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WATER BULLETIN NUMBER 42

Flow of the Rio Grande and Related Data

From Elephant Butte Dam, New Mexico to the Gulf of Mexico

1972

STORAGE IN MAJOR RESERVOIRS
SOURCES OF RIVER FLOW
DIVERSIONS
SUSPENDED SILT
CHEMICAL ANALYSES
SANITARY ASPECTS OF WATER QUALITY
CLIMATOLOGICAL DATA
DRAINAGE BASIN AND IRRIGATED AREAS

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FOREWORD

This bulletin presents the forty-second compilation of the stream discharges and related data concerning the international portion of the Rio Grande, prepared jointly by the United States and Mexican Sections of the International Boundary and Water Commission. The stream flow data and kindred subjects pertain to the Rio Grande and its important tributaries near their confluence with the main stream from Elephant Butte, New Mexico to the Gulf of Mexico. The first publication in the series was Water Bulletin No. 1 for the year 1931. The present volume contains the information for the year 1972.

International stream gaging on the Rio Grande was initiated in 1889, when the station at El Paso, Texas was established. Several stations on the Rio Grande and its tributaries downstream from El Paso were established in 1900 and operated until 1914. Between 1914 and 1923, except for a few months in 1919 and 1920, all stream-gaging work on the international reach of the river was suspended. In 1923, the work was resumed and carried on independently by the two countries until 1931 when the present joint program of stream measurements was adopted.

During 1972 the United States Section of the Commission operated the stream-gaging stations on the Rio Grande at El Paso, American Dam, Island, County Line, Fort Quitman, Above Rio Conchos, Below Rio Conchos, Johnson Ranch, Foster Ranch, Del Rio, San Antonio Crossing, Fort Ringgold, San Benito, and Brownsville. The Mexican Section operated the stream-gaging stations on the Rio Grande at Below Amistad Dam, Below Maverick Dam near Quemado, Eagle Pass, Palafox, Laredo, Below Anzalduas Dam, and Progreso. The station at Falcon Dam was operated jointly by the two Sections. Each Section operated the gaging stations on tributary streams, floodways, and diversions within its own country.

The total drainage area within the outer rim of the Rio Grande Basin is 335,500 square miles. However, about half of this area yields no runoff to the river, the estimated productive area of the watershed being 176,333 square miles. Reservoirs in the basin have a total storage capacity of approximately 11,059,300 acre-feet, in addition to the International Amistad and Falcon Reservoirs, which have a combined conservation capacity of 6,165,000 acre-feet. In the Rio Grande Basin, a rounded total of 2,275,000 acres is irrigated below Elephant Butte Dam on the Rio Grande and below Girvin on the Pecos River. The flow of the Rio Grande to the Gulf of Mexico below Brownsville prior to construction of Falcon Dam averaged 2,600,000 acre-feet per year for the period 1934-1952. For the period 1954-1972, this flow has averaged 603,600 acre-feet per year.

Acknowledgments

Other agencies which have contributed to some part of the data published herein include: The Agricultural Research Service and the Soil Conservation Service of the U. S. Department of Agriculture; the Bureau of Reclamation and the Geological Survey of the U.S. Department of the Interior; the National Weather Service of the U.S. Department of Commerce; the Texas Board of Health; the Texas Water Development Board; the Sanchez Ditch and Reservoir Company; the Middle Rio Grande Conservancy District; the Red Bluff Water Power Control District; State of Colorado, Division of Water Resources; the New Mexico State Engineer Office; the Rio Grande Compact Commission; the Willacy County Water Control and Improvement District No. 1, the Del Rio City Water Department; the Eagle Pass City Water Department; the Laredo City Water Department; the Del Mar Conservation District; Central Power and Light Company; the El Paso Department of Water and Sewerage; the Maverick County Water Control and Improvement District No. 1; the Ministry of Hydraulic Resources of Mexico; the Ministry of Agriculture and Livestock of Mexico; the Meteorological Service of Mexico; Meteorological Service of the State of Chihuahua, Mexico; Federal Power Commission of Mexico; Potable Water Board of Piedras Negras, Coahuila; the Federal Board of Public Improvement Works of Nuevo Laredo, Tamaulipas; and the Water and Drainage Board of Cd. Acuna, Coahuila.

Additional contributions have been made by individuals and corporations and specific notation is made for such, as well as for those of the above-named agencies, where the data appear. The courtesy and cooperation of those who made these contributions are acknowledged with appreciation.

Period Averages

In Water Bulletins Nos. 1 through 29, normal or average discharge volumes shown for the various gaging stations were based on a period beginning in 1924, or thereafter when records became available.

Beginning with Water Bulletin No. 30, the periods have been revised to include only the years following completion of major projects below which the flow of the Rio Grande or a major tributary was modified, or later when records became available. The revised periods are based on the completion of Caballo Dam in 1938, irrigation projects on the Rio Conchos and its tributaries in 1947, International Falcon Dam in 1953, and Amistad and Luis L. Leon Dams in 1968.

For purposes of comparison with the average flows in the Rio Grande below Caballo Dam, records of average discharge in the Rio Grande below Elephant Butte Dam have also been revised to include the same period.

The period of record used to determine the average diversions from the Rio Grande to the United States below Falcon Dam published herein was restricted to begin in 1957, the first complete year of record after United States' waters in Falcon Reservoir were placed under the jurisdiction of the 93rd District Court of Texas.

FOREWORD

Units of Measure

Data collected by the Mexican Section are computed and published in a Spanish version of the water bulletin in metric units. The Mexican data are converted and reported in this bulletin in English units. Conversion factors conform generally to those in the National Bureau of Standards Miscellaneous Publication 286 "Units of Weight and Measure (United States Customary and Metric) - Definitions and Tables of Equivalents". However, for convenience some of the factors have been shortened and modified to facilitate conversion, reconversion to the original units when necessary, and checking of data. Conversion of the mean daily discharges, the monthly average discharge and the monthly volumes from metric to English units is direct. For this reason the monthly average discharge in cubic feet per second and monthly volumes in acre-feet shown for gaging stations operated by the Mexican Section cannot necessarily be obtained in the usual manner from the total monthly flow in second-foot days. For the same reason, evaporation and rainfall data, when totaled, may not be equivalent to the direct conversion from metric to English units. The following factors have been used for data in this bulletin:

METRIC UNITS		ENGLISH UNITS
	LENGTHS	
1 Centimeter		0.393701 Inches
1 Meter		3.28084 Feet
1 Kilometer		0.621371 Miles
	AREAS	
1 Square Meter		10.76391 Square Feet
1 Hectare		2.471054 Acres
1 Square Kilometer		0.386102 Square Miles
	VOLUME	
1 Cubic Meter		61023.74 Cubic Inches
1 Cubic Meter		35.31467 Cubic Feet
1 Cubic Meter		1.30795 Cubic Yards
1000 Cubic Meters		0.81071 Acre-Foot
1 Liter		0.264172 U. S. Gallon
	WEIGHTS	
1 Kilogram		2.204623 Pounds
1 Metric Ton		2204.623 Pounds
1 Metric Ton		1.102311 Short Tons (2000 lbs.)

GENERAL HYDROLOGIC CONDITIONS FOR 1972

Along and Adjacent to the International Portion of the Rio Grande

During the year 1972, temperatures were about normal on the watershed of the Rio Grande below El Paso, Texas. Evaporation averaged 92 percent of normal. Precipitation was 101 percent of normal from El Paso to Amistad Dam, 99 percent of normal from Amistad Dam to Falcon Dam, 111 percent of normal from Falcon Dam to Rio Grande City, and 120 percent of normal in the Lower Rio Grande Valley on the United States side.

The yearly volume of flow of the Rio Grande was below normal from El Paso to the confluence of the Rio Conchos with the Rio Grande, near normal from the confluence of the Rio Conchos to Falcon Reservoir, and below normal from Falcon Dam to the Gulf of Mexico. In the reach between El Paso and the confluence of the Rio Conchos the flow averaged 37 percent of normal, ranging from 35 percent of normal at El Paso Station to 24 percent of normal at the County Line Station; in the reach between the confluence of the Rio Conchos and Amistad Reservoir, where flows were partly regulated by releases from Luis L. Leon Reservoir (El Granero) on the Rio Conchos, the flow averaged 114 percent of normal; and in the reach between Amistad Dam and Falcon Reservoir, where Rio Grande flows were partly regulated by releases from Amistad Reservoir, the flow averaged 62 percent of normal. Flows passing Rio Grande stations below Falcon Dam were partly regulated by releases from Falcon Reservoir. Such releases in 1972 amounted to 1,422,821 acre-feet, or 65 percent of the average for the nineteen years of operation, 1954 through 1972. The volume of flow into the Gulf of Mexico was 658,807 acre-feet, or 109 percent of the average for this nineteen-year period.

The total annual flow of all measured tributaries below Fort Quitman was 130 percent of normal. The total flow of these tributaries in the United States was 788,111 acre-feet, or 116 percent of normal. For Mexico, the measured tributary flow excluding Rio Alamo and Rio San Juan was 1,543,183 acre-feet, or 134 percent of normal. The flow of the Rio Alamo and Rio San Juan was 99 percent and 152 percent of their respective normals.

Return flow to the Rio Grande at Maverick Power Plant near Eagle Pass was 168,354 acre-feet, or 31 percent of the twenty-four year average. Return flow to the Rio Grande through various drains in the Maverick County irrigation district excluding storm inflow amounted to 160,652 acre-feet, or 79 percent of the fourteen-year average.

There were no floods of consequence on the Rio Grande during 1972. The highest peak flow recorded was 35,100 second-feet at the Below Maverick Dam Station.

For all reservoirs in the Rio Grande basin having capacity greater than 15,000 acre-feet, excepting Amistad and Falcon International Reservoirs, the average amount of water in storage in 1972 was 4,429,800 acre-feet, or 109 percent of the normal 4,055,800 acre-feet. In the United States, stored water in these reservoirs averaged 39 percent of normal while in Mexico the average was 139 percent of normal. In International Amistad Reservoir there was a net increase in storage during the year of 1,236,000 acre-feet. Storage ranged from a low of 2,616,000 acre-feet on January 1 to a high of 3,852,100 acre-feet on December 31, and averaged 3,215,500 acre-feet during the year. In International Falcon Reservoir there was a net decrease in storage during the year of 489,400 acre-feet. The storage varied from a high of 3,127,600 acre-feet on January 1 to a low of 2,476,100 acre-feet on April 27 and averaged 2,732,100 acre-feet during the year, or 147 percent of the average for the nineteen years of operation, 1954 through 1972.

Diversions from the Rio Grande in the United States were, on the average, 68 percent of normal. Diversions into the American Canal were 39 percent of normal; into Maverick Canal 54 percent of normal; and in the United States below Falcon Dam 89 percent of the average for the sixteen years, 1957-1972. In Mexico, diversions averaged 116 percent of normal. Diversions into the Acequia Madre were 34 percent of normal, while diversions through Anzalduas Canal for irrigation in Mexico were 121 percent of the nineteen-year average.

In 1972, the total reported irrigated acreage from the Rio Grande and its tributaries below El Paso, Texas showed an decrease of 2 percent from the previous year. On the United States side, there was a decrease of 13 percent above and a decrease of 4 percent below Falcon Dam for an overall average change of 5 percent. On the Mexican side, there were increases of 4 percent above and a decrease of 3 percent below Falcon Dam for a nonappreciable change overall.

The 1972 investigation of the quality of Rio Grande water extended from El Paso to Brownsville. The annual tonnage of salts carried by the river above Falcon Dam was 51 percent of the 1935-1972 normal. The volume of suspended silt transported by the Rio Grande in 1972 was 74 percent of average for sampling stations above Amistad Dam, 2 percent of average for sampling stations in the reach Amistad Dam to Falcon Reservoir, and 58 percent of average for sampling stations below Falcon Dam.

RIO GRANDE BELOW ELEPHANT BUTTE DAM, NEW MEXICO

DESCRIPTION: Cableway, bubbler gage, and water-stage recorders (graphic and digital) located on the left bank 100 feet upstream from the cableway at latitude 33°08'45", longitude 107°12'20", and river mile 1,383.9; 0.7 river mile downstream from Elephant Butte Dam, 1.5 river miles upstream from Cuchillo Negro River, and 135.1 river miles upstream from the American Dam at El Paso, Texas. The zero of the gage is 4,242.09 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 29 discharge measurements during the year and a continuous record of gage heights. Records were furnished by the United States Geological Survey. Records available: 1915 through 1972.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. Beginning December 1940, hydroelectric power generation facilities for 27,000 kva were placed in operation at Elephant Butte Dam.

ETREME FLOWS FROM RECORDS:

	Average Flow in Second-Feet					
Daily:	Max. 8,220	May 22, 1942	Min. 0		Occasionally	
Monthly:	Max. 7,600	May 1942	Min. 1.2		Nov. 1971	
Yearly:	Max. 2,510	1942	Min. 253		1964	

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.2	10.0	‡1,370	1,200	275	14.0	1,920	‡1,500	7.4	2.6	2.2	2.2
2	4.2	9.0	1,390	1,200	292	14.0	1,910	1,730	12.0	2.2	1.4	2.2
3	4.5	8.5	1,400	1,210	124	13.0	1,890	1,700	95.0	1.1	‡ 1.1	2.5
4	6.3	8.5	1,390	1,220	‡ 212	13.0	1,950	1,410	20.0	‡ 1.1	4.6	3.0
5	4.7	9.0	1,390	1,220	127	13.0	1,890	1,140	9.0	1.1	3.4	3.0
6	3.4	9.0	1,380	1,230	126	13.0	‡ 1,940	1,120	13.0	1.1	4.2	3.0
7	3.4	9.0	1,360	1,220	122	13.0	1,910	845	12.0	2.0	3.8	2.6
8	3.4	8.5	1,360	1,240	120	13.0	1,840	625	‡ 10.0	2.0	‡ 1.8	3.4
9	3.4	8.5	1,440	1,260	111	14.0	1,590	614	11.0	2.0	2.0	4.2
10	‡ 3.4	8.0	861	987	14.0	15.0	1,270	606	10.0	2.0	2.0	3.8
11	3.4	7.5	914	‡ 621	11.0	18.0	826	595	9.2	3.0	2.5	3.8
12	3.7	7.5	1,330	630	10.0	15.0	778	584	15.0	5.0	2.5	4.2
13	3.8	‡ 7.5	1,560	625	9.5	13.0	769	572	9.0	‡ 10.0	2.0	3.8
14	3.6	7.5	1,330	594	9.5	15.0	772	‡ 561	8.0	5.0	2.0	4.2
15	3.4	383	1,320	579	6.9	14.0	776	550	7.0	5.0	2.0	3.4
16	3.4	636	1,330	598	‡ 5.9	‡ 69.0	982	554	6.0	5.0	2.5	3.4
17	3.4	659	1,330	614	11.0	98.0	‡ 1,140	562	5.0	5.0	2.5	3.4
18	3.4	‡ 669	1,320	633	11.0	50.0	1,120	550	4.0	8.0	2.0	3.4
19	3.0	667	1,320	646	12.0	416	806	480	4.0	10.0	2.0	‡ 3.0
20	3.0	670	‡1,330	150	12.0	625	1,030	295	‡ 3.8	20.0	2.0	‡ 3.8
21	‡ 2.9	670	1,550	138	12.0	624	886	288	3.8	5.0	2.5	3.8
22	3.4	1,090	1,900	151	12.0	627	772	283	3.8	5.0	2.0	4.6
23	3.6	1,360	1,900	87.0	12.0	806	756	272	3.8	5.0	2.0	4.2
24	3.9	1,390	1,910	275	12.0	799	750	260	3.8	5.0	3.0	3.8
25	3.5	1,390	1,890	275	13.0	803	742	254	3.8	3.0	2.5	3.8
26	‡ 5.5	1,390	1,890	275	13.0	1,020	742	484	3.8	3.0	2.5	2.6
27	6.5	1,390	1,850	278	13.0	1,540	922	407	3.8	3.0	2.5	3.8
28	4.7	1,400	1,490	278	13.0	‡1,600	960	30.0	3.8	3.0	2.5	5.5
29	4.6	1,400	1,190	278	15.0	‡1,660	1,280	14.0	3.8	2.5	2.5	5.5
30	4.2		‡1,190	275	15.0	‡1,640	1,270	11.0	3.8	2.5	‡ 2.2	4.6
31	102		1,200		‡ 15.0		1,320	‡ 15.0		2.5		3.8
Sum	219.8	15,282.0	44,385	19,987.0	1,766.8	12,587.0	37,509	18,911.0	308.4	132.7	72.7	112.3

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	∅ Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1938-1972 Acre-Feet Average	Maximum	Minimum
Jan.			31	102	21	2.9	7.1	436	26,992	86,500	200
Feb.			†28	1,400	†11	7.5	527	30,311	42,003	88,861	188
Mar.			24	1,910	10	861	1,430	88,036	69,881	119,000	1,520
Apr.			9	1,260	23	87.0	666	39,644	77,550	162,000	24,000
May			2	292	16	5.9	57.0	3,504	76,901	467,000	512
June			29	1,660	† 3	13.0	420	24,966	87,824	363,000	16,913
July			4	1,950	†25	742	1,210	74,398	91,215	211,000	41,352
Aug.			2	1,730	30	11.0	610	37,509	76,703	134,000	9,530
Sept.			3	95.0	†20	3.8	10.3	612	33,446	129,000	163
Oct.			20	20.0	† 2	1.1	4.3	263	19,380	72,100	166
Nov.			4	4.6	3	1.1	2.4	144	19,137	158,000	74.2
Dec.			†28	5.5	† 1	2.2	3.6	223	19,917	87,300	179
Yearly				1,950		1.1	413	300,046	640,949	1,818,800	183,415

‡ Discharge measurement made on this day ∅ Mean daily † And other days

RIO GRANDE BELOW CABALLO DAM, NEW MEXICO

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the left bank at latitude 32°53'05", longitude 107°17'30", and river mile 1,355.6; 0.8 river mile downstream from Caballo Dam, about 3 miles northeast of Arrey, New Mexico, 5 miles south of Caballo, New Mexico, and 106.8 river miles upstream from the American Dam at El Paso, Texas. The zero of the gage is 4,140.90 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 20 discharge measurements during the year and a continuous record of gage heights. Records were furnished by the El Paso office of the United States Bureau of Reclamation. Records available: 1938 through 1972.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. In addition to the outflow from Caballo Dam listed below, 683 acre-feet of water were diverted in 1972 into Bonita Lateral, a small irrigation canal just below Caballo Dam. Prior to 1938, discharge records were kept at Percha Dam, a low diversion dam about 1.5 miles downstream from this station. Small accretions to the river take place between the station and Percha Dam.

EXTREME FLOWS FROM RECORDS:

	Average Flow in Second-Feet				
Daily:	Max. 7,650	May 20, 1942	Min. 0.1		Several days 1954, 1955 and 1972
Monthly:	Max. 6,710	May 1942	Min. 0.1		Nov. & Dec. 1955
Yearly:	Max. 2,480	1942	Min. 284		1964

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.0	0.5	285	650	426	4.4	1,480	2,020	25.0	1.7	2.1	2.3
2	1.0	.4	761	617	419	4.4	1,490	2,110	27.0	1.9	‡ 2.1	2.3
3	‡ 1.0	.4	868	531	413	4.4	1,500	1,580	26.0	2.0	2.1	2.3
4	1.0	.4	1,020	495	418	4.4	1,770	1,470	25.0	2.1	2.1	2.2
5	1.0	.3	984	499	‡ 387	4.4	1,850	1,150	25.0	2.2	2.1	2.2
6	1.0	.3	997	517	337	4.4	1,530	1,090	25.0	2.4	2.1	2.2
7	1.0	.3	1,150	514	320	4.4	1,300	778	24.0	2.5	2.1	2.2
8	1.0	‡ .2	1,290	518	365	4.4	1,130	592	414	2.6	2.1	2.2
9	1.0	.2	1,300	530	479	4.4	981	544	898	2.8	2.2	2.2
10	1.0	.2	1,290	543	542	4.4	874	599	960	‡ 2.9	2.2	2.2
11	‡ 1.0	.3	1,420	626	523	4.4	603	684	691	2.8	2.2	2.1
12	1.0	.3	1,490	698	448	4.4	373	775	185	2.8	2.2	2.1
13	1.0	.3	‡1,440	700	196	82.0	385	771	32.0	2.8	2.2	2.1
14	‡ 1.0	.3	1,600	516	118	394	490	777	11.0	2.7	2.2	‡ 2.1
15	1.0	.1	1,730	405	‡ 130	477	548	723	4.0	2.7	2 2	2.1
16	1.0	.1	1,690	288	130	508	697	629	3.8	2.9	2.2	2.1
17	1.0	.1	1,850	308	130	494	804	552	3.5	2.6	2.2	2.1
18	1.0	.1	1,910	338	‡ 130	420	821	391	3.3	2.6	2 2	2.1
19	1.0	.1	1,920	338	130	426	482	125	3.0	2.6	2.2	2.1
20	1.0	.1	1,720	‡ 332	130	498	695	389	2.8	2.6	2.2	2.1
21	1.0	.1	1,780	353	130	‡ 559	842	389	2.6	2.5	2.3	2.1
22	1.0	.1	‡2,050	391	130	552	615	465	2.3	2.4	2.3	2.1
23	1.0	.1	2,070	391	74.0	671	588	653	2.0	2.4	2.3	2.1
24	‡ .7	.1	2,000	401	6.4	749	577	‡ 647	1.8	2.4	2.3	2.1
25	.7	.1	1,900	443	4.4	803	578	935	‡ 1.6	2.4	2.3	2.1
26	.6	.1	1,930	431	4.4	814	‡ 673	125	1.6	2.3	2.3	2.1
27	.6	.1	1,700	432	4.4	1,140	785	32.0	1.6	2.3	2.3	2.1
28	.6	.1	1,140	429	4.4	1,350	1,100	28.0	1.6	2.3	2.3	2.1
29	.6	.1	770	427	4.4	1,350	1,450	26.0	1.6	2.3	‡ 2.3	2.1
30	.5		686	424	4.4	1,410	1,460	26.0	1.6	2.2	2.3	2.1
31	.5		645		‡ 4.4		1,560	25.0		2.2		2.1
Sum	27.8	5.9	43,386	14,085	6,542.2	12,749.8	30,031	21,100.0	3,406.7	75.9	66.2	66.4

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	∅ Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1938-1972 Acre-Feet Average	Maximum	Minimum
Jan.			† 1	1.0	†30	0.5	0.9	55.1	494	4,850	19.2
Feb.			1	.5	†15	.1	.2	11.7	7,830	64,300	11.7
Mar.			23	2,070	1	285	1,400	86,055	84,357	135,000	24,900
Apr.			13	700	16	288	469	27,935	81,058	212,000	25,470
May			10	542	†25	4.4	211	12,976	74,429	412,000	75.2
June			30	1,410	† 1	4.4	425	25,289	103,880	354,000	25,289
July			5	1,850	12	373	969	59,566	112,465	234,000	28,200
Aug.			2	2,110	31	25.0	681	41,851	106,196	179,000	20,500
Sept.			10	960	†25	1.6	114	6,757	48,022	181,000	6,757
Oct.			†10	2.9	1	1.7	2.4	151	4,787	35,400	15.5
Nov.			†23	2.3	† 1	2.1	2.2	131	2,562	14,400	7.0
Dec.			† 1	2.3	†11	2.1	2.1	132	2,656	19,100	6.0
Yearly				2,110		0.1	359	260,909.8	628,736	1,795,670	206,084.6

‡ Discharge measurement made on this day ∅ Mean daily † And other days

RIO GRANDE AT EL PASO, TEXAS

DESCRIPTION: Gravity well and water-stage recorder located on the downstream side of the first pier from the left abutment of the Courchesne Bridge at latitude 31°48' 10", longitude 106°32' 25", and river mile 1,250.5; 5.6 river miles upstream from the Santa Fe Street-Juarez Avenue Bridge between El Paso, Texas and Cd. Juarez, Chihuahua and 1.7 miles upstream from the American Dam at El Paso, Texas. The zero of the gage is 3,722.30 feet above mean sea level, U. S. C. & G. S. datum.
RECORDS: Mean daily discharges in 1972 were computed by adding the flows in the American Canal and the flows at the river station below the American Dam. Because the mean daily discharges are rounded, the monthly sum for this station may not equal the sum of the monthly sums of the other two stations. Extreme discharges are those passing the El Paso station, where measurements are made only during high flows. Records available: 1889 through 1972.
REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station.
EXTREME FLOWS FROM RECORDS: Momentary: Max. 24,000 second-feet on June 12, 1905. Min. occasionally no flow. Since Elephant Butte Dam was closed in 1915, the largest peak flow to pass this station was 13,500 second-feet on September 3, 1925.

		Average Flow in Second-Feet			
Daily:	Max. 23,680	June 12, 1905	Min. 0		Occasionally
Monthly:	Max. 14,300	June 1905	Min. 0		Occasionally
Yearly:	Max. 2,780	1905	Min. 70.1		1902

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	44.3	38.8	23.0	412	155	50.6	507	405	157	103	26.6	14.6
2	44.1	38.7	19.4	404	175	46.6	496	500	162	99.5	27.1	14.6
3	42.2	35.7	18.2	444	202	46.4	530	600	240	92.9	26.3	14.9
4	43.0	35.7	47.8	418	200	43.6	547	625	519	79.2	25.4	15.1
5	37.5	37.7	482	344	232	40.8	586	665	208	69.0	24.4	15.0
6	34.5	38.7	482	313	218	43.0	862	685	183	64.4	23.7	15.0
7	36.0	41.2	339	290	217	45.2	585	490	174	62.7	23.5	14.6
8	39.9	33.1	424	310	197	50.2	490	400	171	59.1	23.2	14.4
9	43.4	34.2	436	302	159	52.4	490	210	170	59.1	26.1	14.6
10	45.0	33.1	598	302	126	51.8	585	175	156	59.0	23.9	14.5
11	44.4	30.1	583	330	117	54.0	465	130	176	57.8	23.0	15.1
12	43.2	29.8	589	306	179	53.5	* 380	140	233	84.2	17.2	15.3
13	42.8	30.6	626	298	193	53.5	295	155	299	78.8	15.0	15.3
14	40.8	29.3	752	425	281	53.5	* 180	230	456	56.9	10.9	15.3
15	39.5	29.7	731	409	348	53.5	* 100	240	203	58.1	13.2	15.2
16	39.0	27.3	606	431	228	93.9	* 100	200	186	58.1	12.8	15.2
17	40.1	26.8	660	316	106	114	* 100	180	148	56.9	9.8	15.5
18	40.9	26.9	656	248	72.2	111	* 150	180	135	60.2	9.7	15.9
19	41.5	26.6	666	225	98.2	117	* 400	180	122	63.2	9.2	21.0
20	41.1	26.7	701	198	132	114	605	270	121	322	8.3	22.3
21	40.1	27.4	742	166	109	113	340	200	114	464	7.9	14.8
22	41.1	27.1	660	147	96.7	111	350	190	113	171	4.8	9.4
23	41.3	26.2	652	126	91.4	115	725	180	112	71.6	4.7	9.4
24	42.6	25.8	724	114	86.1	152	545	210	105	43.0	5.8	9.4
25	39.1	24.8	704	168	89.4	160	420	200	101	35.0	5.7	9.4
26	39.5	24.7	737	181	75.8	245	340	330	98.6	30.4	1.7	10.6
27	39.4	24.4	773	139	64.3	338	260	835	99.1	28.1	9.9	7.5
28	38.3	23.4	852	148	65.0	335	150	685	100	26.1	14.1	6.0
29	37.2	22.9	765	146	66.4	363	200	550	101	24.8	14.1	6.0
30	38.0		552	164	60.5	392	205	410	101	24.3	14.1	6.0
31	37.9		463		45.9		450	270		25.7		6.0
Sum	1,257.7	877.4	17,063.4	8,224	4,485.9	3,612.5	12,438	10,660	5,263.7	2,588.1	462.1	407.9

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1938-1972 Acre-Feet Average	Maximum	Minimum
Jan.	2.58	2.41	1	47.7	5	30.1	40.6	2,495	6,277	15,100	220
Feb.	2.48	2.32	1	43.8	29	21.5	30.3	1,740	7,525	52,200	136
Mar.	5.42	2.26	15	1,190	3	15.9	550	33,845	34,258	62,500	1,790
Apr.	3.63	2.48	14	480	24	89.3	274	16,312	42,680	139,000	6,820
May			15	Ø 348	31	Ø 45.9	145	8,898	45,690	357,000	522
June	3.90	2.40	30	Ø 392	5	Ø 40.8	120	7,165	53,183	304,000	6,020
July			6	Ø 862	15	Ø 100	401	24,670	59,400	198,000	9,652
Aug.			27	Ø 835	11	Ø 130	344	21,144	56,982	158,000	4,870
Sept.	5.18		4	1,450	26	97.9	175	10,440	39,433	171,000	2,430
Oct.	3.05		21	791	30	24.0	83.5	5,133	14,102	57,900	151
Nov.			2	27.5	27	1.6	15.4	917	8,369	21,300	229
Dec.	2.12	2.04	20	38.7	†28	Ø 6.0	13.2	809	8,106	25,600	206
Yearly	5.42			1,450		1.6	184	133,568	376,005	1,559,200	57,481

† And other days Ø Mean daily * Partly estimated

DIVERSIONS FROM THE RIO GRANDE
AMERICAN CANAL AT EL PASO, TEXAS

DESCRIPTION: Concrete control consisting of two triangular-shaped wingwalls extending toward the center of the canal about one-fourth of the canal width and downstream at a 30° angle with the canal side walls, bubbler gage, water-stage recorders (graphic and digital), and binary decimal transmitter located on the right bank of the concrete-lined canal at El Paso, Texas, latitude 31°46'40", longitude 106°31'25", and about 2,400 feet downstream from the headgates of the American Dam which are located at river mile 1,248.8. The zero of the gage is 3,712.09 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 47 discharge measurements during the year, a stable rating curve at medium and high flows, and a continuous record of gage heights. Records available: June 2, 1938 through 1972.

REMARKS: This canal diverts water from the Rio Grande at the American Dam at El Paso, Texas, 2.1 river miles upstream from the International Dam at Juarez, Chihuahua. Water from this canal discharges into the Franklin Canal from which water is frequently returned to the Rio Grande at spillways 2.2, 2.7, and 3.6 river miles downstream from the American Dam. The transmitter relays gage height data upon interrogation by telephone via commercial circuits.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 1,840 second-feet on March 27, 1944. Min. frequently no flow.

		Average Flow in Second-Feet		
Daily:	Max. 1,510	Aug. 13, 1945	Min. 0	Frequently
Monthly:	Max. 1,210	Aug. 1943	Min. 0	Frequently since 1952
Yearly:	Max. 748	1943	Min. 65.6	1956

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	44.3	0	23.0	218	119	50.6	507	363	140	52.6	6.8	1.0
2	44.1	0	19.4	203	‡ 139	‡ 46.6	496	452	137	‡ 54.6	‡ 7.7	1.0
3	42.2	0	‡ 18.2	246	166	46.4	‡ 530	555	* 120	‡ 49.0	7.3	1.0
4	43.0	0	47.8	235	165	43.6	547	583	* 169	33.9	6.8	1.0
5	37.5	0	473	160	197	‡ 40.8	586	624	136	24.7	6.4	1.0
6	34.5	0	‡475	‡ 114	181	43.0	862	581	127	21.2	5.9	‡ 1.0
7	‡ 36.0	15.2	334	87.8	181	45.2	585	465	123	19.3	5.6	1.0
8	39.9	30.6	419	106	163	50.2	490	‡ 397	‡ 122	19.1	5.2	1.0
9	43.4	31.7	431	94.5	‡ 124	52.4	490	207	123	18.9	9.2	1.0
10	45.0	30.7	‡591	96.3	91.1	51.8	585	172	110	18.6	‡ 10.9	1.0
11	‡ 44.4	‡ 28.2	577	‡ 132	84.5	54.0	465	127	132	18.4	14.1	1.0
12	43.2	28.4	583	109	147	‡ 53.5	* 380	137	‡ 188	44.6	9.2	1.0
13	42.8	29.6	620	96.5	160	53.5	‡ 190	152	254	39.0	9.0	1.0
14	40.8	28.8	744	218	249	53.5	* 136	227	286	16.9	‡ 7.9	‡ 1.0
15	39.5	29.7	686	209	‡ 316	53.5	* 100	‡ 237	115	16.7	10.8	1.0
16	39.0	27.3	‡594	227	194	93.9	* 100	197	111	‡ 16.5	10.7	1.0
17	40.1	26.8	649	113	73.2	114	* 100	177	79.9	16.5	7.8	1.0
18	‡ 40.9	‡ 26.9	645	‡ 56.3	38.8	111	* 106	177	69.1	17.4	7.9	‡ 1.0
19	41.5	26.6	655	135	63.8	117	‡ * 286	177	‡ 61.1	20.4	7.8	6.3
20	41.1	26.7	690	161	98.0	‡ 114	406	267	60.2	18.3	7.3	7.4
21	40.1	27.4	731	129	74.2	113	138	197	54.6	18.3	7.1	7.4
22	41.1	27.1	648	110	61.8	111	183	187	53.7	17.8	4.0	7.4
23	41.3	26.2	641	89.3	‡ 55.4	115	513	177	55.6	17.1	3.9	7.4
24	23.9	25.8	713	74.4	50.0	152	378	‡ 207	52.0	‡ 16.6	5.1	7.4
25	1.5	‡ 24.8	693	‡ 129	59.5	160	235	197	48.6	13.0	5.1	7.4
26	0	24.7	579	143	75.8	‡ 245	125	327	‡ 46.6	9.7	1.1	8.6
27	0	24.4	559	103	64.3	338	162	832	47.3	7.5	‡ 1.0	5.5
28	0	23.4	‡646	112	65.0	335	107	682	48.8	5.9	1.0	4.0
29	0	22.9	569	111	66.4	363	157	‡ 547	49.7	4.8	1.0	4.0
30	0		375	128	‡ 60.5	392	162	400	49.4	4.5	1.0	4.0
31	0		286		45.9		‡ 378	253		5.9		4.0
Sum	971.1	613.9	15,714.4	4,146.1	3,629.2	3,612.5	10,485	10,280	3,169.6	657.7	194.6	98.8

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	High	Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1939-1972 Acre-Feet Average	Maximum	Minimum
Jan.	3.36		1	47.7	†25	0	31.3	1,926	1,535	8,110	0
Feb.	3.16		8	34.9	† 1	0	21.2	1,218	4,696	19,500	0
Mar.	8.33	2.76	14	841	3	15.9	507	31,169	30,431	50,100	1,700
Apr.	5.26	2.59	3	265	†18	13.0	138	8,224	31,946	70,900	4,560
May	6.17	3.03	15	362	18	25.6	117	7,198	27,141	69,000	392
June			30	392 ø	5	40.8 ø	120	7,165	36,045	65,700	5,990
July			6	862 ø	†15	100 *ø	338	20,797	43,626	70,700	8,673
Aug.			27	832 ø	11	127 ø	332	20,390	42,587	74,600	4,840
Sept.	6.27	3.20	13	416	26	45.9	106	6,287	27,973	63,100	2,230
Oct.	3.27	2.00	3	57.8	30	4.3	21.2	1,305	11,651	39,000	0
Nov.	2.98		25	36.2	†27	1.0 ø	6.3	386	6,949	21,000	0
Dec.	2.75		19	23.8	† 1	1.0 ø	* 3.2	* 196	6,892	25,500	0
Yearly				862 ø		0	146	106,261	271,472	541,610	47,397.4

‡ Discharge measurement made on this day † And other days
ø Mean daily * Partly estimated

RIO GRANDE BELOW AMERICAN DAM AT EL PASO, TEXAS

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the retaining wall of the Smelter Pump on the left bank of the river at latitude 31°46'35", longitude 106°31'20", and river mile 1,248.2; 1.5 river miles upstream from the International Dam, 3.3 river miles upstream from the Santa Fe Street-Juarez Avenue Bridge between El Paso, Texas, and Cd. Juarez, Chihuahua, and 0.6 river mile downstream from the American Dam. The zero of the gage is 3,712.30 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 69 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: June 1938 through 1972.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. The operation of the American Dam began June 2, 1938. At this dam, part of the flow passing the El Paso Gaging Station is diverted into the American Canal and the remainder, including excess flood flows, passes this station.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 11,300 second-feet on September 14, 1958 with a gage height of 14.50 feet. Min. occasionally no flow.

		Average Flow in Second-Feet		
Daily:	Max. 6,040	May 20, 1942	Min. 0	Occasionally
Monthly:	Max. 4,880	May 1942	Min. 0	June 1972
Yearly:	Max. 1,510	1942	Min. 13.8	1956

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	38.8	0	‡ 194	‡ 35.8	0	0	42.0	* 17.0	50.0	19.8	13.6
2	0	38.7	0	201	‡ 35.7	0	0	48.0	* 25.0	‡ 44.9	19.4	13.6
3	0	‡ 35.7	0	‡ 198	36.5	0	0	45.0	" 120	43.9	19.0	13.9
4	‡ 0	35.7	0	‡ 183	‡ 35.2	0	0	‡ 42.0	* 350	45.3	18.6	‡ 14.1
5	0	37.7	8.7	184	‡ 34.9	‡ 0	0	41.0	‡ 71.5	44.3	18.0	14.0
6	0	38.7	‡ 6.9	‡ 199	36.9	0	0	44.0	55.7	43.2	‡ 17.8	14.0
7	0	26.0	5.0	‡ 202	35.6	0	0	* 25.0	51.1	43.4	17.9	13.6
8	0	2.5	5.1	204	‡ 34.3	0	0	‡ 2.8	49.3	40.0	18.0	13.4
9	0	2.5	5.1	207	35.2	0	0	2.8	47.5	40.2	16.9	13.6
10	0	2.4	‡ 6.5	‡ 206	34.9	0	‡ 0	2.9	45.8	40.4	13.0	13.5
11	‡ 0	1.9	6.3	‡ 198	32.6	0	0	2.9	‡ 44.0	39.4	8.9	‡ 14.1
12	0	1.4	6.3	197	‡ 32.2	‡ 0	0	2.9	45.2	39.6	8.0	14.3
13	0	1.0	6.5	‡ 202	32.7	0	105	3.0	45.2	39.8	‡ 6.0	14.3
14	0	.5	8.5	207	32.3	0	43.9	3.0	170	40.0	3.0	14.3
15	0	‡ 0	45.3	200	31.7	0	0	3.0	88.4	41.4	2.4	14.2
16	0	0	11.8	204	‡ 34.3	0	0	3.1	74.6	‡ 41.6	2.1	14.2
17	0	0	11.4	‡ 203	33.3	0	0	‡ 3.1	67.8	40.4	2.0	14.5
18	‡ 0	0	11.1	192	33.4	0	44.5	3.0	‡ 65.7	42.8	1.8	14.9
19	0	0	10.7	‡ 89.7	‡ 34.4	‡ 0	114	2.9	61.0	42.8	1.4	‡ 14.7
20	0	0	10.7	‡ 37.1	34.2	0	‡ 199	2.8	60.5	304	1.0	14.9
21	0	0	11.4	‡ 36.7	35.1	0	‡ 202	2.7	59.9	446	.8	7.4
22	0	‡ 0	11.8	37.3	‡ 34.9	0	197	‡ 2.7	59.3	153	.8	2.0
23	0	0	11.1	36.8	36.0	0	212	2.7	56.0	54.5	.8	2.0
24	18.7	0	10.7	‡ 39.5	36.1	0	167	2.7	52.7	26.4	.7	2.0
25	‡ 37.6	0	10.7	‡ 39.1	‡ 29.9	0	‡ 185	2.7	‡ 52.1	22.0	.6	‡ 2.0
26	39.5	0	‡158	38.1	0	‡ 0	215	2.7	52.0	20.7	.6	2.0
27	39.4	0	‡214	‡ 36.3	0	0	‡ 97.6	* 2.7	51.8	20.6	‡ 8.9	2.0
28	38.3	0	‡206	‡ 35.6	0	0	43.4	* 2.7	51.7	20.2	13.1	2.0
29	37.2	‡ 0	196	34.6	0	0	43.2	" 2.7	51.6	20.0	13.1	2.0
30	38.0		‡177	35.7	0	0	42.9	" 10.0	51.5	‡ 19.8	13.1	2.0
31	37.9		‡177		0		‡ 42.5	‡ * 17.0		19.8		2.0
Sum	263.5		4,077.5			0		376.5		1,930.4		309.1
	286.6		1,349.6		858.1		1,954.0		2,093.9		267.5	

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1939-1972 Acre-Feet Average	Maximum	Minimum
Jan.	4.01		25	43.9	† 1	0	9.2	568	4,611	12,000	31.1
Feb.	4.00		1	43.8		0	9.1	523	2,550	32,800	31.3
Mar.	6.44		15	389	† 1	0	43.5	2,677	3,540	22,801	81.9
Apr.	4.56	3.62	14	216	29	32.5	136	8,088	10,044	74,500	2,230
May	3.90		21	62.5	†25	0	27.7	1,702	17,797	300,000	25.2
June				0		0	0	0	16,390	250,000	0
July			26	ø 215	† 1	0	63.0	3,876	15,212	155,000	967
Aug.			2	ø 48.0	†21	ø 2.7	12.2	747	14,033	114,000	37.5
Sept.			4	ø 350 *	1	ø 17.0*	69.8	4,153	10,847	124,000	53.8
Oct.	6.85	3.80	21	773	†30	19.7	62.3	3,829	2,063	19,000	18.0
Nov.	4.43	3.72	1	19.9	†24	.6	8.9	531	1,174	8,700	11.9
Dec.	4.17		†19	15.3	†21	ø 2.0	10.0	613	995	7,760	0
Yearly				773		0	37.6	27,307	99,256	1,093,553	10,001.1

‡ Discharge measurement made on this day * Partly estimated ø Mean daily " Estimated
† And other days

DIVERSIONS FROM THE RIO GRANDE
ACEQUIA MADRE AT JUAREZ, CHIHUAHUA

DESCRIPTION: Bridge for making discharge measurements, gravity well, and water-stage recorder located on the right bank of the canal at Juarez, Chihuahua, latitude 31°45'40", longitude 106°30'30", about 260 feet downstream from the canal intake at the International Dam at Juarez, Chihuahua, which is located at river mile 1,246.7 and 2.1 river miles downstream from the American Dam at El Paso, Texas.

RECORDS: Based on 64 discharge measurements during the year, 34 by the Mexican Section and 30 by the United States Section of the Commission, and a continuous record of gage heights. Computations by shifting control methods. Records available: 1938 through 1972. These records, showing the water actually diverted by Mexico, do not necessarily reflect the quantities of water made available to Mexico in the bed of the river by the United States under terms of the Convention of 1906. Such quantities of water are included in the record of "Rio Grande below American Dam at El Paso, Texas." See page 11 in this Water Bulletin.

REMARKS: In 1972 all of the 16,077 acre-feet tabulated below were distributed to land irrigated in the first unit under the canal.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 480 second-feet on July 21, 1944 with a gage height of 6.00 feet. Min. no flow during several months throughout the year.

		Average Flow in Second-Feet			
Daily:	Max. 339	May 10, 1942	Min. 0	Several months each year	
Monthly:	Max. 283	May 1938	Min. 0	Several months each year	
Yearly:	Max. 116	1942	Min. 9.2		1964

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	194	‡ 35.3	0	0	42.0	0	0	0	0
2	0	0	0	194	‡ 33.2	0	0	47.7	0	0	0	0
3	0	0	0	‡ 199	‡ 32.8	0	0	44.8	0	0	0	0
4	0	0	0	‡ 178	‡ 31.4	0	0	42.4	0	0	0	0
5	0	0	0	‡ 172	‡ 31.1	0	0	41.3	0	0	0	0
6	0	0	0	‡ 195	‡ 32.5	0	0	43.8	0	0	0	0
7	0	0	0	‡ 197	33.5	0	0	19.4	0	0	0	0
8	0	0	0	201	‡ 32.5	0	0	0	0	0	0	0
9	0	0	0	200	35.3	0	0	0	0	0	0	0
10	0	0	0	‡ 201	‡ 35.7	0	0	0	0	0	0	0
11	0	0	0	200	36.0	0	0	0	0	0	0	0
12	0	0	0	‡ 200	‡ 36.4	0	0	0	0	0	0	0
13	0	0	0	‡ 200	35.0	0	0	0	0	0	0	0
14	0	0	0	‡ 196	32.8	0	0	0	0	0	0	0
15	0	0	0	197	‡ 33.5	0	0	0	0	0	0	0
16	0	0	0	194	35.7	0	0	0	0	0	0	0
17	0	0	0	‡ 194	‡ 37.9	0	0	0	0	0	0	0
18	0	0	0	194	36.0	0	33.9	0	0	0	0	0
19	0	0	0	‡ 101	‡ 35.3	0	‡ 106	0	0	0	0	0
20	0	0	0	‡ 36.7	35.0	0	‡ 191	0	0	0	0	0
21	0	0	0	‡ 39.2	36.4	0	‡ 204	0	0	0	0	0
22	0	0	0	39.6	‡ 38.8	0	‡ 195	0	0	0	0	0
23	0	0	0	40.3	42.4	0	205	0	0	0	0	0
24	0	0	0	‡ 51.2	‡ 43.4	0	‡ 183	0	0	0	0	0
25	0	0	0	39.6	‡ 35.3	0	‡ 180	0	0	0	0	0
26	0	0	118	‡ 38.5	0	0	‡ 207	0	0	0	0	0
27	0	0	‡207	37.8	0	0	‡ 120	0	0	0	0	0
28	0	0	‡213	‡ 36.0	0	0	‡ 45.2	0	0	0	0	0
29	0	0	‡194	34.6	0	0	36.7	0	0	0	0	0
30	0		‡194	35.3	0	0	36.7	0	0	0	0	0
31	0		‡194		0		‡ 39.6	0		0		0
Sum	0	0	1,120	4,035.8	883.2	0	1,783.1	281.4	0	0	0	0

Month	Current Year 1972								Period 1938-1972		
	Average Rainfall Inches**		Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low				Average	Maximum	Minimum
	1938-1972	1972	Day		Day						
Jan.	0.37	0.22		0		0	0	0	0	0	0
Feb.	.32	.01		0		0	0	0	0	0	0
Mar.	.27	0	29	215	† 1	0	36.0	2,223	1,257	6,482	0
Apr.	.17	0	14	244	29	33.9	135	8,004	7,450	12,383	2,020
May	.33	.16	†23	44.1	†26	0	28.6	1,752	9,328	17,380	0
June	.73	1.94		0		0	0	0	8,098	15,700	0
July	1.60	1.71	†22	212	† 1	0	57.6	3,539	8,171	15,170	0
Aug.	1.37	3.96	2	47.7	† 7	0	9.2	559	7,794	12,620	0
Sept.	1.03	2.32		0		0	0	0	4,557	12,380	0
Oct.	.74	1.49		0		0	0	0	43.8	328	0
Nov.	.34	.51		0		0	0	0	0	0	0
Dec.	.47	.30		0		0	0	0	0	0	0
Yearly	7.74	12.62		244		0	22.2	16,077	46,698.8	83,930	6,653

‡ Discharge measurement made on this day † And other days

** Average for valley floor in U. S. and Mexico from El Paso to Island Station

RIO GRANDE – ISLAND STATION NEAR CLINT, TEXAS

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the left bank of the rectified channel of the Rio Grande at latitude 31°32'00", longitude 106°14'35", and river mile 1,221.1; 0.6 river mile downstream from the Riverside Canal Wasteway No. 2, about 4 miles south southwest of Clint, Texas, and 27.7 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 3,608.99 feet above mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on 46 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: August 17, 1938 through 1972.
REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station.
EXTREME FLOWS FROM RECORDS: Momentary: Max. 7,050 second-feet on September 14, 1958 with a gage height of 15.80 feet. Min. frequently no flow.

	Average Flow in Second-Feet			
Daily:	Max. 6,140	May 19, 1942	Min. 0	Frequently
Monthly:	Max. 4,880	May 1942	Min. 0	Frequently
Yearly:	Max. 1,490	1942	Min. 0.3	1956

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	56.3	2.3	‡ 0.4	1.3	0	0	0	0	" 200	0	‡ 3.3	11.0
2	53.3	‡ 2.2	.4	1.4	0	0	0	0	" 100	0	2.6	14.6
3	55.3	2.1	.4	.9	‡ 0	0	0	0	" 70.0	0	2.6	16.5
4	63.0	1.9	.4	0	0	0	0	0	" 50.0	‡ 0	2.7	3.2
5	65.1	1.7	.4	‡ 0	0	0	‡ 0	0	" 20.0	0	3.4	2.8
6	55.2	1.5	.8	0	0	0	0	0	*‡ 10.9	0	6.1	‡ 2.6
7	55.7	1.3	1.4	0	0	‡ 0	0	0	7.0	0	13.1	2.6
8	‡ 59.0	1.1	‡ 1.4	0	0	37.7	0	0	6.4	0	‡ 9.8	2.5
9	53.5	‡ 1.0	1.7	0	0	108	0	0	5.6	0	10.0	2.5
10	54.7	1.0	1.8	0	‡ 0	66.9	0	0	4.2	0	5.4	2.5
11	37.0	.9	2.1	0	0	.2	0	0	2.8	0	3.5	2.5
12	‡ 22.8	1.0	2.2	‡ 0	0	27.6	‡ 0	0	1.4	0	2.3	2.4
13	18.2	1.0	2.4	0	0	0	0	0	0	0	1.8	‡ 2.4
14	15.5	1.0	2.5	0	0	‡ 0	0	0	‡ 23.8	0	1.7	2.5
15	15.5	1.0	‡ 38.6	.4	0	0	0	0	* 19.2	0	‡ 2.0	2.5
16	16.1	‡ .9	64.6	0	0	0	0	0	8.0	0	1.9	2.6
17	14.1	.9	4.0	0	‡ 0	0	0	0	4.0	0	2.0	2.6
18	17.1	.9	3.8	0	0	0	‡ 0	0	0	‡ 0	2.1	2.7
19	‡ 16.3	.9	3.4	0	0	0	0	0	0	0	2.1	2.7
20	16.5	.9	3.1	‡ 0	0	0	0	0	‡ 0	40.2	2.4	‡ 2.8
21	6.5	.9	2.7	0	0	‡ 0	0	0	0	166	2.2	2.8
22	3.5	.9	2.5	0	0	0	0	0	0	185	‡ 1.8	2.8
23	2.6	‡ .9	‡ 2.1	0	0	0	0	0	0	8.8	1.8	2.8
24	2.4	.9	2.5	0	0	0	0	" 100	0	3.0	2.1	2.7
25	2.2	.9	2.0	.3	0	0	0	" 700	0	‡ 1.9	1.8	2.7
26	‡ 2.2	.8	2.6	‡ 0	0	0	‡ 0	"1,100	0	1.3	1.6	2.7
27	2.2	.7	2.5	0	0	0	0	"1,800	‡ 0	3.1	1.5	‡ 2.7
28	2.2	.7	2.2	0	0	‡ 0	0	"1,600	‡ 0	6.4	1.2	2.7
29	2.1	.7	‡ 2.1	0	0	0	0	"1,200	0	7.3	‡ 1.4	2.7
30	2.2		1.4	0	0	0	0	" 600	0	5.6	5.7	2.7
31	2.3		1.8		‡ 0		0	" 300		4.7		2.6
Sum	790.6	32.9	160.2	4.3	0	240.4	0	"7,400	" 533.3	433.3	101.9	116.4

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1939-1972 Acre-Feet Average	Maximum	Minimum
Jan.	8.55	7.21	5	73.7	29	ø 2.1	25.5	1,568	4,527	11,900	0
Feb.	7.35	7.15	4	2.4	29	ø .7	1.1	65.3	2,954	37,000	0
Mar.	10.75		15	696	† 1	ø .4	5.2	318	2,189	21,000	0
Apr.	7.45		1	2.0	† 4	0	.1	8.5	3,523	70,500	0
May				0		0	0	0	10,078	299,800	0
June	9.78		9	334	† 1	0	8.0	477	8,792	241,000	0
July				0		0	0	0	8,287	118,500	0
Aug.			27	1,800 ø"	† 1	0	"239	"14,678	7,835	99,400	0
Sept.			1	200 ø"	†18	0	" 17.8	" 1,058	8,256	119,200	0
Oct.	12.10		21	463	† 1	0	14.0	859	3,841	42,800	0
Nov.	8.86	7.93	9	21.9	28	1.1	3.4	202	1,138	7,270	0
Dec.	8.87	7.99	3	24.3	†12	ø 2.4	3.8	231	2,127	12,900	0
Yearly				1,800 ø"		0	26.8	19,464.8	63,547	1,079,340	238.1

‡ Discharge measurement made on this day " Estimated ø Mean daily
† And other days * Partly estimated

RIO GRANDE – COUNTY LINE STATION NEAR ACALA, TEXAS

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the left bank of the rectified channel of the Rio Grande at latitude 31°22'50", longitude 105°59'10", and river mile 1,200.9; 0.8 river mile downstream from the El Paso-Hudspeth County Line, 5.5 miles northwest of Acala, Texas, about 8 miles southeast of Tornillo, Texas, and 47.9 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 3,547.59 feet above mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on 43 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: 1938 through 1972.
REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station.
EXTREME FLOWS FROM RECORDS: Momentary: Max. 6,340 second-feet on May 19, 1942 with a gage height of 8.66 feet. Min. frequently no flow.

Average Flow in Second-Feet

Daily:	Max. 6,180	May 18, 1942	Min. 0		Frequently
Monthly:	Max. 4,920	May 1942	Min. 0		Frequently
Yearly:	Max. 1,720	1942	Min. 0		1956 & 1964

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.7	0	‡ 0	0	0	0	0	0	" 400	62.8	‡ 4.3	0
2	3.7	‡ 0	0	0	0	0	0	0	" 300	61.9	10.5	0
3	8.1	0	0	0	‡ 0	0	0	0	" 300	61.9	6.1	0
4	9.9	0	0	0	0	0	0	0	" 250	‡ 61.1	5.5	0
5	34.7	0	0	‡ 0	0	0	‡ 0	0	" 300	60.4	6.4	0
6	17.1	0	0	0	0	0	0	0	‡ * 180	59.8	6.7	‡ 0
7	8.4	0	0	0	0	‡ 0	0	0	88.5	59.2	4.4	0
8	4.8	0	‡ 0	0	0	0	0	0	106	59.2	‡ 4.7	0
9	4.8	‡ 0	0	0	0	0	0	0	86.8	58.6	6.2	0
10	4.4	0	0	0	‡ 0	0	0	" 80.0	82.6	58.7	7.3	0
11	4.2	0	0	0	0	0	0	" 30.0	78.3	58.0	7.9	0
12	‡ 3.6	0	0	‡ 0	0	0	‡ 0	" 5.0	75.8	58.2	7.5	0
13	0	0	0	0	0	0	0	0	72.4	57.5	3.8	0
14	0	0	0	0	0	‡ 0	0	0	‡ 170	57.7	4.4	0
15	0	.8	‡ 0	0	0	0	0	0	223	57.0	‡ 5.9	0
16	0	‡ 1.0	0	0	0	0	0	0	116	56.3	5.6	0
17	0	1.0	0	0	‡ 0	0	0	0	87.3	56.5	3.9	0
18	0	.9	0	0	0	0	0	0	83.0	‡ 55.8	.3	0
19	‡ 0	.9	0	‡ 0	0	0	0	0	80.5	55.6	0	0
20	0	.8	0	0	0	0	102	0	‡ 79.6	55.3	0	‡ 0
21	0	.5	0	0	0	‡ 0	27.7	0	75.8	60.7	0	0
22	0	0	0	0	0	0	0	0	72.8	220	‡ 0	0
23	0	‡ 0	‡ 0	0	0	0	0	0	69.0	118	0	0
24	0	0	0	0	‡ 0	0	0	" 50.0	66.8	* 35.0	0	0
25	0	0	0	0	0	0	‡ 0	" 500	66.3	‡ 6.7	0	0
26	‡ 0	0	0	‡ 0	0	0	0	" 1,000	65.7	6.5	0	0
27	0	0	0	0	0	0	0	" 1,300	‡ 63.6	6.9	0	0
28	0	0	0	0	0	‡ 0	0	* 1,100 *	63.6	8.5	0	0
29	0		‡ 0	0	0	0	0	" 900	62.8	6.6	‡ 0	0
30	0		0	0	0	0	0	" 650	62.8	6.4	0	0
31	0		0		‡ 0		0	" 500		5.4		0
Sum	107.4	5.9	0	0	0	0	129.7	" 6,115.0 * 3,829.0		1,652.2	101.4	0

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1938-1972 Acre-Feet Average	Maximum	Minimum
Jan.	2.21		5	70.0	†13	0	3.5	213	5,883	20,000	0
Feb.	1.02		16	1.2	† 1	0	.2	11.7	4,934	47,900	0
Mar.				0		0	0	0	4,320	38,900	0
Apr.				0		0	0	0	6,561	84,200	0
May				0		0	0	0	12,505	303,000	0
June				0		0	0	0	11,229	239,000	0
July	3.27		20	182	† 1	0	4.2	257	11,371	140,000	0
Aug.			27	1,300 ∅ "	† 1	0	197 "	12,129 "	10,768	123,000	0
Sept.			1	400 ∅ "	†28	62.8	128 *	7,595 *	13,053	140,000	0
Oct.	4.16	1.30	22	319	31	4.0	53.3	3,277	8,131	61,400	0
Nov.	1.49		2	15.9	†19	0	3.4	201	5,280	20,400	0
Dec.				0		0	0	0	5,921	29,700	0
Yearly				1,300 ∅ "		0	32.6	23,683.7	99,956	1,247,500	0

‡ Discharge measurement made on this day * Partly estimated " Estimated
∅ Mean daily † And other days

RIO GRANDE AT FORT QUITMAN, TEXAS

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the left bank of the rectified channel of the Rio Grande at latitude 31°05'05", longitude 105°36'25", and river mile 1,167.1; 1.5 river miles downstream from Old Fort Quitman, 10 miles southeast of Esperanza, Texas, 17.5 miles southeast of McNary, Texas, and 81.7 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 3,450.57 feet above mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on 48 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: 1889 through 1972.
REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station.
EXTREME FLOWS FROM RECORDS**: Momentary: Max. 10,600 second-feet October 5, 1946 with a gage height of 10.00 feet. Min. frequently no flow.

Average Flow in Second-Feet**

Daily:	Max. 5,890	May 19, 1942	Min. 0	Frequently	
Monthly:	Max. 5,030	May 1942	Min. 0	Several months since	1951
Yearly:	Max. 1,750	1942	Min. 2.3		1965

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.2	11.4	‡ 8.9	7.0	0	0	0	0	‼ 500	16.9	‡ 67.4	13.4
2	32.9	‡ 11.5	8.5	7.7	0	0	0	0	‼ 400	14.3	52.3	15.5
3	33.3	10.7	9.4	5.8	‡ 0	0	0	0	‼ 350	13.1	51.9	14.2
4	32.9	10.4	8.9	4.0	0	.3	0	0	‼ 300	‡ 9.7	47.9	14.3
5	‡ 31.7	11.5	8.6	‡ 4.0	0	5.4	‡ 0	0	‼ 250	10.0	39.4	15.7
6	30.8	10.5	8.3	4.7	0	184	0	‼ 2.0	‡ *400	10.4	33.6	‡ 10.7
7	27.3	9.3	8.3	3.5	0	‡ 78.4	0	‼ 5.0	* 240	11.5	28.4	9.7
8	18.6	9.3	‡ 8.0	5.2	0	3.2	0	‼ 1.0	* 107	12.3	‡ 20.5	8.2
9	29.6	‡ 9.7	8.1	6.5	0	29.8	.6	0	* 76.1	12.3	19.7	8.6
10	27.0	9.7	7.8	6.5	‡ 0	2.1	3.1	0	* 37.1	11.5	18.5	11.6
11	18.9	9.3	7.6	6.4	0	.7	0	‼ 200	* 26.8	16.3	26.0	10.0
12	‡ 16.3	8.9	7.6	‡ 6.4	0	62.7	‡ 0	‼ 150	* 22.3	15.3	28.3	9.5
13	15.9	8.9	7.3	6.3	0	31.2	0	‼ 100	* 18.2	15.3	28.1	‡ 9.0
14	13.9	9.2	6.4	5.4	0	‡ 6.6	0	‼ 80.0	$1,550*	16.1	28.8	8.9
15	14.0	8.3	‡ 7.8	5.0	0	2.5	0	‼ 60.0	* 363	16.5	‡ 30.4	8.9
16	12.4	‡ 8.8	7.8	5.0	0	2.3	0	‼ 50.0	* 287	18.0	26.2	8.8
17	13.0	8.8	5.9	5.2	‡ 0	22.8	0	‼ 200	* 265	17.2	21.8	8.8
18	15.2	8.5	7.5	4.9	0	0	‡ 0	‼ 300	* 238	‡ 18.8	20.9	8.7
19	‡ 11.8	8.2	7.8	4.8	0	0	.6	‼ 200	* 219	19.1	20.5	8.7
20	10.9	8.2	7.8	‡ 4.8	0	0	37.3	‼ 100	* 196	25.4	13.7	‡ 8.6
21	10.2	8.3	7.1	4.6	0	‡ 0	11.3	‼ 50.0	‡ 180	35.3	12.6	8.5
22	8.9	8.6	7.4	4.1	0	0	0	‼ 15.0	* 137	22.2	‡ 11.9	8.4
23	9.3	‡ 9.0	‡ 8.1	3.5	0	.5	0	$* 5.0	* 94.3	143	11.7	8.4
24	10.0	8.6	2.2	2.2	‡ 0	0	0	* 5.0	* 56.2	171	11.5	8.3
25	10.7	9.0	6.5	1.2	0	0	0	‼ 5.0	* 37.1	‡ 123	10.3	8.2
26	‡ 10.6	10.2	6.5	‡ .6	0	0	‡ 0	‼ 500	* 28.6	78.6	10.1	8.1
27	9.6	9.0	5.0	0	0	0	0	‼1,000	‡ 23.2	14.2	10.4	‡ 8.0
28	9.4	8.6	3.6	0	0	‡ 0	0	‼1,200	21.6	28.0	11.6	8.1
29	10.2	9.0	‡ 1.6	0	0	0	0	$1,000*	20.0	35.9	‡ 12.2	8.1
30	11.1		4.7	0	0	0	0	‼ 800	17.8	53.8	12.1	8.2
31	11.6		6.9		‡ .8		0	‼ 600		68.8		8.2
Sum	543.2	271.4	217.9	125.3	0.8	432.5	52.9	‼6,628.0	*6,461.3	1,073.8	738.7	302.3

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1938-1972 Acre-Feet Average	Maximum	Minimum
Jan.	4.35	3.90	5	37.4	†22	8.1	17.5	1,077	6,379	20,900	0
Feb.	4.00	3.87	2	12.7	15	8.0	9.4	538	5,511	50,100	0
Mar.	3.95	3.66	1	10.4	†17	1.6	7.0	432	4,315	38,900	0
Apr.	3.87		† 2	7.7	†26	0	4.2	249	5,440	77,000	0
May	3.85		31	4.9	† 1	0	0	1.6	12,850	309,000	0
June	6.16		6	888	† 1	0	14.4	858	11,731	240,000	0
July	4.93		20	157	† 1	0	1.7	105	12,464	140,000	3.8
Aug.			28	ø 1,200	† 1	0	‼ 214	‼ 13,146	12,317	127,000	16.7
Sept.	10.10	4.72	14	3,780	30	17.1	* 215	* 12,816	15,944	147,000	0
Oct.	5.64	4.47	23	198	4	8.1	34.6	2,130	11,866	66,500	0
Nov.	5.03	4.62	1	74.1	26	10.1	23.8	1,465	7,273	24,500	0
Dec.	4.79		1	19.6	27	ø 8.0	9.8	600	7,463	31,000	0
Yearly	10.10			3,780		0	46.0	33,417.6	113,558	1,270,400	1,662.3

** Period 1924-1972 ‡ Discharge measurement made on this day * Partly estimated
‼ Estimated ø Mean daily † And other days

RIO GRANDE ABOVE RIO CONCHOS NEAR PRESIDIO, TEXAS

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the left bank at latitude 29°37'15", longitude 104°28'50", and river mile 962.5; 6.5 miles northwest of the international highway bridge between Presidio, Texas and Ojinaga, Chihuahua, 7.8 river miles upstream from the Rio Conchos, and 286.3 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 2,576.66 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 102 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: 1889 through 1972.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 14,000 second-feet on June 14, 1905. Highest flow recorded since 1924 was 5,160 second-feet, with a gage height of 10.57 feet, on May 26, 1942. Min. frequently no flow.

Average Flow in Second-Feet**

Daily:	Max. 13,700	June 13 & 14, 1905	Min. 0		Frequently
Monthly:	Max. 10,150	June 1905	Min. 0		Frequently
Yearly:	Max. 1,970	1907	Min. 1.3		1964

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.8	‡ 0.4	0	0	‡ 0	32.3	1.1	2.0	‡ 252	226	50.7	‡ 23.5
2	9.2	.4	‡ 0	0	0	‡ 3.8	.4	‡ .7	264	‡ 174	‡ 50.4	21.8
3	‡ 5.7	.5	0	‡ 0	0	1.7	‡ .3	.2	246	138	52.0	19.5
4	2.3	‡ .4	0	0	‡ 0	.7	0	.1	183	108	51.0	‡ 19.4
5	3.4	.4	0	0	0	‡ 12.9	0	.1	‡ 204	96.3	48.8	18.9
6	1.2	.5	‡ 0	0	0	7.9	0	.3	254	‡ 81.2	‡ 46.6	10.1
7	‡ 1.3	‡ .4	0	‡ 0	0	6.8	‡ 0	‡ .2	344	72.6	45.3	‡ 13.2
8	8.0	.4	0	0	‡ 0	‡ 9.4	0	3.7	‡ 411	65.2	42.7	18.2
9	6.1	.2	0	0	0	9.3	0	1.3	461	60.0	40.2	19.0
10	‡ 8.0	‡ .2	0	‡ 0	0	29.2	‡ 0	55.7	506	‡ 59.2	‡ 37.9	18.9
11	6.7	0	0	0	0	18.0	0	‡ 91.1	‡ 600	55.3	36.0	‡ 16.3
12	5.8	0	0	0	0	‡ 17.1	0	20.0	1,080	49.2	35.3	16.7
13	2.3	0	‡ 0	0	0	52.3	0	21.6	‡ 1,870	‡ 41.8	‡ 31.1	17.1
14	1.7	‡ 0	0	‡ 0	0	‡ 51.6	‡ 0	‡ 11.2	‡ 2,120	39.8	22.0	17.0
15	6.7	0	0	0	‡ 0	57.6	0	20.4	‡ 2,300	37.3	23.8	‡ 17.3
16	9.3	0	‡ 0	0	0	‡ 103	0	99.1	‡ 2,330	‡ 34.8	21.6	17.0
17	‡ 8.7	‡ 0	0	‡ 0	‡ 0	156	‡ 1.8	‡ 94.8	2,140	31.8	‡ 21.7	12.5
18	6.6	0	0	0	0	148	1.3	148	‡ 1,860	28.3	23.0	‡ 12.2
19	3.2	0	0	0	0	‡ 156	2.6	226	1,500	23.0	21.2	18.6
20	2.0	0	‡ 0	0	0	172	74.2	285	‡ 1,080	‡ 24.4	‡ 20.9	18.4
21	1.1	0	0	0	0	178	‡ 215	‡ 290	794	32.4	20.7	15.5
22	1.0	‡ 0	0	0	‡ 0	‡ 149	310	240	‡ 790	32.4	21.3	11.9
23	1.0	0	‡ 0	0	0	94.9	183	260	1,000	44.0	21.1	12.1
24	1.0	0	0	‡ 0	0	48.7	173	‡ 284	1,140	‡ 50.4	23.1	11.7
25	‡ 2.0	0	0	0	0	31.8	‡ 214	261	‡ 1,130	47.2	24.5	11.0
26	1.7	0	0	0	‡ 0	‡ 17.4	254	211	1,060	‡ 45.1	24.3	‡ 9.2
27	1.0	0	‡ 0	‡ 0	0	6.0	264	248	987	43.0	‡ 26.3	11.0
28	‡ .6	‡ 0	0	0	0	3.5	‡ 218	‡ 310	786	42.0	24.6	13.0
29	.8	0	0	0	0	2.9	88.4	378	‡ 501	44.6	23.4	‡ 15.5
30	.5		0	0	‡ 0	‡ 1.6	49.5	373	331	‡ 50.1	23.0	15.4
31	.4		‡ 0		100		‡ 8.6	332		50.8		12.6
Sum	121.1	3.8	0	0	100	1,579.4	2,059.2	4,268.5	28,524	1,928.2	954.5	484.5

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1938-1972 Acre-Feet Average	Maximum	Minimum
Jan.	9.60	9.27	1	12.6	†30	0.4	4.0	240	5,750	24,400	0
Feb.	9.28		† 3	.5	†10	0	.1	7.5	4,754	40,800	0
Mar.				0		0	0	0	3,523	39,100	0
Apr.				0		0	0	0	2,622	41,600	0
May	10.81		31	138	† 1	0	3.2	198	9,327	240,000	0
June	11.46	9.23	21	182	4	.3	52.6	3,133	9,966	216,000	0
July	12.36		22	323	† 4	0	66.4	4,084	13,072	156,000	0
Aug.	13.10		27	643	† 5	0	138	8,466	12,706	133,000	0
Sept.	15.11	11.46	16	2,340	4	175	951	56,577	17,236	151,000	0
Oct.	12.20	11.05	1	267	19	22.4	62.2	3,825	14,049	105,000	0
Nov.	11.30	10.98	4	52.3	16	17.7	31.8	1,893	5,616	34,500	0
Dec.	11.05	10.83	1	24.3	21	9.1	15.6	961	5,901	30,900	0
Yearly	15.11			2,340		0	109	79,384.5	104,522	1,176,700	951.8

** Period June 1900-March 1914; September 1919-March 1920; and 1924-1972

‡ Discharge measurement made on this day † And other days

RIO CONCHOS NEAR OJINAGA, CHIHUAHUA

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the right bank at latitude 29°34'00", longitude 104°27'10", 1.5 river miles from the confluence with the Rio Grande, 1.9 miles west of Ojinaga, Chihuahua, and 3.7 miles west of Presidio, Texas. This stream enters the Rio Grande at river mile 954.7, 13.8 river miles upstream from the "Rio Grande below Rio Conchos" Gaging Station, and 294.1 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 2,568.04 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 174 discharge measurements during the year, 165 by the Mexican Section and 9 by the United States Section of the Commission, a continuous record of gage heights, and a rating curve which, above 15,000 second-feet, was defined previously by related gage heights and records of discharge at the "Rio Grande below Rio Conchos" Gaging Station. Computations by shifting control methods. Records available: 1896 through 1972. Records of stage and measured discharge at this station began April 4, 1954. Prior to this date, flow records were determined from records of the Rio Grande at stations located upstream and downstream from the Rio Conchos confluence.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. La Boquilla Reservoir, La Colina Reservoir, La Rosetilla Reservoir, and Luis L. Leon Reservoir are located 250, 242, 186, and 112 river miles, respectively, upstream from this station. Francisco I. Madero Reservoir is located on the Rio San Pedro, a tributary which enters the Rio Conchos 174 river miles upstream from this station. Power generation facilities: La Boquilla 14,647 kw., La Colina 3,620 kw., La Rosetilla 5,150 kw., Francisco I. Madero and Luis L. Leon, none.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 162,000 second-feet on September 11, 1904.

		Average Flow in Second-Feet**			
Daily:	Max. 148,900	Sept. 11, 1904	Min. 0	Several days	1953 & 1955
Monthly:	Max. 24,540	Sept. 1904	Min. 4.7	April	1955
Yearly:	Max. 3,710	1906	Min. 155		1953

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	328	501	‡ 452	752	‡ 671	1,080	812	957	‡ 2,440	‡ 4,800	‡ 473	‡ 406
2	321	‡ 569	438	749	671	‡ 922	837	‡ 925	2,220	‡ 4,560	473	410
3	‡ 328	533	‡ 445	‡ 735	‡ 660	798	‡ 844	911	2,120	3,780	‡ 466	413
4	322	‡ 523	703	710	675	770	840	‡ 911	‡ 3,470	‡ 2,600	466	‡ 410
5	314	516	840	‡ 703	‡ 706	‡ 1,270	‡ 819	989	2,090	1,290	463	413
6	‡ 319	523	‡ 858	703	699	1,050	855	1,040	‡ 2,250	‡ 1,020	‡ 459	‡ 406
7	334	‡ 505	865	‡ 682	706	‡ 1,330	‡ 865	‡ 1,260	2,440	918	456	406
8	1,150	484	‡ 844	682	‡ 706	‡ 1,560	897	1,820	‡ 2,790	848	‡ 448	‡ 403
9	2,070	‡ 473	844	710	696	978	901	‡ 1,120	‡ 2,920	‡ 742	441	406
10	‡ 2,000	480	‡ 830	‡ 710	‡ 671	939	‡ 858	1,590	2,680	480	‡ 441	403
11	1,990	‡ 480	812	699	‡ 682	844	858	‡ 1,950	‡ 3,230	441	441	‡ 396
12	‡ 2,010	494	798	‡ 692	‡ 664	‡ 1,610	‡ 830	1,190	7,980	‡ 876	434	396
13	2,000	494	‡ 798	689	653	‡ 1,600	1,350	‡ 4,630	‡ 4,800	‡ 745	‡ 438	‡ 396
14	‡ 2,000	‡ 523	777	‡ 667	657	‡ 1,200	‡ 1,010	2,030	4,590	466	434	399
15	2,010	498	‡ 766	671	‡ 653	890	964	1,500	‡ 5,620	463	‡ 434	‡ 392
16	2,020	‡ 494	738	710	660	‡ 1,490	904	‡ 2,980	5,010	‡ 466	438	388
17	‡ 2,010	494	‡ 742	‡ 689	‡ 646	911	‡ 1,770	1,570	5,050	477	‡ 431	403
18	‡ 1,990	‡ 498	749	696	636	897	1,320	‡ 2,130	‡ 4,800	‡ 473	424	‡ 406
19	‡ 1,980	487	759	682	‡ 657	‡ 1,050	‡ 2,390	1,850	‡ 4,840	470	420	403
20	1,980	494	‡ 738	‡ 643	675	844	3,230	1,720	‡ 4,940	‡ 459	‡ 427	‡ 396
21	‡ 1,990	‡ 473	727	‡ 632	685	‡ 795	‡ 2,340	‡ 1,300	‡ 7,060	459	424	385
22	1,990	463	‡ 710	643	‡ 696	735	2,030	1,230	‡ 5,580	456	‡ 427	‡ 392
23	1,980	‡ 456	717	667	682	‡ 696	1,200	‡ 1,230	‡ 5,470	‡ 456	448	388
24	‡ 1,960	456	‡ 706	‡ 685	‡ 675	689	‡ 1,280	1,510	5,690	459	‡ 470	378
25	1,930	‡ 456	886	657	675	685	1,220	‡ 1,740	‡ 5,610	‡ 456	470	‡ 388
26	‡ 1,920	463	957	‡ 653	‡ 671	‡ 685	‡ 1,080	2,280	5,610	456	448	385
27	1,920	‡ 466	‡ 989	622	667	675	‡ 1,010	‡ 2,810	‡ 5,540	‡ 470	‡ 431	‡ 374
28	‡ 1,890	‡ 459	989	‡ 614	682	‡ 646	‡ 975	‡ 3,140	5,440	463	424	381
29	1,890	452	‡ 975	639	‡ 710	629	961	1,520	‡ 5,300	463	‡ 410	‡ 378
30	1,660		689	639	‡ 2,450	‡ 703	950	‡ 1,460	5,090	‡ 470	399	360
31	‡ 717		‡ 636		‡ 1,130		‡ 989	‡ 2,120		466		364
Sum	14,207		20,425		28,971		53,413			31,448		12,224
	47,323	23,777		23,167		37,189		132,670			13,258	

Month	Current Year 1972						Average Second-Feet	Total Acre-Feet	Period 1968-1972		
	Extreme Gage Feet		Extreme Second-Feet						Acre-Feet		
			High		Low						
	High	Low	Day		Day				Average	Maximum	Minimum
Jan.	9.81	6.43	9	2,110	4	307	1,530	93,909	59,971	131,293	19,879
Feb.	7.02	6.66	2	586	†23	441	491	28,179	41,383	124,386	3,336
Mar.	7.51	6.66	29	1,020	† 2	424	766	47,161	45,371	130,298	4,171
Apr.	7.19	6.92	1	773	†27	597	682	40,507	31,407	76,357	9,235
May	13.81	6.92	30	6,850	18	611	749	45,957	23,115	45,957	10,932
June	11.55	6.82	12	3,810	29	590	968	57,479	33,667	57,479	6,008
July	12.96	7.22	20	6,110	1	777	1,200	73,771	59,556	93,705	23,833
Aug.	13.58	7.41	13	6,460	† 3	893	1,720	105,915	77,645	115,918	31,728
Sept.	17.39	9.22	12	11,300	6	2,030	4,410	263,069	187,803	468,680	46,959
Oct.	14.14	7.25	1	4,980	12	427	1,010	62,361	103,414	189,837	45,537
Nov.	7.78	7.55	† 1	473	30	396	442	26,302	55,136	125,311	7,484
Dec.	7.68	7.45	5	420	30	353	396	24,243	37,665	51,114	24,243
Yearly	17.39	6.43		11,300		307	1,200	868,853	756,133	1,082,065	463,767

** Period June 1900-March 1914; September 1914-March 1920; and 1924-1972

‡ Discharge measurement made on this day † And other days

ALAMITO CREEK NEAR PRESIDIO, TEXAS

DESCRIPTION: Gravity well and water-stage recorder located on the left bank 300 feet upstream from the highway bridge on Farm-to-Market Road 170 at latitude 29°31'15", longitude 104°17'40", about 2,000 feet from the confluence with the Rio Grande, and about 6 miles southeast of Presidio, Texas. This stream enters the Rio Grande near the lower end of the Presidio Valley at river mile 941.3, 9.7 river miles downstream from the international highway bridge between Presidio, Texas and Ojinaga, Chihuahua, and 307.5 river miles downstream from the American Dam at El Paso, Texas. Measurements of high flows are made from the highway bridge. The zero of the gage is 2,541.61 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 101 discharge measurements during the year at low and medium flows, a high flow rating curve determined by slope-area calculations, and a continuous record of gage heights. Computations by shifting control methods. Records available: 1932 through 1972.

REMARKS: A small irrigation reservoir (San Esteban) 10.5 miles south of Marfa, Texas and irrigation diversions below the reservoir modify the flow of this spring-fed creek. Backwater from the Rio Grande begins to affect the station record when the flow at the station on the Rio Grande below Rio Conchos reaches about 35,000 second-feet.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 56,400 second-feet, determined by slope-area calculations, on September 2, 1962, with a gage height of 13.54 feet. Min. Ø0.1 second-foot on July 25, 1953 and several days in August 1958.

		Average Flow in Second-Feet		
Daily:	Max. 6,200	Sept. 2, 1962	Min. 0.1	July 25, 1953 & several days in August 1958
Monthly:	Max. 418	Sept. 1958	Min. 0.6	Oct. - Dec. 1953 & May 1968
Yearly:	Max. 55.9	1941	Min. 4.3	1951

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.8	‡ 1.5	1.4	1.0	‡ 0.8	3.9	0.9	1.1	‡ 2.5	2.2	1.6	‡ 1.5
2	1.8	1.5	‡ 1.3	1.1	.8	‡ 1.5	.9	‡ .9	2.8	‡ 2.1	‡ 1.6	1.6
3	‡ 1.9	1.5	1.3	‡ 1.2	.8	1.5	‡ .8	.9	2.9	2.1	1.6	1.6
4	1.9	‡ 1.5	1.3	1.2	‡ .8	6.0	.8	35.1	177	2.0	1.5	‡ 1.7
5	1.9	1.5	1.3	1.1	.8	‡ 2.3	.8	16.0	‡ 62.8	2.0	1.4	1.6
6	1.9	1.5	‡ 1.3	1.0	.9	59.2	.8	2.2	6.4	‡ 2.0	‡ 1.4	1.6
7	‡ 1.9	‡ 1.5	1.3	‡ 1.0	1.0	9.9	‡ .8	‡ 1.3	3.4	1.8	1.4	‡ 1.5
8	1.8	1.5	1.4	1.0	‡ 1.0	‡ 2.6	.8	1.3	‡ 3.0	1.6	1.4	1.6
9	1.7	1.5	1.4	1.0	1.0	2.4	.8	22.5	2.5	1.5	1.4	1.6
10	‡ 1.6	1.5	1.4	‡ 1.0	1.0	2.1	‡ .8	1,100	2.0	‡ 1.3	‡ 1.4	1.7
11	1.6	1.4	1.4	1.0	1.0	1.8	.8	‡ 40.0	‡ 1.5	1.5	1.5	‡ 1.8
12	1.6	1.4	1.5	1.0	.9	‡ 1.6	.8	512	1.6	1.8	1.5	1.9
13	1.6	1.4	‡ 1.5	.9	.9	‡ 103	.9	5.6	1.6	‡ 2.0	‡ 1.6	2.0
14	1.6	‡ 1.4	1.5	‡ .9	.9	6.2	‡ .9	‡ 4.3	1.6	2.0	1.6	2.1
15	1.6	1.4	1.5	.9	‡ .9	‡ 122	.9	2,980	‡ 3.7	2.0	1.6	‡ 2.2
16	1.6	‡ 1.5	‡ 1.5	1.0	.9	‡ 1.7	.9	60.4	8.3	‡ 2.0	1.6	2.2
17	‡ 1.6	‡ 1.5	1.5	‡ 1.0	.9	1.4	‡ .9	‡ 220	87.7	2.0	‡ 1.6	2.1
18	1.6	1.5	1.5	1.0	‡ .9	1.2	132	232	‡ 45.5	2.0	1.6	‡ 2.1
19	1.6	1.4	1.5	.9	.9	‡ .9	2.4	151	‡ 2.5	366	1.5	2.1
20	1.6	1.4	‡ 6.2	‡ .9	1.0	1.0	5.6	7.8	3.1	‡ 2.4	‡ 1.5	2.1
21	1.6	1.3	1.1	.9	1.0	1.0	‡1,020	‡ 4.3	34.3	2.2	1.5	2.1
22	1.7	‡ 1.3	1.1	.9	‡ 1.0	‡ 1.1	12.1	5.4	‡ 28.9	1.9	1.6	2.0
23	1.7	1.3	‡ 1.1	.8	1.0	1.1	1.5	31.3	12.4	1.6	1.6	2.0
24	1.7	1.4	1.1	‡ .8	.9	1.1	1.5	‡ 19.9	3.0	‡ 1.4	1.7	2.0
25	‡ 1.7	1.4	1.1	.8	.8	1.1	‡ 1.5	3.3	‡ 2.6	1.4	1.7	2.0
26	1.6	1.4	‡ 1.1	.8	‡ .8	‡ 1.1	1.5	421	2.6	‡ 1.4	1.8	‡ 2.0
27	1.6	1.5	1.1	‡ .8	.8	1.1	1.5	773	2.6	1.4	‡ 1.8	2.1
28	‡ 1.5	‡ 1.5	1.1	.8	.8	1.0	‡ 1.5	‡ 41.9	2.6	1.4	1.7	2.1
29	1.5	1.4	1.0	.8	5.0	1.0	1.4	18.8	‡ 2.6	1.5	1.6	‡ 2.2
30	1.5		1.0	.8	‡ 387	‡ 1.0	1.4	9.6	2.4	‡ 1.5	1.6	2.2
31	1.5		‡ 1.0		‡ 81.2		‡ 1.3	4.7		1.5		2.2
Sum	51.8	41.8	44.8	28.3	498.4	342.8	1,199.5	6,727.6	516.4	419.5	46.9	59.5

Current Year 1972 — **Period 1932-1972**

Month	Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	High	Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Acre-Feet Average	Acre-Feet Maximum	Acre-Feet Minimum
Jan.			† 3	Ø 1.9	†28	Ø 1.5	1.7	103	146	273	46.4
Feb.			† 1	Ø 1.5	†21	Ø 1.3	1.4	82.9	207	3,120	41.5
Mar.	6.90		20	30.0	†29	Ø 1.0	1.4	88.9	149	270	46.4
Apr.			† 3	Ø 1.2	†23	Ø .8	.9	56.1	206	1,070	56.1
May	8.46		30	5,270	† 1	Ø .8	16.1	989	1,058	8,520	34.7
June	7.84	6.40	15	3,000	19	Ø .9	11.4	680	2,099	12,653	49.2
July	8.60	6.42	21	5,850	† 3	Ø .8	38.7	2,379	3,290	18,500	46.8
Aug.	9.72	5.90	15	15,600	† 2	Ø .9	217	13,344	3,369	16,330	56.9
Sept.	7.32	6.27	4	1,590	11	Ø 1.5	17.2	1,024	3,763	24,900	128
Oct.	7.61		19	4,000	10	Ø 1.3	13.5	832	2,021	19,200	36.9
Nov.			†26	Ø 1.8	† 5	Ø 1.4	1.6	93.0	222	2,554	35.7
Dec.			†15	Ø 2.2	† 1	Ø 1.5	1.9	118	153	408	39.3
Yearly	9.72			15,600		0.8	27.3	19,789.9	16,683	40,444	3,109.2

‡ Discharge measurement made on this day Ø Mean daily † And other days

RIO GRANDE BELOW RIO CONCHOS NEAR PRESIDIO, TEXAS

DESCRIPTION: Cableway, bubbler gage, concrete control weir, water-stage recorders (graphic and digital), and binary decimal transmitter located on the left bank at latitude 29°31'05", longitude 104°17'35", and river mile 940.9; 0.4 river mile downstream from Alamito Creek, 10.1 river miles downstream from the international highway bridge between Presidio, Texas and Ojinaga, Chihuahua and 307.9 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 2,536.00 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 92 discharge measurements during the year and a continuous record of gage heights. Computations for high flows by shifting control methods. Low and medium flow computations based on a stable control weir rating curve defined by meter measurements. Records available: 1955 through 1972. Records are also available from 1896 through June 13, 1932 for a station located about 12.1 river miles downstream from the Rio Conchos and 1.3 miles upstream from Alamito Creek; and from June 14, 1932 through 1954 for a station about 2.0 river miles downstream from the Rio Conchos and 11.4 river miles upstream from Alamito Creek.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. The elevation of the zero of the gage prior to placing the weir, May 1, 1968, was 2,527.99 feet above mean sea level, U. S. C. & G. S. datum. The transmitter, operated in cooperation with the National Weather Service, relays gage height data upon interrogation by telephone via commercial circuits.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 54,300 second-feet on October 1, 1958 with a gage height of 20.37 feet. Min. 0.2 second-foot several days in July 1955, and on June 30, 1958.

Average Flow in Second-Feet

Daily:	Max. 52,200	Oct. 1, 1958	Min. 0.2	Several days July 1955; and June 30, 1958
Monthly:	Max. 17,100	Oct. 1958	Min. 3.6	May 1955
Yearly:	Max. 2,590	1958	Min. 283	1956

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	348	‡ 511	401	657	‡ 594	1,200	680	829	‡ 2,520	5,500	515	429
2	344	544	‡ 406	699	588	‡ 884	730	‡ 815	2,520	‡ 5,110	‡ 505	429
3	‡ 343	526	410	‡ 688	581	826	‡ 759	787	2,430	4,810	501	431
4	330	‡ 492	516	647	‡ 574	763	767	814	3,360	3,500	503	‡ 435
5	326	500	691	628	598	1,010	749	883	‡ 2,470	1,570	512	429
6	321	507	‡ 737	623	620	1,050	773	978	2,510	‡ 1,150	‡ 515	429
7	319	‡ 494	761	‡ 610	640	1,250	‡ 793	‡ 1,000	2,780	989	494	423
8	602	461	735	606	‡ 644	‡ 1,820	814	1,590	‡ 2,920	914	482	421
9	1,720	438	726	632	633	983	829	1,270	3,300	851	479	416
10	1,820	438	729	‡ 646	608	988	776	1,430	2,660	‡ 783	477	420
11	1,830	450	724	645	‡ 608	877	764	‡ 2,520	‡ 3,250	728	474	‡ 422
12	‡ 1,870	466	708	627	614	‡ 1,390	719	1,640	‡ 6,360	1,220	473	416
13	1,870	465	‡ 701	613	612	1,830	1,110	3,610	‡ 7,450	‡ 936	‡ 504	415
14	1,890	‡ 460	683	‡ 592	611	1,220	‡ 868	‡ 2,090	‡ 5,320	704	475	417
15	1,880	444	666	590	615	‡ 970	908	2,940	‡ 6,340	651	458	‡ 413
16	1,910	432	‡ 656	617	608	1,450	868	2,170	‡ 7,510	‡ 620	454	410
17	‡ 1,920	‡ 424	638	‡ 613	602	966	‡ 1,650	‡ 1,600	6,960	600	‡ 457	416
18	‡ 1,900	426	643	604	‡ 583	941	1,710	1,720	‡ 7,140	581	452	‡ 429
19	1,870	411	650	595	581	‡ 1,030	1,810	1,800	7,170	660	457	433
20	1,840	415	‡ 666	‡ 546	616	911	2,800	1,660	6,930	‡ 540	457	431
21	1,850	412	660	537	638	856	2,560	‡ 1,350	7,660	599	450	419
22	1,840	‡ 384	640	553	‡ 654	‡ 831	1,710	1,280	‡ 8,670	562	449	418
23	1,830	368	‡ 635	585	609	763	1,280	1,250	6,840	548	463	417
24	1,810	365	631	‡ 609	575	685	1,140	‡ 1,480	6,620	‡ 543	484	417
25	‡ 1,780	356	716	594	560	644	‡ 1,200	1,550	6,870	529	481	416
26	1,770	361	836	598	‡ 599	‡ 613	1,130	2,120	6,910	532	466	‡ 414
27	1,760	377	‡ 856	‡ 561	599	593	‡ 1,110	3,120	6,800	534	‡ 465	412
28	1,700	‡ 394	843	548	637	546	1,090	‡ 3,750	6,590	517	460	409
29	1,680	396	838	573	657	513	1,030	1,870	‡ 6,360	516	452	‡ 414
30	1,560		708	597	‡ 3,770	‡ 540	949	1,710	5,960	‡ 527	448	414
31	790		‡ 572		‡ 1,200		‡ 900	2,010		516		413
Sum	43,623	12,717 / 20,782	18,233	22,628	28,943	34,976	53,636	161,180	38,340	14,262	13,027	

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1968-1972 Acre-Feet Average	Maximum	Minimum
Jan.	3.62	2.01	†14	1,950	† 7	283	1,410	86,525	56,676	116,947	20,968
Feb.	2.54	2.15	1	594	†23	356	439	25,224	38,124	110,937	4,745
Mar.	2.91	2.18	26	867	2	371	670	41,220	40,675	116,352	4,583
Apr.	2.71	2.42	2	714	†21	515	603	36,165	29,393	72,088	10,907
May	5.91	2.45	30	9,130	25	550	730	44,882	23,238	44,882	12,147
June	4.12	2.33	12	3,270	29	467	965	57,408	32,374	57,408	5,927
July	4.68	2.59	18	4,310	1	628	1,130	69,374	64,000	107,399	24,764
Aug.	6.07	2.73	15	10,200	† 2	763	1,730	106,385	78,291	117,205	30,365
Sept.	5.84	3.75	22	9,360	5	2,360	5,370	319,696	201,054	469,832	46,085
Oct.	4.86	2.40	1	5,600	31	501	1,240	76,046	112,044	170,280	40,618
Nov.	2.41	2.28	1	521	30	440	475	28,288	54,618	113,407	8,741
Dec.	2.29	2.22	† 3	435	†27	397	420	25,839	37,887	52,176	25,839
Yearly	6.07	2.01		10,200		283	1,260	917,052	768,374	1,070,504	495,643

‡ Discharge measurement made on this day † And other days

TERLINGUA CREEK NEAR TERLINGUA, TEXAS

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the left bank at latitude 29°12'00", longitude 103°36'15", 2.6 creek miles from the confluence with the Rio Grande, and about 8.5 miles south of Terlingua, Brewster County, Texas. This creek enters the Rio Grande at river mile 876.6, the lower end of Santa Helena Canyon, and 372.2 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 2,200.64 feet above mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on 92 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: 1932 through 1972.
REMARKS: Irrigation diversions modify the flow of this spring-fed creek at this station.
EXTREME FLOWS FROM RECORDS: Momentary: Max. 34,900 second-feet on May 24, 1935 with a gage height of 17.59 feet on a gage 0.3 mile downstream. Min. 0.1 several days in June and July 1950.

Average Flow in Second-Feet

Daily:	Max. 17,200	June 1, 1937	Min. 0.1	Several days in June & July 1950
Monthly:	Max. 921	June 1937	Min. 0.8	October 1934
Yearly:	Max. 146	1937	Min. 5.5	1943

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.7	‡ 3.5	3.2	3.4	2.5	63.6	3.6	4.4	‡ 4.6	4.7	3.5	‡ 3.3
2	3.7	3.5	‡ 3.2	3.4	‡ 2.4	‡ 18.4	2.7	‡ 4.4	4.7	‡ 4.0	‡ 3.1	3.3
3	‡ 3.7	3.5	3.3	3.3	2.4	13.5	‡ 2.5	6.1	4.6	3.8	3.1	3.2
4	3.8	‡ 3.5	3.3	‡ 3.3	‡ 2.4	33.7	2.5	21.0	775	3.6	3.1	‡ 3.2
5	3.8	3.5	3.4	3.3	3.0	‡ 7.7	2.4	57.1	‡ 293	3.4	3.1	3.2
6	3.8	3.4	‡ 3.4	3.4	2.4	7.2	‡ 2.4	13.0	243	3.2	3.1	3.2
7	‡ 3.9	‡ 3.4	3.4	‡ 3.4	2.4	132	2.4	15.2	143	3.0	‡ 3.1	3.2
8	3.9	3.4	3.4	3.4	2.4	‡ 77.4	26.1	‡ 52.4	‡ 877	2.8	3.1	3.2
9	3.8	3.4	3.4	3.3	‡ 2.4	118	43.3	20.7	93.2	2.6	3.1	3.2
10	3.8	3.4	3.4	3.2	‡ 42.2	61.2	‡ 1.4	21.8	15.5	‡ 2.4	3.1	3.2
11	‡ 3.8	3.4	3.4	‡ 3.1	‡ 16.5	50.2	1.6	‡ 175	‡ 10.3	2.4	3.1	‡ 3.2
12	3.7	3.4	3.4	3.0	7.2	‡ 39.7	12.1	87.6	23.7	2.5	3.1	3.2
13	3.7	3.4	‡ 17.5	3.0	3.9	51.0	108	75.3	11.7	2.5	‡ 3.1	3.2
14	3.6	‡ 3.4	10.7	2.9	3.6	8.7	‡ 3.8	‡ 98.0	11.5	2.5	3.1	3.2
15	3.5	3.5	3.6	2.9	‡ 2.9	‡ 66.6	22.1	15.3	221	2.6	3.0	‡ 3.2
16	3.5	3.5	‡ 3.4	2.8	44.8	7.9	101	7.4	95.4	‡ 2.6	‡ 3.0	3.2
17	‡ 3.4	‡ 3.6	3.4	2.8	17.5	4.4	‡ 137	‡ 5.5	628	2.6	3.1	3.2
18	3.4	3.5	3.4	‡ 2.7	4.5	3.7	110	3.6	258	2.6	3.2	3.2
19	3.4	3.4	3.3	2.7	‡ 2.9	‡ 2.9	1,300	3.1	‡ 86.1	2.6	3.2	‡ 3.2
20	3.4	3.3	3.3	2.7	2.9	3.2	620	2.9	19.6	67.4	‡ 3.3	3.2
21	‡ 3.4	3.3	‡ 3.3	‡ 2.7	3.0	‡ 3.4	‡ 692	‡ 2.7	3,730	296	3.3	3.2
22	3.4	3.2	3.4	2.7	‡ 3.0	3.0	262	2.5	‡ 216	71.2	3.2	3.2
23	3.5	‡ 3.1	‡ 3.4	2.8	3.1	‡ 3.3	47.7	407	34.7	17.0	4.3	3.2
24	‡ 3.5	3.2	3.4	2.8	3.3	3.4	‡ 13.9	‡ 89.0	10.4	‡ 9.3	3.5	3.2
25	3.5	3.2	3.3	‡ 2.9	‡ 3.4	3.4	7.3	61.5	17.4	4.9	3.1	3.2
26	3.4	3.2	3.3	2.9	3.4	‡ 2.8	5.2	775	‡ 8.4	4.5	3.0	3.2
27	3.4	3.3	3.2	2.8	3.4	2.5	4.8	646	6.7	‡ 3.6	‡ 3.0	‡ 3.2
28	‡ 3.4	3.4	‡ 3.2	‡ 2.7	1,130	2.2	‡ 4.5	‡ 144	5.8	3.8	3.1	3.2
29	3.4	‡ 3.4	3.3	2.7	93.6	74.1	4.5	58.4	4.9	4.0	3.2	3.2
30	3.4		3.3	2.6	1,580‡	‡ 88.5	4.4	15.7	4.5	‡ 4.2	3.2	3.2
31	3.5		‡ 3.4		‡ 373		‡ 4.4	6.8		3.8		3.1
Sum	111.1	98.2	125.3	89.6	3,370.4	957.6	3,555.6	2,898.4	7,857.7	546.1	95.5	99.3

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	High	Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1932-1972 Acre-Feet Average	Maximum	Minimum
Jan.			† 7	ø 3.9	†17	ø 3.4	3.6	220	193	875	82.7
Feb.			17	ø 3.6	23	ø 3.1	3.4	195	249	4,400	73.4
Mar.	2.71		13	36.6	† 1	ø 3.2	4.0	249	234	2,410	72.4
Apr.			† 1	ø 3.4	30	ø 2.6	3.0	178	1,007	15,500	55.1
May	6.43		30	7,600	† 2	ø 2.4	109	6,685	3,760	26,000	81.3
June	4.45		7	1,750	28	ø 2.2	31.9	1,899	6,838	54,800	59.5
July	7.58	1.81	19	10,900	10	ø 1.4	115	7,052	8,485	28,700	518
Aug.	6.28	2.03	26	7,180	22	ø 2.5	93.5	5,749	5,989	33,617	123
Sept.	8.32	2.00	21	14,400	3	4.1	262	15,586	7,470	42,200	123
Oct.	4.16		21	1,510	†10	ø 2.4	17.6	1,083	3,471	27,900	50.8
Nov.	2.55		23	8.6	†15	ø 3.0	3.2	189	364	2,980	64.9
Dec.			† 1	ø 3.3	31	ø 3.1	3.2	197	283	3,080	90.0
Yearly	8.32			14,400		ø 1.4	54.1	39,282	38,343	105,807	3,958

‡ Discharge measurement made on this day ø Mean daily † And other days

RIO GRANDE AT JOHNSON RANCH NEAR CASTOLON, TEXAS

DESCRIPTION: Cableway, gravity well, and digital water-stage recorder located on the left bank at latitude 29°02'05", longitude 103°23'30", and river mile 855.3; two miles west-northwest of old Johnson Ranch headquarters, 5.5 river miles downstream from Smoky Creek, 13.0 river miles upstream from Chisos Crossing and the Chihuahua-Coahuila state line, 14.0 river miles downstream from Castolon, Brewster County, Texas and Santa Helena Ranch, Chihuahua, and 393.5 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 2,045.30 feet above mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on 90 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: April 1936 through 1972.
REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station.
EXTREME FLOWS FROM RECORDS: Momentary: Max. 61,900 second-feet on September 27, 1958 with a gage height of 24.70 feet. A flow estimated at 97,000 second-feet with a stage of 24.6 feet occurred at this station site on October 3, 1932. Min. no flow several days in 1953, 1955, 1957 and 1958.

Average Flow in Second-Feet

Daily:	Max. 56,900	Sept. 10, 1942	Min. 0	Several days 1953 1955, 1957 & 1958
Monthly:	Max. 23,600	Sept. 1942	Min. 0	May 1953
Yearly:	Max. 4,780	1942	Min. 167	1953

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	389	‡ 1,010	424	565	572	1,330	480	854	‡ 2,100	5,350	596	‡ 475
2	374	681	‡ 403	587	‡ 574	‡ 1,230	576	‡ 801	2,460	‡ 5,030	‡ 576	469
3	‡ 379	601	393	‡ 670	538	944	‡ 694	762	2,440	4,810	565	469
4	372	‡ 600	380	661	‡ 517	900	705	739	2,930	4,550	549	‡ 476
5	375	571	373	634	520	‡ 841	686	954	‡ 3,910	3,270	541	472
6	376	555	‡ 587	598	564	951	‡ 674	851	2,740	1,890	548	460
7	‡ 355	‡ 551	667	‡ 580	565	1,210	681	930	2,730	1,480	‡ 549	450
8	355	552	679	568	593	‡ 3,130	713	‡ 1,010	‡ 3,810	1,250	523	453
9	379	515	662	563	‡ 624	1,760	776	1,510	3,200	1,120	513	450
10	‡ 1,520	479	671	576	602	1,130	792	1,460	2,990	‡ 1,030	509	451
11	1,720	476	669	‡ 590	617	1,110	740	‡ 2,260	‡ 2,820	946	505	‡ 444
12	1,780	467	682	586	559	‡ 931	719	2,300	3,930	864	507	457
13	1,820	477	‡ 696	564	556	2,100	864	2,100	‡ 6,470	1,210	‡ 488	456
14	1,890	‡ 482	686	559	550	2,020	‡ 980	‡ 3,840	6,090	1,110	497	448
15	1,890	486	635	542	‡ 557	‡ 1,340	828	2,810	5,320	805	487	‡ 455
16	1,850	489	‡ 617	534	589	1,230	912	2,030	6,350	‡ 767	‡ 479	443
17	‡ 1,840	‡ 489	613	567	629	1,510	‡ 1,310	‡ 2,450	6,700	746	482	435
18	1,850	477	597	‡ 594	579	1,040	1,950	2,030	8,210	711	479	436
19	1,830	474	705	558	‡ 555	‡ 928	5,350	1,980	‡ 6,660	‡ 688	481	‡ 453
20	1,810	474	759	544	541	997	3,010	1,990	6,180	725	‡ 491	449
21	‡ 1,800	463	‡ 661	‡ 507	560	909	‡ 4,090	1,790	11,200	771	493	449
22	1,810	470	618	489	‡ 597	834	2,900	‡ 1,450	7,990	1,100	475	435
23	1,830	‡ 438	‡ 623	494	608	‡ 786	1,890	2,730	7,940	695	498	428
24	‡ 1,830	429	601	529	571	717	‡ 1,410	‡ 1,770	6,510	‡ 648	516	435
25	1,810	427	591	‡ 555	‡ 541	655	1,210	1,680	6,300	628	518	441
26	1,750	423	593	561	537	‡ 603	1,260	2,380	‡ 6,360	619	518	448
27	1,730	416	747	535	940	592	1,120	3,970	6,290	‡ 629	‡ 483	‡ 453
28	‡ 1,720	426	‡ 784	‡ 514	1,580	566	‡ 1,110	‡ 3,710	6,100	630	481	441
29	1,680	‡ 445	758	491	834	525	1,060	2,860	5,900	609	481	429
30	1,690		756	537	‡ 5,970	‡ 580	978	1,910	5,610	603	474	420
31	1,560		‡ 716		‡ 4,190		‡ 878	1,780		603		408
Sum	42,364	14,843	19,346	16,852	28,329	33,399	41,346	59,691	158,240	45,892	15,302	13,888

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1968-1972 Acre-Feet Average	Maximum	Minimum
Jan.	3.99	1.85	†17	1,930	7	348	1,370	84,029	57,265	118,276	23,830
Feb.	3.37	1.96	1	1,360	27	412	512	29,441	40,269	111,869	7,743
Mar.	3.26	1.92	19	1,260	† 4	360	624	38,372	40,449	115,717	6,067
Apr.	2.54	2.15	4	695	†29	471	562	33,425	29,063	73,919	9,031
May	10.52	2.21	30	11,100	4	500	914	56,190	26,870	56,190	14,454
June	6.42	2.17	8	4,970	29	496	1,110	66,246	37,275	66,246	5,839
July	11.57	2.11	19	12,390	1	463	1,330	82,009	72,407	115,914	29,430
Aug.	6.91	2.50	27	5,530	4	714	1,930	118,395	89,919	132,724	30,689
Sept.	13.94	3.81	21	16,700	1	1,570	5,270	313,865	212,979	472,093	45,186
Oct.	6.64	2.40	1	5,530	29	597	1,480	91,025	131,003	188,986	44,151
Nov.	2.41	2.19	1	602	15	461	510	30,351	57,352	121,232	13,267
Dec.	2.21	2.04	† 1	481	31	392	448	27,546	39,181	54,064	27,546
Yearly	13.94	1.85		16,700		348	1,340	970,894	834,032	1,125,040	615,314

‡ Discharge measurement made on this day † And other days

RIO GRANDE AT FOSTER RANCH NEAR LANGTRY, TEXAS
(ABOVE MAIN STEM HEAD OF AMISTAD RESERVOIR)

DESCRIPTION: Cableway, bubbler gage, concrete control weir, and water-stage recorders (graphic and digital) located on the left bank at latitude 29°46'50", longitude 101°45'20", and river mile 651.0; 500 feet downstream from the Terrell-Val Verde County Line, 16.9 river miles upstream from Langtry, Texas, and 597.8 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 1,157.17 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 46 discharge measurements during the year, 42 by the United States Section and 4 by the Mexican Section of the Commission, and a continuous record of gage heights. Computations for high flows by shifting control methods. Low and medium flow computations based on a stable control weir rating curve defined by meter measurements. Records available: September 1961 through 1972.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. The concrete control weir was placed in operation on February 21, 1967.

EXTREME FLOWS FROM RECORDS: Momentary: Max 103,000 second-feet, determined by slope-area calculations, on June 11, 1965, with a gage height of 34.58 feet. Min. 188 second-feet on August 19, 1965.

Average Flow in Second-Feet

Daily:	Max. 30,100	June 11, 1965	Min. 217	July 1, 1968
Monthly:	Max. 10,700	Sept. 1966	Min. 322	March 1968
Yearly:	Max 2,100	1966	Min. 981	1963

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	675	1,920	693	1,010	‡ 1,300	6,170	811	1,250	2,080	5,110	941	783
2	693	1,950	681	1,020	751	2,840	772	1,160	1,930	4,880	928	783
3	‡ 698	1,920	704	‡ 971	749	1,750	‡ 801	1,090	2,220	4,690	916	779
4	695	1,530	707	854	766	1,520	737	1,070	2,470	4,500	906	‡ 770
5	679	1,160	693	861	769	‡ 1,290	779	1,030	2,520	4,320	879	769
6	676	1,030	‡ 690	924	1,920	1,150	894	994	3,430	3,970	‡ 875	749
7	675	‡ 973	686	916	958	1,120	921	983	3,200	2,800	879	746
8	683	946	684	885	‡ 912	1,080	911	1,130	2,630	2,250	862	746
9	683	916	828	847	782	1,690	907	2,110	3,260	1,990	867	741
10	‡ 663	879	921	‡ 843	778	2,540	875	1,920	3,250	1,770	855	734
11	659	872	929	826	1,010	1,890	885	2,000	‡ 2,980	1,600	839	‡ 727
12	924	865	922	814	872	‡ 1,480	915	3,640	2,800	1,500	816	727
13	1,790	837	‡1,210	828	810	1,890	926	3,430	2,860	1,400	‡ 815	734
14	1,840	‡ 813	952	832	853	1,760	901	‡ 2,570	3,910	1,310	808	735
15	1,900	804	937	810	‡ 788	2,560	1,000	2,550	‡ 5,330	1,260	808	746
16	1,960	792	938	787	787	2,010	1,170	3,300	4,560	1,630	804	746
17	‡ 1,990	783	932	‡ 786	1,230	1,520	‡ 1,210	3,390	4,890	1,320	795	745
18	1,990	783	888	797	2,940	1,290	1,070	2,270	5,610	1,190	792	‡ 734
19	2,020	783	878	788	1,300	‡ 1,370	1,340	2,660	6,520	1,140	780	734
20	2,030	783	‡ 912	827	885	1,340	2,970	2,210	6,220	1,100	‡ 770	727
21	2,000	783	954	830	812	1,130	4,740	2,200	8,960	1,350	771	722
22	2,000	‡ 783	1,090	‡ 799	‡ 781	1,100	3,720	2,180	11,400	1,490	780	727
23	1,980	768	998	777	760	1,140	3,260	2,060	9,450	1,380	783	734
24	‡ 1,990	753	930	‡ 762	757	1,050	‡ 2,600	1,890	7,300	1,490	783	727
25	2,000	755	886	734	783	1,020	2,100	2,950	‡ 6,240	1,180	804	721
26	2,010	750	874	742	809	974	1,710	1,950	5,540	1,050	795	‡ 703
27	1,990	733	‡ 855	759	862	928	1,480	2,300	5,570	‡ 1,010	‡ 808	698
28	1,940	‡ 710	843	755	790	885	1,440	‡ 3,510	5,530	993	820	698
29	1,900	710	859	769	872	838	1,360	3,350	5,450	972	819	705
30	1,900		985	889	‡ 2,640	815	1,300	‡ 3,740	5,310	982	801	710
31	‡ 1,920		1,010		3,180		‡ 1,280	2,630		977		710
Sum	45,553	28,084	27,069	25,042	34,206	48,140	45,785	69,517	143,420	62,604	24,899	22,810

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1968-1972 Acre-Feet Average	Maximum	Minimum
Jan.	2.91	2.07	†20	2,070	6	652	1,470	90,353	68,911	122,084	40,674
Feb.	2.86	2.10	† 1	1,960	29	686	968	55,704	53,873	115,301	22,435
Mar.	2.69	2.08	13	1,590	† 1	663	873	53,691	54,565	126,270	19,789
Apr.	3.39	2.11	30	3,000	25	698	835	49,670	47,591	102,938	21,025
May	5.78	2.14	6	8,630	3	712	1,100	67,847	45,994	67,847	30,108
June	4.95	2.21	1	6,950	30	800	1,600	95,484	64,725	95,484	22,463
July	4.95	2.12	21	6,950	4	710	1,480	90,813	93,918	140,961	70,486
Aug.	4.55	2.32	12	5,820	† 6	965	2,240	137,885	116,631	188,819	45,474
Sept.	9.37	2.81	†21	15,200	† 2	1,840	4,780	284,469	221,377	432,502	76,940
Oct.	4.34	2.30	1	5,250	31	938	2,020	124,173	161,527	214,377	61,705
Nov.	2.33	2.17	1	979	†19	770	830	49,386	73,455	129,741	37,160
Dec.	2.18	2.10	† 1	783	26	686	736	45,243	54,162	71,001	45,245
Yearly	9.37	2.07		15,200		652	1,580	1,144,718	1,056,729	1,290,242	922,282

‡ Discharge measurement made on this day † And other days

PECOS RIVER NEAR LANGTRY, TEXAS

DESCRIPTION: Cableway, concrete control weir, bubbler gage, and water-stage recorders (graphic and digital) located on the right bank at latitude 29°48'10", longitude 101°26'45", about 7.5 miles east of Langtry, Texas, 9.5 river miles upstream from the Pecos High Bridge, and 15.0 river miles from the confluence with the Rio Grande. This stream enters the Rio Grande at river mile 610.0, 24.1 river miles downstream from Langtry, Texas, and 638.8 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 1,133.08 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 48 discharge measurements during the year, 44 by the United States Section and 4 by the Mexican Section of the Commission, and a continuous record of gage heights. Computations for high flows by shifting control methods. Low and medium flow computations based on stable control weir rating curves defined by meter measurements. Records available: July 1967 through 1972. Records are also available for Pecos River near Comstock, 9.5 river miles downstream, from March 17 through December 3, 1898 and May 1900 through October 7, 1954; for Pecos River near Shumla, 3.5 river miles upstream, from October 8, 1954 through June 1967; and for Pecos River at Mouth near Comstock, from March 1961 through July 2, 1968.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. The flood of June 1954, which had a discharge of 948,000 second-feet at the gaging station near the railroad bridge 9.5 river miles downstream, exceeded a gage height of 100 feet at this station. This station was placed in operation June 30, 1967.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	235	220	194	168	‡ 145	178	154	123	197	228	193	175
2	234	219	187	170	152	188	150	120	191	‡ 222	188	175
3	‡ 231	218	188	‡ 167	254	185	‡ 150	119	198	217	191	175
4	230	214	188	166	240	175	150	128	359	214	190	177
5	225	212	188	166	197	‡ 167	149	139	‡ 310	211	188	179
6	227	214	‡ 186	166	181	163	151	136	290	209	‡ 185	176
7	228	‡ 212	186	169	195	157	150	131	257	204	184	‡ 175
8	225	211	187	166	‡ 253	157	148	131	239	206	179	175
9	226	211	185	159	275	159	148	140	247	202	181	175
10	‡ 228	211	‡ 185	‡ 160	273	157	‡ 145	203	239	‡ 198	183	175
11	221	212	185	166	279	156	142	185	‡ 222	193	183	‡ 174
12	221	211	184	169	390	156	142	183	214	192	185	175
13	221	211	‡ 185	166	533	157	142	635	207	189	‡ 187	176
14	218	‡ 206	185	158	416	159	139	‡ 454	197	187	182	175
15	216	201	184	152	‡ 373	239	134	311	188	187	181	172
16	215	201	182	148	301	‡ 205	137	286	185	‡ 185	184	172
17	‡ 216	201	180	‡ 145	302	217	142	265	190	184	184	170
18	220	200	174	144	266	317	142	250	‡ 208	183	184	‡ 172
19	221	199	171	147	280	‡ 326	380	236	197	179	181	177
20	221	198	‡ 831	148	271	276	207	221	191	178	178	177
21	221	200	193	144	244	243	172	‡ 211	357	226	‡ 178	177
22	221	‡ 201	182	142	‡ 226	218	164	202	‡ 579	245	181	175
23	219	198	175	142	215	201	158	201	426	213	182	177
24	‡ 221	199	177	‡ 142	206	191	‡ 152	198	337	202	189	176
25	214	195	175	138	193	179	146	186	‡ 330	196	185	177
26	212	194	175	135	183	‡ 172	141	188	297	192	183	177
27	216	194	‡ 176	141	178	166	137	189	279	191	183	178
28	220	‡ 194	174	145	174	160	132	‡ 182	261	191	183	178
29	222	194	169	145	169	157	129	176	246	193	175	180
30	225		168	145	‡ 170	154	129	177	237	‡ 194	175	182
31	220		164		175		‡ 128	189		194		178
Sum	6,890	5,951	6,263	4,619	7,709	5,735	4,790	6,495	7,875	6,205	5,505	5,452

Month	Current Year 1972 — Extreme Gage Feet		Extreme Second-Feet — High		Extreme Second-Feet — Low		Average Second-Feet	Total Acre-Feet	Period July 1967-1972 — Acre-Feet		
	High	Low	Day		Day				Average	Maximum	Minimum
Jan.	2.10	2.01	† 1	235	27	204	222	13,666	9,676	13,666	7,559
Feb.	2.07	1.97	2	224	†25	191	205	11,804	8,652	11,804	7,012
Mar.	4.37	1.87	20	4,410	†30	160	202	12,422	9,093	12,422	6,929
Apr.	1.91	1.78	† 1	172	†25	134	154	9,162	13,644	26,406	8,156
May	2.75	1.81	12	708	1	142	249	15,291	14,970	28,767	7,207
June	2.39	1.84	†18	372	†13	151	191	11,375	8,891	11,375	5,726
July	2.89	1.75	19	878	31	125	155	9,501	14,255	27,884	4,732
Aug.	3.30	1.72	13	1,520	2	117	210	12,883	34,955	162,055	4,178
Sept.	2.99	1.94	21	1,010	21	182	263	15,620	18,336	53,371	7,674
Oct.	2.23	1.92	21	282	20	175	200	12,307	12,073	26,916	7,123
Nov.	1.98	1.92	24	194	†29	175	184	10,919	9,936	16,167	6,589
Dec.	1.95	1.90	†29	185	† 7	169	176	10,814	10,035	14,325	7,662
Yearly	4.37	1.72		4,410		117	201	145,764	164,571	351,354	94,683

‡ Discharge measurement made on this day † And other days

DOLAN SPRINGS NEAR LOMA ALTA, TEXAS

DESCRIPTION: Concrete wall control, bubbler gage, and water-stage recorder located on the left bank of Snake Creek near its mouth, latitude 29°53'40", longitude 100°59'00", and about 12 miles west of Loma Alta, Val Verde County, Texas. Snake Creek enters Dolan Creek from the left side, 0.9 creek mile from the confluence with Devils River. Dolan Creek enters Devils River from the left side, 16.8 river miles upstream from Pafford Crossing, and 42.3 river miles from the confluence with the Rio Grande. The elevation of the zero of the gage has not been determined.

RECORDS: Based on 12 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: 1966 through 1972.

REMARKS: The flow of these springs is very uniform during periods of dry weather and is not modified by diversions or storage. All storm flow passing this station is deducted and is not included in the tabulation below. This station was established for purposes of correlating the flow of these springs with precipitation data and the flow of other springs in the area. The previous 90° v-notch weir was destroyed by a flood in 1971.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.8	13.1	10.2	7.4	‡ 5.6	6.4	4.4	3.2	13.1	14.2	15.5	12.9
2	15.6	12.8	9.9	7.5	5.6	‡ 6.4	4.3	3.1	13.0	‡ 14.2	15.5	12.9
3	‡ 15.6	12.5	9.9	‡ 7.4	5.5	6.3	‡ 4.4	3.1	12.8	14.4	‡ 15.7	12.8
4	15.4	‡ 12.6	9.9	7.5	5.5	6.1	4.4	3.0	12.7	14.2	15.7	‡ 12.8
5	15.2	12.6	9.6	7.6	5.5	5.9	4.3	3.0	‡ 12.5	14.2	15.6	13.0
6	15.1	12.5	‡ 9.7	7.6	5.5	5.8	4.3	2.9	12.5	14.3	15.6	13.2
7	15.3	12.3	9.9	7.6	5.6	5.8	4.2	‡ 2.9	12.6	14.3	15.3	13.1
8	15.1	12.2	9.6	7.5	5.8	5.6	4.2	2.9	12.6	14.5	15.3	13.1
9	15.1	12.2	9.2	7.2	6.2	5.4	4.1	2.9	12.6	14.6	15.0	13.4
10	15.1	12.2	9.2	7.0	6.2	5.4	4.1	2.9	12.6	14.8	15.0	13.3
11	14.9	12.0	9.3	7.1	6.2	5.4	4.1	2.8	12.8	14.8	14.9	13.2
12	14.8	12.0	9.2	7.2	6.3	5.3	4.0	7.4	12.8	15.0	14.5	13.0
13	14.8	11.8	9.0	7.2	6.4	5.2	4.0	11.7	12.8	15.4	14.3	12.8
14	14.5	11.8	9.0	7.2	6.4	5.1	3.9	16.0	12.8	15.4	14.4	12.6
15	14.5	11.7	8.9	7.1	6.2	5.1	3.9	15.8	12.9	15.5	14.3	12.5
16	14.3	11.5	8.8	7.0	6.3	5.0	3.8	15.7	12.9	15.5	14.2	12.3
17	14.2	11.4	8.8	6.9	6.3	5.0	3.8	15.5	12.9	15.5	14.2	12.2
18	14.4	11.0	8.6	6.9	6.3	4.9	3.8	15.4	12.9	15.7	14.2	12.2
19	14.2	10.9	8.6	6.8	6.3	4.9	3.7	15.2	13.1	15.7	14.2	11.9
20	14.2	10.8	9.3	6.6	6.3	4.9	3.7	15.0	13.1	15.7	14.1	11.7
21	14.2	10.9	8.9	6.5	6.2	4.9	3.6	14.9	13.1	15.5	14.1	11.5
22	13.9	10.9	8.6	6.4	6.2	4.8	3.6	14.7	13.1	15.8	14.0	11.5
23	13.9	10.7	8.3	6.3	6.2	4.8	3.5	14.6	13.3	15.8	13.9	11.3
24	13.7	10.7	8.2	6.2	6.2	4.7	3.5	14.4	13.3	15.6	13.7	11.1
25	13.5	10.7	8.2	6.1	6.3	4.7	3.5	14.2	13.3	15.8	13.4	11.1
26	13.5	10.5	8.0	6.0	6.3	4.7	3.4	14.1	13.3	15.8	13.4	11.0
27	13.4	10.3	8.0	5.9	6.2	4.6	3.4	13.9	13.5	15.8	13.3	10.7
28	13.4	10.3	8.0	5.8	6.2	4.5	3.3	13.8	13.6	15.8	13.3	10.7
29	13.3	10.3	8.0	5.7	6.2	4.5	3.3	13.6	13.8	15.6	13.2	10.5
30	13.1		7.9	5.6	6.2	4.5	3.2	13.5	13.8	15.2	13.2	10.4
31	13.1		7.8		6.2		3.2	13.3		15.5		10.1
Sum	447.1	335.2	276.5	204.8	188.4	156.6	118.9	315.4	390.1	470.1	433.0	374.8

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1966-1972 Acre-Feet Average	Maximum	Minimum
Jan.	2.13	2.01	1	15.8	†30	13.1	14.4	887	312	887	77.2
Feb.	2.01	1.84	1	13.1	†27	10.2	11.6	665	230	665	66.8
Mar.	1.85	1.64	1	10.3	31	7.5	8.9	548	192	548	70.4
Apr.	1.66	1.44	8	7.9	† 1	5.6	6.8	406	153	406	65.5
May	1.51	1.43	†13	6.4	† 3	5.5	6.1	374	203	415	66.2
June	1.51	1.38	† 1	6.5	†28	4.5	5.2	311	197	372	87.9
July			† 1	∅ 4.4	†30	∅ 3.2	3.8	236	183	369	80.9
Aug.			14	∅ 16.0	11	∅ 2.8	10.2	626	333	936	93.8
Sept.	2.04	1.96	†29	13.8	† 5	12.5	13.0	774	381	1,042	85.5
Oct.	2.13	2.06	†22	15.8	† 1	14.2	15.2	932	449	1,134	87.9
Nov.	2.12	2.05	†29	15.7	† 3	13.2	14.4	859	459	1,048	84.5
Dec.	2.08	1.92	9	13.4	31	10.1	12.1	743	446	1,014	83.9
Yearly				∅ 16.0		∅ 2.8	10.1	7,361	3,538	7,361	1,257.2

∅ Mean daily † And other days

DEVILS RIVER AT PAFFORD CROSSING NEAR COMSTOCK, TEXAS
(ABOVE HEAD OF DEVILS BRANCH, AMISTAD RESERVOIR)

DESCRIPTION: Concrete control wall with rectangular notch opening of 900 second-foot capacity, cableway, bubbler gage, water-stage recorders (graphic & digital), and binary decimal transmitter located on the left bank at latitude 29°40'35", longitude 101°00'00", about 11.5 miles east of Comstock, Val Verde County, Texas, and 25.5 river miles from the confluence with the Rio Grande. The confluence is located at river mile 568.1, 0.6 river mile upstream from Amistad Dam, and 680.7 river miles downstream from American Dam at El Paso, Texas. The zero of the gage is 1,131.88 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 39 discharge measurements during the year, 37 by the United States Section and 2 by the Mexican Section of the Commission, a stable rating curve based on meter measurements, and a continuous record of gage heights. Records available: 1960 through 1972. Records are also available from May 1900 through March 1914 for a station 23.8 river miles downstream; from December 1923 through September 1932 for a station 22.8 river miles downstream; from September 2, 1932 through August 1957 for a station 21.0 river miles downstream; from August 7, 1954 through January 1958 for a station 5.4 river miles upstream; and from August 1954 through May 31, 1968 for a station at the mouth 24.7 river miles downstream. A graph of Devils River flow from 1871 through 1939 may be found in Water Bulletin No. 9.

REMARKS: At this station the flow of this spring-fed stream is very uniform during periods of dry weather and is not modified by diversions or storage. The transmitter relays gage height data upon interrogation from the Amistad Dam hydrographic office of the United States Section of the Commission and is also programmed to relay similar data to this same office at predetermined time intervals. Transmission is via radio. In December 1968, the control wall was raised one-half foot and a cable was installed 550 feet upstream.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 173,000 second-feet on August 12, 1972 with a gage height of 16.18 feet. Min. 48.6 second-feet on August 20, 1969.

Average Flow in Second-Feet

Daily:	Max. 77,800	Aug. 15, 1971	Min. 53.7		Aug. 20, 1969
Monthly:	Max. 6,650	Aug. 1971	Min. 64.3		August 1964
Yearly:	Max. 836	1971	Min. 99.9		1968

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	363	318	254	236	210	250	207	159	402	382	384	333
2	358	309	248	235	226	244	205	162	397	374	383	334
3	361	299	251	234	272	239	200	162	1,420	375	378	335
4	345	300	257	229	228	236	200	166	548	371	376	334
5	355	303	258	232	215	‡ 233	199	166	458	365	369	334
6	356	302	258	234	220	230	199	169	439	358	‡ 367	319
7	354	296	261	234	652	225	198	166	424	351	360	325
8	353	304	255	226	‡ 418	227	197	164	409	351	354	324
9	356	298	255	223	291	226	197	304	390	349	352	327
10	‡ 350	299	250	231	263	223	‡ 196	436	387	‡ 348	356	324
11	342	303	254	232	250	219	194	‡ 5,740	‡ 380	350	351	324
12	343	298	258	227	239	225	196	72,700	374	351	355	326
13	341	294	‡ 255	225	256	228	198	45,600	370	345	‡ 349	325
14	331	‡ 291	255	220	269	227	201	‡ 6,810	370	340	348	321
15	326	289	251	211	259	255	201	1,780	367	338	346	313
16	324	282	252	207	254	252	201	1,070	359	‡ 335	‡ 350	312
17	‡ 331	277	252	‡ 204	252	230	‡ 203	809	360	335	349	312
18	340	277	252	213	255	224	205	625	‡ 361	335	350	‡ 314
19	343	275	247	218	241	‡ 223	207	561	346	328	345	316
20	336	278	‡ 348	214	232	220	205	528	341	333	‡ 341	319
21	328	277	308	246	229	217	200	504	440	367	340	302
22	324	‡ 277	268	214	‡ 230	209	200	487	412	1,140	341	306
23	324	273	260	205	233	211	203	476	384	667	343	305
24	‡ 323	272	256	‡ 205	233	212	‡ 205	464	367	‡ 470	357	304
25	320	272	251	196	224	213	197	‡ 457	‡ 355	442	339	303
26	318	258	247	203	204	‡ 210	198	455	351	428	335	‡ 302
27	327	263	‡ 249	207	206	212	200	440	697	422	‡ 339	304
28	327	‡ 266	242	207	207	209	200	‡ 431	450	415	330	304
29	325	267	236	208	210	208	200	427	417	413	333	306
30	316		234	203	‡ 227	207	200	421	387	‡ 410	333	305
31	‡ 315		234		229		198	414		397		304
Sum	10,455	8,317	7,956	6,579	7,934	6,744	6,210	143,253	13,162	12,585	10,553	9,816

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1960-1972 Acre-Feet Average	Maximum	Minimum
Jan.	1.93	1.82	3	370	30	300	337	20,737	11,107	20,737	4,647
Feb.	1.85	1.71	† 1	318	26	240	287	16,497	9,161	16,497	3,999
Mar.	1.97	1.68	20	397	1	224	257	15,780	8,795	15,780	4,186
Apr.	1.84	1.58	21	312	25	178	219	13,049	10,257	38,777	4,520
May	3.19	1.62	7	1,900	26	196	256	15,737	10,406	32,716	4,517
June	1.76	1.59	16	287	30	206	225	13,377	17,008	54,328	4,259
July	1.59	1.53	† 1	209	31	192	200	12,317	11,003	25,513	4,034
Aug.	16.18	1.53	12	173,000	1	158	4,620	284,138	61,069	408,908	3,955
Sept.	3.97	1.88	3	4,920	19	337	439	26,106	32,362	273,004	5,000
Oct.	3.33	1.83	22	2,300	19	324	406	24,962	18,240	50,845	5,004
Nov.	1.95	1.83	1	390	†25	324	352	20,932	12,811	25,004	4,532
Dec.	1.85	1.75	† 1	335	21	284	317	19,470	11,985	23,236	4,697
Yearly	16.18	1.53		173,000		158	665	483,102	214,204	605,057	72,494

‡ Discharge measurement made on this day † And other days

RIO GRANDE BELOW AMISTAD DAM NEAR DEL RIO, TEXAS

DESCRIPTION: Cableway, gravity well, concrete control weir, and water-stage recorders (graphic and digital), and binary decimal transmitter located on the left bank at latitude 29°25'30", longitude 101°02'20", and river mile 565.3, 2.2 river miles downstream from Amistad Dam, 10.6 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 683.5 river miles downstream from American Dam at El Paso, Texas. The zero of the gage is 898.94 feet above mean sea level, U.S.C. & G.S. datum.

RECORDS: Based on 53 discharge measurements during the year, 22 by the Mexican Section and 31 by the United States Section of the Commission, and a continuous record of gage heights. Computations for high flows by shifting control methods. Low and medium flow computations based on a stable control weir rating curve defined by meter measurements. Records available: September 1954 through 1972. Records are also available from May 1900 through April 1915 for a station 1.9 miles upstream; from December 1919 through March 1920 for a station 1.7 miles downstream near McKee's Switch; from July 2, 1941 through August 1954, and October 1960 through 1967 for a station at the international highway bridge; and from December 1923 through July 2, 1941, and 1968 through 1972 for a station approximately 10.4 miles downstream.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. On May 31, 1968, Amistad Dam started impounding water. After this day, flow at this station is controlled largely by releases from Amistad Reservoir, 2.3 river miles upstream. The transmitter relays gage height data upon interrogation by telephone via private line to the Amistad office.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 1,158,000 second-feet on June 28, 1954, determined by slope-area computation, with a gage height of 55.72 feet at the old station site 500 feet downstream. This is the greatest rate of discharge recorded at any point on the Rio Grande. Max. since Amistad Dam, 13,100 second-feet on Sept. 24, 1971. Min. 48.0 second-feet on Dec. 21, 1968 with a gage height of 1.20 feet.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	190	197	307	459	466	383	466	316	276	4,810	190	84.4
2	190 ‡	197 ‡	298 ‡	459 ‡	470 ‡	385	466	396	276	4,810	190	84.4
3	192	197	301 ‡	463 ‡	466	325	466 ‡	470	278	3,880	190	84.4
4	192	197	301	463 ‡	459	276	466	378	273	2,270	190	82.6
5	195	197	301	463	463	279	466	270	274	4,840	190	80.9
6 ‡	195	197 ‡	302	463	473 ‡	279	466	270	274	4,840	190	73.8
7	192	197	307	456	466	276	463	259 ‡	274	4,840	190	82.6
8	195	197	304	448 ‡	466	276	466	251	274	4,840	190	79.1
9	195	197	307	459	470	279	752	273	274	4,840	‡190	79.1
10 ‡	195 ‡	197 ‡	310 ‡	463	470	276	413	245	274	4,840	133	79.1
11	195	197	310	463 ‡	470	276	473	174	274	4,840	79.1	79.1
12 ‡	195	197	310	459	466	280	424	646	274	4,800 ‡	82.6	79.1
13	197	197 ‡	310 ‡	463	463	281 ‡	371	167	274	4,800	80.9	79.1
14	197	197	316	463	466	279	364	166	274	4,800	118	79.1
15	197	197	313	452	470	295	364	169	276	4,800	195	77.7
16	197	197 ‡	316	459 ‡	470	212	364	184	276	2,580	192	77.7
17	197	197 ‡	319 ‡	459	357	151	364	173	276	86.9	192	77.7
18	197 ‡	197	319	470 ‡	276	151	371	169	233	167	186	79.1
19	197	197	323	494	276	149	371	169	158	309	188	80.9
20 ‡	197	200	336 ‡	470	276	149	371	169	158	313	657	‡ 82.6
21	197 ‡	200	322	463	276	146	329	165	174	313	1,090	77.7
22	197	197	319	466	279	144	270	165	1,880	310	1,080	‡ 77.7
23	197	197 ‡	319	466	279	183	270	167 ‡	4,060	310	1,090	75.9
24	197 ‡	222	316 ‡	466 ‡	279	270	270	167	4,060	304	1,080	75.9
25	197	304 ‡	396 ‡	459	279	273	265	201 ‡	4,060	307	1,070	75.9
26	197	304	456	470	276	305	262	306	3,960	307	1,070	75.9
27	200	304 ‡	452 ‡	466	299	364	255	276	4,800	248	1,080	77.7
28	197	304	445	470	385	396 ‡	255	273	4,800	‡ 192	1,080	77.7
29	200	304	448	463	385 ‡	470	255	276	4,800	188	526	77.7
30	200		459 ‡	466	388	466	268	276	4,800	185	‡ 86.2	77.7
31	200		459		388 ‡		268	276		185		77.7
Sum	6,076	6,279	10,601	13,903	12,172	8,279	11,694	7,862	42,614	75,154.9	13,063.8	2,450.0

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	High	Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1968-1972 Acre-Feet Average	Maximum	Minimum
Jan.	0.46	0.43	30	210	† 1	190	196	12,065	66,462	91,162	12,065
Feb.	.56	.43	†25	304	† 1	197	217	12,467	154,653	467,202	12,467
Mar.	.72	.52	†26	459	1	284	342	21,022	58,941	92,735	21,022
Apr.	.89	.66	18	675	30	392	463	27,570	57,958	93,899	27,570
May	.75	.52	6	519	†18	276	392	24,137	97,385	193,689	24,137
June	.72	.33	29	470	22	138	276	16,418	119,778	260,436	16,418
July	1.67	.49	9	2,190	†29	251	378	23,182	74,328	140,070	23,182
Aug.	2.43	.36	12	4,630	11	153	254	15,589	49,140	90,368	15,589
Sept.	2.46	.36	†27	4,800	†19	153	1,420	84,512	59,600	89,218	17,606
Oct.	2.49	.26	† 5	4,840	17	82.6	2,420	149,039	65,027	149,039	3,734
Nov.	1.15	.23	23	1,100	†30	74.2	434	25,928	45,055	99,274	7,068
Dec.	.26	.23	† 1	84.4	6	71.0	79.1	4,859	42,056	93,025	4,859
Yearly	2.49	0.23		4,840		71.0	576	416,788	890,383	1,198,511	416,788

‡ Discharge measurement made on this day † And other days

CARMINA SPRINGS AT AMISTAD DAM NEAR CD. ACUNA, COAHUILA

DESCRIPTION: Cipolletti weir of 70.6 second-foot capacity and staff gage located on a creek that runs almost parallel to Amistad Dam, about 130 feet from the confluence with the Rio Grande, at latitude 29°26'50", longitude 101°03'35", and about 11.0 miles northwest of Cd. Acuna, Coahuila. This creek enters the Rio Grande from the Mexican side at river mile 567.3, 0.2 river mile downstream from Amistad Dam, 12.6 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 681.5 river miles downstream from American Dam at El Paso, Texas. The elevation of the zero of the gage has not been determined.

RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: 1969 through 1972.

REMARKS: At least six separate springs have emerged on the watershed of this small creek since operation of Amistad Dam began in May 1968. Prior to this time, flow in this creek was exclusively from storm runoff. All storm water from surface runoff passing this station is deducted and is not included in the tabulation below. On September 24, 1971, a flood destroyed part of the weir.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.7	32.8	35.7	38.1	35.3	36.0	36.0	36.0	50.5	53.0	52.3	53.0
2	30.1	32.8	‡ 35.7	38.1	35.3	36.0	36.4	35.7	50.5	‡ 53.0	52.3	53.0
3	30.5	33.2	35.7	38.1	35.3	36.0	‡ 36.7	35.7	50.9	53.0	52.3	53.0
4	30.5	33.5	35.7	38.1	35.3	36.0	36.4	35.0	‡ 50.9	53.0	52.3	‡ 53.0
5	30.8	33.9	35.7	38.1	35.3	‡ 36.0	36.0	35.0	50.5	53.0	52.3	53.0
6	‡ 30.8	33.9	35.7	‡ 38.1	35.3	36.0	35.7	35.0	49.8	53.0	52.3	53.3
7	30.8	‡ 34.3	35.7	38.1	35.3	36.0	35.3	‡ 35.0	49.4	53.0	52.3	53.3
8	30.8	34.6	35.7	38.1	35.3	36.0	35.3	35.7	48.7	52.6	52.3	53.3
9	30.8	34.6	‡ 35.7	38.1	‡ 35.0	36.0	35.0	36.7	48.4	52.6	52.3	53.3
10	30.8	35.0	36.0	38.5	35.0	36.0	35.0	37.4	47.7	‡ 52.6	52.3	53.3
11	30.8	35.3	36.0	38.5	35.0	36.0	‡ 34.6	38.5	‡ 47.3	52.6	52.3	‡ 53.3
12	30.8	35.7	36.4	38.5	35.0	36.0	35.0	39.2	47.7	52.6	52.3	53.3
13	30.8	35.7	36.4	‡ 38.5	35.0	36.0	35.0	39.9	48.4	52.6	‡ 52.3	53.3
14	30.8	‡ 36.0	36.7	38.1	35.0	36.0	35.7	41.0	48.7	52.6	52.3	53.3
15	‡ 30.8	36.0	36.7	37.4	‡ 35.0	36.0	36.0	41.7	49.1	52.6	52.3	53.3
16	31.9	36.0	‡ 37.1	37.1	35.0	36.0	36.4	42.7	49.4	‡ 52.6	52.3	53.3
17	‡ 32.6	36.0	37.1	36.7	34.6	36.0	‡ 36.7	43.4	50.1	52.6	52.6	53.3
18	32.6	36.0	37.4	36.0	34.6	36.0	36.4	44.5	‡ 50.5	52.6	52.6	‡ 53.3
19	32.6	36.0	37.4	35.7	34.6	‡ 36.0	36.0	45.2	50.9	52.6	52.6	53.3
20	32.6	36.0	37.4	35.0	34.6	36.0	35.7	45.9	51.2	52.6	52.6	53.3
21	32.6	36.0	37.4	‡ 34.6	34.6	36.0	35.0	47.0	51.6	52.6	‡ 52.6	53.3
22	32.6	36.0	37.8	35.0	‡ 34.6	‡ 36.0	35.0	47.7	51.9	52.6	52.6	53.3
23	32.6	36.0	37.8	35.0	34.6	36.0	34.6	49.1	52.3	‡ 52.6	52.6	53.3
24	‡ 32.6	36.0	‡ 37.8	35.3	34.6	36.0	‡ 34.3	‡ 49.4	52.6	52.6	52.6	53.3
25	32.6	‡ 36.0	37.8	35.3	34.3	36.0	34.6	49.8	‡ 53.0	52.6	52.6	53.3
26	32.6	36.4	37.8	35.7	34.3	‡ 36.0	34.6	49.8	53.7	52.6	53.0	‡ 53.7
27	32.6	36.4	37.8	‡ 35.7	34.3	36.0	35.0	50.1	54.4	52.6	‡ 53.0	53.7
28	32.6	36.4	37.8	35.7	34.3	36.0	35.0	‡ 50.1	55.1	52.6	53.0	53.7
29	32.6	36.4	37.8	35.7	‡ 34.3	36.0	35.7	50.1	55.8	52.6	53.0	53.7
30	32.6		37.8	35.7	34.3	36.0	35.7	50.1	56.5	‡ 52.6	53.0	53.7
31	32.6		38.1		34.3		‡ 36.0	50.5		52.6		53.7
Sum	1,022.9		1,106.6		1,080.0			1,322.9		1,633.4		1,653.2
	980.5		1,141.6		1,079.3			1,100.8		1,527.5		1,575.2

Month	Current Year 1972 Extreme Gage Feet		∅ Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Period 1969-1972 Acre-Feet		
			High		Low						
	High	Low	Day		Day				Average	Maximum	Minimum
Jan.			†17	32.6	1	29.7	31.4	1,939	1,131	1,939	364
Feb.			†26	36.4	† 1	32.8	35.3	2,029	1,091	2,029	373
Mar.			31	38.1	† 1	35.7	36.7	2,264	1,138	2,264	525
Apr.			†10	38.5	21	34.6	36.7	2,195	1,065	2,195	629
May			† 1	35.3	†25	34.3	35.0	2,140	1,092	2,140	709
June			† 1	36.0	† 1	36.0	36.0	2,144	1,043	2,144	598
July			† 3	36.7	24	34.3	35.7	2,185	1,043	2,185	533
Aug.			31	50.5	† 4	35.0	42.7	2,625	1,305	2,625	540
Sept.			30	56.5	11	47.3	50.9	3,030	1,502	3,030	593
Oct.			† 1	53.0	† 8	52.6	52.6	3,240	1,655	3,240	830
Nov.			†26	53.0	† 1	52.3	52.6	3,124	1,690	3,124	964
Dec.			†26	53.7	† 1	53.0	53.3	3,279	1,803	3,279	1,077
Yearly				56.5		29.7	41.7	30,194	15,558	30,194	9,080

‡ Discharge measurement made on this day ∅ Mean daily † And other days

LOURDES SPRING NEAR CD. ACUNA, COAHUILA

DESCRIPTION: Rectangular sharp-crested weir of 28.8 second-foot capacity and staff gage located at latitude 29°26'35", longitude 101°03'30", at the base of the high bank of the Rio Grande, and about 11.1 miles northwest of Cd. Acuna, Coahuila. This creek enters the Rio Grande from the Mexican side at river mile 566.9, 12.2 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 681.9 river miles downstream from American Dam at El Paso, Texas. The zero of the gage is 926.28 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: 1969 through 1972.

REMARKS: This spring emerged since operation of Amistad Dam began in May 1968. All storm water from surface runoff passing this station is deducted and is not included in the tabulation below.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
2	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8
3	1.4	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8
4	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8 ‡	1.8
5	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
6 ‡	1.4	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8
7	1.4 ‡	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8
8	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
9	1.4	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
10	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8
11	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8 ‡	1.8	1.8	1.8 ‡
12	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
13	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8
14	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8
15 ‡	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
16	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8
17 ‡	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8
18	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8 ‡	1.8
19	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
20	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
21	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8 ‡	1.8
22	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
23	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8
24 ‡	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8
25	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8
26	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8
27	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8
28	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8
29	1.8	1.8	1.8	1.8 ‡	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
30	1.8		1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8 ‡	1.8	1.8
31	1.8		1.8		1.8		1.8 ‡	1.8		1.8		1.8
Sum	51.8	52.2	55.8	54.0	55.8	54.0	55.8	55.8	54.0	55.8	54.0	55.8

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Ø Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1969-1972 Acre-Feet Average	Maximum	Minimum
Jan.			†11	1.8	† 1	1.4	1.8	101	109	161	86.7
Feb.			† 1	1.8	† 1	1.8	1.8	101	111	185	78.6
Mar.			† 1	1.8	† 1	1.8	1.8	109	127	209	89.2
Apr.			† 1	1.8	† 1	1.8	1.8	105	115	139	105
May			† 1	1.8	† 1	1.8	1.8	109	98.9	127	74.6
June			† 1	1.8	† 1	1.8	1.8	105	106	126	92.4
July			† 1	1.8	† 1	1.8	1.8	109	110	131	86.7
Aug.			† 1	1.8	† 1	1.8	1.8	109	113	126	94.9
Sept.			† 1	1.8	† 1	1.8	1.8	105	107	115	102
Oct.			† 1	1.8	† 1	1.8	1.8	109	105	129	86.7
Nov.			† 1	1.8	† 1	1.8	1.8	105	94.0	105	81.9
Dec.			† 1	1.8	† 1	1.8	1.8	109	86.7	109	64.9
Yearly				1.8		1.4	1.8	1,276	1,282.6	1,438.5	1,180.1

‡ Discharge measurement made on this day Ø Mean daily † And other days

HILDA SPRING NEAR CD. ACUNA, COAHUILA

DESCRIPTION: Rectangular sharp-crested weir of 53.0 second-foot capacity and staff gage located at latitude 29° 26' 20", longitude 101° 03' 35", about 328 feet from the confluence with the Rio Grande, and about 11.0 miles northwest of Cd. Acuna, Coahuila. This creek enters the Rio Grande from the Mexican side at river mile 566.7, 11.8 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 682.1 river miles downstream from American Dam at El Paso, Texas. The zero of the gage is 908.14 feet above mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: 1969 through 1972.
REMARKS: This spring emerged since operation of Amistad Dam began in May 1968. All storm water from surface runoff passing this station is deducted and is not included in the tabulation below.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.8	2.8	2.8	3.2	2.8	2.8	2.8	2.8	3.5	3.5	3.5	3.5
2	2.8	2.8	2.8	3.2	2.8	2.8	2.8	2.8	3.5	‡ 3.5	3.5	3.5
3	2.8	2.8	2.8	3.2	2.8	2.8	‡ 2.8	2.8	3.9	3.5	3.5	3.5
4	2.8	2.8	2.8	3.2	2.8	2.8	2.8	2.8	‡ 3.9	3.5	3.5	‡ 3.5
5	2.8	2.8	2.8	3.2	2.8	2.8	2.8	3.2	3.9	3.5	3.5	3.5
6	‡ 2.8	2.8	2.8	‡ 3.2	2.8	2.8	2.8	‡ 3.2	3.9	3.5	‡ 3.5	3.5
7	2.8	‡ 2.8	2.8	3.2	2.8	2.8	2.8	3.2	3.9	3.5	3.5	3.5
8	2.8	2.8	2.8	3.2	2.8	2.8	2.8	3.2	4.2	3.5	3.5	3.5
9	2.8	2.8	2.8	3.2	‡ 2.8	2.8	2.8	3.2	4.2	3.5	3.5	3.5
10	2.8	2.8	2.8	3.2	2.8	2.8	2.8	3.2	4.2	‡ 3.5	3.5	3.5
11	2.8	2.8	2.8	3.2	2.8	2.8	‡ 2.8	3.5	‡ 4.2	3.5	3.5	‡ 3.5
12	2.8	2.8	2.8	3.2	2.8	2.8	2.8	3.5	4.2	3.5	3.5	3.5
13	2.8	2.8	2.8	‡ 3.2	2.8	2.8	2.8	3.9	4.2	3.5	‡ 3.5	3.5
14	2.8	‡ 2.8	2.8	3.2	2.8	2.8	2.8	‡ 3.9	4.2	3.5	3.5	3.5
15	‡ 2.8	2.8	2.8	3.2	‡ 2.8	2.8	2.8	3.9	4.2	3.5	3.5	3.5
16	2.8	2.8	2.8	3.2	2.8	2.8	3.2	3.5	4.2	‡ 3.5	3.5	3.5
17	‡ 2.8	2.8	2.8	3.2	2.8	2.8	‡ 3.2	3.5	4.2	3.5	3.5	3.5
18	2.8	2.8	2.8	2.8	2.8	2.8	3.2	3.5	‡ 4.2	3.5	3.5	‡ 3.5
19	2.8	2.8	2.8	2.8	2.8	2.8	3.2	3.5	4.2	3.5	3.5	3.5
20	2.8	2.8	2.8	2.8	2.8	2.8	3.2	3.2	4.2	3.5	3.5	3.5
21	2.8	2.8	2.8	‡ 2.8	2.8	2.8	3.2	‡ 3.2	3.9	3.5	‡ 3.5	3.5
22	2.8	2.8	2.8	2.8	‡ 2.8	2.8	3.2	3.2	3.9	3.5	3.5	3.5
23	2.8	2.8	2.8	2.8	2.8	2.8	3.2	3.2	3.9	‡ 3.5	3.5	3.5
24	‡ 2.8	2.8	2.8	3.2	2.8	2.8	‡ 3.2	3.2	3.5	3.5	3.5	3.5
25	2.8	‡ 2.8	2.8	3.2	2.8	2.8	3.2	3.2	‡ 3.5	3.5	3.5	3.5
26	2.8	2.8	2.8	‡ 3.2	2.8	2.8	3.2	3.2	3.5	3.5	3.5	‡ 3.5
27	2.8	2.8	2.8	3.2	2.8	2.8	3.2	3.2	3.5	3.5	‡ 3.5	3.5
28	2.8	2.8	2.8	3.2	2.8	2.8	3.2	‡ 3.2	3.5	3.5	3.5	3.5
29	2.8	2.8	2.8	3.2	‡ 2.8	2.8	2.8	3.2	3.5	3.5	3.5	3.5
30	2.8		2.8	3.2	2.8	2.8	2.8	3.5	3.5	‡ 3.5	3.5	3.5
31	‡ 2.8		3.2		2.8		‡ 2.8	3.5		3.5		3.5
Sum	86.8	81.2	87.2	93.6	86.8	84.0	92.0	102.1	117.3	108.5	105.0	108.5

Month	Current Year 1972 Extreme Gage Feet		Ø Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Period 1969-1972 Acre-Feet		
			High		Low						
	High	Low	Day		Day				Average	Maximum	Minimum
Jan.			† 1	2.8	† 1	2.8	2.8	173	110	173	57.6
Feb.			† 1	2.8	† 1	2.8	2.8	162	95.7	162	38.9
Mar.			31	3.2	† 1	2.8	2.8	174	98.9	174	43.8
Apr.			† 1	3.2	†18	2.8	3.2	185	95.7	185	43.8
May			† 1	2.8	† 1	2.8	2.8	173	101	173	61.6
June			† 1	2.8	† 1	2.8	2.8	168	91.6	168	58.4
July			†16	3.2	† 1	2.8	2.8	183	93.2	183	60.8
Aug.			†13	3.9	† 1	2.8	3.2	203	106	203	64.9
Sept.			† 8	4.2	† 1	3.5	3.9	234	121	234	79.4
Oct.			† 1	3.5	† 1	3.5	3.5	217	126	217	86.7
Nov.			† 1	3.5	† 1	3.5	3.5	210	127	210	84.3
Dec.			† 1	3.5	† 1	3.5	3.5	217	143	217	86.7
Yearly				4.2		2.8	3.2	2,299	1,309.1	2,299	871.0

‡ Discharge measurement made on this day Ø Mean daily † And other days

SPRING M-15 NEAR CD. ACUNA, COAHUILA

DESCRIPTION: Rectangular sharp-crested weir of 8.1 second-foot capacity and staff gage located at latitude 29°25'10", longitude 101°02'45", about 1300 feet from the confluence with the Rio Grande, and about 9.4 miles northwest of Cd. Acuna, Coahuila. This creek enters the Rio Grande from the Mexican side at river mile 565.0, 10.3 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 683.8 river miles downstream from American Dam at El Paso, Texas. The zero of the gage is 925.13 feet above mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: 1969 through 1972.
REMARKS: This spring emerged since operation of Amistad Dam began in May 1968. All storm water from surface runoff passing this station is deducted and is not included in the tabulation below.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.4	1.4	1.4	1.8	1.4	1.4	1.4	1.4	1.8	1.8	1.8	2.1
2	1.4	1.4	1.4	1.8	1.4	1.4	1.4	1.4	1.8	‡ 1.8	1.8	2.1
3	1.4	1.4	1.4	1.8	1.4	1.4 ‡	1.4	1.4	1.8	1.8	1.8	2.1
4	1.4	1.4	1.4	1.8	1.4	1.4	1.4	1.4 ‡	1.8	1.8	1.8 ‡	2.1
5	1.4	1.4	1.4	1.8	1.4	1.4	1.4	1.4	1.8	1.8	1.8	2.1
6 ‡	1.4	1.4	1.4 ‡	1.8	1.4	1.4	1.4	1.4	1.8	1.4	‡ 1.8	2.1
7	1.4 ‡	1.4	1.4	1.8	1.4	1.4	1.4 ‡	1.4	1.8	1.4	1.8	2.1
8	1.4	1.4	1.4	1.8	1.4	1.4	1.4	1.8	1.8	1.4	1.8	2.1
9	1.4	1.4	1.4	1.8 ‡	1.4	1.4	1.4	1.8	1.8	1.4	1.8	2.1
10	1.4	1.4	1.4	1.8	1.4	1.4	1.4	1.8	1.8	‡ 1.4	1.8	2.1
11	1.4	1.4	1.4	1.8	1.4	1.4 ‡	1.4	2.1	‡ 1.8	1.4	1.8	‡ 2.1
12	1.4	1.4	1.4	1.8	1.4	1.4	1.4	2.1	1.8	1.4	1.8	2.1
13	1.4	1.4	1.8 ‡	1.8	1.4	1.4	1.4	2.5	1.8	1.4	‡ 1.8	2.1
14	1.4 ‡	1.4	1.8	1.8	1.4	1.4	1.4 ‡	2.5	1.8	1.4	1.8	2.1
15 ‡	1.4	1.4	1.8	1.8 ‡	1.4	1.4	1.4	2.5	1.8	1.4	1.8	2.1
16	1.4	1.4	1.8	1.8	1.4	1.4	1.4	2.5	1.8	‡ 1.4	1.8	2.1
17 ‡	1.4	1.4	1.8	1.8	1.4	1.4 ‡	1.4	2.1	1.8	1.4	1.8	2.1
18	1.4	1.4	1.8	1.8	1.4	1.4	1.4	2.1	‡ 1.8	1.4	1.8	‡ 2.1
19	1.4	1.4	1.8	1.8	1.4	1.4	1.4	2.1	1.8	1.8	1.8	2.1
20	1.4	1.4	1.8	1.8	1.4	1.4	1.4	2.1	1.8	1.8	1.8	2.1
21	1.4	1.4	1.8 ‡	1.8	1.4	1.4	1.4 ‡	2.1	1.8	1.8	‡ 1.8	2.1
22	1.4	1.4	1.8	1.8 ‡	1.4	1.4	1.4	2.1	1.8	1.8	1.8	2.1
23	1.4	1.4	1.8	1.8	1.4	1.4	1.4	2.1	1.8 ‡	1.8	1.8	2.1
24 ‡	1.4	1.4	1.8	1.8	1.4	1.4 ‡	1.4	2.1	1.8	1.8	2.1	2.1
25	1.4 ‡	1.4	1.8	1.8	1.4	1.4	1.4	1.8 ‡	1.8	1.8	2.1	2.1
26	1.4	1.4	1.8 ‡	1.8	1.4	1.4	1.4	1.8	1.8	1.8	2.1 ‡	2.1
27	1.4	1.4	1.8	1.8	1.4	1.4	1.4	1.8	1.8	1.8 ‡	2.1	2.1
28	1.4	1.4	1.8	1.8	1.4	1.4	1.4 ‡	1.8	1.8	1.8	2.1	2.1
29	1.4	1.4	1.8	1.8 ‡	1.4	1.4	1.4	1.8	1.8	1.8	2.1	2.1
30	1.4		1.8	1.8	1.4	1.4	1.4	1.8	1.8	‡ 1.8	2.1	2.1
31 ‡	1.4		1.8		1.4		1.4 ‡	1.8		1.8		2.1
Sum	43.4	40.6	51.0	54.0	43.4	42.0	43.4	58.8	54.0	50.6	56.1	65.1

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	∅ Extreme Second-Feet High Day	High	∅ Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1969-1972 Acre-Feet Average	Maximum	Minimum
Jan.			† 1	1.4	† 1	1.4	1.4	86.7	43.8	86.7	21.1
Feb.			† 1	1.4	† 1	1.4	1.4	81.1	38.9	81.1	19.5
Mar.			†13	1.8	† 1	1.4	1.8	101	41.3	101	21.9
Apr.			† 1	1.8	† 1	1.8	1.8	105	43.8	105	21.1
May			† 1	1.4	† 1	1.4	1.4	86.7	53.5	86.7	21.9
June			† 1	1.4	† 1	1.4	1.4	84.3	37.3	84.3	21.1
July			† 1	1.4	† 1	1.4	1.4	86.7	38.1	86.7	21.1
Aug.			†13	2.5	† 1	1.4	1.8	116	43.0	116	0
Sept.			† 1	1.8	† 1	1.8	1.8	105	44.6	105	0
Oct.			† 1	1.8	† 6	1.4	1.8	98.9	46.2	98.9	0
Nov.			†24	2.1	† 1	1.8	1.8	110	54.3	110	21.1
Dec.			† 1	2.1	† 1	2.1	2.1	131	65.7	131	21.9
Yearly				2.5		1.4	1.8	1,192.4	550.5	1,192.4	257.2

‡ Discharge measurement made on this day ∅ Mean daily † And other days

SPRING M-5 NEAR CD. ACUNA, COAHUILA

DESCRIPTION: Rectangular sharp-crested weir of 17.7 second-foot capacity and staff gage located at latitude 29°25'05", longitude 101°02'35", at the base of the high bank of the Rio Grande, and about 9.2 miles northwest of Cd. Acuna, Coahuila. This creek enters the Rio Grande from the Mexican side at river mile 564.8, 10.1 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 684.0 river miles downstream from American Dam at El Paso, Texas. The zero of the gage is 932.38 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: 1969 through 1972.

REMARKS: This spring emerged since operation of Amistad Dam began in May 1968. All storm water from surface runoff passing this station is deducted and is not included in the tabulation below.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.5	2.5
2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	‡ 2.8	2.5	2.5
3	2.5	2.5	2.5	2.5	2.5	2.5	‡ 2.8	2.5	2.5	2.8	2.5	2.5
4	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.8	‡ 2.5	2.8	2.5	‡ 2.5
5	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.8	2.5	2.8	2.5	2.5
6	‡ 2.5	2.5	2.5	‡ 2.5	2.5	2.5	2.8	2.8	2.5	2.8	‡ 2.5	2.5
7	2.5	‡ 2.5	2.5	2.5	2.5	2.5	2.5	‡ 2.8	2.5	2.8	2.5	2.5
8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.5	2.8	2.5	2.5
9	2.5	2.5	2.5	2.5	‡ 2.5	2.5	2.5	2.8	2.8	2.8	2.5	2.5
10	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.8	2.8	2.5	2.5
11	2.5	2.5	2.5	2.5	2.5	2.5	‡ 2.5	2.8	‡ 2.8	2.8	2.5	‡ 2.5
12	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.8	2.8	2.5	2.5
13	2.5	2.5	2.5	‡ 2.5	2.5	2.5	2.5	2.8	2.8	2.8	‡ 2.5	2.5
14	2.5	‡ 2.5	2.5	2.5	2.5	2.5	2.5	‡ 2.8	2.8	2.5	2.5	2.5
15	‡ 2.5	2.5	2.5	2.5	‡ 2.5	2.5	2.5	2.8	2.8	2.5	2.5	2.5
16	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.5	‡ 2.5	2.5	2.5
17	‡ 2.5	2.5	2.5	2.5	2.5	2.5	‡ 2.5	2.8	2.5	2.5	2.5	2.5
18	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	‡ 2.5	2.5	2.5	‡ 2.5
19	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
20	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
21	2.5	2.5	2.5	‡ 2.5	2.5	2.5	2.5	‡ 2.5	2.5	2.5	‡ 2.5	2.5
22	2.5	2.5	2.5	2.5	‡ 2.5	2.5	2.5	2.5	2.8	2.5	2.5	2.5
23	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.8	‡ 2.5	2.5	2.5
24	‡ 2.5	2.5	2.5	2.5	2.5	2.5	‡ 2.5	2.5	2.8	2.5	2.5	2.5
25	2.5	‡ 2.5	2.5	2.5	2.5	2.5	2.5	2.5	‡ 2.8	2.5	2.5	2.5
26	2.5	2.5	2.5	‡ 2.5	2.5	2.5	2.5	2.5	2.8	2.5	2.5	‡ 2.5
27	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.8	2.5	‡ 2.5	2.5
28	2.5	2.5	2.5	2.5	2.5	2.5	2.5	‡ 2.5	2.8	2.5	2.5	2.5
29	2.5	2.5	2.5	2.5	‡ 2.5	2.5	2.5	2.5	2.8	2.5	2.5	2.5
30	2.5		2.5	2.5	2.5	2.5	2.5	2.5	2.8	‡ 2.5	2.5	2.5
31	‡ 2.5		2.5		2.5		‡ 2.5	2.5		2.5		2.5
Sum	77.5	72.5	77.5	75.0	77.5	75.0	78.7	81.7	79.8	81.4	75.0	77.5

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	∅ Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1969-1972 Acre-Feet Average	Maximum	Minimum
Jan.			† 1	2.5	† 1	2.5	2.5	152	125	152	86.7
Feb.			† 1	2.5	† 1	2.5	2.5	142	109	142	78.6
Mar.			† 1	2.5	† 1	2.5	2.5	152	111	152	64.9
Apr.			† 1	2.5	† 1	2.5	2.5	147	105	147	63.2
May			† 1	2.5	† 1	2.5	2.5	152	109	152	64.9
June			† 1	2.5	† 1	2.5	2.5	147	97.2	147	63.2
July			† 4	2.8	† 1	2.5	2.5	155	90.8	155	43.8
Aug.			† 4	2.8	†18	2.5	2.5	162	106	162	43.8
Sept.			† 9	2.8	† 1	2.5	2.8	158	104	158	42.2
Oct.			† 1	2.8	†14	2.5	2.5	161	111	161	43.8
Nov.			† 1	2.5	† 1	2.5	2.5	147	111	147	63.2
Dec.			† 1	2.5	† 1	2.5	2.5	152	113	152	64.9
Yearly				2.8		2.5	2.5	1,827	1,292	1,827	723.2

‡ Discharge measurement made on this day ∅ Mean daily † And other days

ARROYO JABONCILLOS NEAR CD. ACUNA, COAHUILA

DESCRIPTION: Cipolletti weir of 70.6 second-foot capacity and staff gage located at latitude 29°24'25", longitude 101°02'25", about 660 feet from the confluence with the Rio Grande, and about 8.6 miles northwest of Cd. Acuna, Coahuila. This creek enters the Rio Grande from the Mexican side at river mile 564.5, 9.8 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 684.3 river miles downstream from American Dam at El Paso, Texas. The elevation of the zero of the gage has not been determined.

RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: 1969 through 1972.

REMARKS: At least 9 separate springs have emerged along this creek since operation of Amistad Dam began in May 1968. Prior to this time, flow in this creek was exclusively from storm runoff. All storm water from surface runoff passing this station is deducted and is not included in the tabulation below.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46.6	48.4	48.4	52.3	49.4	49.4	49.8	51.9	63.2	69.6	69.9	72.0
2	47.0	48.4	48.4	52.3	49.4	49.4	49.8	52.6	63.6 ‡	69.6	69.9	72.0
3	47.0	48.4	48.4	52.3	49.4	49.4 ‡	49.8	53.7	63.9	69.6	69.9	71.7
4	47.3	48.4	48.4	52.3	49.4	49.4	49.8	54.4 ‡	64.3	69.6	69.9 ‡	71.7
5	47.3	48.4	48.4	52.3	49.4 ‡	49.4	50.1	55.4	64.3	69.6	69.9	71.7
6 ‡	47.7	48.4	48.4 ‡	52.3	49.4	49.4	50.1	56.2	64.3	69.6 ‡	69.9	71.7
7	47.7 ‡	48.4	48.4	52.3	49.4	49.4	50.1 ‡	57.2	64.3	69.6	69.9	71.7
8	47.7	48.4	48.4	52.3	49.4	49.4	50.1	57.2	64.6	69.6	69.6	71.3
9	47.7	48.4	48.4	52.3 ‡	49.4	49.4	50.5	57.2	64.6	69.6	69.6	71.3
10	47.7	48.4	48.7	52.3	49.4	49.4	50.5	57.6	64.6 ‡	69.6	69.2	71.3
11	47.7	48.4	48.7	52.3	49.4	49.4 ‡	50.5	57.6 ‡	65.0	69.6	69.2	71.3 ‡
12	47.7	48.4	49.1	52.3	49.4	49.4	50.5	57.6	65.0	69.6	68.9	71.3
13	47.7	48.4	49.1 ‡	52.3	49.4	49.4	50.9	57.9	65.3	69.6	68.9	71.3
14	47.7 ‡	48.4	49.4	51.9	49.4	49.4	50.9 ‡	57.9	65.3	69.6 ‡	68.9	71.3
15 ‡	47.7	48.4	49.4	51.6 ‡	49.4	49.4	50.9	58.6	65.3	69.6	69.2	71.3
16	47.7	48.4	49.8	51.2	49.4	49.4	51.2	59.0	65.3 ‡	69.6	69.2	71.3
17 ‡	47.7	48.4	50.1	50.9	49.4	49.4 ‡	51.2	59.7	65.7	69.6	69.2	71.3
18	47.7	48.4	50.5	50.9	49.4	49.4	51.2	60.4 ‡	65.7	69.6	69.2	71.3 ‡
19	47.7	48.4	50.5	50.5	49.4	49.4	51.6	60.7	66.0	69.6	69.6	71.7
20	47.7	48.4	50.9	50.1	49.4	49.4	51.6	61.4	66.4	69.6	69.6	71.7
21	48.0	48.4	51.2	49.8 ‡	49.4	49.4	51.9 ‡	62.2	66.7	69.6	69.6 ‡	71.7
22	48.0	48.4	51.6	49.8 ‡	49.4 ‡	49.8	51.9	62.2	67.5	69.6	69.9	71.7
23	48.0	48.4	51.6	49.8	49.4	49.8	52.3	62.2	67.8 ‡	69.6	70.6	71.7
24 ‡	48.0	48.4	51.9	50.1	49.4	49.8 ‡	52.3	62.2	68.5	69.6	71.0	71.7
25	48.0 ‡	48.4	51.9	50.1	49.4	49.8	51.9	62.2 ‡	68.9	69.6	71.3	71.7
26	48.0	48.4	51.9 ‡	50.1	49.4 ‡	49.8	51.9	62.2	68.9	69.6	72.0 ‡	71.7
27	48.0	48.4	51.9	50.1	49.4	49.8	51.6	62.2	69.2	69.6 ‡	72.4	71.7
28	48.0	48.4	51.9	50.1	49.4	49.8	51.6 ‡	62.2	69.2	69.6	72.4	71.7
29	48.4	48.4	51.9	50.5 ‡	49.4	49.8	51.2	62.5	69.2	69.6	72.0	71.7
30	48.4		51.9	50.5	49.4	49.8	51.2	62.9	69.6 ‡	69.9	72.0	71.7
31 ‡	48.4		52.3		49.4		50.9 ‡	63.2		69.9		71.7
Sum	1403.6		1,537.9		1,485.6		1,830.4		2,158.2		2,218.9	
	1,479.9		1,551.8		1,531.4		1,579.8		1,982.2		2,102.8	

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	∅ Extreme Second-Feet High Day	High	∅ Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1969-1972 Acre-Feet Average	Maximum	Minimum
Jan.			†29	48.4	1	46.6	47.7	2,935	1,501	2,935	349
Feb.			† 1	48.4	† 1	48.4	48.4	2,783	1,366	2,783	381
Mar.			31	52.3	† 1	48.4	50.1	3,077	1,450	3,077	526
Apr.			† 1	52.3	†21	49.8	51.2	3,050	1,409	3,050	636
May			† 1	49.4	† 1	49.4	49.4	3,040	1,403	3,040	721
June			†22	49.8	† 1	49.4	49.4	2,949	1,341	2,949	678
July			†23	52.3	† 1	49.8	50.9	3,133	1,396	3,133	769
Aug.			31	63.2	1	51.9	59.0	3,630	1,677	3,630	782
Sept.			31	69.6	1	63.2	66.0	3,932	1,960	3,932	782
Oct.			†30	69.9	† 1	69.6	69.6	4,279	2,331	4,279	1,097
Nov.			†27	72.4	†12	68.9	70.3	4,171	2,357	4,171	1,282
Dec.			† 1	72.0	† 8	71.3	71.7	4,401	2,508	4,401	1,398
Yearly				72.4		46.6	56.9	41,380	20,699	41,380	9,850

‡ Discharge measurement made on this day ∅ Mean daily † And other days

ARROYO DEL BUEY NEAR CD. ACUNA, COAHUILA

DESCRIPTION: Cipolletti weir of 35.3 second-foot capacity, located at latitude 29°24'20", longitude 101°02'25", 0.2 creek mile from the confluence with the Rio Grande, and about 8.5 miles northwest of Cd. Acuna, Coahuila. This stream enters the Rio Grande from the Mexican side at river mile 564.0, 3.5 river miles downstream from Amistad Dam, 9.3 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 684.8 river miles downstream from the American Dam at El Paso, Texas. The elevation of the zero of the gage has not been determined.

RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: November 1961 through 1972.

REMARKS: The flow of this stream is not modified by diversions or storage. Prior to 1969 discharges were based on a continuous record of gage heights and the weir discharge table. Storm flow is deducted and not included in the tabulation below. This station was established for investigational purposes in connection with Amistad Dam to determine what effect storage in Amistad Reservoir will have on the flow of this stream. At approximately 0.3 creek mile upstream from the weir four springs have emerged since Amistad Reservoir storage began. Backwater from the Rio Grande will affect the flow of this stream when the flow in the river is approximately 20,000 second-feet.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.1	8.1	7.8	7.8	7.8	7.4	7.4	7.4	8.5	8.1	7.8	7.8
2	8.1	8.1	7.8	7.8	7.8	7.4	7.4	7.4	8.5	‡ 8.1	7.8	7.8
3	8.1	8.1	7.8	7.8	7.8	7.4	‡ 7.4	7.4	8.5	8.1	7.8	7.8
4	8.1	8.1	7.8	7.8	7.8	7.4	7.4	7.8	‡ 8.5	8.1	7.8	‡ 7.8
5	8.1	8.1	7.8	7.8	7.8	‡ 7.4	7.4	7.8	8.5	8.1	7.8	7.8
6	‡ 8.1	8.1	7.8	‡ 7.8	7.8	7.4	7.4	7.8	8.5	8.1	‡ 7.8	7.8
7	8.1	‡ 8.1	7.8	7.8	7.8	7.4	7.4	‡ 7.8	8.1	7.8	7.8	7.8
8	8.1	8.1	7.8	7.8	7.8	7.4	7.4	7.8	8.1	7.8	7.8	7.4
9	8.1	8.1	7.8	7.8	‡ 7.8	7.4	7.4	7.8	8.1	7.8	7.8	7.4
10	8.1	8.1	7.8	7.8	7.8	7.4	7.4	8.1	8.1	‡ 7.8	7.8	7.4
11	7.8	8.1	7.8	7.8	7.8	7.4	‡ 7.4	8.1	‡ 8.1	7.8	7.8	‡ 7.4
12	7.8	8.1	7.8	7.8	7.8	‡ 7.4	7.4	8.1	8.1	7.8	7.8	7.4
13	7.8	8.1	7.8	‡ 7.8	7.8	7.4	7.4	8.1	8.1	7.8	‡ 7.8	7.4
14	7.8	‡ 8.1	7.8	7.8	7.8	7.4	7.4	‡ 8.5	8.1	7.8	7.8	7.4
15	‡ 7.8	8.1	7.8	7.8	‡ 7.8	7.4	7.4	8.5	8.1	7.8	7.8	7.4
16	7.8	8.1	7.8	7.8	7.8	7.4	7.4	8.5	8.1	‡ 7.8	7.8	7.4
17	‡ 7.8	8.1	7.8	7.8	7.8	7.4	‡ 7.4	8.5	8.1	7.8	7.8	7.4
18	7.8	8.1	7.8	7.8	7.8	7.4	7.4	8.8	‡ 8.1	7.8	7.8	‡ 7.4
19	7.8	8.1	7.8	7.8	7.8	7.4	7.4	8.8	8.1	7.8	7.8	7.4
20	7.8	8.1	7.8	7.8	7.8	7.4	7.4	8.8	8.1	7.8	7.8	7.4
21	8.1	7.8	7.8	‡ 7.8	7.8	7.4	7.4	‡ 9.2	8.1	7.8	‡ 7.8	7.4
22	8.1	7.8	7.8	7.8	‡ 7.8	‡ 7.4	7.4	9.2	8.1	7.8	7.8	7.4
23	8.1	7.8	7.8	7.8	7.8	7.4	7.4	9.2	8.5	‡ 7.8	7.8	7.4
24	‡ 8.1	7.8	7.8	7.8	7.8	7.4	‡ 7.4	9.2	8.5	7.8	7.8	7.4
25	8.1	‡ 7.8	7.8	7.8	7.8	7.4	7.4	8.8	‡ 8.5	7.8	7.8	7.4
26	8.1	7.8	7.8	‡ 7.8	7.4	‡ 7.4	7.4	8.8	8.5	7.8	7.8	‡ 7.4
27	8.1	7.8	7.8	7.8	7.4	7.4	7.4	8.5	8.5	7.8	‡ 7.8	7.4
28	8.1	7.8	7.8	7.8	7.4	7.4	7.4	‡ 8.5	8.5	7.8	7.8	7.4
29	8.1	7.8	7.8	7.8	‡ 7.4	7.4	7.4	8.5	8.1	7.8	7.8	7.4
30	8.1		7.8	7.8	7.4	7.4	7.4	8.5	8.1	‡ 7.8	7.8	7.4
31	‡ 8.1		7.8		7.4		‡ 7.4	8.5		7.8		7.4
Sum	248.1	232.2	241.8	234.0	239.4	222.0	229.4	258.7	247.8	243.6	234.0	232.2

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Ø Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period # Nov. 1961-1972 Acre-Feet **Average	Maximum	Minimum
Jan.			† 1	8.1	†11	7.8	8.1	492	180	528	6.8
Feb.			† 1	8.1	†21	7.8	8.1	461	162	477	5.4
Mar.			† 1	7.8	† 1	7.8	7.8	478	171	520	9.3
Apr.			† 1	7.8	† 1	7.8	7.8	462	227	540	6.3
May			† 1	7.8	†26	7.4	7.8	473	234	544	10.9
June			† 1	7.4	† 1	7.4	7.4	441	200	492	6.3
July			† 1	7.4	† 1	7.4	7.4	456	173	503	6.5
Aug.			†21	9.2	† 1	7.4	8.5	512	205	517	6.7
Sept.			† 1	8.5	† 7	8.1	8.1	492	231	493	6.6
Oct.			† 1	8.1	† 7	7.8	7.8	482	246	513	6.5
Nov.			† 1	7.8	† 1	7.8	7.8	462	203	483	6.3
Dec.			† 1	7.8	† 8	7.4	7.4	461	209	538	6.5
Yearly				9.2		7.4	7.8	5,672	2,441	6,031	216.8

‡ Discharge measurement made on this day # Some months missing
Ø Mean daily † And other days ** See explanation in REMARKS above

ERNESTINA AND ROSITA SPRINGS NEAR CD. ACUNA, COAHUILA

In order to determine what effect storage in Amistad Reservoir has on the flow of various Mexican springs in the vicinity of Amistad Dam, gaging stations were established in November 1961 at Ernestina and Rosita Springs. The stations and springs are described as follows:

ERNESTINA SPRING

DESCRIPTION: A 90° V-notch weir of 1.4 second-foot capacity and staff gage located at the spring on the right bank of Arroyo del Buey about 100 feet from the right bank of the Rio Grande at latitude 29°24'20", longitude 101°02'15", and about 8.5 miles northwest of Cd. Acuna, Coahuila. This spring enters the Rio Grande at river mile 564.0, 9.3 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, 3.5 river miles downstream from Amistad Dam, and 684.8 river miles downstream from the American Dam at El Paso, Texas. The elevation of the zero of the gage has not been determined.

RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: November 7, 1961 through 1972.

REMARKS: The flow of this spring is small and very uniform except during periods of very heavy rainfall at which time the capacity of the weir may be exceeded. The daily flow throughout the year was 0.106 second-foot, or 48 gallons per minute. The volume for the year amounted to 78.0 acre-feet. Waters from this spring have a high sulphur content.

ROSITA SPRING

DESCRIPTION: Cipolletti weir of 3.5 second-foot capacity and staff gage located at the spring about 65 feet from the right bank of the Rio Grande at latitude 29°21'55", longitude 101°00'25", and about 5.5 miles northwest of Cd. Acuna, Coahuila. This spring, located in Mexico, enters the Rio Grande at river mile 560.4, 5.7 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, 7.1 river miles downstream from Amistad Dam, and 688.4 river miles downstream from the American Dam at El Paso, Texas. The elevation of the zero of the gage has not been determined.

RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: November 17, 1961 through 1972.

REMARKS: The flow of this spring is very uniform during periods of dry weather and is not modified by diversions or storage. The daily flow throughout the year ranged from 0.141 to 0.636 second-foot, or 63 to 286 gallons per minute, and the monthly average ranged from 0.141 to 0.353 second-foot, or 63 to 158 gallons per minute. The total volume for the year amounted to 125 acre-feet.

MARIS SPRING NEAR CD. ACUNA, COAHUILA

DESCRIPTION: Cipolletti weir of 106 second-foot capacity and staff gage located at the spring about 100 feet from the right bank of the Rio Grande at latitude 29°24'00", longitude 101°01'55", and about 8 miles northwest of Cd. Acuna, Coahuila. This spring enters the Rio Grande at river mile 563.5, 8.8 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, 4.0 river miles downstream from Amistad Dam, and 685.3 river miles downstream from the American Dam at El Paso, Texas. The elevation of the zero of the gage has not been determined.

RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: November 14, 1961 through 1972.

REMARKS: The flow of this spring is very uniform during periods of dry weather and is not modified by diversions or storage. This station was established for investigational purposes in connection with Amistad Dam to determine what effect storage in Amistad Reservoir will have on the flow of this spring. All storm water from surface runoff passing this station is deducted and is not included in the tabulation below. Prior to May 1969 the weir had an 11.1 second foot-capacity.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.5	14.5	10.9	10.6	13.1	14.8	15.9	15.9	17.0	16.2	15.2	15.2
2	14.5	14.1	10.9	10.6	13.1	15.2	15.9	15.9	17.0	‡ 16.2	15.2	15.2
3	14.5	14.1	10.9	10.6	13.1	15.2	‡ 15.9	15.9	16.6	16.2	15.2	15.2
4	14.5	14.1	10.9	10.6	13.1	15.2	15.9	15.9	‡ 16.6	16.2	15.2	‡ 15.2
5	14.5	14.1	10.9	10.6	13.1	15.2	15.9	15.9	16.6	16.2	15.2	15.2
6	‡ 14.5	13.8	10.9	‡ 10.6	13.1	15.2	15.9	15.9	16.6	16.2	‡ 15.2	15.2
7	14.5	‡ 13.8	10.9	10.6	13.1	15.2	15.9	‡ 15.9	16.6	16.2	15.2	15.2
8	14.5	13.8	10.9	10.2	13.1	‡ 15.2	15.9	16.2	16.2	16.2	15.2	15.2
9	14.5	13.4	10.9	10.2	‡ 13.4	15.2	15.9	16.2	16.2	16.2	15.2	15.2
10	14.5	13.4	10.9	10.2	13.4	15.2	15.9	16.6	16.2	‡ 16.2	15.2	15.2
11	14.5	13.1	10.9	10.2	13.4	15.2	‡ 15.9	17.0	‡ 16.2	16.2	15.2	‡ 15.2
12	14.5	13.1	10.9	9.9	13.4	15.2	15.9	17.0	16.2	16.2	15.2	15.2
13	14.5	12.7	10.9	‡ 9.9	13.4	15.2	15.9	17.3	16.2	15.9	‡ 15.2	15.2
14	14.5	‡ 12.7	10.6	9.9	13.4	15.2	15.9	‡ 17.3	16.2	15.9	15.2	15.2
15	‡ 14.5	12.7	10.6	9.9	‡ 13.8	15.5	15.9	17.7	16.2	15.9	15.2	15.2
16	14.5	12.4	10.6	9.9	13.8	15.5	15.9	18.0	16.2	‡ 15.9	15.2	15.2
17	‡ 14.5	12.4	10.6	9.9	13.8	15.5	‡ 15.9	18.0	16.2	15.9	15.2	15.2
18	14.5	12.4	10.6	9.9	13.8	15.5	15.9	18.4	‡ 16.2	15.5	15.2	‡ 15.2
19	14.5	12.4	10.6	9.9	13.8	15.5	15.9	18.7	16.2	15.5	15.2	15.2
20	14.5	12.0	10.6	9.9	13.8	15.5	15.9	18.7	16.2	15.5	15.2	15.2
21	14.5	12.0	10.6	‡ 9.9	13.8	15.5	15.9	‡ 19.1	16.2	15.5	‡ 15.2	15.2
22	14.5	12.0	10.6	9.9	‡ 14.1	‡ 15.5	15.9	19.1	16.2	15.2	15.2	15.2
23	14.5	12.0	10.6	9.9	14.1	15.5	15.9	18.7	16.2	‡ 15.2	15.2	15.2
24	‡ 14.5	11.7	10.6	9.9	14.1	15.5	‡ 15.9	18.4	16.2	15.2	15.2	15.2
25	14.5	‡ 11.7	10.6	9.9	14.1	15.5	15.9	18.4	‡ 16.2	15.2	15.2	15.2
26	14.5	11.7	10.6	‡ 9.9	14.1	‡ 15.5	15.9	18.0	16.2	15.2	15.2	‡ 15.2
27	14.5	11.3	10.6	9.9	14.1	15.9	15.9	17.7	16.2	15.2	‡ 15.2	15.2
28	14.5	11.3	10.6	9.9	14.1	15.9	15.9	‡ 17.3	16.2	15.2	15.2	15.2
29	14.5	11.3	10.6	9.9	‡ 14.1	15.9	15.9	17.3	16.2	15.2	15.2	15.2
30	14.5		10.6	9.9	14.5	15.9	15.9	17.0	16.2	‡ 15.2	15.2	15.2
31	‡ 14.5		10.6		14.5		‡ 15.9	17.0		15.2		15.2
Sum	449.5	370.0	332.5	303.1	423.6	462.0	492.9	536.4	489.6	487.9	456.0	471.2

Current Year 1972 — Period # Dec. 1961-1972

Month	Extreme Gage Feet High	Extreme Gage Feet Low	ø Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Acre-Feet **Average	Maximum	Minimum
Jan.			† 1	14.5	† 1	14.5	14.5	890	303	919	4.4
Feb.			1	14.5	†27	11.3	12.7	734	263	804	4.1
Mar.			† 1	10.9	†14	10.6	10.6	661	276	898	4.9
Apr.			† 1	10.6	†12	9.9	10.2	601	285	802	4.2
May			†30	14.5	† 1	13.1	13.8	840	392	976	8.7
June			†27	15.9	1	14.5	15.5	917	336	917	6.0
July			† 1	15.9	† 1	15.9	15.9	977	319	977	7.9
Aug.			†21	19.1	† 1	15.9	17.3	1,064	345	1,064	6.2
Sept.			† 1	17.0	† 8	16.2	16.2	973	485	1,111	5.4
Oct.			† 1	16.2	†22	15.2	15.9	969	527	1,420	4.6
Nov.			† 1	15.2	† 1	15.2	15.2	904	452	1,338	4.2
Dec.			† 1	15.2	† 1	15.2	15.2	934	390	1,187	4.4
Yearly				19.1		9.9	14.5	10,464	4,373	10,855	146.2

‡ Discharge measurement made on this day # Some months missing ø Mean daily
** See explanation in REMARKS above † And other days

EIGHT MILE CREEK NEAR DEL RIO, TEXAS

DESCRIPTION: Concrete wall with 90° V-notch weir of 6.9 second-foot capacity, bubbler gage, and water-stage recorder located on the left bank at latitude 29°24'05", longitude 101°00'55", 0.8 creek mile from the confluence with the Rio Grande, and about 8 miles northwest of Del Rio, Texas. This stream enters the Rio Grande from the United States side at river mile 562.9, 4.6 river miles downstream from Amistad Dam, 8.2 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 685.9 river miles downstream from the American Dam at El Paso, Texas. The elevation of the zero of the gage has not been determined.

RECORDS: Based on a continuous record of gage heights and the weir discharge table. Records available: March 1961 through 1972.

REMARKS: The source of flow of this stream is from surface runoff during rainy periods and the subsequent flow from underground seepage as a result of such rains. **Flow of 0.05 second-foot or less are shown as zero in the discharge tabulations; however, the monthly volumes in the annual and period summary are based on the sum of mean daily discharges computed to the nearest hundredth of a second-foot when the mean daily flow is less than 0.1 second-foot. All storm water from surface runoff passing this station is deducted and is not included in the tabulation below. This station was established for investigational purposes in connection with Amistad Dam to determine what effect storage in Amistad Reservoir may have on the flow of this stream.

EXTREME FLOWS FROM RECORDS:

			Average Flow in Second-Feet			
Daily:	Max.	5.3	Aug. 12, 1972	Min.	0	Occasionally
Monthly:	Max.	3.5	Dec. 1972	Min.	0	Occasionally
Yearly:	Max.	2.1	1972	Min.	0	Several years

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.1	1.1	1.1	1.5	1.5	1.6	1.3	1.4	2.8	2.8	2.9	3.3
2	1.1	1.1	1.2	1.5	1.5	1.4	1.3	1.4	2.8	2.8	3.0	3.4
3	1.2	1.1	1.2	1.6	1.5	1.4	1.3	1.6	2.8	2.8	3.2	3.6
4	1.1	1.1	1.2	1.5	1.4	1.3	1.4	1.8	2.7	2.9	3.2	3.5
5	1.4	1.2	1.2	1.5	1.4	1.3	1.4	1.7	2.7	3.0	3.2	3.6
6	1.3	1.2	1.2	1.5	1.4	1.3	1.4	1.5	2.7	3.0	3.2	3.3
7	1.3	1.3	1.2	1.5	1.6	1.3	1.4	1.5	2.6	2.9	3.2	3.3
8	1.3	1.3	1.2	1.4	1.4	1.3	1.4	1.4	2.6	2.9	3.2	3.5
9	1.2	1.4	1.2	1.4	1.4	1.4	1.4	1.7	2.6	2.9	3.2	3.6
10	1.2	1.4	1.2	1.4	1.4	1.3	1.3	2.5	2.6	2.9	3.1	3.7
11	1.2	1.4	1.2	1.4	1.4	1.3	1.3	4.5	2.6	2.8	3.1	3.3
12	1.1	1.4	1.2	1.4	1.4	1.4	1.3	5.3	2.5	2.8	3.1	3.4
13	1.2	1.3	1.2	1.4	1.4	1.7	1.3	4.8	2.5	2.8	3.1	3.5
14	1.0	1.3	1.2	1.4	1.4	1.7	1.3	4.5	2.3	2.8	3.1	3.4
15	.9	1.2	1.2	1.5	1.5	1.9	1.3	4.0	2.3	2.8	3.1	3.4
16	1.0	1.1	1.3	1.5	1.5	2.1	1.3	3.7	2.3	2.7	3.2	3.4
17	1.2	1.1	1.2	1.5	1.5	1.9	1.3	3.6	2.2	2.7	3.3	3.4
18	1.2	1.0	1.1	1.6	1.4	1.8	1.6	3.6	2.1	2.6	3.4	3.4
19	1.3	1.1	1.2	2.1	1.4	1.8	1.8	3.2	2.1	2.6	3.2	3.4
20	1.2	1.1	1.9	2.4	1.4	1.7	1.9	3.0	2.2	2.6	3.1	3.4
21	1.2	1.1	2.0	2.1	1.4	1.6	1.7	3.0	2.3	2.6	3.2	3.4
22	1.2	1.1	1.7	1.9	1.5	1.5	1.6	2.9	2.3	2.6	3.2	3.4
23	1.2	1.1	1.8	1.8	1.5	1.5	1.6	2.8	2.4	2.6	3.2	3.4
24	1.2	1.1	1.7	1.8	1.5	1.5	1.6	2.8	2.4	2.7	3.3	3.4
25	1.1	1.1	1.6	1.7	1.5	1.5	1.6	2.8	2.5	2.7	3.3	3.4
26	1.2	1.1	1.6	1.7	1.5	1.4	1.6	2.9	2.5	2.7	3.3	3.4
27	1.2	1.1	1.6	1.7	1.5	1.4	1.6	3.4	2.6	2.8	3.4	3.6
28	1.2	1.1	1.6	1.6	1.5	1.4	1.5	3.0	2.6	2.8	3.2	3.8
29	1.2	1.1	1.5	1.6	1.5	1.4	1.5	2.8	2.6	2.8	3.2	4.0
30	1.2		1.5	1.5	1.6	1.3	1.5	2.8	2.7	2.8	3.2	3.6
31	1.2		1.5		1.6		1.4	2.8		2.9		3.6
Sum	36.6	34.1	42.7	48.4	45.4	45.4	45.2	88.7	74.9	86.1	95.6	107.8

Month	Current Year 1972								Period #Mar. 1961-1972		
	Extreme Gage Feet		ø Extreme Second-Feet			Average Second-Feet	Total Acre-Feet	Acre-Feet			
	High	Low	Day	High	Day	Low			**Average	Maximum	Minimum
Jan.	0.83	0.64	5	1.4	15	0.9	1.2	72.6	7.7	72.6	0
Feb.	.82	.66	† 9	1.4	14	1.0	1.2	67.6	6.7	67.6	0
Mar.	2.51	.65	21	2.0	1	1.1	1.4	84.7	8.0	84.7	0
Apr.	2.30	.55	20	2.4	† 8	1.4	1.6	96.0	12.2		0
May	1.65	.68	† 7	1.6	† 4	1.4	1.5	90.0	10.5		0
June	2.00	.72	16	2.1	† 4	1.3	1.5	90.0	9.7		0
July	1.91	.68	20	1.9	† 1	1.3	1.5	89.7	8.4		0
Aug.	5.30	.76	12	5.3	1	1.4	2.9	176	22.0		0
Sept.	1.26	.91	† 1	2.8	†18	2.1	2.5	149	17.4		0
Oct.	1.10	1.02	† 5	3.0	†18	2.6	2.8	171	25.2		0
Nov.	1.57	1.05	†18	3.4	1	2.9	3.2	190	22.4	190	0
Dec.	1.22	1.03	29	4.0	† 1	3.3	3.5	214	25.2	214	0
Yearly	5.30	0.55		5.3		0.9	2.1	1,490.6	175.4		3.4

\# Some months missing
† And other days
** See explanation in REMARKS above
ø Mean daily

MCKEE SPRING NEAR DEL RIO, TEXAS

DESCRIPTION: Cipolletti weir of 21.5 second-foot capacity, gravity well, and water-stage recorder located on the source pool of this spring which is located on the left floodplain of the Rio Grande at latitude 29°23' 35", longitude 101°01'15", about 150 feet from the edge of the low-flow channel and about 8 miles northwest of Del Rio, Texas. Water from this spring enters the Rio Grande at river mile 562.7, 4.8 river miles downstream from Amistad Dam, and 686.1 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 894.59 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on a continuous record of gage heights and the weir discharge table. Records available: November 1961 through 1972.

REMARKS: The flow of this spring is uniform during periods of dry weather and is not modified by diversions or storage. It is estimated that backwater from the Rio Grande will reach the emergence of this spring when the river flow is approximately 14,000 second-feet. This station was established for investigational purposes in connection with Amistad Dam to determine what effect storage in Amistad Reservoir may have on the flow of this spring.

EXTREME FLOWS FROM RECORDS:

		Average Flow in Second-Feet				
Daily:	Max. 9.1	Aug. 15, 1972	Min. 0	Occasionally
Monthly:	Max. 8.1	Sept. 1972	Min. 0	Occasionally
Yearly:	Max. 6.9	1972	Min. 0	1963

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.9	6.9	6.8	6.8	6.6	6.8	6.9	6.8	6.8	7.4	6.8	6.9
2	7.0	6.9	6.8	6.9	6.6	6.8	6.9	6.8	6.6	7.4	6.8	6.9
3	7.0	6.9	6.8	6.9	6.6	6.8	6.8	6.9	6.6	7.2	6.8	6.9
4	6.9	6.9	6.8	6.9	6.6	6.8	6.8	6.9	6.6	7.0	6.8	6.9
5	6.9	6.9	6.8	6.9	6.6	6.6	6.6	6.9	6.6	7.2	6.8	6.9
6	6.9	6.9	6.8	6.8	6.6	6.6	6.6	6.8	6.6	7.4	6.8	6.9
7	6.9	6.9	6.8	6.8	6.6	6.6	6.6	6.8	6.6	7.4	6.8	6.9
8	6.9	7.0	6.8	6.8	6.6	6.6	6.6	6.8	6.6	7.4	6.8	6.9
9	6.9	7.0	6.8	6.8	6.6	6.8	6.6	6.9	6.6	7.2	6.8	6.9
10	6.9	7.0	6.8	6.8	6.6	6.8	6.6	7.0	6.6	7.2	6.8	6.9
11	6.9	7.0	6.8	6.8	6.6	6.8	6.6	7.7	6.6	7.2	6.8	6.9
12	6.9	7.0	6.8	6.8	6.6	6.9	6.6	8.1	6.6	7.2	6.8	6.9
13	7.0	6.9	6.8	6.8	6.6	6.9	6.6	8.0	6.6	7.2	6.8	6.9
14	7.0	6.9	6.8	6.8	6.6	6.9	6.6	8.0	6.6	7.2	6.8	6.9
15	7.0	6.9	6.8	6.8	6.6	7.0	6.6	8.0	6.7	7.2	6.8	6.9
16	7.0	6.9	6.6	6.8	6.6	7.2	6.6	7.8	6.8	6.9	6.8	6.9
17	7.0	6.9	6.6	6.9	6.6	7.2	6.6	7.7	6.8	6.8	6.8	6.9
18	7.0	6.9	6.6	7.0	6.6	7.0	6.8	7.4	6.8	6.6	6.8	6.9
19	6.9	6.9	6.8	7.8	6.6	6.9	7.0	7.4	6.9	6.6	6.8	6.9
20	6.9	6.9	7.2	8.0	6.6	6.8	6.9	7.2	7.0	6.6	6.8	6.9
21	6.9	6.9	7.0	7.4	6.6	6.9	6.9	7.2	7.0	6.6	6.8	6.9
22	6.9	6.8	6.9	7.2	6.6	6.9	6.8	7.2	7.0	6.6	6.8	6.9
23	6.9	6.8	6.9	7.2	6.6	6.9	6.8	7.2	7.1	6.6	6.8	6.9
24	6.9	6.8	6.9	6.9	6.6	6.9	6.8	7.0	7.2	6.6	6.8	6.9
25	6.9	6.8	6.9	6.6	6.8	6.8	6.8	7.0	7.2	6.6	6.9	6.9
26	6.9	6.8	6.9	6.6	6.8	6.8	6.8	7.2	7.2	6.6	6.9	6.9
27	6.9	6.8	6.9	6.6	6.8	6.8	6.8	7.2	7.3	6.6	6.9	6.9
28	6.9	6.8	6.8	6.6	6.8	6.9	6.8	7.0	7.4	6.5	6.9	6.9
29	6.9	6.8	6.8	6.6	6.8	6.9	6.8	7.0	7.4	6.5	6.9	6.9
30	6.9		6.8	6.6	6.8	6.9	6.8	6.9	7.5	6.6	6.9	6.9
31	6.9		6.8		6.8		6.8	6.9		6.8		6.9
Sum	214.7	199.8	211.4	207.2	206.0	205.5	208.8	223.7	205.9	214.9	204.6	213.9

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Ø Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period Nov. 1961-1972 Acre-Feet Average	Maximum	Minimum
Jan.	0.71	0.70	† 2	7.0	† 1	6.9	6.9	426	154	426	0
Feb.	.71	.69	† 2	7.0	†16	6.8	6.9	396	140	396	0
Mar.	.74	.68	20	7.2	†16	6.6	6.8	419	154	419	0
Apr.	.78	.68	20	8.0	†25	6.6	6.9	411	168	411	0
May	.69	.68	†25	6.8	† 1	6.6	6.6	409	195	440	.7
June	.72	.68	†16	7.2	† 5	6.6	6.8	408	158	408	0
July	.72	.68	19	7.0	† 5	6.6	6.7	414	151	414	0
Aug.	.78	.69	†11	8.1	† 1	6.8	7.2	444	160	445	0
Sept.			30	7.5	† 2	6.6	6.9	408	172	479	0
Oct.	.73	.68	† 5	7.4	†28	6.5	6.9	426	186	464	0
Nov.	.70	.69	†25	6.9	† 1	6.8	6.8	406	180	421	0
Dec.	.70	.70	† 1	6.9	† 1	6.9	6.9	424	183	426	0
Yearly				8.1		6.5	6.9	4,991	2,001	4,991	0.7

Ø Mean daily † And other days

ARROYO DE LA TREINTA Y UNA NEAR CD. ACUNA, COAHUILA

DESCRIPTION: Cipolletti weir of 35.3 second-foot capacity, located at latitude 29°22'40", longitude 101°01'10", 0.6 creek mile from the confluence with the Rio Grande, and about 6.5 miles northwest of Cd. Acuna, Coahuila. This stream enters the Rio Grande from the Mexican side at river mile 561.2, 6.3 river miles downstream from Amistad Dam, 6.5 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 687.6 river miles downstream from the American Dam at El Paso, Texas. The elevation of the zero of the gage has not been determined.

RECORDS: Based on weekly staff gage readings and the weir discharge table. Mean daily discharges determined by prorating between readings. Records available: May 1961 through 1972.

REMARKS: The flow of this stream is very uniform during periods of dry weather and is not modified by diversions or storage. Prior to 1969 discharges were based on a continuous record of gage heights and the weir discharge table. Storm flow is deducted and not included in tabulation below. This station was established for investigational purposes in connection with Amistad Dam to determine what effect storage in Amistad Reservoir will have on the flow of this stream. It is estimated that backwater from the Rio Grande will affect the flow at this station only during times of extremely high releases.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.2	4.2	4.2	3.9	3.9	3.9	3.9	3.9	4.6	4.2	4.2	4.2
2	4.2	4.2	4.2	3.9	3.9	3.9	3.9	3.9	4.6 ‡	4.2	4.2	4.2
3	4.2	4.2	4.2	3.9	3.9	3.9 ‡	3.9	3.9	4.6	4.2	4.2	4.2
4	4.2	4.6	4.2	3.9	3.9	3.9	3.9	3.9 ‡	4.6	4.2	4.2 ‡	4.2
5	4.2	4.6	4.2	3.9	3.9 ‡	3.9	3.9	3.9	4.6	4.2	4.2	4.2
6 ‡	4.2	4.6	4.2 ‡	3.9	3.9	3.9	3.9	3.9	4.6	4.2 ‡	4.2	4.2
7	4.2 ‡	4.6	4.2	3.9	3.9	3.9	3.9 ‡	3.9	4.6	4.2	4.2	4.2
8	4.2	4.6	4.2	3.9	3.9	3.9	3.9	3.9	4.2	4.2	4.2	4.2
9	4.2	4.6	4.2	3.9 ‡	3.9	3.9	3.9	4.2	4.2	4.2	4.2	4.2
10	4.2	4.6	4.2	3.9	3.9	3.9	3.9	4.2	4.2	4.2 ‡	4.2	4.2
11	4.2	4.6	4.2	3.9	3.9	3.9	3.9 ‡	4.6 ‡	4.2	4.2	4.2 ‡	4.2
12	4.2	4.6	4.2	3.9	3.9	3.9	3.9	4.6	4.2	4.2	4.2	4.2
13	4.2	4.6	4.2 ‡	3.9	3.9	3.9	3.9	4.9	4.2	4.2 ‡	4.2	4.2
14	4.2 ‡	4.6	4.2	3.9	3.9	3.9	3.9 ‡	4.9	4.2	4.2	4.2	4.2
15 ‡	4.2	4.6	4.2	3.9 ‡	3.9	3.9	3.9	4.9	4.2	4.2	4.2	4.2
16	4.2	4.6	4.2	3.9	3.9	3.9	3.9	4.9	4.2 ‡	4.2	4.2	4.2
17 ‡	4.2	4.6	4.2	3.9	3.9	3.9 ‡	3.9	4.9	4.2	4.2	4.2	4.2
18	4.2	4.6	4.2	3.9	3.9	3.9	3.9	4.9 ‡	4.2	4.2	4.2 ‡	4.2
19	4.2	4.6	4.2	4.2	3.9	3.9	3.9	4.9	4.2	4.2	4.2	4.2
20	4.2	4.2	4.2	4.2	3.9	3.9	3.9	4.9	4.2	4.2	4.2	4.2
21	4.2	4.2	3.9	4.2	3.9	3.9	3.9	4.9 ‡	4.2	4.2 ‡	4.2	4.2
22	4.2	4.2	3.9	4.2 ‡	3.9 ‡	3.9	3.9	4.9	4.2	4.2	4.2	4.2
23	4.2	4.2	3.9	4.2	3.9	3.9	3.9	4.6	4.2 ‡	4.2	4.2	4.2
24 ‡	4.2	4.2	3.9	4.2	3.9	3.9	3.9 ‡	4.6	4.2	4.2	4.2	4.2
25	4.2 ‡	4.2	3.9	4.2	3.9	3.9	3.9	4.6	4.2 ‡	4.2	4.2	4.2
26	4.2	4.2	3.9 ‡	4.2	3.9	3.9 ‡	3.9	4.6	4.2	4.2	4.2 ‡	4.2
27	4.2	4.2	3.9	4.2	3.9	3.9	3.9	4.6	4.2	4.2 ‡	4.2	4.2
28	4.2	4.2	3.9	4.2	3.9	3.9	3.9	4.6 ‡	4.2	4.2	4.2	4.2
29	4.2	4.2	3.9	4.2 ‡	3.9	3.9	3.9	4.6	4.2	4.2	4.2	4.2
30	4.2		3.9	4.2	3.9	3.9	3.9	4.6 ‡	4.2 ‡	4.2	4.2	4.2
31 ‡	4.2		3.9		3.9		3.9 ‡	4.6		4.2		4.2
Sum	130.2	128.2	126.9	120.6	120.9	117.0	120.9	139.2	128.8	130.2	126.0	130.2

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	∅ Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period #May 1961-1972 Acre-Feet **Average	Maximum	Minimum
Jan.			† 1	4.2	† 1	4.2	4.2	260	94.9	260	15.2
Feb.			† 4	4.6	† 1	4.2	4.6	255	88.4	255	13.9
Mar.			† 1	4.2	†21	3.9	4.2	253	94.0	253	14.2
Apr.			†19	4.2	† 1	3.9	3.9	239	125	239	10.5
May			† 1	3.9	† 1	3.9	3.9	239	105	239	5.9
June			† 1	3.9	† 1	3.9	3.9	231	90.0	231	4.2
July			† 1	3.9	† 1	3.9	3.9	239	85.9	239	0
Aug.			†13	4.9	† 1	3.9	4.6	276	93.2	276	0
Sept.			† 1	4.6	† 8	4.2	4.2	257	126	257	13.1
Oct.			† 1	4.2	† 1	4.2	4.2	260	135	272	12.1
Nov.			† 1	4.2	† 1	4.2	4.2	252	113	252	14.2
Dec.			† 1	4.2	† 1	4.2	4.2	260	113	266	15.2
Yearly				4.9		3.9	4.2	3,021	1,263.4	3,021	250.4

‡ Discharge measurement made on this day # Some months missing ∅ Mean daily
** See explanation in REMARKS above † And other days

CANTU SPRING ON CIENEGAS CREEK NEAR DEL RIO, TEXAS

DESCRIPTION: Gravity well and water-stage recorder located at the spring source in the channel of a small tributary to Cienegas Creek at latitude 29°23' 15", longitude 100°56' 00", about 2.5 miles northwest of Del Rio, Texas, and 3.5 creek miles from the confluence with the Rio Grande. The spring is isolated from surface runoff by the concrete enclosure but creek backwater may influence the recorded gage heights. Cienegas Creek enters the Rio Grande at river mile 556.6, 1.9 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 692.2 river miles downstream from the American Dam at El Paso, Texas. The elevation of the zero of the gage has not been determined.

RECORDS: Based on 48 discharge measurements during the year and a continuous record of gage heights. Records available: March 1961 through 1972.

REMARKS: The flow of this spring is very uniform and is not modified by diversions or storage. A weir was installed on May 24, 1961 and removed November 21, 1962. Flows of 0.05 second-foot or less are shown as zero in the discharge tabulations; however, the monthly volumes in the annual and period summary are based on the sum of mean daily discharges computed to the nearest hundredth of a second-foot when the mean daily flow is less than 0.1 second-foot. This station was established for investigational purposes in connection with Amistad Dam to determine what effect storage in Amistad Reservoir may have on the flow of this spring.

EXTREME FLOWS FROM RECORDS:

	Average Flow in Second-Feet					
Daily:	Max. 9.6	Sept. 7-10, 1972	Min. 0	Occasionally
Monthly:	Max. 8.7	Sept. 1972	Min. 0	Occasionally
Yearly:	Max. 7.7	1972	Min. 0	1963

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.8	7.4	‡ 7.6	7.5	7.5	‡ 7.3	7.3	7.3	8.9	7.8	‡ 7.8	8.3
2	6.8	‡ 7.4	7.6	7.6	7.3	7.3	7.2	‡ 7.3	9.0	8.0	7.9	8.3
3	6.9	7.4	7.5	7.6	‡ 7.1	7.2	7.1	7.4	9.1	8.1	8.0	8.3
4	6.9	7.3	7.5	7.7	7.1	7.2	7.0	7.4	9.2	‡ 8.3	8.1	8.3
5	‡ 7.0	7.3	7.4	‡ 7.7	7.2	7.1	6.9	7.5	9.4	8.2	8.1	8.4
6	7.0	7.3	7.4	7.7	7.2	7.1	‡ 6.8	7.6	9.5	8.2	8.2	‡ 8.4
7	7.1	7.3	7.3	7.8	7.2	7.0	6.8	7.6	‡ 9.6	8.1	8.3	8.4
8	7.2	7.2	‡ 7.3	7.8	7.2	‡ 7.0	6.9	7.7	9.6	8.0	‡ 8.4	8.3
9	7.2	‡ 7.2	7.4	7.9	7.3	7.0	6.9	7.8	9.6	7.9	8.4	8.3
10	7.2	7.3	7.4	7.9	‡ 7.3	7.0	6.9	7.8	9.6	7.9	8.4	8.3
11	‡ 7.3	7.4	7.5	8.0	7.3	7.0	7.0	7.9	9.5	‡ 7.8	8.4	8.3
12	7.3	7.5	7.5	‡ 8.0	7.2	7.0	‡ 7.0	8.0	9.5	7.8	8.3	8.2
13	7.2	7.7	7.6	8.0	7.2	7.0	7.1	8.0	‡ 9.5	7.8	8.3	‡ 8.2
14	7.2	7.8	7.6	8.0	7.2	‡ 7.0	7.1	8.1	9.4	7.8	8.3	8.2
15	7.2	7.9	‡ 7.7	8.0	7.2	7.0	7.2	8.2	9.2	7.8	‡ 8.3	8.1
16	7.1	‡ 8.0	7.7	8.1	7.1	7.0	7.3	8.2	9.1	7.8	8.3	8.1
17	7.1	8.0	7.7	8.1	‡ 7.1	7.0	7.3	‡ 8.3	8.9	7.8	8.3	8.0
18	7.0	8.0	7.7	8.1	7.1	7.1	7.4	8.3	8.8	7.8	8.3	8.0
19	‡ 7.0	8.0	7.7	‡ 8.1	7.1	7.1	7.5	8.3	8.6	‡ 7.8	8.2	7.9
20	7.0	8.0	7.7	8.1	7.1	7.1	7.5	8.2	8.5	7.7	8.2	‡ 7.9
21	7.1	8.0	7.7	8.2	7.1	‡ 7.1	‡ 7.6	8.2	8.3	7.6	8.2	8.0
22	7.1	8.0	‡ 7.7	8.2	7.1	7.2	7.5	8.2	8.2	7.5	‡ 8.2	8.1
23	7.2	‡ 8.0	7.7	8.3	7.1	7.2	7.4	‡ 8.2	8.0	7.4	8.2	8.2
24	7.2	7.9	7.6	8.3	‡ 7.1	7.3	7.4	8.2	7.9	7.3	8.2	8.4
25	7.3	7.9	7.6	8.4	7.1	7.4	7.3	8.3	7.7	‡ 7.2	8.2	8.5
26	‡ 7.3	7.8	7.5	‡ 8.4	7.2	7.5	‡ 7.2	8.4	7.6	7.3	8.2	8.6
27	7.3	7.8	7.5	8.2	7.2	7.5	7.2	8.4	7.4	7.4	8.2	‡ 8.7
28	7.3	7.7	7.4	8.0	7.2	‡ 7.6	7.2	8.4	‡ 7.3	7.5	8.2	8.7
29	7.3	7.7	‡ 7.4	7.8	7.2	7.5	7.2	‡ 8.5	7.5	7.5	‡ 8.2	8.6
30	7.4		7.4	7.7	7.2	7.4	7.3	8.6	7.6	7.6	8.2	8.6
31	7.4		7.5		7.3		7.3	8.7		7.7		8.6
Sum	221.4	222.2	233.8	239.2	222.8	215.2	222.8	249.0	262.0	240.4	246.5	257.2

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Ø Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period Mar. 1961-1972 Acre-Feet Average	Maximum	Minimum
Jan.	2.40	2.35	†30	7.4	† 1	6.8	7.1	439	157	439	0
Feb.	2.68	2.39	†16	8.0	† 8	7.2	7.7	441	138	441	0
Mar.	2.84	2.68	†15	7.7	† 7	7.3	7.5	464	145	464	0
Apr.	3.23	2.75	†25	8.4	1	7.5	8.0	474	146	474	0
May	3.21	2.81	1	7.5	† 3	7.1	7.2	442	141	442	0
June	3.27	2.83	28	7.6	† 7	7.0	7.2	427	130	427	0
July0	3.80	2.72	21	7.6	† 6	6.8	7.2	442	125	442	0
Aug.	3.42	2.75	31	8.7	† 1	7.3	8.0	494	145	494	0
Sept.	2.91	2.83	† 7	9.6	28	7.3	8.7	520	160	520	0
Oct.	2.91	2.85	4	8.3	25	7.2	7.8	477	177	477	0
Nov.	2.86	2.78	† 8	8.4	1	7.8	8.2	489	172	489	0
Dec.	2.78	2.66	†27	8.7	†19	7.9	8.3	510	186	510	0
Yearly	3.80	2.35		9.6		6.8	7.7	5,619	1,822	5,619	0

‡ Discharge measurement made on this day Ø Mean daily † And other days

CIENEGAS CREEK NEAR DEL RIO, TEXAS

DESCRIPTION: Gravity wells and water-stage recorders located, one each, on the left bank of the Cienegas Creek at latitude 29°21'00", longitude 100°56'40", 0.3 creek mile from the confluence with the Rio Grande; and, for the Briggs Farm Ditch, on the right bank of a concrete flume at latitude 29°21'40", longitude 100°56'30", 2,900 feet from the ditch intake which branches off the right bank of Cienegas Creek immediately upstream from a small diversion dam across the creek, and about 2.5 miles west of Del Rio, Texas. The point of diversion is 1.8 creek miles from the confluence with the Rio Grande. Cienegas Creek enters the Rio Grande at river mile 556.6, 1.9 river miles upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 692.2 river miles downstream from the American Dam at El Paso, Texas. The elevation of the zero of the gages has not been determined.

RECORDS: Based on 50 and 55 discharge measurements at Cienegas Creek and Briggs Farm Ditch, respectively, during the year and a continuous record of gage heights. Mean daily discharge computations determined by combining the two records for the total yield of the springs. Records available: March 1965 through 1972. *Discharge measurement data available since November 1962. Records are also available from September 1931* through June 1935 for a station 0.1 creek mile downstream.

REMARKS: Low flow of this stream is from springs, one of which is Cantu Spring whose discharge is shown on page 39. The flow of this stream is modified by irrigation diversions through the Briggs Farm ditch and, occasionally, by other smaller diversions upstream. During 1972 there were no appreciable diversions from the creek, other than through the Briggs Farm ditch whose net amount of diversion is included in the tabulation below. All storm flow passing this station is deducted and is not included in the tabulation. These stations were established for investigational purposes in connection with Amistad Dam to determine what effect storage in Amistad Reservoir may have on the flow of these springs. The recorders were installed in March 1965.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.1	14.9	14.4	13.0	15.1	16.4	12.3	16.2	16.9	16.5	16.9	18.3
2	14.8	14.8	14.1	13.0	15.2	16.3	8.8	15.6	16.8	15.3	16.8	13.8
3	14.8	14.6	14.2	13.4	16.7	15.6	9.5	15.9	16.8	14.0	16.4	14.0
4	14.8	14.9	14.0	13.0	16.3	15.7	10.7	17.6	16.7	14.4	15.6	18.1
5	14.7	14.7	14.0	13.7	15.7	15.1	15.5	16.7	17.3	14.5	15.4	18.2
6	14.9	14.5	13.5	14.1	15.8	14.8	16.2	15.9	17.3	15.6	16.3	18.0
7	15.1	14.4	14.2	14.5	17.7	14.6	15.8	15.3	16.4	15.7	15.3	18.0
8	14.6	15.1	14.5	13.4	19.2	15.3	14.2	14.3	16.4	15.9	15.2	18.1
9	15.2	15.0	15.0	13.7	18.7	14.3	17.0	17.5	17.2	16.2	15.8	18.2
10	15.6	14.7	14.8	14.3	17.1	14.0	18.0	26.9	17.5	16.3	16.4	18.0
11	15.6	13.9	14.9	14.0	16.6	14.0	17.5	34.8	17.5	16.4	16.8	18.0
12	16.0	15.6	14.8	13.2	16.7	14.8	13.8	42.7	17.7	16.0	16.7	18.1
13	15.7	15.1	14.4	13.2	16.4	14.3	13.2	32.2	18.5	16.1	16.7	18.0
14	15.1	16.7	14.1	11.2	16.8	14.0	13.4	25.6	18.3	16.8	16.4	16.3
15	14.7	16.0	14.1	10.8	17.1	14.5	12.7	22.0	18.2	16.8	15.8	12.0
16	14.5	14.9	13.5	11.4	16.9	14.0	13.6	20.5	18.9	15.9	14.6	11.8
17	14.1	13.9	12.6	12.0	17.1	13.5	13.1	19.8	18.9	16.0	14.6	12.2
18	13.8	13.8	11.9	12.2	16.4	13.1	13.6	19.9	18.8	15.2	15.4	13.7
19	13.7	14.2	10.3	15.8	16.0	12.2	18.1	20.0	17.6	16.1	16.3	17.0
20	13.7	15.2	11.9	18.2	16.5	11.9	21.1	18.6	17.4	16.5	16.3	16.7
21	13.9	15.1	12.3	16.9	15.9	11.6	19.8	18.6	17.7	17.4	16.1	15.8
22	14.1	14.7	13.2	16.1	16.6	11.2	18.6	18.0	17.7	16.0	17.1	15.9
23	13.6	15.1	13.8	16.4	17.3	11.0	19.5	17.6	17.7	14.5	17.1	16.1
24	14.6	15.3	13.8	16.1	15.6	10.9	19.1	17.9	17.6	11.6	17.3	16.2
25	14.7	15.4	14.3	15.4	16.4	11.5	18.8	17.3	17.3	15.2	17.1	16.5
26	14.9	15.6	13.6	15.5	15.7	11.5	18.2	19.1	17.3	16.1	16.3	16.8
27	14.9	15.6	13.2	15.4	15.5	11.0	18.1	18.2	17.8	16.3	16.4	17.5
28	15.5	14.6	11.3	14.5	15.6	10.7	17.3	17.6	17.6	17.6	16.4	17.6
29	15.5	15.0	11.4	15.0	16.9	10.9	16.3	17.7	17.3	20.3	16.7	17.6
30	15.6		11.3	15.0	17.2	10.1	16.9	17.8	16.7	20.4	17.0	17.9
31	15.4		12.2		17.0		16.5	17.7		19.4		17.8
Sum	458.2	433.3	415.6	424.4	513.7	398.8	487.2	625.5	525.8	501.0	487.2	512.2

	Current Year 1972								Period Mar. 1965-1972		
Month	Extreme Gage Feet		∅ Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
	High	Low	High Day	High	Low Day	Low			Average	Maximum	Minimum
Jan.			12	16.0	23	13.6	14.8	909	477	909	134
Feb.			14	16.7	18	13.8	14.9	859	426	859	98.0
Mar.			9	15.0	19	10.3	13.4	824	445	925	102
Apr.			20	18.2	15	10.8	14.1	842	419	842	100
May			8	19.2	1	15.1	16.6	1,019	425	1,019	109
June			1	16.4	30	10.1	13.3	791	346	791	86.3
July			20	21.1	2	8.6	15.7	966	352	966	85.5
Aug.			12	42.7	8	14.3	20.2	1,241	440	1,241	48.4
Sept.			†16	18.9	† 7	16.4	17.5	1,043	447	1,043	84.1
Oct.			30	20.4	24	11.6	16.2	994	558	994	150
Nov.			24	17.3	†15	14.6	16.2	966	513	966	152
Dec.			1	18.3	16	11.8	16.5	1,016	540	1,016	133
Yearly				42.7		8.8	15.8	11,470	5,388	11,470	1,530.9

∅ Mean daily † And other days

RIO GRANDE AT DEL RIO, TEXAS

DESCRIPTION: Cableway, gravity well, concrete control weir, water-stage recorders (graphic and digital), and binary decimal transmitter located on the right bank 1,200 feet upstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila at latitude 29°19'35",longitude 100°55'50", and river mile 554.9; 12.6 river miles downstream from Amistad Dam, and 693.9 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 869.20 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 46 discharge measurements during the year, 39 by the United States Section and 7 by the Mexican Section of the Commission, and a continuous record of gage heights. Computations for high flow by shifting control methods. Low and medium flow computations based on a stable control weir rating curve defined by meter measurements. Records available: December 1923 through July 2, 1941 and January 1968 through 1972. Records are available from May 1900 through April 1915 for a station 12.2 miles upstream; from December 1919 through March 1920 for a station 8.7 miles upstream near McKee's Switch; from July 2, 1941 through 1954 and October 1960 through 1967 for a station 1,200 feet downstream at the international highway bridge; and from September 1954 through 1972 for a station, Rio Grande below Amistad Dam, 10.4 miles upstream.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. Except for tributary inflows and small intervening diversions below Amistad Dam, flow at this station after May 31, 1968 is controlled largely by releases from Amistad Reservoir. The concrete control weir was placed in operation on February 8 and the cable on June 7, 1968. The transmitter, operated in cooperation with the National Weather Service, relays gage height data upon interrogation by telephone via commercial circuits.

EXTREME FLOWS FROM RECORDS: The greatest recorded flow of 1,140,000 second-feet occurred on June 28, 1954, with a gage height of 38.25 feet at a station 1,200 feet downstream. This peak flow was deduced by subtracting 18,000 second-feet from the peak discharge which occurred below Amistad Dam Site, 10.5 miles upstream. This subtraction was for estimated flattening of the flood wave in traveling between these points. The lowest recorded flow was 142 second-feet which occurred August 14, 1971, with a gage height of 1.27 feet.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	303	313	425	557	574	487	579	415	417	4,910	328	233
2	303 ‡	315 ‡	410	553	576	487	574	495	417	4,580	327	231
3	303	301	416	557	567	452	578	589	426	3,930	327	229
4	296	305	417	553	558	390	613	564	417	2,470	327	229
5	297	309	413	‡ 560	571	387	600	402	417	4,690	329	229
6	‡ 303	314	412	561	615	‡ 381	592	390	417	4,860	335	223
7	301	305	417	557	641	377	586	387	‡ 407	‡ 4,870	333	221
8	307	313	415	561	599	375	592	377	401	4,900	331	229
9	311	‡ 311	417	558	576	375	903	452	400	4,910	‡ 335	229
10	317	311	‡ 416	569	579	384	507	520	400	4,910	315	228
11	315	310	421	561	‡ 576	384	589	520	403	4,910	227	224
12	‡ 315	307	420	561	574	408	575	2,430	403	‡ 4,910	230	227
13	315	306	429	561	574	390	498	445	‡ 403	4,900	219	226
14	315	303	434	559	576	386	844	371	403	4,890	224	‡ 229
15	313	298	434	547	576	‡ 479	472	343	403	4,860	319	222
16	311	295	‡ 430	548	‡ 574	373	481	342	403	3,330	327	220
17	317	‡ 293	430	551	511	264	479	‡ 394	409	285	‡ 317	223
18	318	296	428	560	‡ 387	261	513	334	404	272	324	227
19	315	299	427	704	379	266	533	320	298	456	321	229
20	‡ 315	303	536	‡ 625	381	257	494	315	291	472	629	230
21	315	303	445	580	381	‡ 254	‡ 478	315	327	480	1,210	224
22	315	302	440	576	384	252	386	315	1,580	462	‡1,220	‡ 226
23	308	301	‡ 440	576	‡ 386	261	384	312	4,070	458	1,230	225
24	303	‡ 305	441	‡ 572	381	383	377	305	4,070	458	1,240	224
25	301	413	484	556	377	394	377	310	4,110	458	1,210	227
26	‡ 297	412	575	‡ 568	377	407	377	465	3,960	‡ 465	1,230	224
27	311	417	570	572	378	‡ 500	377	430	4,710	429	1,240	226
28	315	417	569	571	486	503	‡ 377	425	‡ 4,810	340	1,230	226
29	321	417	555	564	487	‡ 575	377	417	4,840	336	‡ 880	229
30	321		‡ 548	566	495	576	377	‡ 417	4,880	329	247	224
31	303		548		‡ 497		379	417		325		224
Sum	9,600	9,394	14,162	17,064	15,593	11,668	15,868	14,533	45,296	78,855	17,361	7,017

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period #1968-1972 Acre-Feet Average	Maximum	Minimum
Jan.	1.47	1.42	29	339	4	279	310	19,041	68,242	90,952	19,041
Feb.	1.54	1.43	26	430	† 3	291	324	18,633	150,820	448,205	18,633
Mar.	1.75	1.51	20	757	3	390	457	28,090	61,733	96,390	28,090
Apr.	1.82	1.61	19	883	†15	531	569	33,846	62,145	93,320	33,846
May	1.78	1.48	6	810	27	351	503	30,928	98,482	189,997	30,928
June	1.67	1.39	15	624	†21	248	389	23,143	119,998	250,318	23,143
July	2.57	1.49	14	2,870	10	364	512	31,474	76,085	138,413	31,474
Aug.	3.89	1.44	12	10,000	†22	303	469	28,826	55,784	89,515	28,826
Sept.	3.05	1.43	30	4,960	19	291	1,510	89,843	67,719	89,843	38,850
Oct.	3.06	1.38	5	5,010	18	238	2,540	156,406	74,320	156,406	11,578
Nov.	2.01	1.35	24	1,260	†13	210	579	34,435	50,045	99,830	13,644
Dec.	1.38	1.35	† 1	238	† 6	210	226	13,918	46,931	97,072	13,918
Yearly	3.89	1.35		10,000		210	701	508,583	932,304	1,256,395	508,583

‡ Discharge measurement made on this day † And other days

Values for January 1968 are Rio Grande near Del Rio discharge less Arroyo Las Vacas flow

ARROYO LAS VACAS AT CD. ACUNA, COAHUILA

DESCRIPTION: Concrete wall with a 90° V-notch weir of 353 second-foot capacity, gravity well, and water-stage recorder located on the left bank at Cd. Acuna, Coahuila, latitude 29°19'45", longitude 100°57'20", and 1.8 creek miles from the confluence with the Rio Grande. This stream enters the Rio Grande at river mile 554.7, on the upstream side of the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, 12.8 river miles downstream from Amistad Dam, and 694.1 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 885.82 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 1 discharge measurement during the year, a stable rating curve up to 353 second-feet, which is the capacity of the weir, and a continuous record of gage heights. Computations by shifting control methods for flows exceeding the capacity of the weir. During 1972, the capacity of the weir was exceeded on April 19, May 6, June 15, and August 10. Records available: Occasional estimates from June 1935 to March 19, 1938 and a continuous record from March 20, 1938 through 1972.

REMARKS: Low flow of this stream is from springs and is modified by irrigation diversions upstream. On June 17, 1961, a flood destroyed the station leaving the control wall under several feet of silt. The station was reconstructed in September and a V-notch weir with a capacity of 353 second-feet, constructed at this station, started operating December 14, 1961. On June 28, 1954, backwater from the Rio Grande reached an elevation of 902.49 feet at this station. Records prior to 1965 were published under the title "Arroyo Las Vacas near Cd. Acuna, Coahuila. "

EXTREME FLOWS FROM RECORDS: Momentary: Max. 63,570 second-feet with a gage height of 25.26 feet on June 17, 1961. Min. no flow several occasions in 1956, 1957, 1960, 1961, and September 1, 1967.

Average Flow in Second-Feet**

Daily:	Max. 23,940	June 17, 1961	Min. 0	Several days Dec. 1956, Jan. 1957, & Sept. 1, 1967
Monthly:	Max. 1,050	June 1961	Min. 0.4	Several months 1952, 1953, & 1954
Yearly:	Max. 96.7	1961	Min. 2.8	1952

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.2	15.2	9.2	5.7	6.0	6.0	4.2	2.8	6.0	5.3	5.3	5.3
2	10.2	15.2	8.5	5.7	19.1	5.3	4.2	3.2	6.0	5.3	5.7	5.7
3	10.2	15.2	9.2	5.7	14.1	5.3	4.2	3.2	6.0	4.6	5.7	5.7
4	10.2	11.7	9.2	5.7	10.6	4.6	60.4	3.5	6.0	4.6	5.7	6.0
5	12.0	11.7	9.2	5.7	9.9	4.9	25.4	3.2	6.0	4.6	5.3	6.0
6	11.7	11.7	10.2	5.7	337	4.6	7.1	3.2	6.0	4.2	5.3	5.7
7	11.7	10.6	10.2	5.7	228	4.2	5.7	3.2	6.0	4.2	5.3	5.7
8	11.7	10.2	10.2	5.3	26.5	4.2	4.9	3.2	6.0	4.2	5.3	5.7
9	13.4	10.2	13.8	5.3	19.1	4.6	4.2	79.1	5.7	4.6	5.3	5.7
10	12.0	10.2	15.2	5.3	17.7	4.2	4.2	399	5.3	4.6	5.7	5.7
11	11.7	10.9	13.8	5.3	17.0	4.9	4.2	367	5.3	4.6	5.7	5.7
12	12.7	10.9	9.2	4.6	16.6	18.7	4.2	59.7	5.3	4.6	5.7	5.7
13	11.7	11.7	8.1	4.2	15.2	6.0	4.2	22.2	4.6	4.6	5.7	5.7
14	12.7	11.7	7.8	4.2	15.2	6.0	4.2	16.2	4.6	5.3	5.7	5.7
15	12.0	11.7	7.8	4.2	14.1	‡ 250	3.9	13.8	4.2	5.3	5.7	5.7
16	11.7	10.6	7.1	4.2	12.4	24.0	3.9	13.1	4.2	4.6	5.7	5.3
17	11.7	9.9	7.1	4.2	12.0	15.9	3.5	15.2	4.2	4.6	5.7	5.7
18	11.7	9.2	6.7	7.4	12.0	12.7	4.6	14.5	4.2	4.6	5.7	5.7
19	13.4	9.9	6.7	147	11.3	12.0	5.7	12.7	4.2	4.6	5.7	5.7
20	11.7	10.2	7.1	19.8	10.6	11.7	3.9	12.0	4.2	4.6	5.7	5.7
21	11.7	10.2	7.1	10.2	8.8	7.8	3.5	11.7	4.2	4.6	5.3	5.3
22	10.6	10.2	7.1	8.1	7.8	8.1	11.7	11.7	4.2	4.6	5.3	5.7
23	10.9	10.2	7.1	7.4	7.1	8.1	7.8	11.7	4.9	4.6	5.3	5.7
24	10.2	10.2	7.1	7.1	7.1	6.7	4.2	11.7	5.3	4.6	7.4	5.7
25	10.2	10.2	6.7	7.1	7.1	6.0	3.5	10.9	4.9	4.6	6.7	5.7
26	10.2	10.2	6.7	7.1	6.7	6.4	3.5	11.7	6.0	4.6	6.0	5.7
27	10.2	9.2	6.0	6.7	6.7	5.3	3.2	10.2	7.1	4.6	5.7	6.0
28	10.9	9.2	6.0	6.7	6.0	5.3	3.2	8.5	6.7	4.6	5.3	6.0
29	13.4	10.2	6.0	6.7	6.0	4.9	2.8	7.1	6.0	5.3	5.7	6.0
30	15.2		6.0	6.0	6.7	4.2	2.8	6.0	5.3	5.3	5.3	6.0
31	15.2		6.0		7.4		2.8	6.4		5.3		6.0
Sum	363.0	318.4	258.1	334.0	901.8	472.6	215.8	1,157.6	158.6	146.6	169.6	177.6

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	High	Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1938-1972 Acre-Feet Average	Maximum	Minimum
Jan.	0.66	0.56	†30	15.2	† 1	10.2	11.7	720	349	910	31.5
Feb.	.66	.52	† 1	15.2	†18	9.2	10.9	632	508	5,950	33.3
Mar.	.69	.46	11	17.0	31	5.7	8.5	512	569	2,600	59.2
Apr.	3.08	.39	19	1,050	†13	4.2	11.3	662	1,522	16,610	75.4
May	4.79	.46	6	3,230	† 1	6.0	29.0	1,789	1,437	9,080	90.0
June	4.07	.39	15	2,170	30	4.2	15.9	937	2,842	62,520	43.8
July	2.53	.33	4	593	†29	2.8	7.1	429	913	8,230	26.8
Aug.	4.33	.33	10	2,540	1	2.8	37.4	2,296	1,172	13,661	42.2
Sept.	.59	.39	26	11.7	†15	4.2	5.3	315	3,081	49,566	37.3
Oct.	.43	.39	31	5.7	† 6	4.2	4.6	291	1,679	20,444	22.6
Nov.	.52	.43	24	8.1	† 1	5.3	5.7	335	355	1,670	21.0
Dec.	.46	.43	† 4	6.0	† 1	5.3	5.7	350	322	780	22.0
Yearly	4.79	0.33		3,230		2.8	12.7	9,268	14,749	70,026.3	2,066.7

** Period 1938-1972 ‡ Discharge measurement made on this day † And other days

SAN FELIPE SPRINGS AT DEL RIO, TEXAS

DESCRIPTION: Two large and at least two smaller springs rise near the northeast city limits of Del Rio, Texas in or near the channel of San Felipe Creek at latitude 29°22'20" and longitude 100°53'00". The total yield of these springs consists of waters measured in the Val Verde Canal at Del Rio, Texas and in San Felipe Creek at Moore Park, Del Rio, Texas, and diversions by the city of Del Rio. Diversions by the San Felipe Irrigation Company through the Val Verde Canal are measured at a gaging station consisting of a paved measuring section and gravity well and water-stage recorder located on the left side of the canal under the U. S. Highway 277 Bridge across San Felipe Creek at latitude 29°21'55" and longitude 100°53'10". The bridge is located about 0.6 creek mile downstream from the source of the springs and 2.9 creek miles from the confluence of the creek with the Rio Grande. The gaging station on San Felipe Creek at Moore Park consists of gravity well and water-stage recorder located on the left bank about 800 feet downstream from the U. S. Highway 277 Bridge at latitude 29°21'50" and longitude 100°53'10". This stream enters the Rio Grande at river mile 553.1, 1.6 river miles downstream from the international highway bridge between Del Rio, Texas, and Cd. Acuna, Coahuila, and 695.7 river miles downstream from the American Dam at El Paso, Texas. The zeros of the gages for the two stations are, respectively, 942.58 feet and 930.77 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Records for the Val Verde Canal and San Felipe Creek at Moore Park are based on 52 and 49 discharge measurements, respectively, by wading during the year, and continuous records of gage heights. Computations by shifting control methods. Records for the Del Rio Pumping Plant are furnished by the City of Del Rio Water Department. Records available: Total yield of the springs, Feb. 1961 through 1972.

REMARKS: The flows tabulated below represent only the total yield of the springs. All storm runoff has been eliminated from the tabulations.

Average Flow in Second-Feet

Daily:	Max. 151	Oct. 27-28, 1972	Min. 29.2		July 29, 1964
Monthly:	Max. 145	Dec. 1972	Min. 34.4		August 1964
Yearly:	Max. 135	1972	Min. 50.5		1963

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	125	131	132	128	129	133	126	136	142	140	147	137
2	126	131	123	127	124	132	128	134	140	140	146	142
3	124	129	135	131	120	131	129	132	141	140	144	143
4	123	130	134	127	126	130	126	132	140	140	144	144
5	122	129	132	128	125	130	125	130	142	141	144	149
6	125	132	131	129	131	126	128	130	134	139	143	149
7	125	129	131	128	128	129	128	129	135	137	144	148
8	126	133	130	129	130	129	129	129	135	140	144	148
9	126	133	130	128	129	129	129	128	135	140	142	146
10	127	132	131	127	129	133	132	131	139	141	144	145
11	128	130	130	130	126	131	131	136	143	144	142	146
12	128	130	129	131	127	130	133	134	141	141	145	144
13	128	130	130	132	129	130	133	134	143	142	143	145
14	128	132	130	134	130	133	131	134	143	143	143	144
15	126	130	132	130	133	132	137	136	143	144	146	145
16	126	130	132	131	132	133	135	135	142	146	146	146
17	126	128	135	131	130	134	132	137	143	145	148	146
18	128	126	133	130	128	134	128	138	141	146	148	147
19	129	124	137	126	127	132	125	137	140	143	148	147
20	130	126	136	128	132	133	126	138	142	145	147	146
21	130	125	137	130	131	130	128	140	141	146	146	146
22	129	125	135	129	131	128	129	141	140	147	145	145
23	130	123	133	130	130	128	128	141	140	148	144	144
24	131	127	133	129	130	128	132	141	141	148	141	146
25	130	128	132	128	128	126	131	138	140	150	140	141
26	131	128	132	127	128	128	130	140	139	150	137	144
27	132	129	130	127	131	128	133	138	138	151	137	144
28	133	134	128	129	133	126	135	139	137	151	134	145
29	131	134	125	129	136	125	136	140	139	150	137	146
30	131		128	129	136	125	133	137	140	148	137	145
31	130		128		135		133	138		148		147
Sum	3,964	3,748	4,074	3,872	4,014	3,896	4,039	4,203	4,199	4,474	4,296	4,500

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	∅ Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period Feb. 1961-1972 Acre-Feet Average	Maximum	Minimum
Jan.			28	133	5	122	128	7,862	5,294	7,862	2,274
Feb.			†28	134	23	123	129	7,434	4,809	7,434	2,119
Mar.			†19	137	2	123	131	8,081	5,204	8,081	2,365
Apr.			14	134	19	126	129	7,680	4,950	7,680	2,291
May			†29	136	3	120	129	7,962	5,239	7,962	2,842
June			†17	134	†29	125	130	7,728	5,093	7,728	2,481
July			15	137	† 5	125	130	8,011	5,195	8,011	2,214
Aug.			†22	141	9	128	136	8,337	5,154	8,337	2,114
Sept.			†11	143	6	134	140	8,329	5,127	8,329	2,555
Oct.			†27	151	7	137	144	8,874	5,634	8,874	2,508
Nov.			†17	148	28	134	143	8,521	5,431	8,521	2,384
Dec.			† 5	149	1	137	145	8,926	5,697	8,926	2,390
Yearly				151		120	135	97,745	62,827	97,745	36,580

∅ Mean daily † And other days

SAN FELIPE CREEK NEAR DEL RIO, TEXAS

DESCRIPTION: Cableway, bubbler gage, and water-stage recorders (graphic and digital) located on the right bank at latitude 29°19'55", longitude 100°53'20", immediately upstream from the Silos Farm road bridge, 1.1 creek miles from the confluence with the Rio Grande, and about 2 miles south-southeast of Del Rio, Texas. This stream enters the Rio Grande at river mile 553.1, 1.6 river miles downstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 695.7 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 877.43 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 50 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: September 1931 through 1972.

REMARKS: Municipal diversions at Del Rio and irrigation diversions greatly modify the flow of this spring-fed creek at this station. Backwater from the Rio Grande reaches this station when the Rio Grande near Del Rio reaches a stage of 15 feet or a flow of about 60,000 second-feet. On June 28, 1954 combined creek flow and backwater from the Rio Grande reached a stage of 24.51 feet, the highest of record, at this station.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 45,000 second-feet on June 14, 1935 with a gage height of 23.20 feet. Min. 0.4 second-foot on July 20, 1953.

Average Flow in Second-Feet

Daily:	Max. 16,200	June 14, 1935	Min. 1.5		July 21, 1953
Monthly:	Max. 805	June 1935	Min. 4.6		July 1953
Yearly:	Max. 136	1935	Min. 25.1		1953

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	120	‡ 131	119	103	102	90.6	88.2	‡ 93.2	102	112	119	127
2	120	130	109	103	‡ 119	87.1	89.0	93.4	102	110	118	125
3	121	130	98.4	102	114	84.4	90.3	103	103	‡ 110	118	124
4	‡ 126	132	99.3	‡ 102	108	86.5	92.8	112	103	112	118	126
5	125	134	102	102	115	87.1	‡ 99.6	111	101	111	120	‡ 129
6	126	130	109	102	130	‡ 85.9	98.2	110	‡ 110	117	118	130
7	126	129	‡107	98.3	123	87.7	95.9	105	116	121	‡ 119	136
8	127	‡ 130	107	98.7	122	98.6	96.2	‡ 105	117	123	123	139
9	127	129	106	102	‡ 121	103	97.9	124	111	122	126	138
10	127	129	107	107	122	102	97.4	150	106	122	127	140
11	‡ 127	128	106	109	121	104	‡ 106	173	103	‡ 124	133	139
12	125	126	105	106	120	110	106	139	‡ 99.0	123	134	‡ 136
13	125	123	103	102	117	‡ 114	106	129	103	122	128	136
14	125	120	‡103	95.3	117	111	106	123	106	117	‡ 129	136
15	125	‡ 119	103	96.5	117	124	106	‡ 118	105	111	128	134
16	125	120	103	94.4	‡ 116	104	107	116	105	110	125	135
17	124	121	104	95.8	114	104	107	123	107	‡ 109	127	135
18	‡ 125	123	105	‡ 100	112	103	‡ 147	119	109	111	128	134
19	126	125	106	117	106	107	107	117	‡ 109	117	127	‡ 134
20	126	126	113	112	108	‡ 110	107	118	109	123	129	134
21	127	125	111	108	105	107	108	115	119	126	‡ 131	138
22	126	126	109	107	104	105	108	‡ 109	123	127	130	139
23	127	‡ 129	108	107	‡ 101	104	108	111	127	130	131	138
24	126	127	108	104	97.4	101	108	111	126	132	132	139
25	‡ 130	121	108	‡ 103	93.1	101	‡ 108	108	126	‡ 133	128	139
26	134	118	111	108	92.1	95.8	107	114	‡ 126	135	126	140
27	134	120	110	108	91.9	‡ 93.4	106	109	125	130	126	‡ 141
28	133	121	‡106	110	90.6	92.4	105	107	124	125	‡ 126	142
29	132	‡ 119	105	109	86.5	91.9	104	‡ 106	116	128	128	140
30	133		106	108	107	91.4	103	105	111	130	128	138
31	131		105		‡ 96.9		102	105		‡ 123		138
Sum	3,931	3,641	3,301.7	3,120.0	3,389.5	2,986.8	3,217.5	3,581.6	3,349.0	3,746	3,780	4,199

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1932-1972 Acre-Feet Average	Maximum	Minimum
Jan.	1.39	1.15	30	140	† 1	117	127	7,797	4,313	7,797	934
Feb.	1.35	1.16	3	135	27	113	126	7,222	3,445	8,630	487
Mar.	1.32	.98	2	128	4	88.2	107	6,549	3,202	6,549	689
Apr.	1.89	1.05	19	190	†13	89.4	104	6,188	3,771	10,407	566
May	2.39	.99	2	252	1	79.4	109	6,723	4,612	17,600	739
June	2.50	1.08	15	246	3	77.4	99.6	5,924	4,915	47,900	301
July	5.27	.98	18	827	1	ø 88.2	104	6,382	3,422	8,800	285
Aug.	3.81	1.00	11	461	2	80.4	116	7,104	3,333	7,584	350
Sept.	1.63	1.28	26	135	12	91.3	112	6,643	4,966	28,678	872
Oct.	1.63	1.36	30	137	†15	103	121	7,430	4,691	14,229	1,000
Nov.	1.59	1.38	†12	140	† 6	113	126	7,498	3,814	7,498	526
Dec.	1.58	1.40	†27	144	† 2	118	135	8,329	3,916	8,329	496
Yearly	5.27	0.98		827		77.4	115	83,789	48,400	98,137	18,201

‡ Discharge measurement made on this day ø Mean daily † And other days

DIVERSIONS FROM THE RIO GRANDE
MAVERICK CANAL AT MILE 13 NEAR QUEMADO, TEXAS

DESCRIPTION: Light-weight cableway for making current meter measurements from the bank, bubbler gage, and water-stage recorders (graphic and digital), located on the left bank of a gunnite-lined section of the canal at latitude 29°03'00", longitude 100°39'40", 0.5 canal mile downstream from the Tequesquite Creek Siphon, 3.5 canal miles upstream from the Las Moras Creek Siphon, about 7.5 miles north-northwest of Quemado, Maverick County, Texas, and 12.8 canal miles from the canal intake. The canal intake is at river mile 537.4, 17.3 river miles downstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 711.4 river miles downstream from the American Dam at El Paso, Texas. The elevation of the zero of the gage has not been determined.

RECORDS: Based on 50 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Gage heights at this station are affected by gate operation at Las Moras Siphon. Records available: June 21, 1949 through 1972.

REMARKS: Water from the Rio Grande is diverted into the Maverick Canal by Maverick County Water Control and Improvement District No. 1 for power generation and irrigation use. At canal mile 31.8 a portion of the diverted water returns to the river through the Maverick Power Plant, and the remainder enters the Maverick Canal Extension. In 1972, 9,946 acres of land were irrigated between canal mile 31.8 and the power plant, and 27,386 acres were irrigated from the extension, making a total of 37,332 acres. A total of 329,006 acre-feet of water returned to the Rio Grande at the power plant and through the irrigation system (see pages 50, 52, and 55).

EXTREME FLOWS FROM RECORDS: Momentary: Max. 1,680 second-feet on September 15, 1967. Min. no flow several days in June, July, and November 1954.

Average Flow in Second-Feet

Daily:	Max. 1,620	July 13, 1952 & Sept. 13, 1963	Min. 0	June 28 through July 11 & Nov. 2, 1954
Monthly:	Max. 1,560	Feb. 1971	Min. 319	July 1954
Yearly:	Max. 1,420	1961	Min. 632	1972

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	464	509	563	650	723	635	648	475	578	1,510	508	417
2	471	511	559	655	‡ 703	614	638	527	575	1,510	504	398
3	471	‡ 461	521	658	786	616	658	‡ 646	571	‡ 1,530	505	420
4	‡ 473	432	543	‡ 658	758	591	652	773	572	1,520	505	410
5	468	451	557	654	727	530	646	660	‡ 565	1,290	510	‡ 409
6	437	471	556	662	754	‡ 507	‡ 690	559	569	1,550	506	408
7	452	466	‡ 572	670	757	496	662	532	572	1,560	‡ 496	396
8	463	‡ 469	572	633	734	506	651	‡ 535	564	1,570	489	409
9	485	484	558	636	‡ 728	510	657	575	566	1,550	498	417
10	470	485	563	649	750	516	650	728	572	‡ 1,550	495	426
11	‡ 458	496	570	‡ 671	749	521	‡ 607	684	560	1,550	459	412
12	457	495	528	648	757	540	659	727	‡ 546	1,530	408	‡ 408
13	449	495	510	635	747	‡ 584	647	705	545	1,540	397	416
14	418	488	‡ 516	639	738	529	586	649	553	1,550	‡ 386	406
15	407	‡ 485	525	631	747	580	565	‡ 689	563	1,550	412	407
16	408	475	528	606	‡ 745	663	565	615	564	1,540	504	402
17	415	472	528	624	751	523	554	633	567	1,030	504	400
18	‡ 427	461	537	‡ 624	651	425	‡ 561	607	577	448	518	403
19	462	417	555	746	544	410	656	550	‡ 527	‡ 507	529	‡ 406
20	483	409	575	877	528	‡ 409	605	524	438	643	498	405
21	481	406	‡ 574	783	519	400	557	509	427	661	984	405
22	425	407	578	725	515	386	505	‡ 512	457	668	‡1,340	397
23	405	430	566	730	‡ 542	378	456	521	1,180	635	1,420	404
24	415	‡ 433	559	723	542	400	448	511	1,400	627	1,480	409
25	‡ 406	459	559	‡ 706	525	494	‡ 505	499	1,460	625	1,470	401
26	405	539	623	699	496	507	519	546	‡ 1,500	‡ 633	1,440	395
27	423	540	677	742	497	‡ 566	503	650	1,440	624	1,440	394
28	473	547	653	742	524	607	496	612	1,470	582	‡1,430	399
29	481	‡ 564	646	726	612	638	495	‡ 590	1,490	551	1,420	406
30	509		655	728	‡ 600	654	505	586	1,500	535	809	408
31	499		652		651		491	578		‡ 523		405
Sum	13,757		20,530		15,735		18,507		33,692		12,598	
	13,960		17,678		20,400		18,037		23,468		22,864	

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1950-1972 Acre-Feet Average	Maximum	Minimum
Jan.	5.16	4.44	30	516	26	397	450	27,689	73,304	89,500	27,689
Feb.	5.40	4.36	29	575	22	402	474	27,287	66,964	86,817	27,287
Mar.	7.07	4.98	27	686	17	388	570	35,064	68,701	90,700	35,064
Apr.	7.31	6.00	20	896	16	591	684	40,721	64,649	81,000	40,721
May	7.05	4.90	7	819	†22	489	658	40,463	70,187	84,973	39,400
June	6.67	4.09	16	693	24	374	524	31,210	72,339	90,547	31,210
July	6.08	4.70	6	705	23	435	582	35,776	71,977	93,900	19,600
Aug.	6.74	4.82	12	853	1	470	597	36,708	74,260	91,459	36,708
Sept.	9.10	4.46	26	1,550	22	418	782	46,548	72,860	89,039	32,963
Oct.	9.12	4.45	8	1,570	18	421	1,090	66,827	74,349	91,578	22,235
Nov.	8.82	4.26	24	1,500	14	378	762	45,350	71,056	89,991	22,487
Dec.	4.72	4.25	1	459	2	384	406	24,988	71,736	89,158	23,516
Yearly	9.12	4.09		1,570		374	632	458,631	852,382	1,027,400	458,631

‡ Discharge measurement made on this day † And other days

PINTO CREEK NEAR DEL RIO, TEXAS

DESCRIPTION: Cableway, solid ledge rock and concrete control, bubbler gage, and digital water-stage recorder located on the right bank at latitude 29°08'45", longitude 100°43'05", 1.6 creek miles from the confluence with the Rio Grande, and about 19 miles southeast of Del Rio, Texas. This stream enters the Rio Grande at river mile 530.1, 6.1 river miles downstream from the Maverick County Water Control and Improvement District No. 1 diversion dam, and 718.7 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 813.68 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 50 discharge measurements during the year and a continuous record of gage heights. Records available: September 1955 through 1972 at this station, and November 22, 1928 through August 1955 at a site 3.9 miles upstream.

REMARKS: Small irrigation diversions modify the flow of this spring-fed creek at this station. When the flow in the Rio Grande at the confluence of this creek exceeds about 80,000 second-feet, backwater may reach this station. Backwater from the Rio Grande flood of June 1954 reached a gage height of 28.8 feet, or an elevation of 842.50 feet above mean sea level, at this station. On June 29, 1966 the graphical water-stage recorder was replaced by a digital recorder.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 186,000 second-feet on June 24, 1948 with a gage height of 32.0 feet. Min. frequently no flow.

		Average Flow in Second-Feet			
Daily:	Max. 28,200	June 24, 1948	Min. 0		Frequently
Monthly:	Max. 953	June 1948	Min. 0		Frequently
Yearly:	Max. 105	1932	Min. 1.8		1945

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	33.1	‡ 17.2	12.9	18.4	‡ 20.8	9.7	4.3	‡ 2.9	14.5	20.7	18.2	18.8
2	32.5	17.7	11.7	18.8	42.0	10.2	4.5	3.0	13.8	20.8	‡ 17.8	19.0
3	‡ 31.9	17.2	11.3	19.0	68.4	10.4	4.9	3.2	13.5	21.1	17.7	19.1
4	32.0	16.7	8.6	‡ 19.2	17.0	9.7	5.2	374	13.3	21.4	17.5	19.1
5	31.8	17.5	10.2	19.4	16.0	‡ 9.3	‡ 5.1	32.8	12.9	21.5	17.4	18.9
6	31.7	18.7	‡ 10.5	20.1	26.0	9.4	4.4	12.9	13.3	‡ 21.2	17.0	19.2
7	31.7	‡ 18.3	10.9	20.5	19.5	9.4	3.7	9.8	14.0	20.8	15.9	19.5
8	31.3	17.5	12.2	20.6	‡ 17.8	9.5	3.2	‡ 10.7	‡ 12.5	20.4	15.6	19.5
9	31.3	17.5	11.7	21.2	17.0	9.6	2.7	42.2	12.6	19.8	‡ 15.2	19.8
10	30.9	17.8	9.8	‡ 20.9	16.0	9.7	‡ 2.3	‡ 179	13.0	19.2	15.2	19.9
11	30.8	18.0	9.2	20.3	16.0	11.6	2.1	‡ 59.5	13.4	16.3	15.2	20.2
12	30.5	18.8	9.7	18.9	15.8	‡ 18.2	2.0	1,430	13.8	‡ 9.2	14.3	20.2
13	30.4	19.1	‡ 9.8	17.7	15.5	11.7	2.0	234	14.1	17.0	10.5	20.5
14	30.0	‡ 18.8	8.1	15.8	14.7	16.3	2.1	‡ 76.3	‡ 14.1	17.4	11.7	‡ 20.6
15	30.0	18.8	8.2	14.0	15.4	22.8	2.1	49.2	13.7	16.9	12.6	20.6
16	29.6	18.8	8.0	13.2	15.8	19.6	2.1	40.0	14.8	16.3	‡ 13.3	21.2
17	29.6	18.3	8.1	‡ 12.5	15.7	15.5	‡ 2.2	36.2	15.2	16.0	13.4	21.5
18	‡ 29.4	17.6	8.0	12.7	15.5	13.7	2.5	33.5	16.0	16.2	13.6	21.8
19	28.9	16.7	7.1	14.5	14.5	‡ 12.7	11.8	31.1	16.2	‡ 15.9	14.6	22.1
20	28.1	16.3	‡ 7.1	15.9	13.4	7.8	8.2	28.8	15.8	16.2	18.1	22.4
21	27.2	16.0	7.4	16.5	12.4	7.5	11.3	26.8	‡ 15.5	19.1	18.1	‡ 22.7
22	22.6	‡ 15.8	7.4	15.7	‡ 11.8	11.0	8.7	24.7	32.7	18.2	‡ 16.5	22.7
23	15.6	14.9	7.1	15.0	11.9	6.9	7.7	22.3	31.9	15.8	16.1	21.9
24	‡ 15.6	14.7	7.1	‡ 15.0	11.8	3.1	‡ 8.1	‡ 21.5	25.5	18.4	19.9	21.5
25	16.2	15.7	10.7	15.2	11.8	2.9	7.0	19.6	22.8	18.5	18.6	20.9
26	15.9	18.4	19.1	15.4	11.3	‡ 2.8	6.0	19.5	25.2	‡ 18.7	17.6	20.5
27	16.4	18.7	‡ 18.7	16.6	10.6	3.1	5.5	17.8	23.2	18.8	17.7	20.3
28	17.2	‡ 15.6	18.6	10.2	9.8	3.3	4.6	16.0	‡ 21.6	18.9	18.1	20.5
29	17.3	13.0	18.2	21.8	8.8	3.7	3.7	15.6	21.5	19.9	18.4	20.7
30	20.2		17.9	21.9	‡ 6.9	3.9	3.4	14.7	20.8	20.2	‡ 18.8	19.6
31	18.2		18.1		8.3		3.0	‡ 14.5		20.0		18.9
Sum	817.9	500.1	343.4	516.9	528.2	295.0	146.4	2,902.1	521.2	570.8	484.6	634.1

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1929-1972 Acre-Feet Average	Maximum	Minimum
Jan.	1.51	1.10	1	33.4	24	14.9	26.4	1,622	489	2,270	0
Feb.	1.40	1.09	14	19.3	†28	13.0	17.2	992	561	5,760	0
Mar.	1.35	.87	†25	19.1	4	6.5	11.1	681	501	2,500	0
Apr.	1.39	.79	†28	22.0	28	2.7	17.2	1,025	1,443	27,100	0
May	3.29	.88	2	475	30	6.7	17.0	1,048	2,299	29,400	0
June	1.67	.74	15	31.0	26	2.7	9.8	585	4,129	56,700	0
July	1.41	.70	19	20.7	11	1.9	4.7	290	1,592	30,000	0
Aug.	6.69	.76	12	3,500	1	2.8	93.6	5,756	1,927	48,700	0
Sept.	1.95	.94	22	58.2	14	9.0	17.4	1,034	2,592	48,965	0
Oct.	1.33	.92	† 3	21.5	12	8.7	18.4	1,132	1,032	8,940	0
Nov.	1.33	.94	24	20.3	12	8.8	16.2	961	445	2,590	0
Dec.	1.33	1.24	21	22.9	† 1	18.8	20.5	1,258	531	2,470	0
Yearly	6.69	0.70		3,500		1.9	22.6	16,384	17,541	76,259.3	1,325.3

‡ Discharge measurement made on this day † And other days

RIO SAN DIEGO AT JIMENEZ, COAHUILA

DESCRIPTION: Cableway, masonry and concrete Cipolletti weir of 777 second-foot capacity, gravity well, and water-stage recorder located on the left bank on Rio San Diego, and gravity well and water-stage recorder on Acequia de Dolores, an irrigation canal that runs along the left bank of the river under the cable, located at latitude 29°04'20", longitude 100°43'50", about 3.5 miles west of Jimenez, Coahuila, and 4.1 river miles from the confluence with the Rio Grande. Part of the canal flow measured here returns to the river downstream. This stream enters the Rio Grande at river mile 525.2, 11.0 river miles downstream from Maverick Dam, 29.4 river miles downstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 723.6 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 831.72 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: For the river, based on the weir discharge table and a continuous record of gage heights; and for the canal, on a continuous record of gage heights. The flows tabulated below include the flow of the canal, and prior to 1964, they do not. In 1972, the capacity of the weir was exceeded on April 19, May 6, and August 11. Records available: 1922 through 1972. The records from 1922 through September 1932 are considered doubtful.

REMARKS: Reservoirs and irrigation diversions upstream from these stations modify the flow of this spring-fed stream. On December 24, 1955, the zero of the gage was raised 2.62 feet; in November 1961 an additional 0.20 foot, and the capacity of weir was increased from 706 to 777 second-feet.

EXTREME FLOWS FROM RECORDS**: Momentary: Max. 81,930 second-feet on June 17, 1961 with a gage height of 20.70 feet. Min. no flow occurred on several occasions during April, May, and June 1939, May and August 1952, and July and August 1953.

Average Flow in Second-Feet**

Daily:	Max.	33,730	June 17, 1961	Min.	0	Occasionally	
Monthly:	Max.	2,380	Oct. 1932	Min.	8.0	July 1956	
Yearly:	Max.	527	1935	Min.	24.0	1956	

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	333	240	137	107	98.9	99.2	86.2	196	345	278	246	193
2	326	249	130	107	101	92.5	86.2	179	344	278	246	185
3	318	257	130	107	113	92.2	86.2	196	344	278	243	185
4	318	266	124	107	108	91.8	92.9	597	335	278	234	185
5	318	274	115	107	102	89.3	160	240	335	278	228	177
6	318	283	115	107	176	85.1	115	234	323	278	234	177
7	318	292	108	107	221	85.1	106	225	307	278	228	177
8	308	294	102	107	138	83.3	101	216	303	278	225	177
9	308	281	108	107	117	74.9	92.5	223	303	278	215	177
10	295	269	102	107	111	84.8	92.5	352	303	278	207	177
11	288	257	102	107	116	84.8	90.0	1,060	303	278	202	177
12	278	245	102	107	116	88.6	92.2	682	303	278	202	177
13	275	232	102	96.8	116	101	92.2	336	299	278	194	177
14	273	220	102	87.6	109	99.9	85.8	318	285	279	199	177
15	268	208	115	87.6	109	189	85.8	308	283	279	210	177
16	268	212	115	87.6	108	138	85.8	302	283	274	210	170
17	273	206	111	87.6	116	121	85.8	318	283	274	210	158
18	268	198	108	87.6	115	111	90.8	333	283	264	210	147
19	268	191	103	403	107	99.9	156	325	274	264	210	141
20	268	185	108	162	99.9	99.6	101	328	272	264	210	128
21	268	179	115	140	99.9	99.9	99.2	328	272	264	201	116
22	267	172	108	125	99.6	107	128	338	272	264	197	116
23	267	166	102	115	96.8	102	170	345	285	264	197	116
24	267	159	102	114	83.3	92.9	178	360	292	264	197	116
25	257	153	102	108	85.8	92.9	187	371	291	264	197	116
26	248	147	102	108	89.0	93.2	194	403	309	255	197	116
27	246	145	102	112	89.0	93.6	197	431	300	255	197	116
28	245	143	102	128	85.8	90.4	196	431	277	246	197	116
29	244	141	102	115	85.8	86.2	196	410	268	246	197	116
30	243		102	108	85.5	86.2	196	371	268	246	197	116
31	242		102		85.5		196	357		246		116
Sum	8,681	6,264	3,385	3,556.8	3,383.8	2,955.3	3,921.1	11,113	8,944	8,326	6,337	4,715

Month	Current Year 1972 Extreme Gage Feet High	Low	Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1933-1972 Acre-Feet Average	Maximum	Minimum
Jan.	0.79	0.66	1	333	31	242	280	17,219	7,112	36,430	1,860
Feb.	.72	.43	8	294	31	141	216	12,424	5,660	25,760	1,060
Mar.	.43	.36	1	137	†23	102	109	6,710	4,954	27,040	1,340
Apr.	1.51	.30	19	978	†14	87.6	119	7,064	5,984	40,270	1,110
May	1.84	.30	6	1,330	24	83.3	109	6,713	11,319	120,200	861
June	.79	.26	15	360	† 8	72.7	98.5	5,861	10,769	108,300	543
July	.56	.33	27	197	†14	85.8	126	7,777	8,110	37,890	490
Aug.	2.85	.49	11	2,680	2	162	357	22,036	8,332	53,789	738
Sept.	.82	.69	1	353	†29	268	293	17,725	16,230	94,667	1,183
Oct.	.72	.62	14	279	28	246	269	16,524	15,817	71,830	1,693
Nov.	.62	.52	† 1	246	13	194	211	12,567	10,658	64,060	803
Dec.	.56	.39	† 1	197	†21	116	152	9,343	7,356	45,320	1,130
Yearly	2.85	0.26		2,680		72.7	196	141,963	112,301	381,720	17,430

** Period October 1932-1972 † And other days

RIO GRANDE BELOW MAVERICK DAM NEAR QUEMADO, TEXAS

DESCRIPTION: Cableway, bubbler gage, control weir of 1,270 second-foot capacity, gravity well, and water-stage recorder located on the right bank at latitude 29°03'00", longitude 100°40'00", and river mile 523.4; 1.5 miles south-southeast of Jimenez, Coahuila, 1.9 river miles downstream from Rio San Diego, about 7.5 miles north-northwest of Quemado, Maverick County, Texas, 12.8 river miles downstream from the Maverick County Water Control and Improvement District No. 1 diversion dam, 31.3 river miles downstream from the international highway bridge between Del Rio, Texas and Cd. Acuna, Coahuila, and 725.5 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 769.00 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 9 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods prior to completion of the weir and for flows exceeding the capacity of the weir thereafter. Computations for flows within the capacity of the weir were based on a stable control **weir rating curve defined by meter measurements.** Records available: 1965 through 1972. Records, excluding some high flow periods, are also available from 1956 through May 1965 for a station 8.1 river miles upstream.

REMARKS: This station was placed in operation January 1, 1965 and replaces the station "Rio Grande below Maverick Dam near Del Rio, Texas" which stopped operating June 1, 1965. Irrigation diversions 14.0 river miles upstream largely control the flow at this station. A bubbler gage replaced the gravity well on May 1, 1966. The weir was placed in operation June 1, 1967 at which time a bubbler gage and gravity well were installed and the zero of the gage was set 3.28 feet higher.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	367	280	125	109	114	101	60.0	163	367	4,310	256	212
2	367	‡ 272	109	109	141	97.5	60.0	163	367	4,310	250	205
3	367	250	101	109	256	86.5	63.9	173	364	4,270	250	203
4	367	274	101	105	194	90.4	70.3	1,270	351	2,540	250	198
5	357	314	101	120	144	86.5	317	572	343	2,310	239	198
6	357	324	101	109	392	86.5	185	273	343	4,240	239	193
7	357	318	101	111	1,770	81.9	120	245	327	4,310	239	188
8	357	318	103	106	357	79.5	106	213	318	4,310	239	188
9	357	315	93.9	101	222	‡ 72.4	94.0	220	318	4,310	239	188
10	357	311	93.9	109	179	73.1	339	1,190	307	4,310	239	192
11	357	313	93.9	109	169	77.7	142	2,230	307	4,310	229	198
12	343	307	101	109	160	82.3	97.5	14,500	307	4,310	229	198
13	331	300	101	101	145	92.9	86.5	6,990	296	4,310	229	198
14	331	291	101	93.9	142	86.5	86.5	833	296	‡ 4,240	229	192
15	318	266	101	86.5	142	456	86.5	441	296	4,240	229	188
16	318	224	101	86.5	142	523	86.5	381	296	4,100	229	179
17	311	201	101	86.5	140	163	86.5	378	296	749	219	169
18	311	176	96.8	86.5	140	131	86.5	396	284	303	219	160
19	309	163	89.3	‡ 823	133	117	558	385	272	281	219	‡ 151
20	307	160	86.5	338	123	113	188	396	‡ 272	272	208	151
21	307	160	95.7	190	117	108	109	396	272	288	208	148
22	303	169	105	142	117	98.2	118	396	284	296	259	142
23	296	169	101	129	112	92.9	157	396	2,570	272	‡ 253	142
24	291	151	104	117	95.7	86.5	169	406	3,600	272	244	139
25	284	152	101	107	98.5	86.5	179	420	3,490	272	239	133
26	280	139	111	103	105	79.5	175	438	3,740	272	229	130
27	272	133	117	112	101	79.5	169	473	4,130	272	225	125
28	272	133	117	129	101	67.1	160	463	4,340	272	221	117
29	272	133	117	117	93.9	60.0	169	424	4,340	272	219	117
30	268		109	115	‡ 93.9	60.0	166	396	4,310	272	219	117
31	280		110		98.5		‡ 160	385		261		114
Sum	9,971	6,716	3,190.0	4,268.9	6,338.5	3,515.9	4,650.7	36,005	37,403	69,356	6,995	5,173

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	High	Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1968-1972 Acre-Feet Average	Maximum	Minimum
Jan.	0.82	0.66	4	388	30	265	322	19,774	21,799	54,215	5,236
Feb.	.75	.43	6	331	†27	133	232	13,322	110,593	401,339	5,788
Mar.	.43	.33	1	125	20	86.5	103	6,325	19,917	68,727	5,874
Apr.	1.90	.33	19	1,730	†15	86.5	142	8,462	17,583	32,447	5,030
May	2.62	.36	7	3,530	†29	93.9	205	12,596	42,857	110,993	6,574
June	1.71	.26	15	1,370	†29	60.0	117	6,971	66,638	164,298	1,671
July	1.44	.26	19	999	† 1	60.0	150	9,222	27,061	80,943	2,322
Aug.	13.19	.49	12	35,100	† 1	163	1,160	71,498	56,441	164,760	11,855
Sept.	3.41	.66	26	5,970	†19	272	1,250	74,204	43,376	74,204	13,678
Oct.	2.89	.66	† 1	4,310	31	261	2,240	137,509	70,004	137,509	13,399
Nov.	.66	.56	†22	272	†20	208	233	13,874	19,450	32,340	13,343
Dec.	.59	.39	1	219	31	112	167	10,260	14,517	25,360	7,486
Yearly	13.19	0.26		35,100		60.0	530	384,017	510,236	1,095,264	207,998

‡ Discharge measurement made on this day † And other days

RIO SAN RODRIGO NEAR MOUTH AT EL MORAL, COAHUILA

DESCRIPTION: Cableway, gravity well, concrete control weir of 4,600 second-foot capacity, and water-stage recorder located on the left bank at El Moral, Coahuila, latitude 28°53'45", longitude 100°38'05", 0.6 river mile from the confluence with the Rio Grande, and about 15.5 miles northwest of Piedras Negras, Coahuila. The stream enters the Rio Grande at river mile 512.0, 19.5 river miles downstream from the Maverick County Water Control and Improvement District No. 1 diversion dam, 20.7 river miles upstream from the international highway bridge between Eagle Pass, Texas and Piedras Negras, Coahuila, and 736.8 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 751.61 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 45 discharge measurements made at low and medium flows during the year and a continuous record of gage heights. Records available: 1962 through 1972.

REMARKS: This station, located 10.6 river miles downstream from the permanent station which was in operation from 1922 through May 1966, was originally installed on a provisional basis; however, it became the permanent station on June 1, 1966 when operation of the upstream station was discontinued. The rating curve for this station is affected by backwater from the Rio Grande when its flow is approximately 10,000 second-feet. The flow of this spring-fed stream is modified by diversions above this station. On November 25, 1969, a concrete control weir was finished and placed in operation. Prior to this date, the zero of the gage was 746.82 feet above mean sea level, U. S. C. & G. S. datum.

EXTREME FLOWS FROM RECORDS**: Momentary: Max. 72,000 second-feet on June 17, 1961 determined by slope-area computations. Min. frequently no flow.

Average Flow in Second-Feet

Daily:	Max.	6,180	Sept. 15, 1967	Min.	0	Frequently
Monthly:	Max.	1,450	Aug. 1971	Min.	0	Frequently
Yearly:	Max.	305	1971	Min.	5.3	1963

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	190	‡ 144	74.9	46.6	27.9	‡ 20.1	20.1	80.5	501	187	142	111
2	190	144	73.8	45.9	27.5	21.2	20.1	‡ 71.0	456	187	142	111
3	190	141	71.7	44.8	27.9	21.2	20.1	59.7	417	187	‡ 142	108
4	190	138	71.0	‡ 43.4	‡ 29.0	21.9	20.1	1,180	374	‡ 184	142	108
5	‡ 180	140	69.9	42.0	29.0	21.9	45.9	243	338	182	138	105
6	180	140	68.2	41.7	32.1	20.8	38.1	109	‡ 311	178	138	‡105
7	178	136	68.2	40.6	31.8	20.8	35.3	80.5	290	177	136	105
8	175	‡ 133	68.2	40.6	30.0	20.1	32.8	66.7	268	177	132	105
9	171	124	68.2	40.6	29.0	‡ 20.5	31.4	71.3	256	172	‡ 134	105
10	171	120	66.4	40.6	29.0	20.8	‡ 30.4	132	253	172	134	105
11	169	124	66.4	42.7	‡ 30.4	20.5	30.0	‡1,780	239	172	134	105
12	168	124	65.3	‡ 42.7	31.1	23.3	28.6	‡1,910	231	168	134	105
13	‡ 161	120	65.3	42.0	30.0	26.1	27.5	862	‡ 226	‡ 168	132	102
14	161	120	65.3	39.9	28.6	‡ 26.1	27.2	671	221	168	130	‡ 98.2
15	161	119	65.3	38.8	27.9	254	25.8	547	218	168	127	98.2
16	161	‡ 114	64.6	47.3	27.5	220	25.1	‡ 470	204	168	126	98.2
17	161	113	62.9	48.7	26.1	57.2	25.1	413	199	163	126	98.2
18	161	111	62.2	50.1	25.8	43.1	27.9	353	195	‡ 163	126	94.6
19	‡ 161	108	59.0	50.1	‡ 24.0	36.7	66.7	300	190	163	125	94.6
20	160	109	60.4	‡ 46.6	23.0	29.0	‡ 150	266	‡ 182	165	122	‡ 91.5
21	155	108	62.9	36.0	21.5	‡ 30.0	388	255	175	170	122	88.3
22	152	106	‡ 61.1	30.7	21.2	28.6	392	251	172	182	121	85.5
23	149	‡ 104	57.9	27.5	20.5	27.2	357	‡ 246	182	166	122	85.5
24	144	101	57.9	25.8	‡ 20.1	26.1	310	239	187	154	134	85.5
25	143	93.9	57.2	24.0	19.1	26.1	258	234	184	‡ 150	130	85.5
26	‡ 140	90.4	56.2	23.7	19.1	23.7	‡ 211	249	243	150	121	85.5
27	140	82.3	59.0	23.0	18.4	22.6	173	452	‡ 205	150	117	85.5
28	140	77.7	56.9	23.7	18.0	‡ 22.6	145	593	202	150	115	‡ 85.5
29	140	76.6	‡ 52.6	23.3	17.3	21.9	125	664	197	146	‡ 111	85.5
30	144		48.7	23.7	19.1	21.5	110	614	192	146	111	85.5
31	144		48.7		19.4		95.3	558		146		82.6
Sum	5,030	3,361.9	1,956.3	1,137.1	781.3	1,195.6	3,292.5	14,020.7	7,508	5,179	3,866	2,993.9

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1962-1972 Acre-Feet Average	Maximum	Minimum
Jan.	1.64	1.48	† 1	190	†26	140	162	9,976	2,195	9,976	0
Feb.	1.48	1.18	† 1	144	†28	76.6	116	6,669	1,443	6,669	0
Mar.	1.18	.98	1	76.6	31	46.6	63.2	3,880	1,184	3,880	0
Apr.	1.02	.75	18	51.2	27	22.2	37.8	2,256	3,153	21,692	122
May	1.12	.59	6	62.5	29	17.0	25.1	1,549	2,311	6,431	17.0
June	3.48	.66	15	1,290	† 1	20.1	39.9	2,373	1,421	4,705	0
July	2.26	.66	21	427	† 1	20.1	106	6,531	4,643	28,394	0
Aug.	6.07	1.02	4	5,540	3	55.1	452	27,824	12,467	89,017	0
Sept.	2.46	1.57	1	530	22	172	250	14,894	14,311	44,000	0
Oct.	1.64	1.51	22	192	†29	146	167	10,277	10,192	48,324	0
Nov.	1.48	1.35	1	142	†29	111	129	7,672	4,598	19,270	0
Dec.	1.35	1.18	† 1	111	31	82.6	96.4	5,936	3,530	15,058	0
Yearly	6.07	0.59		5,540		17.0	137	99,837	61,448	220,979	3,850.7

** Period 1961-1972 ‡ Discharge measurement made on this day † And other days

RETURN FLOW TO THE RIO GRANDE AT MAVERICK POWER PLANT NEAR EAGLE PASS, TEXAS

DESCRIPTION: A part of the water diverted from the river into the Maverick Canal is returned to the Rio Grande through the hydroelectric power plant located on the left bank of the Rio Grande at latitude 28°49' 50", longitude 100°33' 10", about 9 miles north-northwest of Eagle Pass, Texas, and about 32.2 canal miles downstream from the point of diversion. The return enters the Rio Grande at river mile 501.5 and 747.3 river miles downstream from the American Dam at El Paso, Texas.

RECORDS: Based on records furnished by the Maverick County Water Control and Improvement District No. 1, showing hourly discharge in cubic feet per second based on hourly manometer readings, through each turbine at the Central Power and Light Company hydroelectric power plant. The mean daily discharges computed from the manometer readings have been multiplied by a factor to make them agree with periodic current meter measurements of flows made under steble flow conditions by hydrographers of the Commission. There were 53 discharge measurements made during the year. Records available: 1949 through 1972.

REMARKS: This power plant began operating April 16, 1932 with hydroelectric power generating facilities for 12,000 kw. Because the September 1932 flood washed out the upper end of the Maverick Canal, this plant did not operate from September 2, 1932 until March 17, 1937. Since then it has operated continuously except for 44 days in 1953 when shortage of water prevented operation and from June 30 through July 19, during flood of 1954, and while the canal was being repaired. The plant's operation is now governed by the amount of water released from Amistad Reservoir which began operations on May 31, 1968.

Average Flow in Second-Feet

Daily:	Max. 1,460	Aug. 29, 1969	Min. 0		Occasionally
Monthly:	Max. 1,270	Sept. 1966	Min. 14.1		June 1953
Yearly:	Max. 1,020	1950 & 1961	Min. 232		1972

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26	‡ 197	145	74.1	‡ 87.5	‡ 103	44.0	‡ 44.3	174	1,270	99.9	225
2	149	288	144	156	87.1	78.8	44.0	44.3	158	1,270‡	70.7	156
3	‡ 137	283	128	‡ 137	137	83.6	44.0	44.3	137	1,270	81.6	56.3
4	142	208	133	66.8	179	75.3	44.0	385	122	1,260	81.6	‡ 61.7
5	163	209	133	56.3	179	‡ 46.0	205	391	86.8	1,120	88.2	75.3
6	153	237	‡ 95.4	68.7	217	45.7	219	362	‡ 114	1,170	‡ 87.1	82.1
7	148	‡ 214	36.0	69.9	331	45.4	‡ 107	‡ 202	89.6	1,210	81.9	56.9
8	130	188	106	39.0	‡ 306	45.1	170	97.7	57.0	1,230	82.2	28.6
9	130	206	94.3	72.7	295	44.8	172	155	33.2	1,200	72.2	52.3
10	‡ 165	179	122	‡ 67.3	383	44.5	‡ 172	471	107	1,180	47.7	93.4
11	106	191	140	38.3	579	44.2	114	495	‡ 64.3	1,130	48.0	‡110
12	47.0	208	136	37.7	427	‡ 148	131	506	33.2	1,100‡	36.9	28.4
13	52.5	218	‡111	37.0	489	360	73.0	463	33.2	1,120	‡ 31.0	71.0
14	40.0	‡ 183	36.0	36.4	482	327	45.9	610	59.6	1,130	31.0	57.3
15	34.9	170	36.0	35.7	‡ 445	328	45.9	590	239	1,150	31.0	63.9
16	34.9	173	36.0	35.0	451	474	45.9	‡ 466	229	1,140‡	53.0	45.1
17	‡ 34.9	190	36.0	‡ 33.7	394	374	‡ 45.9	414	278	879	165	53.2
18	34.9	146	36.0	33.7	310	227	45.9	454	‡ 240	156	87.6	‡ 43.6
19	34.9	143	84.2	33.7	192	‡ 194	136	392	218	33.2	160	20.7
20	34.9	127	‡ 61.8	112	180	140	149	355	149	122	‡262	30.9
21	65.9	90.9	67.9	120	207	105	122	‡ 301	70.4	238	538	57.4
22	87.9	‡ 35.0	36.0	74.0	‡ 90.4	83.4	71.4	226	195	331	1,140	60.1
23	35.0	35.0	36.0	115	102	67.5	86.3	208	773	295	1,050	54.7
24	‡ 35.0	35.0	36.0	‡ 93.6	89.9	44.0	‡ 45.3	196	1,240	‡ 235	1,230	89.8
25	35.0	35.0	36.0	35.2	57.0	88.0	45.3	144	‡1,260	250	1,230	107
26	35.0	129	36.0	35.2	41.6	‡ 79.2	96.0	153	1,310	257	1,220	72.4
27	35.0	94.7	234	51.6	41.6	44.0	76.6	320	1,170	265	1,200‡	45.0
28	52.6	‡ 149	188	152	41.6	44.0	45.0	‡ 231	1,170	207	1,180	33.5
29	72.1	164	178	133	41.6	44.0	61.8	186	1,270	164	1,180	65.6
30	66.2		91.5	118	41.6	44.0	44.3	202	1,290	‡ 157	727	77.5
31	79.2		91.1		96.8		44.3	197		156		104
Sum	2,496.8	4,725.6	2,880.2	2,168.6	7,001.7	3,871.5	2,791.8	9,305.6	12,370.3	22,695.2	12,393.6	2,178.7

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	ø Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1949-1972 Acre-Feet Average	Maximum	Minimum
Jan.			10	165	†15	34.9	80.5	4,952	51,202	72,800	4,952
Feb.			2	288	†22	35.0	163	9,373	46,222	68,500	9,373
Mar.			27	234	† 7	36.0	92.9	5,713	41,499	65,400	5,713
Apr.			2	156	†17	33.7	72.3	4,301	36,285	58,600	4,301
May			11	579	†26	41.6	226	13,888	45,171	69,188	2,280
June			16	474	†24	44.0	129	7,679	41,107	68,900	841
July			6	219	† 1	44.0	90.1	5,537	38,604	63,000	2,880
Aug.			14	610	† 1	44.3	300	18,457	45,724	69,000	18,457
Sept.			26	1,310	† 9	33.2	412	24,536	50,902	75,591	13,741
Oct.			† 1	1,270	19	33.2	732	45,015	52,268	70,870	11,147
Nov.			†24	1,230	†13	31.0	413	24,582	48,606	67,400	3,203
Dec.			1	225	19	20.7	70.3	4,321	50,839	73,130	2,608
Yearly				1,310		20.7	232	168,354	548,429	740,000	168,354

‡ Discharge measurement made on this day ø Mean daily † And other days

DIVERSIONS FROM THE RIO GRANDE
MAVERICK CANAL EXTENSION BELOW THE POWER PLANT
NEAR EAGLE PASS, TEXAS

DESCRIPTION: Gage well and digital water-stage recorder located on the downstream side of a wooden pile bridge at latitude 28°49'50", longitude 100°32'40", about 1 mile downstream from the heading of this canal extension, about 9 miles north-northwest of Eagle Pass, Texas, and about 32.8 canal miles downstream from the point of diversion from the Rio Grande, which is located at river mile 537.4. The elevation of the zero of the gage has not been determined.

RECORDS: Based on 49 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: 1939 through 1972.

REMARKS: The main Maverick Canal divides into two branches at a point about 9 miles north-northwest of Eagle Pass, Texas, and about 31.8 canal miles downstream from the point at which water from the Rio Grande is diverted. One branch leads to the Maverick Power Plant and back to the Rio Grande while the other branch forms this Maverick Canal Extension, which is used to transmit irrigation water. Irrigation from this canal extension began in June 1938. In 1972, 27,386 acres of land north and south of Eagle Pass were irrigated. A total of 130,177 acre-feet of water from this canal extension returned to the river through the irrigation system which extends approximately 67 canal miles downstream.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 580 second-feet on July 25, 1964. Min. occasionally no flow.

		Average Flow in Second-Feet		
Daily:	Max. 559	July 14, 1964	Min. 0	Occasionally
Monthly:	Max. 525	July 1964	Min. 18.7	March 1939
Yearly:	Max. 345	1964	Min. 62.1	1939

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	264	‡ 243	314	346	‡ 450	‡ 457	452	‡ 272	298	202	306	197
2	237	185	306	353	405	457	475	260	297	‡ 202	344	216
3	‡ 254	199	289	‡ 337	342	447	466	279	321	202	340	257
4	247	204	266	358	330	411	448	253	330	221	342	‡ 305
5	230	205	297	384	319	‡ 397	432	224	320	262	354	308
6	178	209	‡ 298	379	320	369	403	196	‡ 328	264	‡ 345	‡ 307
7	198	‡ 211	326	391	318	350	‡ 402	‡ 182	315	265	338	291
8	212	210	306	430	‡ 313	340	401	256	318	267	322	281
9	228	207	311	459	318	336	402	283	343	266	320	304
10	‡ 232	231	316	‡ 431	255	337	‡ 384	201	358	266	336	300
11	228	253	310	434	202	‡ 375	361	184	‡ 355	275	325	‡ 291
12	292	242	323	407	201	342	356	166	359	285	308	282
13	313	237	‡ 298	406	203	237	400	165	348	286	‡ 287	291
14	292	‡ 248	325	429	204	232	428	164	324	286	256	287
15	283	243	322	443	‡ 206	194	394	163	202	288	255	285
16	285	232	329	464	207	190	393	‡ 162	231	‡ 287	295	283
17	‡ 284	226	308	464	226	185	‡ 391	162	228	290	301	294
18	274	225	287	‡ 431	258	180	375	162	‡ 225	254	286	‡ 287
19	281	218	313	420	241	‡ 180	384	163	224	222	307	273
20	307	211	‡ 298	447	232	210	357	163	229	287	‡ 294	269
21	288	223	337	441	243	227	345	‡ 164	277	290	297	270
22	277	‡ 240	332	459	‡ 266	230	334	166	240	292	271	271
23	260	225	318	480	262	273	355	188	169	293	261	272
24	‡ 267	239	305	‡ 453	284	257	‡ 374	219	144	‡ 294	163	266
25	267	250	303	477	318	279	344	255	‡ 166	293	157	248
26	250	258	319	469	313	‡ 315	325	275	194	292	168	255
27	247	286	370	485	292	300	299	277	202	291	‡ 177	249
28	286	‡ 308	362	394	324	331	314	‡ 309	202	289	176	259
29	292	308	358	373	333	386	318	323	202	287	177	264
30	318		355	428	421	439	353	294	201	‡ 271	188	262
31	316		347		452		317	292		252		258
Sum	8,187	6,776	9,848	12,672	9,058	9,263	11,782	6,822	7,950	8,321	8,296	8,482

Month	Current Year 1972								Period 1939-1972		
	Average Rainfall Inches**		Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low				Average	Maximum	Minimum
	1939-1972	1972	Day		Day						
Jan.	0.78	0.57	28	329	7	159	264	16,239	12,650	19,800	2,140
Feb.	.94	.11	27	331	† 1	161	234	13,440	11,852	18,200	2,120
Mar.	.69	.10	27	388	4	257	318	19,533	15,128	23,310	1,150
Apr.	1.69	.09	20	520	3	317	422	25,135	15,568	25,900	3,430
May	3.08	2.06	1	466	12	194	292	17,966	13,441	28,191	2,840
June	1.96	1.68	3	494	19	177	309	18,373	16,510	30,173	3,750
July	1.32	.91	3	496	31	279	380	23,369	18,129	32,276	4,510
Aug.	2.29	4.57	9	370	12	138	220	13,531	15,812	29,812	3,480
Sept.	2.97	2.45	10	373	23	143	265	15,769	12,436	22,640	4,600
Oct.	2.07	.28	17	306	19	197	268	16,504	13,056	21,800	5,130
Nov.	.69	.96	5	361	†24	131	277	16,455	13,211	20,117	4,170
Dec.	.65	.15	† 5	311	1	196	274	16,824	12,996	20,200	4,233
Yearly	19.13	13.93		520		131	294	213,138	170,789	250,801	44,950

‡ Discharge measurement made on this day † And other days

** On the United States side from Maverick Power Plant to Cuervo Creek

RETURN FLOW TO THE RIO GRANDE FROM MAVERICK CANAL
MAVERICK DAM TO EAGLE PASS, TEXAS

DESCRIPTION: Part of the water diverted from the Rio Grande into the Maverick Canal is returned to the river through various drains and spillways of the irrigation system located between Maverick Diversion Dam and Eagle Pass, Texas. These return flows are measured at gaging stations consisting of sharp-crested Cipolletti weirs or control structures equipped with continuous water-stage recorders located at Lateral 2 Spill, Canon Grande, Quemado Creek, Lateral 15 Spill, Hardt Spill, Houchin Spill, Lateral 12 Spill, Lateral 8-B Spill, Elm Creek, and Seco Creek; and a Parshall flume at the Lateral 2 Sand Trap Spill into Las Moras Creek immediately below the canal siphon.

RECORDS: Based on the weir discharge table and a continuous record of gage heights. All storm flow occurring at these stations is deducted from the records and is not shown below. Records available: April 1959 through 1972.

REMARKS: In addition to the flows listed below, water from the Maverick Canal is returned to the Rio Grande in this reach at the Maverick Power Plant (see page 50).

EXTREME FLOWS FROM RECORDS:

		Average Flow in Second-Feet		
Daily:	Max. 788	Jan. 16, 1965	Min. 18.3	March 9, 1969
Monthly:	Max. 218	Jan. 1965	Min. 39.7	Dec. 1972
Yearly:	Max. 145	1965	Min. 55.8	1972

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	48.4	61.6	65.6	74.3	76.9	58.6	63.6	48.4	38.5	38.8	44.7	37.4
2	47.0	52.6	77.5	78.9	84.2	56.4	75.7	51.0	41.8	38.1	48.6	35.2
3	45.7	48.5	69.1	66.2	91.6	50.7	74.0	65.9	51.7	41.6	43.8	34.4
4	53.6	50.6	75.0	77.9	84.4	49.4	78.3	57.2	46.5	42.3	42.7	39.3
5	48.0	51.6	66.6	80.4	70.9	46.2	87.4	38.6	43.0	38.3	41.6	41.4
6	60.3	45.8	74.8	79.1	78.3	50.2	66.0	36.7	39.5	45.1	46.5	32.6
7	59.3	43.5	87.9	75.1	61.8	44.9	54.5	41.8	50.5	44.6	46.2	31.6
8	55.1	56.5	87.0	82.5	44.1	53.6	53.1	52.4	51.6	39.6	53.1	34.2
9	48.5	55.1	70.6	79.4	49.7	60.6	49.5	54.2	60.5	44.2	47.0	41.1
10	45.1	59.3	79.9	93.4	53.1	70.7	49.2	62.6	54.2	43.9	52.0	35.2
11	44.3	56.5	74.1	102	54.7	58.7	51.0	50.2	44.9	44.2	55.2	33.0
12	59.6	46.4	74.0	95.7	47.1	58.5	43.8	54.0	49.3	54.9	54.9	35.3
13	61.5	46.4	77.5	87.0	38.1	43.5	42.5	54.0	57.2	66.9	46.4	33.9
14	59.0	45.9	81.7	77.1	35.0	37.4	35.8	46.8	51.1	59.5	42.9	44.0
15	52.9	42.8	81.8	82.1	45.6	41.0	47.1	41.3	61.2	62.7	48.7	43.1
16	53.0	42.0	85.4	76.7	56.0	40.2	45.7	36.8	55.6	59.1	48.2	36.8
17	58.6	52.8	97.5	73.8	47.5	44.4	44.7	40.0	44.2	60.7	43.0	37.5
18	55.2	54.9	101	81.4	51.7	47.1	53.7	39.0	43.7	58.3	54.3	40.5
19	61.1	52.2	77.4	96.2	60.9	44.9	59.7	38.0	42.9	50.3	54.0	45.9
20	64.8	54.3	84.0	87.0	52.6	44.5	54.3	39.3	40.2	60.2	47.5	50.8
21	67.5	55.3	93.7	83.9	39.8	42.5	50.2	38.7	39.6	65.6	42.6	45.4
22	66.4	60.5	81.5	87.2	47.0	37.1	62.9	49.3	51.3	54.0	44.7	41.0
23	60.9	70.0	87.6	65.5	55.1	38.6	58.1	57.2	54.5	47.3	42.7	42.2
24	66.2	76.3	96.4	64.9	57.9	46.2	45.3	61.6	50.3	46.7	43.6	35.1
25	63.7	90.6	99.6	85.4	52.8	45.2	37.6	49.7	41.1	51.5	38.5	36.2
26	73.2	73.4	91.3	95.8	54.9	43.5	39.9	58.3	36.6	46.6	42.5	40.7
27	63.4	58.8	70.5	99.2	65.5	46.4	38.9	41.4	47.7	41.0	40.2	47.0
28	76.8	64.8	58.8	84.1	69.0	54.3	39.0	41.7	52.2	47.0	38.1	44.2
29	78.4	63.3	59.1	89.5	73.9	56.9	47.1	43.2	47.2	54.9	35.7	46.2
30	68.1		69.2	73.7	92.7	55.8	45.8	46.1	40.7	56.5	39.7	44.0
31	55.8		68.7		71.0		43.5	42.2		47.8		43.2
Sum	1,821.4	1,632.3	2,464.8	2,475.4	1,863.8	1,468.0	1,637.9	1,477.6	1,429.3	1,552.2	1,369.6	1,229.4

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	∅ Extreme Second-Feet High Day	High	∅ Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Period Apr. 1959-1972 Acre-Feet Average	Maximum	Minimum
Jan.			29	78.4	11	44.3	58.8	3,613	6,907	13,430	3,613
Feb.			25	90.6	16	42.0	56.3	3,238	5,803	7,652	3,238
Mar.			18	101	28	58.8	79.5	4,889	6,633	8,952	4,378
Apr.			11	102	24	64.9	82.5	4,910	6,644	7,795	4,243
May			30	92.7	14	35.0	60.1	3,697	6,438	8,777	3,697
June			10	70.7	22	37.1	48.9	2,912	6,994	9,219	2,912
July			5	87.4	14	35.8	52.8	3,249	7,400	9,858	3,249
Aug.			3	65.9	6	36.7	47.7	2,931	7,081	9,666	2,931
Sept.			15	61.2	26	36.6	47.6	2,835	6,118	9,477	2,835
Oct.			13	66.9	2	38.1	50.1	3,079	6,144	8,583	3,079
Nov.			11	55.2	29	35.7	45.7	2,717	6,312	8,696	2,717
Dec.			20	50.8	7	31.6	39.7	2,438	6,167	8,821	2,438
Yearly				102		31.6	55.8	40,508	78,641	104,997	40,508

∅ Mean daily

RIO GRANDE AT EAGLE PASS, TEXAS

DESCRIPTION: Cableway, gravity well, water-stage recorder, and resistance-type transmitter located on the left bank at latitude 29°42'50", longitude 100°30'25", and river mile 491.8; 0.5 river mile upstream from the international highway bridge between Eagle Pass, Texas and Piedras Negras, Coahuila, 73.4 river miles downstream from Amistad Dam, and 757.0 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 682.91 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 93 discharge measurements during the year, 47 by the Mexican Section and 46 by the United States Section of the Commission, and a continuous record of gage heights. Computations by shifting control methods. Records available: May 1900 through Mar. 1914; Aug. 1914 through Apr. 1916; Sept. 1916; Sept. and Oct. 1917; Oct. 1918; Sept. and Oct. 1919; Aug and Sept. 1920; June 1922; Sept., Nov., and Dec. 1923; and 1924 through 1972.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. The transmitter is coupled, via leased telephone circuits, to a receiver located in the office of the Eagle Pass and Piedras Negras Bridge Company from where the Wheatstone bridge circuit can be balanced to indicate the existing gage height. This system is operated in cooperation with the National Weather Service.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 964,100 second-feet, determined by slope-area calculations, on June 29, 1954 with a gage height of 53.51 feet. Well-authenticated information indicates the occurrence of a flood in June 1865 with an estimated discharge of 1,236,000 second-feet and a gage height of 56.00 feet on the present gage and also that these were the only floods since 1745 with flows greater than 825,000 second-feet. Min. 24.4 second-feet on June 22,1953 with a gage height of 0.07 foot.

Average Flow in Second-Feet**

Daily:	Max.	572,100	June 28, 1954	Min.	30.7	June 22, 1953
Monthly:	Max.	48,000	Sept. 1932	Min.	248	April 1953
Yearly:	Max.	9,180	1932	Min.	870	1956

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	809	706	‡ 540	466	385	339	195	‡ 348	1,100	5,190	583	646
2	833	777	516	466	‡ 445	299	216	346	1,040	5,190	537	590
3	816	770	501	484	‡ 459	237	210	381	996	‡ 5,190	558	509
4	‡ 826	710	501	‡ 410	653	291	210	1,630	932	4,270	537	445
5	819	735	505	‡ 367	554	204	‡ 533	2,470	‡ 865	3,110	540	‡ 445
6	840	795	473	385	530	‡ 187	‡ 675	950	830	4,910	551	445
7	823	766	‡ 392	388	1,990	187	512	646	795	5,090	‡ 530	424
8	809	‡ 742	459	329	1,280	‡ 187	452	‡ 537	752	5,120	‡ 523	413
9	809	‡ 752	470	349	‡ 742	189	417	547	699	5,090	523	424
10	812	738	427	420	‡ 802	190	388	1,040	763	‡ 5,050	473	477
11	‡ 784	738	480	‡ 360	876	194	‡ 530	‡ 2,870	720	‡ 5,010	473	477
12	696	735	477	351	837	319	‡ 403	9,320	‡ 643	4,940	473	‡ 448
13	689	749	463	334	791	‡ 544	321	‡ 15,800	643	4,980	459	445
14	678	710	‡ 367	314	749	509	271	3,600	643	4,980	‡ 438	434
15	650	‡ 675	‡ 360	288	713	583	244	‡ 2,190	837	4,980	438	427
16	653	646	364	290	‡ 731	1,910	252	1,620	802	4,910	452	410
17	653	614	357	‡ 288	‡ 689	890	276	1,400	826	‡ 3,300	533	388
18	‡ 643	565	364	293	607	590	‡ 283	1,380	791	968	526	396
19	643	544	388	‡ 360	494	477	277	1,200	‡ 777	653	551	‡ 378
20	657	519	417	1,000	463	‡ 424	742	1,140	713	717	614	381
21	674	498	‡ 396	639	477	371	618	1,040	629	826	754	399
22	671	‡ 403	364	456	371	339	653	‡ 932	788	943	1,300	381
23	639	406	‡ 364	406	‡ 327	303	650	‡ 918	1,870	862	1,500	381
24	607	‡ 413	‡ 364	413	357	235	590	908	4,770	‡ 745	1,670	406
25	‡ 607	396	367	‡ 296	291	281	‡ 547	872	4,770	752	1,660	427
26	593	466	381	310	233	291	544	901	‡ 5,260	766	1,600	381
27	597	459	572	303	262	‡ 201	512	1,110	5,400	759	1,580	‡ 360
28	600	456	‡ 526	463	267	204	431	1,290	5,540	706	‡1,550	339
29	657	‡ 470	509	463	239	214	424	‡ 1,330	5,540	678	1,530	357
30	671		484	431	‡ 256	195	410	1,270	5,540	657	1,250	381
31	‡ 671		484		378		‡ 374	1,190		‡ 657		392
Sum	17,953		12,122		11,384		61,176			91,999		13,206
	21,929	13,632		18,248		13,160		56,274			24,706	

Month	Current Year 1972								Period 1968-1972		
	Extreme Gage Feet		Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low				Average	Maximum	Minimum
	High	Low	Day		Day						
Jan.	2.49	2.07	7	886	26	586	706	43,498	74,663	93,805	43,498
Feb.	2.43	1.71	2	848	27	364	618	35,604	154,021	448,150	35,604
Mar.	2.07	1.51	27	646	17	341	441	27,037	58,879	114,018	27,037
Apr.	2.79	1.35	20	1,210	†15	248	403	24,030	58,756	89,308	24,030
May	4.00	1.18	7	3,020	26	210	590	36,193	92,052	144,777	36,193
June	4.23	1.15	16	3,400	† 6	187	378	22,586	114,065	246,770	19,254
July	2.89	1.15	20	1,280	1	193	424	26,100	74,157	119,791	26,100
Aug.	11.38	1.51	13	22,600	2	321	1,970	121,302	122,447	261,760	56,856
Sept.	6.17	2.00	26	7,420	21	558	1,880	111,645	100,923	128,939	80,699
Oct.	5.35	2.07	† 1	5,190	31	607	2,970	182,475	132,193	182,475	80,699
Nov.	3.25	1.74	25	1,710	14	424	823	49,003	69,051	94,575	48,562
Dec.	2.23	1.51	1	699	26	321	427	26,197	63,582	105,033	26,197
Yearly	11.38	1.15		22,600		187	971	705,670	1,114,789	1,707,306	705,670

** Period 1924-1972 ‡ Discharge measurement made on this day † And other days

RIO ESCONDIDO AT VILLA DE FUENTE, COAHUILA

DESCRIPTION: Cableway, gravity well, concrete control weir of 1,750 second-foot capacity, and water-stage recorder located on the downstream side of the left abutment of the highway bridge over Rio Escondido on the outskirts of Villa de Fuente, Coahuila, 1.2 river miles downstream from the cableway, at latitude 28°40'10", longitude 100°32'50", about 3 miles southwest of Piedras Negras, Coahuila, 3.7 river miles from the confluence with the Rio Grande, and 6.8 river miles downstream from the confluence of Rio San Antonio with Rio Escondido. Rio Escondido enters the Rio Grande at river mile 488.2, 3.1 river miles downstream from the international highway bridge between Eagle Pass, Texas and Piedras Negras, Coahuila, and 760.6 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 718.37 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 15 discharge measurements during the year and a continuous record of gage heights. Records available: 1922 through 1972. Records from 1922 through September 1932 are considered doubtful.

REMARKS: Diversions and drainage returns modify the flow of this spring-fed stream at this station. Backwater from the Rio Grande reached an elevation of 729.92 feet during the flood of June 1954. Prior to November 1954, the gage well was located at the present cableway site. The weir was destroyed by a flood on September 24, 1964. On November 25, 1969, the concrete control weir was finished and placed in operation.

EXTREME FLOWS FROM RECORDS**: Momentary: Max. 24,000 second-feet on June 29, 1936 with a gage height of 19.13 feet. Min. frequently no flow.

Average Flow in Second-Feet**

Daily:	Max. 13,100	Sept. 24, 1964	Min. 0	Several days 1956-1958 & 1965
Monthly:	Max. 827	Sept. 1964	Min. 0.3	September 1965
Yearly:	Max. 144	1971	Min. 2.4	1956

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	193	139	108	92.9	53.3	38.1	21.2	‡ 43.1	215	193	141	111
2	193	138	105	92.2	80.9	38.1	21.2	45.9	210	193	141	111
3	193	138	105	86.9	72.4	36.0	20.1	126	210	193	145	108
4	193	138	102	77.0	63.9	31.1	21.5	127	206	193	141	108
5	193	142	102	74.5	62.2	29.0	29.7	68.9	219	193	138	108
6	192	148	102	74.5	62.2	29.0	32.1	64.6	228	193	131	115
7	188	145	101	74.9	62.2	29.0	27.9	64.6	226	193	124	118
8	184	145	98.9	70.3	61.1	29.3	26.1	65.7	224	189	121	118
9	184	141	98.9	69.6	60.0	35.0	25.8	85.5	238	189	123	118
10	184	141	98.9	69.6	60.7	32.5	24.7	388	244	184	123	118
11	176	141	98.9	72.0	62.2	29.0	25.8	‡ 720	224	184	123	118
12	177	145	98.9	69.6	64.6	31.1	‡ 23.7	526	‡ 215	184	129	118
13	178	141	98.9	67.1	63.6	‡ 36.4	22.6	417	215	184	127	118
14	177	141	96.4	66.0	61.4	42.4	21.2	360	215	180	125	118
15	176	141	92.9	62.9	72.7	42.7	21.2	321	215	176	125	115
16	176	138	92.9	59.7	77.0	39.9	21.2	296	215	176	124	111
17	172	138	91.5	57.9	75.2	35.0	25.1	279	210	176	125	111
18 ‡	169	138	90.4	57.9	74.5	36.4	32.1	277	210	164	127	111
19	165	136	90.4	57.9	74.9	32.8	32.8	275	210	143	127	111
20	159	134	90.4	60.0	61.4	30.4	29.0	270	186	138	127	111
21	157	134	90.4	57.9	54.0	29.0	29.0	267	176	138	131	108
22	155 ‡	134	87.6	55.8	57.9	28.3	28.3	‡ 272	218	141	117	105
23	152	134	87.6	54.4 ‡	57.2	26.1	29.0	272	192	136	114	105
24	152	134	87.6	55.8	60.7	25.8	29.0	270	201 ‡	134	125	105
25 ‡	152	134	87.6 ‡	54.0	56.2	25.8	29.0	251	198	134	125	105
26	152	134	87.6	55.1	53.3	23.7	25.1	256	207	134	120	105
27	152	134	88.6	55.4	49.1	23.7	23.7	234	201	131	118 ‡	105
28	152	134	‡ 92.9	55.4	41.7	23.7	22.2	226	201	131	113	105
29	152	117	92.9	54.7	41.7	23.7	21.2	222	200	134	113	108
30	152		92.9	53.3	34.6	22.2	20.5	221	193	138	113	108
31	152		92.9		33.9		31.4	217		141		105
Sum	5,302	3,997	2,951.9	1,965.2	1,866.7	935.2	793.4	7,528.3	6,322	5,110	3,776	3,439

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1933-1972 Acre-Feet Average	Maximum	Minimum
Jan.	1.87	1.71	† 1	193	†23	152	171	10,519	2,057	15,990	43.8
Feb.	1.74	1.21	5	160	29	62.2	138	7,929	1,469	9,990	38.9
Mar.	1.51	1.38	1	108	†22	87.6	95.3	5,853	1,244	6,910	92.4
Apr.	1.41	1.15	1	92.9	†25	53.3	65.7	3,898	1,846	21,950	81.1
May	1.54	.79	2	118	20	18.7	60.4	3,703	3,635	25,470	154
June	1.18	.82	15	60.0	30	21.2	31.1	1,854	2,289	19,730	60.3
July	1.31	.79	18	77.0	31	18.7	25.4	1,573	1,592	9,740	57.6
Aug.	4.36	1.05	10	1,370	1	41.7	243	14,938	2,862	20,830	34.9
Sept.	2.30	1.41	22	321	20	92.9	211	12,538	4,422	49,182	17.8
Oct.	1.87	1.61	† 1	193	27	131	165	10,131	3,192	28,327	43.8
Nov.	1.71	1.12	12	151	22	49.4	126	7,483	2,087	25,730	43.8
Dec.	1.54	1.48	† 7	118	†22	105	111	6,818	1,821	13,406	67.3
Yearly	4.36	0.79		1,370		18.7	120	87,237	28,516	104,294	1,755.3

** Period 1932-1972 ‡ Discharge measurement made on this day † And other days

RETURN FLOW TO THE RIO GRANDE FROM MAVERICK CANAL
EAGLE PASS TO SAN ANTONIO CROSSING

DESCRIPTION: Part of the water diverted from the Rio Grande into the Maverick Canal is returned to the river through various drains and spillways of the irrigation system located between Eagle Pass, Texas and the San Antonio Crossing Gaging Station. These return flows are measured at gaging stations consisting of sharp-crested Cipolletti weirs or control structures equipped with continuous water-stage recorders located at Lateral 40 Spill, Lateral 40 D Spill, Canon Diablo, Lateral 50 Lowline No. 1, Lateral 50 Spill, Lateral 50 Lowline No. 2, Rosita Creek, Lateral 60 K Spill, Sauz Creek, Lateral 70 Spill No. 1, Lateral 70 Spill No. 2, Indio Creek, Gravel Spill, Lateral 71 Spill, and Cuervo Creek.

RECORDS: Based on the weir discharge table, stable station control rating tables, and a continuous record of gage heights. All storm flow occurring at these stations is deducted from the records and is not shown below. Records available: April 1959 through 1972.

EXTREME FLOWS FROM RECORDS:

		Average Flow in Second-Feet		
Daily:	Max. 350	July 5, 1968	Min. 15.7	March 10, 1969
Monthly:	Max. 248	July 1967	Min. 54.6	December 1969
Yearly:	Max. 206	1963	Min. 132	1970

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	197	262	168	175	217	210	128	126	159	138	116	137
2	201	257	152	169	298	249	156	110	142	133	121	142
3	193	194	161	185	289	252	167	83.3	154	121	151	152
4	178	118	166	176	254	268	181	118	162	120	159	172
5	182	129	169	159	232	259	191	158	173	122	188	205
6	179	170	148	139	200	217	187	158	162	117	196	233
7	160	156	153	138	209	175	182	138	148	135	203	244
8	115	149	149	145	224	167	184	120	140	141	214	240
9	131	140	148	154	210	186	199	134	138	142	199	237
10	148	119	161	179	215	177	199	193	166	141	181	246
11	139	120	179	179	220	177	182	271	180	135	205	215
12	141	124	181	167	197	200	151	233	177	122	224	224
13	137	170	188	179	179	253	138	209	178	117	202	228
14	176	193	190	180	181	245	142	165	167	116	190	225
15	184	190	165	156	182	189	174	147	174	128	188	185
16	178	162	154	163	176	158	221	135	160	136	176	154
17	179	157	145	169	163	148	204	159	116	135	177	157
18	181	130	132	168	162	147	199	133	119	135	194	197
19	192	123	149	175	170	142	186	131	110	125	200	248
20	190	147	160	163	174	122	170	130	111	113	182	240
21	172	137	159	140	158	102	182	125	98.4	121	186	227
22	176	118	145	134	158	95.0	178	114	125	128	173	202
23	183	116	139	158	162	107	200	107	152	146	195	211
24	162	149	140	177	158	114	180	97.2	166	140	252	226
25	147	109	144	166	148	125	165	98.5	127	134	214	233
26	144	109	156	182	143	112	160	114	98.0	133	175	235
27	153	131	159	202	144	87.5	161	139	102	142	147	221
28	142	144	152	238	158	97.1	137	149	119	152	137	212
29	144	159	162	240	145	96.0	127	155	129	162	142	207
30	189		166	218	141	109	133	151	128	158	153	197
31	215		166		171		129	169		156		200
Sum	5,208	4,382	4,906	5,173	5,838	4,985.6	5,293	4,470.0	4,280.4	4,144	5,440	6,452

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	ø Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period Apr. 1959-1972 Acre-Feet Average	Maximum	Minimum
Jan.			31	215	8	115	168	10,330	9,949	12,435	5,242
Feb.			1	262	†25	109	151	8,692	9,493	13,117	5,561
Mar.			14	190	18	132	158	9,731	10,784	13,498	6,118
Apr.			29	240	22	134	172	10,260	11,018	13,030	9,380
May			2	298	30	141	188	11,580	10,358	13,926	6,205
June			4	268	27	87.5	166	9,889	11,462	14,430	7,798
July			16	221	29	127	171	10,499	12,161	15,219	9,940
Aug.			11	271	3	83.3	144	8,866	11,164	14,299	8,378
Sept.			11	180	26	98.0	143	8,490	9,484	13,974	4,541
Oct.			29	162	20	113	134	8,220	9,503	12,248	6,865
Nov.			24	252	1	116	181	10,790	9,863	11,843	5,067
Dec.			19	248	1	137	208	12,797	9,763	12,797	3,354
Yearly				298		83.3	165	120,144	125,002	149,031	95,204

ø Mean daily † And other days

RIO GRANDE AT SAN ANTONIO CROSSING NEAR EL INDIO, TEXAS

DESCRIPTION: Cableway, bubbler gage, concrete control weir, and water-stage recorders (graphic and digital) located on the left bank at latitude 28°20'40", longitude 100°18'35", and river mile 455.8; 0.5 river mile downstream from Cuervo Creek, which marks the lower end of the Maverick County Water Control and Improvement District No. 1, 1.9 river miles upstream from Tovar Creek, 5 miles northeast of Villa Guerrero, Coahuila, about 11.5 miles south of El Indio, Texas, 35.5 river miles downstream from the international highway bridge between Eagle Pass, Texas and Piedras Negras, Coahuila, and 793.0 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 580.00 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 59 discharge measurements during the year, 49 by the United States Section and 10 by the Mexican Section of the Commission, and a continuous record of gage heights. Computations for high flows by shifting control methods. Low and medium flow computations based on a stable control weir rating curve defined by meter measurements. Records available: Mar., Apr., May, Oct., Nov., and Dec. 1952 with some days missing; Jan. through Aug. 20, 1953; Sept. 23, 1953 through June 14, 1954; and May 27, 1955 through 1972 with several days missing prior to Sept. 1955.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 912,000 second-feet in June 1954, determined by slope-area computation, with an elevation of 624.31 feet. Min. 54.4 second-feet on June 24, 1953 with an elevation of 581.96 feet at a station 1,700 feet upstream from the present site.

Average Flow in Second-Feet**

Daily:	Max. 185,000	Sept. 25, 1964	Min. 299	July 20 & Aug. 2-4, 1956
Monthly:	Max. 31,700	Sept. 1964	Min. 445	July 1956
Yearly:	Max. 6,130	1958	Min. 1,040	1956

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1,140	1,040	‡ 789	736	684	581	337	507	1,520	5,350	‡ 982	1,300
2	1,190	‡ 1,110	766	675	783	594	345	‡ 485	1,390	5,360	917	976
3	1,190	1,110	728	698	‡ 815	579	363	460	1,350	5,380	926	937
4	1,150	1,040	728	677	823	547	394	819	1,310	‡ 5,140	940	851
5	‡ 1,150	977	722	‡ 618	871	566	‡ 426	2,760	1,270	3,970	932	811
6	1,170	1,040	706	566	803	490	743	1,570	1,190	3,860	947	‡ 836
7	1,160	1,070	672	588	892	‡ 444	850	1,060	‡ 1,170	5,280	957	861
8	1,120	1,020	‡ 620	585	2,320	427	709	806	1,120	5,380	‡ 942	853
9	1,100	‡ 993	662	555	1,260	432	647	‡ 749	1,060	5,380	931	827
10	1,110	986	682	616	1,060	447	637	908	1,160	5,380	888	829
11	1,120	966	675	641	1,200	440	593	2,550	1,140	‡ 5,330	862	873
12	‡ 1,060	968	711	‡ 604	1,140	493	‡ 706	7,880	1,060	5,280	864	870
13	997	985	703	593	1,030	751	556	13,100	‡ 1,020	5,240	870	‡ 844
14	1,010	1,030	700	600	992	‡ 852	479	‡ 6,510	1,070	5,240	842	835
15	989	1,000	‡ 628	557	996	761	430	2,840	1,280	5,330	‡ 814	814
16	987	‡ 964	616	520	953	1,030	480	2,090	1,220	5,330	805	803
17	987	933	599	529	‡ 912	1,800	488	1,840	1,140	‡ 4,770	821	801
18	987	886	572	526	862	968	480	1,710	1,140	2,030	891	798
19	‡ 976	817	577	‡ 536	780	733	‡ 459	1,650	1,090	1,130	881	814
20	974	805	615	729	724	637	585	1,520	‡ 1,060	950	912	‡ 791
21	986	805	629	992	671	‡ 559	969	1,490	975	1,060	‡ 992	766
22	972	748	‡ 603	742	666	508	841	1,380	941	1,180	1,270	761
23	974	‡ 669	574	624	592	478	861	‡ 1,300	1,260	1,250	1,650	755
24	944	682	574	613	‡ 526	458	854	1,260	3,730	1,160	1,880	754
25	913	723	576	592	528	403	780	1,240	4,650	‡ 1,070	1,970	771
26	‡ 881	668	580	‡ 537	488	434	‡ 721	1,200	4,600	1,080	1,900	796
27	873	744	586	580	443	428	706	1,280	‡ 5,410	1,090	1,820	762
28	863	752	755	624	447	‡ 353	648	1,530	5,370	1,100	1,800	733
29	882	762	705	709	444	327	571	1,590	5,390	1,070	‡1,770	707
30	952		684	687	421	327	566	‡ 1,640	5,370	1,060	1,760	725
31	1,020		669		‡ 447		545	1,620		1,030		729
Sum	31,827	26,293	20,406	18,849	25,573	17,847	18,769	67,344	61,456	103,260	34,736	25,583

Current Year 1972 — **Period 1968-1972**

Month	Extreme Gage Feet		Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low						
	High	Low	Day		Day				Average	Maximum	Minimum
Jan.	6.32	6.06	4	1,220	†28	854	1,030	63,128	84,717	108,121	63,128
Feb.	6.33	5.89	2	1,220	26	636	907	52,151	160,255	444,879	52,151
Mar.	6.10	5.80	1	901	26	534	658	40,475	72,377	126,920	40,475
Apr.	6.31	5.76	†20	1,210	17	495	628	37,386	71,207	105,586	37,386
May	7.13	5.66	8	2,890	†30	406	825	50,723	106,698	155,903	50,723
June	7.07	5.56	17	2,740	†29	319	595	35,399	140,608	353,792	29,808
July	6.25	5.55	21	1,140	1	311	605	37,228	85,862	134,150	37,228
Aug.	9.44	5.69	13	18,400	3	435	2,170	133,575	141,752	294,704	66,822
Sept.	8.08	6.07	27	6,660	22	892	2,050	121,896	110,694	131,375	83,327
Oct.	7.89	6.10	† 4	5,470	†19	950	3,330	204,813	151,123	204,813	92,140
Nov.	6.74	5.96	25	2,020	16	791	1,160	68,898	82,213	97,251	58,569
Dec.	6.58	5.90	1	1,700	29	699	825	50,743	76,466	104,173	50,743
Yearly	9.44	5.55		18,400		311	1,230	896,415	1,283,972	2,016,338	896,415

** Period 1956-1972 ‡ Discharge measurement made on this day † And other days

RIO GRANDE AT PALAFOX NEAR LAREDO, TEXAS

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the right bank on the outskirts of Palafox, Webb County, Texas and Villa Hidalgo, Coahuila at latitude 27°47'55", longitude 99°52'40", and river mile 403.0; 1.9 river miles downstream from Arroyo Agua Verde in Mexico, 13.1 river miles upstream from Santo Tomas Creek in United States, 44.7 river miles upstream from the international highway bridge between Laredo, Texas and Nuevo Laredo, Tamaulipas, and 845.8 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 436.02 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 36 discharge measurements during the year, 28 by the Mexican Section and 8 by the United States Section of the Commission, and a continuous record of gage heights. Computations by shifting control methods. High flows prior to early 1962 were computed from a rating curve developed after the cableway was installed. Records available: August 1959 through 1972.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. The recorder was installed on August 5, 1959 and the cableway in early 1962.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 214,000 second-feet on September 25, 1964 with a gage height of 42.06 feet. Min. 314 second-feet on June 30, and July 1, 1972 with a gage height of -0.66 foot.

Average Flow in Second-Feet**

Daily:	Max.	163,000	Sept. 26, 1964	Min.	314	July 1, 1972
Monthly:	Max.	30,400	Sept. 1964	Min.	434	June 1969
Yearly:	Max.	4,420	1964	Min.	1,270	1972

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1,230	1,310	‡ 745	685	703	622	314	‡ 512	1,670	5,090	‡ 989	1,940
2	1,250	1,340	763	703	1,250	572	321	477	1,570	5,090	939	1,510
3	1,310	1,260	735	710	943	‡ 622	335	466	1,500	‡ 5,160	886	1,070
4	1,330	‡1,210	727	735	837	583	‡ 364	459	1,450	5,190	886	950
5	1,270	1,150	720	‡ 724	809	537	378	975	1,390	4,800	904	‡ 826
6	‡ 1,260	1,060	720	639	922	‡ 565	378	2,740	1,330	5,370	911	756
7	1,290	1,050	720	547	837	533	378	1,520	1,220	4,980	918	756
8	1,260	1,060	‡ 689	565	1,190	551	385	1,080	‡ 1,190	5,120	911	763
9	1,210	1,060	650	540	1,980	579	385	826	1,150	5,190	911	784
10	1,190	1,080	667	523	1,460	562	388	802	1,130	5,120	897	784
11	‡ 1,200	1,110	678	554	1,600	565	388	1,200	1,200	5,090	855	798
12	1,200	1,130	678	625	1,430	593	388	4,450	1,180	5,050	833	826
13	1,110	1,140	713	572	1,200	576	388	9,960	1,120	4,980	848	826
14	1,030	1,170	706	565	1,920	770	392	14,700	1,030	5,050	‡ 826	812
15	1,050	‡1,170	692	547	1,350	911	396	4,100	1,140	5,050	798	812
16	1,010	1,110	‡ 643	505	1,350	802	406	2,600	1,350	5,050	784	812
17	1,020	1,060	629	533	1,100	1,370	420	2,090	1,280	‡ 5,050	798	784
18	‡ 1,050	978	622	‡ 533	1,020	1,720	‡ 431	1,890	1,180	3,810	872	742
19	1,050	904	607	523	946	1,090	438	1,790	‡ 1,180	1,790	950	727
20	1,050	826	607	523	844	819	431	1,720	1,150	1,150	918	742
21	1,050	791	632	671	752	667	466	1,620	1,110	989	911	756
22	1,050	809	650	1,000	‡ 692	565	795	‡ 1,570	1,010	1,140	950	735
23	1,030	742	629	742	667	505	886	1,450	996	1,220	1,060	742
24	975	749	614	590	618	477	886	1,380	1,610	1,260	1,640	735
25	936	742	646	‡ 554	498	452	‡ 872	1,360	4,410	1,170	1,990	742
26	925	699	1,070	565	501	392	770	1,310	4,480	1,100	2,010	770
27	‡ 915	671	671	516	509	385	703	1,260	5,050	1,130	1,990	798
28	936	685	632	646	607	406	685	1,430	4,980	1,110	1,940	784
29	925	731	‡ 713	590	632	364	653	1,690	5,160	1,070	1,940	770
30	1,080		692	685	618	321	544	1,720	5,120	1,040	1,940	756
31	1,190		678		625		526	1,720		996		763
Sum	34,382	28,797	21,338	18,410	30,410	19,476	15,490	70,867	59,336	105,405	34,005	26,371

Month	Current Year 1972							Period 1968-1972		
	Extreme Gage Feet		Extreme Second-Feet			Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low					
	High	Low	Day		Day			Average	Maximum	Minimum
Jan.	1.61	0.85	4	1,350	29	897	1,110	68,246	84,547	107,275	68,246
Feb.	1.48	.33	2	1,340	27	671	992	57,122	162,967	455,925	57,122
Mar.	1.77	.03	26	1,570	19	604	689	42,321	76,657	138,207	42,321
Apr.	1.31	- .03	21	1,180	16	480	614	36,522	70,559	105,285	36,522
May	3.54	- .03	14	3,380	26	480	982	60,344	114,060	160,901	60,344
June	2.89	- .66	17	2,420	30	314	650	38,616	222,096	750,690	25,768
July	.85	- .66	22	939	1	314	501	30,729	95,665	156,748	30,729
Aug.	10.53	- .16	14	20,900	4	452	2,280	140,546	163,939	360,755	70,515
Sept.	5.15	.82	27	6,180	23	922	1,980	117,725	124,136	154,009	93,812
Oct.	5.31	.89	6	6,500	21	957	3,400	208,980	188,286	313,474	100,018
Nov.	2.46	.49	†26	2,010	17	770	1,130	67,467	86,104	104,269	56,954
Dec.	2.36	.36	1	1,940	22	713	851	52,317	80,431	111,036	52,317
Yearly	10.53	-0.66		20,900		314	1,270	920,935	1,469,447	2,724,451	920,935

** Period Aug. 1959-1972 ‡ Discharge measurement made on this day † And other days

RIO GRANDE AT LAREDO, TEXAS

DESCRIPTION: Cableway, bubbler gage, and water-stage recorder located on the right bank at Laredo, Texas at latitude 27°29'45", longitude 99°29'30", and river mile 357.2; immediately downstream from the Laredo, Texas sewage plant, 1.1 river mile downstream from the international highway bridge between Laredo, Texas and Nuevo Laredo, Tamaulipas, and 891.6 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 345.28 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 78 discharge measurements during the year, 71 by the Mexican Section and 7 by the United States Section of the Commission, and a continuous record of gage heights. Computations by shifting control methods. Records available: May 1900 through 1913; May, June, and Oct. 1914; Sept. 1916; Sept. and Oct. 1917; Oct. 1918; Sept. and Oct. 1919; Aug. and Sept. 1920; June, Nov. and Dec. 1922; and 1923 through 1972. Gage height records are available for Jan., Feb., and Mar. 1914.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. This station was established in Jan. 1955 to replace the station 1.7 miles upstream which was destroyed by the June-July 1954 flood. Prior to July 11, 1968 the recorder was located 0.2 river mile upstream, where the cableway is still located, and the zero of the gage was 347.90 feet above mean sea level, U. S. C. & G. S. datum.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 716,900 second-feet on June 30, 1954, determined by slope-area calculations with a gage height of 61.35 feet. Much well-authenticated information establishes the occurrence of a greater flood in June 1865 with a gage height of 62.5 feet on the same gage and discharge of approximately 950,000 second-feet and also that these were the only floods since 1745 with flows greater than 600,000 second-feet. Min. no flow several days in June and July 1953 and on July 24, 1956.

Average Flow in Second-Feet**

Daily:	Max. 576,000	June 30, 1954	Min. 0	Several days June, July 1953	
Monthly:	Max. 49,500	Sept. 1932	Min. 5.5	June 1953	
Yearly:	Max. 9,670	1932	Min. 1,080	1956	

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1,330	1,130	798	720	607	353	272	473	1,660	5,440	1,150	1,890
2	1,320	1,150	788	692	‡ 1,640	353	247	463	1,600	‡ 5,400	1,170	1,770
3	‡ 1,330	1,160	798	‡ 706	2,090	516	258	441	1,510	5,400	1,140	1,250
4	1,370	1,190	759	706	961	562	272	441	‡ 1,440	5,400	890	‡ 967
5	1,380	1,160	742	720	830	505	335	452	1,370	5,190	890	939
6	1,330	1,100	‡ 742	706	826	470	385	1,700	1,290	‡ 4,170	‡ 939	890
7	1,330	‡ 1,060	742	611	908	480	388	‡ 2,090	1,210	3,780	904	848
8	1,360	1,190	742	‡ 523	‡ 855	614	547	1,360	1,120	5,300	904	830
9	1,360	1,170	710	523	1,700	547	706	1,010	1,170	‡ 5,400	939	848
10	‡ 1,290	1,110	643	‡ 501	‡10,100	629	‡ 646	812	1,120	5,400	939	862
11	1,250	1,090	664	512	‡ 5,690	544	540	851	‡ 1,070	5,400	922	‡ 862
12	1,210	1,070	692	523	‡ 2,980	‡ 597	533	2,010	1,120	5,400	904	862
13	1,210	1,050	‡ 738	604	1,860	819	505	‡ 8,370	1,140	5,370	‡ 848	904
14	1,130	‡ 1,060	872	551	1,720	795	547	‡ 14,300	1,060	5,260	830	904
15	1,090	1,080	819	523	2,590	742	473	‡ 7,700	996	5,300	830	904
16	1,130	1,100	770	523	‡ 2,430	858	413	‡ 3,530	1,140	‡ 5,260	830	890
17	‡ 1,130	1,090	675	‡ 480	1,570	742	378	‡ 2,590	1,260	5,260	812	890
18	1,100	1,050	586	427	1,180	1,620	353	‡ 2,150	‡ 1,180	5,010	812	862
19	1,130	1,010	586	417	1,090	‡ 1,390	388	‡ 1,950	1,120	2,820	812	830
20	1,130	978	‡ 562	417	996	1,020	378	1,890	1,110	1,700	890	812
21	‡ 1,120	‡ 943	505	396	886	780	378	‡ 1,720	1,120	1,200	904	‡ 830
22	1,120	932	562	597	791	643	480	1,590	1,350	1,080	‡ 953	830
23	1,150	932	611	908	706	530	890	1,490	1,060	‡ 1,200	1,050	812
24	‡ 1,120	890	‡ 562	‡ 682	‡ 660	470	819	‡ 1,390	1,090	1,300	1,590	830
25	1,120	‡ 837	494	501	604	434	855	1,330	‡ 2,890	1,340	1,950	812
26	1,090	826	1,200	470	459	‡ 399	819	1,300	‡ 4,660	1,300	2,070	830
27	1,070	819	‡1,070	664	459	378	735	1,270	4,730	1,200	2,030	862
28	1,030	‡ 773	735	918	434	341	657	‡ 1,270	‡ 5,580	1,300	‡1,980	876
29	1,030	809	678	622	‡ 388	341	646	1,390	5,470	1,200	1,930	876
30	1,070		780	558	367	341	893	1,720	5,540	‡ 1,200	1,900	848
31	‡ 1,120		770		353		537	1,690		1,170		830
Sum	36,950	29,759	22,395	17,701	48,730	18,813	16,273	70,743	58,176	111,150	34,712	29,050

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	High	Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1968-1972 Acre-Feet Average	Maximum	Minimum
Jan.	2.72	2.36	† 5	1,410	†28	1,030	1,190	73,338	85,907	109,488	72,974
Feb.	2.89	1.84	† 4	1,360	28	749	1,020	58,978	160,922	450,602	58,978
Mar.	3.02	1.44	26	1,710	25	487	720	44,409	76,704	145,127	44,409
Apr.	3.28	1.28	27	1,980	21	396	590	35,107	72,350	118,874	35,107
May	17.19	1.31	10	23,100	31	353	1,570	96,663	117,493	161,335	89,917
June	3.48	1.25	18	2,170	30	307	629	37,312	213,564	695,494	29,685
July	2.07	1.18	23	922	2	233	526	32,270	107,895	223,886	32,270
Aug.	11.88	1.44	14	18,200	3	424	2,280	140,273	171,950	426,780	65,681
Sept.	6.43	2.23	28	6,320	15	996	1,940	115,448	135,607	222,401	94,988
Oct.	5.97	2.26	1	5,440	22	1,080	3,600	220,489	236,771	526,524	105,334
Nov.	3.28	1.97	26	2,070	19	798	1,160	68,833	87,073	109,789	58,095
Dec.	3.12	1.97	1	1,900	23	798	936	57,620	84,620	115,063	57,620
Yearly	17.19	1.18		23,100		233	1,350	980,740	1,550,856	3,074,060	980,740

** Period 1924-1972 ‡ Discharge measurement made on this day † And other days

RIO SALADO AT LAS TORTILLAS, TAMAULIPAS

DESCRIPTION: Cableway, control weir with notch opening of 2,500 second-foot capacity, gravity well, and water-stage recorder located on the right bank at latitude 26°50'10", longitude 99°33'50", 2.0 river miles downstream from the confluence of Rio Sabinas with Rio Salado, 6 miles southeast of the town of Las Tortillas, Tamaulipas, and 24.8 river miles from the confluence with the Rio Grande. This stream enters the Rio Grande at river mile 298.4, 24.6 river miles upstream from Falcon Dam, and 950.4 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 325.72 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 13 discharge measurements during the year, a stable rating curve up to 2,500 second-feet, and a continuous record of gage heights. Computations by shifting control methods for flows greater than 2,500 second-feet. Records available: September 9, 1953 through 1972. Records are also available for a station at old Cd. Guerrero, 18.6 miles downstream, from 1900 through 1913 and 1923 through September 8, 1953.

REMARKS: Reservoirs and irrigation diversions modify the flow at this station.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 65,000 second-feet on September 16, 1971 with a gage height of 40.39 feet. Min. frequently no flow. The maximum discharge was measured at the highway bridge 13.0 river miles downstream from the station. Extreme flow data for the Rio Salado at Cd. Guerrero prior to September 8, 1953 may be found in previous bulletins.

Average Flow in Second-Feet**

Daily:	Max. 62,900	Sept. 16, 1971	Min. 0		Frequently
Monthly:	Max. 13,600	Sept. 1971	Min. 0		Frequently
Yearly:	Max. 3,310	1971	Min. 56.8		1956

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1,020	484	607	327	357	327	413	255	292	890	201	179
2	1,150	512	558	327	286	‡ 319	396	240	‡ 285	915	186	179
3	1,210	‡ 494	434	327	699	302	565	‡ 224	285	915	‡ 201	179
4	‡ 1,210	484	403	319	1,390	286	445	209	300	890	209	179
5	1,240	583	413	319	865	286	487	334	300	‡ 777	209	171
6	1,240	657	‡ 374	‡ 327	558	294	‡ 381	285	300	752	209	171
7	1,210	667	374	335	413	286	396	285	300	752	194	171
8	1,210	657	374	319	403	696	413	270	643	738	202	164
9	1,210	678	374	311	516	918	374	233	1,190	738	224	164
10	1,210	667	374	302	311	1,260	357	224	1,240	724	224	164
11	1,190	667	374	302	286	1,430	335	872	1,120	713	224	164
12	1,120	667	374	302	261	918	319	848	1,000	713	232	164
13	‡ 1,060	657	396	302	245	989	302	459	646	713	239	164
14	883	657	434	294	245	1,180	302	343	385	724	239	‡ 164
15	830	657	632	294	‡ 438	1,060	302	285	300	713	239	156
16	795	657	632	286	1,610	1,020	297	255	285	565	239	148
17	713	678	533	278	953	883	286	247	300	321	200	156
18	622	703	473	278	727	989	297	239	321	239	224	144
19	558	692	424	278	848	812	320	232	270	224	224	148
20	523	692	399	278	2,790	727	323	224	239	224	217	144
21	523	678	396	261	1,420	692	286	224	232	194	217	144
22	512	667	385	252	848	657	286	247	278	194	209	135
23	512	657	385	252	657	632	319	270	381	186	209	135
24	501	667	385	252	501	583	346	255	332	179	201	135
25	494	643	364	237	456	558	357	262	343	164	194	130
26	494	657	364	385	434	523	374	270	343	148	194	135
27	484	657	357	946	396	494	360	292	343	148	194	135
28	473	632	357	890	374	463	335	300	448	156	194	135
29	466	622	346	1,000	357	445	310	300	470	164	186	135
30	456		335	505	335	470	310	321	540	179	179	135
31	466		327		335		319	321		194		135
Sum	18,490		11,085		20,499		9,625		15,146		4,762	
	25,585		12,957		20,314		10,912		13,711		6,313	

Month	Current Year 1972 Extreme Gage Feet High	Low	Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1954-1972 Acre-Feet Average	Maximum	Minimum
Jan.	2.40	1.51	5	1,260	30	456	826	50,804	7,683	57,070	0
Feb.	1.87	1.74	†18	703	† 1	484	636	36,676	6,520	66,880	0
Mar.	1.94	1.28	15	752	31	319	417	25,704	3,740	29,690	0
Apr.	2.43	1.12	29	1,300	25	237	371	21,994	5,711	21,994	0
May	3.67	1.12	20	3,570	15	237	657	40,307	20,868	100,919	0
June	3.05	1.21	11	2,170	† 4	286	682	40,594	20,777	172,970	0
July	2.43	1.18	3	1,300	†21	269	352	21,649	28,621	441,541	0
Aug.	2.36	1.12	11	1,320	4	209	310	19,091	15,052	92,579	0
Sept.	2.30	1.15	10	1,240	20	224	456	27,207	115,796	807,616	2,860
Oct.	2.07	.98	† 2	915	†26	148	487	30,045	72,178	550,739	110
Nov.	1.18	1.05	†13	239	30	179	210	12,527	33,854	338,000	0
Dec.	1.05	.92	† 1	179	25	130	153	9,428	17,594	176,100	0
Yearly	3.67	0.92		3,570		130	463	336,026	348,394	2,400,553	41,238.2

** Period September 1953-1972 ‡ Discharge measurement made on this day † And other days

RIO GRANDE BELOW FALCON DAM, TEXAS

DESCRIPTION: The discharges reported below represent water measured as it leaves Falcon Reservoir through turbine penstocks, bypass valves, spillway gates, and leakage. Falcon Dam, astride the Rio Grande, is located at latitude 26°33'25", longitude 99°10'05", and river mile 273.8; about 7 miles southwest of Falcon, Texas, 84.5 river miles downstream from the international highway bridge between Laredo, Texas and Nuevo Laredo, Tamaulipas, and 975.0 river miles downstream from the American Dam at El Paso, Texas. A gravity well and water-stage recorder located 2.5 river miles downstream and a cableway located one mile farther downstream are used to measure the flow of this station at times when spillway gates are in operation.

RECORDS: Based on daily Simplex meter records of releases through the six turbines, established rating curves for the four hollow-jet bypass valves, estimates of gate leakage, and measurements of flow at the cable during spillgate operations. Records available: 1958 through 1972. Records are also available from December 17, 1952 through 1957 for a station at Chapeno, 2.5 miles downstream, where discharges included arroyo inflow below Falcon Dam, which inflow is eliminated from the records reported below.

REMARKS: Computation of flow was made jointly by the United States and Mexican Sections of the Commission from a consolidation of the basic data gathered by each Section incident to the international operation of Falcon Reservoir.

EXTREME FLOWS FROM RECORDS**: Momentary: Max. 82,600 second-feet on September 18, 1971. Min. 1.5 second-feet on March 24 and 25, 1957 (at Chapeno gaging station).

Average Flow in Second-Feet**

Daily:	Max. 76,400	Sept. 18, 1971	Min. 1.5	March 24 & 25, 1957
Monthly:	Max. 32,500	Oct. 1958	Min. 24.0	Sept. 1967
Yearly:	Max. 6,930	1958	Min. 1,580	1970

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2,510	4,360	892	1,280	1,370	2,050	18.0	18.0	4,050	18.0	602	1,760
2	2,520	4,740	1,330	1,340	766	1,270	18.0	18.0	4,080	18.0	511	1,000
3	1,520	4,300	1,090	2,980	89.0	1,200	18.0	18.0	4,530	1,520	773	707
4	1,970	4,350	887	3,000	18.0	1,190	18.0	18.0	5,010	3,460	1,020	716
5	2,030	4,180	895	3,600	18.0	1,320	18.0	18.0	5,060	4,020	1,020	701
6	1,020	4,380	1,660	4,050	18.0	1,520	18.0	18.0	4,560	4,010	925	1,020
7	1,520	3,990	2,080	3,950	18.0	2,420	18.0	18.0	3,960	4,000	827	502
8	1,510	2,770	2,100	4,080	18.0	173	18.0	313	3,410	4,020	919	495
9	1,520	2,590	2,110	5,170	18.0	18.0	18.0	659	3,730	4,020	1,040	511
10	2,000	2,690	2,120	6,990	18.0	18.0	18.0	234	3,310	4,020	1,200	815
11	3,850	2,370	2,120	7,720	18.0	18.0	18.0	337	2,740	3,100	1,500	418
12	3,130	2,370	2,110	7,840	18.0	18.0	18.0	322	3,010	2,550	1,520	77.0
13	3,650	2,390	1,460	8,100	18.0	18.0	18.0	549	4,040	2,480	1,350	219
14	3,790	1,640	304	10,100	18.0	18.0	18.0	340	3,500	2,390	1,040	126
15	4,320	686	262	11,200	18.0	18.0	18.0	474	3,510	2,590	1,020	18.0
16	4,350	610	426	11,300	18.0	18.0	1,050	506	3,990	2,530	1,010	612
17	4,380	606	987	11,300	18.0	18.0	665	517	3,500	2,410	1,030	614
18	4,350	555	412	11,400	18.0	18.0	18.0	1,110	3,010	2,420	1,810	618
19	4,670	605	401	11,600	18.0	18.0	963	1,440	4,560	1,540	1,910	822
20	6,050	597	413	11,900	18.0	18.0	1,520	1,560	6,040	1,760	606	1,120
21	7,110	860	272	12,300	395	18.0	1,020	1,530	5,080	1,690	621	330
22	7,780	1,070	105	11,900	536	18.0	658	1,570	4,000	2,060	317	326
23	8,020	1,570	107	11,000	18.0	18.0	165	1,570	4,060	2,060	318	519
24	7,920	1,350	105	9,800	18.0	18.0	18.0	1,450	2,000	1,550	117	520
25	8,050	1,100	112	8,710	519	18.0	18.0	1,570	18.0	1,170	18.0	926
26	7,900	921	207	8,140	1,020	18.0	18.0	1,800	18.0	851	18.0	463
27	7,820	918	319	7,460	1,010	18.0	18.0	1,820	18.0	1,050	92.0	866
28	7,850	774	334	2,690	1,010	18.0	18.0	2,130	18.0	1,250	18.0	867
29	7,780	450	757	18.0	1,020	18.0	18.0	2,870	18.0	1,250	1,870	1,020
30	8,120		1,250	992	1,270	18.0	18.0	2,970	18.0	961	1,990	1,530
31	6,200		1,270		1,530		18.0	3,500		898		1,610
Sum	145,210	59,792	28,897	212,910.0	10,877.0	11,539.0	6,473.0	31,267.0	94,848.0	67,666.0	27,012.0	21,848.0

Month	Current Year 1972 Extreme Gage Feet		Ø Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Period # 1954-1972 Acre-Feet		
			High		Low						
	High	Low	Day		Day				Average	Maximum	Minimum
Jan.			30	8,120	6	1,020	4,680	288,020	215,165	414,129	16,245
Feb.			2	4,740	29	450	2,060	118,596	164,216	367,384	16,600
Mar.			†10	2,120	†22	105	932	57,316	130,086	347,000	2,390
Apr.			21	12,300	29	18.0	7,060	420,317	237,225	461,541	19,530
May			31	1,530	† 4	18.0	351	21,574	287,620	526,000	21,574
June			7	2,420	† 9	18.0	385	22,887	254,234	551,000	22,887
July			20	1,520	† 1	18.0	209	12,839	105,890	229,828	12,839
Aug.			31	3,500	† 1	18.0	1,010	62,017	121,606	206,000	25,900
Sept.			20	6,040	†25	18.0	3,160	188,128	180,804	1,080,871	1,428
Oct.			† 5	4,020	† 1	18.0	2,180	134,214	251,666	1,997,000	27,100
Nov.			30	1,990	†25	18.0	900	53,578	126,090	1,128,000	9,376
Dec.			1	1,760	15	18.0	705	43,335	116,177	465,000	32,569
Yearly				12,300		18.0	1,960	1,422,821	2,190,779	5,016,800	1,143,806

** Period 1954-1972 # Values prior to 1958 are Chapeno discharges less arroyo inflow
Ø Mean daily † And other days

RIO ALAMO AT CD. MIER, TAMAULIPAS

DESCRIPTION: Cableway, reinforced concrete weir of 177 second-foot capacity, gravity well, and water-stage recorder located on the right bank at a point called "El Paso del Cantaro", latitude 26°27'10", longitude 99°09'20", about 0.5 mile north of Cd. Mier, Tamaulipas, and 5.0 river miles from the confluence with the Rio Grande. This stream enters the Rio Grande at river mile 261.4, 12.4 river miles downstream from Falcon Dam, and 987.4 river miles downstream from the American Dam at El Paso, Texas. The weir is located about 300 feet downstream from the recorder. The zero of the gage is at mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 6 discharge measurements made at high flows during the year, the weir discharge table at low flows, and a continuous record of gage heights. High flow computations by shifting control methods. Records available: July 1923 through 1972.

REMARKS: Small reservoirs and irrigation diversions modify the flow of this spring-fed stream at this station. On June 11, 1952, the zero of the gage was raised 1.31 feet to make it coincide with the weir crest elevation. Prior to January 1, 1969, the zero of the gage was 188.35 feet above mean sea level, U. S. C. & G. S. datum.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 144,800 second-feet on September 11, 1948 with a gage height of 33.56 feet. Min. periods of no flow have occurred at times during all years of record except 1934, 1935, 1968 and 1972.

Average Flow in Second-Feet**

Daily:	Max.	87,230	Sept. 11, 1948	Min.	0	Frequently
Monthly:	Max.	7,310	Sept. 1967	Min.	0	Frequently
Yearly:	Max.	837	1967	Min.	16.4	1929

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	94.3	67.1	67.1	65.3	59.0	59.0	109	71.3	24.7	114	63.2	56.9
2	96.8	67.1	67.1	63.2	62.5	63.6	104	73.5	24.7	107	63.2	61.1
3	84.8	65.0	59.0	63.2	1,020‡	76.3	102	71.3	21.5	89.7	63.2	63.2
4	84.8	67.1	59.0	63.2	193	50.9	100	73.8	20.1	84.8	63.2	65.3
5	75.9	63.2	59.0	54.7	86.9	50.9	100	67.1	18.7	75.9	63.2	67.1
6	80.5	61.1	54.7	54.7	75.9	47.3	96.8	65.0	18.7	75.9	63.2	67.1
7	75.9	63.2	54.7	45.6	71.3	47.3	94.3	59.0	18.7	75.9	63.2	61.1
8	75.9	65.0	54.7	43.8	67.1	‡1,920	91.8	59.0	14.5	98.9	63.2	61.1
9	75.9	65.0	59.0	43.8	63.2	‡7,630	87.2	54.7	24.7	84.8	63.2	63.2
10	89.7	69.2	59.0	43.8	950	2,890	84.8	56.9	158	71.3	63.2	63.2
11	87.2	67.1	59.0	43.8	98.9	1,180	75.9	56.9	68.9	67.1	61.1	65.3
12	75.9	63.2	56.9	37.1	63.2	742	71.3	54.7	40.6	63.2	59.0	63.2
13	75.9	61.1	59.3	37.1	63.2	466	69.2	54.7	37.1	61.1	61.1	63.2
14	73.5	61.1	200	37.1	115	441	67.1	50.9	37.1	59.0	59.0	61.1
15	73.5	65.0	94.3	33.9	441	456	71.3	47.3	31.1	59.0	56.9	59.0
16	71.3	67.1	71.3	33.9	160	689	88.3	43.8	26.1	59.0	54.7	61.1
17	69.2	65.0	65.0	33.9	101	922	106	42.4	24.7	59.0	45.6	61.1
18	71.3	67.1	63.2	33.9	130	777	89.7	40.6	21.5	59.0	42.4	63.2
19	73.5	63.2	61.1	27.9	215	385	84.8	37.1	21.5	54.7	42.4	65.3
20	73.5	56.9	59.0	27.9	209	262	75.9	35.3	21.5	47.3	43.8	65.3
21	71.3	50.9	61.1	27.9	101	219	80.5	35.3	367	47.3	42.4	63.2
22	65.0	54.7	63.2	24.7	87.2	178	277	37.1	298	54.7	45.6	59.0
23	54.7	56.9	63.2	24.7	75.9	169	137	35.3	431	59.0	63.2	59.0
24	61.1	56.9	59.0	24.7	80.5	182	124	27.9	5,260	56.9	69.2	61.1
25	63.2	54.7	59.0	21.5	69.2	154	91.8	27.9	‡2,020	63.2	67.1	61.1
26	61.1	59.0	364	530	63.2	137	91.8	24.7	519	73.5	61.1	61.1
27	63.2	54.7	170	161	61.1	134	84.8	24.7	‡6,180	75.9	59.0	61.1
28	61.1	59.0	104	706	56.9	131	84.8	24.7	‡3,340	73.5	59.0	63.2
29	63.2	75.2	89.7	146	54.7	126	75.9	24.7	720	71.3	54.7	65.3
30	67.1		75.9	73.8	47.3	109	75.9	24.7	162	71.3	54.7	65.3
31	71.3		67.1		67.8		73.4	24.7		67.1		65.3
Sum	1,811.8		2,628.1			20,694.3		1,427.0		2,180.3		1,941.8
	2,281.6		2,558.6		5,010.0		2,966.3		19,971.4		1,734.0	

Month	Current Year 1972								Period 1924-1972		
	Extreme Gage Feet		Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low				Average	Maximum	Minimum
	High	Low	Day		Day						
Jan.	189.24	188.94	2	96.8	23	54.7	73.5	4,525	3,185	34,920	0
Feb.	189.30	188.91	29	109	21	50.9	62.5	3,593	2,407	25,550	0
Mar.	190.62	188.94	26	848	† 6	54.7	82.6	5,075	2,398	19,830	0
Apr.	191.01	188.68	28	1,260	25	21.5	87.6	5,213	6,182	36,210	0
May	191.34	188.88	3	1,640	†30	43.8	161	9,931	12,812	137,000	0
June	196.59	188.91	9	10,200	† 6	47.3	689	41,039	12,798	83,240	0
July	190.22	189.04	22	509	14	67.1	95.7	5,884	6,337	37,590	0
Aug.	189.24	188.71	4	96.8	†26	24.7	45.9	2,830	16,940	205,700	0
Sept.	199.41	188.58	27	15,500	8	14.5	667	39,619	41,242	434,387	135
Oct.	189.44	188.91	8	137	†20	47.3	70.3	4,326	19,093	193,700	0
Nov.	189.04	188.85	24	69.2	†18	42.4	57.9	3,439	3,837	25,165	0
Dec.	189.04	188.98	5	67.1	1	56.9	62.5	3,852	3,210	15,982	0
Yearly	199.41	188.58		15,500		14.5	178	129,326	130,441	605,678.4	11,898.7

** Period 1924-1972 ‡ Discharge measurement made on this day † And other days

CONTRIBUTIONS FROM RIO SAN JUAN FALCON DAM TO FORT RINGGOLD

DESCRIPTION: The Lower Rio San Juan Irrigation District in Mexico lies along the Rio Grande between Cd. Miguel Aleman and Rio Bravo, Tamaulipas and is irrigated with water impounded by Marte R. Gomez Dam situated on the Rio San Juan 12.4 river miles upstream from the confluence with the Rio Grande. The Rio San Juan enters the Rio Grande at river mile 237.8 and 1,011.0 river miles downstream from the American Dam at El Paso, Texas. Drain water from this irrigation district enters the Rio Grande between Falcon Dam and the Fort Ringgold Gaging Station through the Rio San Juan Channel, Rancherias Drain, and Los Fresnos Drain; and between this station and Anzalduas Dam through Puertecitos, Los Indios, Huizache, and Morillo Drains. Only the portion of water reaching the Rio Grande via channels located upstream from the Fort Ringgold Gaging Station is shown below. The portion of drain water from this irrigation district reaching the Rio Grande via channels located downstream from the Fort Ringgold Gaging Station is shown on page 66 in this bulletin.

RECORDS: Water entering the Rio Grande through the Rio San Juan Channel, included in the tabulation below and composed of spills and leakage from Marte R. Gomez Dam, and storm inflow and drainage below the dam, was measured at the Rio San Juan Gaging Station at Camargo, Tamaulipas 3.1 river miles upstream from the confluence with the Rio Grande. (See next page for station description and separate tabulation of discharge for this station). The discharge through Rancherias Drain was determined by prorating between 47 current meter measurements made during the year. There was no drainage flow through Los Fresnos Drain in 1972. All storm water measured at these two drains was deducted and is not included in the tabulation below. Records available: 1953 through 1972.

REMARKS: In 1972 there were 164,000 irrigable acres in the Lower Rio San Juan Irrigation District.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	537	41.0	47.3	10.9	34.6	30.0	2,310	1,350	19.8	4,840	254	116
2	562	35.7	43.4	10.9	202	29.3	2,260	1,150	18.4	3,920	254	70.6
3	583	34.6	38.8	10.6	978	27.9	2,420	1,030	17.7	3,260	253	65.3
4	604	33.5	35.0	10.6	38.1	26.8	2,650	918	17.0	2,600	253	60.0
5	625	32.8	30.4	10.6	35.7	25.8	2,260	837	15.5	1,790	268	54.7
6	572	32.1	26.5	10.6	36.7	25.1	2,170	710	14.8	689	283	49.1
7	519	31.1	21.9	10.6	37.8	23.7	2,290	590	15.5	298	297	43.8
8	459	30.4	18.0	10.6	39.2	23.3	2,420	505	15.9	196	296	38.5
9	406	29.3	18.0	9.9	68.2	23.0	1,890	484	16.6	93.9	295	39.2
10	353	28.3	18.0	9.9	374	23.0	2,080	470	17.0	84.8	294	39.2
11	301	26.8	18.0	9.9	576	136	2,250	484	17.7	76.3	284	39.9
12	248	26.1	18.0	9.9	252	229	1,820	501	18.0	75.2	274	40.3
13	227	24.7	18.0	10.2	216	207	1,480	463	18.7	73.8	265	41.0
14	207	23.3	18.0	10.2	756	113	1,120	424	18.4	72.7	255	41.3
15	186	22.6	18.0	10.6	1,230	441	1,090	385	18.0	72.0	245	41.7
16	166	21.2	18.0	10.9	179	1,260	1,290	337	17.7	71.0	248	42.4
17	145	22.2	18.0	11.3	32.8	2,050	1,370	286	17.3	69.6	250	43.1
18	125	22.6	18.0	11.3	28.6	3,570	1,440	194	17.0	68.5	252	44.5
19	104	24.0	17.7	11.7	27.2	4,940	1,410	129	16.6	69.9	255	45.2
20	99.9	24.7	17.7	12.7	25.8	5,010	1,320	98.5	16.2	70.6	257	46.3
21	95.0	25.8	17.7	14.1	24.0	4,630	1,190	86.9	16.2	72.0	259	47.0
22	90.8	26.4	17.7	15.2	22.6	4,100	2,180	77.7	16.2	72.7	259	47.7
23	86.5	27.5	16.6	16.6	21.2	3,530	2,360	69.2	16.6	74.2	259	48.4
24	82.3	30.4	15.5	17.7	19.8	3,060	2,760	60.4	1,490	74.9	258	49.4
25	77.3	33.2	14.5	19.1	21.2	2,610	2,790	51.9	5,900	76.3	257	50.1
26	73.1	36.0	13.4	20.1	23.0	2,230	2,960	43.1	6,920	75.9	257	51.2
27	67.8	38.8	12.4	21.2	24.4	1,880	2,900	34.6	8,370	75.9	257	65.0
28	62.2	41.7	11.3	1,260	26.5	1,640	2,660	25.8	9,110	75.9	256	241
29	56.9	44.5	11.3	339	27.9	1,860	2,320	24.0	7,730	75.6	209	265
30	51.9		11.3	40.6	29.7	1,860	2,020	22.2	6,140	254	163	85.8
31	46.6		10.9		31.1		1,680	20.5		254		57.6
Sum	7,819.3	871.3	629.3	1,977.5	5,439.1	45,613.9	63,160	11,861.8	46,052.8	19,672.7	7,766	2,010.3

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	∅ Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1954-1972 Acre-Feet Average	Maximum	Minimum
Jan.			5	625	31	46.6	252	15,510	9,425	77,184	126
Feb.			29	44.5	16	21.2	30.0	1,728	4,500	40,778	246
Mar.			1	47.3	31	10.9	20.1	1,248	3,115	24,706	250
Apr.			28	1,260	† 9	9.9	66.0	3,930	3,935	36,208	196
May			15	1,230	24	19.8	176	10,793	4,906	29,121	555
June			20	5,010	† 9	23.0	1,520	90,449	10,047	90,449	476
July			26	2,960	15	1,090	2,040	125,206	17,568	125,206	312
Aug.			1	1,350	31	20.5	381	23,512	18,845	274,079	202
Sept.			28	9,110	6	14.8	1,540	91,361	126,525	1,878,782	298
Oct.			1	4,840	18	68.5	636	39,015	107,824	901,800	229
Nov.			7	297	30	163	259	15,402	29,208	230,400	154
Dec.			29	265	8	38.5	65.0	3,990	13,290	98,974	200
Yearly				9,110		9.9	583	422,144	349,188	2,896,004	11,025

∅ Mean daily † And other days

RIO SAN JUAN AT CAMARGO, TAMAULIPAS

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the left bank opposite Camargo, Tamaulipas at latitude 26°18'50", longitude 98°50'20", 3.1 river miles from the confluence with the Rio Grande, and 9.3 river miles downstream from Marte R. Gomez Dam. This stream enters the Rio Grande at river mile 237.8, 3.9 river miles upstream from the Rio Grande gaging station at Fort Ringgold, 36.0 river miles downstream from Falcon Dam, and 1,011.0 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is at mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 87 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Discharge prorated between measurements during times of extremely low flow. Records available: January 1954 through 1972.

REMARKS: Except for storm inflow, diversion, and drainage returns below Marte R. Gomez Dam, the flow at this station is controlled by spills from Marte R. Gomez Reservoir and leakage through the dam. Backwater from the Rio Grande frequently reaches this station. Flow passing this station, combined with drain water entering the Rio Grande through Rancherias and Los Fresnos drains, is also published under heading "Contributions from Rio San Juan - Falcon Dam to Fort Ringgold" (see previous page). Prior to July 1, 1968 the zero of the gage was 130.45 feet above mean sea level, U. S. C. & G. S. datum.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 115,000 second-feet on September 25, 1967 with a gage height of 42.03 feet. Min. 0.7 second-foot several days in April 1960.

Average Flow in Second-Feet

Daily:	Max. 115,000	Sept. 25, 1967	Min. 0.7	April 23, 24 & 25, 1960	
Monthly:	Max. 31,600	Sept. 1967	Min. 2.1	November 1964	
Yearly:	Max. 3,990	1967	Min. 14.6	1963	

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	530	33.2	‡ 30.4	2.1	10.6	6.7	‡ 2,300	‡1,340	15.5	4,840	249	114
2	554	‡ 27.5	26.8	2.1	177	7.1	2,250	1,150	14.5	3,920‡	249	‡ 67.5
3	576	25.4	23.0	2.1	953	7.1	‡ 2,410	1,020	13.8	3,250	249	62.2
4	597	23.3	19.4	2.1	10.6	7.4	‡ 2,640	‡ 915	13.1	2,600‡	‡ 249	56.9
5	‡ 618	21.5	15.5	‡ 2.1	7.1	7.8	‡ 2,250	833	12.0	1,780‡	263	51.6
6	565	19.4	12.0	2.1	7.1	‡ 8.1	‡ 2,160	706	‡ 11.3	685	278	45.9
7	512	17.3	8.1	2.1	7.1	8.1	‡ 2,280	‡ 586	12.0	293	‡ 292	40.6
8	456	15.5	‡ 4.6	2.1	7.1	8.1	‡ 2,410	501	12.4	191	291	‡ 35.3
9	403	13.4	4.6	1.8	35.0	8.1	1,890	480	13.1	89.3	290	36.0
10	349	‡ 11.3	4.2	1.8	340	8.1	‡ 2,080	466	13.8	80.5	‡ 289	36.4
11	295	10.2	4.2	1.8	544	121	‡ 2,240	480	14.5	‡ 72.0	280	37.1
12	‡ 242	9.5	4.2	‡ 1.8	221	215	‡ 1,810	498	14.8	71.0	271	37.4
13	221	8.5	4.2	1.8	187	194	‡ 1,470	459	‡ 15.5	69.6	262	38.1
14	201	7.4	3.9	1.8	727	99.6	‡ 1,110	420	15.2	68.5	253	38.5
15	180	6.7	‡ 3.9	1.8	1,210	‡ 427	1,080	‡ 381	14.5	67.5	‡ 244	39.2
16	160	‡ 5.7	4.2	1.8	155	‡1,240	1,280	333	14.1	66.4	245	39.9
17	139	5.7	4.9	1.8	10.6	‡2,040	‡ 1,360	281	13.4	65.0	246	40.3
18	119	5.3	5.3	1.8	7.8	3,570	‡ 1,430	189	13.1	‡ 63.9	248	41.0
19	‡ 98.2	5.3	5.6	1.8	7.8	‡4,940	‡ 1,410	124	12.4	65.0	249	41.3
20	93.9	5.3	6.0	1.8	7.8	‡5,010	‡ 1,310	93.2	‡ 12.0	65.7	251	‡ 42.0
21	89.3	5.3	6.7	1.8	7.8	‡4,630	‡ 1,180	‡ 81.6	12.0	66.7	‡ 252	42.7
22	85.1	4.9	‡ 7.1	1.8	7.8	‡4,100	2,180	72.0	12.0	67.5	252	43.4
23	80.9	‡ 4.9	6.4	1.8	7.8	‡3,530	2,350	63.6	12.0	68.5	252	44.1
24	76.6	8.5	5.3	1.8	‡ 7.8	‡3,050	‡ 2,750	55.1	1,490	69.2	252	45.2
25	72.0	12.4	4.6	1.8	7.4	2,600	‡ 2,780	46.6	‡5,900	‡ 70.3	252	46.3
26	‡ 67.8	15.9	3.9	1.8	7.4	‡2,220	‡ 2,950	38.1	‡6,920	70.3	252	47.3
27	62.2	19.4	2.8	1.8	7.1	‡1,870	‡ 2,890	29.7	‡8,370	70.3	252	61.1
28	56.2	23.0	‡ 2.1	1,240	7.1	‡1,620	‡ 2,650	‡ 21.2	‡9,110	70.3	252	237
29	50.5	26.8	2.1	317	6.7	‡1,850	2,310	19.4	‡7,730	70.3	206	261
30	44.8		2.1	17.7	6.7	‡1,850	2,010	18.0	‡6,140	249	160	‡ 81.9
31	39.2		2.1		‡ 6.4		‡ 1,680	‡ 16.2		249		53.7
Sum	7,633.7	393.5	240.2	1,625.7	4,712.6	45,253.2	62,900	11,716.7	45,967.0	19,524.8	7,630	1,904.9

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	High	Extreme Second-Feet Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1954-1972 Acre-Feet Average	Maximum	Minimum
Jan.			5	618	31	39.2	246	15,138	9,309	76,938	88.4
Feb.			1	33.2	†22	4.9	13.8	790	4,315	40,536	203
Mar.			1	30.4	†28	2.1	7.8	477	2,951	24,513	212
Apr.	140.16		28	2,750	† 9	1.8	54.4	3,229	3,726	35,876	177
May	141.44		14	3,680	31	6.4	152	9,344	4,476	28,709	245
June	141.67		20	5,090	† 1	6.7	1,510	89,748	9,668	89,748	274
July	140.45	138.12	3	3,100	15	865	2,030	124,772	17,371	124,772	182
Aug.	139.11		1	1,470	31	16.2	378	23,251	18,706	273,904	161
Sept.	143.18		28	9,390	6	11.3	1,530	91,185	126,378	1,878,406	226
Oct.	141.40		1	5,330	18	63.9	629	38,720	107,664	901,500	193
Nov.			7	292	30	160	254	15,134	29,059	230,100	126
Dec.			†28	283	8	35.3	61.4	3,779	13,164	98,547	163
Yearly	143.18			9,390		1.8	572	415,567	346,787	2,891,093	10,534

‡ Discharge measurement made on this day † And other days

DIVERSIONS FROM THE RIO GRANDE
UNITED STATES SIDE - FALCON DAM TO FORT RINGGOLD

Beginning June 1971, the Texas Water Rights Commission assumed control of the United States portion of the water in Falcon Reservoir and in the Rio Grande below Falcon Dam, the disposition of such waters being made by its Rio Grande Watermaster. Previous to that, since June 1956, such waters had been under the jurisdiction of the 93rd District Court of Texas administered by its Special Water Master.

During 1972, 8,160 irrigable acres and several towns and rural homes were allotted Rio Grande water in the river reach between Falcon Dam and the Fort Ringgold gaging station. Such irrigable area was 1.1% of the total irrigable acres below Falcon Dam allotted Rio Grande water.

The total diversion during 1972 in this river reach was 7,495 acre-feet, or 0.9% of the total water diverted from the Rio Grande below Falcon Dam. All records of diversions in this river reach, which were determined by means of flow meters, were furnished by the Rio Grande Watermaster. More than one crop per year is often grown on parts of this land.

EXTREME FLOWS FROM RECORDS:

Average Flow in Second-Feet

Daily:	Max. 77.0	May 1, 1962	Min. 0		Occasionally
Monthly:	Max. 43.8	June 1960	Min. 2.2		March 1957
Yearly:	Max. 20.3	1960	Min. 6.9		1968

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	13.2	12.9	21.6	33.0	4.1	2.6	7.7	7.8	11.4	2.3	3.5	7.8
2	11.7	12.5	21.6	11.6	2.1	6.7	7.5	10.4	7.2	3.9	5.3	12.9
3	1.2	14.1	24.6	22.6	2.0	4.6	9.7	8.4	4.6	2.2	3.5	4.4
4	8.8	17.8	26.4	24.0	2.0	3.0	7.8	8.4	3.6	4.2	3.3	4.4
5	8.0	20.6	11.0	18.0	2.0	2.7	6.7	8.9	6.5	7.0	3.2	2.9
6	12.0	18.2	17.9	24.3	3.0	2.4	10.5	2.8	8.6	4.6	4.0	1.8
7	14.9	20.6	17.7	27.8	1.6	5.1	5.2	8.7	9.1	6.2	6.8	10.7
8	12.7	14.7	17.8	28.2	3.6	5.1	8.6	7.9	14.5	3.1	3.8	10.6
9	3.4	13.9	17.8	25.6	1.6	2.2	4.4	7.5	13.9	7.2	6.1	11.1
10	3.4	14.4	18.0	25.0	2.0	2.2	6.8	6.7	10.2	9.0	3.5	10.3
11	2.9	15.3	16.1	27.1	2.1	1.6	8.6	6.2	12.6	15.2	5.1	10.3
12	4.3	13.7	14.1	27.1	3.7	2.1	15.2	9.0	13.0	14.2	3.4	10.3
13	4.3	6.8	10.6	29.1	4.8	1.6	16.9	7.0	11.4	13.2	5.0	13.3
14	4.3	10.7	8.4	19.5	1.8	1.3	22.3	4.9	10.2	11.9	5.9	12.3
15	11.0	8.3	7.6	20.3	1.8	2.8	9.9	8.3	14.1	2.5	3.0	1.9
16	8.6	16.2	8.7	18.7	4.9	2.4	4.0	8.6	16.1	11.6	4.7	2.8
17	13.8	22.1	9.1	15.4	5.2	.1	7.6	9.4	7.5	11.7	7.8	3.0
18	25.0	22.7	10.6	22.3	1.8	3.4	5.9	6.4	14.6	14.6	8.4	4.0
19	23.8	27.4	9.3	25.7	1.8	3.8	5.7	6.7	10.6	14.3	1.5	9.4
20	24.8	21.8	10.6	17.9	3.5	3.6	6.9	4.8	14.2	12.4	2.0	11.5
21	23.4	34.8	16.6	23.8	2.8	2.2	6.2	4.8	8.2	9.5	1.9	12.2
22	23.1	33.2	18.1	26.9	4.3	2.2	6.1	7.8	7.9	7.3	2.0	9.3
23	20.8	28.9	18.1	20.9	3.4	2.2	3.7	9.3	6.3	9.0	1.5	7.8
24	26.2	33.8	17.5	22.1	7.1	5.8	3.2	12.4	2.7	7.9	3.1	7.1
25	23.0	32.6	25.6	22.0	2.8	2.6	5.7	10.0	3.6	6.1	3.3	7.1
26	22.0	23.9	22.0	16.8	5.8	3.1	9.5	13.8	5.8	3.4	3.8	11.1
27	19.8	16.8	24.3	16.4	7.2	6.4	9.2	6.2	5.4	6.6	3.1	8.6
28	18.5	24.6	19.4	10.4	2.3	6.0	6.4	17.7	2.7	3.5	3.8	7.5
29	21.8	25.7	17.4	13.9	3.2	7.0	7.6	19.2	1.7	2.0	3.9	7.2
30	9.9		16.6	4.6	8.5	8.6	3.7	21.7	3.3	2.0	4.3	7.9
31	15.8		16.7		3.6		9.1	20.1		2.0		4.9
Sum	436.4	579.0	511.8	641.0	106.4	105.4	248.3	291.8	261.5	230.6	120.5	246.4

Month	Average Rainfall Inches**		Current Year 1972 ∅ Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Period 1957-1972 Acre-Feet		
			High		Low						
	1957-1972	1972	Day		Day				Average	Maximum	Minimum
Jan.	1.06	0.26	24	26.2	3	1.2	14.1	866	622	1,291	159
Feb.	1.13	.93	21	34.8	13	6.8	20.0	1,148	695	1,480	223
Mar.	.59	.74	4	26.4	15	7.6	16.5	1,015	960	1,845	158
Apr.	1.54	2.03	1	33.0	30	4.6	21.4	1,271	1,010	1,890	357
May	2.47	2.57	30	8.5	†7	1.6	3.4	211	1,090	2,624	211
June	2.59	4.74	30	8.6	17	.1	3.5	209	1,162	2,610	209
July	1.01	2.86	14	22.3	24	3.2	8.0	492	763	1,620	278
Aug.	2.23	.14	30	21.7	6	2.8	9.4	579	670	935	439
Sept.	5.23	7.37	16	16.1	29	1.7	8.7	519	542	1,230	178
Oct.	2.20	.33	11	15.2	†29	2.0	7.4	457	687	1,220	131
Nov.	1.26	1.79	18	8.4	†19	1.5	4.0	239	527	1,170	216
Dec.	.74	.26	13	13.3	6	1.8	7.9	489	602	1,580	145
Yearly	22.05	24.02		34.8		0.1	10.3	7,495	9,330	14,754	4,989

∅ Mean daily ** United States side-average of several stations in the reach
† And other days

RIO GRANDE AT FORT RINGGOLD, RIO GRANDE CITY, TEXAS

DESCRIPTION: Cableway, bubbler gage, gravity well, water-stage recorders (graphic and digital), and impulse-type transmitter located on the left bank at Fort Ringgold, latitude 26°22'05", longitude 98°48'20", and river mile 233.9; about 1 mile downstream from Rio Grande City, Texas, 3.9 river miles downstream from Rio San Juan, and 1,014.9 river miles downstream from American Dam at El Paso, Texas. The zero of the gage is 100.00 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 13 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: January 1955 through 1972. Records composed of the addition of discharges of the Rio Grande at Roma, Texas, and the Rio San Juan at Santa Rosalia, Tamaulipas are available for May, June, and October 1914; September 1916; September and October 1917; October 1918; September and October 1919; August and September 1920; June 1922; September 1923; and 1924 through 1931. Records are also available for the station "Rio Grande near Rio Grande City," 3.0 miles downstream, for 1932 through 1954.

REMARKS: Reservoirs, diversions, and drainage returns modify the river flow at this station. Except for tributary inflows and intervening diversions below Falcon Dam, flow at this station is controlled largely by releases from Falcon Reservoir, 39.9 river miles upstream. The transmitter relays gage height data to the Anzalduas Dam office of the United States Section of the Commission and to the Anzalduas Dam control room via leased telephone circuits. The data is recorded automatically at both locations.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 220,000 second-feet on September 22 and 23, 1967 with a gage height of 61.40 feet. Min. no flow occurred several days in June and July 1953.

Average Flow in Second-Feet**

Daily:	Max. 207,000	Sept. 23, 1967	Min. 14.6		April 13, 1957
Monthly:	Max. 49,600	Oct. 1958	Min. 235		March 1957
Yearly:	Max. 9,140	1958	Min. 1,750		1970

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3,050	5,000	629	1,230	810	1,320	2,210	1,630	3,560	5,360	1,160	2,360
2	2,990	4,420	933	1,220	1,340	1,870	2,480	1,310	4,140	4,490	998	2,110
3	2,940	4,610	1,520	1,310	3,100	1,250	2,200	‡ 1,140	4,570	3,860	884	1,270
4	1,980	4,200	1,210	2,940	1,190	1,070	2,900	1,000	4,550	4,380	1,130	882
5	2,640	4,660	962	3,010	535	988	2,200	921	4,790	5,510	1,440	858
6	2,510	4,530	945	3,760	248	1,040	2,250	812	4,810	5,180	1,440	790
7	1,330	4,410	1,800	4,370	198	1,270	2,060	677	4,420	4,670	1,320	1,160
8	1,810	3,830	2,240	3,940	168	2,420	2,630	596	4,040	4,480	1,230	680
9	1,820	3,110	2,270	4,850	159	5,680	1,890	681	3,740	4,310	1,340	622
10	1,790	2,940	2,270	5,730	260	5,940	1,700	1,150	3,980	4,390	1,510	610
11	2,290	3,000	2,330	8,130	405	2,190	2,400	833	3,620	4,280	1,690	917
12	4,030	2,680	2,340	8,270	281	1,120	1,730	854	3,060	3,530	2,070	570
13	3,410	2,690	2,370	7,240	194	820	1,370	849	3,430	2,950	2,040	412
14	3,840	2,720	1,710	‡ 8,900	211	612	946	978	4,140	2,850	1,870	267
15	4,340	1,960	602	10,500	2,240	706	771	784	3,650	2,900	1,510	291
16	4,460	853	408	11,300	511	1,240	1,040	788	4,220	2,900	1,440	262
17	4,520	785	417	11,500	260	2,540	1,970	750	4,100	2,960	‡1,440	486
18	4,440	737	922	‡11,500	183	4,280	2,010	785	3,420	2,820	1,470	715
19	4,680	691	534	11,700	161	5,320	1,450	1,250	3,340	2,780	2,290	725
20	4,790	701	463	11,800	200	5,410	1,910	1,630	5,340	1,930	2,420	932
21	‡ 7,310	729	466	‡12,100	212	‡ 5,060	2,480	1,790	5,730	2,150	1,030	1,240
22	7,080	986	407	12,400	263	4,510	2,940	1,730	5,420	2,020	1,000	807
23	7,620	1,290	339	11,800	462	3,900	2,970	1,760	4,250	2,400	803	684
24	7,800	1,800	238	11,000	281	3,420	3,120	1,730	13,200	2,420	751	834
25	7,780	1,600	215	9,940	150	2,980	2,950	1,610	‡ 12,100	1,920	603	883
26	7,970	1,260	224	‡ 9,380	295	2,380	2,930	1,710	7,670	1,500	513	1,310
27	7,770	1,050	410	8,140	760	1,870	2,930	1,970	‡ 16,800	1,120	425	908
28	7,680	1,060	386	8,710	811	1,510	2,740	2,000	‡ 15,300	1,330	376	1,300
29	7,710	930	362	3,170	802	1,720	2,260	2,290	9,800	1,640	376	1,340
30	7,670		646	510	804	1,720	1,860	‡ 2,920	6,670	1,630	2,000	1,280
31	7,900		1,180		1,010		1,530	3,090		1,290		1,830
Sum	147,950	69,292	31,748	220,350	18,504	76,156	66,827	42,018	177,860	95,950	38,569	29,335

Current Year 1972 — Period # 1954-1972

Month	Extreme Gage Feet		Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low						
	High	Low	Day		Day				Average	Maximum	Minimum
Jan.	31.12	26.28	31	8,720	† 7	671	4,770	293,455	222,112	416,906	33,043
Feb.	30.14	25.97	1	6,710	20	457	2,390	137,439	175,295	376,607	25,500
Mar.	28.65	25.43	13	4,100	25	198	1,020	62,971	133,666	378,000	14,400
Apr.	33.87	25.71	22	13,400	30	316	7,340	437,058	244,321	447,815	75,100
May	28.44	25.23	3	3,780	26	133	597	36,702	307,427	521,000	36,702
June	30.75	26.01	10	8,230	7	482	2,540	151,053	281,064	560,000	98,620
July	28.89	26.27	22	4,480	15	663	2,160	132,549	131,031	303,952	22,300
Aug.	28.99	25.87	31	5,050	17	520	1,360	83,341	151,071	522,593	25,000
Sept.	36.78	26.41	27	21,800	†12	1,040	5,930	352,780	372,708	2,712,754	42,423
Oct.	30.46	25.93	5	7,580	28	567	3,100	190,314	381,840	3,047,000	30,000
Nov.	28.38	25.60	20	4,120	28	339	1,290	76,500	164,048	1,442,000	29,274
Dec.	28.43	25.29	1	4,190	17	188	946	58,185	128,566	540,000	36,100
Yearly	36.78	25.23		21,800		133	2,770	2,012,347	2,693,149	6,619,700	1,269,259

** Period 1955-1972 ‡ Discharge measurement made on this day † And other days

1954 values are Rio Grande City less arroyo inflow

CONTRIBUTIONS FROM RIO SAN JUAN FORT RINGGOLD TO ANZALDUAS DAM

DESCRIPTION: The Lower Rio San Juan Irrigation District in Mexico lies along the Rio Grande between Cd. Miguel Aleman and Rio Bravo, Tamaulipas and is irrigated with water impounded by Marte R. Gomez Dam situated on the Rio San Juan 12.4 river miles upstream from the confluence with the Rio Grande. The Rio San Juan enters the Rio Grande at river mile 237.8 and 1,011.0 river miles downstream from the American Dam at El Paso, Texas. Drain water from this irrigation district enters the Rio Grande between Falcon Dam and the Fort Ringgold Gaging Station through the Rio San Juan Channel, Rancherias Drain, and Los Fresnos Drain; and between this station and Anzalduas Dam through Puertecitos, Los Indios, Huizache, and Morillo Drains. Only the portion of drain water from this irrigation district reaching the Rio Grande via drains located downstream from the Fort Ringgold Gaging Station is shown below. The portion of water reaching the Rio Grande via channels located upstream from the Fort Ringgold Gaging Station is shown on page 62 in this bulletin.

RECORDS: Drain water reaching the Rio Grande through Puertecitos, Los Indios, Huizache, and Morillo Drains was determined by prorating between frequent current meter measurements. In 1972, 44, 45, 46, and 16 meter measurements were made at Puertecitos, Los Indios, Huizache, and Morillo Drains, respectively. All storm water measured at these drains was deducted and is not included in the tabulation below. In 1972, 74 per cent of the drain water from this irrigation district reaching the Rio Grande between Fort Ringgold Gaging Station and Anzalduas Dam was contributed by Morillo Drain. Records available: 1953 through 1972.

REMARKS: In 1972 there were 164,000 irrigable acres in the Lower Rio San Juan Irrigation District. Since July 9, 1969 some water has been diverted from Morillo Drain directly to the gulf via the Morillo Drain Diversion Canal to reduce the salinity of Rio Grande waters. In 1972, 24,614 acre-feet were diverted.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.8	135	32.1	17.7	105	1,440	1,380	13.4	15.5	61.8	12.0	6.7
2	8.1	82.6	33.2	17.3	105	1,370	1,380	13.4	16.2	62.5	11.6	6.0
3	7.8	44.8	32.5	17.0	105	1,630	1,370	13.8	15.5	63.6	11.3	5.3
4	7.1	59.3	33.5	17.0	105	1,490	1,400	13.8	14.8	64.3	10.9	5.3
5	6.7	135	30.4	16.6	106	1,490	1,360	13.1	14.1	64.3	10.2	4.9
6	7.4	136	29.7	17.3	106	1,490	1,360	12.4	13.1	63.9	9.9	6.7
7	7.4	73.1	27.2	18.7	106	1,440	1,350	12.4	12.4	63.9	9.9	8.5
8	8.1	32.1	22.2	19.4	106	1,480	1,430	11.3	11.7	63.9	8.8	8.5
9	8.8	45.6	21.9	20.1	107	1,480	1,410	10.6	11.3	63.9	8.1	8.8
10	9.2	34.3	21.9	20.8	107	1,480	1,400	9.9	10.9	32.1	7.8	9.2
11	9.9	35.3	21.5	22.2	107	1,480	1,200	9.2	10.9	18.0	8.1	9.2
12	9.9	36.0	21.2	23.0	106	1,270	1,470	9.2	10.6	17.7	8.1	7.4
13	10.6	37.1	33.5	23.3	106	1,290	1,360	8.8	10.2	17.7	8.5	5.7
14	10.6	38.1	67.1	24.7	106	1,330	1,320	8.8	9.9	17.7	8.8	6.4
15	10.6	39.2	20.5	25.4	106	1,400	1,240	9.2	9.5	17.7	9.2	6.4
16	10.6	39.9	20.1	26.1	105	1,400	1,180	9.2	9.2	17.7	9.2	6.4
17	11.7	38.1	19.4	26.8	112	1,440	1,140	8.8	8.8	17.7	9.2	6.7
18	11.7	36.0	19.1	109	113	1,450	1,040	8.8	7.8	17.7	8.8	7.1
19	11.7	34.3	18.0	99.2	113	1,430	290	8.8	7.4	17.3	8.5	7.1
20	11.7	32.8	17.7	85.8	113	1,520	23.7	8.8	7.1	17.3	8.5	7.1
21	11.7	31.1	17.0	74.2	112	1,520	23.7	8.8	6.7	16.6	8.5	7.1
22	11.7	29.0	16.6	69.2	176	1,530	66.0	8.8	7.4	15.9	7.8	7.1
23	11.3	27.2	17.0	143	749	1,490	66.0	8.8	8.5	15.5	7.8	7.1
24	117	27.2	17.3	112	1,290	1,430	66.0	8.8	9.2	14.8	7.8	7.1
25	118	27.5	17.7	83.3	1,500	1,400	66.0	9.5	40.6	14.1	7.8	18.0
26	117	27.5	17.7	45.9	1,500	1,440	66.0	10.2	56.9	13.8	7.4	33.5
27	119	27.2	18.0	50.1	1,580	1,510	48.4	11.3	57.6	13.4	7.1	10.6
28	126	27.2	18.4	133	1,580	1,410	30.7	12.0	59.3	13.1	7.1	7.1
29	133	57.9	18.0	137	1,580	1,420	17.0	13.1	60.0	12.7	7.1	7.1
30	135		18.0	80.5	1,490	1,420	17.0	13.8	60.7	12.7	6.7	7.1
31	138		17.7		1,520		14.8	14.8		12.4		7.1
Sum	1,426.4		1,575.6		43,370		333.6		935.7		258.3	
	1,226.1		736.1		15,222		24,585.3		593.8		262.5	

Month	Current Year 1972								Period 1954-1972		
	Extreme Gage Feet		∅ Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low				Average	Maximum	Minimum
	High	Low	Day		Day						
Jan.			31	138	5	6.7	39.6	2,429	2,058	4,745	561
Feb.			6	136	†23	27.2	49.1	2,829	3,273	7,059	653
Mar.			14	67.1	22	16.6	23.7	1,459	2,674	5,291	782
Apr.			23	143	5	16.6	52.6	3,125	3,089	6,111	899
May			†27	1,580	1	105	491	30,179	7,031	30,179	1,557
June			3	1,630	12	1,270	1,440	85,952	9,527	85,952	2,027
July			12	1,470	31	14.8	795	48,782	5,442	48,782	1,037
Aug.			31	14.8	†13	8.8	10.6	661	2,044	3,948	661
Sept.			30	60.7	21	6.7	19.8	1,178	1,944	4,150	665
Oct.			† 4	64.3	31	12.4	30.0	1,856	2,574	9,831	623
Nov.			1	12.0	30	6.7	8.8	520	2,286	10,461	520
Dec.			26	33.5	5	4.9	8.5	512	3,531	34,043	512
Yearly				1,630		4.9	247	179,482	45,473	179,482	13,462

∅ Mean daily † And other days

DIVERSIONS FROM THE RIO GRANDE
UNITED STATES SIDE – FORT RINGGOLD TO ANZALDUAS DAM

Beginning June 1971, the Texas Water Rights Commission assumed control of the United States portion of the water in Falcon Reservoir and in the Rio Grande below Falcon Dam, the disposition of such waters being made by its Rio Grande Watermaster. Previous to that, since June 1956, such waters had been under the jurisdiction of the 93rd District Court of Texas administered by its Special Water Master.

During 1972, 178,760 irrigable acres and several towns and rural homes were allotted Rio Grande water in the river reach between the gaging station at Fort Ringgold and Anzalduas Dam. Such irrigable area was 23.9% of the total irrigable acres below Falcon Dam allotted Rio Grande water.

The total diversion during 1972 in this river reach was 211,999 acre-feet, or 26.2% of the total water diverted from the Rio Grande below Falcon Dam. About 87% of the water diverted in this river reach was determined by the International Boundary and Water Commission through records of discharge obtained by means of flow meters, and by deflection meters developed by the Commission. The records for the rest of these diversions were furnished by the Rio Grande Watermaster and were determined from records of discharge obtained by means of flow meters. More than one crop per year is often grown on parts of this land.

EXTREME FLOWS FROM RECORDS:

		Average Flow in Second-Feet			
Daily:	Max. 1,220	June 21, 1960	Min. 0		Occasionally
Monthly:	Max. 1,010	June 1960	Min. 10.3		March 1957
Yearly:	Max. 417	1961	Min. 188		1966

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	117	166	432	116	153	132	101	254	501	155	485	43.9
2	126	295	469	163	126	207	65.1	239	345	391	482	181
3	445	318	354	309	30.1	167	294	269	220	399	448	163
4	322	273	210	530	58.3	18.4	112	278	424	421	277	315
5	217	205	132	463	31.7	83.5	312	210	543	428	215	299
6	266	124	392	530	33.6	159	344	83.0	497	466	441	189
7	245	514	432	526	0	222	310	195	486	295	443	162
8	109	427	470	404	63.2	190	235	280	469	246	580	145
9	114	288	482	279	64.0	139	164	402	332	479	568	84.3
10	467	358	392	626	69.6	31.7	442	406	169	531	491	39.9
11	517	234	220	621	23.6	8.9	542	372	466	576	328	89.2
12	426	121	166	634	78.8	8.9	506	256	502	497	220	141
13	472	91.4	344	586	3.7	8.9	615	183	491	528	577	104
14	388	141	80.4	550	0	47.7	421	493	482	378	588	98.1
15	213	133	104	391	34.8	8.9	260	540	443	253	613	79.2
16	149	150	128	317	37.8	46.9	181	501	312	614	592	72.3
17	437	199	141	717	2.7	26.9	462	492	247	615	513	60.7
18	497	181	47.4	690	36.2	7.7	476	376	515	646	354	182
19	519	123	13.0	728	81.9	45.9	443	305	500	640	250	287
20	582	100	107	754	1.2	57.8	403	189	519	491	623	500
21	464	238	118	732	1.2	13.7	379	489	521	373	570	418
22	287	254	168	507	35.1	57.4	106	472	428	195	359	254
23	272	491	203	323	36.3	145	2.5	529	357	600	76.3	61.6
24	594	552	169	782	35.8	75.1	22.6	520	206	669	4.0	14.8
25	615	382	156	788	37.3	20.7	32.6	473	419	651	.2	7.0
26	663	236	107	772	164	66.6	61.1	334	439	463	.6	273
27	692	195	213	709	40.7	95.7	68.1	212	419	410	.6	366
28	622	426	184	251	2.9	149	73.2	544	390	330	1.3	368
29	464	354	224	134	58.2	148	82.2	543	345	228	2.0	343
30	286		242	102	113	137	40.0	561	216	420	11.1	235
31	279		166		147		148	594		469		173
Sum	7,569.4			15,034		2,526.3		11,594.0		13,857		5,749.0
	11,866		7,065.8		1,601.7		7,703.4		12,203		10,113.1	

Month	Current Year 1972								Period 1957-1972		
	Average Rainfall Inches**		∅ Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low						
	1957-1972	1972	Day		Day				Average	Maximum	Minimum
Jan.	1.23	0.81	27	692	8	109	383	23,536	11,767	28,747	2,010
Feb.	1.09	1.14	24	552	13	91.4	361	15,014	11,812	38,599	1,640
Mar.	.68	1.65	9	482	19	13.0	228	14,015	17,053	41,200	637
Apr.	1.39	2.15	25	788	30	102	501	29,820	23,762	36,074	5,760
May	2.39	4.01	26	164	† 7	0	51.7	3,177	22,057	48,400	3,177
June	2.67	5.73	7	222	18	7.7	84.2	5,011	25,476	59,900	5,011
July	.99	3.36	13	615	23	2.5	248	15,279	20,941	45,400	6,753
Aug.	1.60	.41	31	594	6	83.0	374	22,996	20,265	30,000	11,440
Sept.	3.89	2.24	5	543	10	169	407	24,204	15,322	35,000	4,136
Oct.	2.47	.53	24	669	1	155	447	27,485	15,483	30,400	2,830
Nov.	1.12	1.43	20	623	25	.2	337	20,059	13,173	21,932	2,930
Dec.	.95	.31	20	500	25	7.0	185	11,403	10,920	18,782	2,506
Yearly	20.47	23.77		788		0	292	211,999	208,031	302,180	136,460

∅ Mean daily ** United States side-average of several stations in the reach
† And other days

DIVERSIONS FROM THE RIO GRANDE
ANZALDUAS CANAL NEAR REYNOSA, TAMAULIPAS

DESCRIPTION: Cableway, gravity well, and water-stage recorder located on the left bank at latitude 26°08'05", longitude 98°20'10", 0.5 canal mile from the canal intake, and about 5 miles northwest of Reynosa, Tamaulipas. The canal intake is immediately upstream from Anzalduas Dam at river mile 171.6, 102.2 river miles downstream from Falcon Dam, and 1,077.2 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is 86.32 feet above mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 70 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: 1952 through 1972.

REMARKS: Diversions by this canal are for irrigation and domestic use in Mexico and for conveying water for storage in Culebron, Villa Cardenas, and Palito Blanco Reservoirs about 23 canal miles downstream from this station. During 1972, 484,860 acres were irrigated with water delivered through this canal. More than one crop per year was grown on parts of this land. Flow at this canal station is affected by backwater from the operation of canal gates 4.5 miles, 11.3 miles, and 22.5 miles below this station. During 1972, there was no water returned to the Rio Grande through Poniente Drain.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 10,950 second-feet on June 2, 1957 with a gage height of 16.01 feet. Min. no flow occurs frequently.

Average Flow in Second-Feet

Daily:	Max.	9,350	May 29, 1957	Min.	0	Frequently
Monthly:	Max.	5,090	April 1972	Min.	0	Several months
Yearly:	Max.	1,980	1959	Min.	150	1952

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.6	5,900‡	215	791	212	1,330	‡1,470	1.4	1,010	2,540	423	0
2	10.6	5,260‡	‡650	886	1.4	‡ 999	1,480	1.4	1,070	724	420	1.4
3	261	3,780	713	‡ 1,260	1,380	1,290	1,450	1.4	1,060	‡ 689	297	1.4
4	‡ 466	3,530‡	710	1,670	2,920‡	1,800	1,470	1.4	‡ 1,250	812	191	1.4
5	547	3,530	364	‡ 1,710	2,540	‡1,810	1,480	1.4	1,420	1,020	191	1.4
6	547	3,530	1.4	1,950	‡ 812	1,750	1,470	1.4	1,490	1,240	‡173	1.4
7	547	3,210	1.4	2,240	1.4	1,530	‡1,480	1.4	1,720	1,320	173	1.4
8	565	3,010	1.4	‡ 2,400	1.4	1,840	1,490	1.4	‡ 1,740	1,390	74.2	1.4
9	600	2,950‡	1.4	2,640	1.4	3,110	1,490	1.4	1,880	‡ 1,400	1.4	1.4
10	‡ 586	2,530	1.4	‡ 2,830	1.4	‡4,910	1,490	1.4	2,060	1,490	1.4	1.4
11	565	1,760	1.4	‡ 3,200	1.4	4,840	1,490	1.4	1,940	1,590	1.4	1.4
12	1,090	1,450‡	1.4	3,960	‡ 530	3,410	1,480	1.4	1,770	1,600	1.4	1.4
13	1,620‡	886	1.4	‡ 5,050	‡ 763	1,180	1,470	1.4	‡ 1,310	1,590	1.4	1.4
14	1,940	883	399	‡ 5,860	759	1.4	1,480	1.4	890	1,560	1.4	1.4
15	2,310‡	883	‡664	6,290	1,200	‡ 1.4	1,480	1.4	1,030	1,390	1.4	1.4
16	2,470	‡ 777	713	7,380	1,890	1.4	1,500	1.4	1,130	953	1.4	1.4
17	2,510	533	710	7,590	1,910‡	1.4	1,490	1.4	1,200	706	1.4	1.4
18	2,610‡	494	749	‡ 8,020	1,840	1.4	1,480	1.4	‡ 1,260	611	1.4	284
19	2,970	872	752	‡ 8,230	706	569	1,480	367	1,310	‡ 551	1.4	720
20	3,250‡	1,310	1.4	8,330	‡ 717	2,520	‡1,320	636	1,320	544	1.4	410
21	3,350‡	‡ 636	1.4	‡ 8,620	360	2,680	1,060	‡ 671	1,350	551	243	1.4
22	3,920‡	230	1.4	‡ 8,760	1.4	‡1,970	1,070	706	1,630	554	‡512	1.4
23	4,910	10.6	1.4	8,760	1.4	1,260	1,070	848	‡ 1,760	554	434	1.4
24	5,120‡	10.6	‡ 1.4	8,230	600	830	1,070	848	2,100	547	1.4	1.4
25	5,260	10.6	1.4	‡ 7,310	1,420	304	1,070	848	‡ 4,060	‡ 551	1.4	1.4
26	5,370	10.6	1.4	6,460	1,660	1.4	544	‡ 777	‡ 4,800	‡ 547	0	1.4
27	5,650	10.6	1.4	6,000	1,910‡	1.4	1.4	717	‡ 4,060	491	0	1.4
28	5,900‡	10.6	1.4	6,360	1,900	1.4	1.4	713	4,940	371	0	1.4
29	5,760	10.6	‡ 1.4	6,500	1,810	759	1.4	713	‡ 4,980	441	0	1.4
30	5,690		1.4	3,600	1,810	1,480	1.4	‡ 788	4,870	‡ 434	0	1.4
31	5,830‡		364		1,810‡		1.4	883		434		1.4
Sum	82,235.2	48,018.2	7,029.6	152,887	31,470.2	42,182.2	35,331.0	9,540.2	62,410	29,195	3,150.8	1,451.8

Month	Current Year 1972 Average Rainfall Inches** 1954-1972	1972	∅ Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1954-1972 Acre-Feet Average	Maximum	Minimum
Jan.	1.15	0.63	28	5,900	† 1	10.6	2,650	163,121	104,841	259,799	1,520
Feb.	1.36	.98	1	5,900	†23	10.6	1,660	95,233	98,997	251,519	1,086
Mar.	.69	2.01	19	752	† 6	1.4	227	13,943	40,794	147,900	1,128
Apr.	1.74	2.36	†22	8,760	1	791	5,090	303,212	129,157	303,212	23,381
May	2.43	4.65	4	2,920	† 2	1.4	1,010	62,419	184,233	285,477	29,169
June	2.84	10.79	10	4,910	†14	1.4	1,410	83,679	120,347	270,700	15,256
July	1.38	4.06	16	1,500	†27	1.4	1,140	70,122	43,358	162,400	5,730
Aug.	2.09	1.10	31	883	† 1	1.4	308	18,920	72,516	186,909	6,709
Sept.	5.10	3.27	29	4,980	14	890	2,080	123,812	73,593	165,800	8,708
Oct.	2.68	2.48	1	2,540	28	371	943	57,899	52,575	209,590	0
Nov.	1.40	1.06	22	512	†26	0	105	6,250	14,385	83,690	0
Dec.	1.05	.47	19	720	1	0	47.0	2,880	32,011	166,700	651
Yearly	23.91	33.86		8,760		0	1,380	1,001,490	966,812	1,434,920	551,946

‡ Discharge measurement made on this day ∅ Mean daily † And other days
** Average of several stations

RIO GRANDE BELOW ANZALDUAS DAM, TEXAS

DESCRIPTION: Cableway, gravity well, water-stage recorder, and selsyn-type transmitter, located on the right bank at latitude 26°08'00", longitude 98°20'05", and river mile 171.1; 0.5 river mile downstream from Anzalduas Dam, about 4.5 miles northwest of Reynosa, Tamaulipas, 12.2 river miles upstream from the international highway bridge between Hidalgo, Texas and Reynosa, Tamaulipas, and 1,077.7 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is at mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 65 discharge measurements during the year, 61 by the Mexican Section and 4 by the United States Section of the Commission, and a continuous record of gage heights. Computations by shifting control methods. Records available: 1952 through 1972.

REMARKS: Except during local storms, flow at this station is controlled largely by releases from Falcon Reservoir and by diversions into Anzalduas Canal. Excessive upstream flood flows are partly diverted into the Mission Inlet of the United States floodway system before reaching this station. Prior to January 1, 1968 the zero of the gage was 82.61 feet above mean sea level, U. S. C. & G. S. datum. The transmitter relays gage height data to the Anzalduas Dam control room.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 131,000 second-feet on September 24, 1967 with a gage height of 30.51 feet. Min. periods of no flow have occurred on several occasions in 1953, 1954, 1956, and 1957.

Average Flow in Second-Feet

Daily:	Max. 121,000	Sept. 25, 1967	Min. 0		Occasionally
Monthly:	Max. 37,830	Oct. 1958	Min. 5.5		March 1957
Yearly:	Max. 6,410	1958	Min. 158		1957

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3,100	1,940	‡ 632	350	1,010	1,370	1,900	1,840	1,440	3,810	‡ 953	597
2	3,140	‡ 463	632	350	770	1,540	2,390	1,540	‡ 3,990	424	424	‡ 399
3	‡ 2,660	547	682	‡ 350	2,340	876	2,110	‡ 1,300	2,720	4,310	‡ 374	456
4	2,180	1,010	1,010	350	992	858	2,460	1,140	2,870	‡ 3,670	576	639
5	1,640	964	992	353	207	982	2,450	1,030	2,520	‡ 3,530	816	‡ 795
6	‡ 2,090	1,150	‡ 893	622	68.5	1,410	‡ 2,080	1,050	2,730	3,880	735	950
7	1,610	‡ 1,080	826	925	72.4	1,790	1,960	876	‡ 2,620	3,740	501	946
8	‡ 1,080	897	1,390	1,210	‡ 240	1,080	2,100	‡ 678	2,040	3,160	770	717
9	1,080	756	1,760	1,310	350	2,370	2,390	509	1,710	2,670	‡ 943	470
10	1,090	607	1,890	‡ 1,910	614	‡ 3,570	1,680	448	1,510	2,620	953	512
11	1,180	600	2,120	1,820	1,160	2,600	1,560	798	‡ 1,410	2,210	1,200	569
12	1,320	791	2,270	2,610	1,010‡	2,540	1,850	682	1,350	1,900	1,420	470
13	‡ 1,290	1,640	‡2,250	2,390	812	2,620	1,740	826	1,330	‡ 791	‡1,340	470
14	1,350	‡ 1,650	1,710	‡ 2,300	823	‡ 3,310	‡ 2,070	636	2,280	1,080	879	470
15	1,530	1,410	456	2,280	809	‡ 2,900	1,360	562	‡ 2,510	953	890	448
16	1,680	939	381	2,280	805	3,010	1,020	547	2,080	‡ 1,280	985	388
17	‡ 1,700	512	299	‡ 2,500	809	3,710	1,030	‡ 547	2,690	1,280	1,030	470
18	1,620	484	198	2,640	551	4,380	1,270	417	2,180	1,380	961	‡ 547
19	1,530	456	205	2,660	‡ 756	‡ 4,660	770	367	1,860	1,550	1,240	540
20	1,770	357	‡ 205	‡ 2,740	186	4,590	463	385	1,790	1,470	1,380	600
21	2,010	‡ 523	205	2,590	385	4,630	625	491	3,410	1,110	1,540	685
22	2,000	565	205	2,630	1,190	4,660	1,900	558	4,100	1,260	1,310	590
23	2,090	519	205	‡ 3,090	1,360	4,660	2,440	491	‡ 3,530	‡ 1,110	‡1,200	434
24	2,410	523	‡ 191	3,020	1,640‡	4,660	2,460	477	3,740	1,110	1,670	385
25	2,310	523	198	2,790	441	4,660	‡ 2,370	‡ 586	8,050	‡ 964	1,390	597
26	‡ 2,150	516	205	2,690	160	‡ 4,380	2,510	537	6,390	759	1,230	735
27	2,080	1,040	‡ 274	2,560	344	3,990	3,110	544	‡ 6,960	‡ 509	918	‡ 837
28	1,950	678	350	3,710	812	3,570	3,080	763	‡ 9,990	572	735	996
29	1,970	819	350	2,180	‡ 770	2,600	2,840	908	8,760	777	653	971
30	2,100		350	1,110	975	‡ 1,970	2,570	1,060	5,190	‡ 812	590	957
31	2,220		350		1,210		2,190	1,230		1,090		1,030
Sum	57,920	23,959	23,684	58,320	23,671.9	89,946	60,748	23,823	101,360	59,347	29,606	19,670

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1954-1972 Acre-Feet Average	Maximum	Minimum
Jan.	86.29	82.48	2	3,530	† 9	1,050	1,870	114,895	95,386	220,916	1,090
Feb.	84.91	80.71	1	2,510	18	173	826	47,504	71,590	241,900	830
Mar.	84.65	80.71	†12	2,600	17	117	763	46,968	74,666	235,500	339
Apr.	86.88	81.04	28	4,380	5	318	1,940	115,652	87,695	155,700	3,160
May	86.88	79.79	3	4,380	†18	53.0	763	46,946	111,166	202,400	35,360
June	87.34	81.43	19	4,770	8	569	3,000	178,406	149,925	226,345	7,850
July	85.47	79.89	27	3,300	20	35.3	1,960	120,541	78,168	253,970	2,000
Aug.	83.73	80.61	1	2,020	8	235	770	47,252	57,991	257,297	943
Sept.	92.39	82.22	28	10,200	9	1,080	3,380	201,086	234,212	1,862,856	3,920
Oct.	87.76	80.81	2	5,370	13	325	1,910	117,725	298,165	2,326,000	1,730
Nov.	84.22	80.77	22	2,450	3	311	989	58,740	146,826	1,438,000	1,430
Dec.	82.51	80.84	31	1,270	24	339	636	39,022	90,128	540,100	1,500
Yearly	92.39	79.79		10,200		35.3	1,560	1,134,737	1,495,918	4,640,968	114,749

‡ Discharge measurement made on this day † And other days

RIO GRANDE FLOODWAY DISCHARGES
LOWER RIO GRANDE VALLEY

On the United States Side

Part of the excess water from floods entering the Lower Rio Grande Valley is diverted from the river through the United States floodway system, with the inlet located south of Mission, Texas approximately six miles upstream from the Anzalduas Dam.

Floodwater entering the system is measured first at the Mission Floodway Station on State Highway No. 336 bridge south of McAllen and again 18.5 miles downstream at the Main Floodway Station on Farm Road No. 88 bridge south of Weslaco. At a point 3 miles southwest of Mercedes the floodway divides, one channel going northeastward through the Arroyo Colorado Floodway to the Gulf of Mexico, and the other going to the Gulf via the North Floodway, traveling first northward and then eastward to the Gulf. At the point of division, a divisor dike which runs longitudinally in the Main Floodway, divides and controls the flows into the Arroyo Colorado Floodway and the North Floodway. The flow of the Arroyo Colorado is measured at El Fuste Siphon south of Mercedes and farther downstream at the bridge on U. S. Highway No. 83 south of Harlingen. The North Floodway flow is measured at the bridge on old U. S. Highway No. 83 west of Mercedes and farther downstream at the bridge on U. S. Highway No. 77 near Sebastian.

In 1972, no flood flow was diverted through this floodway system.

On the Mexican Side

Part of the excess water from floods entering the Lower Rio Grande Valley is diverted from the river through the Mexican floodway system, with inlets located approximately 38 miles (Retamal Heading), 51 miles (San Rafael), and 107 miles (Floodway No. 2), respectively, downstream from Anzalduas Dam. Floodway No. 3, 1.2 miles upstream from the Brownsville-Matamoros Bridge, is greatly obstructed and is considered to be inoperative.

Floodwater diverted through Retamal Heading is measured at a cableway station 0.9 mile downstream from the headgate. It flows through Retamal Canal into Culebron and Villa Cardenas Lakes from which it discharges through floodgates into Floodway No. 1 and flows southeastward into the Gulf of Mexico. Floodwater diverted at San Rafael is measured near the intake and flows through San Rafael Drain into Culebron and Villa Cardenas Lakes from which it discharges into Floodway No. 1. Floodwater entering Floodway No. 2 is measured at the Matamoros-Reynosa highway crossing and flows south and east into the Gulf of Mexico.

In 1972, no flood flows were diverted into this floodway system. There were no diversions for irrigation purposes through Retamal Canal in 1972.

DIVERSIONS FROM THE RIO GRANDE
UNITED STATES SIDE - ANZALDUAS DAM TO PROGRESO

Beginning June 1971, the Texas Water Rights Commission assumed control of the United States portion of the water in Falcon Reservoir and in the Rio Grande below Falcon Dam, the disposition of such waters being made by its Rio Grande Watermaster. Previous to that, since June 1956, such waters had been under the jurisdiction of the 93rd District Court of Texas administered by its Special Water Master.

During 1972, 137,920 irrigable acres and several towns and rural homes were allotted Rio Grande water in the river reach between Anzalduas Dam and the Progreso International Bridge. Such irrigable area was 18.4% of the total irrigable acres below Falcon Dam allotted Rio Grande water.

The total diversion during 1972 in this river reach was 171,911 acre-feet, or 21.2% of the total water diverted from the Rio Grande below Falcon Dam. About 95% of the water diverted in this river reach was determined by the International Boundary and Water Commission through records of discharge obtained by means of flow meters, and by deflection meters developed by the Commission. The records for the rest of these diversions were furnished by the Rio Grande Watermaster and were determined from records of discharge obtained by means of flow meters. More than one crop per year is often grown on parts of this land.

EXTREME FLOWS FROM RECORDS:

	Average Flow in Second-Feet				
Daily:	Max. 1,120	June 16 & 17, 1965	Min. 0		Occasionally
Monthly:	Max. 749	June 1969	Min. 13.3		May 1972
Yearly:	Max. 333	1961	Min. 167		1970

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	50.8	288	378	42.7	22.1	197	374	142	410	2.2	261	28.6
2	73.1	298	377	3.9	20.4	280	295	235	331	145	298	17.5
3	364	242	362	139	10.8	94.0	447	243	135	311	319	4.1
4	370	278	297	206	13.5	31.8	475	247	324	350	224	57.7
5	169	263	67.7	216	83.5	186	560	156	524	372	24.9	256
6	166	228	327	209	0	235	611	39.4	630	400	214	217
7	284	338	439	213	0	217	555	150	689	258	264	200
8	321	435	422	206	0	170	407	232	658	131	240	104
9	167	435	384	80.2	0	46.4	275	267	490	365	314	65.2
10	366	374	378	419	0	31.8	461	261	244	586	292	2.3
11	408	320	235	502	0	0	511	261	343	594	230	233
12	484	312	61.6	492	0	0	520	166	339	572	76.9	48.7
13	503	.9	206	506	47.0	0	534	48.7	283	554	223	48.8
14	473	63.0	92.8	533	43.6	0	542	224	340	371	408	157
15	255	72.5	132	527	17.5	0	483	195	414	201	420	174
16	130	71.1	126	228	23.6	62.5	156	240	314	532	444	134
17	337	69.1	60.0	544	8.0	9.4	420	342	118	602	437	0
18	524	74.1	0	624	0	0	410	323	353	632	305	246
19	559	55.6	0	620	0	28.0	324	224	502	548	99.5	302
20	574	41.0	24.5	618	0	27.3	280	38.7	510	362	339	326
21	548	186	43.4	626	0	27.1	186	220	578	252	329	292
22	436	250	20.0	525	0	27.1	54.2	218	539	146	197	212
23	181	292	87.2	263	0	23.4	0	250	258	186	97.6	21.9
24	527	273	118	618	0	12.6	9.5	281	69.7	285	115	2.5
25	510	314	16.6	622	0	.3	10.4	236	254	268	106	2.5
26	526	323	62.5	606	0	22.5	33.9	174	251	169	68.7	262
27	526	199	152	621	0	126	31.1	45.3	240	201	21.8	350
28	474	337	187	357	0	220	140	291	218	148	16.9	361
29	493	339	197	194	0	239	95.3	407	266	55.1	13.2	342
30	352		189	2.4	3.0	376	0	404	164	203	14.3	272
31	382		177		119		27.0	411		263		77.7
Sum	6,771.3		11,363.2		2,690.2		6,972.1		10,064.3		4,817.5	
	11,532.9		5,619.3		412.0		9,227.4		10,788.7		6,412.8	

Month	Current Year 1972								Period 1957-1972		
	Average Rainfall Inches**		∅ Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low						
	1957-1972	1972	Day		Day				Average	Maximum	Minimum
Jan.	1.31	0.55	20	574	1	50.8	372	22,875	11,671	34,959	723
Feb.	1.24	.94	† 8	435	13	.9	233	13,431	9,425	28,535	1,140
Mar.	.77	2.64	7	439	†18	0	181	11,146	13,791	36,100	1,050
Apr.	1.42	1.67	21	626	30	2.4	379	22,539	18,046	26,074	3,630
May	2.81	4.59	31	119	† 6	0	13.3	817	18,469	35,500	817
June	2.86	8.32	30	376	†11	0	89.7	5,336	27,264	44,541	5,336
July	1.05	2.60	6	611	†23	0	298	18,302	22,308	41,100	6,597
Aug.	1.75	.75	31	411	20	38.7	225	13,829	15,059	25,800	7,452
Sept.	4.19	2.32	7	689	24	69.7	360	21,399	12,758	28,000	3,214
Oct.	2.75	1.75	18	632	1	2.2	325	19,962	14,054	29,215	2,059
Nov.	1.34	1.30	16	444	29	13.2	214	12,720	10,545	22,818	1,015
Dec.	1.13	.36	28	361	17	0	155	9,555	9,409	17,500	1,978
Yearly	22.62	27.79		689		0	237	171,911	182,799	241,270	121,003

∅ Mean daily ** United States side-average of several stations in the reach
† And other days

RIO GRANDE NEAR PROGRESO, TEXAS

DESCRIPTION: Gravity well, water-stage recorder, and digital transmitter located on the downstream side of the center pier of the Progreso International Bridge at latitude 26°03'45", longitude 97°57'00", and river mile 123.8; 0.8 river mile downstream from the Progreso pumping plant, 2 miles south of Progreso, Texas, 47.3 river miles downstream from Anzalduas Dam, and 1,125.0 river miles downstream from the American Dam at El Paso, Texas. Meter measurements are made from the bridge. An auxiliary gage well and water-stage recorder located about 300 feet upstream from the bridge are used when the low-flow channel shifts to the left bank. The zero of the gage at both recorders is at mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 65 discharge measurements during the year, 59 by the Mexican Section and 6 by the United States Section of the Commission, and a continuous record of gage heights. Computations by shifting control methods. Records available: December 1952 through August 24, 1953; and December 1953 through 1972.

REMARKS: Except for diversions, tributary inflows, and drainage returns below Falcon Dam, flow at this station after August 25, 1953 was controlled largely by releases from Falcon Reservoir, 150 miles upstream. Excessive upstream flood flows are partly diverted through the Mission Inlet of the United States floodway system and through Retamal Heading of the Mexican floodway system before reaching this station. The transmitter relays gage height data upon interrogation by telephone via commercial circuits. Prior to January 1, 1969, the zero of the gage was 52.56 feet above mean sea level, U. S. C. & G. S. datum.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 60,700 second-feet on September 26, 1967 with a gage height of 24.84 feet. Min. no flow several days in June, July, and August 1953.

Average Flow in Second-Feet

Daily:	Max. 48,400	Sept. 26, 1967	Min. 0	Frequently	1953
Monthly:	Max. 22,400	Oct. 1971	Min. 5.1	June	1953
Yearly:	Max. 4,560	1971	Min. 666		1957

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3,010	2,240	576	333	1,370	1,100	1,880	2,440	851	5,230	848	777
2	3,330	‡1,900	505	438	1,180	1,140	1,800	‡ 1,970	1,050	4,100	982	777
3	3,300	826	466	470	1,140	1,300	2,130	1,590	1,450	‡ 3,990	526	639
4	2,830	‡ 526	434	‡ 381	2,100	1,070	‡ 1,820	1,370	2,420	3,920	459	‡ 554
5	2,270	770	727	·296	1,460	901	2,080	1,200	2,340	3,460	583	689
6	‡ 1,850	932	953	284	625	784	2,000	1,170	‡ 2,040	3,400	830	689
7	1,950	985	‡ 809	334	367	1,120	1,670	1,230	2,030	‡ 3,570	‡ 735	858
8	1,780	908	565	614	312	1,650	1,590	1,020	1,860	3,530	448	872
9	1,390	720	922	936	‡ 282	1,420	1,920	‡ 703	1,510	3,110	512	879
10	1,080	696	1,430	1,170	456	‡ 2,290	‡ 2,120	512	1,450	2,480	720	636
11	‡ 918	‡ 537	1,670	‡ 1,290	738	3,520	1,460	396	1,500	2,260	798	565
12	939	523	2,020	1,300	1,230	3,070	1,260	516	‡ 1,230	1,970	1,060	494
13	1,020	731	2,300	1,860	1,230	‡ 2,960	1,360	837	1,140	‡ 1,580	1,360	‡ 494
14	978	1,660	‡2,430	‡ 1,810	1,050	‡ 3,100	1,320	879	1,260	936	‡1,160	487
15	1,050	‡1,830	1,910	1,630	1,050	‡ 3,450	1,540	706	1,910	890	703	484
16	1,450	1,580	904	1,730	‡ 1,030	3,200	1,270	‡ 452	2,160	883	‡ 586	406
17	1,700	1,170	622	1,890	1,010	3,260	1,020	417	2,060	‡ 833	600	367
18	‡ 1,500	759	572	‡ 1,890	1,010	3,880	826	396	2,500	816	699	456
19	1,230	636	484	1,930	922	4,480	‡ 911	352	1,940	901	731	‡ 438
20	1,130	611	448	1,920	788	‡ 4,660	699	340	‡ 1,520	1,210	1,100	333
21	1,340	551	406	2,030	664	4,660	551	448	1,530	1,260	1,100	333
22	1,610	‡ 452	‡ 381	1,910	‡ 371	4,700	551	445	2,780	1,030	1,300	417
23	1,800	‡ 448	‡ 406	2,210	1,080	4,730	1,820	‡ 445	3,500	1,210	1,280	533
24	2,010	406	367	2,650	1,490	4,730	2,570	410	3,290	‡ 1,050	‡1,200	572
25	2,050	367	289	‡ 2,410	1,730	4,730	2,720	346	4,200	971	1,560	501
26	‡ 1,960	‡ 360	344	2,160	996	‡ 4,730	‡ 2,610	364	‡ 6,780	‡ 946	1,410	‡ 498
27	1,820	381	351	‡ 2,030	‡ 438	‡ 4,480	2,820	470	5,900	816	1,390	523
28	1,740	777	‡ 254	2,300	323	3,990	3,220	547	7,420	667	1,200	509
29	1,650	‡ 692	287	3,170	759	3,480	3,120	558	‡ 8,970	‡ 971	653	
30	1,760		313	2,330	869	2,540	2,990	‡ 530	7,840	773	840	706
31	2,020		316		‡ 939		2,810	713		‡ 819		802
Sum	54,465	24,974	24,461	45,711	29,009	91,125	56,458	23,772	86,431	59,208	27,691	17,941

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1954-1972 Acre-Feet Average	Maximum	Minimum
Jan.	60.37	56.14	3	3,450	11	879	1,760	108,024	94,564	241,800	17,340
Feb.	58.79	54.66	1	2,340	26	347	862	49,522	72,589	371,900	12,620
Mar.	58.86	54.20	14	2,510	28	216	788	48,497	68,839	379,400	4,990
Apr.	59.97	54.46	29	3,280	† 5	283	1,530	90,676	78,754	144,000	32,060
May	58.33	54.49	4	2,260	9	260	936	57,562	101,280	153,028	33,164
June	61.75	55.71	†24	4,770	6	763	3,040	180,780	124,370	180,780	50,884
July	59.81	54.82	28	3,250	22	381	1,820	111,967	74,079	235,822	16,970
Aug.	58.96	54.69	1	2,650	†19	334	766	47,161	53,650	189,578	10,400
Sept.	66.70	55.77	29	9,080	1	784	2,880	171,492	164,033	837,532	21,650
Oct.	63.91	55.31	1	6,530	29	569	1,910	117,417	212,170	1,377,161	14,030
Nov.	57.35	54.95	25	1,590	† 8	424	922	54,916	105,082	735,000	18,000
Dec.	56.10	54.46	9	946	†20	302	579	35,587	84,064	487,200	7,370
Yearly	66.70	54.20		9,080		216	1,480	1,073,601	1,233,474	3,291,271	482,410

‡ Discharge measurement made on this day † And other days

DIVERSIONS FROM THE RIO GRANDE
UNITED STATES SIDE - PROGRESO TO SAN BENITO

Beginning June 1971, the Texas Water Rights Commission assumed control of the United States portion of the water in Falcon Reservoir and in the Rio Grande below Falcon Dam, the disposition of such waters being made by its Rio Grande Watermaster. Previous to that, since June 1956, such waters had been under the jurisdiction of the 93rd District Court of Texas administered by its Special Water Master.

During 1972, 304,400 irrigable acres and several towns and rural homes were allotted Rio Grande water in the river reach between the gaging stations at Progreso and near San Benito. Such irrigable area was 40.7% of the total irrigable acres below Falcon Dam allotted Rio Grande water.

The total diversion during 1972 in this river reach was 329,798 acre-feet, or 40.7% of the total water diverted from the Rio Grande below Falcon Dam. About 99% of the water diverted in this river reach was determined by the International Boundary and Water Commission through records of discharge obtained by means of flow meters, by open channel rating stations, and by deflection meters developed by the Commission. The records for the rest of these diversions were furnished by the Rio Grande Watermaster and were determined from records of discharge obtained by means of flow meters. More than one crop per year is often grown on parts of this land.

EXTREME FLOWS FROM RECORDS:

		Average Flow in Second-Feet		
Daily:	Max. 2,750	June 15, 1965	Min. 0	Occasionally
Monthly:	Max. 2,080	June 1960	Min. 53.5	March 1957
Yearly:	Max. 726	1965	Min. 367	1968

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	209	516	303	106	779	494	543	18.1	764	455	310	266
2	203	648	340	108	618	560	659	103	744	354	344	181
3	485	607	340	115	395	564	845	272	640	456	388	4.3
4	430	532	316	261	508	578	765	139	730	452	273	124
5	306	336	238	276	406	684	907	75.4	966	305	224	115
6	464	153	285	275	302	608	1,030	114	1,290	266	404	79.7
7	707	352	330	236	0	719	929	161	1,440	244	471	63.2
8	580	445	351	171	121	476	882	102	1,180	147	491	142
9	283	377	299	152	54.5	239	720	188	1,070	260	428	322
10	854	526	299	801	36.0	0	945	312	907	310	389	220
11	1,010	413	266	1,060	20.2	0	957	332	1,050	324	411	179
12	862	288	269	1,040	102	49.4	860	143	811	361	267	309
13	880	191	235	1,060	0	0	751	142	710	372	653	369
14	863	200	328	1,140	0	0	662	106	437	295	771	268
15	711	340	398	1,220	57.6	55.7	667	287	352	124	812	331
16	581	359	435	1,220	75.5	0	506	320	239	680	688	293
17	931	266	330	1,330	51.7	0	628	298	236	848	638	162
18	1,310	279	17.2	1,450	152	0	617	220	449	815	624	197
19	1,420	238	0	1,510	92.2	273	602	139	485	854	555	243
20	1,160	162	82.7	1,500	42.3	311	605	103	483	930	928	370
21	1,260	81.3	168	1,530	17.2	244	461	103	471	695	1,050	383
22	1,320	241	138	1,420	60.3	181	372	235	478	576	990	324
23	1,260	311	120	1,200	23.0	32.2	447	325	381	805	769	306
24	1,390	324	116	1,360	0	0	203	270	133	794	692	192
25	1,510	340	26.9	1,450	103	0	175	357	343	808	658	113
26	1,490	338	0	1,440	56.5	198	133	170	526	720	667	339
27	1,380	280	70.1	1,250	0	0	154	229	452	698	165	490
28	1,270	375	224	906	0	187	171	290	552	319	136	518
29	1,160	341	255	864	141	473	52.2	378	572	157	296	504
30	769		214	866	220	472	0	462	541	250	289	476
31	575		96.0		243		56.9	526		122		382
Sum	27,633	9,859.3 6,889.9		27,317 4,677.0		7,398.3 17,305.1		6,919.5	19,432	14,796 15,781		8,265.2

Month	Average Rainfall Inches**		Current Year 1972 ∅ Extreme Second-Feet High			Low	Average Second-Feet	Total Acre-Feet	Period 1957-1972 Acre-Feet		
	1957-1972	1972	Day		Day				Average	Maximum	Minimum
Jan.	1.45	0.53	25	1,510	2	203	891	54,809	38,349	97,130	4,872
Feb.	1.53	.94	2	648	21	81.3	340	19,556	20,596	49,859	4,807
Mar.	.90	3.25	16	435	†19	0	222	13,666	22,343	54,200	3,280
Apr.	1.48	1.28	21	1,530	1	106	911	54,182	42,291	74,653	12,900
May	3.25	4.62	1	779	† 7	0	151	9,277	47,952	74,629	9,277
June	3.21	9.28	7	719	†10	0	247	14,674	71,048	123,000	14,674
July	1.53	4.02	6	1,030	30	0	558	34,324	38,948	77,132	11,307
Aug.	2.31	1.29	31	526	1	18.1	223	13,725	25,840	45,900	12,736
Sept.	5.21	3.56	7	1,440	24	133	648	38,543	24,714	59,400	4,308
Oct.	2.97	2.20	20	930	31	122	477	29,347	22,892	58,164	5,146
Nov.	1.61	1.48	21	1,050	28	136	526	31,301	20,134	44,359	4,853
Dec.	1.30	.29	28	518	3	4.3	267	16,394	21,442	37,500	6,663
Yearly	26.75	32.74		1,530		0	454	329,798	396,549	525,771	266,680

∅ Mean daily ** United States side-average of several stations in the reach
† And other days

RIO GRANDE NEAR SAN BENITO, TEXAS

DESCRIPTION: Cableway, concrete control weir, bubbler gage, water-stage recorders (graphic and digital), and impulse-type transmitter, located on the left bank at latitude 26°02'00", longitude 97°43'40", and river mile 96.5; 5.6 river miles downstream from San Benito pumping plant, about 9.5 miles southwest of San Benito, Texas, and 1,152.3 river miles downstream from the American Dam at El Paso, Texas. An auxiliary gage well is located 0.2 river mile upstream from the gage. The zero of the gage is at mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 19 discharge measurements during the year and a continuous record of gage heights. Computations for high flows by shifting control methods. Low and medium flow computations based on a stable control weir rating curve defined by meter measurements. Records available: November 26, 1952 through August 25, 1953, and December 1953 through 1972.

REMARKS: Except for diversions, tributary inflows, and drainage returns below Falcon Dam, flow at this station after August 25, 1953 was controlled largely by releases from Falcon Reservoir, 177.3 river miles upstream. Excessive upstream flood flows are partly diverted through the United States and Mexican floodway systems before reaching this station. The transmitter relays gage height data via leased telephone circuits to the Harlingen office of the United States Section of the Commission. The concrete control weir was constructed in December 1965 and the gage was moved to its present location just above the weir on January 4, 1967.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 25,000 second-feet on September 29, 1967 with a gage height of 61.05 feet. Min. no flow occurs frequently.

	Average Flow in Second-Feet**			
Daily:	Max. 24,800	Sept. 29, 1967	Min. 0	Frequently
Monthly:	Max. 14,300	Oct. 1971	Min. 39.5	December 1956
Yearly:	Max. 2,970	1967	Min. 200	1956

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2,310	1,410	349	182	760	613	1,420	2,440	215	5,340	496	492
2	2,710	1,390	294	238	537	528	1,110	1,950	186	4,050	609	507
3	2,680	644	‡226	306	726	628	1,080	‡1,510	481	3,510	‡384	624
4	2,260	160	204	314	948	599	1,070	1,120	1,360	3,460	132	531
5	1,790	175	246	198	1,060	377	982	1,030	1,590	3,190‡	103	443
6	1,410	560	562	132	575	245	997	920	1,100	2,880	268	566
7	1,310	590	595	113	403	216	741	878	648	3,120	363	623
8	1,090	503	405	147	345	719	555	878	604	3,180	202	714
9	799	348	372	500	251	1,030	744	656	595	2,980	92.4	523
10	635	‡265	833	579	324	1,320	1,090	320	423	2,360	146	441
11	135	157	1,020	254	488	2,710	704	‡ 153	638	1,920	307	394
12	83.6	164	1,250	314	‡ 860	2,990	370	156	473	1,660	518	389
13	‡ 111	236	1,560	‡ 467	1,060	2,690	434	437	433	1,360	764	179
14	111	763	1,780	813	996	2,750	501	617	‡ 517	780	573	154
15	156	1,210	1,680	443	948	‡ 3,120	694	586	1,020	579	304	204
16	971	1,090	890	437	889	3,090	826	280	1,640	531	‡ 90.7	137
17	1,090	914	429	595	901	3,000	507	200	1,580	158	75.3	170
18	545	683	535	485	807	3,290	298	173	1,730	91.2	60.9	212
19	129	411	525	396	817	3,660	212	195	1,640	‡ 89.2	68.6	276
20	51.8	385	447	366	757	3,830	‡ 225	216	1,030	176	81.8	212
21	55.2	451	372	415	764	3,930	193	244	829	444	107	‡ 83.7
22	138	356	287	502	551	‡ 3,920	189	315	1,620	532	150	49.2
23	326	265	250	653	583	4,010	657	202	2,910	435	556	38.3
24	529	171	273	982	1,040	4,040	1,650	137	3,560	367	481	200
25	528	118	281	897	1,280	4,020	2,150	128	3,770	268	782	390
26	486	90.6	285	710	1,020	3,920	2,130	98.7	‡ 5,250	263	834	305
27	383	81.6	266	653	654	3,890	2,110	206	‡ 5,360	270	926	135
28	‡ 440	126	251	853	407	3,610	2,550	258	5,250	216	998	51.0
29	431	417	169	1,600	420	3,010	2,740	305	6,700	367	771	33.0
30	600		95.5	1,650	587	2,310	2,680	197	6,860	423	560	63.5
31	1,040		100		589		2,540	156		512		207
Sum	25,333.6	14,134.2	16,831.5	16,194	22,347	74,065	34,154	16,961.7	60,012	45,511.4	11,803.7	9,286.7

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	Extreme Second-Feet High Day	Extreme Second-Feet High	Extreme Second-Feet Low Day	Extreme Second-Feet Low	Average Second-Feet	Total Acre-Feet	Period 1954-1972 Acre-Feet Average	Maximum	Minimum
Jan.	41.56	34.27	2	2,770	20	50.7	817	50,248	46,325	227,000	2,920
Feb.	37.65	34.35	2	1,540	26	81.3	487	28,035	46,079	363,000	3,380
Mar.	38.50	34.37	14	1,830	31	87.5	543	33,385	41,082	360,000	2,560
Apr.	38.86	34.41	29	1,930	† 6	113	540	32,120	34,225	118,000	11,500
May	37.10	34.71	25	1,390	9	244	721	44,325	45,868	128,576	16,873
June	44.65	34.70	24	4,040	† 6	209	2,470	146,906	49,813	146,906	16,100
July	41.02	34.55	29	2,770	22	175	1,100	67,743	37,840	197,219	4,690
Aug.	39.68	34.35	1	2,520	26	90.6	547	33,643	27,268	136,690	3,100
Sept.	50.14	34.58	30	7,100	2	174	2,000	119,032	113,102	599,652	7,710
Oct.	49.13	34.37	1	6,310	†18	87.0	1,470	90,271	155,278	880,859	3,840
Nov.	36.00	34.26	†27	1,070	†17	60.9	393	23,412	79,985	662,000	5,640
Dec.	35.64	34.18	8	768	29	30.3	300	18,420	61,069	479,000	2,430
Yearly	50.14	34.18		7,100		30.3	947	687,540	737,934	2,152,943	145,520

** Period 1954-1972 ‡ Discharge measurement made on this day † And other days

DIVERSIONS FROM THE RIO GRANDE
UNITED STATES SIDE – SAN BENITO TO BROWNSVILLE

Beginning June 1971, the Texas Water Rights Commission assumed control of the United States portion of the water in Falcon Reservoir and in the Rio Grande below Falcon Dam, the disposition of such waters being made by its Rio Grande Watermaster. Previous to that, since June 1956, such waters had been under the jurisdiction of the 93rd District Court of Texas administered by its Special Water Master.

During 1972, 112,530 irrigable acres and several towns and rural homes were allotted Rio Grande water in the river reach between the gaging stations near San Benito and Brownsville. Such irrigable area was 15.1% of the total irrigable acres below Falcon Dam allotted Rio Grande water.

The total diversion during 1972 in this river reach was 88,232 acre-feet, or 10.9% of the total water diverted from the Rio Grande below Falcon Dam. About 87% of the water diverted in this river reach was determined by the International Boundary and Water Commission through records of discharge obtained by means of flow meters, by open channel rating stations, and by deflection meters developed by the Commission. The records for the rest of these diversions were furnished by the Rio Grande Watermaster and were determined from records of discharge obtained by means of flow meters. More than one crop per year is often grown on parts of this land.

EXTREME FLOWS FROM RECORDS:

		Average Flow in Second-Feet		
Daily:	Max. 782	June 14, 1963	Min. 0	Occasionally
Monthly:	Max. 542	June 1965	Min. 18.5	February 1966
Yearly:	Max. 223	1965	Min. 102	1968

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	102	121	61.6	38.6	93.0	68.5	88.7	109	187	29.2	103	35.9
2	98.3	134	80.5	20.0	75.5	71.4	83.0	132	175	114	132	34.7
3	125	167	58.9	56.9	49.0	83.3	169	155	203	164	121	31.8
4	92.8	222	52.7	65.6	29.2	119	144	37.1	280	191	73.0	37.9
5	52.4	126	54.0	55.9	22.5	353	241	47.2	302	179	43.4	32.2
6	108	124	50.8	19.5	21.0	425	380	50.5	288	178	53.3	32.8
7	140	241	49.9	26.5	21.0	376	494	55.3	264	35.5	106	32.5
8	140	241	39.0	57.0	37.3	272	400	158	230	21.9	87.5	33.1
9	115	331	27.0	52.9	49.1	121	140	142	111	59.2	90.9	26.6
10	129	199	24.3	211	30.4	39.2	359	126	82.6	56.2	40.9	24.6
11	124	130	18.9	36.7	21.1	35.8	398	39.0	97.3	68.0	38.3	28.7
12	114	83.5	17.8	71.6	21.1	27.9	197	35.1	109	86.1	36.3	144
13	148	135	29.8	128	21.1	12.9	172	22.6	108	75.2	44.2	245
14	181	113	12.6	290	21.1	22.6	177	32.5	182	39.7	110	216
15	147	61.3	25.4	396	45.5	15.9	154	135	182	31.0	116	130
16	126	91.4	14.8	414	62.6	29.5	85.1	132	27.4	85.5	124	29.7
17	366	120	12.0	418	62.6	38.3	66.0	133	26.9	92.4	57.3	43.1
18	484	115	18.8	480	63.7	43.2	30.9	112	229	88.4	44.3	137
19	390	97.7	17.2	456	67.9	33.7	62.9	110	339	118	26.7	111
20	330	78.3	18.3	499	59.5	25.2	159	29.7	168	142	49.1	154
21	301	79.4	22.2	490	58.5	25.0	142	65.4	84.6	104	56.9	184
22	208	115	24.9	441	55.1	39.3	29.8	148	98.7	92.8	60.9	52.8
23	257	96.3	22.8	452	36.9	40.4	28.4	116	54.5	154	33.0	57.9
24	468	85.2	20.0	541	35.6	37.0	31.4	142	42.5	173	32.0	38.7
25	553	90.1	18.3	550	36.2	30.3	37.5	137	50.6	155	32.0	48.9
26	517	76.8	17.8	538	35.7	78.4	34.0	172	53.1	119	32.0	161
27	397	76.4	42.3	524	32.1	132	39.1	185	43.2	124	107	185
28	312	87.8	41.3	134	29.6	228	29.7	184	41.4	53.3	106	123
29	309	70.6	46.2	88.0	21.1	350	36.3	235	35.0	29.9	47.6	112
30	281		57.1	87.6	34.4	199	43.5	260	31.4	26.8	44.1	85.8
31	187		48.3		53.7		113	240		105		93.5
Sum	7,302.5	3,708.8	1,045.5	7,638.8	1,303.1	3,372.8	4,565.3	3,677.4	4,126.2	2,991.1	2,048.7	2,703.2

Month	Current Year 1972								Period 1957-1972		
	Average Rainfall Inches**		∅ Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low						
	1957-1972	1972	Day		Day				Average	Maximum	Minimum
Jan.	1.72	1.21	25	553	5	52.4	236	14,484	11,145	24,568	1,290
Feb.	1.85	1.62	9	331	15	61.3	128	7,356	6,562	15,243	1,028
Mar.	.76	2.33	2	80.5	17	12.0	33.7	2,074	6,116	15,200	705
Apr.	1.51	1.81	25	550	6	19.5	255	15,151	11,161	21,828	2,180
May	3.04	3.38	1	93.0	† 5	21.0	42.0	2,585	14,020	27,670	2,561
June	3.19	8.65	6	425	13	12.9	112	6,690	18,403	32,279	6,690
July	1.47	3.73	7	494	23	28.4	147	9,055	11,531	23,145	3,687
Aug.	2.50	.87	30	260	13	22.6	119	7,294	7,760	10,700	4,061
Sept.	5.82	3.95	19	339	17	26.9	138	8,184	5,914	12,600	876
Oct.	3.08	1.45	5	191	8	21.9	96.5	5,933	5,703	11,300	1,591
Nov.	1.49	1.24	2	132	19	26.7	68.3	4,064	4,845	9,021	2,320
Dec.	1.52	.50	13	245	10	24.6	87.2	5,362	6,142	11,200	2,163
Yearly	27.95	30.74		553		12.0	122	88,232	109,302	161,503	73,788

∅ Mean daily ** United States side-average of several stations in the reach
† And other days

RIO GRANDE NEAR BROWNSVILLE, TEXAS

DESCRIPTION: Cableway, bubbler gage, and water-stage recorders (graphic and digital) located on the left bank at latitude 25°52'35", longitude 97°27'15", and river mile 48.8; 1,000 feet downstream from El Jardin pumping plant, 6.8 river miles downstream from the international highway bridge (Gateway) between Brownsville, Texas and Matamoros, Tamaulipas, and 1,200.0 river miles downstream from the American Dam at El Paso, Texas. The zero of the gage is at mean sea level, U. S. C. & G. S. datum.

RECORDS: Based on 14 discharge measurements during the year and a continuous record of gage heights. Computations by shifting control methods. Records available: 1934 through 1972.

REMARKS: Except for diversions, tributary inflows, and drainage returns below Falcon Dam, flow at this station after August 25, 1953 was controlled largely by releases from Falcon Reservoir, 225 river miles upstream. Excessive upstream flood flows are partly diverted into the United States and Mexican floodway systems before reaching this station.

EXTREME FLOWS FROM RECORDS: Momentary: Max. 31,700 second-feet on October 8, 1945 with a gage height of 31.48 feet. Min. no flow occurs frequently.

Average Flow in Second-Feet

Daily:	Max. 30,800	Sept. 14,1942; Oct. 8, 1945	Min. 0	Frequently
Monthly:	Max. 23,200	Oct. 1941	Min. 0	June, July 1953
Yearly:	Max. 9,010	1941	Min. 42.1	1956

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2,150	1,220	300	79.3	1,600	621	2,250	2,310	50.5	6,360	486	592
2	2,610	1,550	345	113	886	606	1,520	2,000	51.1	5,420	455	528
3	2,930	1,420	‡252	155	696	560	1,150	‡1,580	53.7	4,320	‡488	534
4	2,880	829	194	223	769	598	1,120	1,230	135	3,630	407	612
5	2,520	282	169	246	‡ 1,170	432	1,030	1,040	908	3,460	273	563
6	2,140	171	213	172	1,160	50.2	928	963	970	3,190	214	499
7	1,720	553	614	105	708	11.3	720	889	602	3,040	241	548
8	1,590	568	708	80.8	536	15.2	445	852	276	3,210	303	615
9	1,350	338	587	77.3	372	683	541	823	401	3,220	222	692
10	1,130	173	510	415	223	1,200	777	676	399	2,930	132	572
11	899	151	969	404	311	1,830	862	‡ 421	197	2,350	151	475
12	592	128	1,300	180	560	2,920	609	245	417	1,930	285	397
13	254	94.1	1,550	167	894	2,980	‡ 358	197	217	1,650	517	267
14	173	130	1,870	286	1,120	2,750	287	461	123	1,350	678	149
15	124	869	1,990	447	1,020	2,770	445	668	137	925	485	110
16	144	1,330	1,810	87.4	908	3,030	691	539	943	711	267	137
17	599	1,230	1,130	36.1	851	2,980	819	214	1,420	577	105	179
18	632	975	708	35.9	844	2,940	611	134	1,320	320	101	140
19	‡ 408	731	690	24.6	748	3,240	300	114	1,330	‡ 180	107	134
20	70.0	533	674	‡ 14.1	747	3,590	149	128	1,100	129	101	166
21	‡ 24.6	489	619	11.7	682	3,810	85.1	138	842	146	101	‡131
22	13.8	482	509	13.1	672	3,910	103	121	739	391	95.9	82.4
23	13.0	357	344	28.8	508	3,940	109	129	1,600	466	122	66.9
24	32.3	218	275	89.3	606	4,060	639	101	2,540	367	414	73.0
25	128	131	305	502	1,160	4,150	1,640	74.9	3,060	323	490	112
26	124	83.4	312	380	1,390	4,180	2,010	69.2	3,480	276	712	255
27	109	62.5	304	127	1,080	4,080	2,020	63.8	‡4,720	255	764	180
28	149	52.8	306	415	700	4,000	2,110	60.1	‡5,110	272	829	92.2
29	190	71.2	222	1,000	502	3,530	2,480	60.3	5,420	290	898	69.4
30	208		126	1,740	491	2,890	2,600	58.4	6,200	397	756	64.4
31	563		86.4		620		2,510	‡ 52.7		451		56.5
Sum	15,222.0		7,655.4		72,356.7		16,412.4		52,536		9,091.8	
	26,469.7	19,991.4		24,534		31,918.1		44,761.3		11,199.9		

Month	Current Year 1972							Period 1954-1972		
	Extreme Gage Feet		Extreme Second-Feet			Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low			Average	Maximum	Minimum
	High	Low	Day		Day					
Jan.	14.83	4.34	3	2,960	23	11.4	854	52,502	34,243	224,000	283
Feb.	10.83	4.89	2	1,620	29	41.5	525	30,192	40,490	362,000	1,060
Mar.	11.97	4.99	15	2,000	31	70.9	645	39,652	35,503	361,000	2,050
Apr.	11.75	3.83	30	1,900	21	11.1	255	15,184	22,421	127,000	875
May	11.74	5.82	1	1,900	10	198	791	48,662	30,008	127,595	4,140
June	18.02	4.04	26	4,200	7	4.2	2,410	143,517	30,657	143,517	2,430
July	14.20	5.02	30	2,630	†21	75.9	1,030	63,309	29,798	190,638	1,120
Aug.	13.52	3.73	1	2,410	31	51.1	529	32,554	19,017	97,786	218
Sept.	21.99	3.55	30	6,500	2	50.2	1,490	88,783	95,695	516,325	950
Oct.	22.01	4.33	1	6,510	21	108	1,690	104,204	135,842	887,207	756
Nov.	8.03	3.84	29	928	17	68.9	373	22,215	72,318	528,000	1,290
Dec.	7.17	3.34	9	712	31	46.8	293	18,033	57,629	480,000	524
Yearly	22.01	3.34		6,510		4.2	908	658,807	603,621	1,995,959	30,596

‡ Discharge measurement made on this day † And other days

DIVERSIONS FROM THE RIO GRANDE
UNITED STATES SIDE – BROWNSVILLE TO THE GULF

Beginning June 1971, the Texas Water Rights Commission assumed control of the United States portion of the water in Falcon Reservoir and in the Rio Grande below Falcon Dam, the disposition of such waters being made by its Rio Grande Watermaster. Previous to that, since June 1956, such waters had been under the jurisdiction of the 93rd District Court of Texas administered by its Special Water Master.

During 1972, 6,170 irrigable acres were allotted Rio Grande water in the river reach between the gaging station near Brownsville and the mouth of the Rio Grande. Such irrigable area was 0.8% of the total irrigable acres below Falcon Dam allotted Rio Grande water.

The total diversion during 1972 in this river reach was 665 acre-feet, or 0.1% of the total water diverted from the Rio Grande below Falcon Dam. All records of diversions in this river reach, which were determined by means of flow meters, were furnished by the Rio Grande Watermaster. More than one crop per year is often grown on parts of this land.

EXTREME FLOWS FROM RECORDS:

			Average Flow in Second-Feet			
Daily:	Max.	40.4	June 17, 1965	Min.	0	Frequently
Monthly:	Max.	23.4	June 1965	Min.	0	Occasionally
Yearly:	Max.	7.0	1965	Min.	0.9	1972

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.0	3.2	0	0	2.2	0	0	0	0	0	0	0
2	8.0	3.2	0	0	2.2	0	0	0	0	0	0	0
3	8.0	3.2	0	0	2.2	0	0	0	0	0	0	0
4	8.0	3.2	0	0	2.2	0	0	0	0	0	0	0
5	8.0	3.2	0	0	2.2	0	0	0	0	0	0	0
6	8.0	3.2	0	0	0	0	0	0	0	0	0	0
7	2.1	3.2	0	0	0	1.7	0	0	0	0	0	0
8	0	13.6	0	0	0	2.0	0	.9	0	0	0	0
9	0	10.6	0	0	0	.2	0	.9	0	0	0	0
10	0	10.6	0	0	0	.2	0	.9	0	0	0	0
11	0	10.6	0	0	0	.2	0	.9	0	0	0	0
12	0	10.6	0	0	0	.2	0	.9	0	0	0	0
13	0	10.6	0	0	0	.2	0	.9	0	0	0	0
14	4.4	10.6	0	2.5	0	.2	0	3.0	0	0	0	0
15	4.4	14.6	0	2.5	0	0	0	2.1	0	0	0	0
16	4.4	4.1	0	0	0	0	0	2.1	0	0	0	0
17	6.5	4.0	0	0	0	0	0	2.1	0	0	0	0
18	6.5	4.1	0	0	0	0	0	0	0	0	0	0
19	6.5	4.1	0	0	0	0	0	0	0	0	0	0
20	6.5	4.2	0	0	0	0	0	0	0	0	0	0
21	3.9	4.1	0	0	0	0	0	0	0	0	0	0
22	5.1	4.0	0	0	0	0	0	0	0	0	0	0
23	5.1	0	0	0	0	0	0	0	0	0	0	0
24	3.0	0	0	1.9	0	0	0	0	0	0	0	0
25	6.0	0	0	1.9	0	0	0	0	0	0	0	0
26	6.0	0	0	1.9	0	0	0	0	0	0	0	0
27	6.0	0	0	1.9	0	0	0	0	0	0	0	0
28	8.4	0	0	1.9	0	0	0	0	0	0	0	0
29	5.0	0	0	1.9	0	0	0	0	0	0	0	0
30	3.0		0	1.9	0	0	0	0	0	0	0	0
31	3.0		0		0		0	0		0		0
Sum	143.8	142.8	0	18.3	11.0	4.9	0	14.7	0	0	0	0

Month	Current Year 1972								Period 1957-1972		
	Average Rainfall Inches**		∅ Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low						
	1957-1972	1972	Day		Day				Average	Maximum	Minimum
Jan.	1.84	1.18	28	8.4	† 8	0	4.6	285	464	1,275	0
Feb.	1.97	2.45	15	14.6	†23	0	4.9	283	221	668	0
Mar.	.75	1.67		0		0	0	0	144	634	0
Apr.	1.58	1.68	†14	2.5	† 1	0	.6	36.3	215	633	0
May	2.82	3.08	† 1	2.2	† 6	0	.4	21.8	359	1,356	0
June	3.04	9.73	7	2.0	† 1	0	.2	9.7	486	1,393	9.7
July	1.33	4.33		0		0	0	0	224	778	0
Aug.	2.42	.96	14	3.0	† 1	0	.5	29.2	138	317	13.7
Sept.	5.99	3.99		0		0	0	0	61.8	190	0
Oct.	3.06	3.00		0		0	0	0	59.7	218	0
Nov.	1.56	1.20		0		0	0	0	77.8	252	0
Dec.	1.57	.57		0		0	0	0	94.7	335	0
Yearly	27.93	33.84		14.6		0	0.9	665.0	2,545.0	5,036.3	665.0

∅ Mean daily ** United States side-average of several stations in the reach
† And other days

DIVERSIONS FROM THE RIO GRANDE
UNITED STATES SIDE BELOW FALCON DAM

Beginning June 1971, the Texas Water Rights Commission assumed control of the United States portion of the water in Falcon Reservoir and in the Rio Grande below Falcon Dam, the disposition of such waters being made by its Rio Grande Watermaster. Previous to that, since June 1956, such waters had been under the jurisdiction of the 93rd District Court of Texas administered by its Special Water Master.

In 1972, 747,940 irrigable acres, several towns, and many rural homes were allotted Rio Grande water between Falcon Dam and the Gulf of Mexico. The total diversion from the river was 810,004 acre-feet. About 93% of the water diverted was determined through records of discharge obtained by means of flow meters, by open channel rating stations, and by deflection meters developed by the Commission. The records for the balance of the diversions were furnished by the Rio Grande Watermaster and were determined from records of discharge obtained by means of flow meters. Drainage from more than 90 per cent of this area does not return to the Rio Grande but some of it is re-used within the area. More than one crop per year is often grown on parts of this land.

Diversion data pertaining to "Diversions from the Rio Grande-United States Side below Rio Grande City" for the period 1922 through 1957, may be found in previous Water Bulletins. The area irrigated below Rio Grande City is about 99% of the total acreage irrigated in the United States side below Falcon Dam.

A breakdown by river reaches of the total diversion below Falcon Dam shown in the tabulation below may be found in appropriate downstream order in preceding pages of this Water Bulletin. Because the mean daily discharges are rounded, the total acre-feet shown in the summary below may not equal the sum of the acre-feet of the individual reaches.

EXTREME FLOWS FROM RECORDS:

		Average Flow in Second-Feet		
Daily:	Max. 5,380	June 20 & 21, 1960	Min. 7.2	Sept. 29, 1967
Monthly:	Max. 4,350	June 1960	Min. 102	March 1957
Yearly:	Max. 1,590	1965	Min. 880	1970

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	500	1,110	1,200	336	1,050	894	1,110	531	1,870	644	1,160	382
2	520	1,390	1,290	306	844	1,130	1,110	719	1,600	1,010	1,260	427
3	1,430	1,350	1,140	642	489	913	1,760	947	1,200	1,330	1,280	208
4	1,230	1,330	902	1,090	613	750	1,500	710	1,760	1,420	850	539
5	760	954	503	1,030	548	1,310	2,030	498	2,340	1,290	510	705
6	1,020	650	1,070	1,060	360	1,430	2,380	290	2,710	1,310	1,120	520
7	1,390	1,470	1,270	1,030	22.6	1,540	2,290	570	2,890	839	1,290	468
8	1,160	1,580	1,300	866	225	1,110	1,930	781	2,550	549	1,400	435
9	682	1,460	1,210	590	169	549	1,300	1,010	2,020	1,170	1,410	509
10	1,820	1,480	1,110	2,080	138	105	2,210	1,110	1,410	1,490	1,220	297
11	2,060	1,120	756	2,250	67.0	46.5	2,420	1,010	1,970	1,580	1,010	540
12	1,890	829	528	2,260	206	88.5	2,100	610	1,770	1,530	604	653
13	2,010	436	825	2,310	76.6	23.6	2,090	404	1,600	1,540	1,500	780
14	1,910	539	522	2,540	66.5	71.6	1,820	863	1,450	1,100	1,380	751
15	1,340	630	667	2,560	157	83.3	1,570	1,170	1,410	612	1,960	716
16	999	692	712	2,200	204	141	932	1,200	908	1,920	1,850	532
17	2,090	680	552	3,020	130	74.7	1,580	1,280	635	2,170	1,650	269
18	2,850	676	94.0	3,270	254	54.3	1,540	1,040	1,560	2,200	1,340	766
19	2,920	546	39.5	3,340	244	384	1,440	785	1,840	2,170	933	952
20	2,680	407	243	3,390	106	425	1,450	365	1,690	1,940	1,940	1,360
21	2,600	624	368	3,400	79.7	312	1,170	882	1,660	1,430	2,010	1,290
22	2,280	897	369	2,920	155	307	568	1,080	1,550	1,020	1,610	852
23	2,000	1,220	451	2,260	99.6	243	482	1,230	1,060	1,750	977	455
24	3,010	1,270	440	3,330	78.5	130	270	1,230	454	1,930	846	255
25	3,220	1,160	243	3,430	179	53.9	261	1,210	1,070	1,890	800	178
26	3,220	998	209	3,370	262	369	272	864	1,270	1,470	772	1,050
27	3,020	767	502	3,120	80.0	360	302	678	1,160	1,440	298	1,400
28	2,700	1,250	656	1,660	34.8	790	420	1,330	1,200	854	264	1,380
29	2,450	1,130	740	1,300	224	1,220	274	1,580	1,220	472	363	1,310
30	1,700		719	1,060	379	1,190	87.2	1,710	956	902	363	1,080
31	1,440		504		561		354	1,790		961		731
Sum	58,901	28,645	21,134.5	62,020	8,102.3	16,098.4	39,022.2	29,477	46,783	41,933	34,470	21,790

Month	Current Year 1972								Period 1957-1972		
	Average Rainfall Inches**		∅ Extreme Second-Feet				Average Second-Feet	Total Acre-Feet	Acre-Feet		
			High		Low						
	1957-1972	1972	Day		Day				Average	Maximum	Minimum
Jan.	1.36	0.75	†25	3,220	1	500	1,900	116,828	74,016	182,403	9,717
Feb.	1.36	1.13	8	1,580	20	407	988	56,817	49,312	126,230	11,785
Mar.	.73	2.04	8	1,300	19	39.5	682	41,920	60,423	149,000	6,280
Apr.	1.46	1.93	25	3,430	2	306	2,070	123,015	96,483	157,807	25,100
May	2.71	3.83	1	1,050	7	22.6	261	16,071	103,978	171,000	16,071
June	2.91	7.32	7	1,540	13	23.6	537	31,931	143,903	259,000	31,931
July	1.17	3.44	11	2,420	30	87.2	1,260	77,399	94,732	178,000	31,502
Aug.	2.05	.70	31	1,790	6	290	951	58,467	69,724	113,000	36,208
Sept.	4.75	3.52	7	2,890	24	454	1,560	92,793	59,276	136,000	12,709
Oct.	2.70	1.20	18	2,200	29	472	1,350	83,173	58,895	124,598	12,991
Nov.	1.34	1.46	21	2,010	28	264	1,150	68,370	49,292	97,969	12,674
Dec.	1.13	.33	27	1,400	25	178	703	43,220	48,620	84,500	14,034
Yearly	23.67	27.65		3,430		22.6	1,120	810,004	908,654	1,153,049	636,835

∅ Mean daily ** United States side-average of several stations in the reach
† And other days

OUTFALLS FROM SEWERS INTO THE RIO GRANDE

In Acre-Feet

EL PASO SEWAGE OUTFALL

This sewage enters the Rio Grande through the outfalls of the El Paso, Ascarate, and Ysleta Sewage Plants, located 7.1, 8.7, and 15.6 river miles, respectively, downstream from the American Dam. The outfall from the El Paso Plant consists of flows measured by a Parshall meter and estimates of amounts which bypass the meter. The effluent from the Socorro Plant, located 17.6 miles below American Dam, is discharged into ponds at the approximate rate of 10 c.f.s. When the ponds overflow, the effluent may enter either the Rio Grande or Riverside Canal. No record has been kept of the amount of this effluent entering the Rio Grande and it is not included in the table below. All of the plants are operated by the El Paso Water Utilities of the Public Service Board of the City of El Paso, Texas and the records are furnished by that agency.

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly
1972	1,747	1,606	1,743	1,738	1,713	1,756	1,885	1,839	1,724	1,680	1,498	1,462	20,391
* Average	1,710	1,592	1,764	1,721	1,857	1,824	1,960	1,977	1,842	1,844	1,714	1,739	21,544

EAGLE PASS SEWAGE OUTFALL

This sewage outfall enters the Rio Grande 758.1 river miles downstream from the American Dam at El Paso, Texas and about 600 feet upstream from the Eagle Pass-Piedras Negras International Railroad Bridge. The records are based on weekly current meter measurements or gage height observations made by personnel of the International Boundary and Water Commission.

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly
1972	53.0	40.7	52.8	52.0	54.0	54.7	54.9	63.3	56.5	54.0	52.8	48.2	636.9
* Average	57.3	53.7	52.2	46.7	46.8	43.4	43.9	53.0	55.3	58.8	59.5	60.2	630.8

LAREDO SEWAGE OUTFALL

This sewage outfall enters the Rio Grande 891.4 river miles downstream from the American Dam at El Paso, Texas and immediately upstream from the Laredo Gaging Station. The record is based on estimates by the Texas State Health Department.

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly
1972	504	497	609	687	487	516	524	570	578	534	540	482	6,528
* Average	416	418	506	518	542	512	520	490	419	410	475	431	5,657

BROWNSVILLE SEWAGE OUTFALL

This sewage outfall enters the Rio Grande 3.4 river miles downstream from the Gateway Bridge between Brownsville, Texas and Matamoros, Tamaulipas; 3.4 river miles upstream from the Brownsville Gaging Station; and 52.2 river miles from the Gulf of Mexico. Records are furnished by the City of Brownsville.

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly
1972	664	602	645	579	655	700	713	654	530	628	562	589	7,521
* Average	343	336	374	342	368	396	411	404	394	430	383	375	4,556

* Period averages are for past 10 years

MUNICIPAL AND INDUSTRIAL WATER USES

In Acre-Feet

Tabulated below are monthly and yearly amounts of water pumped from the Rio Grande directly into the municipal distribution systems of cities along the border, except for the city of Del Rio whose total supply is derived from San Felipe Springs. The city of El Paso derives its municipal supply mainly from the Franklin Canal and from wells some of which, near Canutillo, Texas, pump water into the Rio Grande to be conveyed 17 miles downstream to the point of diversion at the El Paso Water Plant. In 1972 this water amounted to 7,024 acre-feet and is included in the tabulation below. Ciudad Acuna, Coahuila, whose municipal diversion for the Rio Grande started in 1971 may, at times, use an alternate source from Arroyo Las Vacas which was its previous source of supply. Such use would be reflected in the tabulations below.

All Rio Grande water used by U. S. municipalities below Falcon Dam is also included in the figures shown under "Diversions from the Rio Grande - United States Side.." (by river reaches and total below Falcon Dam) on pages 64, 67, 71, 73, 75, 77, and 78 herein. Population data for all cities are estimates based on the 1970 official census except for Falcon Village (estimated by the International Boundary and Water Commission), and Del Mar and San Ignacio which are based on utilities connections.

In United States

Month	EL PASO (Pop. 337,748)				DEL RIO ø (Pop. 21,350)			
	1972	Period 1963-1972			1972	Period 1963-1972		
		Average	Maximum	Minimum		Average	Maximum	Minimum
Jan.	0	0	0	0	412.5	354.9	424.6	279.1
Feb.	0	0	0	0	524.9	354.9	524.9	252.2
Mar.	328	372.1	831	37.9	662.7	524.2	714.9	350.1
Apr.	844	1,291.4	2,096	671.4	679.0	561.4	679.0	482.5
May	1,648	1,694.3	3,251	3.0	514.1	565.1	770.3	376.5
June	1,596	1,950.2	3,407	637.0	723.2	720.0	907.6	571.7
July	2,076	1,952.3	2,819	830.8	901.9	911.9	1,093.2	715.0
Aug.	1,748	1,922.6	2,800	881.5	633.1	806.3	1,051.5	500.8
Sept.	906	1,253.5	1,958	343.9	697.6	568.8	697.6	431.0
Oct.	222	412.8	1,016	0	650.6	438.2	650.6	282.1
Nov.	0	171.5	397	0	458.2	357.7	458.2	295.6
Dec.	0	107.9	677.1	0	413.4	328.0	413.4	259.2
Yearly	9,368	11,128.6	15,518.0	3,805.3	7,271.2	6,491.4	7,271.2	5,734.3

Month	EAGLE PASS (Pop. 16,562)				DEL MAR (Pop. 1,830)			
	1972	Period 1963-1972			1972	Period 1963-1972		
		Average	Maximum	Minimum		Average	Maximum	Minimum
Jan.	224.1	161.6	224.1	122.2	20.2	11.9	22.6	1.5
Feb.	229.8	156.0	229.8	120.7	20.1	13.1	29.0	1.4
Mar.	262.8	193.3	262.8	163.3	31.1	13.9	31.1	0
Apr.	306.8	209.6	306.8	155.2	45.2	23.5	45.3	0
May	291.1	215.5	332.2	144.3	27.6	21.8	51.3	0
June	305.7	261.1	305.7	214.8	30.0	24.6	58.4	0
July	354.4	302.4	365.0	239.2	43.1	25.0	43.1	0
Aug.	305.1	281.4	346.9	229.8	45.2	33.8	51.3	6.1
Sept.	266.7	215.3	279.2	164.8	51.2	26.5	51.2	5.9
Oct.	265.3	198.2	265.3	154.7	36.2	17.9	36.2	4.8
Nov.	194.7	177.1	238.4	123.8	30.1	19.7	32.1	3.9
Dec.	172.0	166.9	228.6	113.8	19.3	15.7	31.8	3.3
Yearly	3,178.5	2,539.0	3,178.5	2,115.2	399.3	248.4	399.3	42.3

ø Includes Laughlin Air Force Base

MUNICIPAL AND INDUSTRIAL WATER USES

In Acre-Feet

In United States

Month	LAREDO (Pop. 66,800)				LAREDO POWER STATION			
	1972	Period 1963-1972			1972	Period 1963-1972		
		Average	Maximum	Minimum		Average	Maximum	Minimum
Jan.	915.5	757.2	1,109.1	587.8	67.9	43.4	67.9	26.2
Feb.	871.2	733.7	1,045.4	585.3	67.6	38.4	72.7	13.5
Mar.	1,171.0	974.1	1,402.4	786.4	70.1	45.4	79.3	10.7
Apr.	1,494.3	1,126.2	1,552.9	920.6	64.8	56.5	76.4	26.0
May	1,058.8	1,178.2	1,857.8	822.6	75.2	59.8	80.2	37.8
June	1,289.3	1,280.8	1,684.6	1,016.5	82.1	72.3	85.1	51.9
July	1,496.2	1,484.8	1,771.9	1,176.2	106.2	90.8	106.2	63.4
Aug.	1,628.2	1,418.5	1,708.1	1,228.8	83.4	90.1	109.1	73.8
Sept.	1,482.1	1,074.4	1,482.1	742.1	67.3	73.2	87.8	49.8
Oct.	1,301.5	998.7	1,326.2	815.5	45.6	52.0	87.8	29.7
Nov.	1,001.0	879.4	1,158.1	673.9	60.5	53.2	71.3	21.8
Dec.	877.0	783.5	1,016.1	591.5	52.5	51.6	71.3	32.2
Yearly	14,586.1	12,689.5	15,720.3	10,524.4	843.2	726.7	864.7	524.5

Month	SAN YGNACIO (Pop. 1,020)				NEW ZAPATA (Pop. 2,300)			
	1972	Period November 1965-1972			1972	Period 1963-1972		
		Average	Maximum	Minimum		Average	Maximum	Minimum
Jan.	2.2	1.9	3.0	0.8	30.1	26.3	43.0	14.6
Feb.	2.3	2.3	3.6	1.1	27.6	26.6	40.2	17.4
Mar.	3.2	3.1	5.2	2.1	32.1	32.1	41.2	25.0
Apr.	3.5	3.8	4.8	2.4	42.4	36.9	46.0	27.0
May	2.6	2.9	5.3	1.5	32.5	34.1	42.6	18.3
June	3.0	3.2	4.8	1.4	42.9	39.0	49.2	27.7
July	3.5	3.4	4.7	.8	39.4	45.7	57.6	34.4
Aug.	4.9	3.8	4.9	1.4	67.7	45.6	67.7	31.5
Sept.	4.0	2.6	4.0	1.5	37.7	31.8	50.4	21.1
Oct.	2.8	2.3	2.9	1.5	35.4	30.5	47.6	20.0
Nov.	2.3	2.2	2.8	1.4	29.6	26.4	44.3	18.9
Dec.	2.2	2.0	2.9	1.1	29.6	25.3	43.1	16.7
Yearly	36.5	33.5	42.8	21.3	447.0	400.3	483.8	334.9

Month	FALCON VILLAGE (Pop. 172)				ROMA * (Pop. 2,600)			
	1972	Period 1963-1972			1972	Period 1963-1972		
		Average	Maximum	Minimum		Average	Maximum	Minimum
Jan.	7.6	6.2	9.5	4.2	32.4	28.4	38.6	14.4
Feb.	7.9	6.2	9.4	4.4	25.1	26.3	36.0	14.4
Mar.	11.1	8.5	12.9	6.5	38.1	34.3	45.3	18.2
Apr.	11.7	9.6	13.0	6.5	48.0	37.2	48.7	17.0
May	8.4	8.8	11.6	6.5	42.1	38.3	49.7	19.9
June	7.9	10.1	14.3	7.8	42.0	38.9	50.1	21.1
July	9.2	11.9	14.7	9.2	46.5	42.4	54.9	21.9
Aug.	12.7	11.4	13.2	9.7	52.4	41.8	52.4	25.7
Sept.	10.5	8.3	11.0	5.8	46.5	34.7	49.5	18.6
Oct.	9.3	7.5	9.3	6.4	42.3	32.8	44.5	19.5
Nov.	8.2	6.8	8.2	5.1	35.6	30.4	44.0	15.7
Dec.	7.6	6.4	7.8	3.8	33.6	28.2	43.2	15.4
Yearly	112.1	101.7	123.3	88.1	484.6	413.7	528.0	228.2

Month	RIO GRANDE CITY (Pop. 5,680)				BROWNSVILLE (Pop. 61,000)			
	1972	Period 1963-1972			1972	Period 1963-1972		
		Average	Maximum	Minimum		Average	Maximum	Minimum
Jan.	88.7	65.8	88.7	52.8	883.1	723.4	899.7	620.4
Feb.	83.5	61.0	83.5	51.6	973.9	692.0	973.9	572.5
Mar.	96.6	72.4	96.6	59.8	976.3	828.7	1,120.0	641.6
Apr.	118.3	78.1	118.3	61.4	1,130.8	860.6	1,130.8	663.1
May	92.8	76.4	96.4	61.4	972.0	820.5	1,035.6	644.2
June	99.7	86.8	124.0	59.2	984.5	883.0	1,047.4	727.3
July	131.9	95.2	131.9	59.2	993.6	1,048.0	1,264.0	860.4
Aug.	156.2	99.7	156.2	83.9	1,072.8	998.6	1,177.1	790.2
Sept.	114.3	81.8	114.3	62.9	1,075.7	832.7	1,075.7	665.4
Oct.	109.3	76.2	109.3	58.0	1,099.6	821.6	1,099.6	657.2
Nov.	80.7	71.9	96.3	55.9	955.8	776.5	955.8	603.4
Dec.	85.0	70.2	85.0	54.9	997.4	780.1	997.4	577.6
Yearly	1,257.0	935.5	1,257.0	768.2	12,115.5	10,065.7	12,115.5	8,907.7

* Includes Los Saenz and Escobares, Texas

MUNICIPAL AND INDUSTRIAL WATER USES

In Acre-Feet

In Mexico

Month	CD. ACUNA, COAHUILA (Pop. 35,000)				PIEDRAS NEGRAS, COAHUILA (Pop. 65,736)			
	1972	Period 1971-1972			1972	Period 1965-1972		
		Average	Maximum	Minimum		Average	Maximum	Minimum
Jan.	0	0	0	0	273.0	211.6	273.9	163.8
Feb.	55.5	79.1	102.7	55.5	215.2	185.6	238.1	160.3
Mar.	76.8	109.6	142.4	76.8	260.6	221.6	267.6	184.6
Apr.	67.9	106.3	144.7	67.9	289.4	240.6	289.4	194.2
May	77.6	107.4	137.1	77.6	294.3	263.3	316.5	198.5
June	83.7	103.5	123.3	83.7	312.9	292.8	336.8	241.8
July	80.1	117.0	154.0	80.1	350.8	326.3	375.4	297.2
Aug.	83.7	153.0	222.4	83.7	319.0	307.9	353.2	248.2
Sept.	81.9	110.8	139.7	81.9	334.8	268.2	334.8	222.1
Oct.	86.4	116.1	145.8	86.4	324.3	255.8	324.3	208.5
Nov.	73.8	64.8	73.8	55.7	286.4	231.6	286.4	176.4
Dec.	61.4	30.7	61.4	0	342.2	231.0	342.2	171.1
Yearly	828.8	1,098.3	1,367.8	828.8	3,602.9	3,036.3	3,602.9	2,599.5

Month	NUEVO LAREDO, TAMPS. (Pop. 164,801)				NUEVA CD. GUERRERO, TAMPS. (Pop. 3,451)			
	1972	Period 1963-1972			1972	Period 1963-1972		
		Average	Maximum	Minimum		Average	Maximum	Minimum
Jan.	1,486.2	1,034.4	1,486.2	731.6	28.3	29.0	36.6	19.8
Feb.	1,390.0	973.4	1,390.0	697.0	26.6	26.9	33.2	19.1
Mar.	1,607.2	1,152.6	1,607.2	929.6	31.5	33.7	48.0	25.4
Apr.	1,829.0	1,276.8	1,829.0	1,006.9	23.3	32.9	41.9	19.9
May	1,574.1	1,315.6	1,781.6	956.3	28.0	36.8	48.9	28.0
June	1,623.9	1,380.7	1,775.6	915.0	27.4	33.1	40.9	21.2
July	1,828.6	1,499.1	1,935.6	997.7	28.7	33.6	42.5	26.2
Aug.	1,818.3	1,495.1	1,856.3	957.4	27.2	33.0	42.1	26.8
Sept.	1,915.3	1,316.5	1,915.3	913.2	26.8	31.9	41.8	22.2
Oct.	1,975.1	1,316.5	1,975.1	943.8	34.0	32.3	39.6	24.0
Nov.	1,702.8	1,164.5	1,702.8	857.9	34.6	31.4	42.4	24.6
Dec.	1,592.1	1,137.0	1,592.2	793.2	29.5	29.2	34.7	24.6
Yearly	20,342.6	15,062.2	20,342.6	11,252.2	345.9	383.8	470.5	325.4

Month	CD. MIER, TAMPS. (Pop. 5,908)				CD. MIGUEL ALEMAN, TAMPS. (Pop. 12,400)			
	1972	Period 1963-1972			1972	Period Aug. 1967-1972		
		Average	Maximum	Minimum		Average	Maximum	Minimum
Jan.	29.8	29.0	35.8	21.8	37.6	32.8	37.6	25.3
Feb.	28.7	27.7	33.1	20.1	35.3	33.6	40.5	29.0
Mar.	32.6	34.0	47.0	26.6	44.3	40.7	45.3	32.4
Apr.	26.4	34.0	40.8	25.5	50.8	42.2	50.8	31.0
May	31.5	36.3	50.3	25.9	38.2	41.8	46.9	36.5
June	32.1	34.5	38.9	24.8	45.7	45.2	49.1	37.8
July	34.5	35.3	40.5	28.9	56.0	52.3	62.8	40.9
Aug.	31.2	35.1	40.9	29.2	60.4	44.0	60.4	9.7
Sept.	29.7	31.8	40.4	20.9	59.2	40.5	59.2	26.0
Oct.	36.7	32.7	45.6	18.3	51.0	37.0	51.0	19.9
Nov.	35.0	32.5	40.9	25.4	37.6	38.5	46.5	29.3
Dec.	32.5	30.1	33.5	25.0	27.8	35.4	43.7	27.8
Yearly	380.7	393.0	456.1	340.7	543.9	484.0	543.9	442.6

STORED WATER IN LARGE RESERVOIRS OF THE RIO GRANDE BASIN

In Thousands of Acre-Feet

Data are presented below for all storage reservoirs in the Rio Grande Basin in the United States and Mexico that exceed 15,000 acre-feet in capacity, except San Esteban Reservoir on Alamito Creek which according to the Texas Water Development Board originally had a capacity of 18,800 acre-feet. There are no monthly storage data available for this reservoir. Also presented on pages 86 and 87 are data for International Amistad and Falcon Reservoirs on the Rio Grande. The monthly figures represent the water in storage on the last day of each month, in thousands of acre-feet. The capacities indicated are at spillway level. Storage figures greater than the capacity indicate that the water surface was above spillway level.

The reservoirs and the agencies providing the data are: Rio Grande, Continental, Santa Maria, Terrace, Mountain Home, and Platoro from the State of Colorado, Division of Water Resources; Sanchez from the Sanchez Ditch and Reservoir Company; Abiquiu from the United States Corps of Engineers; Costilla, Bluewater, Alamogordo, McMillan, and Avalon from the United States Geological Survey; Heron from the Rio Grande Compact Commission; Storrie from the State Engineer Office of New Mexico; El Vado, Elephant Butte and Caballo from the United States Bureau of Reclamation; Red Bluff from the Red Bluff Water Power Control District; Lake Casa Blanca from the Webb County Office; Willacy from the Willacy County Water Control and Improvement District No. 1; La Boquilla, La Colina, and Rosetilla from the Federal Power Commission of Mexico; Francisco I. Madero, Chihuahua, Luis L. Leon, Centenario, San Miguel, Venustiano Carranza, La Boca, Marte R. Gomez,Culebron, Villa Cardenas, and Palito Blanco from the Ministry of Hydraulic Resources of Mexico; Amistad Reservoir (International) and Falcon Reservoir(International) from International Boundary and Water Commission.

In United States

Month	RIO GRANDE (Capacity 51.1)		CONTINENTAL (Capacity 22.7)		SANTA MARIA (Capacity 45.1)		TERRACE (Capacity 17.2)		MOUNTAIN HOME (Capacity 18.6)	
	1972	#Average 1927-1972	1972	#Average 1928-1972	1972	#Average 1928-1972	1972	#Average 1925-1972	1972	#Average 1924-1972
Jan.	14.8	13.7	5.2	4.8	5.9	6.7	5.0	3.4	1.3	3.6
Feb.	15.9	14.9	5.8	5.2	6.3	7.1	6.4	3.7	1.5	4.0
Mar.	18.1	16.3	6.2	5.7	6.6	8.0	6.7	4.1	1.9	4.4
Apr.	18.1	16.6	6.2	6.2	6.6	9.2	6.5	5.0	2.1	4.9
May	13.0	21.9	6.2	8.0	6.5	13.0	6.6	7.0	1.6	6.7
June	2.0	22.2	4.5	8.2	2.7	14.4	5.7	8.2	1.2	6.7
July	2.3	12.4	2.3	5.4	1.5	9.4	3.7	5.4	1.1	4.8
Aug.	3.0	6.3	2.3	3.5	1.5	4.9	1.9	3.3	1.0	3.1
Sept.	3.0	6.8	2.3	3.6	1.5	4.8	1.8	2.9	1.1	2.7
Oct.	8.5	8.1	2.2	3.6	3.0	5.0	1.9	3.1	1.1	2.7
Nov.	12.6	10.8	3.1	4.0	3.5	5.7	3.1	3.0	1.3	3.0
Dec.	15.3	12.5	4.0	4.5	4.0	6.1	4.3	3.3	1.5	3.3
Avg.	10.6	13.5	4.2	5.2	4.1	7.8	4.5	4.4	1.4	4.2
Max.	18.1	52.1	6.2	26.7	6.6	42.1	6.7	17.7	2.1	16.4
Min.	2.0	0	2.2	0	1.5	0	1.8	0	1.0	0

Month	SANCHEZ (Capacity 103.2)		PLATORO (Capacity 60.0)		COSTILLA (Capacity 15.7)		HERON (Capacity 401.3)		EL VADO (Capacity 196.5)	
	1972	#Average 1927-1972	1972	Average 1952-1972	1972	#Average 1922-1972	1972	Average 1971-1972	1972	Average 1935-1972
Jan.	9.3	11.1	4.0	5.9	2.8	4.4	42.8	21.7	1.1	29.4
Feb.	10.2	11.3	3.9	5.9	3.2	4.8	43.4	22.2	1.4	26.6
Mar.	11.2	11.9	4.4	6.2	3.9	5.3	47.3	24.8	1.4	26.2
Apr.	10.9	13.3	4.5	7.1	4.6	6.5	55.8	33.5	9.7	64.2
May	9.1	16.9	4.4	9.6	3.8	8.4	62.0	42.9	10.8	109.1
June	6.0	15.9	4.4	15.3	1.5	7.7	63.7	50.6	8.7	98.7
July	3.7	11.5	4.4	12.4	.6	5.0	54.2	45.3	6.4	79.4
Aug.	1.9	9.2	4.4	11.3	0	3.5	49.4	44.8	4.2	58.2
Sept.	2.4	9.5	4.4	11.6	.1	3.0	49.4	43.5	4.1	47.3
Oct.	3.1	10.1	4.4	11.3	.7	3.3	65.9	52.8	4.1	43.7
Nov.	4.3	10.3	2.9	6.1	1.2	3.6	69.2	55.6	4.2	32.9
Dec.	4.4	10.7	2.9	6.1	1.6	4.0	53.8	48.2	21.7	28.6
Avg.	6.4	11.8	4.1	9.1	2.0	5.0	54.7	40.5	6.5	53.7
Max.	11.2	62.4	4.5	54.0	4.6	15.1	69.2	69.2	21.7	203.5
Min.	1.9	0	2.9	0	0	0	42.8	0.6	1.1	0

Some months missing

STORED WATER IN LARGE RESERVOIRS OF THE RIO GRANDE BASIN
In Thousands of Acre-Feet

In United States

Month	ABIQUIU (Capacity 1,217.3)		BLUEWATER (Capacity 43.5)		ELEPHANT BUTTE (Capacity 2,137.2)		CABALLO (Capacity 344.0)		STORRIE (Capacity 23.3)	
	1972	Average 1965-1972	1972	#Average 1927-1972	1972	Average 1915-1972	1972	#Average 1938-1972	1972	#Average 1939-1972
Jan.	2.0	1.0	4.4	5.7	223.4	756.1	17.0	100.4	5.1	7.9
Feb.	2.0	1.1	4.3	6.4	239.1	757.3	44.3	126.8	5.3	7.8
Mar.	2.0	2.2	4.1	9.8	200.9	736.1	35.8	108.8	5.3	8.5
Apr.	2.0	4.4	3.9	12.5	171.6	732.0	36.3	102.6	3.3	8.8
May	2.1	21.0	3.6	10.8	167.6	826.5	22.7	102.0	2.1	9.4
June	2.0	12.5	3.4	8.8	145.0	856.6	20.7	83.3	1.6	8.0
July	1.8	12.1	3.2	7.6	82.8	798.4	29.3	62.1	2.3	8.3
Aug.	1.9	17.4	3.0	6.7	71.3	741.5	39.9	37.2	9.6	9.4
Sept.	3.2	18.7	2.9	6.4	128.4	715.0	52.0	27.9	10.1	8.8
Oct.	2.1	18.2	2.9	6.1	191.7	714.4	67.2	43.8	12.3	8.5
Nov.	2.1	8.8	3.0	5.9	256.9	729.1	67.5	59.5	11.9	8.7
Dec.	2.0	1.4	3.1	5.7	301.6	746.9	63.1	75.9	11.7	7.8
Avg.	2.1	9.9	3.5	7.7	181.7	759.1	41.7	77.5	6.7	8.5
Max.	3.2	99.0	4.4	47.1	ø 301.0	ø 2,302.8	ø 68.1	ø 346.6	12.3	26.3
Min.	1.8	0	2.9	0	ø 53.2	ø 3.3	ø 15.2	ø 0.1	1.6	0

Month	ALAMOGORDO (Capacity 110.7)		McMILLAN and AVALON (Capacity 38.0)		RED BLUFF (Capacity 310.0)		LAKE CASA BLANCA (Capacity 22.1)		WILLACY (Capacity 25.0)	
	1972	#Average 1937-1972	1972	#Average 1908-1972	1972	#Average 1936-1972	1972	Average 1962-1972	1972	#Average 1939-1972
Jan.	49.5	67.2	13.3	26.5	45.0	96.8	21.9	11.9	21.6	14.9
Feb.	54.1	71.1	13.5	26.6	45.5	98.5	21.7	11.6	18.4	14.0
Mar.	39.4	60.3	11.1	26.1	45.3	95.3	21.0	11.2	15.7	13.2
Apr.	4.0	52.3	20.6	17.4	35.6	81.2	20.5	11.4	18.3	13.4
May	4.0	54.9	8.8	19.7	33.4	84.5	24.3	12.1	18.6	14.4
June	5.8	48.8	5.8	19.1	31.3	86.3	23.0	12.7	17.2	14.5
July	8.7	47.7	21.9	18.1	23.8	76.5	20.7	12.0	18.8	14.2
Aug.	29.9	51.8	30.0	17.4	24.6	72.8	18.4	12.2	14.1	13.0
Sept.	59.5	53.8	35.2	18.5	44.9	74.3	18.3	14.9	17.6	14.6
Oct.	65.8	57.9	28.9	20.5	45.8	84.4	18.3	13.6	17.2	14.9
Nov.	74.9	59.6	31.5	22.0	47.0	87.2	18.3	13.4	19.5	14.8
Dec.	80.2	64.2	32.6	25.1	49.1	91.5	18.1	13.1	17.2	14.5
Avg.	39.6	57.5	21.1	21.4	39.3	85.8	20.4	12.5	17.8	14.2
Max.	80.2	156.3	35.2	85.5	49.1	327.5	24.3	28.2	21.6	22.6
Min.	4.0	0.4	5.8	0	23.8	10.0	18.1	3.5	14.1	0

Month	TOTAL IN U. S. RESERVOIRS (Capacity 5,259.1)									
	1972	Estimated ‡Average								
Jan.	495.4	1,193.1								
Feb.	546.2	1,226.9								
Mar.	488.3	1,184.4								
Apr.	441.1	1,202.5								
May	411.2	1,398.8								
June	356.2	1,398.5								
July	294.0	1,248.0								
Aug.	312.3	1,127.5								
Sept.	442.2	1,088.6								
Oct.	547.1	1,126.0								
Nov.	638.0	1,144.0								
Dec.	697.2	1,173.4								
Avg.	472.4	1,209.3								
Max.	697.2									
Min.	294.0									

Some months missing ø Daily extremes ‡ Totals of period averages in all reservoirs

STORED WATER IN LARGE RESERVOIRS OF THE RIO GRANDE BASIN

In Thousands of Acre-Feet

In Mexico

Month	LA BOQUILLA (Capacity 2,417.5)		LA COLINA (Capacity 19.5)		ROSETILLA (Capacity 15.4)		FRANCISCO I. MADERO (Capacity 344.6)		CHIHUAHUA (Capacity 25.9)	
	1972	#Average 1914-1972	1972	Average 1940-1972	1972	Average 1940-1972	1972	#Average 1948-1972	1972	Average 1961-1972
Jan.	1,454.6	1,427.4	19.0	17.9	13.9	12.4	308.2	209.5	7.9	5.2
Feb.	1,381.6	1,394.0	18.6	18.2	13.9	12.8	306.0	207.6	7.6	5.1
Mar.	1,291.1	1,340.0	19.2	18.2	8.8	12.3	270.5	199.3	7.3	5.0
Apr.	1,181.9	1,268.1	19.8	18.7	10.1	11.7	218.7	170.2	6.6	4.7
May	1,088.5	1,207.9	18.2	18.5	12.1	11.6	185.6	146.4	6.0	4.4
June	1,057.6	1,128.1	19.8	18.5	7.6	12.1	189.9	132.2	6.2	4.0
July	1,056.8	1,164.1	18.6	18.6	12.2	11.7	194.0	144.7	6.0	4.3
Aug.	1,093.8	1,330.0	19.9	18.2	10.1	12.6	337.2	173.0	11.2	5.7
Sept.	1,486.3	1,492.3	17.8	17.9	13.3	13.1	345.8	205.3	12.7	6.3
Oct.	1,481.7	1,500.7	16.9	17.7	14.1	13.0	336.2	215.4	12.3	6.5
Nov.	1,519.9	1,464.1	11.6	16.5	14.3	12.3	337.4	215.4	13.5	6.5
Dec.	1,518.1	1,447.6	18.5	17.9	11.7	13.2	341.7	215.8	11.3	6.1
Avg.	1,301.4	1,347.0	18.2	18.1	11.8	12.4	280.9	186.2	9.0	5.3
Max.	1,519.9	2,544.7	19.9	20.5	14.3	19.4	345.8	366.6	13.5	13.5
Min.	1,056.8	16.9	11.6	11.6	7.6	0.4	185.6	1.4	6.0	0.2

Month	LUIS L. LEON (Capacity 689.1)		CENTENARIO and SAN MIGUEL (Capacity 19.9)		VENUSTIANO CARRANZA (Capacity 1,122.8)		LA BOCA (Capacity 33.2)		MARTE R. GOMEZ (Capacity 898.3)	
	1972	Average 1968-1972	1972	Average 1934-1972	1972	Average 1930-1972	1972	Average 1963-1972	1972	#Average 1943-1972
Jan.	381.8	286.7	13.9	13.2	1,130.8	364.2	33.0	24.5	802.0	579.9
Feb.	388.3	281.6	14.1	13.0	1,130.8	344.6	33.0	24.5	760.4	529.3
Mar.	368.9	265.5	10.9	9.7	1,078.2	324.2	32.9	24.0	757.7	496.2
Apr.	347.8	232.3	9.2	8.3	1,068.8	313.9	31.9	23.4	651.1	466.5
May	336.4	225.4	11.3	9.0	1,086.2	301.2	32.9	23.1	724.1	437.5
June	345.4	259.4	9.3	7.7	1,079.8	288.5	32.9	22.9	911.8	422.9
July	338.9	292.5	9.5	7.3	1,079.8	297.0	32.9	23.4	806.0	400.7
Aug.	344.6	302.5	13.6	8.1	1,133.9	304.1	32.8	24.8	767.1	466.4
Sept.	332.4	373.0	14.0	10.2	1,132.4	356.1	32.8	26.1	842.2	577.4
Oct.	338.9	392.6	14.8	12.4	1,129.2	386.5	32.8	26.7	824.8	631.9
Nov.	355.9	386.0	14.4	12.6	1,098.9	392.0	32.8	27.0	828.9	631.1
Dec.	364.8	383.1	15.2	13.0	1,095.8	391.6	32.8	27.1	836.9	628.6
Avg.	353.7	306.7	12.5	10.4	1,103.7	338.7	32.8	24.8	792.8	522.4
Max.	ø 383.3	ø615.9	15.2	20.7	ø1,135.6	ø1,167.8	33.0	33.6	ø950.6	1,465.4
Min.	ø 300.8	ø 3.8	9.2	0	ø1,040.8	* 1.0	31.9	0	ø745.6	** 17.8

Month	CULEBRON and VILLA CARDENAS (Capacity 90.0)		PALITO BLANCO (Capacity 124.0)						TOTAL IN MEXICAN RESERVOIRS (Capacity 5,800.2)	
	1972	#Average 1939-1972	1972	Average 1942-1972					1972	Estimated ‡Average
Jan.	8.8	38.0	20.3	38.8					4,194.2	3,017.7
Feb.	19.3	35.0	16.4	33.5					4,090.0	2,899.2
Mar.	23.9	33.0	20.9	33.7					3,890.3	2,761.1
Apr.	28.2	34.7	25.1	30.9					3,599.2	2,583.4
May	23.3	36.9	33.9	30.9					3,558.5	2,452.8
June	22.0	38.6	60.5	33.3					3,742.8	2,368.2
July	9.9	33.9	47.8	32.0					3,612.4	2,430.2
Aug.	7.9	34.2	26.4	29.3					3,803.5	2,708.9
Sept.	6.2	44.1	32.0	40.8					4,267.9	3,162.6
Oct.	4.9	45.9	14.6	46.1					4,221.2	3,295.4
Nov.	4.0	38.9	13.5	44.8					4,245.1	3,247.2
Dec.	3.6	43.0	12.7	44.0					4,263.1	3,231.0
Avg.	13.5	38.0	27.0	36.5					3,957.4	2,846.5
Max.	28.2	116.8	60.5	140.1					4,267.9	
Min.	3.6	0	12.7	0					3,558.5	

\# Some months missing * Minimum since full reservoir in 1932 ** Minimum since full reservoir in 1947
ø Daily extremes ‡ Total of period averages in all reservoirs

STORED WATER IN LARGE RESERVOIRS OF THE RIO GRANDE BASIN

International Amistad Reservoir

Amistad Dam is the second of the major international storage dams constructed on the Rio Grande as authorized by the Water Treaty of 1944 between the United States and Mexico. It is located at mile 567.5, 12.8 river miles upstream from Del Rio, Texas and Cd. Acuna, Coahuila, and 681.3 river miles downstream from the American Dam at El Paso, Texas.

Permanent storage began July 12, 1968 when the last of the temporary outlets used during the course of construction was closed.

Storage Capacities

(1961 Survey)

Elevation	Description	At Indicated Elevation		Between Indicated Elevations	
		Reservoir Capacity Acre-Feet	Reservoir Area Acres	Storage Volume Acre-Feet	Type of Storage
898.0	Original River Bed at Dam Axis	0	0		
				8,029	Silt and Dead
930.0	Lowest Outlet (United States Penstocks)	8,029	712		
				3,497,410	Silt & Conservation
1,117.0	Top of Conservation Storage *	3,505,439	64,860		
				1,744,222	Ordinary Flood
1,140.4	Top of Spillway Gates	5,249,661	84,358		
				407,116	Super Flood
1,145.1	Maximum Water Surface	5,656,777	88,984		

Storage in Thousands of Acre-Feet at 24:00 Hours 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2,618.1	2,725.4	2,787.7	2,845.2	2,879.9	2,964.2	3,043.0	3,109.2	3,587.2	3,807.9	3,790.8	3,806.5
2	2,619.8	2,729.8	2,788.2	2,846.3	2,881.6	2,970.1	3,042.4	3,109.2	3,590.5	3,807.9	3,792.1	3,807.9
3	2,621.4	2,731.5	2,788.8	2,847.4	2,882.2	2,973.0	3,043.0	3,110.4	3,596.4	3,810.7	3,794.2	3,811.4
4	2,622.4	2,733.1	2,791.0	2,847.4	2,882.2	2,975.3	3,044.2	3,112.8	3,601.0	3,814.8	3,794.9	3,811.4
5	2,623.5	2,737.0	2,791.0	2,848.6	2,882.8	2,977.7	3,043.0	3,114.6	3,605.0	3,814.8	3,796.9	3,812.7
6	2,625.1	2,740.3	2,791.6	2,850.9	2,892.0	2,979.4	3,042.4	3,115.8	3,610.3	3,815.5	3,799.7	3,814.1
7	2,626.2	2,741.4	2,795.0	2,851.4	2,900.0	2,981.2	3,041.8	3,117.0	3,615.6	3,810.7	3,799.7	3,814.1
8	2,628.9	2,742.5	2,795.0	2,853.1	2,901.1	2,982.9	3,041.8	3,118.8	3,620.2	3,804.5	3,799.0	3,814.1
9	2,631.6	2,744.2	2,795.5	2,855.4	2,902.3	2,984.7	3,041.8	3,126.0	3,626.2	3,799.7	3,801.7	3,817.5
10	2,634.3	2,749.2	2,797.8	2,856.5	2,903.4	2,989.4	3,041.2	3,135.1	3,630.9	3,794.9	3,801.1	3,819.6
11	2,635.9	2,749.8	2,799.4	2,858.2	2,906.3	2,993.5	3,041.2	3,152.0	3,634.8	3,788.7	3,800.4	3,819.6
12	2,638.1	2,751.4	2,802.3	2,859.4	2,908.0	2,998.2	3,041.8	3,371.0	3,639.5	3,783.2	3,802.4	3,820.3
13	2,642.4	2,753.1	2,805.1	2,861.1	2,910.4	3,002.9	3,042.4	3,474.4	3,642.8	3,777.1	3,803.1	3,821.0
14	2,646.7	2,757.0	2,807.9	2,862.8	2,912.1	3,005.2	3,042.4	3,491.2	3,648.8	3,770.3	3,802.4	3,823.7
15	2,648.3	2,758.6	2,811.3	2,862.8	2,913.2	3,017.0	3,042.4	3,498.3	3,660.9	3,763.4	3,803.1	3,824.4
16	2,650.5	2,760.9	2,812.4	2,862.8	2,916.1	3,021.1	3,043.0	3,508.0	3,669.6	3,761.4	3,803.8	3,824.4
17	2,655.4	2,763.1	2,815.2	2,863.4	2,919.0	3,024.0	3,045.9	3,516.5	3,679.6	3,764.1	3,804.5	3,824.4
18	2,660.8	2,764.2	2,815.8	2,865.1	2,925.4	3,027.6	3,048.9	3,521.0	3,691.0	3,766.9	3,805.9	3,827.2
19	2,665.7	2,765.9	2,821.4	2,870.2	2,928.2	3,030.0	3,060.2	3,526.9	3,703.1	3,766.2	3,805.2	3,829.9
20	2,671.1	2,768.7	2,828.7	2,871.9	2,930.0	3,032.9	3,065.5	3,532.1	3,716.6	3,766.9	3,805.2	3,833.4
21	2,675.5	2,770.3	2,831.0	2,871.9	2,931.1	3,035.3	3,075.7	3,535.4	3,741.7	3,768.9	3,805.9	3,833.4
22	2,680.9	2,772.6	2,833.3	2,871.9	2,932.3	3,036.5	3,083.4	3,539.9	3,761.4	3,773.0	3,803.1	3,834.8
23	2,685.9	2,775.4	2,836.1	2,873.1	2,933.4	3,037.6	3,089.4	3,543.2	3,776.4	3,775.7	3,803.8	3,837.5
24	2,691.3	2,777.6	2,838.9	2,873.1	2,935.2	3,039.4	3,093.0	3,546.5	3,783.9	3,776.4	3,804.5	3,828.2
25	2,694.1	2,780.4	2,939.5	2,871.9	2,936.3	3,041.2	3,097.2	3,551.7	3,790.8	3,776.4	3,803.1	3,841.0
26	2,699.0	2,782.6	2,841.2	2,872.5	2,938.1	3,042.4	3,099.0	3,558.9	3,797.6	3,777.1	3,803.1	3,841.0
27	2,705.0	2,783.2	2,842.9	2,873.6	2,938.7	3,043.0	3,100.8	3,562.2	3,801.1	3,778.5	3,803.8	3,841.7
28	2,708.3	2,784.9	2,843.5	2,874.8	2,939.8	3,043.6	3,102.6	3,567.4	3,804.5	3,781.2	3,804.5	3,841.7
29	2,716.0	2,786.5	2,843.5	2,875.9	2,940.4	3,043.6	3,105.0	3,573.3	3,807.9	3,783.2	3,805.2	3,848.6
30	2,718.2		2,844.6	2,878.2	2,947.9	3,044.2	3,107.4	3,579.9	3,808.6	3,786.7	3,806.5	3,850.0
31	2,722.1		2,844.6		2,951.4		3,108.6	3,584.5		3,789.4		3,852.1

Month	1972							Period June 1968-1972		
	MOMENTARY MAXIMUM			MOMENTARY MINIMUM			Average Storage	Mean Monthly Storage		
	Elevation	Storage	Day	Elevation	Storage	Day		Average	Maximum	Minimum
Jan.	1,103.93	2,722.1	31	1,101.98	2,616.0	1	2,660.1	1,544.7	2,660.1	722.6
Feb.	1,105.09	2,786.5	29	1,103.93	2,722.1	1	2,758.0	1,518.2	2,758.0	787.7
Mar.	1,106.12	2,844.6	31	1,105.09	2,786.5	1	2,815.5	1,487.2	2,815.5	861.7
Apr.	1,106.71	2,878.2	30	1,106.12	2,844.6	1	2,862.6	1,526.4	2,862.6	962.8
May	1,107.98	2,951.4	31	1,106.71	2,878.2	1	2,916.2	1,547.0	2,916.2	1,038.6
June	1,109.56	3,044.2	30	1,107.98	2,951.4	1	3,011.2	1,215.4	3,011.2	3.0
July	1,110.54	3,108.6	31	1,109.51	3,041.2	†10	3,063.2	1,231.6	3,063.2	83.0
Aug.	1,118.21	3,584.5	31	1,110.64	3,108.6	1	3,384.0	1,454.6	3,384.0	176.2
Sept.	1,121.54	3,808.6	30	1,118.21	3,584.5	1	3,688.1	1,658.7	3,688.1	355.7
Oct.	1,121.64	3,815.5	6	1,120.85	3,761.4	16	3,785.7	1,860.3	3,785.7	661.0
Nov.	1,121.51	3,806.5	30	1,121.26	3,789.4	1	3,801.6	1,933.3	3,801.6	702.9
Dec.	1,122.17	3,852.1	31	1,121.51	3,806.5	† 1	3,827.0	1,972.0	3,827.0	706.1
Yearly	1,122.17	3,852.1		1,101.98	2,616.0		3,215.5	1,579.4	3,215.5	1,047.6

† And other days * When necessary the Commission may set temporary conservation levels

STORED WATER IN LARGE RESERVOIRS OF THE RIO GRANDE BASIN

International Falcon Reservoir

Falcon Dam is the lowermost of the major international storage dams authorized for construction on the Rio Grande by the Water Treaty of 1944 between the United States and Mexico and was the first dam constructed. It is located 84.5 river miles downstream from Laredo, Texas and Nuevo Laredo, Tamaulipas, 975.0 river miles downstream from the American Dam, and 273.8 river miles upstream from the Gulf of Mexico.

Storage Capacities

Storage data after October 1, 1972, are based on 1971-1972 capacity survey.

Elevation	Description	At Indicated Elevation		Between Indicated Elevation	
		Reservoir Capacity Acre-Feet	Reservoir Area Acres	Storage Volume Acre-Feet	Type of Storage
175.0	Original River Bed at Dam Axis	0	0		
				67	Silt and Dead
203.33	Lowest Outlet (Mexican Penstock)	67	89		
				2,667,521	Silt & Conservation
301.2	Top of Conservation Storage *	2,667,588	86,843		
				509,505	Ordinary Flood
306.7	Top of Spillway Gates	3,177,093	98,512		
				801,323	Super Flood
314.2	Maximum Water Surface	3,978,416	115,406		

Storage in Thousands of Acre-Feet at 24:00 Hours .1972 —— Annual and Period Summary

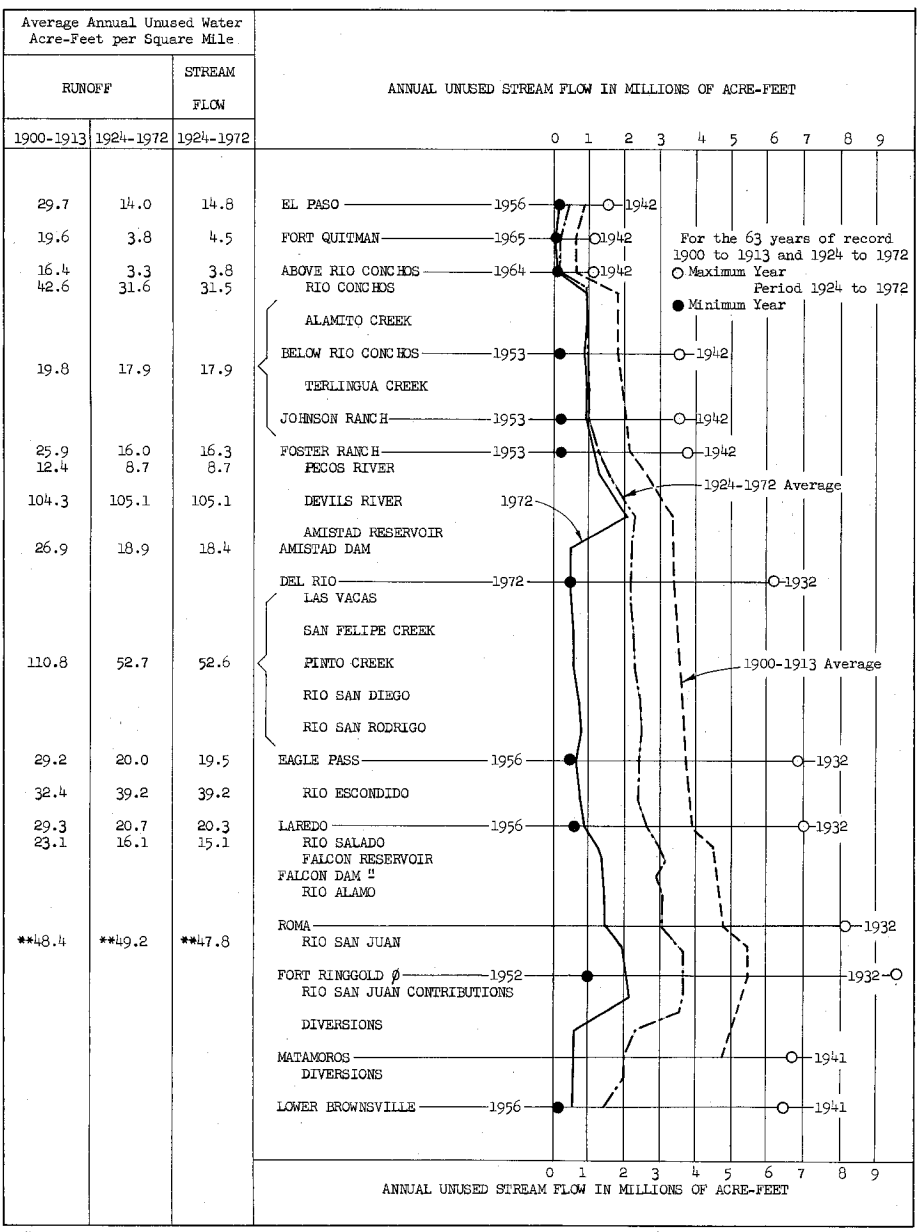
Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3,125.7	2,922.5	2,894.4	2,879.1	2,497.1	2,641.6	2,690.7	2,683.0	2,699.2	2,607.3	2,655.4	2,640.8
2	3,121.8	2,917.1	2,892.6	2,874.6	2,506.9	2,637.4	2,689.0	2,683.0	2,693.2	2,618.4	2,655.4	2,642.5
3	3,127.6	2,909.8	2,891.7	2,870.1	2,521.5	2,635.7	2,689.0	2,682.2	2,685.6	2,626.1	2,656.3	2,644.2
4	3,127.6	2,903.4	2,892.6	2,865.6	2,525.6	2,634.0	2,691.5	2,681.3	2,677.1	2,629.6	2,655.4	2,645.9
5	3,124.7	2,898.0	2,892.6	2,859.3	2,529.7	2,632.3	2,694.1	2,680.5	2,667.7	2,632.2	2,655.4	2,645.9
6	3,122.8	2,892.6	2,890.8	2,853.9	2,531.3	2,629.8	2,693.2	2,679.6	2,658.4	2,633.9	2,654.6	2,643.4
7	3,122.8	2,885.4	2,890.8	2,846.8	2,537.0	2,626.5	2,692.4	2,680.5	2,651.7	2,633.0	2,652.9	2,644.2
8	3,124.7	2,888.1	2,889.0	2,838.8	2,537.0	2,643.3	2,691.5	2,681.3	2,647.5	2,633.0	2,651.1	2,644.2
9	3,126.6	2,886.3	2,885.4	2,829.0	2,538.7	2,648.3	2,690.7	2,680.5	2,647.5	2,635.6	2,650.3	2,645.1
10	3,127.6	2,888.1	2,881.8	2,813.9	2,564.2	2,653.4	2,689.8	2,678.8	2,645.8	2,639.0	2,648.5	2,645.9
11	3,124.7	2,885.4	2,881.8	2,798.1	2,592.3	2,660.1	2,688.1	2,677.9	2,640.7	2,643.5	2,646.8	2,645.1
12	3,122.8	2,882.7	2,875.5	2,783.1	2,605.6	2,670.3	2,686.4	2,679.6	2,634.9	2,648.5	2,644.2	2,645.9
13	3,120.9	2,880.0	2,878.2	2,765.6	2,611.4	2,675.4	2,684.7	2,686.4	2,630.7	2,652.9	2,641.6	2,646.8
14	3,115.1	2,880.9	2,878.2	2,747.4	2,620.6	2,677.9	2,683.0	2,708.6	2,624.8	2,657.2	2,639.0	2,648.5
15	3,107.4	2,882.7	2,880.0	2,728.4	2,627.3	2,680.5	2,682.2	2,725.8	2,618.1	2,663.2	2,637.3	2,648.5
16	3,098.8	2,882.7	2,880.0	2,704.3	2,635.7	2,691.5	2,681.3	2,733.6	2,609.8	2,667.6	2,636.5	2,647.7
17	3,091.2	2,887.2	2,878.2	2,683.9	2,643.3	2,692.4	2,678.8	2,735.3	2,601.4	2,669.3	2,634.7	2,646.8
18	3,086.5	2,886.3	2,877.3	2,661.0	2,643.3	2,694.1	2,677.9	2,737.9	2,598.9	2,674.5	2,631.3	2,645.9
19	3,080.7	2,886.3	2,876.4	2,636.5	2,644.1	2,696.6	2,677.1	2,739.6	2,590.6	2,678.0	2,625.3	2,645.1
20	3,069.4	2,886.3	2,880.0	2,612.3	2,644.9	2,698.3	2,677.1	2,738.7	2,580.7	2,678.0	2,626.1	2,644.2
21	3,057.1	2,888.1	2,880.9	2,588.1	2,646.6	2,700.0	2,676.2	2,737.0	2,575.7	2,674.5	2,625.3	2,643.4
22	3,046.7	2,888.1	2,880.9	2,564.2	2,652.5	2,700.0	2,681.3	2,735.3	2,572.4	2,671.9	2,627.9	2,642.5
23	3,032.6	2,889.0	2,881.8	2,543.6	2,655.1	2,700.0	2,685.6	2,731.8	2,589.0	2,669.3	2,630.4	2,643.4
24	3,018.5	2,889.0	2,882.7	2,523.1	2,657.6	2,700.9	2,687.3	2,728.4	2,597.3	2,667.6	2,633.0	2,643.4
25	3,004.5	2,889.9	2,883.6	2,506.0	2,658.4	2,700.9	2,687.3	2,724.1	2,599.8	2,665.9	2,634.7	2,643.4
26	2,990.6	2,890.8	2,883.6	2,490.6	2,655.9	2,699.2	2,687.3	2,723.2	2,630.7	2,663.2	2,635.6	2,642.5
27	2,977.6	2,890.8	2,886.3	2,476.1	2,652.5	2,697.5	2,687.3	2,721.5	2,664.4	2,662.4	2,637.3	2,640.8
28	2,968.4	2,893.5	2,889.0	2,497.1	2,649.2	2,695.8	2,686.4	2,720.6	2,678.8	2,660.6	2,642.5	2,639.0
29	2,956.4	2,895.3	2,887.2	2,497.1	2,648.3	2,694.1	2,685.6	2,715.5	2,690.7	2,658.9	2,645.1	2,638.2
30	2,942.6		2,885.4	2,496.3	2,646.6	2,692.4	2,686.4	2,710.3	2,699.2	2,658.0	2,641.6	2,638.2
31	2,930.7		2,882.7		2,644.9		2,684.7	2,705.2		2,656.3		2,638.2

Month	1972							Period 1954-1972		
	MOMENTARY MAXIMUM			MOMENTARY MINIMUM			Average Storage	Mean Monthly Storage		
	Elevation	Storage	Day	Elevation	Storage	Day		Average	Maximum	Minimum
Jan.	305.13	3,127.6	† 1	303.03	2,930.7	31	3,070.8	2,013.5	3,070.8	218.7
Feb.	303.03	2,930.7	1	302.47	2,880.0	13	2,891.2	1,896.6	2,962.5	156.2
Mar.	302.64	2,895.3	1	302.42	2,875.5	12	2,884.2	1,860.1	2,959.5	226.7
Apr.	302.50	2,882.7	1	297.72	2,476.1	27	2,694.5	1,749.2	2,954.6	325.6
May	299.93	2,658.4	25	297.97	2,496.3	1	2,604.0	1,640.5	2,869.9	490.1
June	300.43	2,700.9	†24	299.55	2,626.5	7	2,673.3	1,554.1	2,673.3	273.7
July	300.35	2,694.1	5	300.14	2,676.2	21	2,685.9	1,671.2	2,685.9	209.9
Aug.	300.88	2,739.6	19	300.16	2,677.9	11	2,707.3	1,672.8	2,707.3	208.0
Sept.	300.48	2,705.2	1	298.90	2,572.4	22	2,636.7	1,807.5	2,871.1	256.2
Oct.	301.32	2,678.0	†19	300.41	2,599.6	1	2,652.5	2,091.1	3,250.2	308.3
Nov.	301.07	2,656.3	† 1	300.71	2,625.3	†19	2,641.7	2,136.8	3,124.5	390.9
Dec.	300.98	2,648.5	†14	300.86	2,638.2	†29	2,643.9	2,153.1	3,129.7	343.4
Yearly	305.13	3,127.6		297.72	2,476.1		2,732.1	1,854.1	2,764.2	544.3

† And other days * When necessary the Commission may set temporary conservation levels

SOURCES OF RIVER FLOW

The graph and the column of figures on this page represent data on the annual yield of drainage areas tributary to various stream-gaging stations in the Rio Grande watershed. The graphic values are for the entire tributary area, while the column figures are reduced to the yield from one average square mile of the tributary area. There were no reservoirs of consequence on the area from 1900 to 1913; therefore, the figures in the first column correspond to those for that period in the graph. Because about 17,000,000 acre-feet of reservoir capacity have been developed on the watershed since 1913, in which large volumes of unused runoff are stored in some years and released in later years as unused stream flow (thus reducing the unused stream flow in some years and adding thereto in others), it is significant to differentiate between the unused runoff and unused stream flow.



‼ Values prior to 1953 considered the same as for Zapata Gaging Station. ø Values prior to 1955 considered the same as for Rio Grande City Gaging Station. ** Includes contributions of the Rio San Juan entering the Rio Grande above and below Rio Grande City

SUSPENDED SILT IN THE RIO GRANDE AND TRIBUTARIES

The following tables are based on determinations of gravimetric percentages of dry silt in water samples taken at each station by one of the following three methods:

A. By lowering an open small-neck bottle in one or more verticals in the stream cross section, being careful to approach but not strike bottom, thus securing an integrated sample throughout the depth. By taking from each sample an amount of water volumetrically proportional to the river flow represented by that sample, a composite, representative of the monthly river flow, is made and its gravimetric percentage of silt determined.

B. By sampling at the stream surface with a separate bottle at each of three points, spaced 1/6, 1/2, and 5/6 of the stream width. The gravimetric percentage in each sample is determined, a coefficient of 1.10 is applied to the average of the three, and the product applied to the volume of stream flow represented by that set of samples.

C. By sampling at 2-hour intervals, the water pumped directly from the river to the Laredo, Texas Water Treatment Plant. From daily composites of these samples, a monthly composite, representative of the river flow, is made as stated in Method A and its gravimetric percentage of silt determined.

For ease of comparison, the assumption is made that one cubic foot of silt weighs 66.7 pounds, or one acre-foot of silt weighs 1,452 tons.

Rio Grande at El Paso, Texas

Period: Sept. 1947-1972

Month	1972 Tons Water	1972 Tons Silt	1972 No. of Samples	1972 Gravimetric Percentages Average	Maximum Sample	Minimum Sample	1972 Acre-Feet at 1,452 Tons Per Acre Foot	Period of Record Average	Maximum	Minimum
Jan.	3,391,000	111	20	0.003280			0.08	0.19	1.4	0
Feb.	2,365,000	88.0	16	.003720			.06	.24	2.2	.01
Mar.	45,998,000	36,800	29	.07996			25.3	19.7	52.7	.89
Apr.	22,169,000	3,150	30	.01420			2.2	10.6	45.2	2.2
May	12,093,000	1,110	29	.009200			.76	8.0	63.3	.03
June	9,738,000	1,250	28	.01280			.86	20.6	152	.86
July	33,528,000	37,600	30	.1122			25.9	33.4	124	1.1
Aug.	28,736,000	52,500	23	.1827			36.2	35.8	112	2.0
Sept.	14,189,000	30,100	11	.2118			20.7	22.8	123	1.1
Oct.	6,976,000	10,800	11	.1541			7.4	5.1	51.0	.01
Nov.	1,246,000	44.4	5	.003560			.03	.29	1.5	.01
Dec.	1,099,000	34.5	0	[1] .003140			.02	.28	2.1	.01
Yearly	181,528,000	173,587.9	232	0.0956			119.51	157.00	436.87	34.37

Samples and analyses by U. S. Section, Method A
[1] Estimated

Río Conchos near Ojinaga, Chihuahua

Period: 1956-1972

Jan.	127,629,000	0	12	0	0	0	0	0	0	0
Feb.	38,297,000	0	12	0	0	0	0	.26	4.5	0
Mar.	64,095,000	0	14	0	0	0	0	0	0	0
Apr.	55,052,000	0	12	0	0	0	0	.34	5.8	0
May	62,459,000	161,000	15	.2576	2.0234	0	111	34.0	145	0
June	78,118,000	274,000	15	.3512	1.8737	0	189	190	688	0
July	100,260,000	451,000	15	.4501	1.4883	0	311	302	1,450	0
Aug.	143,946,000	735,000	17	.5108	1.4913	0	506	561	2,650	8.1
Sept.	357,529,000	1,277,000	17	.3573	1.7018	.0836	879	1,235	9,330	14.4
Oct.	84,753,000	55,000	13	.0649	.1385	0	37.9	833	12,400	0
Nov.	35,746,000	0	13	0	0	0	0	6.6	70.2	0
Dec.	32,948,000	0	13	0	0	0	0	1.2	14.0	0
Yearly	1,180,832,000	2,953,000	168	0.2501	2.0234	0	2,033.9	3,163.4	21,903.3	284.7

Samples and analyses by Mexican Section, Method B

Rio Grande below Rio Conchos near Presidio, Texas

Period: 1955-1972

Jan.	117,594,000	32,300	9	0.02749			22.2	4.4	22.2	0.70
Feb.	34,281,000	1,140	7	.003320			.79	4.3	22.2	.14
Mar.	56,021,000	2,950	8	.005259			2.0	5.9	70.9	.15
Apr.	49,151,000	1,460	8	.002972			1.0	6.0	95.7	.12
May	60,998,000	177,000	10	.2902	2.137	0.005100	122	31.6	161	.21
June	78,021,000	114,000	10	.1461	.6604	.009700	78.5	131	465	.29
July	94,284,000	269,000	9	.2852	1.091	.004500	185	293	1,420	2.0
Aug.	144,585,000	837,000	8	.5788	1.851	.02280	576	398	1,360	2.9
Sept.	434,491,000	782,000	16	.1799	.6175	.1278	539	598	3,610	14.9
Oct.	103,352,000	63,400	9	.06132	.2224	.01470	43.7	390	4,770	2.6
Nov.	38,445,000	1,260	7	.003280			.87	9.6	45.2	.26
Dec.	35,117,000	899	8	.002560			.62	3.8	13.7	.62
Yearly	1,246,340,000	2,282,409	109	0.1831			1,571.68	1,875.6	8,793.44	172.78

Samples and analyses by U. S. Section, Method A

SUSPENDED SILT IN THE RIO GRANDE AND TRIBUTARIES

Rio Grande at Johnson Ranch near Castolon, Texas

Period: Oct. 1951-1972

Month	1972 Tons Water	1972 Tons Silt	1972 No. of Samples	1972 Gravimetric Percentages Average	Maximum Sample	Minimum Sample	1972 Acre-Feet at 1,452 Tons Per Acre Foot	Period of Record Average	Maximum	Minimum
Jan.	114,201,000	37,000	7	0.03240	0.07440	0.004800	25.5	4.4	25.5	0.40
Feb.	40,012,000	1,760	7	.004400			1.2	14.9	253	.21
Mar.	52,150,000	4,800	8	.009200			3.3	2.9	9.4	.14
Apr.	45,427,000	1,890	7	.004160			1.3	49.8	692	.01
May	76,366,000	456,000	10	.5974	2.563	.00600	314	131	426	0
June	90,033,000	304,000	9	.3374	2.509	.02120	209	408	1,570	2.3
July	111,456,000	889,000	9	.7972	3.350	.01210	612	782	4,030	51.6
Aug.	160,907,000	1,088,000	8	.6760	1.309	.01360	749	927	3,840	2.8
Sept.	426,565,000	1,256,000	7	.2945	3.835		865	972	8,990 *	98.5
Oct.	123,709,000	101,000	7	.08148			69.6	821	13,500 ‼	2.4
Nov.	41,249,000	1,980	6	.004800			1.4	14.0	151	.28
Dec.	37,437,000	1,230	6	.003280			.85	6.7	48.3	.41
Yearly	1,319,512,000	4,142,660	91	0.3140			2,852.15	4,133.7	23,869.62	803.27

Samples and analyses by U. S. Section, Method A
‼ Estimated * Partly estimated

Rio Grande at Foster Ranch near Langtry, Texas

Period: 1969-1972

Month	1972 Tons Water	1972 Tons Silt	1972 No. of Samples	1972 Gravimetric Percentages Average	Maximum Sample	Minimum Sample	1972 Acre-Feet at 1,452 Tons Per Acre Foot	Period of Record Average	Maximum	Minimum
Jan.	122,796,000	50,700	4	0.04128	0.08060	0.003500	34.9	13.0	34.9	0.61
Feb.	75,706,000	4,210	4	.005560			2.9	4.3	13.0	.57
Mar.	72,970,000	17,700	4	.02424			12.2	7.8	12.2	2.0
Apr.	67,505,000	3,700	4	.005480			2.5	4.2	12.7	.22
May	92,209,000	72,000	5	.07808			49.6	27.8	49.6	.60
June	129,769,000	954,000	4	.7354			657	353	657	75.1
July	123,421,000	1,069,000	5	.8658	1.577	.02010	736	564	736	355
Aug.	187,395,000	1,192,000	4	.6359	.9723	.02940	821	611	1,320	21.8
Sept.	386,613,000	2,213,000	4	.5725	1.135	.2679	1,520	943	1,520	285
Oct.	168,760,000	163,000	5	.09672			112	470	1,070	112
Nov.	66,715,000	3,500	4	.005240			2.4	28.3	91.6	2.4
Dec.	61,491,000	1,430	4	.002320			.98	5.7	16.1	.98
Yearly	1,555,350,000	5,744,240	51	0.3693			3,951.48	3,032.1	3,951.48	1,739.3

Samples and analyses by U. S. Section, Method A

Pecos River near Langtry, Texas

Period: Nov. 1954-1972

Month	1972 Tons Water	1972 Tons Silt	1972 No. of Samples	1972 Gravimetric Percentages Average	Maximum Sample	Minimum Sample	1972 Acre-Feet at 1,452 Tons Per Acre Foot	Period of Record Average	Maximum	Minimum
Jan.	18,573,000	468	5	0.002520			0.32	0.25	0.62	0.05
Feb.	16,042,000	411	4	.002560			.28	.23	.70	.05
Mar.	16,882,000	479	4	.002840			.33	.27	.79	.05
Apr.	12,452,000	329	4	.002640			.23	11.3	167	.06
May	20,782,000	565	5	.002720			.39	23.0	407	.07
June	15,459,000	291	4	.001880			.20	2.8	41.7	.09
July	12,913,000	284	4	.002200			.20	2.0	22.2	.05
Aug.	17,509,000	518	4	.002960			.36	1.8	23.8	.04
Sept.	21,229,000	747	4	.003520			.51	27.9	359	.09
Oct.	16,726,000	361	5	.002160			.25	7.7	59.8	.07
Nov.	14,840,000	309	4	.002080			.21	.31	1.1	.03
Dec.	14,697,000	282	4	.001920			.19	.20	.55	.05
Yearly	198,104,000	5,044	51	0.002546			3.47	77.76	577.44	1.87

Samples and analyses by U. S. Section, Method A

Rio Grande below Amistad Dam near Del Rio, Texas

Period: July 1968-1972

Month	1972 Tons Water	1972 Tons Silt	1972 No. of Samples	1972 Gravimetric Percentages Average	Maximum Sample	Minimum Sample	1972 Acre-Feet at 1,452 Tons Per Acre Foot	Period of Record Average	Maximum	Minimum
Jan.	16,397,000	197	13	0.001200			0.14	0.62	1.2	0.14
Feb.	16,944,000	183	12	.001080			.13	1.3	2.3	.13
Mar.	28,570,000	194	14	.0006800			.13	.53	1.1	.13
Apr.	37,470,000	285	11	.0007600			.20	.76	1.3	.20
May	32,804,000	367	11	.001120			.25	1.5	3.2	.25
June	22,313,000	330	12	.001480			.23	1.1	2.1	.23
July	31,506,000	403	13	.001280			.28	4.0	16.4	.28
Aug.	21,187,000	297	12	.001400			.20	1.2	2.9	.20
Sept.	114,858,000	2,020	11	.001760			1.4	.99	1.5	.20
Oct.	202,554,000	2,670	10	.001320			1.8	1.0	1.6	.05
Nov.	35,238,000	310	11	.0008800			.21	.72	1.9	.05
Dec.	6,604,000	63.4	12	.0009600			.04	.81	1.7	.04
Yearly	566,445,000	7,319.4	142	0.001292			5.01	14.53	* 26.0	5.01

Samples and analyses by U. S. Section, Method A
* July through December 1968

SUSPENDED SILT IN THE RIO GRANDE AND TRIBUTARIES

Rio Grande at Laredo, Texas

Period: #1953-1972

Month	1972 Tons Water	1972 Tons Silt	1972 No. of Samples	1972 Gravimetric Percentages Average	Maximum Sample	Minimum Sample	1972 Acre-Feet at 1,452 Tons Per Acre Foot	Period of Record Average	Maximum	Minimum
Jan.	99,671,000	1,510	31	0.001520			1.0	9.5	28.0	1.0
Feb.	80,155,000	1,230	29	.001600			.88	20.9	109	.88
Mar.	60,355,000	3,430	31	.005680			2.4	11.4	26.8	.78
Apr.	47,713,000	1,740	30	.003640			1.2	173	1,920	.47
May	131,372,000	33,600	31	.02556			23.1	323	3,540	2.3
June	50,710,000	811	30	.001600			.56	980	12,400	.56
July	43,857,000	1,910	31	.004360			1.3	581	3,440	1.3
Aug.	190,641,000	118,000	31	.06184			81.3	494	1,960	4.2
Sept.	156,902,000	13,100	30	.008360			9.0	1,064	5,010	9.0
Oct.	299,660,000	28,400	31	.009480			19.6	808	7,520	7.6
Nov.	93,549,000	3,260	30	.003480			2.2	95.1	1,190	2.2
Dec.	78,310,000	1,970	31	.002520			1.4	12.0	67.6	1.4
Yearly	1,332,895,000	209,011	366	0.01568			143.94	4,571.9	19,257.72	143.94

Samples by Laredo Water Plant and analyses by U. S. Section, Method C
\# Some months missing

∅ Rio Grande below Falcon Dam, Texas, U. S. Tailrace

Period: July 1955-1972

Jan.	391,439,000	3,440	8	0.0008800			2.4	1.7	5.4	0.14
Feb.	161,180,000	1,930	9	.001200			1.3	2.1	9.1	.06
Mar.	77,896,000	841	6	.001080			.58	1.2	4.3	.15
Apr.	571,240,000	4,570	12	.0008000			3.1	3.2	12.2	.25
May	29,321,000	422	4	.001440			.29	3.4	8.1	.19
June	31,105,000	311	3	.001000			.21	3.4	18.7	.21
July	17,449,000	181	0	".001040			.12	.93	2.3	.12
Aug.	84,285,000	910	3	.001080			.63	1.1	2.8	.22
Sept.	255,679,000	2,150	8	.0008400			1.5	1.9	12.9	0
Oct.	182,406,000	1,680	6	.0009200			1.2	3.6	37.5	.18
Nov.	72,816,000	670	5	.0009200			.46	1.1	5.5	.02
Dec.	58,895,000	542	2	.0009200			.37	1.7	14.7	.11
Yearly	1,933,711,000	17,647	66	0.0009126			12.16	25.33	92.15	7.24

Samples and analyses by U. S. Section, Method A
∅ Discharge based on record of total releases from Falcon Reservoir " Estimated

Río Alamo at Cd. Mier, Tamaulipas

Period: #1934-1972

Jan.	6,150,000	0	0	" 0	0	0	0	1.7	21.8	0
Feb.	4,883,000	0	0	" 0	0	0	0	2.8	48.6	0
Mar.	6,897,000	4,480	4	.065	.2576	0	3.1	6.2	91.2	0
Apr.	7,085,000	6,940	5	.098	.1871	0	4.8	27.7	229	0
May	13,497,000	11,470	11	.085	.1000	.0033	7.9	44.5	281	0
June	55,775,000	120,000	9	.215	.3500	.0055	82.6	60.6	471	0
July	7,997,000	2,320	9	.029	.0446	.0011	1.6	19.7	143	0
Aug.	3,846,000	154	7	.004	.0055	.0011	.11	123	1,610	0
Sept.	53,845,000	144,000	7	.268	.3314	.0011	99.2	220	2,920	0
Oct.	5,879,000	470	7	.008	.0297	0	.32	81.9	753	0
Nov.	4,674,000	0	0	" 0	0	0	0	2.1	40.7	0
Dec.	5,235,000	0	0	" 0	0	0	0	1.5	33.7	0
Yearly	175,763,000	289,834	59	0.1649	0.3500	0	199.63	591.7	3,156.57	54.09

Samples and analyses by Mexican Section, Method B
\# Some months missing. " Estimated

Rio Grande at Fort Ringgold, Rio Grande City, Texas

Period: May 1959-1972

Jan.	398,826,000	5,900	6	0.001480			4.1	11.2	32.6	0.43
Feb.	186,789,000	3,210	6	.001720			2.2	5.4	13.7	.35
Mar.	85,582,000	1,370	4	.001600			.94	5.0	26.7	.39
Apr.	593,992,000	28,300	8	.004760			19.5	19.5	51.0	6.0
May	49,381,000	17,900	7	.03596			12.3	49.8	259	4.0
June	205,292,000	85,400	7	.04160			58.8	42.9	94.4	4.7
July	180,143,000	8,360	8	.004640			5.8	18.8	90.9	2.1
Aug.	113,266,000	3,400	7	.003000			2.3	61.6	510	1.2
Sept.	479,453,000	327,000	9	.06828			225	153	798	4.8
Oct.	258,650,000	21,200	6	.008200			14.6	73.1	552	2.6
Nov.	103,969,000	2,200	6	.002120			1.5	4.0	11.4	1.3
Dec.	79,077,000	1,330	8	.001680			.92	3.6	12.1	.92
Yearly	2,734,920,000	505,570	82	0.01849			347.96	447.9	1,691.1	72.12

Samples and analyses by U. S. Section, Method A

SUSPENDED SILT IN THE RIO GRANDE AND TRIBUTARIES

‡ Rio Grande near Los Ebanos, Texas

Period: May 1956-1972

Month	1972 Tons Water	1972 Tons Silt	1972 No. of Samples	1972 Gravimetric Percentages Average	Maximum Sample	Minimum Sample	1972 Acre-Feet at 1,452 Tons Per Acre Foot	Period of Record Average	Maximum	Minimum
Jan.	398,826,000	14,300	13	0.003586			9.8	20.5	107	0.50
Feb.	186,789,000	3,980	12	.002129			2.7	6.8	16.0	.74
Mar.	85,582,000	1,990	14	.002320			1.4	7.5	40.2	.65
Apr.	593,992,000	39,900	12	.006720			27.5	63.0	635	3.0
May	49,881,000	16,200	13	.03243			11.2	77.2	289	5.3
June	205,292,000	45,400	13	.02213			31.3	59.9	209	3.2
July	180,143,000	17,400	13	.009640			12.0	13.9	79.9	.74
Aug.	113,266,000	4,580	13	.004040			3.2	91.1	1,150	2.0
Sept.	479,453,000	199,000	13	.04151			137	114	459	3.5
Oct.	258,650,000	22,300	12	.008640			15.4	48.1	314	3.2
Nov.	103,969,000	4,680	13	.004502			3.2	8.8	75.1	.62
Dec.	79,077,000	2,320	13	.002932			1.6	4.6	16.3	1.0
Yearly	2,734,920,000	372,050	154	0.01360			256.3	515.4	1,788.7	80.0

Samples and analyses by U. S. Section, Method A

‡ Discharge based on record of flow at Fort Ringgold

Rio Grande below Anzalduas Dam, Texas

Period: May 1956-1972

Jan.	156,150,000	2,620	31	0.001680			1.8	8.7	49.0	0.53
Feb.	64,561,000	981	29	.001520			.68	2.9	11.9	.24
Mar.	63,833,000	1,760	31	.002760			1.2	3.6	27.3	.25
Apr.	157,179,000	7,230	30	.004600			5.0	38.9	279	2.0
May	63,803,000	2,780	31	.004360			1.9	29.0	79.9	1.4
June	242,466,000	32,000	30	.01320			22.0	43.3	414	1.2
July	163,824,000	5,500	31	.003360			3.8	27.5	333	.83
Aug.	64,219,000	1,280	31	.002000			.88	34.2	502	.73
Sept.	273,290,000	67,700	30	.02476			46.6	145	1,480	.59
Oct.	159,997,000	8,580	31	.005360			5.9	94.4	676	.34
Nov.	79,832,000	2,840	30	.003560			2.0	20.0	274	.51
Dec.	53,034,000	1,150	31	.002160			.79	10.7	135	.41
Yearly	1,542,188,000	134,421	366	0.008716			92.55	458.20	2,541.0	28.37

Samples and analyses by U. S. Section, Method A

Rio Grande near San Benito, Texas

Period: April 1955-1972

Jan.	68,291,000	2,240	3	0.003280			1.5	12.0	121	0.13
Feb.	38,102,000	3,110	4	.008167			2.1	8.7	97.8	.15
Mar.	45,373,000	1,720	4	.003800			1.2	4.4	50.6	.11
Apr.	43,653,000	5,310	7	.01216			3.7	5.1	17.9	.11
May	60,241,000	4,750	6	.007888			3.3	25.2	265	2.2
June	199,656,000	57,200	6	.02864			39.4	12.0	39.4	.72
July	92,067,000	10,500	6	.01144			7.2	8.7	91.6	.11
Aug.	45,723,000	2,670	9	.005847			1.8	6.9	48.5	.07
Sept.	161,773,000	120,000	6	.07392			82.6	51.9	218	.30
Oct.	122,685,000	20,600	8	.01683			14.2	66.7	636	.25
Nov.	31,819,000	1,560	7	.004900			1.1	20.0	247	.17
Dec.	25,034,000	915	7	.003655			.63	12.7	163	.06
Yearly	934,417,000	230,575	73	0.02468			158.73	234.3	894.82	9.54

Samples and analyses by U. S. Section, Method A

Rio Grande near Brownsville, Texas

Period: April 1955-1972

Jan.	71,354,000	1,860	3	0.002600			1.3	6.0	67.4	0.02
Feb.	41,033,000	3,100	4	.007550			2.1	10.3	80.6	.04
Mar.	53,890,000	2,210	5	.004096			1.5	5.3	70.2	.08
Apr.	20,636,000	743	6	.003600			.51	3.4	27.7	.04
May	66,135,000	6,930	6	.01048			4.8	8.5	58.5	.38
June	195,050,000	79,800	7	.04092			55.0	10.7	58.4	.21
July	86,041,000	10,200	6	.01184			7.0	25.4	292	.08
Aug.	44,243,000	3,680	8	.008327			2.5	5.8	45.0	.01
Sept.	120,662,000	66,000	5	.05472			45.5	43.6	255	0
Oct.	141,621,000	159,000	5	.1124			110	47.6	242	.03
Nov.	30,192,000	1,470	8	.004880			1.0	24.0	283	.12
Dec.	24,508,000	1,230	7	.005020			.85	12.1	142	.02
Yearly	895,365,000	336,223	70	0.03755			232.06	202.7	1,072.26	1.97

Samples and analyses by U. S. Section, Method A

CHEMICAL ANALYSES OF WATER SAMPLES FROM THE RIO GRANDE AND TRIBUTARIES - 1972

The following tables are based on chemical analyses of composites representative of the river flow at Rio Grande and tributary stations. The monthly composites were made by the United States Section of the Commission by taking from each independent water sample an amount of water volumetrically proportional to the river flow represented by that sample. The chemical analyses were made by the U. S. Geological Survey, Water Resources Division, Austin, Texas. All other data were computed by the United States Section of the Commission.

To convert milligram equivalents to parts per million by weight, multiply each ion by its appropriate conversion factor. These factors are: Ca, 20.04; Mg, 12.16; Na, 22.99; (CO_3 plus HCO_3) expressed as CO_3, 30.00; SO_4, 48.03; Cl, 35.45; NO_3, 62.00. To convert tons per acre-foot to parts per million, multiply tons per acre-foot by 735.5. Electrical conductivity, reported in the tables as ECx10^6 at 25°C, is a relative measure of the total salt concentration.

Rio Grande at El Paso, Texas

Sampling by U. S. Section

Month	No. of Samples	Dissolved Solids: Tons Per Acre-Foot	Dissolved Solids: Total Tons	ECx10^6 @25°C	Boron p.p.m.	pH	% Na **	% Cl ***	Mean Milligram Equivalents per Liter: Ca	Mg	Na	CO_3 + HCO_3	SO_4	Cl	NO_3
Jan.	20	2.27	5,660	2,450	0.45	7.7	66	33	6.24	2.47	16.70	5.31	12.03	8.60	0.03
Feb.	16	2.57	4,470	2,600	.47	7.8	69	34	6.04	2.47	18.66	5.51	12.45	9.45	.01
Mar.	29	1.03	34,900	1,120	.17	7.5	51	28	4.29	1.32	5.77	3.47	4.73	3.27	.01
Apr.	30	1.14	18,600	1,300	.19	7.4	52	27	4.74	1.48	6.79	3.93	5.91	3.61	.01
May	29	1.37	12,200	1,540	.25	7.4	59	31	4.79	1.56	9.09	4.00	6.95	4.85	.04
June	28	1.71	12,300	1,920	.32	7.8	66	34	4.79	1.81	12.57	4.00	8.87	6.77	.02
July	30	.99	24,400	1,140	.21	8.1	54	27	4.04	1.15	6.00	3.74	4.64	3.16	.06
Aug.	23	.94	19,900	1,080	.18	7.8	53	27	3.94	1.07	5.66	3.41	4.54	2.96	.07
Sept.	11	1.50	15,700	1,720	.26	7.9	63	33	4.99	1.40	10.74	3.87	7.75	5.70	.07
Oct.	11	2.27	11,700	2,550	.43	7.9	70	36	5.79	2.14	18.27	5.08	11.95	9.59	.02
Nov.	5	2.94	2,700	3,200	.56	8.0	73	38	6.19	2.88	24.01	5.83	14.82	12.69	.00
Dec.‼	0	2.94	2,380	3,200	.56	8.0	73	38	6.19	2.88	24.01	5.83	14.82	12.69	.00
Mean ⊕	∅232	1.23	∅ 164,910	1,380	0.23	7.7	57	30	4.50	1.41	7.98	3.81	6.08	4.27	0.04
Period Avg.		1.10	445,000	1,220			52	29	4.40	1.57	6.57	3.52	5.46	3.66	
Tons of Constituents, 1972									16,400	3,110	33,300	20,800	53,000	27,500	
Avg. Tons, Period 1930-1972									48,400	10,500	83,000	58,100	145,000	71,400	

Rio Grande at Fort Quitman, Texas

Sampling by U. S. Section

Month	No. of Samples	Dissolved Solids: Tons Per Acre-Foot	Dissolved Solids: Total Tons	ECx10^6 @25°C	Boron p.p.m.	pH	% Na **	% Cl ***	Mean Milligram Equivalents per Liter: Ca	Mg	Na	CO_3 + HCO_3	SO_4	Cl	NO_3
Jan.‼	0	7.74	8,340	8,500			67	64	19.59	9.99	60.79	3.88	28.03	56.98	
Feb.	4	9.94	5,350	9,630	0.83	7.5	66	66	22.70	12.01	68.30	4.16	31.02	69.40	0.01
Mar.	4	11.60	5,010	11,300	.94	7.8	66	68	26.85	14.48	79.17	4.13	35.19	84.07	.01
Apr.	2	12.50	3,110	12,600	.95	7.4	67	68	28.84	16.29	91.35	4.03	39.56	93.66	.05
May ‼	0	12.40	19.8	12,500			67	68	28.60	16.16	90.62	4.00	39.24	92.91	
June	2	7.60	6,520	8,350	.86	7.7	67	64	19.21	9.79	59.60	3.80	27.48	55.86	.04
July‼	0	8.19	860	9,000			67	64	20.75	10.57	64.37	4.10	29.68	60.33	
Aug.	2	3.75	49,300	4,330	.55	8.1	68	62	9.88	4.11	30.02	3.47	13.62	27.65	.16
Sept.	4	2.45	31,400	3,000	.33	8.0	64	57	7.58	3.04	18.88	3.21	9.58	17.21	.11
Oct.	3	2.80	5,960	3,300	.33	7.7	65	57	8.58	3.13	21.45	3.67	10.83	19.18	.16
Nov.	3	5.05	7,400	5,660	.61	7.9	65	60	14.42	5.76	38.11	5.38	18.24	35.54	.27
Dec.‼	0	9.81	5,890	9,500			66	66	22.40	11.85	67.41	4.11	30.62	68.50	
Mean ⊕	∅24	3.87	∅129,159.8	4,400			66	61	10.49	4.56	29.80	3.53	14.02	27.85	
Period Avg.		2.46	307,000	2,780			61	55	7.87	3.19	17.39	3.65	9.10	15.83	
Tons of Constituents, 1972									9,550	2,520	31,100	4,810	30,600	44,900	
Avg. Tons, Period 1930-1972									26,800	6,600	68,000	18,600	74,300	95,400	

⊕ Weighted mean ∅ Total ** Percent of total cations *** Percent of total anions ‼ Estimated

CHEMICAL ANALYSES OF WATER SAMPLES FROM THE RIO GRANDE AND TRIBUTARIES - 1972

Rio Grande above Rio Conchos near Presidio, Texas

Sampling by U. S. Section

Month	No. of Samples	Dissolved Solids: Tons Per Acre-Foot	Dissolved Solids: Total Tons	EC x 10^6 @25°C	Boron p. p. m.	pH	% Na **	% Cl ***	Mean Milligram Equivalents per Liter: Ca	Mg	Na	CO_3 + HCO_3	SO_4	Cl	NO_3
Jan.	6	5.21	1,250	5,810		7.8	63		# 23.00		39.67	4.69		35.54	
Feb.	3	6.80	51.0	6,820	0.70	7.3	62	56	19.86	8.23	46.11	4.20	28.73	41.47	0.01
Mar.	No	Flow													
Apr.	No	Flow													
May	1	1.15	228	1,180		7.1	21		# 10.20		2.74	2.72		.99	
June	9	.79	2,480	887	.15	7.3	46	19	4.19	.60	4.00	2.85	4.52	1.72	.01
July	5	.77	3,140	833		7.4	35		# 5.36		2.91	2.33		1.02	
Aug.	8	.69	5,840	789		7.2	41		# 4.68		3.22	2.56		1.33	
Sept.	16	.76	43,000	898		7.8	47		# 4.60		4.00	2.62		2.45	
Oct.	9	2.88	11,000	3,410		7.4	60		# 14.10		20.79	3.87		18.39	
Nov.	7	4.01	7,590	4,460		7.5	64		# 17.10		29.75	4.00		26.52	
Dec.	8	5.09	4,890	5,730		7.7	63		# 21.60		37.24	4.10		34.42	
Mean ⊕	ø72	1.00	ø 79,469	1,160		7.7	51		# 5.69		5.79	2.73		4.06	
Period Avg.		1.88	203,000	2,120			59		# 8.76		12.56	3.11		10.75	
Tons of Constituents, 1972											14,400	8,840		15,500	
Avg. Tons, Period 1935-1972											42,400	13,700		56,000	

Rio Conchos near Ojinaga, Chihuahua

Sampling by Mexican Section

Month	No. of Samples	Dissolved Solids: Tons Per Acre-Foot	Dissolved Solids: Total Tons	EC x 10^6 @25°C	Boron p. p. m.	pH	% Na **	% Cl ***	Mean Milligram Equivalents per Liter: Ca	Mg	Na	CO_3 + HCO_3	SO_4	Cl	NO_3
Jan.	12	1.04	97,700	1,100		7.5	50		# 5.76		5.74	3.05		1.50	
Feb.	12	1.21	34,100	1,320	0.36	7.6	51	17	5.44	1.32	7.09	3.41	8.22	2.40	0.06
Mar.	14	1.18	55,600	1,200		7.4	51		# 5.96		6.18	3.21		1.75	
Apr.	12	1.17	47,400	1,230		7.5	52		# 5.92		6.52	2.95		1.86	
May	15	1.20	55,100	1,230		7.3	49		# 6.64		6.26	2.82		1.75	
June	14	1.09	62,700	1,180	.31	8.0	51	14	4.79	1.07	6.18	2.66	7.87	1.72	.05
July	14	1.02	75,200	1,120		7.5	47		# 6.08		5.48	3.05		1.50	
Aug.	16	1.04	110,000	1,100		7.6	44		# 6.40		5.05	2.85		1.30	
Sept.	17	.89	234,000	957		7.8	48		# 4.96		4.57	2.82		1.04	
Oct.	13	.90	56,100	1,020		8.1	50		# 5.12		5.13	2.75		1.64	
Nov.	13	1.32	34,700	1,360		7.7	51		# 6.80		7.13	3.18		2.48	
Dec.	12	1.19	28,800	1,260		7.8	51		# 6.32		6.57	3.08		2.31	
Mean ⊕	ø164	1.03	ø 891,400	1,100		7.7	49		# 5.73		5.46	2.92		1.49	
Period Avg.		0.75	557,000	791			41		# 4.74		3.36	2.71		1.16	
Tons of Constituents, 1972											148,000	104,000		62,400	
Avg. Tons, Period 1935-1972											78,100	82,300		41,600	

Rio Grande at Johnson Ranch near Castolon, Texas

Sampling by U. S. Section

Month	No. of Samples	Dissolved Solids: Tons Per Acre-Foot	Dissolved Solids: Total Tons	EC x 10^6 @25°C	Boron p. p. m.	pH	% Na **	% Cl ***	Mean Milligram Equivalents per Liter: Ca	Mg	Na	CO_3 + HCO_3	SO_4	Cl	NO_3
Jan.	7	1.11	93,300	1,190		7.3	50		# 6.16		6.09	3.28		1.78	
Feb.	7	1.31	38,600	1,410	0.36	7.3	51	17	5.89	1.40	7.61	3.41	9.16	2.54	0.04
Mar.	8	1.35	51,800	1,330		7.3	51		# 6.56		6.96	3.08		2.29	
Apr.	7	1.31	43,800	1,340		7.5	53		# 6.48		7.26	2.72		2.26	
May	10	1.09	61,200	1,150		7.2	48		# 6.36		5.83	2.88		1.52	
June	9	1.00	66,200	1,050	.22	7.9	40	11	5.79	.82	4.44	3.34	6.56	1.18	.06
July	9	1.08	88,600	1,160		7.6	43		# 6.92		5.26	3.44		1.24	
Aug.	8	.91	108,000	962		7.4	39		# 6.08		3.96	3.31		.96	
Sept.	7	.92	289,000	974		7.8	42		# 5.76		4.22	2.88		1.10	
Oct.	7	1.06	96,500	1,190		7.3	49		# 6.16		5.96	3.11		2.48	
Nov.	6	1.58	48,000	1,630		7.9	54		# 7.72		9.14	3.08		4.03	
Dec.	6	1.46	40,200	1,550		7.7	52		# 7.68		8.35	3.28		3.61	
Mean ⊕	ø91	1.06	ø1,025,200	1,120		7.6	46		# 6.28		5.30	3.10		1.61	
Period Avg.		0.94	638,000	934			44		# 5.69		4.46	2.88		1.64	
Tons of Constituents 1972											161,000	123,000		75,400	
Avg. Tons, Period 1948-1972											95,000	80,100		54,000	

⊕ Weighted mean ø Total ** Percent of total cations *** Percent of total anions
Sum of calcium and magnesium

CHEMICAL ANALYSES OF WATER SAMPLES FROM THE RIO GRANDE AND TRIBUTARIES - 1972

Month	No. of Samples	Dissolved Solids: Tons Per Acre-Foot	Dissolved Solids: Total Tons	ECx10⁶ @25°C	Boron p.p.m.	pH	% Na **	% Cl ***	Mean Milligram Equivalents per Liter: Ca	Mg	Na	CO_3 + HCO_3	SO_4	Cl	NO_3

Rio Grande at Foster Ranch near Langtry, Texas

Sampling by U. S. Section

Jan.	4	1.08	97,600	1,100	0.32	7.3	48	14	4.79	1.32	5.70	3.31	6.95	1.69	0.06
Feb.	4	1.08	60,200	1,110	.27	7.3	48	16	4.64	1.48	5.57	3.28	6.62	1.89	.04
Mar.	4	1.14	61,200	1,160	.28	7.4	48	17	4.64	1.48	5.66	3.02	6.93	2.00	.04
Apr.	4	1.11	55,100	1,150	.25	7.3	50	17	4.34	1.48	5.83	2.82	6.95	1.97	.06
May	5	1.01	68,500	1,050	.23	7.2	47	16	4.54	1.15	4.96	3.08	5.81	1.69	.04
June	4	.83	79,300	909	.18	7.7	40	11	4.89	.82	3.83	3.28	5.16	1.02	.14
July	5	1.07	97,200	1,120	.22	7.7	43	11	5.59	.99	4.96	3.47	7.02	1.30	.06
Aug.	4	.87	120,000	939	.32	7.5	35	10	5.44	.90	3.48	3.21	5.73	.99	.07
Sept.	4	.86	245,000	924	.29	7.6	42	11	4.74	.73	4.00	3.05	5.52	1.07	.06
Oct.	5	.89	111,000	1,020	.18	7.9	45	17	4.69	.99	4.70	3.38	5.45	1.78	.04
Nov.	4	1.22	59,900	1,300	.27	7.6	49	22	4.99	1.81	6.57	2.92	7.54	3.02	.04
Dec.	4	1.13	51,100	1,220	.26	7.5	48	21	4.69	1.73	6.00	2.92	7.12	2.68	.04
Mean ⊕	∅51	0.97	∅1,106,100	1,030	0.26	7.5	44	14	4.87	1.07	4.69	3.17	6.09	1.51	0.06
Period Avg.		0.89	944,000	947					4.72	0.98	4.08	3.20	5.29	1.38	
Tons of Constituents, 1972									152,000	20,300	168,000	148,000	455,000	83,300	
Avg. Tons, Period 1968-1972									136,000	17,200	135,000	138,000	365,000	70,300	

Pecos River near Langtry, Texas

Sampling by U. S. Section

Jan.	5	3.02	41,300	3,200	0.23	7.2	59	62	7.88	5.59	19.27	3.38	8.87	20.31	0.11
Feb.	4	3.01	35,500	3,220	.26	7.2	60	63	7.78	5.43	19.75	3.28	8.83	20.88	.08
Mar.	4	2.65	32,900	2,870	.19	7.4	59	63	6.84	4.69	16.70	2.95	7.50	18.20	.07
Apr.	4	2.62	24,000	2,860	.20	7.6	59	63	6.69	4.85	16.36	2.95	7.58	18.05	.00
May	5	3.24	49,500	3,480	.26	7.3	61	65	7.83	5.59	21.01	3.02	9.24	22.57	.15
June	4	2.18	24,800	2,640	.21	7.6	59	63	6.14	4.44	14.96	2.92	6.83	16.36	.05
July	4	2.20	20,900	2,470	.29	7.5	59	62	5.69	4.03	14.09	2.72	6.50	15.18	.05
Aug.	4	1.65	21,300	1,900	.24	7.7	56	59	4.94	3.04	10.09	2.92	4.54	10.95	.08
Sept.	4	2.50	39,000	3,060	.17	7.7	60	65	7.09	4.69	18.01	2.95	7.66	19.75	.07
Oct.	5	2.24	27,600	2,760	.17	7.5	60	63	6.44	4.28	16.05	2.88	7.16	17.21	.06
Nov.	4	2.11	23,000	2,510	.18	7.6	58	61	6.14	4.28	14.36	3.15	6.37	15.37	.11
Dec.	4	2.34	25,300	2,760	.20	7.7	58	61	6.79	4.69	15.57	3.21	7.29	16.93	.14
Mean ⊕	∅51	2.50	∅ 365,100	2,840	0.22	7.5	59	63	6.75	4.67	16.55	3.03	7.43	17.86	0.08
Period Avg.		2.00	388,000	2,340			57	61	5.96	3.93	13.17	2.74	6.23	14.22	
Tons of Constituents, 1972									26,800	11,300	75,500	18,000	70,700	126,000	
Avg. Tons, Period 1955-1972									31,500	12,600	79,900	21,700	78,900	133,000	

Rio Grande below Amistad Dam near Del Rio, Texas

Sampling by U. S. Section

Jan.	13	0.70	8,450	785	0.20	7.1	38	24	3.94	0.99	2.96	2.85	3.23	1.97	0.04
Feb.	12	.72	8,980	809	.18	7.3	38	25	3.99	.99	3.09	2.88	3.27	2.09	.03
Mar.	14	.79	16,600	850	.14	7.4	40	26	3.94	.99	3.35	2.92	3.41	2.20	.02
Apr.	11	.74	20,400	832	.12	7.2	40	25	3.94	.99	3.31	2.85	3.44	2.14	.06
May	11	.74	17,900	830	.12	7.5	40	26	3.89	.99	3.26	2.79	3.37	2.14	.06
June	12	.72	11,800	843	.14	7.7	39	25	4.14	.99	3.26	2.95	3.39	2.14	.03
July	13	.68	15,800	809	.14	7.7	40	26	3.79	.99	3.22	2.69	3.37	2.14	.01
Aug.	12	.71	11,100	830	.13	8.1	38	25	4.14	.99	3.09	3.02	3.31	2.09	.04
Sept.	11	.69	58,300	811	.14	7.8	41	26	3.74	.99	3.22	2.79	3.27	2.09	.01
Oct.	10	.63	93,900	780	.12	7.9	43	26	3.39	.99	3.26	2.49	3.27	2.00	.01
Nov.	11	.71	18,400	818	.40	7.5	40	25	3.79	1.07	3.26	2.72	3.44	2.03	.01
Dec.	12	.78	3,790	869	.14	7.5	36	26	4.54	.99	3.13	2.56	3.91	2.23	.02
Mean ⊕	∅142	0.68	∅285,420	807	0.15	7.7	41	26	3.71	0.99	3.24	2.70	3.32	2.07	0.02
Period Avg.		0.81	695,000	931			44	26	3.99	1.20	4.08	2.87	4.09	2.43	
Tons of Constituents, 1972									42,100	6,820	42,200	45,900	90,400	41,600	
Avg. Tons, Period 1969-1972									92,800	17,000	109,000	100,000	228,000	100,000	

⊕ Weighted mean ∅ Total ** Percent of total cations *** Percent of total anions

CHEMICAL ANALYSES OF WATER SAMPLES FROM THE RIO GRANDE AND TRIBUTARIES - 1972

Month	No. of Samples	Dissolved Solids: Tons Per Acre-Foot	Dissolved Solids: Total Tons	ECx10⁶ @25°C	Boron p.p.m.	pH	% Na **	% Cl ***	Mean Milligram Equivalents per Liter: Ca	Mg	Na	CO_3 + HCO_3	SO_4	Cl	NO_3

Rio Grande at Laredo, Texas

Sampling by Laredo Water Plant

Jan.	31	0.89	65,300	949		7.4	39		# 6.00		3.83	2.61		2.93	
Feb.	29	.95	56,000	1,030	0.26	7.4	41	30	4.29	1.89	4.31	2.82	4.56	3.24	0.07
Mar.	31	1.17	52,000	1,240		7.4	48		# 6.12		5.57	2.69		4.20	
Apr.	30	1.03	36,200	1,220		7.3	43		# 7.00		5.31	2.82		3.95	
May	31	.82	79,300	911		7.2	42		# 5.12		3.78	2.56		2.85	
June	30	.97	36,200	1,160	.27	7.6	44	34	4.59	1.81	5.13	2.66	5.16	3.95	.02
July	31	.97	31,300	1,110		7.6	45		# 6.04		4.87	2.75		3.44	
Aug.	31	.53	74,300	611		7.2	31		# 4.10		1.87	2.69		1.41	
Sept.	30	.61	70,400	695		8.0	35		# 4.28		2.35	2.67		1.66	
Oct.	31	.62	137,000	785		8.0	40		# 4.64		3.04	2.72		1.95	
Nov.	30	.65	44,700	745		7.6	39		# 4.40		2.78	2.43		1.86	
Dec.	31	.71	40,900	813		7.6	40		# 4.76		3.18	2.15		2.17	
Mean ⊕ Ø366		0.74	Ø 723,600	849		7.6	40		# 5.02		3.33	2.64		2.38	
Period Avg.		0.67	1,394,000	758			40		# 4.47		3.04	2.52		2.07	
Tons of Constituents, 1972											102,000	106,000		113,000	
Avg. Tons, Period 1956-1972											199,000	215,000		209,000	

Río Salado at Las Tortillas, Tamaulipas

Sampling by Mexican Section

Jan.	1	1.54	78,200	1,570		7.4	41		# 9.80		6.70	3.05		4.82	
Feb.	1	1.78	65,300	1,690	0.38	7.5	41	30	6.59	4.11	7.31	2.88	9.74	5.42	0.24
Mar.	1	2.71	69,700	2,480		7.4	45		#14.80		11.96	3.08		8.89	
Apr.	1	4.57	101,000	4,100		7.3	48		#24.80		22.49	2.52		15.52	
May	1	4.46	180,000	4,070		7.3	50		#23.60		23.27	3.31		16.08	
June	1	3.26	132,000	3,190	1.1	7.7	46	31	11.38	7.98	16.18	3.61	21.24	11.28	.21
July	1	2.96	64,100	2,870		7.3	46		#17.10		14.62	2.59		9.73	
Aug.	1	3.63	69,300	3,390		7.5	47		#20.40		18.10	3.18		11.99	
Sept.	1	2.60	70,700	2,650		7.6	45		#15.80		13.01	2.43		8.46	
Oct.	1	1.05	31,500	1,150		8.0	36		# 7.60		4.22	2.56		2.65	
Nov.	1	3.88	48,600	3,530		7.6	44		#23.00		18.14	3.15		11.34	
Dec.	1	3.97	37,400	3,680		7.6	44		#24.00		18.92	3.08		11.90	
Mean ⊕ Ø12		2.82	Ø947,800	2,680		7.5	45		#16.32		13.55	2.99		9.29	
Period Avg.		0.82	299,000	864			35		# 5.85		3.21	2.44		2.29	
Tons of Constituents, 1972											142,000	41,000		151,000	
Avg. Tons, Period 1955-1972											36,700	36,400		40,400	

‡ Rio Grande below Falcon Dam, Texas, U. S. Tailrace

Sampling by U. S. Section

Jan.	8	0.56	161,000	638	0.21	7.1	35	25	3.09	0.90	2.18	2.38	2.39	1.58	0.03
Feb.	9	.63	74,700	687	.16	7.2	38	26	3.29	.99	2.61	2.52	2.64	1.78	.02
Mar.	6	.73	41,800	777	.13	7.1	36	27	3.59	1.23	2.70	2.62	3.06	2.09	.01
Apr.	12	.70	294,000	778	.15	7.4	37	27	3.59	1.23	2.78	2.39	3.31	2.14	.01
May	4	.73	15,700	784	.16	7.4	39	29	3.49	1.32	3.04	2.33	3.33	2.31	.06
June	3	.71	16,200	822	.18	8.1	40	29	3.49	1.32	3.18	2.31	3.52	2.34	.00
July ‼	0	.74	9,500	870			41	30	3.56	1.40	3.44	2.28	3.76	2.55	
Aug.	3	.78	48,400	905	.30	7.6	42	31	3.64	1.48	3.70	2.26	4.00	2.76	.01
Sept.	8	.78	147,000	925	.31	7.4	43	32	3.54	1.56	3.87	2.10	4.16	2.91	.00
Oct.	6	.79	106,000	945	.19	7.8	43	32	3.59	1.56	3.96	2.10	4.25	2.99	.01
Nov.	5	.85	45,500	962	.22	7.4	43	32	3.64	1.73	4.05	2.10	4.46	3.05	.01
Dec.	2	.85	36,800	974	.22	7.4	43	31	3.69	1.73	4.13	2.13	4.62	3.07	.00
Mean ⊕ Ø66		0.70	Ø 996,600	797			39	29	3.46	1.27	3.04	2.31	3.38	2.28	
Period Avg.		0.68	1,471,000	791			43	29	3.26	1.17	3.30	2.29	3.27	2.27	
Tons of Constituents, 1972									134,000	29,900	135,000	134,000	314,000	156,000	
Avg. Tons, Period 1956-1972									192,000	42,000	223,000	202,000	462,000	237,000	

⊕ Weighted mean Ø Total ** Percent of total cations *** Percent of total anions ‼ Estimated
‡ Tonnage figures based on total release from Falcon Reservoir # Sum of calcium and magnesium

CHEMICAL ANALYSES OF WATER SAMPLES FROM THE RIO GRANDE AND TRIBUTARIES - 1972

Month	No. of Samples	Dissolved Solids: Tons Per Acre-Foot	Dissolved Solids: Total Tons	ECx10⁶ @25°C	Boron p.p.m.	pH	% Na **	% Cl ***	Mean Milligram Equivalents per Liter: Ca	Mg	Na	CO_3 + HCO_3	SO_4	Cl	NO_3

Rio Grande at Fort Ringgold, Rio Grande City, Texas

Sampling by U. S. Section

Jan.	6	0.63	185,000	705	0.22	7.7	38	27	3.34	0.99	2.61	2.59	2.58	1.95	0.02
Feb.	6	.78	107,000	882	.24	7.2	43	32	3.74	1.23	3.74	2.67	3.33	2.88	.04
Mar.	4	1.25	78,700	1,360	.39	7.2	49	40	4.99	1.81	6.52	3.08	5.10	5.42	.04
Apr.	8	.73	319,000	826	.18	7.3	38	28	3.74	1.32	3.04	2.57	3.41	2.37	.01
May	7	1.14	41,800	1,360	.40	7.0	53	43	4.74	1.40	7.05	2.75	4.96	5.78	.03
June	7	.78	118,000	902	.29	7.3	41	31	3.94	1.23	3.61	2.69	3.46	2.79	.03
July	8	.80	106,000	939	.24	7.6	44	34	3.74	1.40	4.00	2.49	3.71	3.16	.01
Aug.	7	.85	70,800	1,010	.29	7.9	45	34	3.89	1.56	4.39	2.56	4.10	3.44	.01
Sept.	9	.68	240,000	807	.26	7.5	39	28	3.64	1.23	3.09	2.49	3.33	2.31	.01
Oct.	6	.85	162,000	1,000	.22	7.8	45	33	3.84	1.56	4.35	2.23	4.46	3.33	.01
Nov.	6	.95	72,700	1,090	.29	7.4	47	36	3.89	1.73	5.00	2.36	4.52	3.86	.06
Dec.	8	.99	57,600	1,150	.32	7.5	47	36	4.19	1.81	5.31	2.49	4.83	4.12	.05
Mean ⊕	Ø82	0.77	Ø1,558,600	892	0.24	7.5	42	31	3.77	1.33	3.64	2.55	3.59	2.82	0.02
Period Avg.		0.71	1,834,000	829			44	30	3.41	1.17	3.54	2.36	3.37	2.49	
Tons of Constituents, 1972									207,000	44,300	229,000	209,000	472,000	274,000	
Avg. Tons, Period 1959-1972									239,000	49,800	285,000	248,000	567,000	309,000	

Morillo Drain in Mexico, 8.4 River Miles above Anzaldúas Dam

Sampling by Mexican Section

Jan.	2	10.6	18,500	10,600	5.1	7.7	74	65	17.96	12.01	86.13	4.16	36.02	74.76	0.08
Feb.	3	10.8	11,000	10,700	6.1	7.7	74	65	17.96	11.60	86.13	3.97	36.23	75.60	.08
Mar.	4	13.7	2,850	13,000	6.2	7.7	76	69	20.06	13.49	105.27	3.47	40.60	97.32	.06
Apr.	2	11.1	18,000	11,100	.54	7.7	74	65	18.36	12.26	87.44	4.46	37.27	77.58	.07
May	5	2.11	52,700	2,450	.98	7.1	64	55	5.74	2.80	15.40	2.43	8.33	13.48	.06
June	4	1.63	111,000	1,950	.24	7.5	61	53	5.14	2.14	11.40	2.62	6.45	10.10	.01
July	5	1.50	51,700	1,760	.73	7.8	61	51	4.59	2.14	10.40	2.39	6.16	8.80	.02
Aug.	No	Flow													
Sept.‼	0	7.69	3,970	8,700			74	62	14.82	9.45	68.05	4.12	31.13	58.10	
Oct.	2	7.81	6,620	8,830	4.4	7.8	74	62	14.97	9.54	68.73	4.16	31.44	58.68	.11
Nov.	No	Flow													
Dec. ‼	0	9.29	1,140	10,500			74	65	17.79	11.90	85.32	4.12	35.68	74.06	
Mean ⊕	Ø27	2.08	¤Ø 277,480	2,380			64	55	5.67	2.69	15.15	2.60	8.05	13.25	
Period Avg.		3.40	178,000	3,730			69	61	7.55	4.22	26.60	2.73	12.39	23.59	
Tons of Constituents, 1972 *									20,600	5,940	63,300	14,200	70,300	85,400	
Avg. Tons, Period 1970-1972									10,780	3,660	43,600	5,830	42,400	59,600	

Rio Grande below Anzaldúas Dam, Texas

Sampling by U. S. Section

Jan.	31	0.87	100,000	957	0.26	7.3	43	36	3.99	1.40	4.09	2.69	3.50	3.50	0.05
Feb.	29	1.03	48,900	1,250	.36	7.5	49	41	4.59	1.73	6.05	2.85	4.41	5.13	.04
Mar.	31	1.47	69,000	1,580	.48	7.5	49	45	5.64	2.30	7.61	2.75	5.87	7.00	.04
Apr.	30	.84	97,100	970	.25	7.2	45	36	3.69	1.40	4.22	2.29	3.79	3.50	.03
May	31	1.94	91,100	2,260	.76	7.2	63	56	5.54	2.47	13.75	2.26	7.41	12.47	.06
June	30	1.07	191,000	1,300	.42	7.6	53	45	4.29	1.65	6.61	2.43	4.64	5.70	.01
July	31	.95	115,000	1,160	.32	7.4	50	41	3.99	1.65	5.70	2.43	4.43	4.71	.03
Aug.	31	1.13	53,400	1,340	.46	7.6	49	44	4.54	2.06	6.35	2.52	4.96	5.78	.02
Sept.	30	.75	151,000	892	.20	7.7	45	34	3.39	1.32	3.78	2.08	3.66	2.96	.03
Oct.	31	.85	100,000	1,060	.24	7.9	47	37	3.79	1.65	4.74	2.26	4.39	3.84	.01
Nov.	30	1.20	70,500	1,430	.38	7.9	48	42	4.89	2.39	6.87	2.56	5.70	6.09	.05
Dec.	31	1.29	50,300	1,480	.42	7.6	50	43	4.84	2.39	7.26	2.49	5.85	6.32	.05
Mean ⊕	Ø366	1.00	Ø1,137,300	1,180	0.33	7.5	49	41	4.14	1.69	5.66	2.40	4.48	4.82	0.03
Period Avg.		0.91	1,405,000	1,070			50	40	3.77	1.42	5.23	2.39	3.95	4.19	
Tons of Constituents, 1972									128,000	31,700	201,000	111,000	332,000	264,000	
Avg. Tons, Period 1959-1972									159,000	36,400	253,000	151,000	399,000	313,000	

⊕ Weighted mean Ø Total ** Percent of total cations *** Percent of total anions ‼ Estimated
* To Rio Grande excluding storm runoff ¤ An additional 233,490 tons pumped to the gulf

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES
1972

The following tables show electrical conductivity, expressed in mhos per centimeter x 10^6 at 25°C, of individual water samples taken at Rio Grande and tributary stations. The determinations were made by the United States Section of the Commission.

Electrical conductivity is a relative indication of the concentration of dissolved solids in the water samples. Though no exact relationship exists between conductivity and dissolved solids in natural waters, a study of recent data pertaining to stations on the Rio Grande watershed indicates that the relationship may be expressed within 10% by the following equations:

Tons per Acre-Foot = .0008878 (EC x 10^6 at 25°C) when conductivity (EC x 10^6 at 25°C) is below 7,520 micromhos.

Tons per Acre-Foot = .001052 (EC x 10^6 at 25°C) - 1.235 when conductivity (EC x 10^6 at 25°C) ranges between 7,520 and 22,000 micromhos.

Rio Grande at El Paso, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		March		April		May		June		July		September	
3	2,440	22	2,690	27	1,050	26	1,480	27	1,870	28	1,190	27	1,080	7	1,210
4	2,330	23	2,710	28	1,040	27	1,510	28	2,030	29	1,160	28	1,190	8	1,410
5	2,380	24	2,710	29	997	28	1,520	29	2,090	30	1,200	29	1,340	11	1,560
7	2,500	25	2,770	30	1,090	29	1,470	31	2,240	July		30	1,220	12	1,570
10	2,440	28	2,820	31	1,110	30	1,410	June		1	1,060	August		15	1,560
11	2,290	29	2,820	April		May		1	2,150	2	1,060	1	1,020	18	1,960
12	2,320	March		1	1,120	1	1,500	2	2,090	3	999	2	1,040	19	1,970
13	2,370	1	2,670	2	1,130	2	1,490	3	2,130	4	992	3	952	21	2,090
14	2,350	2	2,980	3	1,150	3	1,370	5	2,280	5	939	4	966	22	2,090
17	2,440	3	3,040	4	1,160	4	1,520	6	1,980	6	928	5	947	25	2,090
18	2,460	6	1,430	5	1,170	5	1,440	7	2,050	7	924	6	909	26	3,120
19	2,410	7	1,370	6	1,230	6	1,420	8	2,240	8	946	7	1,050	29	3,120
20	2,500	8	1,320	7	1,280	7	1,480	9	1,830	9	982	8	1,040	October	
21	2,440	9	1,270	8	1,250	9	1,500	10	2,110	10	958	9	1,120	3	3,000
24	2,530	10	1,180	9	1,240	10	1,680	11	2,260	11	1,050	10	1,260	5	3,110
25	2,600	11	1,140	10	1,270	11	1,740	12	1,960	12	1,090	11	1,220	16	2,940
26	2,570	12	1,140	11	1,210	12	1,670	13	2,100	13	1,320	12	1,300	17	3,240
27	2,610	13	1,120	12	1,230	13	1,400	14	2,210	14	1,240	13	1,370	19	3,240
28	2,570	14	1,140	13	1,250	14	1,380	16	2,250	15	1,360	15	772	20	1,430
31	2,460	15	1,100	14	1,210	15	1,190	17	1,660	16	1,700	16	1,170	24	2,750
February		16	1,130	15	1,170	16	1,280	18	2,230	17	1,620	17	1,260	26	3,090
1	2,570	17	1,100	16	1,150	17	1,480	19	1,740	18	1,460	18	784	27	2,370
3	2,570	18	1,080	17	1,220	18	1,840	20	1,680	19	1,370	21	948	30	2,830
4	2,710	19	1,080	18	1,290	19	1,750	21	1,930	20	1,110	22	997	31	3,100
7	2,640	20	1,110	19	1,430	20	1,600	22	2,220	21	1,020	24	1,170	November	
8	2,560	21	1,060	20	1,580	21	1,630	23	2,000	22	1,040	25	1,170	2	3,230
9	2,520	22	1,080	21	1,610	22	1,700	24	1,620	23	1,050	28	1,210	3	3,230
10	2,610	23	1,090	22	1,620	23	1,740	25	1,520	24	825	31	799	6	3,200
11	2,620	24	1,040	23	1,650	24	1,740	26	1,480	25	831	September		7	3,040
14	2,620	25	1,050	24	1,840	25	1,770	27	1,240	26	921	5	1,210	9	3,230
15	2,610	26	1,030	25	1,570	26	1,820								

Sampling by U. S. Section

Rio Grande at Fort Quitman, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
February		February		March		April		August		September		October		November	
3	9,780	23	9,780	23	11,820	20	12,380	20	6,010	14	619	4	9,110	1	5,590
9	9,780	March		29	11,820	June		23	2,690	21	7,420	18	2,660	8	5,590
16	9,780	8	10,710	April		8	10,140	September		27	8,110	23	2,440	15	5,590
		15	10,940	12	12,380	8	6,290	6	1,340						

Sampling by U. S. Section

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES
1972

Rio Grande above Rio Conchos near Presidio, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		May		June		August		September		September		October	
3	5,580	31	1,170	30	1,260	11	1,270	11	882	22	1,090	20	4,800
7	5,800	31	1,190	July		14	1,960	13	685	25	969	24	4,990
10	5,840	June		3	1,320	17	759	13	688	29	1,320	26	3,830
17	5,810	2	1,020	21	757	21	772	14	710	October		30	3,720
25	6,420	5	1,250	25	850	24	772	15	681	2	2,280	November	
28	7,030	12	841	28	835	28	710	16	735	2	2,280	2	5,200
February		14	660	31	1,080	September		17	847	6	3,210	6	3,790
1	6,890	16	805	August		1	768	18	883	10	3,870	10	3,710
4	6,890	19	788	2	1,200	5	843	19	904	13	4,240	13	4,370
7	6,890	22	942	7	1,320	8	924	20	1,020	16	4,580	17	4,820
		26	1,080										

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
November		December	
20	4,960	1	5,290
27	4,950	4	5,450
December		7	5,520
1	5,290	11	5,480
4	5,450	15	5,650
7	5,520	18	5,940
11	5,480	26	6,110
15	5,650	29	6,010
18	5,940		
26	6,110		
29	6,010		

Sampling by U. S. Section

Rio Conchos near Ojinaga, Chihuahua

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		April		May		July		August		September	
3	1,300	23	1,350	10	1,220	29	1,230	10	1,210	18	1,140	25	890
7	1,330	25	1,350	12	1,220	30	1,360	12	1,220	21	1,150	27	805
10	1,090	28	1,340	14	1,240	31	912	14	1,000	23	1,180	29	773
12	1,080	March		17	1,210	June		18	1,100	25	1,140	October	
14	1,090	1	1,340	19	1,240	5	1,280	19	880	28	913	2	755
17	1,100	3	1,340	21	1,250	7	1,060	20	920	30	1,140	4	715
19	1,110	6	1,200	24	1,240	8	1,020	21	1,150	September		6	1,090
21	1,100	8	1,190	26	1,240	9	1,090	24	1,160	1	1,140	10	1,380
24	1,100	10	1,200	28	1,240	12	1,130	26	1,130	4	1,100	12	1,350
26	1,110	13	1,200	May		13	1,170	28	1,240	6	1,090	14	1,000
28	1,060	15	1,200	1	1,250	14	1,050	31	1,230	8	1,090	16	1,420
31	1,120	17	1,210	3	1,240	16	1,260	August		10	1,070	18	1,360
February		20	1,220	5	1,230	19	1,240	2	1,230	11	913	20	1,340
2	1,390	22	1,220	8	1,240	21	1,250	4	1,210	13	867	23	1,360
4	1,410	24	1,220	10	1,240	23	1,260	7	1,200	15	895	25	1,320
7	1,340	27	1,180	12	1,230	26	1,260	9	880	16	893	27	1,310
9	1,370	29	1,190	15	1,230	28	1,260	11	894	18	1,040	30	1,320
11	1,350	31	1,260	17	1,240	30	1,270	12	1,060	19	1,050	November	
14	1,340	April		19	1,230	July		13	819	20	1,040	1	1,400
16	1,350	3	1,200	22	1,220	3	1,230	14	1,230	21	983	3	1,310
18	1,350	5	1,230	24	1,230	5	1,240	15	1,250	22	950	6	1,390
21	1,340	7	1,230	26	1,240	7	1,230	16	1,250	23	980	8	1,390

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
November		December	
10	1,390	4	1,340
13	1,320	6	1,350
15	1,390	8	1,340
17	1,360	11	1,260
20	1,380	13	1,310
22	1,370	15	1,160
24	1,300	18	1,250
27	1,340	20	1,180
29	1,350	22	1,220
December		25	1,190
1	1,400	27	1,250
4	1,350	29	1,270
6	1,350		
8	1,340		
11	1,260		
13	1,310		
15	1,160		
18	1,250		
20	1,180		
22	1,220		
25	1,190		
27	1,250		
29	1,270		

Sampling by Mexican Section

Rio Grande below Rio Conchos near Presidio, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		April		May		July		August		September	
3	1,460	22	1,420	14	1,300	31	1,150	10	1,260	28	1,010	22	788
7	1,470	28	1,420	17	1,210	June		14	1,250	September		25	915
10	1,120	March		20	1,310	2	1,220	17	1,160	1	1,080	29	836
12	1,090	2	1,320	24	1,300	5	1,240	21	850	5	912	October	
17	1,100	6	1,210	27	1,300	7	936	25	1,200	8	1,030	2	826
18	1,080	13	1,240	May		8	989	27	1,170	11	1,030	6	1,260
25	1,110	16	1,250	1	1,310	12	1,240	31	1,220	12	930	10	1,560
28	1,050	20	1,190	4	1,280	15	1,010	August		13	797	13	1,340
31	1,150	23	1,270	3	1,290	19	1,200	2	1,250	14	828	16	1,570
February		27	1,200	11	1,300	22	1,200	7	1,070	15	1,010	20	1,620
1	1,180	31	1,320	15	1,300	26	1,280	11	1,100	16	881	24	1,710
4	1,330	April		18	1,300	30	1,320	14	936	17	944	26	1,680
7	1,360	3	1,200	22	1,270	July		17	853	18	995	30	1,650
14	1,340	7	1,250	26	1,280	3	1,260	21	876	19	988	November	
17	1,370	10	1,280	30	1,080	7	1,270	24	1,100	20	1,010	2	1,770

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
November		December	
6	1,730	1	1,550
13	1,550	4	1,510
15	1,600	7	1,540
17	1,640	11	1,510
20	1,600	15	1,460
27	1,550	18	1,480
December		26	1,490
1	1,550	29	1,460
4	1,510		
7	1,540		
11	1,510		
15	1,460		
18	1,480		
26	1,490		
29	1,460		

Sampling by U. S. Section

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES
1972

Rio Grande at Johnson Ranch near Castolon, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		April		May		June		August		September		November	
3	1,690	23	1,470	7	1,330	22	1,330	26	1,270	2	1,270	13	927	7	1,770
7	1,630	29	1,480	11	1,320	25	1,300	30	1,350	8	1,220	19	981	13	1,640
11	1,170	March		18	1,340	30	890	July		11	960	26	920	16	1,640
17	1,120	2	1,470	21	1,350	31	969	3	1,380	14	866	October		20	1,550
21	1,140	6	1,480	25	1,370	June		6	1,280	17	1,070	2	864	27	1,570
24	1,120	13	1,280	28	1,340	2	1,160	10	1,270	22	1,100	10	1,410	December	
28	1,130	16	1,290	May		5	1,490	14	1,240	24	872	16	1,270	1	1,590
February		21	1,330	2	1,350	8	736	17	1,730	28	811	19	1,560	4	1,600
1	1,170	23	1,310	4	1,350	12	1,140	21	937	September		24	1,560	11	1,580
4	1,330	28	1,290	9	1,340	15	856	24	1,030	1	1,080	27	1,680	15	1,550
7	1,470	31	1,260	11	1,270	19	928	28	1,100	5	903	30	1,620	19	1,480
14	1,480	April		15	1,340	23	1,200	31	1,190	8	1,090	November		27	1,500
17	1,470	3	1,350	19	1,330					11	1,070	2	1,590		

Sampling by U. S. Section

Rio Grande at Foster Ranch near Langtry, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		April		May		July		August		October		November	
3	1,190	22	1,190	3	1,140	15	1,090	3	1,080	14	804	2	898	20	1,280
10	1,240	28	1,170	10	1,160	22	1,110	10	1,160	21	1,070	10	821	27	1,270
17	1,080	March		17	1,140	30	1,010	17	1,130	28	859	16	1,220	December	
31	1,070	6	1,180	24	1,170	June		24	1,120	September		24	1,210	4	1,220
February		13	1,260	May		5	940	31	1,000	5	1,030	30	1,250	11	1,240
7	1,060	20	1,100	1	852	12	786	August		11	1,030	November		18	1,190
14	1,190	27	1,150	8	1,110	19	776	7	1,110	18	851	6	1,280	26	1,200
										25	871	13	1,330		

Sampling by U. S. Section

Pecos River near Langtry, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		April		May		July		August		October		November	
3	3,400	22	3,340	3	2,990	22	2,920	3	2,650	28	1,930	10	3,080	20	2,550
10	3,450	28	3,340	10	2,920	30	2,570	10	2,420	September		16	2,690	27	2,600
17	3,200	March		17	2,860	June		24	2,370	5	2,080	24	2,290	December	
24	3,070	6	3,270	24	2,750	5	2,540	31	2,410	11	3,910	30	2,430	4	2,610
31	3,030	13	3,240	May		12	2,570	August		18	3,300	November		11	2,680
February		20	969	1	2,640	19	2,380	7	2,320	25	3,070	6	2,420	18	2,790
7	3,190	27	3,020	8	2,990	26	3,140	14	1,630	October		13	2,470	26	2,910
14	3,250			15	5,510			21	1,850	2	3,120				

Sampling by U. S. Section

Devils River at Pafford Crossing near Comstock, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		April		May		July		August		October		November	
3	398	14	406	3	396	30	376	10	370	28	367	10	384	20	394
10	408	22	400	10	389	June		17	364	September		16	357	27	391
17	403	28	397	17	382	5	309	24	366	5	278	24	321	December	
24	404	March		May		12	356	31	368	11	350	30	385	4	396
31	408	6	383	1	268	19	359	August		18	377	November		11	412
February		13	394	8	355	26	363	7	366	25	374	6	383	18	391
7	411	20	375	15	379	July		14	240	October		13	382	26	407
				22	377	3	365	21	384	2	377				

Sampling by U. Section

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES

1972

Rio Grande below Amistad Dam near Del Rio, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		**February**		**March**		**May**		**June**		**August**		**September**		**November**	
3	826	14	805	27	847	12	820	28	830	7	852	25	801	13	856
5	794	16	807	29	839	15	810	30	825	9	844	27	758	15	843
7	745	18	827	31	826	17	825	**July**		11	723	29	758	17	832
10	758	21	816	**April**		19	835	3	803	14	825	**October**		20	827
12	753	23	820	3	834	22	835	5	795	16	873	2	750	22	794
14	761	25	816	5	833	24	832	7	802	18	852	5	758	27	794
17	769	28	823	7	827	26	836	10	809	21	873	10	769	29	794
19	762	**March**		10	825	30	837	12	778	23	867	13	771	**December**	
21	770	1	795	14	831	**June**		14	784	28	857	16	771	1	866
24	772	3	815	17	827	2	826	17	808	30	850	18	828	4	815
26	789	6	830	19	789	5	837	19	808	**September**		20	793	6	870
28	784	8	829	21	825	7	827	21	812	1	834	24	795	8	888
31	799	10	841	24	824	12	835	24	835	5	828	27	794	11	856
February		13	859	26	820	14	839	26	809	8	829	30	822	13	807
2	818	15	864	28	826	16	833	28	823	11	833	**November**		15	860
4	795	17	855	**May**		19	850	31	833	14	828	1	846	18	899
7	836	20	846	1	834	21	857	**August**		18	827	6	818	20	867
9	822	22	860	3	822	23	841	2	838	20	850	8	819	22	834
11	807	24	850	10	830	26	840	4	841	22	842	10	822	27	890
														29	841

Sampling by U. S. Section

** Rio Grande below Maverick Dam near Del Rio, Texas

January		**February**		**April**		**May**		**July**		**August**		**October**		**November**	
1	765	16	758	1	821	16	805	1	795	16	725	1	766	15	770
2	769	17	751	2	812	17	803	2	802	17	771	2	789	16	795
3	767	18	751	3	816	18	798	3	796	18	803	3	745	17	796
4	772	19	743	4	817	19	787	4	804	19	759	4	749	18	796
5	781	20	747	5	816	20	787	5	787	20	780	5	768	19	771
6	782	21	757	6	809	21	790	6	800	21	782	6	760	20	769
7	801	22	755	7	813	22	779	7	788	22	780	7	770	21	808
8	782	23	764	8	811	23	788	8	804	23	783	8	763	22	795
9	756	24	779	9	811	24	788	9	794	24	789	9	762	23	788
10	751	25	777	10	823	25	782	10	799	25	786	10	766	24	779
11	755	26	780	11	812	26	782	11	692	26	784	11	776	25	793
12	756	27	788	12	808	27	789	12	780	27	799	12	776	26	797
13	756	28	783	13	817	28	786	13	798	28	783	13	775	27	797
14	756	29	797	14	818	29	795	14	791	29	788	14	778	28	797
15	757	**March**		15	818	30	793	15	787	30	792	15	775	29	791
16	758	1	804	16	820	31	801	16	780	31	789	16	776	30	781
17	757	2	805	17	824	**June**		17	782	**September**		17	797	**December**	
18	758	3	814	18	818	1	779	18	786	1	793	18	751	1	752
19	754	4	819	19	791	2	794	19	766	2	795	19	742	2	760
20	753	5	817	20	759	3	797	20	678	3	779	20	826	3	765
21	752	6	816	21	835	4	800	21	765	4	794	21	803	4	769
22	753	7	816	22	814	5	791	22	783	5	792	22	783	5	778
23	753	8	811	23	813	6	766	23	781	6	792	23	772	6	779
24	755	9	817	24	807	7	785	24	851	7	798	24	778	7	798
25	759	10	816	25	806	8	789	25	764	8	784	25	778	8	785
26	756	11	819	26	806	9	790	26	761	9	784	26	782	9	778
27	754	12	820	27	809	10	786	27	757	10	780	27	776	10	785
28	754	13	826	28	804	12	783	28	765	11	785	28	774	11	784
29	760	14	832	29	806	13	889	29	753	12	786	29	768	12	788
30	760	15	832	30	808	14	779	30	753	13	790	30	767	13	778
31	767	16	835	**May**		15	770	31	751	14	790	31	773	14	781
February		17	834	1	804	16	557	**August**		15	782	**November**		15	779
1	806	18	834	2	810	17	726	1	762	16	782	1	786	16	769
2	774	19	834	3	794	18	755	2	766	17	788	2	788	17	788
3	773	20	825	4	807	19	755	3	785	18	790	3	784	18	774
4	775	21	881	5	811	20	752	4	791	19	787	4	785	19	770
5	773	22	789	6	806	21	745	5	675	20	790	5	771	20	772
6	778	23	823	7	868	22	739	6	744	21	778	6	770	21	771
7	758	24	821	8	690	23	732	7	734	22	785	7	772	22	768
8	772	25	827	9	790	24	733	8	757	23	857	8	769	23	762
9	774	26	829	10	801	25	750	9	769	24	799	9	774	24	765
10	768	27	830	11	808	26	776	10	760	25	801	10	768	25	768
11	769	28	827	12	807	27	776	11	501	26	805	11	770	26	771
12	765	29	832	13	807	28	783	12	414	27	771	12	771	27	766
13	763	30	826	14	809	29	790	13	264	28	769	13	748	28	769
14	760	31	821	15	810	30	798	14	389	29	766	14	745	29	773
15	753							15	578	30	762			30	772
														31	774

Sampling by Maverick County Water Control and Improvement District No. 1

** Samples collected at the Maverick Canal headgate

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES
1972

Rio Grande at San Antonio Crossing near El Indio, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		April		May		July		August		October		November	
5	638	16	764	5	936	17	920	5	998	14	352	4	752	15	735
12	646	23	815	12	1,040	24	859	12	892	23	630	11	760	21	732
19	761	March		19	1,040	31	930	19	931	30	623	17	777	29	802
26	714	1	894	26	961	June		26	738	September		25	729	December	
February		8	994	May		7	973	August		7	615	November		6	807
2	744	15	1,010	3	984	14	1,030	2	795	13	655	1	758	13	789
9	689	22	971	10	696	21	808	9	691	20	696	8	737	22	792
						28	971			27	775				

Sampling by U. S. Section

Rio Grande at Laredo, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		April		May		July		August		October		November	
1	945	16	1,030	1	1,380	17	748	1	1,060	16	320	1	765	16	743
2	966	17	991	2	1,350	18	988	2	1,080	17	399	2	760	17	769
3	979	18	1,000	3	1,300	19	1,120	3	1,100	18	469	3	759	18	743
4	950	19	1,010	4	1,240	20	1,040	4	1,130	19	498	4	764	19	736
5	928	20	1,010	5	1,160	21	1,030	5	1,150	20	538	5	759	20	784
6	879	21	1,050	6	1,150	22	1,050	6	1,140	21	573	6	752	21	753
7	943	22	1,040	7	1,180	23	1,100	7	1,150	22	608	7	751	22	731
8	860	23	1,010	8	1,190	24	1,120	8	1,180	23	620	8	744	23	764
9	872	24	1,070	9	1,200	25	1,110	9	1,180	24	643	9	741	24	756
10	965	25	1,090	10	1,220	26	1,100	10	1,190	25	655	10	754	25	733
11	874	26	1,090	11	1,120	27	1,130	11	1,200	26	663	11	740	26	681
12	899	27	1,080	12	1,150	28	1,140	12	1,170	27	664	12	747	27	660
13	875	28	1,120	13	1,170	29	1,160	13	1,140	28	676	13	745	28	758
14	929	29	1,120	14	1,170	30	1,150	14	1,140	29	683	14	748	29	774
15	947	March		15	1,150	31	1,180	15	1,130	30	649	15	752	30	760
16	890	1	1,090	16	1,200	June		16	1,130	31	640	16	762	December	
17	910	2	1,100	17	1,210	1	1,180	17	1,160	September		17	759	1	718
18	941	3	1,130	18	1,210	2	1,190	18	1,140	1	626	18	759	2	754
19	1,010	4	1,150	19	1,210	3	1,230	19	1,110	2	607	19	775	3	798
20	983	5	1,060	20	1,240	4	1,170	20	1,080	3	605	20	783	4	819
21	981	6	1,110	21	1,250	5	1,130	21	1,070	4	632	21	795	5	819
22	961	7	1,070	22	1,250	6	1,130	22	1,070	5	618	22	814	6	845
23	1,000	8	1,150	23	1,220	7	1,160	23	1,040	6	598	23	823	7	784
24	992	9	1,190	24	1,170	8	1,140	24	1,050	7	626	24	829	8	816
25	999	10	1,070	25	1,160	9	1,180	25	1,050	8	612	25	844	9	850
26	973	11	1,150	26	1,200	10	1,230	26	1,020	9	625	26	862	10	865
27	1,010	12	1,110	27	1,190	11	1,200	27	1,030	10	633	27	812	11	872
28	937	13	1,150	28	1,190	12	1,220	28	1,080	11	641	28	787	12	845
29	963	14	1,160	29	1,140	13	1,170	29	1,080	12	648	29	728	13	829
30	949	15	1,070	30	1,300	14	1,700	30	980	13	630	30	706	14	802
31	1,030	16	1,230	May		15	1,150	31	964	14	588	31	757	15	759
February		17	1,260	1	1,180	16	1,090	August		15	649	November		16	779
1	1,010	18	1,210	2	1,060	17	1,040	1	954	16	668	1	721	17	751
2	1,090	19	1,210	3	970	18	1,140	2	907	17	670	2	726	18	818
3	1,110	20	1,230	4	979	19	1,130	3	902	18	655	3	738	19	765
4	1,070	21	1,210	5	1,010	20	1,100	4	886	19	681	4	706	20	763
5	1,070	22	1,280	6	1,110	21	1,060	5	873	20	660	5	727	21	765
6	1,080	23	1,240	7	1,120	22	1,060	6	869	21	707	6	733	22	773
7	1,100	24	1,240	8	1,120	23	1,060	7	796	22	766	7	765	23	769
8	1,070	25	1,240	9	1,180	24	1,070	8	880	23	699	8	723	24	764
9	1,030	26	1,310	10	897	25	1,080	9	868	24	698	9	728	25	772
10	1,020	27	1,440	11	628	26	1,060	10	812	25	694	10	711	26	793
11	1,010	28	1,500	12	672	27	1,020	11	737	26	672	11	711	27	811
12	963	29	1,740	13	764	28	1,000	12	633	27	703	12	698	28	800
13	1,010	30	1,550	14	887	29	1,030	13	682	28	769	13	719	29	829
14	1,010	31	1,330	15	909	30	1,050	14	519	29	772	14	737	30	857
15	1,010			16	772			15	377	30	708	15	774	31	829

Sampling by Laredo Water Plant

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES

1972

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C

Río Salado at Las Tortillas, Tamaulipas

January		March		April		May		July		August		September		November	
4	1,580	4	2,500	4	4,140	15	4,160	6	2,880	3	3,430	2	2,660	3	3,540
February						June						October		December	
13	1,730					2	3,190					5	1,140	14	3,690

Sampling by Mexican Section

Rio Grande below Falcon Dam, Texas, U. S. Tailrace

January		February		March		April		May		August		September		November	
5	606	4	661	3	776	12	773	22	796	28	937	20	918	10	949
17	619	9	660	6	772	14	784	26	803	30	932	22	916	13	943
19	622	11	663	10	747	17	781	31	808	September		October		15	942
21	622	14	670	13	777	19	790	June		1	892	4	924	17	949
24	649	18	697	April		21	774	2	810	6	895	6	929	29	949
26	639	23	909	3	757	24	788	5	813	8	909	9	926	December	
28	660	25	846	5	757	26	792	7	813	11	912	11	932	3	957
31	637	28	827	7	761	28	780	August		13	908	18	932	6	956
February		March		10	757	May		14	906	18	917	30	942		
2	658	1	792			1	788								

Sampling by U. S. Section

Rancherías Drain in Mexico, 69.3 River Miles above Anzaldúas Dam

January		February		March		May		July		August		October		November	
5	8,190	16	7,120	28	8,240	10	8,950	4	7,340	16	6,800	4	7,020	15	7,090
12	8,120	23	5,480	April		17	7,260	12	6,770	22	6,290	11	6,680	21	6,950
19	8,240	March		5	7,980	24	6,300	19	7,090	31	5,930	18	7,340	December	
26	8,050	1	6,810	12	8,000	31	4,850	27	6,770	September		25	7,020	8	7,090
February		8	7,650	19	6,840	June		August		6	6,830	November		16	7,360
2	8,240	15	7,430	26	5,980	7	6,020	9	6,820	13	6,910	4	7,260	20	7,320
10	6,830	22	7,940							20	7,040	10	7,310	29	7,190

Sampling by Mexican Section

* Río San Juan at Camargo, Tamaulipas

January		February		March		May		July		August		October		November	
5	780	23	2,020	28	2,740	24	2,160	12	797	28	1,810	18	1,150	21	819
12	923	March		April		31	2,090	17	800	31	1,550	25	1,100	December	
26	1,350	1	2,160	5	2,380	June		August		September		November		8	1,580
February		8	2,430	12	2,440	6	2,200	7	826	6	1,870	4	832	20	1,320
10	2,090	15	2,670	May		July		15	822	13	2,490	10	817	29	883
16	2,410	22	3,500	10	2,670	4	863	21	882	20	2,580	15	814		
				17	1,050										

Sampling by Mexican Section
* Some samples collected below Marte R. Gomez Dam

Rio Grande at Fort Ringgold, Rio Grande City, Texas

January		February		April		June		July		August		September		November	
6	742	28	1,450	21	808	5	1,010	7	910	21	928	28	591	17	1,070
10	835	March		24	812	9	786	10	930	25	945	October		20	1,010
14	696	6	1,330	26	812	16	1,050	14	960	28	931	6	918	27	1,190
17	704	20	1,340	28	1,050	18	786	17	1,560	September		10	958	December	
21	666	27	1,900	May		19	786	21	1,010	1	930	13	1,000	1	1,030
27	678	31	1,070	1	1,110	21	822	28	802	5	914	20	988	4	1,120
February		April		4	897	23	826	31	842	8	936	24	1,020	8	1,170
3	702	7	810	8	1,610	26	883	August		11	937	27	1,240	15	1,410
7	780	10	797	11	2,390	30	916	3	971	18	938	November		18	1,400
14	820	14	802	14	1,240	July		7	1,070	22	960	2	1,210	20	1,240
18	1,490	17	798	18	1,280	3	930	10	1,290	25	634	6	1,030	26	1,140
25	1,240			25	1,780			18	1,040	27	526	9	1,060	29	1,040

Sampling by U. S. Section

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES
1972

Puertecitos Drain in Mexico, 46.8 River Miles above Anzaldúas Dam

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		April		May		June		August		September		November	
5	5,020	16	5,010	5	6,160	24	1,150	26	1,510	11	4,600	21	4,180	10	4,380
13	4,800	23	5,560	12	5,270	27	1,210	July		18	4,510	October		16	4,290
19	4,850	March		19	5,380	29	1,190	1	1,460	24	4,510	4	2,740	28	4,490
26	4,750	1	5,660	26	5,050	31	1,140	8	1,330	September		20	2,990	December	
February		8	5,870	May		June		13	892	2	3,740	25	4,080	6	4,490
2	4,820	15	5,980	10	5,170	7	1,250	27	4,380	8	4,020	November		20	4,500
10	4,770	22	5,740	17	5,200	21	1,550	August		14	4,160	4	4,350	29	4,500
		28	5,810					4	4,310						

Sampling by Mexican Section

Los Indios Drain in Mexico, 46.8 River Miles above Anzaldúas Dam

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		March		May		July		August		October		November	
5	3,490	16	3,550	28	3,490	10	3,480	1	3,390	18	3,560	4	3,450	16	3,410
13	3,540	23	3,530	April		17	3,440	8	3,400	24	3,520	20	3,500	28	3,380
19	3,550	March		5	3,490	24	3,480	13	3,310	September		25	3,490	December	
26	3,160	1	3,390	12	3,480	31	3,300	27	3,350	2	3,700	November		6	3,360
February		8	3,500	19	3,400	June		August		8	3,640	4	3,460	20	3,310
2	3,360	15	3,430	26	3,310	7	3,070	4	3,330	21	3,590	10	3,410	29	3,310
10	3,610	22	3,480			21	3,390	11	3,370						

Sampling by Mexican Section

Huizache Drain in Mexico, 41.8 River Miles above Anzaldúas Dam

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		March		May		June		August		September		November	
5	4,320	16	4,660	28	4,580	10	4,580	26	855	4	2,780	14	2,820	4	3,360
13	3,750	23	4,740	April		17	4,300	July		11	3,010	21	2,750	10	4,210
19	3,770	March		5	4,060	24	4,150	1	852	18	2,820	October		16	3,260
26	4,050	1	4,550	12	3,700	31	3,870	8	843	24	2,850	4	2,720	28	4,200
February		8	4,650	19	3,770	June		13	840	September		20	2,670	December	
2	3,950	15	4,500	26	3,890	7	3,410	27	2,810	2	2,730	25	2,740	6	4,250
10	4,190	22	4,520			21	834			8	2,710			20	4,220
														29	3,560

Sampling by Mexican Section

Rio Grande near Los Ebanos, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		April		May		July		August		October		November	
3	970	18	1,800	3	1,250	19	2,340	5	917	18	1,390	2	766	17	1,200
5	1,000	21	2,000	5	936	22	1,840	8	943	21	1,110	4	815	20	1,120
7	908	23	1,910	7	893	24	1,770	10	960	23	1,060	9	981	22	1,170
10	1,040	25	1,490	10	814	26	1,800	12	944	25	1,090	11	979	24	1,370
13	912	28	1,470	12	802	30	1,350	14	1,010	28	1,040	13	1,050	27	1,510
14	842	March		15	819	June		17	1,020	30	1,030	16	1,030	29	1,690
16	778	1	1,590	17	797	2	1,070	19	1,120	September		18	1,040	December	
19	768	3	1,770	19	811	5	1,300	21	1,090	1	976	20	1,040	1	1,410
21	726	6	1,410	21	823	7	1,220	24	882	4	953	23	1,180	4	1,170
24	695	8	1,360	24	814	9	1,030	26	851	6	953	25	1,120	6	1,350
26	700	10	1,030	26	834	12	743	28	826	8	1,010	27	1,260	8	1,340
28	704	13	1,050	29	947	14	1,300	31	943	11	1,020	30	1,250	11	1,400
31	738	15	1,550	May		16	1,260	August		13	1,030	November		13	1,450
February		17	2,060	1	1,220	19	839	2	1,050	15	1,070	1	1,240	15	1,740
2	778	20	1,940	3	996	21	817	4	1,200	18	1,010	3	1,310	18	1,980
4	823	22	1,860	5	1,190	23	851	7	1,410	20	1,050	6	1,260	20	1,550
7	845	24	2,270	8	1,930	26	925	9	1,410	22	987	8	1,210	22	1,220
9	917	27	2,570	10	2,310	28	989	11	1,490	25	547	10	1,210	25	1,250
11	982	29	2,520	12	2,260	30	993	14	1,320	27	734	13	1,110	27	1,140
14	1,090	31	1,230	15	2,200	July		16	1,320	29	602	15	1,080	29	1,170
16	1,200			17	1,620	3	964								

Sampling by U. S. Section

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES
1972

Rio Grande at Penitas, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		March		May		June		August		September		November	
3	1020	23	2080	22	1250	5	1680	23	876	9	1470	27	597	13	1170
5	1020	25	1980	24	1300	8	1160	26	1260	11	1630	29	662	15	1140
7	1160	28	1370	27	1570	10	1150	28	1010	14	1600	October		17	1180
10	1210	29	1520	29	1670	12	1160	30	1120	16	1420	2	791	20	1220
12	1130	March		31	1770	15	2850	July		18	1480	4	782	22	1080
14	767	1	1610	April		17	2640	3	988	21	1350	6	971	24	1110
17	778	2	1610	3	1650	19	1990	5	1010	23	1150	9	1000	27	1310
19	767	3	1640	5	1250	22	2360	7	1000	25	1160	11	1020	29	1320
21	806	4	2010	7	927	24	2800	10	927	28	1150	13	1070	December	
24	679	5	1930	10	880	26	2110	12	1040	30	1070	16	1090	1	2070
28	698	6	1780	12	821	29	2670	14	985	September		18	1080	4	1140
31	769	7	1600	14	812	31	1360	17	1220	1	985	20	1270	6	1240
February		8	1570	17	808	June		19	1500	4	988	23	1260	8	1280
2	817	9	1470	19	808	2	1250	21	1110	6	951	25	1100	11	1400
4	924	10	1270	21	826	5	1240	24	1060	8	982	27	1200	13	1550
7	861	11	1260	24	813	7	1330	26	1550	11	994	30	1440	15	1540
9	868	12	1200	26	838	9	1220	28	1410	13	1040	November		18	1520
11	1010	13	1200	28	879	12	1110	31	925	15	1010	1	1350	20	1760
14	1040	14	1130	May		14	2090	August		18	991	3	1350	22	1780
16	1090	15	1130	1	1030	16	1650	2	986	20	1070	6	1400	25	1660
18	1100	17	1160	3	1070	19	1910	4	984	22	957	8	1330	27	1300
21	1790	20	1160			21	882	7	1400	25	1140	10	1340	29	1250

Sampling by U. S. Section

Rio Grande above Anzalduas Dam, South of Abram, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		March		May		June		August		September		November	
3	974	21	1850	20	1990	5	1100	23	834	9	1460	27	730	13	1290
5	988	23	2090	22	2220	8	1090	26	905	11	1600	29	599	15	1160
7	1050	25	2150	24	2120	10	1150	28	957	14	1560	October		17	1140
10	1240	28	1470	27	2050	12	1500	30	1030	16	1510	2	740	20	1220
12	1100	29	1390	29	2130	15	2390	July		18	1430	4	791	22	1130
14	784	March		31	2290	17	2680	3	1020	21	1460	6	903	24	1350
17	747	1	1550	April		19	1600	5	995	23	1190	9	969	27	1760
19	722	2	1600	3	2130	22	2420	7	953	25	1140	11	1010	29	1960
21	787	3	1710	5	1180	24	2590	10	879	28	1140	13	999	December	
24	680	4	1880	7	953	26	2070	12	994	30	1100	16	1100	1	1980
26	708	5	1900	10	866	30	1930	14	960	September		18	1100	4	1080
28	704	6	1770	12	837	31	1490	17	1200	1	1010	20	1140	6	1070
31	747	7	1700	14	816	June		19	1140	4	977	23	1190	8	1260
February		8	1730	17	810	2	1380	21	1210	6	978	25	1190	11	1400
2	723	9	1570	19	804	5	1070	24	995	8	960	27	1130	13	1370
4	809	10	1300	21	817	7	1150	26	940	11	992	30	1410	15	1520
7	793	11	1240	24	807	8	1230	28	889	13	1010	November		18	1490
9	805	12	1170	26	834	12	713	31	945	15	1020	1	1450	20	1850
11	1090	13	1170	28	839	14	821	August		18	984	3	1380	22	1870
14	1070	14	1150	May		16	1300	2	1030	20	1010	6	1550	25	1290
16	1090	15	1150	1	952	19	1120	4	1150	22	967	8	1320	27	1310
18	1140	17	1210	3	1070	21	854	7	1380	25	706	10	1290	29	1290

Sampling by U. S. Section

Morillo Drain in Mexico, 8.4 River Miles above Anzaldúas Dam

January		February		March		April		May		June		July		July	
19	a) 10,540	9	a) 9,360	9	a) 12,050	6	a) 12,360	23	a) 3,680	1	a) 1,790	8	a) 1,640	31	a) 10,710
24	a) 10,320	24	a) 12,210	16	a) 14,630	12	a) 9,680	25	a) 1,970	3	a) 1,850	11	a) 1,660	October	
February		March		23	a) 12,510	May		29	a) 1,790	19	a) 2,150	14	a) 1,550	2	b) 7,900
3	a) 10,250	1	a) 11,930			4	a) 5,940	30	a) 1,790	29	a) 1,810	24	a) 8,240	2	c) 11,350
														19	a) 8,440

a) Morillo Drain at Pumping Plant b) Esterito Drain at Arguelles c) Morillo Drain below Brecha Arguelles
Sampling by Mexican Section

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES

1972

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C

Rio Grande below Anzalduas Dam, Texas

January		February		April		May		July		August		October		November	
1	1120	16	1120	1	2080	16	3150	1	1280	16	1660	1	776	16	1230
2	1040	17	1130	2	2110	17	2600	2	1270	17	1610	2	845	17	1180
3	1060	18	1100	3	2450	18	2330	3	1220	18	1660	3	899	18	1170
4	1050	19	1110	4	2470	19	2870	4	1180	19	1680	4	960	19	1180
5	1030	20	1120	5	1720	20	2930	5	1160	20	1570	5	959	20	1240
6	1070	21	1280	6	1310	21	2880	6	1170	21	1570	6	996	21	1260
7	1100	22	1480	7	1050	22	2940	7	1130	22	1560	7	1030	22	1180
8	1070	23	1710	8	936	23	4330	8	1170	23	1470	8	1090	23	1130
9	1110	24	1900	9	887	24	3030	9	1140	24	1300	9	1120	24	1270
10	1080	25	1990	10	874	25	2440	10	1150	25	1210	10	1130	25	1510
11	1210	26	2060	11	914	26	2220	11	1120	26	1200	11	1020	26	1690
12	1240	27	2240	12	858	27	1910	12	1170	27	1220	12	1010	27	1860
13	1180	28	2180	13	830	28	1950	13	1200	28	1220	13	1030	28	2040
14	1030	29	2000	14	817	29	1920	14	1140	29	1190	14	1050	29	2170
15	801	March		15	828	30	1780	15	1170	30	1170	15	1080	30	2230
16	817	1	1860	16	830	31	1850	16	1220	31	1120	16	1110	December	
17	788	2	1640	17	832	June		17	1320	September		17	1120	1	2340
18	758	3	1600	18	934	1	1520	18	1350	1	1070	18	1130	2	2100
19	756	4	1680	19	922	2	1540	19	1330	2	998	19	1110	3	1860
20	788	5	1850	20	929	3	1570	20	1350	3	1040	20	1090	4	1670
21	791	6	1860	21	916	4	1500	21	1520	4	980	21	1120	5	1520
22	774	7	1950	22	835	5	1330	22	1230	5	967	22	1120	6	1330
23	687	8	1900	23	912	6	1300	23	1240	6	959	23	1130	7	1140
24	818	9	1760	24	933	7	1350	24	1110	7	955	24	1220	8	1110
25	866	10	1730	25	950	8	1360	25	1440	8	960	25	1270	9	1110
26	880	11	1390	26	982	9	1460	26	1070	9	975	26	1200	10	1160
27	893	12	1270	27	987	10	1220	27	981	10	993	27	1190	11	1200
28	881	13	1240	28	1120	11	842	28	928	11	1000	28	1190	12	1250
29	886	14	1260	29	1050	12	1010	29	907	12	1000	29	1180	13	1300
30	940	15	1470	30	1400	13	1210	30	928	13	1020	30	1240	14	1380
31	928	16	1410	May		14	1420	31	943	14	1060	31	1310	15	1400
February		17	1240	1	1430	15	1550	August		15	1040	November		16	1420
1	1000	18	1210	2	1390	16	1760	1	989	16	1010	1	1400	17	1410
2	986	19	1250	3	1540	17	1720	2	1030	17	1010	2	1360	18	1370
3	921	20	1320	4	1750	18	1700	3	1070	18	1040	3	1420	19	1430
4	905	21	1360	5	1610	19	1500	4	1110	19	1000	4	1430	20	1500
5	1030	22	1440	6	1370	20	1160	5	1280	20	1030	5	1440	21	1460
6	1170	23	1640	7	1320	21	1050	6	1290	21	1090	6	1490	22	1530
7	1210	24	1600	8	1410	22	1030	7	1390	22	982	7	1500	23	1790
8	913	25	1640	9	1510	23	1080	8	1480	23	976	8	1530	24	1880
9	906	26	1770	10	1670	24	1080	9	1460	24	1090	9	1450	25	1920
10	1010	27	1790	11	1530	25	1110	10	1540	25	801	10	1390	26	1770
11	971	28	1880	12	1720	26	1130	11	1660	26	685	11	1350	27	1640
12	1120	29	2000	13	2660	27	1160	12	1650	27	753	12	1330	28	1450
13	1140	30	2050	14	2930	28	1190	13	1750	28	581	13	1350	29	1350
14	1070	31	2130	15	2950	29	1240	14	1750	29	628	14	1300	30	1470
15	1080					30	1250	15	1740	30	687	15	1280	31	1370

Sampling by U. S. Section

Arroyo Colorado South of Harlingen, Texas

January		February		March		May		July		August		October		November	
3	5180	14	5140	27	4960	1	3320	17	4750	28	6050	16	5030	27	4680
10	4980	23	5540	April		15	1520	24	4420	September		30	4950	December	
17	4730	28	5450	3	5620	June		31	5290	6	5540	November		6	5330
24	4820	March		10	5470	7	4890	August		20	5550	6	5340	11	5530
February		8	5150	17	5540	July		7	5890	25	1460	13	5240	18	5120
7	4980	20	2890	24	5340	3	5260	21	5620	October		20	5210	27	5190
										2	4830				

Sampling by U. S. Section

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES
1972

North Floodway near Sebastian, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		February		March		May		July		August		October		November	
3	5890	14	6260	27	6520	1	5390	17	5560	28	5500	16	4130	27	5250
10	5470	23	6470	April		8	6460	24	4690	September		30	4160	December	
17	5470	28	5410	3	7000	June		31	6280	6	4380	November		6	5300
24	4910	March		10	6720	6	5030	August		20	4960	6	4780	11	4810
February		6	5950	17	5300	July		7	6080	25	3270	13	4360	18	4760
7	6260	20	4920	24	5380	5	6690	21	4850	October		20	4250	27	5320
										2	4580				

Sampling by U. S. Section

Rio Grande at Mercedes, Texas, Pumps

January		February		April		May		July		August		October		November	
1	1270	16	1130	1	1900	16	2510	1	1240	16	1700	1	727	16	1430
2	1150	17	1100	2	2000	17	2840	2	1300	17	1730	2	721	17	1440
3	1150	18	1110	3	2000	18	2800	3	1310	18	1840	3	773	18	1380
4	1110	19	1290	4	1930	19	3150	4	1330	19	1790	4	833	19	1360
5	1120	20	1370	5	2180	20	2800	5	1270	20	1790	5	869	20	1360
6	1140	21	1350	6	2160	21	2090	6	1260	21	1800	6	945	21	1220
7	1150	22	1380	7	2140	22	2470	7	1160	22	1810	7	977	22	1200
8	1120	23	1360	8	2290	23	2670	8	1200	23	1770	8	977	23	1280
9	1140	24	1410	9	2080	24	2890	9	1150	24	1740	9	973	24	1260
10	1140	25	1430	10	1150	25	3430	10	1180	25	1700	10	1070	25	1180
11	1280	26	1490	11	1010	26	3850	11	1190	26	1680	11	1090	26	1180
12	1230	27	1630	12	928	27	3270	12	1190	27	1520	12	1130	27	1410
13	1230	28	1790	13	927	28	2870	13	1230	28	1510	13	1040	28	1600
14	1310	29	1990	14	884	29	2580	14	1160	29	1590	14	1030	29	1370
15	1360	March		15	861	30	2450	15	1210	30	1340	15	1060	30	1830
16	1350	1	2170	16	844	31	1940	16	1250	31	1320	16	1060	December	
17	1070	2	2220	17	874	June		17	1260	September		17	1080	1	2050
18	912	3	2220	18	867	1	2000	18	1260	1	1280	18	1120	2	2110
19	908	4	2090	19	861	2	1820	19	1300	2	1210	19	1140	3	2240
20	938	5	1980	20	861	3	1720	20	1410	3	1130	20	1100	4	2260
21	920	6	1750	21	946	4	1550	21	1400	4	1130	21	1080	5	2320
22	875	7	1750	22	962	5	1600	22	1480	5	1130	22	1110	6	2070
23	879	8	1930	23	958	6	1620	23	1480	6	1010	23	1110	7	1870
24	857	9	1910	24	869	7	1660	24	1360	7	996	24	1190	8	1610
25	758	10	2090	25	940	8	1450	25	1430	8	980	25	1180	9	1460
26	741	11	1880	26	953	9	1290	26	1180	9	981	26	1180	10	1220
27	907	12	1730	27	972	10	1280	27	1470	10	979	27	1290	11	1240
28	927	13	1560	28	975	11	1500	28	1290	11	1000	28	1340	12	1410
29	958	14	1260	29	979	12	1120	29	1020	12	990	29	1340	13	1290
30	973	15	1150	30	1070	13	833	30	941	13	1030	30	1340	14	1320
31	960	16	1220	May		14	890	31	937	14	1050	31	1300	15	1330
February		17	1380	1	1130	15	1280	August		15	1050	November		16	1390
1	955	18	1580	2	1140	16	1480	1	958	16	1070	1	1290	17	1530
2	952	19	1790	3	1270	17	1560	2	989	17	1090	2	1310	18	1530
3	989	20	1800	4	1490	18	1780	3	1040	18	1090	3	1340	19	1560
4	1100	21	1710	5	1240	19	1780	4	1060	19	1050	4	1410	20	1520
5	1210	22	1670	6	1380	20	1730	5	1140	20	1040	5	1460	21	1570
6	1340	23	1650	7	1920	21	1400	6	1140	21	1030	6	1460	22	1570
7	1330	24	1810	8	1830	22	1140	7	1210	22	1030	7	1520	23	1560
8	1080	25	1670	9	1830	23	1050	8	1370	23	1040	8	1480	24	1590
9	1250	26	1680	10	1830	24	1050	9	1370	24	960	9	1520	25	1580
10	1290	27	1670	11	1830	25	1080	10	1440	25	957	10	1580	26	1640
11	1340	28	1680	12	1540	26	1080	11	1530	26	988	11	1570	27	1840
12	1150	29	1790	13	1620	27	1110	12	1670	27	558	12	1570	28	1940
13	1220	30	1820	14	1630	28	1160	13	1670	28	689	13	1570	29	1940
14	1220	31	1870	15	1560	29	1180	14	1670	29	734	14	1380	30	1750
15	1180					30	1210	15	1640	30	502	15	1380	31	1570

Sampling by U. S. Section

ELECTRICAL CONDUCTIVITY OF WATER SAMPLES
1972

Rio Grande near San Benito, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		March		May		June		August		September		October		November	
19	998	10	1840	2	1140	22	1240	1	965	7	992	19	1140	21	1560
20	1050	21	1730	9	1830	27	1100	4	1040	12	1020	24	1180	28	1440
28	956	28	1630	12	1880	29	1180	8	1220	19	1030	26	1240	December	
February		April		16	1570	July		11	1420	26	1040	31	1370	5	2210
4	1040	4	1930	17	2350	6	1240	17	1690	27	709	November		7	2190
10	1130	6	1970	30	2800	11	1220	22	1300	October		3	1310	12	1270
17	1110	7	2000	June		13	1220	24	1790	5	882	7	1540	14	1310
24	1310	11	1380	6	1540	18	1220	29	1720	10	1060	10	1510	19	1450
March		13	991	15	1080	20	1290	31	1490	12	1110	14	1480	21	1490
3	1930	14	936	20	1760	27	1250	September		17	1080	16	1430	26	1580
		25	910					1	1040						

Sampling by U. S. Section

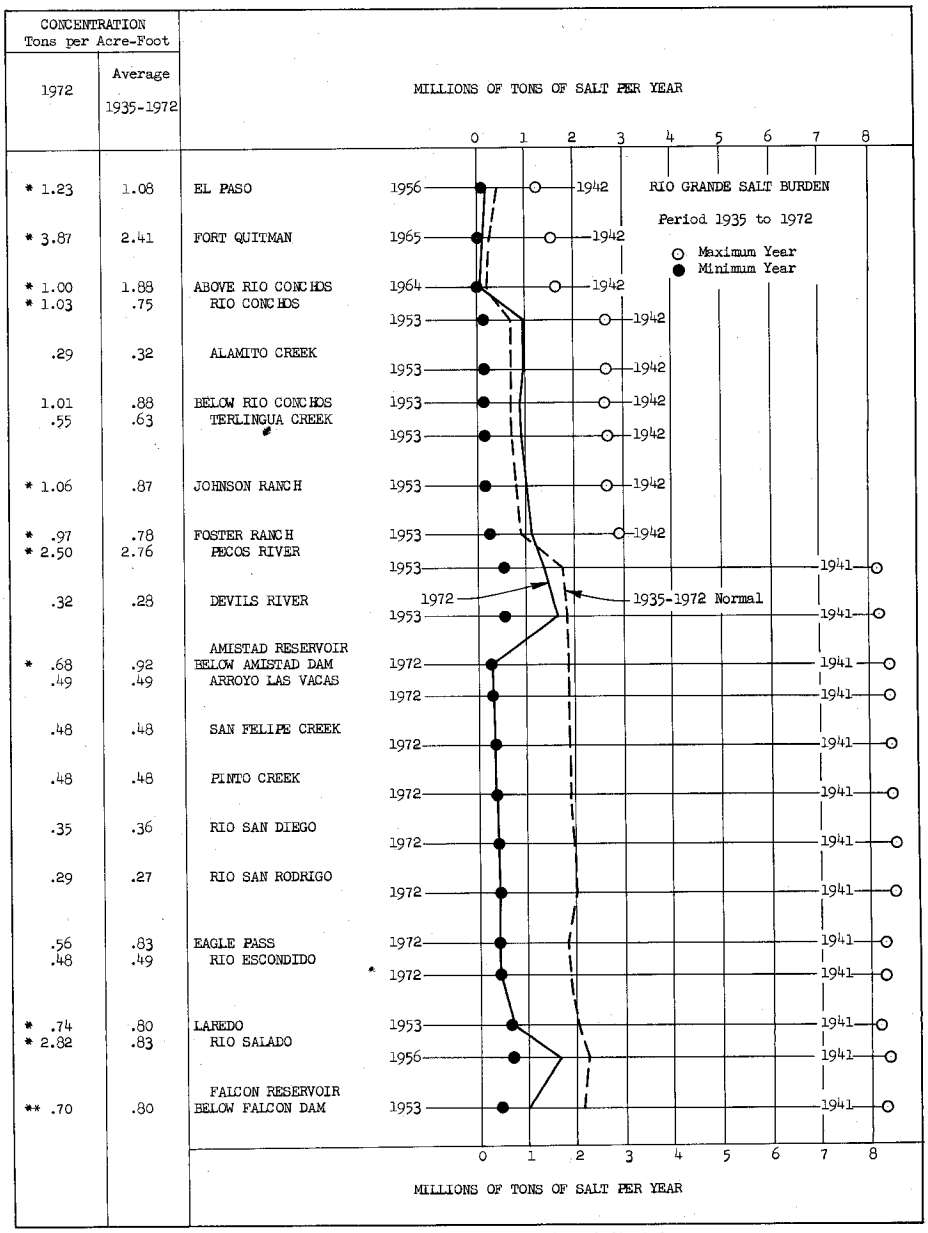
Rio Grande near Brownsville, Texas

Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C	Date	ECx10⁶ @25°C
January		March		April		June		July		August		October		November	
19	1390	10	1940	25	992	9	1640	20	1410	29	2130	17	1060	21	1770
20	1510	22	1440	May		15	931	25	1500	31	2020	24	1290	28	1290
28	1110	28	1800	2	1000	20	1800	25	1380	September		26	1250	30	1410
February		30	1770	5	1140	22	1600	August		5	1470	31	1340	December	
4	1010	April		9	1350	27	1100	1	979	12	1070	November		5	1920
10	1300	4	1760	12	1390	29	1160	8	1160	19	1110	3	1420	7	2120
17	1190	6	1730	17	1720	July		11	1350	21	1080	7	1520	12	1860
24	1240	11	1900	30	4250	6	1350	17	1750	27	1060	10	1630	14	1800
March		13	2110	June		11	1260	22	1820	October		11	1600	19	1600
3	1530	20	1300	6	1980	13	1280	24	1830	3	672	16	1640	21	1590
														26	1530

Sampling by U. S. Section

RIO GRANDE SALT BURDEN

The term "salt", as used herein, means total dissolved solids. The 1972 concentrations which are marked by an asterisk (*) are based on the chemical analyses shown on preceding pages of this bulletin. Those without asterisks are based on chemical analyses reported in previous water bulletins or have been developed by deduction. Average concentrations shown for the period 1935 to 1972 are the weighted means of the values determined for the 38-year period indicated.



* Based on 1972 chemical analyses of samples collected at stations indicated
** Based on 1972 chemical analyses of samples collected at Falcon Dam - U. S. Tailrace

SANITARY ASPECTS OF WATER QUALITY

The United States and Mexican Sections of the Commission and the Texas State Department of Health cooperate in the joint sanitary water-sampling program along the Rio Grande. All analyses below have been made under the "Rules of Laboratory Procedure," as approved by the participating agencies and which conform with the procedures set out in the manual "Standard Methods for the Examination of Water and Wastewater," Eleventh Edition (1960), prepared jointly by the American Public Health Association, the American Water Works Association and the Water Pollution Control Federation. These analyses were made in the laboratories of the El Paso Water Plant, the Cameron County Health Unit, and the United States Section of the International Boundary and Water Commission. The percentages of dissolved oxygen (D. O.) shown below are the percent saturation at the elevation of the sampling stations.

Franklin Canal at El Paso, Texas, Water Plant

Date 1972	D. O. Percent Saturation	B. O. D. Parts Per Million	Coliform Organisms per 100 c. c.	Total Bacteria per c. c. (plate count)	Date 1972	D. O. Percent Saturation	B. O. D. Parts Per Million	Coliform Organisms per 100 c. c.	Total Bacteria per c. c. (plate count)
Jan. 4	103	2.1	380,000	26,400	June 20	95.8	2.2	16,000	27,900
11	88.7	2.8	240,000	17,600	July 10	83.0	3.1	6,200	20,000
18	114	2.5	1,600	17,950	24			110,000	110,000
Feb. 1	90.5	3.4	380,000	48,800	31	78.4	2.6	9,300	24,100
8	96.0	1.7	6,200	38,200	Aug. 7	84.4	2.6	36,000	
15	110	4.7	9,300	20,000	14	84.8	3.2	16,000	36,500
23	87.1	2.9	21,000	46,000	21	80.6	3.3	110,000	165,000
29	93.6	4.1	62,000	32,800	Sept. 5	90.3	3.9	700,000	500,000
Mar. 9	92.6	6.5	3,600		11	76.5	1.3		4,850
16	88.6	4.5	36,000		18	77.6	.6	1,600	4,800
20	107	6.9	3,600	68,000	25	88.0	1.1	23,000	
Apr. 11	101	2.8	11,000	3,950	Oct. 2	92.8	1.1	11,000	2,400
17	101	2.4	23,000	12,400	10	48.2	1.3		
25	95.3		36,000	12,410	17	77.8	1.3	110,000	3,300
May 2	130	10.5	110,000	34,300	25	111	3.4	62,000	48,600
9	125	4.3	11,000	52,000	Nov. 14	91.7	2.4	3,600	
16	104	2.3	67,000	24,600					
30	84.9	4.3	110,000	51,400	Total	3,281.4	111.6	3,437,000	2,057,260
June 6	97.2	4.3	700,000	93,000	Average	93.8	3.3	101,100	68,600
13	111	5.2	11,000	510,000					

Rio Grande at Ysleta, Texas-Zaragoza, Chih. Bridge

Jan. 4	56.3	45.2	16,000,000	11,000,000	July 10	91.7	17.5	790,000	190,000
11	37.4	32.3	11,000,000	8,600,000	24	91.1	16.8	540,000	209,500
18	36.6	28.7	11,000,000	7,100,000	31	69.3	13.7	1,100,000	158,500
25	30.0	34.6	24,000,000	6,200,000	Aug. 7	74.7	6.4	360,000	220,000
Feb. 1	26.3	38.4	2,800,000	5,600,000	14		14.8	2,300,000	1,820,000
8		17.7	8,100,000	3,810,000	21	67.9	9.5	930,000	
15	32.8	35.0	24,000,000	11,600,000	Sept. 5	88.1	24.3	2,300,000	675,000
22	43.1	26.4	22,000,000	4,210,000	11		8.0		
29	60.7	24.3	70,000,000	2,800,000	18	60.7	7.9	3,600,000	850,000
Mar. 9	65.6	16.8	38,000,000		25	65.5	9.3	11,000,000	10,000,000
16	74.8	14.1	620,000		Oct. 2	69.1	11.7	11,000,000	2,400,000
20	74.3	17.4	16,000,000	1,860,000	10	54.6	21.3	38,000,000	4,700,000
Apr. 10	55.7	8.4	3,600,000	24,900,000	17	73.2	12.7	5,500,000	2,700,000
17	106	11.0	3,600,000	402,500	25	96.1	21.7	11,000,000	770,000
24	75.9		6,200,000	2,700,000	Nov. 6	62.3	11.9	3,600,000	1,900,000
May 2	121	19.5	6,200,000	248,500	14	81.6	39.0	24,000,000	2,225,000
9	105	14.8	230,000	690,000	Dec. 4	72.0	21.0	16,000,000	230,000
16	55.7	3.7	3,600,000	24,900,000	11	67.1	28.6	9,400,000	1,700,000
23	88.9	13.2	36,000,000	1,590,000	18	69.7	35.5	38,000,000	1,100,000
30	112	9.9	360,000	1,250,000					
June 6	83.8	23.7	36,000,000	3,340,000					
13	84.0	11.2	6,200,000	4,800,000	Total	2,777.8	794.0	528,530,000	160,479,000
20	97.2	16.1	3,600,000	1,030,000	Average	71.2	19.4	12,891,000	4,223,100

SANITARY ASPECTS OF WATER QUALITY

Rio Grande at Laredo, Texas, Water Plant

Date 1972	Coliform Organisms per 100 c. c.	Total Bacteria per c. c. (plate count)	Date 1972	Coliform Organisms per 100 c. c.	Total Bacteria per c. c. (plate count)	Date 1972	Coliform Organisms per 100 c. c.	Total Bacteria per c. c. (plate count)
Jan. 10	230	50	May 8	2,300	815	Sept. 11	26	45
17	26	50	15	1,100	175	18	36	45
24	60	35	22	60	200	25	23	70
31	1,100	115	30	26	185	Oct. 2	26	145
Feb. 7	1,100	51	June 5	26	95	10	60	285
14	26	35	12	26	65	16	230	150
22	26	35	19	26	90	24	26	170
28	60	60	26	26	45	30	210	110
Mar. 6	110	305	July 3	26	25	Nov. 6	110	135
13	2,300	460	10	26	40	27	110	65
20	60	40	17	26	80	Dec. 4	26	40
27	2,300	520	31	26	75	11	230	60
Apr. 3	60	205	Aug. 7	60	65	18	26	5.5
10	230	175	14	24,000	885			
17	26	80	21	110	485	Total	36,905	7,461.5
24	26	40	28	26	80	Average	785	159
May 1	110	410	Sept. 5	26	65			

Samples and analyses by U. S. Section

Rio Grande at 8.6 Miles below Laredo, Texas, R. R. Bridge

Jan. 10	62,000	17,500	Mar. 27	62,000	21,500	Oct. 30	62,000	30,500
17	110,000	12,000	Apr. 24	110,000	30,500	Nov. 6	36,000	7,000
24	240,000	40,500	Sept. 11	160,000	11,500			
Feb. 7	160,000		18	110,000	30,500			
14	110,000	80,500	26	220,000		Total	2,074,000	413,000
28	220,000	51,000	Oct. 3	110,000		Average	129,600	31,800
Mar. 13	240,000	59,000	16	62,000	21,000			

Samples by Mexican Section and analyses by U. S. Section

Rio Grande below Falcon Dam, Texas, U. S. Tailrace

Jan. 10	2.6	5.5	May 22	0	2,075	Sept. 18	0	35
17	2.6	1.5	30	0	430	25	0	25
24	0	50.5	June 5	0	260	Oct. 2	0	3.5
31	0	1.5	12	2.6	665	10	0	4
Feb. 14	0	25.0	19	0	35	16	0	2.5
22	0	5.0	26	0	30	24	0	500
28	0	12.5	July 3	0	45	30	6.0	125
Mar. 6	0	13.0	10	0	30	Nov. 6	2.6	35
27	36	127.5	17	0	8	27	0	25
Apr. 3	23	305.0	Aug. 7	0	650	Dec. 4	0	30
10	0	820.0	14	0	550	11	0	6.0
17	0	35.0	21	0	2,200			
24	0	25.0	28	6.0	1,315	Total	87.4	10,811.0
May 1	0	50.0	Sept. 5	6.0	185	Average	2.1	264
8	0	25.0	11	0	40			

Samples and analyses by U. S. Section

Rio Grande at Mercedes, Texas, Pumps

Apr. 24	3,300							
May 8	16,000							
						Total	19,300	
						Average	9,650	

Samples by U. S. Section and analyses by Cameron County Health Unit

RAINFALL ON THE RIO GRANDE WATERSHED IN THE UNITED STATES

In Inches

Tabulated below, in approximate downstream order, are monthly records of United States rainfall stations located in Texas with averages for their periods of record. For location, elevation, period of record, type of gage in use, watershed subdivision in which the station is located, and the observer, see alphabetical listing of these stations shown on pages 136 through 139 in this bulletin. These rainfall records have not been published elsewhere. Records of daily rainfall amounts, where available, are on file in the office of the United States Section of the Commission. Daily records for years prior to 1953 may also be found in corresponding water bulletins.

Detailed listings of the months and years for which records are available through 1970 may be found under "Index to Precipitation Records" in Water Bulletins 10, 14, 26, and Supplement 40 A.

	American Dam		Island Station		County Line Station		Fort Hancock Bridge		Guayuco Arroyo	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.11	0.36	0.01	0.29	0.23	0.31	0.25	0.34	0.16	0.28
Feb.	.22	.33	0	.26	0	.22	0	.28	0	.21
Mar.	T	.33	0	.24	0	.26	.01	.24	0	.18
Apr.	0	.20	0	.15	0	.20	0	.25	0	.19
May	.08	.21	.08	.30	.86	.35	.80	.51	2.46	.40
June	1.70	.61	.69	.55	.47	.60	2.35	.89	2.27	.62
July	.42	1.44		1.09		1.20	1.43	1.26	1.77	1.44
Aug.	4.19	1.36		1.20		1.32	3.16	1.76	6.45	1.84
Sept.	1.49	1.00		.80		.94	5.87	1.11	2.90	1.09
Oct.	1.25	.64	1.42	.72	1.07	.90	1.44	1.00	.80	1.07
Nov.	.22	.25	.46	.25	.52	.28	.43	.30		.22
Dec.	.19	.41	.21	.38	.08	.34	.11	.42	0	.35
Yearly	9.87	7.14		6.23		6.92	15.85	8.36		7.89

	Fort Quitman		Neely Ranch		Moody Bennett Ranch		La Nutria Station		Bill Shannon Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.17	0.37	0.02	0.30	0	0.33	0.05	0.01	0	0.45
Feb.	0	.24	0	.20	.25	.32	0	.16	0	.37
Mar.	0	.23	0	.19	0	.16	.05	.28	0	.45
Apr.	0	.23		.12	0	.13	0	.03	0	.16
May	1.26	.41		.33	4.67	.74	.65	.17	.50	.82
June	1.93	.88	2.49	.85	2.78	.92	1.50	1.08	5.00	1.62
July		1.51		1.70	2.50	1.66	.40	1.03	4.00	2.31
Aug.		1.78		1.89	1.77	1.92	1.65	2.81	3.50	2.33
Sept.		.99		1.32	3.66	1.29	1.60	1.08	2.50	1.87
Oct.	.85	.87	1.38	1.03	1.35	.97	.95	1.40	1.00	1.11
Nov.	.54	.29		.24	.60	.38	.40	.43	.75	.32
Dec.	.60	.38	0	.40	0	.21	.10	.08	0	.45
Yearly		8.18		8.57	17.58	9.03	7.35	8.56	17.25	12.26

	Adobes Ranch		Shafter		Livingston Ranch		Presidio (IB&WC Gage)		Quebec Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0	0.33	0	T	0	0.44	0.05	0.28	0	0.48
Feb.	0	.22	0	.42	0	.32	0	.21	0	.27
Mar.	0	.21	.40	.45	0	.19	T	.16	0	.30
Apr.	0	.14	0	0	0	.47	T	.17	.50	.24
May	2.29	.67	.65	.34	1.25	.35	1.10	.46	1.50	.91
June	2.59	1.45	5.80	3.12	3.05	1.92	2.70	1.30	1.40	1.80
July	2.75	2.06	4.45	5.33	3.95	1.88	1.50	1.27	5.10	2.43
Aug.	2.24	1.77	5.20	3.77	4.00	1.75	.30	1.12	5.20	2.46
Sept.	5.96	2.00	1.30	2.85	2.80	1.70	2.10	1.18	6.30	2.06
Oct.	0	.68	1.20	2.00	.42	.95	.65	.66	2.10	.89
Nov.	0	.26	0	.84	0	.37	.50	.28	0	.31
Dec.	0	.25	0	0	0	.23	0	.21	0	.29
Yearly	15.83	10.04	19.00	19.12	15.47	10.57	8.90	7.30	22.10	12.44

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN THE UNITED STATES

In Inches

	Bloys Camp		Kerr Mitchell Ranch		Loma Vista Ranch		H. T. Fletcher Ranch		H. M. Greenwood (Cienega Ranch)	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.22	0.67	0	0.48	0	0.65	0	0.77	0	0.60
Feb.	.13	.63	0	.36	0	.31	0	.33	0	.32
Mar.	.33	.56	.40	.22	0	.19	.15	.39	0	.33
Apr.	0	.43	0	.42	0	.49	0	.43	0	.50
May	4.07	1.50	4.46	1.17	4.32	1.02	2.60	1.12	1.80	.81
June	1.91	2.67	1.78	1.86	2.20	1.93	1.20	1.65	3.80	2.20
July	6.39	3.46	1.14	1.91	1.20	2.08	5.15	2.85	2.10	2.36
Aug.	6.52	4.00	4.10	2.15	3.70	2.04	4.80	2.88	3.90	2.26
Sept.	4.59	2.70	5.16	1.74	4.68	1.70	5.60	2.06	2.90	2.76
Oct.	2.08	1.58	1.50	1.31	1.60	1.12	1.80	1.50	.90	1.47
Nov.	.44	.63	.25	.34	.35	.25	.40	.48	.50	.48
Dec.	.02	.58	0	.35	0	.40	0	.38	.20	.56
Yearly	26.70	19.41	18.79	12.31	18.05	12.18	21.70	14.84	16.10	14.65

	Redford		Lajitas, Texas		02 Ranch		Earl Hammond Ranch		Big Bend Chevron Station	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.10	0.31	0	0.12	0	0.48	0	0.16	0.21	0.20
Feb.	0	.21	.03	.50	0	.39	.06	.41	0	.48
Mar.	.40	.23	0	.34	.40	.33	1.17	.43	T	.27
Apr.	T	.27	.75	.53	0	.38	.14	.42	T	.30
May	1.50	.49	1.35	.62	1.59	1.04	2.12	.56	1.16	.49
June	.75	.93	3.30	1.62	1.58	1.44	1.02	1.64	1.73	1.41
July	.40	1.15	0	1.02	2.02	1.92	3.95	2.04	1.93	1.40
Aug.	1.20	1.12	1.21	1.72	3.25	2.30	2.40	2.30	1.56	1.68
Sept.	2.65	1.66	1.95	2.59	2.99	1.80	3.88	1.93	2.60	2.24
Oct.	.30	.83	0	.77	.90	1.43	1.01	1.59	.86	.84
Nov.	.50	.34	0	.09	.40	.61	0	.35	.78	.37
Dec.	0	.16	0	.10	0	.36	0	.37	0	.08
Yearly	7.80	7.70	8.59	10.02	13.13	12.48	15.75	12.20	10.83	9.76

	Maverick Ranger Station		Terlingua Creek Station		Castolon, Texas		Johnson Ranch		J. F. Woodward Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.16	0.38	0.15	0.24	0.13	0.23	0.20	0.35	0.04	0.49
Feb.	0	.30	0	.19	0	.29	0	.22	0	.40
Mar.	.05	.11	.02	.16	.83	.37	1.40	.20	.44	.21
Apr.	0	.16	T	.35	0	.35	T	.39	0	.44
May	1.66	.80	1.80	.64	2.09	.90	2.40	1.05	2.54	1.09
June	2.00	1.60	1.85	1.07	1.42	1.49	.40	1.08	1.40	1.96
July	2.16	1.59	2.25	.98	2.48	1.57	1.70	1.04	2.07	2.07
Aug.	.87	1.72	2.50	1.00	1.95	1.78	.80	.89	4.58	2.91
Sept.	3.19	1.66	2.65	1.24	2.09	1.81	3.50	1.37	1.57	1.92
Oct.	.62	1.13	.80	.71	.86	.93	.70	.70	1.33	1.10
Nov.	.92	.26	.80	.18	.85	.17	.80	.20	.20	.54
Dec.	0	.28	0	.22	0	.22	0	.29	0	.22
Yearly	11.63	9.99	12.82	6.98	12.70	10.11	11.90	7.78	14.17	13.35

	Yarborough Ranch		Kokernot Ranch Headquarters		Buttrill Ranch		A. M. Potter Ranch		Black Gap Game Refuge	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.07	0.18	0.11	0.48	0	0.52	0.12	0.32	0.20	0.45
Feb.	0	.34	0	2.89	0	.15	0	.50	0	.48
Mar.	0	.38	.07	.18	0	.17	.46	.22	.37	.31
Apr.	0	.28	0	.52	0	.49	0	.22	0	.38
May	2.18	.78	2.04	.75	4.49	1.12	2.20	1.05	2.38	1.41
June	1.46	1.92	.36	1.41	2.40	1.53	.79	1.23	2.18	1.38
July	3.28	2.72	2.90	1.65	0	1.57	1.52	1.18	2.23	1.59
Aug.	3.05	3.56	4.40	1.48	4.30	1.25	3.13	1.50	2.41	1.26
Sept.	2.80	2.39	1.62	1.34	3.45	1.65	2.50	1.62	1.35	1.79
Oct.	1.85	1.34	1.44	1.10	2.34	.99	.57	.51	1.37	1.14
Nov.	.75	.85	.25	.30	0	.27	0	.41	.40	.32
Dec.	0	.26	0	.34	0	.21	0	.44	0	.29
Yearly	15.04	15.00	13.19	12.44	16.98	9.92	11.29	9.20	12.89	10.80

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN THE UNITED STATES

In Inches

	Stillwell Crossing		Persimmon Gap Ranger Station		Sheep Pasture		Mouth of Maravillas Creek		Dove Mountain Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0	0.36		0.51	0.28	0.23	0.30	0.17	0	0.48
Feb.	0	.35		.46	0	.43	0	.07	0	.37
Mar.	.69	.40	3.45	.41	1.18	.59	.60	.34	.36	.29
Apr.	.17	.21	0	.47	0	.23	0	.44	T	.42
May	2.25	.88	2.61	1.00	2.13	1.25	2.00	.88	3.13	1.10
June	.14	1.23	.27	1.23	1.62	1.84	3.02	1.81	.54	1.28
July	1.45	1.78	.49	1.39	2.06	1.40	4.53	1.22	.63	1.86
Aug.	2.07	1.20	1.28	.89	2.29	1.39	.95	1.86	2.77	1.29
Sept.	0	2.30	2.18	1.22	1.75	2.56	.75	1.03	1.02	1.12
Oct.	.55	1.03	.63	1.17	1.27	1.78	.50	1.18	.70	1.50
Nov.	.43	.28	.38	.25	.50	.56	.21	.41	0	.29
Dec.	0	.32	0	.29	0	.26	0	.10	0	.37
Yearly	7.75	10.34		9.29	13.08	12.52	12.86	9.51	9.15	10.37

	Slaughter Ranch		Steve Stumberg Ranch		McGonagill Ranch Headquarters		McGonagill Ranch East Mill		E. W. Hardgrave Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	T	0.40	0.10	0.56	0	0.37	0	0.38	0.56	0.52
Feb.	0	.54	.16	.43	0	.57	0	.22	0	.67
Mar.	T	.51	.14	.41	0	.41	0	.44	.31	.38
Apr.	T	.63	0	.64	0	.46	0	.60	.02	1.30
May	3.90	1.16	1.46	1.42	5.08	1.16	5.90	1.24	2.46	1.39
June	1.50	1.00	1.26	1.87	1.00	2.06	3.70	1.98	.32	1.61
July	1.00	1.19	.45	1.87	.60	2.08	1.50	1.31	.14	1.12
Aug.	2.40	2.35	3.46	1.60	3.39	1.54	8.10	1.59	7.02	1.59
Sept.	4.45	2.34	.98	2.24	3.90	2.10	5.50	2.09	3.07	2.54
Oct.	.90	1.66	.73	1.61	4.40	1.07	3.00	1.16	1.00	1.68
Nov.	.30	.63	.07	.40	0	.25	0	.20	.32	.54
Dec.	0	.40	.17	.50	0	.15	0	.20	.03	.37
Yearly	14.45	12.81	8.98	13.55	18.37	12.22	27.70	11.41	15.25	13.71

	Lewis James Ranch		Dryden		Ross Foster Ranch		W. A. Arledge Ranch		Hoffman Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.70	0.40	0.36	0.52	0.20	0.45	0.33	0.69	T	0.38
Feb.	0	.63	0	.52	.02	.55	0	.50	0	.42
Mar.	.23	.40	.30	.43	1.70	.29	.38	.47	.20	.38
Apr.	.15	.89	.45	.89	.50	.80	0	1.23	0	.30
May	2.10	1.52	2.01	1.71	2.70	1.57	1.15	1.83	3.03	1.16
June	.67	1.02	1.62	1.11	0	1.26	.65	1.70	1.16	1.91
July	.20	1.59	.33	1.02	.75	.61	1.15	1.17	3.55	1.99
Aug.	2.24	2.61	1.96	1.30	1.69	1.37	2.06	1.33	4.18	2.40
Sept.	2.43	3.47	1.67	1.84	1.87	2.12	1.30	2.00	4.25	1.98
Oct.	.90	1.50	1.39	1.23	1.70	1.06	1.44	1.52	1.42	1.23
Nov.	.39	.61	.38	.41	.20	.24	.46	.47	.20	.44
Dec.	0	.32	0	.44	0	.24	0	.51	0	.33
Yearly	10.01	14.96	10.47	11.42	11.33	10.56	8.92	13.42	17.99	12.92

	Owens Ranch		Todd Field		Terrell Plant (E. P. N. G. Co.)		* Latham Ranch		Prosser Ranch No. 3	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.27	0.27		0.35		0.33		0.59	0.45	0.36
Feb.	.43	.65		.88		.66	0	1.04	.10	.84
Mar.	0	1.05		1.25	.50	.68	0	.61	1.60	.51
Apr.	0	1.56		2.11	.30	1.87	0	2.15	.40	1.17
May	4.22	1.80		1.68	4.90	1.59	3.60	3.59	1.05	2.11
June	2.18	1.61		2.62	.50	1.57	1.50	2.27	1.60	1.34
July	.71	.50		.70	1.00	.78	1.80	2.40	.80	1.06
Aug.	2.60	2.11		1.92	2.35	1.32	4.50	4.04	5.66	2.69
Sept.	4.74	2.95	4.63	3.12	3.46	2.38	3.70	4.12	2.70	3.24
Oct.	9.21	2.27	1.23	1.42	2.54	1.40	2.00	1.69	2.10	1.65
Nov.	0	1.08	.17	.61	0	.68	0	1.05	.35	.58
Dec.	.26	.53	0	.28	0	.37		.92	0	.19
Yearly	24.62	16.38		16.94		13.63		24.47	16.81	15.74

T Trace * Formerly Oberkamf Ranch

RAINFALL ON THE RIO GRANDE WATERSHED IN THE UNITED STATES

In Inches

	Ranchita (Continental)		Pecos River Near Langtry Station		Deadmans Canyon Near Comstock		Prosser Ranch No. 1		Continental Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.50	0.22	0.27	0.26	0.48	0.32	0.40	0.31	0.60	0.59
Feb.	.10	.68	0	.74	.10	.59	.10	.68	.10	.88
Mar.	1.92	.68	.80	.48	.80	.43	1.20	.39	1.70	.62
Apr.	.07	.99	T	.95	T	1.04	1.10	1.44	1.10	1.44
May	2.25	1.99	1.60	1.45	3.95	2.07	3.40	2.11	3.40	2.64
June	2.62	2.72	1.80	2.09	.70	2.28	1.70	1.67	2.40	2.13
July	.50	1.16	1.80	2.06	1.34	2.03	.80	2.27	1.50	2.71
Aug.	6.45	5.53	2.66	2.73	2.31	3.23	3.85	3.28	4.25	3.59
Sept.	2.30	2.25	2.65	2.80	2.15	2.46	3.90	2.69	2.90	3.06
Oct.	2.70	2.10	1.95	1.43	1.75	1.78	2.30	1.72	2.20	2.10
Nov.	.50	1.05	.35	.66	.30	.64	.40	.64	.50	.78
Dec.	0	.34	T	.24	.04	.34	0	.28	0	.38
Yearly	19.91	19.71	13.88	15.89	13.92	17.21	19.15	17.48	20.65	20.92

	Martin King Ranch		Brotherton Ranch		Walker Ranch		P. W. Kelly Ranch		Comstock	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.39	0.58	0.53	0.85	0.35	0.18	0.68	0.47	0.43	0.62
Feb.	.09	.76	0	.86	.05	.63	0	.84	.08	.84
Mar.	.64	.26	.95	.35	.90	.40	.80	.70	.95	.58
Apr.	.07	.82	.37	.91	.70	.60	.66	1.08	.84	1.32
May	2.24	1.60	2.39	1.48	2.75	2.22	4.13	2.30	3.45	1.94
June	1.51	1.70	2.48	2.14	2.40	2.77	2.64	2.40	2.06	2.28
July	.99	1.17	1.58	1.10	1.70	1.50	1.25	1.68	.83	1.05
Aug.	3.38	1.56	3.68	2.45	2.91	2.00	3.64	2.66	3.74	2.01
Sept.	1.52	2.64	1.32	2.63	1.75	2.40	2.58	2.45	2.29	2.15
Oct.	1.78	2.03	1.97	1.79	1.90	1.71	1.77	2.00	.94	1.82
Nov.	.28	.50	.35	.52	.35	.74	.66	.54	.43	.57
Dec.	0	.42	0	.20	0	.27	0	.28	.03	.67
Yearly	12.89	14.09	15.62	15.28	15.76	15.42	18.81	17.40	16.07	15.85

	Cow Creek Near Comstock		Goodenough * Spring Raft		Amistad Reservoir Near Comstock		Feely		Lock Store	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.30	0.35	0.28	0.34	0.23	0.16	0.60	0.53	0	0.50
Feb.	0	.60	0	.58	.05	.29	0	.77	.40	.91
Mar.	1.40	.43	1.10	.27	2.00	.72	1.40	.62	.02	.64
Apr.	.40	1.06	.30	1.30	.40	.50	.60	1.32	1.13	1.88
May	2.35	1.13	2.00	1.10	2.70	1.43	2.60	1.99	3.35	1.99
June	1.95	1.79	1.70	2.01	.20	1.93	1.60	2.38	1.95	1.40
July	.20	.89	1.27	.73	1.10	1.28	.48	.79	.94	1.36
Aug.	4.50	3.22	1.88	1.83	4.14	4.68	5.57	2.77	6.21	2.97
Sept.	1.80	2.42	2.40	3.10	2.10	3.15	2.45	2.64	4.67	3.59
Oct.	.60	1.38	.55	1.82	.55	.32	.40	1.98	2.78	1.54
Nov.	.30	.51	.40	.41	.38	.13	.30	.38	.15	.68
Dec.	0	.25	.03	.35	.03	.01	0	.33	.07	.23
Yearly	13.80	14.03	11.91	13.84	13.88	14.60	16.00	16.50	21.67	17.69

	W. E. Sawyer Ranch		Whitehead Brothers Ranch		Prosser Ranch No. 2		Bakers Crossing		Allen Dunbar Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.30	0.37	0.45	0.34	0.60	0.38	0.35	0.86	0.40	0.72
Feb.	0	1.04	0	.88	.05	.94	0	1.00	0	1.30
Mar.	.60	.99	2.10	.67	2.20	.66	1.70	.74	1.90	.82
Apr.	.60	2.00	.58	1.04	.70	1.20	.10	1.01	1.50	2.26
May	3.10	1.99	5.40	2.84	.85	1.69	3.11	2.36	3.80	2.70
June	2.74	1.25	1.48	1.72	1.85	1.62	1.15	2.07	2.20	3.38
July	.55	1.78	.44	1.39	.65	2.06	1.93	1.48	.85	1.70
Aug.	9.30	3.66	2.92	2.91	5.35	3.31	7.77	2.24	8.10	2.69
Sept.	2.80	2.89	2.30	2.70	3.25	3.21	3.90	3.09	3.15	3.54
Oct.	3.10	2.24	1.35	3.16	3.60	1.76	2.89	1.64	1.20	3.10
Nov.	0	.90	.40	.85	.45	.61	0	.61	.45	.74
Dec.	0	.54	0	.30	0	.27	.30	.65	0	.65
Yearly	23.09	19.65	17.42	18.80	19.55	17.71	23.20	17.75	23.55	23.60

T Trace * Formerly Goodenough Spring

RAINFALL ON THE RIO GRANDE WATERSHED IN THE UNITED STATES

In Inches

	Erekson Ranch		Vinegarone		Dolan Springs		H. K. Fawcett Ranch		Hinds "AT" Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.		0.92	0.45	0.26	0.35	0.31	0.43	0.70	0.40	0.58
Feb.		1.25	0	.98	0	.86	0	.81	0	.97
Mar.		.75	2.37	.74	2.10	.83	1.90	.80	1.35	.61
Apr.		2.10	1.15	1.22	.82	1.59	3.75	1.70	1.01	1.24
May		2.52	3.18	2.44	5.08	2.06	2.60	2.46	3.52	1.92
June	1.65	3.19	.60	1.72	1.50	1.88	1.45	1.61	1.37	2.32
July	.60	1.65	.40	1.55	.16	1.49	.45	.97	1.17	1.30
Aug.	7.81	2.14	8.73	4.15	6.59	4.44	8.85	2.78	6.35	2.19
Sept.	2.90	3.14	2.55	2.58	2.80	2.88	2.80	3.53	5.04	2.89
Oct.	1.59	2.53	1.40	3.03	1.40	2.47	1.50	2.33	.94	2.37
Nov.	0	.92	.35	.90	.35	.75	.45	.63	.43	.63
Dec.	0	.43	0	.29	0	.30	0	.40	0	.50
Yearly		21.54	21.18	19.86	21.15	19.86	24.18	18.72	21.58	17.52

	H. T. Miers Ranch Headquarters		H. T. Miers Ranch No. 2		A. A. Baker Ranch		Harlow Ranch		Gillis Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.35	0.65	0.23	0.48	0.29	0.36	0.30	0.10	0.22	0.44
Feb.	.02	1.26	.10	.98	.15	.79	0	.40	.04	.92
Mar.	.80	.72	1.11	.77	.65	.50	.50	.28	.87	.75
Apr.	.05	1.62	.92	1.51	.80	1.18	1.00	1.12	.32	1.40
May	3.08	2.56	4.39	2.29	3.54	1.92	3.00	2.34	2.58	2.17
June	1.55	3.26	1.53	2.66	1.82	1.92	1.70	2.69	1.41	1.84
July	.20	1.28	.47	1.08	.56	1.19	.70	1.14	.87	.99
Aug.	8.35	2.66	11.98	3.78	4.87	2.54	4.10	3.44	7.72	2.35
Sept.	1.60	2.86	2.00	3.17	3.07	2.93	2.40	2.56	3.89	2.74
Oct.	.85	3.08	.48	1.99	1.26	1.65	2.30	2.21	.61	2.40
Nov.	.50	.82	.67	.82	.46	.61	T	.70	.49	.96
Dec.	0	.54	.09	.47	.04	.34	T	.12	0	.53
Yearly	17.35	21.31	23.97	20.00	17.51	15.93	16.00	17.10	19.02	17.49

	Goldwire Ranch		Pafford Crossing		Big Satan Creek Station		Cliff Lowry Ranch		Lowry Ranch No. 2	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.45	0.31	0.35	0.43	0.52	0.27	0.47	0.42	0.52	0.36
Feb.	.06	.84	0	.86	0	.69	.10	1.23	.08	1.01
Mar.	1.00	.54	1.65	.36	.95	.65	.77	.54	.61	.70
Apr.	.03	.82	T	1.10	.65	.99	2.24	1.76	1.36	1.75
May	3.70	2.40	2.57	1.75	1.46	1.90	2.30	2.49	2.35	2.20
June	1.62	3.08	.57	2.41	0	2.34	1.98	2.28	.98	2.24
July	.95	2.15	1.00	1.16	.60	1.04	.53	.73	1.11	.75
Aug.	10.10	7.75	7.85	2.60	11.70	7.06	11.10	3.18	11.77	4.06
Sept.	1.80	2.25	2.25	3.08	2.00	2.48	1.32	3.81	1.02	2.92
Oct.	.90	2.63	.72	2.08	.70	2.61	.75	2.16	.10	1.69
Nov.	.45	.91	.45	.53	.45	.85	.65	.81	.07	.90
Dec.	0	.21	0	.42	0	.35	0	.43	0	.42
Yearly	21.06	23.89	17.41	16.78	19.03	21.23	22.21	19.84	19.97	19.00

	Tuffy Whitehead Ranch		Stewart Ranch		Rough Canyon Near Del Rio		Devils Lake		Sellers Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.45	0.32	0.65	0.44	0.65	0.31	0.46	0.66	0.42	0.41
Feb.	.07	.78	.10	.96	.03	1.04	.10	.89	T	.74
Mar.	1.73	.58	.95	.43	.50	.23	.50	.56	.90	.43
Apr.	.65	1.17	1.43	1.55	2.09	1.10	1.81	1.65	1.00	1.44
May	2.90	1.62	2.11	1.63	2.05	1.98	1.76	1.83	1.05	1.41
June	1.20	2.07	1.59	2.50	.90	2.34	1.37	2.39	1.00	2.53
July	1.03	.80	.70	1.11	.50	1.01	.46	.83	.80	.71
Aug.	5.43	2.06	9.90	2.30	11.20	5.22	12.04	2.01	10.15	2.56
Sept.	3.53	3.12	.77	3.07	2.15	2.89	2.28	2.29	1.85	2.36
Oct.	.65	1.70	.15	2.16	.47	2.14	.47	1.86	.48	1.90
Nov.	.55	.60	.64	.76	.45	1.08	.55	.66	.48	.57
Dec.	.21	.38	0	.46	T	.32	0	.71	.03	.41
Yearly	18.40	15.20	18.99	17.37	20.99	19.66	21.80	16.34	18.16	15.47

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN THE UNITED STATES

In Inches

Month	Evans Creek Near Comstock		J. G. Brite Ranch		Hutto Ranch No. 1		Hutto Ranch No. 2		Middle Fork San Pedro	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.37	0.20	0.51	0.38	0.80	0.54	0.72	0.51	0.90	0.39
Feb.	T	.60	.06	.99	.11	1.11	.10	1.11	.02	.62
Mar.	1.80	.68	.68	.59	1.16	.57	.89	.51		.22
Apr.	1.25	1.12	1.28	1.83	2.50	2.18	2.31	2.52	2.30	1.65
May	1.85	.82	1.54	2.16	2.14	1.65	2.14	1.68	3.53	2.79
June	1.85	2.23	1.49	1.98	2.04	2.36	1.51	2.29	2.10	2.72
July	.25	.45	1.11	.72	1.08	.78	1.33	.80	.85	.96
Aug.	8.47	6.26	10.97	3.22	5.77	3.18	7.09	3.12	6.15	5.13
Sept.	2.93	4.27	1.74	3.56	.97	3.58	1.43	4.61	1.70	1.32
Oct.	.40	2.10	.51	2.12	.50	2.10	.53	1.78	.45	3.57
Nov.	.50	.89	.54	.73	.70	.87	.87	1.00	.45	1.05
Dec.	.03	.28	.01	.40	0	.43	0	.37	T	.36
Yearly	19.70	19.90	20.44	18.68	17.77	19.35	18.92	20.30		20.78

Month	North Fork San Pedro		Long Ranch		Buoy No. 11		Amistad Raft		Amistad Dam	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.90	0.38	0.67		0.50	0.24	0.85	0.32	0.93	0.48
Feb.	.05	.65	.09		T	.45	.05	.49	.06	.89
Mar.	.80	.43	.65		1.50	.60	.50	.38	1.05	.61
Apr.	2.00	1.33	2.91		.55	.58	.50	1.54	1.99	2.10
May	2.40	2.02	2.00		3.80	1.76	2.96	2.10	1.95	2.03
June	1.70	2.50	1.53		.35	2.77	1.90	2.58	2.26	1.80
July	.58	.76	.91		.55	.48	.81	.66	1.03	.70
Aug.	8.23	4.92	7.45		3.35	4.95	13.39	7.20	11.22	3.10
Sept.	1.25	2.65	1.51		3.85	3.55	2.15	3.45	1.78	4.49
Oct.	.40	3.34	.45	1.11		.55	.50	2.57	.45	1.50
Nov.	.55	1.14	.74	.57		0	.65	.79	.71	.65
Dec.	T	.37	.03	.21	.03	.08	.03	.26	.04	.45
Yearly	18.86	20.49	18.94			16.01	24.29	22.34	23.47	18.80

Month	Laughlin Air Force Base		Gillis Headquarters Ranch		Lewis Ranch		Maverick County Canal Headgate		Sultenfuss Ranch	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.50	0.51	0.74	0.58	0.56	0.59	0.75	0.55	0	0.74
Feb.	.03	.98	.13	1.22	.11	1.06	.18	1.04	.61	1.48
Mar.	.20	.42	.67	.63	.86	.61	.07	.60	0	.78
Apr.	1.11	2.10	3.14	2.18	2.43	2.42	1.59	1.69	1.80	2.96
May	1.62	1.65	2.94	2.80	2.19	2.14	3.51	2.10	2.85	2.30
June	1.39	2.89	2.59	3.09	1.14	2.59	1.79	2.27	1.50	3.01
July	2.08	1.43	.85	1.18	.46	.42	1.70	1.37	.60	.27
Aug.	6.17	2.49	7.97	5.74	8.64	3.21	7.61	1.77	13.41	5.01
Sept.	.78	3.13	1.20	2.13	1.28	4.51	.63	3.03	2.58	4.33
Oct.	.42	2.51	.61	3.03	.78	2.59	.15	1.94	.70	2.57
Nov.	.95	.87	.92	1.46	.80	.92	.83	.72	1.01	1.23
Dec.	.09	.51	0	.35	0	.54	0	.51	0	.72
Yearly	15.34	19.49	21.76	24.39	19.25	21.60	18.81	17.59	25.06	25.40

Month	Pinto Creek Station		Las Moras Creek		Wipff Ranch		Lateral No. 2 Spill		Normandy	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.50	0.46	0.68	0.72	0.70	0.69	0.35	0.62	0.56	0.75
Feb.	.10	.84	.14	1.11	.30	.88	0	.77	.16	.75
Mar.	0	.51	.06	.63	.40	.60	.90	.64	.29	.80
Apr.	1.10	1.36	.32	1.31	.30	1.39	0	1.47	.08	1.54
May	2.80	1.70	3.54	2.13	4.10	2.02	4.00	2.50	3.47	2.43
June	2.30	2.83	2.82	2.92	2.00	2.34	6.20	2.33	5.14	2.13
July	2.30	1.01	1.70	1.09	1.30	1.27	2.30	1.56	3.19	1.80
Aug.	6.50	2.27	6.02	2.53	5.40	2.42	4.60	2.67	6.77	2.74
Sept.	2.50	3.44	3.60	4.00	2.55	3.25	4.40	3.45	3.48	3.56
Oct.	.20	2.02	.52	2.60	1.10	2.07	.45	2.11	.87	2.19
Nov.	.95	.85	.92	1.12	.80	1.08	.73	.96	1.04	.94
Dec.	.15	.49	.13	.60	.10	.53	.07	.48	.11	.76
Yearly	19.40	17.78	20.45	20.76	19.05	18.54	24.00	19.56	25.16	20.39

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN THE UNITED STATES

In Inches

	Lateral No. 12 Headgate		Lateral No. 15 Spill		Maverick Power Plant		Cooper Ranch		Coal Mine	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.50	0.62	0.35	0.65	0.42	0.72	0.90	0.43	0.61	0.52
Feb.	0	.61	0	.67	.18	.78	.40	.70	.18	.85
Mar.	0	.56	.60	.51	.17	.81	.70	.52	.12	.60
Apr.	T	1.49	0	1.28	.17	1.66	.10	1.38	0	1.55
May	3.10	2.43	1.75	2.43	1.64	2.81	3.00	2.29	2.02	2.73
June	2.50	1.95	4.70	1.98	4.12	2.25	1.55	2.02	.92	1.15
July	1.75	1.28	2.55	1.45	1.98	1.33	1.05	1.69	1.09	2.18
Aug.	5.20	2.21	6.30	2.16	5.86	2.16	6.00	2.28	6.04	2.11
Sept.	4.30	3.35	2.60	2.64	2.29	2.83	3.10	3.68	2.57	3.68
Oct.	.65	2.38	.30	2.36	.80	2.39	.40	2.21	.35	2.29
Nov.	.93	.74	.62	.64	.89	.71	1.00	.78	.85	.65
Dec.	.11	.51	.20	.52	.18	.57	.15	.51	.07	.42
Yearly	19.04	18.13	19.97	17.29	18.70	19.02	18.35	18.49	14.82	18.73

	Elm Creek Station		Chittim Ranch		Eagle Pass		Canon Diablo		Rosita Creek Siphon	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.65	0.46	0.90	0.50	0.88	0.66	0.88	0.55	0.30	0.40
Feb.	.10	.68	T	.85	.16	.98	.10	.82	0	.76
Mar.	T	.50	T	.59	.12	.89	T	.85	0	.56
Apr.	T	1.52	T	1.66	.07	1.43	T	2.01	.55	1.62
May	2.75	3.02	2.30	3.08	2.08	3.80	1.70	4.59	1.05	2.94
June	1.60	1.72	1.20	1.67	2.82	2.66	2.20	2.40	.35	1.94
July	.75	1.70	1.70	1.70	1.17	1.04	.60	.55	.35	1.62
Aug.	6.50	2.65	4.90	2.55	5.26	3.76	5.15	3.26	3.10	2.11
Sept.	5.05	3.05	2.60	3.18	3.58	4.19	1.25	3.89	2.65	3.13
Oct.	.55	2.35	.10	2.54	.29	1.95	.20	1.98	.20	2.24
Nov.	.02	.54	.90	.59	1.11	.64	1.02	.75	1.10	.74
Dec.	.12	.52	.10	.56	.20	.79	.23	.58	.25	.61
Yearly	18.09	18.71	14.70	19.47	17.74	22.79	13.33	22.23	9.90	18.67

	Weyrich Farm		Trees Farm		Rosita Creek Station		Farias Ranch		Indio Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.40	0.43	0.60	0.45	0.35	0.41	0.62	0.53	0.47	0.53
Feb.	0	.83	.11	.81	0	.70	.18	1.09	.11	.85
Mar.	0	.60	.04	.50	T	.58	.05	.56	.18	.57
Apr.	0	1.95	.06	1.80	.05	1.92	.10	2.03	T	2.19
May	1.70	3.54	2.06	3.13	1.15	2.65	2.38	3.35	2.38	2.86
June	.35	1.64	1.14	1.60	1.40	1.97	2.12	1.44	2.61	2.41
July	.05	.58	.39	1.56	.35	.83	.42	2.00	1.17	1.91
Aug.	3.00	2.04	3.12	2.06	3.70	2.17	4.71	2.52	3.79	2.02
Sept.	3.05	3.46	1.84	2.70	1.50	2.60	1.86	3.78	2.27	3.54
Oct.	.02	1.59	.19	2.95	.05	2.64	.19	2.90	.18	2.62
Nov.	1.00	.75	1.26	.70	.95	.70	1.15	.89	1.00	.86
Dec.	.20	.58	.12	.54	.10	.57	.12	.76	.18	.64
Yearly	9.77	17.99	10.93	18.80	9.60	17.74	13.90	21.85	14.34	21.00

	El Indio		Van Dalsem Farm		Wuensche Farm		Keisling Farm		Cuervo Creek Station	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.60	0.74	0.45	0.42	0.55	0.60	0.49	0.48	0.25	0.57
Feb.	.19	.92	.10	.88	.11	.98	.11	.90	T	.72
Mar.	0	.59	.10	.52	.11	.65	.21	.75	T	.47
Apr.	.50	1.64	.05	1.98	T	1.74	T	1.96	0	1.63
May	3.60	3.40	2.95	2.90	1.41	2.76	1.85	2.70	1.15	2.30
June	1.50	1.88	1.45	1.09	1.73	2.08	1.82	2.45	1.40	1.93
July	.28	1.03	1.20	1.43	1.09	1.21	1.51	1.34	1.15	1.15
Aug.	4.90	2.07	5.20	1.89	4.09	2.00	3.93	2.12	3.00	1.89
Sept.	3.40	3.09	2.90	3.40	1.42	3.13	1.45	2.87	1.30	3.05
Oct.	.10	1.95	.29	2.41	.29	2.11	.36	2.41	.40	2.33
Nov.	1.05	.69	1.05	.73	1.01	.74	1.03	.68	.95	.73
Dec.	0	.62	.15	.62	.15	.57	.16	.83	.15	.53
Yearly	16.12	18.62	15.89	18.27	11.96	18.57	12.92	19.49	9.75	17.30

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN THE UNITED STATES

In Inches

	Apache Ranch		Laredo Water Plant		Fort McIntosh (Laredo)		Corralitos Ranch		Huisache Ranch	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	2.00	0.78	0.37	0.76	0.48	0.72	0.25	0.61	0.20	0.75
Feb.	0	.94	.89	.80	1.07	.86	.95	.72	1.40	.95
Mar.	2.00	.38	2.42	.58	.62	.69	1.40	.28	1.30	.39
Apr.	0	1.55	1.75	1.09	2.47	1.28	2.40	1.13	2.80	1.42
May	5.00	2.41	10.60	2.42	14.31	2.66	5.10	1.76	1.65	2.13
June	2.50	1.90	3.91	2.07	2.79	2.17	2.20	2.18	5.20	2.00
July	0	1.79	.90	1.11	.68	1.36	2.45	.88	2.68	1.01
Aug.	2.40	2.26	1.85	1.78	1.67	1.89	.20	2.01	.10	1.66
Sept.	.30	3.75	2.82	3.21	2.84	2.96	3.95	3.43	9.90	4.23
Oct.	0	2.53	.19	1.67	.30	1.69	.30	1.69	.30	2.10
Nov.	2.30	.94	.73	.85	1.48	1.14	.90	.92	1.00	.94
Dec.	0	.75	.02	.86	.23	.86	0	.47	0	.66
Yearly	16.50	19.98	26.45	17.20	28.94	18.28	20.10	16.08	26.53	18.24

	Zapata Water Plant		El Peyote Ranch		Arroyo Tigre Chiquito		Falcon Dam		Roma International Bridge	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.20	0.78	0	1.10	0.20	0.78	0.14	0.80	T	0.86
Feb.	1.20	.81	1.50	1.17	.46	.84	.91	.82	.80	1.00
Mar.	1.20	.47	.80	.44	.94	.33	.45	.66	0	.71
Apr.	2.80	1.64	.50	1.07	1.80	1.07	2.25	1.22	2.50	1.39
May	1.01	2.67	4.30	3.70	2.80	2.38	3.80	2.38	.31	1.78
June	4.65	1.85	5.20	3.54	4.40	2.07	6.12	2.65	4.58	2.14
July	3.17	.98	.55	1.34	1.50	.84	1.55	.85	3.00	.84
Aug.	1.70	1.81	0	1.31	0	2.26	.32	2.48	0	2.16
Sept.	9.07	4.75	4.80	6.06	5.00	4.85	5.61	4.48	9.10	4.53
Oct.	0	1.53	0	1.58	.20	2.08	.33	2.20	0	2.07
Nov.	1.64	1.05	.20	.69	1.50	1.14	1.63	1.19	1.90	.82
Dec.	0	.60	.20	.60	.20	.57	.22	.63	0	.49
Yearly	26.64	18.94	18.05	22.60	19.00	19.21	23.33	20.36	22.19	18.79

	Garciasville		Los Ebanos		La Joya		HCWCID #6, Goodwin Pump No. 4B		HCWCID #6, Goodwin Pump No. 3	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.30	0.90	1.80	1.10	0.80	1.09	1.32	1.13	1.09	1.17
Feb.	1.20	.88	.70	.71	1.50	.96	.78	.91	.84	1.03
Mar.	1.65	.48	.85	.41	.55	.43	1.51	.58	1.51	.64
Apr.	2.07	1.18	5.50	1.78	2.65	1.14	1.40	1.12	2.71	1.31
May	3.61	2.24	2.30	1.85	3.43	2.11	3.37	2.10	4.64	2.30
June	2.20	2.17	4.60	2.15	5.40	2.62	6.54	2.44	5.98	2.45
July	2.92	1.15	4.20	.92	3.25	.92	2.10	.85	5.02	1.02
Aug.	.05	1.70	0	1.96	.45	1.82	0	1.34	0	1.42
Sept.	3.49	4.04	1.90	2.97	1.40	3.16	1.70	3.31	1.76	3.03
Oct.	.35	1.86	.35	1.81	.45	1.82	.20	2.74	.47	2.90
Nov.	1.26	1.04	1.00	.73	1.02	1.03	1.55	1.07	1.28	.99
Dec.	.25	.68	1.50	.65	.22	.89	0	.85	.28	.98
Yearly	19.35	18.32	24.70	17.04	21.12	17.99	20.47	18.44	25.58	19.24

	HCWCID #6, Goodwin Pump No. 5		HCWCID #6, Goodwin Pump No. 3A		HCWCID #6 Goodwin Pump No. 4		Penitas (Edinburg Pumping Plant)		New Mission Pumping Plant	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	1.42	1.19	0.38	1.07	1.10	1.57	0.41	1.20	0.30	0.70
Feb.	1.01	.97	1.50	1.11	1.04	.98	1.18	.97	1.00	.60
Mar.	2.00	.68	1.37	.59	.96	.53	.70	.49	1.00	.48
Apr.	2.75	1.39	1.69	1.39	1.75	1.20	2.00	1.02		1.06
May	2.88	2.73	3.83	2.08	4.33	2.33	5.44	2.27	5.41	3.07
June	5.50	2.27	5.86	2.73	7.87	2.88	5.78	2.89	5.48	2.86
July	2.98	.82	4.70	.90	3.44	1.03	2.57	.99	3.66	.99
Aug.	.42	1.94	1.37	1.46	0	1.29	.56	1.75	.27	1.26
Sept.	3.96	3.87	.90	3.06	.94	3.89	1.69	3.66	1.65	2.83
Oct.	.25	2.69	.20	2.83	.38	3.03	.36	2.64	0	2.18
Nov.	2.25	1.07	.81	1.03	1.67	1.13	1.44	1.09	1.25	.66
Dec.	.10	.93	0	.87	.34	1.08	.06	1.04	0	.75
Yearly	25.52	20.55	22.61	19.12	23.82	20.94	22.19	20.01		17.44

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN THE UNITED STATES

In Inches

	O. C. Dale Farm		HCWCID #15 (Edinburg Office)		Edinburg Filtration Plant		La Feria Pumping Plant		La Feria Materials Yard	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	1.04	1.45	1.62	1.25	0.86	1.30	0.65	1.48	0.90	1.09
Feb.	1.43	1.13	.98	1.02	1.30	1.06	.50	1.58	.46	1.22
Mar.	5.07	.88	1.35	.70	1.73	.78	2.80	.87	5.65	1.00
Apr.	1.72	1.69	.95	1.43	1.29	1.55	2.00	1.96	1.40	1.44
May	4.18	2.27	3.21	2.43	4.03	2.44	7.26	3.45	3.82	3.63
June	8.97	2.98	4.67	2.47	6.59	2.79	17.30	3.61	11.40	3.79
July	3.23	1.05	2.50	.96	1.81	.80	7.90	2.08	4.70	1.66
Aug.	.41	1.76	1.13	1.66	.49	1.53	2.13	3.21	1.84	2.80
Sept.	3.21	3.84	1.73	3.82	1.26	3.52	6.00	6.98	3.50	5.44
Oct.	.82	3.09	.15	2.50	1.60	2.44	9.00	4.11	1.35	2.83
Nov.	1.94	1.33	2.12	1.07	1.49	1.21	1.50	2.10	.70	1.57
Dec.	.56	1.08	.32	.96	.73	1.04	0	1.41	.21	1.82
Yearly	32.58	22.55	20.73	20.27	23.18	20.46	57.04	32.84	35.93	28.29

	CCWCID #19 (Adams Gardens)		San Benito Pump		Whipple Farm		* CCWCID #11 Bayview Dist. Office		Los Fresnos Pumping Plant	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.43	1.00	0.75	1.27	2.70	1.80	1.30	1.35	1.70	1.50
Feb.	1.09	1.13	.60	.91	2.10	1.92	2.22	1.75	.70	1.59
Mar.	4.01	.83	1.95	.84	2.50	.74	1.97	.82	2.40	.61
Apr.	1.32	1.43	.95	1.21	2.50	1.85	1.27	1.62	4.00	1.78
May	3.21	2.76	7.39	2.54	3.45	3.29	4.00	2.90	1.80	2.58
June	7.79	2.80	7.35	2.45	10.05	3.04	7.18	2.32	12.00	3.86
July	4.45	1.13	3.20	1.62	4.45	1.96	3.97	1.58	3.00	1.51
Aug.	1.13	2.10	.59	1.94	1.30	2.73	1.07	2.70	.60	2.45
Sept.	2.31	3.79	2.89	4.33	5.61	6.12	4.22	5.73	3.20	5.26
Oct.	1.55	2.56	.84	2.30	.35	3.07	1.15	2.34	.80	3.94
Nov.	1.38	1.42	1.41	1.01	1.70	1.52		1.42	.70	1.65
Dec.	.41	1.08	.65	1.30	.70	1.56	.25	1.39	.40	1.32
Yearly	29.08	22.03	28.57	21.72	37.41	29.60		25.92	31.30	28.05

* Average of 18 gages

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

Tabulated below, in approximate downstream order, are monthly records of Mexican rainfall stations with averages for their periods of record. For location, elevation, period of record, type of gage in use, watershed subdivision in which the station is located, and the observer, see alphabetical listing of these stations shown on pages 140 through 144 in this bulletin. These rainfall records have not been published elsewhere. Records of daily rainfall amounts, where available, are on file in the office of the Mexican Section of the Commission.

Detailed listings of the months and years for which records are available through 1970 may be found under "Index to Precipitation Records" in Water Bulletins 10, 14, 22, 26, and Supplement 40A.

	Juarez, Chihuahua		Loma Blanca, Chihuahua		Garita Km. 28, Chihuahua		Samalayuca, Chihuahua		San Agustin, Chihuahua	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.43	0.37	0.31	0.20	0.43	0.35	0.08	0.28	0.20	0.30
Feb.	T	.42	0	0	0	.31	0	.40	0	.28
Mar.	T	.38	.04	.02	0	.29	.08	.37	0	.29
Apr.	0	.31	0	.10	0	.09	0	.14	0	.12
May	.04	.33	.12	.14	.16	.14	.24	.14	.47	.25
June	2.95	.67	2.05	1.30	1.38	.89	4.05	.94	1.61	.72
July	1.42	1.52	.43	1.01	2.28	1.53	.94	1.77	2.72	1.62
Aug.	4.25	1.52	3.46	1.91	6.93	1.81	3.54	1.92	4.02	1.23
Sept.	1.50	1.28	2.40	1.06	4.65	1.50	3.15	1.82	2.01	1.09
Oct.	1.34	.98	.94	.64	1.02	.82	1.06	.58	1.65	.65
Nov.	.39	.53	.63	.25	1.06	.39	.47	.38	.51	.32
Dec.	.47	.54	.28	.40	.40	.57	.20	.47	.31	.54
Yearly	12.79	8.85	10.66	7.03	18.31	8.69	13.81	9.21	13.50	7.41

	Guadalupe, Chihuahua		Tinajas, Chihuahua		Praxedis Guerrero, Chihuahua		San Antonio, Chihuahua		Porvenir, Chihuahua	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.12	0.26	0	0.21	0.16	0.24	0.04	0.28	0.08	0.24
Feb.	0	.32	0	.27	0	.25	0	.29	0	.33
Mar.	T	.40	0	.30	0	.31	0	.31	T	.26
Apr.	0	.07	0	.07	0	.05	0	.06	0	.10
May	.59	.21	.87	.24	.91	.23	2.99	.35	1.14	.43
June	.28	.82	2.60	.80	.43	.75	5.43	1.47	2.68	.99
July	1.22	1.49	1.42	1.75	.31	1.91	.16	2.15	1.02	1.53
Aug.	3.70	1.74	2.01	1.70	2.56	1.49	1.93	2.30	5.31	2.07
Sept.	2.80	1.19	3.19	1.40	3.70	1.06	4.80	1.59	7.05	1.37
Oct.	.83	.89	1.38	.99	1.06	.87	.71	1.00	1.38	.91
Nov.	.55	.43	0	.37	.24	.38	.16	.45	.43	.47
Dec.	.04	.33	0	.34	.04	.30	.04	.38	.16	.45
Yearly	10.13	8.15	11.47	8.44	9.41	7.84	16.26	10.63	19.25	9.15

	Vado de Cedillos, Chihuahua		Los Barriles, Chihuahua		Banderas, Chihuahua		Luis L. Leon, Chihuahua		El Cuarenta, Chihuahua	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.28	0.25	T	0.41	0	0.06	0.20	0.28	0.08	0.17
Feb.	0	.28	0	.29	.24	.24	0	.23	T	.28
Mar.	0	.22	T	.29	0	.25	0	.21	.08	.30
Apr.	0	.13	0	.15	0	.09	0	.14	T	.13
May	1.06	.33	.94	.41	1.18	.23	1.30	.31	1.57	.29
June	2.52	1.33	2.80	1.35	3.54	1.25	4.49	1.47	1.34	.81
July	1.26	1.63	.87	2.29	1.81	1.30	3.07	1.81	2.24	1.82
Aug.	2.05	1.93	1.10	2.51	3.19	2.57	4.72	2.44	2.60	2.61
Sept.	5.47	1.50	.08	1.85	3.23	1.47	2.05	1.24	4.49	1.74
Oct.	1.38	1.02	.87	1.32	1.34	.83	.94	1.06	2.09	1.16
Nov.	.55	.40	T	.61	.47	.36	.52	.47	.39	.45
Dec.	.16	.47	T	.41	0	.22	.16	.39	.28	.48
Yearly	14.73	9.49	6.66	11.89	15.00	8.87	17.45	10.05	15.16	10.24

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

Month	El Cuervo, Chihuahua		Carichic, Chihuahua		San Juanito, Chihuahua		Siquirichic, Chihuahua		El Vergel, Chihuahua	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.04	0.22	0.12	0.43	0.47	1.48	1.50	1.11	1.65	1.59
Feb.	0	.23	0	.53	0	.91	0	.49	T	.84
Mar.	.04	.16	.16	.17	.55	.14	.31	.36	.24	.58
Apr.	0	.18	0	.13	T	2.12	0	.23	0	.52
May	1.10	.38	1.46	.41	1.65	.64	2.32	.49	1.97	.78
June	2.52	1.42	1.93	1.62	4.88	2.08	2.32	1.69	7.64	3.09
July	3.94	2.18	5.43	5.96	5.20	14.85	2.83	5.28	6.93	6.64
Aug.	2.95	2.61	7.99	5.21	5.20	9.00	2.20	5.24	7.24	6.65
Sept.	3.82	2.11	3.70	3.07	5.59	3.56	2.40	3.18	6.61	4.86
Oct.	1.97	1.06	.79	1.34	2.99	3.95	1.77	1.03	2.20	1.74
Nov.	1.10	.22	1.38	.58	1.42	1.40	3.19	.48	2.05	.62
Dec.	.04	.09	.28	.76	1.10	2.12	1.57	1.15	.28	1.61
Yearly	17.52	10.86	23.24	20.21	29.05	42.25	20.41	20.72	36.81	29.52

Month	Balleza, Chihuahua		El Sitio, Chihuahua		La Boquilla, Chihuahua		San Antonio, Durango		Estacion Rosario, Durango	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	T	0.36	0.16	0.22	0.51	0.31	0.28	0.33	0.39	0.30
Feb.	0	.35	0	.37	T	.17	0	.14	0	.39
Mar.	T	.13	.35	.14	T	.17	.16	.09	.16	.20
Apr.	0	.21	0	.18	0	.18	0	.25	0	.21
May	1.26	.23	.55	.44	.71	.53	.94	.56	1.69	.94
June	7.64	1.66	1.06	1.67	3.07	1.44	3.23	1.82	5.24	2.74
July	4.49	4.58	4.45	4.21	2.95	2.87	4.41	4.32	4.57	4.38
Aug.	3.07	4.81	4.53	4.91	3.03	2.93	5.04	3.79	3.35	4.85
Sept.	2.83	3.30	5.98	3.72	5.00	2.94	7.91	4.25	10.39	5.60
Oct.	.28	.85	.08	.84	.91	.92	.67	1.21	.71	1.44
Nov.	2.36	.51	1.54	.45	1.73	.33	1.46	.24	1.73	.41
Dec.	T	.52	.04	.33	0	.37	0	.26	0	.50
Yearly	21.93	17.51	18.74	17.48	17.91	13.16	24.10	17.26	28.23	21.96

Month	Ojo Caliente, Chihuahua		Villa Coronado, Chihuahua		Santa Barbara, Chihuahua		Valle Allende, Chihuahua		Escalon, Chihuahua	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.59	0.20	0.39	0.30	0.47	0.35	0.31	0.22	0.08	0.42
Feb.	0	.20	0	.29	0	.54	0	.23	T	.17
Mar.	0	.16	.24	.22	.12	.24	.04	.09	.63	.12
Apr.	0	.17	0	.25	0	.15	0	.21	0	.29
May	.59	.50	1.34	.51	2.20	1.09	.63	.62	2.36	.73
June	2.76	1.73	8.90	3.21	4.45	2.53	3.35	1.83	1.54	1.68
July	1.18	3.15	3.46	3.56	2.76	3.38	3.23	3.27	1.38	2.22
Aug.	4.09	2.68	5.98	3.97	1.22	4.46	4.65	4.49	4.37	2.69
Sept.	5.31	2.67	4.45	3.99	3.82	5.00	3.98	4.22	2.36	2.94
Oct.	.39	1.16	1.38	1.55	.28	.97	.39	1.09	1.22	1.28
Nov.	1.81	.18	1.61	.46	.75	.27	1.57	.21	1.42	.25
Dec.	.04	.26	0	.38	0	.45	0	.27	0	.29
Yearly	16.76	13.06	27.75	18.69	16.07	19.43	18.15	16.75	15.36	13.08

Month	Jimenez, Chihuahua		Parral, Chihuahua		Camargo, Chihuahua		Santa Rita, Chihuahua		Victoria, Chihuahua	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.39	0.24	0.39	0.21	0.55	0.41	0	0.39	0.43	0.31
Feb.		.11	T	.21	T	.25	.04	.28	0	.67
Mar.	.04	.09	T	.11	T	.13	0	.16	.08	.17
Apr.	0	.12	0	.21	0	.19	0	.24	T	.27
May	1.14	.48	.47	.43	.63	.63	.20	.53	1.73	.88
June	2.60	1.14	1.42	1.76	2.52	1.75	3.58	1.75	1.38	2.30
July	5.39	3.35	4.57	4.25	2.24	3.00	1.18	2.04	1.81	2.54
Aug.	3.23	2.28	5.24	4.32	3.19	2.54	2.44	2.50	1.89	2.91
Sept.	2.87	2.15	7.05	4.30	3.07	2.96	1.30	2.23	2.68	2.75
Oct.	.55	1.42	.20	1.19	.47	1.07	2.40	.96	.47	.62
Nov.	1.93	.23	1.97	.49	1.85	.38	0	.15	1.26	.20
Dec.	0	.24	T	.38	.04	.38	.31	.37	T	.26
Yearly	18.14	11.85	21.31	17.86	14.56	13.69	11.45	11.60	11.73	13.88

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

	Tacubaya, Chihuahua		Rosetilla, Chihuahua		Nonoava, Chihuahua		El Maguey, Chihuahua		San Lorenzo, Chihuahua	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.24	0.18	0.16	0.39	0.35	0.10	0.04	0.24		0.19
Feb.	.47	.54	T	.14	0	.36	0	.31	0	.13
Mar.	.08	.17	T	.11	.12	.25	.16	.13	.12	.01
Apr.	0	.18	0	.28	0	.17	0	.12	0	0
May	3.58	1.19	2.48	.33	1.38	.25	.47	.38	2.80	.55
June	2.52	1.67	1.65	1.14	1.14	1.07	1.61	1.66	2.48	1.65
July	1.89	3.66	3.74	2.57	3.70	5.81	3.50	3.68	3.78	3.46
Aug.	2.83	2.06	3.58	2.68	3.03	3.12	4.88	4.09	10.24	4.74
Sept.	3.15	3.30	2.91	2.20	4.88	2.83	4.41	3.45	6.69	3.90
Oct.	.20	.53	.24	.84	.91	1.23	.28	.93	.24	.90
Nov.	.98	.23	.91	.20	2.52	.54	2.28	.28	1.22	.60
Dec.	.55	.56	T	.35	.12	.52	.08	.31	0	.58
Yearly	16.49	14.27	15.67	11.23	18.15	16.25	17.71	15.58		16.71

	Villalba, Chihuahua		Las Virgenes, Chihuahua		Km. 135, Chihuahua		Km. 99, Chihuahua		Delicias, Chihuahua	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.16	0.32	0.28	0.26	0.20	0.08	0.12	0.10	0.20	0.33
Feb.	0	.14	0	.11	0	.17	0	.20	0	.14
Mar.	.04	.06	.08	.05	0	.11	0	.10	0	.13
Apr.	0	.17	0	.21	0	.34	0	.22	0	.27
May	.71	.36	1.34	.33	1.97	.54	.94	.48	1.14	.31
June	2.09	1.18	1.26	1.15	1.38	1.40	1.93	1.72	.71	1.15
July	3.46	3.32	.79	2.29	.83	2.12	.24	2.34	1.81	2.41
Aug.	5.28	3.00	4.25	2.51	3.39	2.71	3.86	2.58	2.52	2.45
Sept.	5.20	2.65	6.46	2.20	5.39	2.92	5.08	2.80	3.15	2.17
Oct.	.31	.98	.31	.82	.20	.98	.24	.79	.20	.82
Nov.	1.38	.27	1.06	.23	1.07	.22	1.14	.25	1.02	.26
Dec.	.04	.37	0	.34	.04	.23		.38	0	.38
Yearly	18.67	12.82	15.83	10.50	14.47	11.82		11.96	10.75	10.82

	Lazaro Cardenas, Chihuahua		Meoqui, Chihuahua		Las Burras, Chihuahua		Cd. Guerrero, Chihuahua		Bachiniva, Chihuahua	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.24	0.26	0.16	0.14	0.12	0.23	0.04	0.58	0	0.38
Feb.	T	.19	T	.19	0	.16	T	.41	.04	.16
Mar.	.04	.12	.04	.11	0	.13	.12	.21	1.50	.35
Apr.	0	.31	0	.49	0	.19	T	.20	0	.10
May		.46	1.54	.50	1.77	.38	1.73	.30	.71	.20
June		1.57	1.34	1.25	.71	1.05	4.02	1.55	2.05	1.51
July		2.74	1.65	2.31	6.97	2.74	5.43	4.81	3.86	6.00
Aug.		2.32	4.37	2.45	3.27	2.46	7.13	5.28	9.13	4.75
Sept.		2.25	4.17	2.04	3.15	2.13	3.31	2.99	5.91	2.39
Oct.		1.07	.24	.99	.35	.76	2.36	1.23	1.61	1.22
Nov.		.23	.94	.15	.91	.17	1.54	.51	1.38	.34
Dec.		.23	T	.36	0	.35	.43	.71	0	.42
Yearly		11.75	14.45	10.97	17.25	10.75	26.11	18.78	26.19	17.82

	La Trasquila, Chihuahua		Cuauhtemoc, Chihuahua		Colonia Anahuac, Chihuahua		Presa Chihuahua, Chihuahua		Chihuahua, Chihuahua	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0	0.14	0.35	0.28	0.20	0.27	0.16	0.12	0.04	0.27
Feb.	0	.30	0	.17	T	.37	.09	.20	T	.19
Mar.	.16	.13	.08	.12	.12	.14	.12	.15	.16	.21
Apr.	0	.18	0	.20	0	.25	0	.20	0	.19
May	1.34	.39	1.50	.36	1.06	.46	2.68	.84	2.28	.42
June	4.25	1.69	2.56	1.51	2.20	1.38	3.86	2.43	2.48	1.51
July	3.70	3.65	5.28	4.67	4.06	4.96	2.32	4.53	4.09	3.45
Aug.	4.41	3.03	6.38	4.12	5.75	4.95	6.54	4.48	6.57	3.38
Sept.	9.29	3.35	4.41	2.66	4.21	3.25	2.99	2.70	2.16	2.74
Oct.	1.42	.73	.63	1.14	.28	1.15	.55	.96	.83	.84
Nov.	.71	.36	1.42	.29	1.06	.32	.91	.26	.94	.41
Dec.	.08	.26	.04	.40	.04	.24	.04	.31	T	.35
Yearly	25.36	14.21	22.65	15.92	18.98	17.74	20.26	17.18	19.55	13.96

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

Month	Majalca, Chihuahua		Planta Zootecnica, Chihuahua		Villa Aldama, Chihuahua		La Campana, Chihuahua		Presa Luis L. Leon, *Chihuahua	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.12	0.22	0.08	0.22	0.04	0.18	0	0.23	0	0.06
Feb.	.08	.34	T	.19	0	.13	0	.28	0	.17
Mar.	.28	.27	.24	.17	.04	.21	.20	.17	0	.16
Apr.	0	.39	0	.24	0	.17	1.30	.31	0	.24
May	1.14	.85	2.16	.48	1.73	.47		.22	.87	.18
June	7.52	2.89	4.06	1.77	2.80	2.05		1.68	2.44	1.36
July	6.93	6.04	2.60	3.74	1.77	3.15		3.14	1.57	1.67
Aug.	11.26	5.64	5.35	4.05	5.98	3.00		3.24	7.48	2.83
Sept.	5.51	3.66	3.11	2.44	3.50	2.84		2.89	1.65	2.43
Oct.	.71	.98	.94	1.14	.67	.66		1.04	.08	.67
Nov.	1.18	.28	1.26	.31	1.06	.26		.31	.39	.16
Dec.	.12	.27	T	.32	0	.27		.32	0	.17
Yearly	34.85	21.83	19.80	15.06	17.59	13.39		13.83	14.48	10.10

Month	El Anteojo, Chihuahua		Parrita, Chihuahua		Maijoma, Chihuahua		Cuchillo Parado, Chihuahua		Coyame, Chihuahua	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	T	T	0	0.07	0.08	0.42	0	0.10	0.16	0.12
Feb.	0	.25	0	.23	0	.37	0	.12	0	.38
Mar.	T	.04	.12	.07	.24	.22	0	.11	.04	.18
Apr.	0	.35	0	.56	0	.22	0	.12	0	.26
May	1.57	.50	1.10	.32	.59	.68	1.65	.61	1.97	.60
June	2.95	1.96	3.07	2.24	2.76	1.69	1.69	1.07	2.20	1.42
July	2.95	2.52	2.68	2.28	1.42	2.76	.98	2.35	2.09	2.19
Aug.	2.91	2.49	4.65	3.28	4.09	3.14	3.46	2.17	5.87	1.97
Sept.	3.31	1.84	7.56	2.96	2.52	2.56	3.62	1.39	2.80	2.51
Oct.	.16	.85	.67	.98	.87	1.03	1.50	.77	.63	.91
Nov.	1.06	.18	.51	.22	1.18	.36	1.50	.30	.55	.31
Dec.	0	.32	0	.14	T	.34	0	.20	0	.16
Yearly	14.91	11.30	20.36	13.35	13.75	13.79	14.40	9.31	16.31	11.01

Month	Las Varas, Chihuahua		Gallego, Chihuahua		El Sueco, Chihuahua		Ojinaga (IB&WC), Chihuahua		Ojinaga (M.S of Mexico), Chihuahua	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	T	0.27	0.04	0.21	0.08	0.37	T	0.35	T	0.31
Feb.	0	.47	0	.42	0	.46	0	.25	0	.22
Mar.	T	.15	.39	.15	.28	.24	T	.16	0	.20
Apr.	0	.19	0	.17	0	.19	0	.23	0	.25
May	.98	.27	2.13	.28	1.81	.22	1.10	.41	1.02	.55
June	3.94	1.08	2.76	1.11	3.31	.89	3.43	1.40	3.94	1.15
July	3.46	3.05	2.83	3.03	2.60	2.80	1.61	1.47	2.32	1.39
Aug.		3.18	4.33	3.38	3.15	3.68	2.13	1.51	2.20	1.51
Sept.	3.54	2.53	4.65	2.30	6.50	2.67	2.36	1.42	3.31	1.53
Oct.		1.43	1.97	1.42	3.23	1.27	.51	1.07	.43	1.02
Nov.		.43	.87	.30	.87	.45	.51	.37	.71	.38
Dec.		.27	.16	.23	.08	.24	0	.26	T	.38
Yearly		13.32	20.13	13.00	21.91	13.48	11.65	8.90	13.93	8.89

Month	Portrero del Llano, Chihuahua		Manuel Benavides, Chihuahua		Sierra Mojada, Coahuila		Mina La Borrada, Coahuila		Santa Rosa, Coahuila	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.08	0.09	0.08	0.13	0	0.54	0.51	0.27	0.51	0.79
Feb.	0	.28	0	.21	0	.27	0	.43	0	.76
Mar.	0	.51	.04	.28	.51	.30	.39	.25	1.30	.56
Apr.	0	.15	0	.22	0	.27	0	.35	.39	.93
May	.24	.23	2.13	1.08	1.10	1.02	0	.80	3.58	1.35
June	2.05	1.71	1.57	1.46	2.64	2.28	0	1.86	1.18	1.67
July	1.85	2.25	1.77	2.35	3.94	2.74	0	1.16	2.48	1.43
Aug.	3.23	2.41	3.42	2.51	1.65	2.83	1.77	2.10	3.35	2.06
Sept.	3.74	1.59	2.48	2.73	2.64	3.04	3.35	2.11	1.61	2.38
Oct.	.47	.57	.24	.86	1.22	1.33	.75	1.20	2.20	2.22
Nov.	.47	.18	.79	.18	1.65	.51	.71	.37	.39	.94
Dec.	0	.29	0	.16	T	.59	0	.22	0	.40
Yearly	12.13	10.26	12.52	12.17	15.35	15.72	7.48	11.12	16.99	15.49

T Trace * Formerly Presa El Granero, Chihuahua

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

Month	San Fernando, Coahuila		Hacienda San Miguel, Coahuila		Rcho. La Chuparrosa, Chihuahua		Presa Centenario, Coahuila		Amstd. Res. Near Tlaloc, Coahuila	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.71	0.34	0.55	0.29	0.25	0.08	0.87	0.51	1.00	0.47
Feb.	T	.59	0	.51	.15	.34	.08	.94	.05	.37
Mar.	2.64	.43	.24	.61	1.62	.64	.79	.52	1.60	.69
Apr.	.04	1.08	3.98	1.93	.52	.60	2.76	1.48	2.00	1.45
May	3.43	1.16	2.83	2.10	3.49	1.54	2.76	1.64	3.03	1.69
June	.08	1.01	1.26	2.30	1.39	1.90	1.18	2.45	1.35	3.03
July	2.60	.87	4.25	1.43	1.01	.94	.67	.89	1.17	.84
Aug.	.83	1.65	2.76	2.00	2.16	4.64	7.48	3.54	8.40	6.37
Sept.	1.61	2.97	2.68	3.55	2.21	2.29	.87	5.16	2.20	4.94
Oct.	1.61	1.66	0	1.88	.87	.74	.79	2.12	.50	.78
Nov.	.47	.45	.79	.40	.47	.16	.59	.94	.60	.22
Dec.	T	.35	0	.27	.03	.10	.04	.39	0	.07
Yearly	14.02	12.56	19.34	17.27	14.17	13.97	18.88	20.58	21.90	20.92

Month	Ciudad Acuna, Coahuila		Presa Cabeceras, Coahuila		Presa San Miguel, Coahuila		Palestina, Coahuila		Chupadero, Coahuila	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	1.14	0.57	0.71	0.47	0.59	0.42	0.71	0.91	0.87	0.55
Feb.	.08	.86	.16	.76	.08	.87	.16	.99	0	.88
Mar.	.31	.73	.39	.57	0	.60	1.30	.66	0	.52
Apr.	1.73	1.68	1.26	1.31	.63	.89	3.70	1.66	2.05	1.72
May	2.44	2.39	4.06	2.52	1.93	2.10	2.16	2.42	2.76	1.75
June	2.95	2.48	2.48	2.22	2.87	2.37	2.36	2.42	3.07	2.43
July	3.82	1.13	.55	1.13	2.52	1.01	1.50	1.72	4.29	1.09
Aug.	6.89	2.11	6.93	4.12	6.22	3.07	4.80	2.32	9.06	2.63
Sept.	1.02	3.34	1.38	5.84	.87	4.42	2.72	3.30	2.01	4.21
Oct.	.43	2.34	.51	2.25	.35	1.91	.83	1.90	.31	2.09
Nov.	.79	.61	1.26	.84	.98	.80	.87	.75	.83	.79
Dec.	.16	.51	.16	.35	0	.52	.08	.79	0	.40
Yearly	21.76	18.75	19.85	22.38	17.04	18.98	21.19	19.84	25.25	19.06

Month	Jimenez, Coahuila		El Remolino, Coahuila		Piedras Negras, Coahuila		Allende, Coahuila		Villa Guerrero, Coahuila	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.63	0.66	0.87	0.41	1.14	0.69		0.62	0.39	0.46
Feb.	.16	.94	0	.64	.28	.96	0	1.07	.12	.73
Mar.	T	.76	0	.42	.24	.67	.08	.46	.16	.42
Apr.	.79	1.70	0	1.59	.16	1.97	.12	1.17	.55	1.58
May	3.82	2.56	1.57	2.32	2.32	3.18	3.15	2.31	1.34	2.52
June	2.99	2.85	2.76	3.71	1.38	2.23	2.24	2.29	1.18	2.42
July	2.64	1.31	1.77	1.93	1.18	1.89	3.07	1.70	1.73	1.17
Aug.	5.47	2.03	0	1.99	5.08	2.80	4.13	2.99	4.37	2.31
Sept.	2.20	3.37	.79	4.25	3.54	3.36	2.36	3.90	1.06	4.12
Oct.	1.02	2.40	.71	2.59	.55	2.82	.24	2.22	.35	2.95
Nov.	.98	.91	.98	.63	1.50	.74	1.10	.61	1.06	.65
Dec.	.20	.66	0	.39	.24	.65	.08	.55	0	.59
Yearly	20.90	20.15	9.45	20.87	17.61	21.96		19.89	12.31	19.92

Month	Rancho San Diego, Coahuila		Rancho Mercedes, Coahuila		Villa Hidalgo, Coahuila		Colombia, Nuevo Leon		Rancho Los Vidrios, Tamaulipas	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0	0.21	0	0.56	2.24	0.79	0.75	0.22	0.79	0.80
Feb.	0	.48	0	.73	.20	.98	.39	.65	.39	.97
Mar.	0	.40	1.50	.77	2.76	.65	.79	.55	1.89	.42
Apr.	0	1.33	2.99	2.19	.83	1.58	.51	1.32	1.89	1.43
May	2.56	2.65	5.98	3.00	5.40	2.46	3.31	2.79	11.69	2.96
June	3.54	2.06	2.64	2.08	2.99	2.05	1.22	1.45	6.89	2.03
July	.39	1.51	.43	.79	.39	.97	0	.76	1.57	1.08
Aug.	.39	1.70	0	2.50	2.95	2.14	3.15	3.49	2.56	2.24
Sept.	1.18	3.97	1.42	2.75	1.81	3.55	0	4.82	3.19	3.59
Oct.	.20	1.60	0	2.00	0	1.80	0	1.45	0	2.47
Nov.	.59	.87	.79	1.03	1.18	1.05	1.57	1.28	2.36	1.32
Dec.	.59	.64	0	.62	.24	.77		.59	.59	.98
Yearly	9.44	17.42	15.75	19.02	20.99	18.79		19.37	33.81	20.29

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

Month	Nv. Laredo (M.S. of Mexico), Tamps.		Nv. Laredo (IBWC), Tamaulipas		El Llano, Tamaulipas		Nuevo Laredo Km. 26 SSW, Tamaulipas		San Ignacio, Tamaulipas	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.63	0.77	0.63	0.62	0.59	0.68	0.79	0.64	1.14	0.56
Feb.	1.10	.88	1.14	.91	1.50	.89	1.57	1.04	1.57	1.04
Mar.	.12	.62	.20	.40	.79	.29	1.18	.39	0	.37
Apr.	2.83	1.20	2.60	1.15	3.15	1.25	1.54	1.63	.43	1.38
May	14.29	2.45	16.38	2.65	7.60	3.19	9.69	2.80	2.80	3.22
June	2.99	2.11	2.13	2.35	3.90	4.42	5.04	1.61	2.36	1.70
July	1.57	1.28	1.02	.95	1.34	.34	1.18	.87	1.77	.73
Aug.	1.46	1.64	1.81	2.28		4.15	0	2.38	0	2.64
Sept.	2.76	3.02	2.87	3.54	3.62	5.60	5.51	4.77	2.48	5.25
Oct.	.39	1.54	.28	1.73	.31	2.41	0	1.92	.87	2.44
Nov.	1.26	.98	1.46	1.01	1.14	.96	2.83	1.14	1.26	1.27
Dec.	.20	.88	.12	.72	.12	.69	.24	.68	0	.72
Yearly	29.60	17.37	30.64	18.31		24.87	29.57	19.87	14.68	21.32

Month	Rancho San Juan de la Palma, Tamps.		El Treinta, Coahuila		Muzquiz, Coahuila		Conchos, Coahuila		Sabinas, Coahuila	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0	0.72	0	0.36	0.47	0.78	0	0.27	0.47	0.59
Feb.	.12	.95	0	.41	0	.55	0	.59	T	.72
Mar.	1.69	.56	0	.58	.24	.90	.71	.32	1.02	.42
Apr.	1.65	1.90	.39	1.16	1.34	1.02		1.70	.79	1.22
May	1.26	1.93	5.12	2.46	5.10	3.92		2.47	5.12	2.52
June	4.25	1.92	2.95	3.12	4.63	3.32		2.40	1.69	1.96
July	2.76	.80	4.33	2.17	7.42	2.49	3.58	1.97	2.83	1.23
Aug.	0	1.92	3.94	2.52	2.20	2.55	.51	1.94	1.42	2.20
Sept.	9.21	4.46	4.72	4.48	2.91	4.92	1.77	3.33	2.52	3.45
Oct.	.20	1.68	0	1.68	.27	2.19	0	2.12	.08	1.79
Nov.	1.22	1.11	0	.41	1.41	1.16	1.02	.57	1.30	.62
Dec.	.12	.77	0	.19	.08	.94	.08	.46	0	.54
Yearly	22.48	18.72	21.45	19.54	26.07	24.74		18.14	17.24	17.26

Month	** Juarez, Coahuila		Cuatro Cienegas, Coahuila		Ocampo, Coahuila		Ejido San Blas, Coahuila		San Buenaventura, Coahuila	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.		0.57	0.31	0.32	0.08	0.40	0	0.44	0.20	0.63
Feb.		.49	0	.33	0	.14	0	0	0	.50
Mar.	3.11	.38	.08	.12	.47	.18	0	0	.47	.33
Apr.	.79	1.24	0	.29	.08	.73	0	.22	.04	.74
May	3.39	1.99	1.14	.78	1.02	1.07	.20	1.62	.75	1.55
June	2.28	.98	.47	.70	1.02	1.36	3.54	4.51	3.11	1.64
July	3.54	.91	1.06	.78	1.46	1.87	3.90	1.80	2.76	1.56
Aug.	.04	1.41	.51	1.06	.79	1.75	1.69	2.41	0	1.70
Sept.	1.89	3.27	1.89	1.50	1.73	2.45	1.77	3.69	2.28	2.51
Oct.	.04	1.63	.12	.76	.24	1.08	.51	5.20	.31	1.31
Nov.	2.13	.60	1.34	.39	1.57	.29	.31	.10	.79	.56
Dec.	0	.36	0	.42		.39	0	.14	.08	.63
Yearly		13.83	6.92	7.45		11.71	11.92	20.13	10.79	13.66

Month	Monclova, Coahuila		Progreso, Coahuila		* Presa Carranza, Coahuila		Laguna de Salinillas, N. L.		Candela, Coahuila	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.47	0.47	0.63	0.43	0.63	0.73	1.02	0.65	0.16	0.08
Feb.	T	.47	0	.49	.04	.63	.16	.62		
Mar.	.08	.30	.16	.34	2.20	.49	2.91	.54	.24	.42
Apr.	.04	.60	.16	1.23	.31	1.22	.87	1.04	.63	.55
May	2.48	1.47	3.43	2.19	4.88	2.18	7.24	2.32	2.44	2.21
June	2.76	1.38	2.05	1.54	3.54	1.82	3.82	1.76	3.35	2.09
July	4.76	1.52	2.60	.86	2.13	.97	1.46	.76	2.44	2.13
Aug.	2.13	1.62	.31	1.89	.71	2.04	.87	2.43	1.02	1.38
Sept.	.67	3.06	1.26	3.05	2.91	3.05	3.15	3.37		
Oct.	.28	1.20	.79	1.83	.08	1.69	.04	1.80	.04	.28
Nov.	.67	.57	.71	.56	1.22	.61	1.14	.73	.79	.40
Dec.		.54	.12	.48	.20	.64	.16	.57	.24	.28
Yearly		13.20	12.22	14.89	18.85	16.07	22.84	16.59		

T Trace * Formerly Don Martin, Coahuila ** Formerly Villa Juarez, Coahuila

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

	Lampazos, Nuevo Leon		Anahuac, Nuevo Leon		La Gloria, Nuevo Leon		Bustamante, Nuevo Leon		Sabinas Hidalgo, Nuevo Leon	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.16	0.58	0.47	0.70	0	0.42	0.24	0.59	0.16	0.45
Feb.	.55	.90	.26	.61	.94	.80	.47	.82	.51	.88
Mar.		.58	.47	.51	1.06	.34	.43	.55	1.06	.68
Apr.	.04	1.13	.67	1.14	1.73	1.28	.91	1.03	1.81	1.28
May	6.18	2.51	3.07	2.35	2.80	2.59	3.66	1.60	7.24	2.59
June		2.83	3.39	1.74	2.20	2.75	5.20	3.54	5.94	4.27
July	.79	1.67	1.57	1.24	0	1.38	1.81	1.39	4.33	2.29
Aug.	.94	1.87	5.04	2.14	0	1.67	3.15	3.37	.55	2.54
Sept.	.87	5.69	1.26	3.32	1.54	5.33	2.72	5.96	1.06	7.23
Oct.	0	1.67	.12	1.51	0	1.51	.75	2.05	.63	2.68
Nov.	.55	.72	.98	.66	1.30	.84	1.02	.91	1.06	1.15
Dec.	.08	.48	.20	.72	.31	.64	0	.61	.08	.65
Yearly		20.63	17.50	16.64	11.88	19.55	20.36	22.42	24.43	26.69

	Vallecillo, Nuevo Leon		Las Tortillas, Tamaulipas		Rancho San Rafael Bustamante, Tamps.		Rio Salado Riberena, Tamaulipas		Aniego 166, Tamaulipas	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.24	0.46	0.39	0.37	0.59	0.54	0.39	0.47	0.24	0.72
Feb.	.71	.80	.98	1.11	1.50	1.56	.83	1.04	.98	.92
Mar.	.55	.45	.79	.48	.47	.25	1.10	.49	.39	.43
Apr.	1.81	1.02	.59	1.40	.51	.88	.35	1.26	2.56	1.12
May	5.08	1.95	3.74	3.16	3.23	2.69	2.28	2.85	2.76	3.16
June	6.57	2.99	5.28	2.48	6.50	3.50	4.37	2.47	5.12	2.08
July	1.65	1.25	4.72	.99	1.69	1.28	1.38	.63	1.38	.44
Aug.	.39	1.83	0	1.42	0	2.33	0	2.55	0	2.35
Sept.	2.13	4.86	8.66	5.61	8.98	6.65	9.06	6.40	9.06	7.51
Oct.	.31	2.26	0	1.51	.39	3.41	0	2.20	.20	1.70
Nov.	1.10	.89	1.57	1.30	1.57	1.73	1.97	1.28	1.57	1.11
Dec.	.28	.60	.59	.86	.20	.58	.71	.97	.39	.60
Yearly	20.82	19.36	27.31	20.69	25.63	25.40	22.44	22.61	24.65	22.14

	La Bandera, Tamaulipas		Nueva Cd. Guerrero, Tamaulipas		Hacienda El Alamo, Nuevo Leon		San Javier, Nuevo Leon		Cd. Mier, Km. 8 SW, Tamaulipas	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.20	0.69	0.24	0.94	T	0.34	0.20	0.71	0.20	0.71
Feb.	.59	.76	.87	.87	1.50	.99	.59	.91	.59	1.07
Mar.	1.18	.77	.87	.53	.47	.42	.79	.77	.59	.78
Apr.	4.33	1.50	1.18	1.35	.94	.71	2.76	1.84	2.83	1.44
May	5.51	3.19	4.02	2.17	4.33	2.04	4.49	4.03	1.77	3.35
June	7.09	3.28	5.67	2.75	7.72	4.95	10.24	3.85	6.34	3.50
July	1.97	.78	2.83	.86	1.77	2.51	3.94	1.56	4.13	1.45
Aug.	0	2.55	.04	1.94	.16	3.17	0	3.10	0	2.88
Sept.	11.02	6.53	8.94	4.34	2.91	5.49	9.45	6.25	10.24	6.15
Oct.	.20	1.75	.16	2.10	.94	2.01	.59	2.39	.59	2.12
Nov.	1.77	.99	1.85	.99	1.54	1.31	1.97	1.21	1.97	1.16
Dec.	.59	.68	.47	.56	.12	.52	.39	.74	.39	.76
Yearly	34.45	23.47	27.14	19.40	22.40	24.46	35.41	27.36	29.64	25.37

	Cd. Mier, Tamaulipas		Miguel Alemen, Tamaulipas		Parras, Coahuila		Gral. Cepeda, Coahuila		Reata, Coahuila	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.16	1.04	0.20	0.80	0.24	0.51	0.04	0.49	0	0.29
Feb.	.63	1.17	.82	1.07	.12	.41	.04	.50	0	.20
Mar.	.63	.72	.67	.26	.08	.42	.04	.31	0	.28
Apr.	1.93	1.39	1.93	1.87	.20	.23	.43	.41	.20	.30
May	.87	2.85	1.42	2.32	1.81	1.09	2.17	.85	.91	.85
June	4.80	2.51	3.82	2.28	3.27	2.11	3.23	2.23	2.76	1.11
July	2.99	.74	2.44	1.09	1.30	2.36	3.46	3.26	1.57	.76
Aug.	0	2.64	.12	2.34	3.31	2.96	4.25	3.07	1.50	1.63
Sept.	11.18	5.30	8.98	7.72	2.40	2.79	.91	2.79	.12	1.31
Oct.	.39	2.32	.16	1.38	.20	1.29	.24	1.27	.24	.70
Nov.	2.01	1.27	1.54	1.10	1.22	.48	.51	.50	2.09	.47
Dec.	.24	.69	.35	.62	.08	.81	.12	.53	0	.28
Yearly	25.83	22.64	22.45	22.85	14.23	15.46	15.44	16.21	9.39	8.18

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

Month	San Antonio de las Alazanas, Coahuila		Saltillo, Coahuila		Ramos Arizpe, Coahuila		Carbonera, Nuevo Leon		Icamole, Nuevo Leon	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.91	0.88	0.08	0.58	0.16	0.47	0.16	0.82	0	0.27
Feb.	.63	.90	.16	.55	.16	.39	.16	.82	T	.30
Mar.	1.38	.51	.98	.42	.43	.28	1.18	.80	.71	.17
Apr.	1.14	.95	.71	.80	.47	.46	.91	.94	0	.30
May	3.03	1.84	1.93	1.17	1.65	.86	3.50	2.15	.31	.88
June	4.49	2.78	1.81	2.22	1.97	1.06	5.12	2.36	1.02	.93
July	4.52	3.28	3.39	2.59	2.52	1.43	5.43	2.60	.55	.46
Aug.	.98	3.13	3.43	2.46	1.10	1.32	1.89	3.16	.24	1.16
Sept.	1.85	2.69	1.30	2.72	1.46	1.74	1.77	2.98	1.02	2.07
Oct.	3.70	2.16	.47	1.27	.39	.76	1.22	1.95	.43	.94
Nov.	1.38	1.31	.71	.83	.91	.47	3.31	.95	.98	.49
Dec.	.20	.94	.04	.63	.04	.52	.16	.85	0	.41
Yearly	24.21	21.37	15.01	16.24	11.26	9.76	24.81	20.38	5.26	8.38

Month	Mina, Nuevo Leon		La Popa, Nuevo Leon		Cienega de Flores, Nuevo Leon		Topo Chico, Nuevo Leon		Higueras, Nuevo Leon	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.43	0.45	0	0.48	0.55	1.22	0.31	0.37	0.20	0.64
Feb.	.16	.45	1.30	1.02	.94	.95	.24	.54	.59	.56
Mar.	.04	.13	1.34	.33	2.83	1.16	.35	.45	2.72	.67
Apr.	.24	.52	0	.49	.83	1.59	.39	.97	.39	1.29
May	1.46	.63	2.24	1.19	6.89	2.75	4.21	1.34	3.70	2.01
June	1.57	1.76	2.28	1.15	10.47	3.10	7.44	2.19	11.89	2.48
July	1.50	.79	.59	1.01	4.92	1.88	2.76	1.32	4.57	2.01
Aug.	.47	1.43	1.06	1.93	.71	4.40	.43	2.89	1.42	3.15
Sept.	2.76	3.36	3.23	3.25	4.21	5.71	5.83	4.45	4.61	4.84
Oct.		1.20	.47	.86	2.91	2.76	3.39	2.57	2.52	1.75
Nov.	1.34	.66	.87	.61	1.46	1.11	.55	.68	1.50	.80
Dec.	.04	.45	0	.61	.59	1.10	.04	.41	.28	.63
Yearly		11.83	13.38	12.93	37.31	27.73	25.94	18.18	34.39	20.83

Month	Sombreretillo, Nuevo Leon		Los Ramones, Nuevo Leon		Cerro Prieto, Nuevo Leon		Los Herrera (La Tableta), Nuevo Leon		Rinconada, Nuevo Leon	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.83	1.63	0.43	0.62	0.35	0.12	0.04	0.58	0	0.28
Feb.	1.77	1.88	.24	.73	.04	.84	.16	.67	0	.26
Mar.	2.56	.93	1.34	.65	2.17	.69	2.44	.64	.59	.23
Apr.	.39	1.24	.59	1.72	2.32	.90	1.18	1.40	0	.45
May	11.61	6.86	4.45	2.35	8.39	4.14	4.06	2.70	1.02	.53
June	15.91	12.35	8.82	3.21	8.78	3.68	3.94	2.62	2.99	1.07
July	6.57	5.60	4.80	1.89	5.91	2.52	3.70	1.30	0	.35
Aug.	.55	5.88	0	3.64	.08	2.23	1.42	2.65	.75	1.28
Sept.	10.71	17.89	7.09	5.33	1.61	4.70	15.55	4.89	.91	1.68
Oct.	3.15	8.73	2.56	2.97	1.30	2.96	.98	2.59	.55	.91
Nov.	4.17	2.49	1.30	.71	0	.15	1.34	.67	.59	.29
Dec.	2.13	1.79	.47	.47	.16	.14	.28	.46	0	.31
Yearly	60.35	67.27	32.09	24.29	31.11	23.07	35.09	21.17	7.40	7.64

Month	Santa Catarina, Nuevo Leon		Monterrey, Nuevo Leon		Apodaca, Nuevo Leon		A. Blanca Canoas, Nuevo Leon		Pajonal, Nuevo Leon	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.20	0.64	0.31	0.61	0.12	0.65	0	0.57	0.24	0.59
Feb.	.12	.44	.47	.69	.59	.97	0	.59	.43	.71
Mar.	.04	.31	.16	.74	.39	.66	.59	.22	1.30	.29
Apr.	0	.66	.31	1.14	.39	.86	1.69	.63	.71	.71
May	1.18	.88	3.86	1.59	4.33	2.24	.91	1.67	1.65	1.73
June	2.83	1.89	7.48	2.73	5.20	2.62	3.27	2.71	2.99	2.16
July	1.57	1.14	2.76	2.32	1.26	1.30	3.31	2.10	4.09	2.60
Aug.	.83	3.00	1.30	3.20	.47	3.97	1.81	2.94	.43	3.84
Sept.	1.57	3.91	6.65	5.95	2.09	6.29	1.65	4.79	1.30	5.16
Oct.	2.76	1.77	3.07	3.21	2.13	2.42	1.54	2.29	1.26	2.20
Nov.	.47	.48	.43	1.24	.63	.86	1.26	.80	.35	.61
Dec.	.08	.51	.16	.69	.08	.60	0	.40	0	.65
Yearly	11.65	15.63	26.96	24.11	17.68	23.44	16.03	19.71	14.75	21.25

T Trace

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

	Cadereyta, Nuevo Leon		La Cruz, Nuevo Leon		Tunel San Francisco, Nuevo Leon		Las Comitas, Nuevo Leon		* La Boca, Nuevo Leon	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.55	0.73	0	0.54	0.91	0.77	0.35	0.32	0.47	0.90
Feb.	.67	.91	0	.56	.87	1.18	.20	.39	.55	1.01
Mar.	3.54	1.16	.39	.22	5.28	1.88	.16	.27	2.79	1.14
Apr.	3.58	2.07	1.93	.55	1.02	2.09	.08	.75	.63	1.68
May	7.48	2.43	.94	1.58	6.97	2.98	1.38	1.00	5.91	2.68
June	8.50	3.54	3.03	2.69	11.61	5.99	1.02	2.30	10.04	5.32
July	3.39	2.44	3.31	2.49	5.83	3.19	3.03	1.78	8.78	3.38
Aug.	.79	3.65	1.57	3.56	1.26	7.01	0	3.48	4.13	6.12
Sept.	5.43	5.08	1.57	4.67	8.70	10.69	3.27	4.55	7.56	9.17
Oct.	3.15	3.28	.55	2.14	6.30	6.13	1.69	1.97	5.87	5.22
Nov.	1.02	1.14	.94	.73	.83	1.75	0	.48	.55	1.40
Dec.	.04	.70	0	.26	.20	.98	.04	.36	.08	.88
Yearly	38.14	27.13	14.23	19.99	49.78	44.64	11.22	17.65	47.36	38.90

	Adjuntas, Nuevo Leon		Villa Allende, Nuevo Leon		San Juan, Nuevo Leon		Laguna de Sanchez, Nuevo Leon		Cerritos, Nuevo Leon	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.55	0.36	0.87	0.92	0.47	0.42	0.16	0.58	0.04	0.26
Feb.	.31	.70	1.10	1.22	.51	.90	.55	.61	.12	1.37
Mar.	.24	.18	3.46	1.30	1.77	.73	1.26	.48	2.44	.55
Apr.	.67	1.24	3.78	2.61	.51	1.93	1.26	1.18	.87	.46
May	5.59	2.84	12.52	3.56	5.51	2.22	2.64	1.96	9.37	3.94
June	8.50	7.82	10.87	4.77	8.98	2.73	3.54	3.28	14.49	6.91
July	9.80	6.06	8.50	3.15	3.78	1.89	4.09	2.60	11.81	6.87
Aug.	.83	3.79	.79	5.26	.28	3.80	.71	4.27	2.20	3.92
Sept.	4.96	11.40	7.01	8.19	3.90	5.39	2.48	5.50	8.66	14.71
Oct.	7.71	6.13	3.31	5.80	4.65	3.14	2.13	2.84	.87	5.40
Nov.	.08	.80	.98	1.61	1.02	.92	.94	.59	.39	.45
Dec.	0	.50	.31	.93	.35	.46	0	.58	.08	.32
Yearly	39.24	41.82	53.50	39.32	31.73	24.53	19.76	24.47	51.34	45.16

	Casillas, Nuevo Leon		Cienega Del Toro, Nuevo Leon		Potrero Redondo, Nuevo Leon		Mimbres, Nuevo Leon		Rayones, Nuevo Leon	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.51	0.40	0.79	0.98	2.01	0.76	4.25	1.20	0	0.29
Feb.	0	.88	.16	.59		1.72	4.25	1.34	.24	.33
Mar.	2.17	.55	.31	.70	2.52	1.34	4.25	1.52	0	.30
Apr.	.24	.78	.28	.95	1.77	2.67	2.99	1.28	0	.97
May	6.38	2.21	2.52	2.06	6.02	3.45	2.64	1.91	0	1.36
June	.55	3.02	.79	2.02	6.93	7.68	5.75	2.47	.55	1.95
July	3.07	2.42	.28	1.58	5.24	4.54	3.70	2.43	1.57	.90
Aug.	2.05	3.31	.28	2.65	1.18	6.48	6.97	3.27	0	2.75
Sept.	2.83	4.46	.24	3.45	6.65	14.04	7.20	3.24	.55	3.00
Oct.	1.46	2.29	.12	2.36	4.65	5.86	3.82	1.93		1.44
Nov.	1.81	.67	.16	.60	1.02	1.74	7.05	1.23		.38
Dec.	.55	.68	0	.69	0	.75	.75	1.31		.29
Yearly	21.62	21.67	5.93	18.63		51.03	53.62	23.13		13.96

	Rusio, Nuevo Leon		Santa Rosa, Nuevo Leon		Potosi, Nuevo Leon		Iturbide, Nuevo Leon		Cabezones, Nuevo Leon	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	T	0.61	0	0		0.92	0.39	0.54	0.31	0.78
Feb.	.16	.71	0	.25		.84	.51	.64	.39	.88
Mar.	.55	.68	.43	.14	1.02	.46	3.94	.60	3.23	1.28
Apr.	.59	1.18	.16	.08	.39	1.30	.35	1.11	2.05	2.54
May	1.02	2.00	1.77	1.44	8.54	1.70	2.60	1.98	7.83	3.45
June	3.42	1.93	0	.83	1.93	1.33	6.85	3.38	17.05	5.08
July	1.46	.91	1.61	1.04		.80	4.09	2.48	4.49	2.59
Aug.	.91	1.30	0	.30	.91	1.70	.35	4.11	1.02	5.44
Sept.	1.57	1.74	0	.62	.71	1.28	2.83	5.41	5.98	8.04
Oct.	.51	1.37	0	.25	.79	1.27	.94	2.56	2.32	3.65
Nov.	.63	.71	.24	.12		1.55	.63	.59	.35	1.14
Dec.	.08	.87	.12	.04	.24	1.93	.08	.47	.43	.62
Yearly	10.90	14.01	4.33	5.11		15.08	23.56	23.87	45.45	35.49

T *Trace* * *Formerly Villa de Santiago, Nuevo Leon*

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

	Linares, Nuevo Leon		Montemorelos, Nuevo Leon		Gral. Teran Expermt. Station, Nuevo Leon		El Realito, Nuevo Leon		El Cuchillo, Nuevo Leon	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.28	0.88	0.39	0.77	0	0.53	0.04	0.10	0.12	0.62
Feb.	.24	.86	.63	.98	.63	.84	.75	.38	.43	.54
Mar.	2.16	1.11	2.91	1.19	3.47	1.48	.71		.67	.52
Apr.	2.52	2.32	1.34	2.30	1.06	1.43	.71	.38	1.42	1.31
May	9.17	3.66	9.80	3.18	4.72	2.72	8.42	3.28	7.40	2.22
June	12.52	3.72	10.47	3.87	4.37	4.14	3.31	3.86	5.20	2.47
July	2.60	2.46	4.33	2.00	5.12	2.30	5.55	3.69	4.80	1.64
Aug.	.87	3.70	.35	4.23	1.26	3.47	.63	3.17	.55	2.79
Sept.	3.78	6.32	8.11	5.79	6.65	7.15	3.50	7.16	5.20	4.38
Oct.	3.23	3.42	5.35	3.91	4.96	4.69	.83	1.72	.59	2.07
Nov.	.55	1.17	.90	1.63	.75	1.16	.39	.26	.87	.55
Dec.	.24	1.03	.16	.85	.20	.65	.39	.20	.20	.45
Yearly	38.16	30.65	44.74	30.70	33.19	30.56	25.23		27.45	19.56

	Gral. Bravo, Nuevo Leon		Las Enramadas, Nuevo Leon		Cerralvo, Nuevo Leon		Comales, Tamaulipas		Camargo, Tamaulipas	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.20	0.75	0.20	0.87	T	0.65	0.31	0.81	0.24	0.98
Feb.	.59	.53	.24	.72	.59	.63	1.02	.73	1.14	.95
Mar.	.47	.55		.77	.51	.57	.87	.60	.75	.51
Apr.	2.13	1.48	.20	1.87	.55	1.93	2.13	1.56	1.02	1.78
May	11.89	2.96		2.89	5.08	2.94	2.44	2.09	3.46	2.20
June	6.38	2.60	13.50	3.61	11.30	2.99	3.50	2.02	4.02	2.19
July	3.98	2.16		2.27	2.01	1.46	4.33	1.17	4.92	1.28
Aug.	.47	2.75		3.81	1.02	3.59	.08	2.62	0	2.05
Sept.	5.75	4.45		6.42	6.54	5.19	3.58	4.13	5.31	4.45
Oct.	.87	2.11		2.65	1.65	2.67	.28	2.35	.43	1.80
Nov.	1.02	.88		.75	1.18	.70	1.57	.74	2.01	1.22
Dec.	.12	.72		.71	.28	.45	.87	.70	.39	.68
Yearly	33.87	21.94		27.34	30.71	23.77	20.98	19.52	23.69	20.09

	Valadeces, Tamaulipas		Bajo Rio San Juan, Tamps., No. 2-29		* Cd. Dias Ordaz, Tamaulipas		Reynosa Km. 22 SW, Tamaulipas		Bajo Rio San Juan, Tamps., No. 2-38	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.79	1.15	0.79	1.01	0.87	0.79	0.20	0.89	0.35	1.05
Feb.	.79	.97	.94	.87	.79	.86	1.18	.63	.71	.75
Mar.	.79	.55	.79	.44	1.14	.50	2.87	.58	1.73	.51
Apr.	2.56	1.64	2.36	1.38	2.68	1.72	3.82	1.30	2.68	1.32
May	4.09	3.35	6.18	4.03	3.86	2.40	4.13	2.95	5.51	3.83
June	6.14	3.22	6.77	2.72	3.58	2.06	4.80	2.78	6.14	3.36
July	3.15	1.66	3.31	1.08	3.39	.97	5.51	1.52	4.45	1.34
Aug.	.20	2.12	.47	2.53	.43	1.96	0	2.08	.67	3.16
Sept.	2.64	4.97	1.18	4.99	2.20	3.94	1.18	5.11	2.09	4.37
Oct.	.20	2.21	.28	2.18	.16	2.41	.39	1.99	.20	1.59
Nov.	1.26	1.12	1.42	1.18	1.57	1.07	.98	.96	1.26	1.37
Dec.	.28	.78	.24	.73	.16	.78	2.48	1.19	.20	.88
Yearly	22.89	23.74	24.73	23.14	20.83	19.46	27.54	21.98	25.99	23.53

	Bajo Rio San Juan, Tamps., No. 2-33		Arguelles, Tamaulipas		Presa Anzalduas, Tamaulipas		Reynosa, Tamaulipas		Mendez, Tamaulipas	
Month	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.55	1.10	0.20	1.06	0	0.57	0.55	0.96	0.51	0.88
Feb.	1.42	.88	1.77	1.09	.79	.45	.43	.82	.59	.84
Mar.	.87	.44	.87	.57	3.46	.53	3.27	.74	3.15	.90
Apr.	2.76	1.49	2.87	1.21	2.24	1.36	2.36	1.17	1.06	1.80
May	10.47	4.13	3.94	2.89	5.98	2.74	4.92	2.31	7.52	2.67
June	.67	2.88	5.08	2.72	5.35	2.33	4.80	2.10	6.65	2.69
July	4.80	1.22	3.62	1.01	3.98	1.07	6.10	1.14	2.87	1.12
Aug.	.47	2.85	0	1.36	.16	1.44	0	1.53	.35	3.06
Sept.	.91	5.28	1.97	4.82	1.10	3.54	.63	3.25	.94	4.48
Oct.	.39	2.29	1.10	1.65	.55	2.31	1.22	2.07	1.22	2.33
Nov.	1.34	1.27	1.65	.99	.79	.74	.79	.95	.35	.70
Dec.	.39	1.15	.87	1.22	.08	.69	0	.78	.16	.43
Yearly	25.04	24.98	23.94	20.59	24.48	17.77	25.07	17.82	25.37	21.90

T Trace * Formerly San Miguel de Camargo, Tamaulipas

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

Month	Bajo Rio San Juan, Tamps., No. 3-55		Bajo Rio San Juan, Tamps., No. 3-58		Bajo Rio San Juan, Tamps., No. 3-60		Bajo Rio San Juan, Tamps., No. 3-47		Bajo Rio San Juan, Tamps., No. 3-63	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.87	1.46	0.39	1.29	0.55	1.19	0.91	1.43	0.55	1.32
Feb.	.63	1.15	.63	1.05	1.10	1.07	.67	1.16	1.46	1.44
Mar.	1.57	.79	2.99	.81	3.54	.74	1.54	.69	2.44	.73
Apr.	3.07	1.89	2.36	1.64	2.36	1.95	2.17	1.70	2.36	1.36
May	4.21	3.24	3.98	3.05	4.29	2.87	4.53	4.10	2.80	2.43
June	10.63	3.23	9.09	2.66	9.37	2.91	10.00	3.62	10.98	3.19
July	7.68	2.48	5.55	2.16	4.72	1.57	6.85	2.22	5.67	1.86
Aug.	0	2.24	0	2.20	0	2.43	0	2.06	0	3.06
Sept.	4.13	4.80	1.73	5.26	1.97	5.18	2.76	4.69	1.06	5.95
Oct.	1.22	3.32	.59	3.15	.39	3.04	1.54	2.62	.51	2.25
Nov.	1.26	.79	.98	1.18	1.02	1.14	1.50	1.22	0	.98
Dec.	.08	.85	.63	.91	.16	.87	0	1.04	0	.75
Yearly	35.35	26.24	28.92	25.36	29.47	24.96	32.47	26.55	27.83	25.32

Month	Rio Bravo, Tamaulipas		Retamal, Tamaulipas		Bajo Rio Bravo, Tamps., No. 3-15		Bajo Rio Bravo, Tamps., No. 4-16		Bajo Rio Bravo, Tamps., No. 3-14	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.87	0.98	0.79	0.89	0.55	1.27	0.31	1.44	0.39	1.25
Feb.	.63	1.09	.39	.96	1.46	1.30	.94	1.28	.55	.68
Mar.	1.57	.69	2.48	.70	1.26	.81	1.06	.72	.83	.45
Apr.	3.07	1.59	2.36	1.35	2.05	1.60	1.97	1.65	1.93	1.26
May	4.21	2.43	3.74	2.45	3.54	3.28	2.52	2.46	4.29	3.51
June	10.63	2.80	12.83	2.59	12.13	4.10	11.50	4.06	8.58	2.84
July	7.68	2.00	2.05	1.03	5.43	2.17	4.45	1.51	3.15	1.59
Aug.	0	2.28	.83	2.26	.28	2.55	.16	3.12	2.17	1.91
Sept.	4.13	4.71	4.84	3.41	1.65	3.89	1.73	5.68	1.42	4.38
Oct.	1.22	2.61	3.35	2.41	2.60	2.31	.16	2.46	2.56	2.05
Nov.	1.26	1.12	1.18	1.22	.75	1.11	.79	1.64	1.02	.88
Dec.	.08	.84	.55	.86	.75	1.02	.59	1.00	.31	.85
Yearly	35.35	23.14	35.39	20.13	32.45	25.41	26.18	27.02	27.20	21.65

Month	Bajo Rio Bravo, Tamps., No. 3-17		Bajo Rio Bravo, Tamps., No. 2-8		Bajo Rio Bravo, Tamps., No. 2-6		Bajo Rio Bravo, Tamps., No. 2-10		Valle Hermoso, Tamaulipas	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.43	1.43	0.63	1.43	0.67	1.75	0.43	1.35	0.43	0.97
Feb.	1.18	1.34	1.06	1.32	2.44	1.37	.87	2.13	1.02	1.22
Mar.	.59	.67	1.61	.91	.93	1.07	1.57	1.07	1.54	.56
Apr.	1.77	1.22	2.13	1.70	2.28	1.57	1.38	1.60	3.39	1.70
May	3.54	3.53	2.05	2.68	4.53	3.35	2.52	2.31	4.57	2.69
June	10.51	3.44	12.60	2.94	11.97	3.35	11.14	3.28	11.26	3.17
July	2.76	1.96	4.80	2.22	3.74	1.63	6.57	1.91	5.43	1.64
Aug.	.98	2.21	.20	3.28	1.26	2.72	1.81	2.79	1.02	1.73
Sept.	1.10	5.27	2.17	6.13	1.38	5.10	2.83	5.80	3.35	5.68
Oct.	4.29	2.10	.87	2.30	2.24	3.26	.71	1.78	2.28	2.28
Nov.	1.30	1.38	.94	2.11	.83	1.41	.91	1.46	1.02	1.53
Dec.	.79	1.04	.63	1.02	.28	1.22	.16	.80	.79	.89
Yearly	29.24	25.59	29.69	28.04	32.60	27.80	30.90	26.28	36.10	24.06

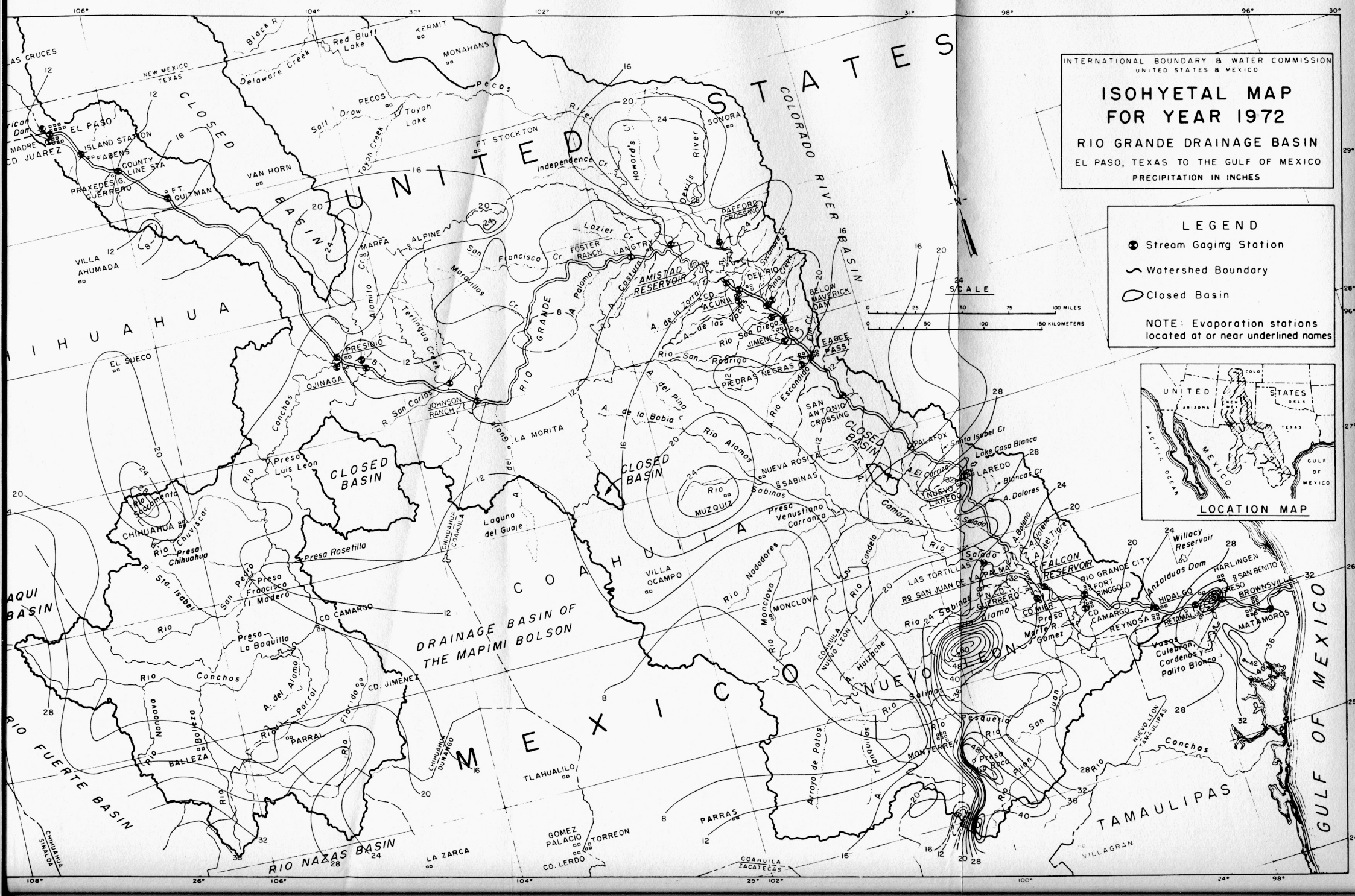
Month	Control, Tamaulipas		Bajo Rio Bravo, Tamps., No. 2-5		Bajo Rio Bravo, Tamps., No. 2-11		Bajo Rio Bravo, Tamps., No. 1-2		Bajo Rio Bravo, Tamps., No. 2-7	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.39	1.23	0.75	1.83	0.55	1.43	0.31	1.61	0.28	1.50
Feb.	.75	1.00	1.18	1.28	1.06	1.04	.87	1.20	1.14	1.22
Mar.	.83	.63	6.50	1.27	1.22	.75	1.50	.66	1.73	.85
Apr.	1.50	1.49	2.01	1.62	4.65	2.04	1.89	1.18	3.78	1.97
May	6.85	2.84	3.70	2.87	2.44	3.26	5.87	3.55	4.25	3.43
June	11.61	3.07	12.91	3.57	14.69	4.15	12.52	4.04	11.46	3.73
July	2.87	1.39	3.23	1.33	5.20	2.03	2.17	1.83	5.16	1.80
Aug.	2.72	2.77	2.60	2.54	1.06	2.87	1.02	2.91	2.24	3.08
Sept.	3.98	5.41	2.56	5.80	7.91	5.48	3.35	6.27	3.82	5.39
Oct.	1.06	2.38	3.50	2.26	3.07	2.82	.71	2.31	3.43	2.20
Nov.	1.10	1.20	.87	1.36	1.10	1.36	.83	1.28	.94	1.80
Dec.	.24	.91	.31	1.03	1.06	1.09	.39	.98	.43	1.07
Yearly	33.90	24.32	40.12	26.76	44.01	28.32	31.43	27.82	38.66	28.04

RAINFALL ON THE RIO GRANDE WATERSHED IN MEXICO

In Inches

Month	Bajo Rio Bravo, Tamps., No. 1-4		Bajo Rio Bravo, Tamps., No. 1-18		Bajo Rio Bravo, Tamps., No. 1-3		Bajo Rio Bravo, Tamps., No. 1-13		Bajo Rio Bravo, Tamps., No. 1-12	
	1972	Average	1972	Average	1972	Average	1972	Average	1972	Average
Jan.	0.63	1.84	0.94	1.64	0.28	1.70	0.75	1.54	0.83	1.86
Feb.	1.06	.97	2.60	1.30	.87	1.10	1.02	1.14	.87	1.18
Mar.	4.09	.98	1.26	.50	1.50	.59	1.02	.71	2.44	.69
Apr.	2.40	1.75	1.73	1.27	3.15	1.67	4.29	1.59	3.82	1.47
May	3.07	3.09	1.65	2.60	1.61	3.04	3.11	2.10	3.03	3.25
June	10.47	3.71	9.45	3.19	10.63	3.84	14.69	3.86	9.92	3.25
July	2.36	.94	4.80	1.64	2.52	1.37	4.17	1.39	2.20	1.73
Aug.	1.42	2.36	.63	2.40	.55	2.40	2.36	2.90	.91	1.86
Sept.	3.11	5.91	3.46	4.94	4.92	5.47	3.35	5.97	5.98	5.51
Oct.	2.64	2.41	3.43	2.93	1.34	2.53	1.73	2.42	.55	3.11
Nov.	.91	1.04	1.18	1.35	.67	1.78	.47	1.44	1.02	1.28
Dec.	.47	1.11	.55	1.21	.35	1.05	.20	1.05	.31	1.08
Yearly	32.63	26.11	31.68	24.97	28.39	26.54	37.16	26.11	31.88	26.27

Month	Matamoros, Tamaulipas	
	1972	Average
Jan.	0.94	1.74
Feb.	2.40	1.80
Mar.	1.89	.62
Apr.	2.24	1.77
May	3.23	2.58
June	13.50	3.65
July	3.86	1.54
Aug.	.91	2.91
Sept.	3.54	6.55
Oct.	4.53	3.60
Nov.	1.14	1.43
Dec.	.71	1.55
Yearly	38.89	29.74


INTERNATIONAL BOUNDARY & WATER COMMISSION
UNITED STATES & MEXICO
ISOHYETAL MAP
FOR YEAR 1972
RIO GRANDE DRAINAGE BASIN
EL PASO, TEXAS TO THE GULF OF MEXICO
PRECIPITATION IN INCHES
LEGEND
Stream Gaging Station
Watershed Boundary
Closed Basin
NOTE: Evaporation stations located at or near underlined names
SCALE
0 25 50 75 100 MILES
0 50 100 150 KILOMETERS
LOCATION MAP
UNITED STATES
MEXICO
GULF OF MEXICO
PACIFIC OCEAN
EL PASO
CD JUAREZ
FABENS
ISLAND STATION
COUNTY LINE STA
PRAXEDES G GUERRERO
FT QUITMAN
VAN HORN
FT STOCKTON
SALT DRAW
TOYAH CREEK
TOYAH LAKE
RED BLUFF LAKE
DELAWARE CREEK
BLACK R
KERMIT
MONAHANS
PECOS
SONORA
HOWARD'S CR
DEVILS RIVER
INDEPENDENCE CR
LOZIER CR
MARFA
ALPINE
SAN FRANCISCO CR
MORQUILLOS CR
FOSTER RANCH
LANGTRY
AMISTAD RESERVOIR
DEL RIO
PAFFORD CROSSING
SYCAMORE CR
PINTO CREEK
BELOW MAVERICK
CD ACUNA
EAGLE PASS
JIMENEZ
PIEDRAS NEGRAS
PRESIDIO
OJINAGA
JOHNSON RANCH
EL SUECO
LA MORITA
SAN ANTONIO CROSSING
PALAFOX
LAREDO
NUEVO LAREDO
LAKE CASA BLANCA
SANTA ISABEL CR
BLANCAS CR
A. DOLORES
A. SELADO
A. BOLENO
A. VALERIO
A. DEL TIGRE
WILLACY RESERVOIR
FALCON RESERVOIR
RIO GRANDE CITY
FORT RINGGOLD
HARLINGEN
SAN BENITO
BROWNSVILLE
HIDALGO
PHARR
CD CAMARGO
REYNOSA
MATAMOROS
ANZALDUAS DAM
LAS TORTILLAS
RIO SAN JUAN DE LA PALMA
CD GUERRERO
CD MIER
PRESA MARTE R GOMEZ
VASOS CULEBRON, CARDENAS Y PALITO BLANCO
CHIHUAHUA
PRESA CHUVISCAR
PRESA CHIHUAHUA
PRESA ROSETILLA
PRESA LUIS LEON
PRESA FRANCISCO I MADERO
PRESA LA BOQUILLA
CD CAMARGO
CD JIMENEZ
PARRAL
FLORIDO
BALLEZA
NONOAVA
CHIHUAHUA DURANGO
TLAHUALILO
PARRAS
GOMEZ PALACIO
TORREON
CD LERDO
LA ZARCA
COAHUILA ZACATECAS
CHIHUAHUA SINALOA
RIO NAZAS BASIN
RIO FUERTE BASIN
LAGUNA DEL GUAJE
VILLA OCAMPO
MUZQUIZ
NUEVA ROSITA
SABINAS
PRESA VENUSTIANO CARRANZA
RIO NADADORES
MONCLOVA
ARROYO DE PATOS
RIO CONCHOS
RIO SAN PEDRO
RIO SAN ISABEL
RIO SABINAS
RIO ALAMOS
RIO SALADO
RIO CANDELO
RIO CAMARON
RIO ESCONDIDO
RIO SAN RODRIGO
RIO SAN DIEGO
A. DE LOS VAPORES
A. DE LA ZORRA
A. DEL PINO
A. DE LA BABIA
A. DEL ALAMO
A. DEL PARRAL
A. HUIZACHE
A. TIGRILLOS
RIO PESQUERIA
RIO SAN JUAN
RIO SALINAS
PRESA DE LA BOCA
MONTERREY
NUEVO LEON TAMAULIPAS
COAHUILA NUEVO LEON
CHIHUAHUA COAHUILA
DRAINAGE BASIN OF THE MAPIMI BOLSON
CHIHUAHUA
COAHUILA
NUEVO LEON
TAMAULIPAS
CLOSED BASIN
CLOSED BASIN
CLOSED BASIN
CLOSED BASIN
RIO GRANDE
COLORADO RIVER BASIN
CHIHUAHUA BASIN
AQUI BASIN
UNITED STATES
MEXICO
GULF OF MEXICO

AVERAGE RAINFALL ON SUBDIVISIONS OF THE RIO GRANDE WATERSHED

With Averages for the 102 Years 1871-1972, Inclusive

In Inches

The precipitation records of all stations on or adjacent to the watershed subdivisions listed below have been used, with proper weighting for area, in calculating the average rainfalls shown here. The drainage area for each subdivision is shown in parentheses. The hundreds of individual records are delineated in the various "Indexes to Precipitation Records" shown in Water Bulletins Nos. 10, 14, 22, 26, and Supplement 40A.

Month	El Paso to Fort Quitman (2,677 Square Miles)		Fort Quitman to Above Rio Conchos (3,022 Square Miles)		* Above Rio Conchos to Johnson Ranch (3,815 Square Miles)		Johnson Ranch to Langtry (13,669 Square Miles)	
	1972	Period Average	1972	Period Average	1972	Period Average	1972	Period Average
Jan.	0.18	0.43	0.05	0.39	0.09	0.35	0.26	0.50
Feb.	0	.37	.06	.26	0	.29	.01	.37
Mar.	.02	.33	.02	.25	.29	.20	.69	.42
Apr.	0	.27	0	.35	.04	.39	.07	.81
May	.93	.40	2.09	.60	1.39	.77	2.42	1.52
June	2.33	.83	2.94	1.22	1.93	1.12	.84	1.74
July	3.54	2.31	2.38	3.00	1.71	1.83	1.17	1.88
Aug.	1.75	1.94	3.08	2.44	2.76	1.86	2.26	2.12
Sept.	3.53	1.37	3.34	1.89	2.81	1.51	2.59	2.20
Oct.	1.15	.91	1.16	1.03	.57	.85	1.07	1.23
Nov.	.47	.44	.55	.41	.68	.34	.47	.59
Dec.	.16	.59	.04	.54	0	.40	.01	.55
Total	14.06	10.19	15.71	12.38	12.27	9.91	11.86	13.93

Month	Pecos River below Sheffield (3,390 Square Miles)		# Langtry to Amistad Dam (2,091 Square Miles)		Devils River (4,305 Square Miles)		‡ Amistad Dam to Eagle Pass (1,625 Square Miles)	
	1972	Period Average	1972	Period Average	1972	Period Average	1972	Period Average
Jan.	0.33	0.71	0.57	0.52	0.38	0.68	0.64	0.75
Feb.	.12	.88	.02	.63	.14	.72	.18	.91
Mar.	.23	.78	1.30	.77	.93	1.07	.40	1.00
Apr.	.23	1.88	1.61	1.34	.90	1.77	1.13	1.69
May	3.58	1.80	3.05	1.96	3.56	2.58	2.52	2.92
June	2.14	2.50	1.02	2.23	1.94	2.69	2.21	2.50
July	.89	1.83	2.66	1.20	.71	1.72	1.49	1.81
Aug.	3.60	2.00	2.73	1.67	7.38	2.14	7.14	2.01
Sept.	4.10	2.38	2.17	2.35	3.19	2.94	2.10	3.14
Oct.	2.63	1.81	1.02	1.44	2.23	2.18	.58	2.01
Nov.	.16	.92	.55	.75	.24	1.54	.84	1.03
Dec.	.09	.74	.04	.63	.02	1.00	.13	.87
Total	18.10	18.23	16.74	15.49	21.62	21.03	19.36	20.64

Month	⊕ Eagle Pass to Laredo (3,795 Square Miles)		♂ Laredo to Falcon Dam (3,369 Square Miles)		† Falcon Dam to Rio Grande City (468 Square Miles)		United States Side below Rio Grande City (986 Square Miles)	
	1972	Period Average	1972	Period Average	1972	Period Average	1972	Period Average
Jan.	0.74	0.74	0.40	0.75	0.16	0.90	0.82	1.23
Feb.	.13	.81	1.26	.79	.97	.82	1.18	1.07
Mar.	.94	.94	.97	.80	.77	.96	2.26	1.06
Apr.	.82	1.59	1.70	1.40	1.68	1.20	1.90	1.35
May	4.29	3.13	6.80	3.23	2.82	2.45	4.03	2.84
June	2.66	2.45	4.30	1.90	4.80	2.08	7.68	2.51
July	.90	1.42	1.49	2.06	2.11	1.87	3.54	1.72
Aug.	2.47	2.34	.53	1.85	.06	2.15	.79	2.26
Sept.	1.77	3.07	5.38	3.09	6.06	3.53	2.93	4.36
Oct.	.13	1.86	.21	1.59	.25	1.94	1.35	2.51
Nov.	1.09	.98	1.48	1.57	1.47	.79	1.40	1.38
Dec.	.23	.99	.21	.83	.25	.67	.35	1.25
Total	16.17	20.32	24.73	19.86	21.40	19.36	28.23	23.54

* Excluding Rio Conchos, Alamito and Terlingua Creeks
# Excluding Pecos and Devils Rivers
‡ Excluding Arroyo Las Vacas, San Felipe Creek, Pinto Creek, Rio San Diego, and Rio San Rodrigo
⊕ Excluding Rio Escondido
♂ Excluding Rio Salado above Old Cd. Guerrero
† Excluding Rio Alamo and Rio San Juan

LOCATION OF RAINFALL STATIONS ON THE RIO GRANDE WATERSHED

The precipitation records of stations listed below began on the date shown and extend through 1972. For detailed information regarding sources of data, specific periods of record, and other pertinent matters relative to these and additional rainfall stations on the Rio Grande watershed see "Index to Precipitation Records" in Water Bulletins Nos. 10, 14, 22, 26, and Supplement 40A. All United States precipitation stations listed below are in Texas, while those in Mexico are in the indicated state as shown.

In United States

NAME OF STATION	TYPE GAGE	LATITUDE	LONGITUDE	ELEV. (FT.)	RECORD BEGAN	WATERSHED SUBDIVISION	OBSERVER
Adobes Ranch	S	29° 46'	104° 34'	2,550	1950	Fort Quitman - Above Rio Conchos	T. C. Davis
American Dam	S	31° 47'	106° 32'	3,730	1938	El Paso - Fort Quitman	I. B. & W. C.
Amistad Dam	R	29° 28'	101° 02'	1,150	July 1962	Langtry - Below Amistad Dam	I. B. & W. C.
Amistad Raft	C	29° 27'	101° 03'	‡‡	Dec. 1968	Langtry - Amistad Dam	I. B. & W. C.
Amistad Reservoir near Comstock	C	29° 33'	101° 13'	1,130	1970	Langtry - Amistad Dam	I. B. & W. C.
Apache Ranch	C	27° 56'	99° 56'	500	# 1953	Eagle Pass - Laredo	Leroy Tibiletti
Arledge, W. A. Ranch	S	29° 58'	101° 38'	1,950	June 1933	Johnson Ranch - Langtry	W. A. Arledge
Arroyo Tigre Chiquito	C	26° 41'	99° 07'	314	Apr. 1954	Laredo - Falcon Dam	I. B. & W. C.
Baker, A. A. Ranch	R	29° 44'	101° 09'	1,720	July 1962	Devils River	I. B. & W. C.
Bakers Crossing	S	29° 58'	101° 09'	1,520	#Apr. 1955	Devils River	James Baker
Bennett, Moody Ranch	S	30° 37'	104° 55'	3,175	July 1956	Fort Quitman - Above Rio Conchos	Moody Bennett
Big Bend Chevron Station	S	29° 19'	103° 32'	2,550	Aug. 1967	Terlingua Creek	Howard Gibson
Big Satan Creek Station	C	29° 40'	100° 58'	1,150	Nov. 1968	Devils River	I. B. & W. C.
Black Gap Game Refuge	S	29° 34'	102° 57'	2,325	# 1952	Johnson Ranch - Langtry	Ben Martin
Bloys Camp	V	30° 33'	104° 07'	5,650	# 1941	Alamito Creek	George Knight
Brite, J. G. Ranch	R	29° 33'	101° 01'	1,150	Sept.1962	Devils River	I. B. & W. C.
Brotherton Ranch	V	29° 42'	101° 19'	1,400	1961	Langtry - Below Amistad Dam	Perry Calk
Buoy No. 11	C	29° 31'	101° 10'	‡‡	Dec. 1969	Langtry - Amistad Dam	I. B. & W. C.
Buttrill Ranch	S	30° 00'	103° 16'	3,500	Mar. 1952	Johnson Ranch - Langtry	Tom B. Leary
Canon Diablo	C	28° 39'	100° 27'	700	1964	Eagle Pass - Laredo	I. B. & W. C.
Castolon	S	29° 08'	103° 31'	2,100	#Mar. 1953	Above Rio Conchos - Johnson Ranch	National Park Service
CCWID #11 (Bayview Dist. Off.) Avg. 18 Gages	S	26° 09'	97° 21'	25	1952	Lower Rio Grande Valley	CCWID #11
CCWCID #19 (Adams Gardens)	S	26° 10'	97° 47'	50	1952	Lower Rio Grande Valley	CCWCID #19
Chittim Ranch	C	28° 44'	100° 28'	810	Mar. 1959	Below Amistad Dam - Eagle Pass	I. B. & W. C.
Coal Mine	R	28° 48'	100° 28'	770	Mar. 1959	Below Amistad Dam - Eagle Pass	I. B. & W. C.
Comstock	S	29° 41'	101° 10'	1,530	May 1939	Langtry - Below Amistad Dam	I. B. & W. C.
Continental Ranch	S	29° 51'	101° 18'	1,560	Mar. 1965	Pecos River Below Sheffield	Julio Crowder
Cooper Ranch	C	28° 50'	100° 27'	800	Mar. 1959	Below Amistad Dam - Eagle Pass	I. B. & W. C.
Corralitos Ranch	C	27° 07'	99° 25'	346	1953	Laredo - Falcon Dam	I. B. & W. C.
County Line Station	R	31° 23'	105° 59'	3,550	1938	El Paso - Fort Quitman	I. B. & W. C.
Cow Creek near Comstock	R	29° 36'	101° 12'	1,210	Apr. 1965	Langtry - Below Amistad Dam	I. B. & W. C.
Cuervo Creek Station	C	28° 21'	100° 19'	620	1954	Eagle Pass - Laredo	I. B. & W. C.
Dale, O. C. Farm	S	26° 15'	98° 16'	130	1952	Lower Rio Grande Valley	O. C. Dale
Dead Mans Canyon near Comstock	C	29° 47'	101° 19'	1,320	Sept.1967	Pecos River below Sheffield	I. B. & W. C.
Devils Lake	R	29° 34'	100° 59'	1,146	May 1939	Devils River	I. B. & W. C.
Dolan Springs	C	29° 54'	100° 59'	1,360	Feb. 1966	Devils River	I. B. & W. C.
Dove Mountain Ranch	S	29° 48'	102° 54'	2,880	#Mar. 1952	Johnson Ranch - Langtry	Sam Cavness
Dryden	S	30° 03'	102° 07'	2,130	# 1931	Johnson Ranch - Langtry	Lewis Cash
Dunbar, Allen Ranch	V	29° 57'	100° 32'	2,200	1955	Devils River	Allen Dunbar
Eagle Pass	S	28° 42'	100° 30'	815	1964	Eagle Pass - Laredo	I. B. & W. C.
Edinburg Filtration Plant	S	26° 18'	98° 10'	100	1952	Lower Rio Grande Valley	City of Edinburg
El Indio	S	28° 31'	100° 19'	725	# 1941	Eagle Pass - Laredo	Glen Stidham
Elm Creek Station	C	28° 46'	100° 30'	720	1959	Below Amistad Dam - Eagle Pass	I. B. & W. C.
El Peyote Ranch	C	27° 07'	98° 58'	650	1966	Laredo - Falcon Dam	F. J. Saldana
Erekson Ranch	S	29° 56'	100° 34'	2,330	1955	Devils River	Bob Erekson
Evans Creek near Comstock	C	29° 32'	101° 06'	1,180	July 1969	Devils River	I. B. & W. C.

S Standard R Recording C Cumulative V Visual ‡‡ Reservoir Surface
Some months or years missing

LOCATION OF RAINFALL STATIONS ON THE RIO GRANDE WATERSHED

In United States

NAME OF STATION	TYPE GAGE	LATITUDE	LONGITUDE	ELEV. (FT.)	RECORD BEGAN	WATERSHED SUBDIVISION	OBSERVER
Falcon Dam	S	26° 33'	99° 08'	323	Apr. 1950	Laredo - Falcon Dam	I. B. & W. C.
Farias Ranch	R	28° 36'	100° 20'	720	Mar. 1959	Eagle Pass - Laredo	I. B. & W. C.
Fawcett, H. K. Ranch	S	29° 52'	100° 54'	1,550	# 1941	Devils River	H. K. Fawcett
Feely	C	29° 34'	101° 07'	1,250	Apr. 1965	Langtry - Below Amistad Dam	I. B. & W. C.
Fletcher, H. T. Ranch	S	30° 12'	104° 16'	5,100	# 1939	Alamito Creek	Hayes Mitchell,Jr.
Fort Hancock Bridge	S	31° 16'	105° 51'	3,500	Apr. 1940	El Paso - Fort Quitman	I. B. & W. C.
Fort McIntosh (Laredo)	V	27° 30'	99° 31'	410	# 1850	Eagle Pass - Laredo	I. B. & W. C.
Fort Quitman	R	31° 06'	105° 36'	3,430	# 1937	Fort Quitman - Above Rio Conchos	I. B. & W. C.
Foster, Ross Ranch	C	29° 47'	101° 45'	1,230	May 1961	Johnson Ranch - Langtry	I. B. & W. C.
Garciasville	R	26° 20'	98° 41'	200	Apr. 1957	Lower Rio Grande Valley	I. B. & W. C.
Gillis Headquarters Ranch	S	29° 37'	100° 47'	1,410	1968	Amistad Dam - Eagle Pass	Jake Schiller
Gillis Ranch	S	29° 41'	101° 03'	1,440	1965	Devils River	Walter Gillis
Goldwire Ranch	C	29° 44'	100° 57'	1,685	Nov. 1968	Devils River	Jake Schiller
Goodenough Spring Raft	C	29° 32'	101° 16'	‡‡	Aug. 1958	Langtry - Amistad Dam	I. B. & W. C.
Greenwood, H. M. (Cienega Ranch)	S	29° 48'	104° 13'	4,000	Mar. 1941	Alamito Creek	H. M. Greenwood
Guayuco Arroyo	R	31° 10'	105° 40'	3,600	#May 1940	El Paso - Fort Quitman	I. B. & W. C.
Hammond, Earl Ranch	S	29° 41'	103° 51'	3,700	Apr. 1963	Terlingua Creek	Earl Hammond
Hardgrave, E. W. Ranch	S	30° 18'	102° 09'	2,650	Apr. 1952	Johnson Ranch - Langtry	Jack Hardgrave
Harlow Ranch	C	29° 50'	101° 11'	1,695	Mar. 1969	Devils River	I. B. & W. C.
HCWCID #6 Goodwin Pump No. 3	S	26° 16'	98° 24'	175	# 1953	Lower Rio Grande Valley	HCWCID #6
HCWCID #6 Goodwin Pump No. 3A	S	26° 14'	98° 22'	130	# 1953	Lower Rio Grande Valley	HCWCID #6
HCWCID #6 Goodwin Pump No. 4	S	26° 16'	98° 21'	185	1958	Lower Rio Grande Valley	HCWCID #6
HCWCID #6 Goodwin Pump No. 4B	S	26° 18'	98° 23'	210	# 1953	Lower Rio Grande Valley	HCWCID #6
HCWCID #6 Goodwin Pump No. 5	S	26° 22'	98° 21'	225	# 1953	Lower Rio Grande Valley	HCWCID #6
HCWCID #15 (Edinburg Office)	S	26° 23'	98° 09'	85	1952	Lower Rio Grande Valley	HCWCID #15
Hinds "AT" Ranch	S	29° 46'	101° 03'	1,690	Sept.1954	Devils River	Lucious Hinds
Hoffman Ranch	S	30° 38'	103° 51'	4,650	June 1955	Pecos River Above Sheffield	Dr.A.J. Hoffman
Huisache Ranch	C	26° 57'	99° 21'	383	Aug. 1953	Laredo - Falcon Dam	I. B. & W. C.
Hutto Ranch No. 1	R	29° 30'	100° 50'	1,240	Jan. 1964	Devils River	I. B. & W. C.
Hutto Ranch No. 2	R	29° 29'	100° 54'	1,210	Jan. 1964	Devils River	I. B. & W. C.
Indio Ranch	S	28° 31'	100° 22'	700	1959	Eagle Pass - Laredo	Earnest Scales
Island Station	R	31° 32'	106° 14'	3,630	1939	El Paso - Fort Quitman	I. B. & W. C.
James, Lewis Ranch	S	30° 11'	102° 07'	2,275	1966	Johnson Ranch - Langtry	Lewis James
Johnson Ranch	C	29° 01'	103° 23'	2,050	#July 1933	Johnson Ranch - Langtry	I. B. & W. C.
Keisling Farm	S	28° 23'	100° 17'	740	Dec. 1958	Eagle Pass - Laredo	Robert Smith
Kelly, P. W. Ranch	S	29° 46'	101° 12'	1,750	1965	Langtry - Below Amistad Dam	Bobby Kelly
King, Martin Ranch	R	29° 44'	101° 22'	1,460	Nov. 1954	Langtry - Below Amistad Dam	I. B. & W. C.
Kokernot Ranch - Hqtrs.	S	29° 59'	103° 34'	4,140	# 1952	Johnson Ranch - Langtry	David Kokernot
La Feria Materials Yard	V	26° 10'	97° 50'	60	1960	Lower Rio Grande Valley	CCWCID #3
La Feria Pumping Plant	S	26° 03'	97° 50'	60	1952	Lower Rio Grande Valley	CCWCID #3
Lajitas	S	29° 16'	103° 48'	2,320	June 1967	Above Rio Conchos - Johnson Ranch	Texas Hwy Dept.
La Joya	R	26° 15'	98° 29'	150	Apr. 1957	Lower Rio Grande Valley	I. B. & W. C.
La Nutria Station	C	30° 14'	104° 43'	2,880	Mar. 1967	Fort Quitman - Above Rio Conchos	I. B. & W. C.
Laredo Water Plant	S	27° 33'	99° 31'	410	# 1930	Eagle Pass - Laredo	Laredo Water Plant
Las Moras Creek	S	29° 00'	100° 38'	800	1958	Below Amistad Dam - Eagle Pass	Lou McGee
Lateral No. 2 Spill	C	28° 56'	100° 38'	760	Mar. 1959	Below Amistad Dam - Eagle Pass	I. B. & W. C.
Lateral No. 12 Headgate	C	28° 54'	100° 34'	800	1959	Below Amistad Dam - Eagle Pass	I. B. & W. C.
Lateral No. 15 Spill	C	28° 51'	100° 34'	740	1959	Below Amistad Dam - Eagle Pass	I. B. & W. C.
Latham Ranch ‡	S	30° 13'	101° 22'	2,120	1965	Pecos River Below Sheffield	John & Bob Latham
Laughlin Air Force	S	29° 22'	100° 47'	1,080	Dec. 1958	Below Amistad Dam - Eagle Pass	U. S. A. F.
Lewis, Billie C., Jr. Ranch	S	29° 33'	100° 40'	1,400	1967	Below Amistad Dam - Eagle Pass	Billie C. Lewis,Jr.
Livingston Ranch	S	29° 49'	104° 22'	4,150	# 1951	Above Rio Conchos - Johnson Ranch	J. S. Livingston
Lock Store	S	30° 40'	100° 57'	2,400	Oct. 1962	Devils River	Claud Ward

S Standard C Cumulative V Visual R Recording # Some months or years missing
‡ Formerly Oberkampf Ranch ‡‡ Reservoir surface

LOCATION OF RAINFALL STATIONS ON THE RIO GRANDE WATERSHED

In United States

NAME OF STATION	TYPE GAGE	LATITUDE	LONGITUDE	ELEV. (FT.)	RECORD BEGAN	WATERSHED SUBDIVISION	OBSERVER
Loma Vista Ranch	S	30° 13'	103° 47'	5,050	# 1941	Alamito Creek	Hayes Mitchell
Long Ranch	R	29° 28'	100° 57'	1,140	Oct. 1971	Devils River	I. B. & W. C.
Los Ebanos	C	26° 16'	98° 33'	150	Apr. 1957	Lower Rio Grande Valley	I. B. & W. C.
Los Fresnos Pump. Plant	S	25° 57'	97° 34'	30	1952	Lower Rio Grande Valley	CCWCID #6
Lowry, Cliff Ranch	R	29° 39'	100° 52'	1,490	June 1962	Devils River	I. B. & W. C.
Lowry Ranch No. 2	R	29° 37'	100° 46'	1,160	May 1965	Devils River	I. B. & W. C.
Maverick County Canal Headgate	S	29° 10'	100° 46'	870	Mar. 1948	Below Amistad Dam - Eagle Pass	MCWCID #1
Maverick Power Plant	S	28° 50'	100° 33'	800	June 1952	Below Amistad Dam - Eagle Pass	C. P. & L. Co.
Maverick Ranger Station	S	29° 18'	103° 30'	2,780	1955	Terlingua Creek	Park Ranger
McGonagill Ranch - Headquarters	S	30° 20'	102° 58'	4,150	Apr. 1952	Johnson Ranch - Langtry	W. E. McGonagill
McGonagill Ranch - East Mill	S	30° 21'	102° 55'	4,050	May 1952	Johnson Ranch - Langtry	W. G. McGonagill
Middle Fork San Pedro	C	29° 30'	100° 53'	1,170	June 1969	Devils River	I. B. & W. C.
Miers, H. T. Ranch - Headquarters	C	29° 44'	100° 51'	1,760	1957	Devils River	I B. & W. C.
Miers, H. T. Ranch No. 2	R	29° 44'	100° 53'	1,600	Apr. 1964	Devils River	I. B. & W. C.
Mitchell, Kerr Ranch	S	30° 13'	104° 00'	4,450	# 1941	Alamito Creek	Mrs. K. Mitchell
Mouth of Maravillas Creek	S	29° 34'	102° 47'	1,650	#Oct. 1949	Johnson Ranch - Langtry	Black Gap Game Refuge
Neely Ranch	S	30° 59'	105° 32'	3,350	Aug. 1941	Fort Quitman - Above Rio Conchos	Mrs. Tom Neely
New Mission Pump. Plant	S	26° 11'	98° 24'		Aug. 1961	Lower Rio Grande Valley	HCWCID #14
Normandy	S	28° 55'	100° 36'	780	Dec. 1958	Below Amistad Dam - Eagle Pass	Fannin G. Lowe
North Fork San Pedro	C	29° 31'	100° 53'	1,144	June 1969	Devils River	I. B. & W. C.
02 Ranch	S	29° 51'	103° 45'	3,780	# 1914	Terlingua Creek	Calvin Woodward
Owens Ranch	S	30° 45'	101° 40'	2,170	July 1963	Pecos River Below Sheffield	Jeff Owens
Pafford Crossing	C	29° 41'	101° 00'	1,180	Feb. 1960	Devils River	I. B. & W. C.
Pecos River near Langtry Station	C	29° 48'	101° 27'	1,260	July 1967	Pecos River Below Sheffield	I. B. & W. C.
Penitas (Edinburg Pumping Plant)	S	26° 14'	98° 27'	100	July 1957	Lower Rio Grande Valley	B. Leadbetter
Persimmon Gap Ranger Station	S	29° 40'	103° 10'	2,900	# 1948	Johson Ranch - Langtry	Park Ranger
Pinto Creek Station	C	29° 09'	100° 43'	870	Dec. 1958	Below Amistad Dam - Eagle Pass	I. B. & W. C.
Potter, A. M. Ranch	S	29° 46'	103° 25'	3,440	1952	Johnson Ranch - Langtry	A. M. Potter
Presidio (IB&WC Gage)	C	29° 34'	104° 23'	2,550	Oct. 1949	Above Rio Conchos - Johnson Ranch	I. B. & W. C.
Prosser Ranch No. 1	C	29° 54'	101° 14'	1,710	Mar. 1965	Pecos River Below Sheffield	I. B. & W. C.
Prosser Ranch No. 2	C	29° 59'	101° 16'	1,850	Mar. 1965	Devils River	I. B. & W. C.
Prosser Ranch No. 3	C	30° 02'	101° 16'	2,020	Mar. 1965	Pecos River Below Sheffield	I. B. & W. C.
Quebec Ranch	V	30° 31'	104° 25'	4,600	1949	Adjacent to Alamito Creek	George Jones
Ranchita (Continental)	S	29° 50'	101° 20'	1,540	1969	Pecos River	Julio Crowder
Redford	C	29° 29'	104° 13'	2,500	July 1954	Above Rio Conchos - Johnson Ranch	I. B. & W. C.
Roma (Internat'l Bridge)	S	26° 24'	99° 01'	230	1941	Falcon Dam - Rio Grande City	Starr County Bridge Co.
Rosita Creek Siphon	C	28° 41'	100° 24'	760	# 1959	Eagle Pass - Laredo	I. B. & W. C.
Rosita Creek Station	C	28° 36'	100° 24'	700	# 1959	Eagle Pass - Laredo	I. B. & W. C.
Rough Canyon nr. Del Rio	C	29° 35'	100° 56'	1,147	June 1969	Devils River	I. B. & W. C.
San Benito Pump	S	26° 03'	97° 45'	50	Oct. 1953	Lower Rio Grande Valley	I. B. & W. C.
Sawyer, W. E. Ranch	S	30° 28'	100° 47'	2,100	June 1966	Devils River	Geo. Powell
Sellers Ranch	C	29° 34'	101° 02'	1,190	#Feb. 1960	Devils River	I. B. & W. C.
Shafter	V	29° 49'	104° 19'	3,800	July 1968	Above Rio Conchos - Johnson Ranch	Rosa Munoz
Shannon, Bill Ranch	C	29° 57'	104° 40'	2,680	# 1956	Fort Quitman - Above Rio Conchos	Bill Shannon
Sheep Pasture	S	29° 33'	102° 55'	2,210	May 1965	Johnson Ranch - Langtry	Black Gap Game Refuge
Slaughter Ranch	V	29° 57'	102° 41'	2,560	# 1965	Johnson Ranch - Langtry	Mrs. J. Garner
Stewart Ranch	R	29° 35'	100° 52'	1,330	Feb. 1960	Devils River	I. B. & W. C.
Stillwell Crossing	S	29° 24'	102° 50'	1,750	# 1960	Johnson Ranch - Langtry	Ulice Adams
Stumberg, Steve Ranch	C	30° 11'	102° 53'	4,300	1943	Johnson Ranch - Langtry	Mrs.SteveStumberg
Sultenfuss Ranch	S	29° 21'	100° 37'	1,110	1965	Pinto Creek	Udo Sultenfuss
Terlingua Creek Station	C	29° 12'	103° 36'	2,215	Mar. 1952	Above Rio Conchos - Johnson Ranch	I. B. & W. C.
Terrell Plant (El Paso Nat. Gas Co.)	R	30° 22'	101° 50'	2,510	July 1962	Pecos River Below Sheffield	Bob Norred
Todd Field	S	30° 51'	101° 27'	2,650	Sept.1964	Pecos River Below Sheffield	R. B. Stephens
Trees Farm	R	28° 38'	100° 25'	720	Mar. 1959	Eagle Pass - Laredo	I. B. & W. C.
Van Dalsem Farm	C	28° 27'	100° 19'	700	1959	Eagle Pass - Laredo	I. B. & W. C.

S Standard C Cumulative V Visual R Recording # Some months or years missing

LOCATION OF RAINFALL STATIONS ON THE RIO GRANDE WATERSHED

In United States

NAME OF STATION	TYPE GAGE	LATITUDE	LONGITUDE	ELEV. (FT.)	RECORD BEGAN	WATERSHED SUBDIVISION	OBSERVER
Vinegarone	C	29° 57'	100° 46'	1,780	May 1966	Devils River	I. B. & W. C.
Walker Ranch	C	29° 49'	101° 14'	1,530	July 1969	Devils River	I. B. & W. C.
Weyrich Farm	C	28° 40'	100° 24'	760	Sept.1962	Eagle Pass - Laredo	I. B. & W. C.
Whipple Farm	S	26° 04'	97° 29'	25	1952	Lower Rio GrandeValley	Harry Whipple
Whitehead Bros. Ranch	S	30° 02'	100° 52'	1,900	May 1966	Devils River	I. B. & W. C.
Whitehead, Tuffy Ranch	R	29° 38'	101° 07'	1,420	July 1962	Devils River	I. B. & W. C.
Wipff Ranch	C	29° 00'	100° 35'	840	Mar. 1959	Below Amistad Dam - Eagle Pass	I. B. & W. C.
Woodward, J. F. Ranch	S	30° 08'	103° 36'	4,750	1954	Johnson Ranch -Langtry	J. F. Woodward
Wuensche Farm	S	28° 24'	100° 19'	670	# 1952	Eagle Pass - Laredo	I. B. & W. C.
Yarborough Ranch	S	30° 06'	103° 36'	4,550	1966	Johnson Ranch -Langtry	VenancioVictorino
Zapata Water Plant	S	26° 54'	99° 16'	380	May 1953	Laredo - Falcon Dam	Zapata WaterPlant

S Standard R Recording C Cumulative V Visual # Some months or years missing

LOCATION OF RAINFALL STATIONS ON THE RIO GRANDE WATERSHED

In Mexico

NAME OF STATION	TYPE GAGE	LATITUDE	LONGITUDE	ELEV. (FT.)	RECORD BEGAN	WATERSHED SUBDIVISION	OBSERVER
A. Blanca Canoas, Nuevo Leon	S	25° 32'	100° 30'	†	# 1958	Rio San Juan	Hydr. Resources
Adjuntas, Nuevo Leon	S	25° 18'	100° 08'	†	# 1958	Rio San Juan	Monterrey Wtrwrks
Allende, Coahuila	S	28° 21'	100° 51'	1,170	# 1947	Eagle Pass - Laredo	Hydr. Resources
Amistad Reservoir near Tlaloc, Coahuila	C	29° 26'	101° 07'	1,200	1970	Langtry - Amistad Dam	I. B. & W. C.
Anahuac, Nuevo Leon	S	27° 15'	100° 08'	656	#June 1933	Rio Salado	Hydr. Resources
Aniego 166, Tamaulipas	C	26° 46'	99° 15'	308	Jan. 1964	Laredo - Falcon Dam	I. B. & W. C.
Apodaca, Nuevo Leon	S	25° 46'	100° 11'	1,330	Feb. 1964	Rio San Juan	Hydr. Resources
Arguelles, Tamaulipas	C	26° 11'	98° 28'	†	1962	Lower Rio Grande Valley	I. B. & W. C.
Bachiniva, Chihuahua	S	28° 46'	107° 15'	6,250	# 1952	Adjacent to Rio Conchos	Meteor. Service of Mexico
Bajo Rio Bravo, Tamaulipas							
No. 1-2	S	25° 56'	97° 46'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 1-3	S	25° 50'	97° 42'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 1-4	S	25° 51'	97° 45'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 1-12	S	25° 56'	97° 38'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 1-13	S	25° 44'	97° 40'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 1-18	S	25° 49'	97° 42'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 2-5	S	25° 48'	97° 49'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 2-6	S	25° 44'	97° 53'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 2-7	S	25° 39'	97° 42'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 2-8	S	25° 40'	97° 55'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 2-10	S	25° 36'	97° 52'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 2-11	S	25° 35'	97° 46'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 3-14	S	25° 56'	97° 59'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 3-15	S	25° 46'	98° 01'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 3-17	S	25° 49'	97° 58'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 4-16	S	25° 35'	98° 00'	†	1964	Lower Rio Grande Valley	Hydr. Resources
Bajo Rio San Juan, Tamaulipas							
No. 2-29	S	26° 10'	98° 38'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 2-33	S	26° 10'	98° 28'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 2-38	S	26° 06'	98° 34'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 3-47	S	25° 58'	98° 07'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 3-55	S	25° 52'	98° 12'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 3-58	S	25° 50'	98° 11'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 3-60	S	25° 46'	98° 10'	†	1964	Lower Rio Grande Valley	Hydr. Resources
No. 3-63	S	25° 41'	98° 06'	†	1964	Lower Rio Grande Valley	Hydr. Resources
Balleza, Chihuahua	S	26° 57'	106° 21'	5,870	# 1903	Rio Conchos	Meteor. Service of Mexico
Banderas, Chihuahua	S	31° 00'	105° 39'	†	1963	Fort Quitman - Above Rio Conchos	Hydr. Resources
Bustamente, Nuevo Leon	S	26° 32'	100° 31'	1,450	# 1958	Rio Salado	Hydr. Resources
Cabezones, Nuevo Leon	S	24° 59'	99° 45'	†	1962	Adjacent to Rio San Juan	Hydr. Resources
Cadereyta, Nuevo Leon	S	25° 35'	100° 00'	1,180	#Sept.1904	Rio San Juan	Hydr. Resources
Camargo, Chihuahua	S	27° 42'	105° 10'	5,420	Oct. 1956	Rio Conchos	Hydr. Resources
Camargo, Tamaulipas	S	26° 19'	98° 50'	223	# 1953	Falcon Dam - Rio Grande City	Hydr. Resources
Carbonera, Nuevo Leon	S	24° 49'	100° 47'	†	# 1958	Rio San Juan	Hydr. Resources
Carichic, Chihuahua	S	27° 55'	107° 04'		May 1961	Rio Conchos	Meteor. Service of Chihuahua
Casillas, Nuevo Leon	S	25° 12'	100° 12'	4,060	# 1958	Rio San Juan	Hydr. Resources
Cd. Acuna, Coahuila	S	29° 20'	100° 57'	900	1951	Below Amistad Dam - Eagle Pass	I. B. & W. C.
Cd. Diaz Ordaz	S	26° 14'	98° 36'	130	# 1953	Lower Rio Grande Valley	Hydr. Resources
Cd. Guerrero, Chihuahua	S	28° 33'	107° 29'	6,560	#May 1903	Adjacent to Rio Conchos	Meteor. Service of Mexico
Cd. Mier, Tamaulipas	S	26° 26'	99° 09'	260	Oct. 1955	Falcon Dam - Rio Grande City	I. B. & W. C.
Cd. Mier Km. 8, SW, Tamaulipas	C	26° 23'	99° 14'	†	1962	Rio Alamo	I. B. & W. C.
Cerralvo, Nuevo Leon	R	26° 05'	99° 37'	1,130	#Nov. 1938	Rio San Juan	Hydr. Resources
Cerritos, Nuevo Leon	S	25° 31'	100° 12'	†	# 1958	Rio San Juan	Monterrey Wtrwrks
Cerro Prieto, Nuevo Leon	S	25° 57'	99° 26'	†	#Sept.1958	Rio San Juan	Hydr. Resources
Chihuahua, Chihuahua	S	28° 38'	106° 04'	4,690	# 1900	Rio Conchos	Meteor. Service of Mexico
Chupadero, Coahuila	S	29° 05'	100° 51'	980	1961	Rio San Diego	F. Jakubesch
Cienega de Flores, Nuevo Leon	R	25° 57'	100° 57'	1,770	Apr. 1938	Rio San Juan	Hydr. Resources
Cienega del Toro, Nuevo Leon	S	25° 05'	100° 20'	7,010	# 1958	Rio San Juan	Hydr. Resources
Colombia, Nuevo Leon	C	27° 42'	99° 46'	†	Jan. 1964	Eagle Pass - Laredo	I. B. & W. C.
Colonia Anahuac, Chihuahua	S	28° 29'	106° 44'	6,550	1961	Rio Conchos	Celulosa de Chihuahua, S.A.
Comales, Tamaulipas	R	26° 11'	98° 55'	260	#Mar. 1938	Rio San Juan	Hydr. Resources
Conchos, Coahuila	S	28° 01'	101° 20'	†	#Oct. 1950	Rio Salado	Hydr. Resources
Control, Tamaulipas	S	25° 58'	97° 49'	59	#June 1942	Lower Rio Grande Valley	Hydr. Resources

S Standard C Cumulative R Recording † Not available
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LOCATION OF RAINFALL STATIONS ON THE RIO GRANDE WATERSHED

In Mexico

NAME OF STATION	TYPE GAGE	LATITUDE	LONGITUDE	ELEV. (FT.)	RECORD BEGAN	WATERSHED SUBDIVISION	OBSERVER
Coyame, Chihuahua	S	29° 28'	105° 06'	†	Nov. 1961	Rio Conchos	Meteor. Service of Chihuahua
Cuatro Cienegas, Coah.	S	26° 59'	102° 04'	2,430	# 1923	Rio Salado	Hydr. Resources
Cuauhtemoc, Chihuahua	S	28° 24'	106° 52'	7,250	#June 1923	Adjacent to Rio Conchos	Meteor. Service of Mexico
Cuchillo Parado, Chihuahua	S	29° 26'	104° 53'	2,982	# 1951	Rio Conchos	Hydr. Resources
Delicias, Chihuahua	S	28° 11'	105° 28'	3,710	#Aug. 1933	Rio Conchos	Hydr. Resources
Don Martin, Coahuila	S	27° 31'	100° 37'	790	#June 1927	Rio Salado	Hydr. Resources
Ejido San Blas, Coahuila	S	27° 25'	101° 43'	†	1970	Rio Salado	Hydr. Resources
El Anteojo, Chihuahua	S	28° 29'	104° 48'	4,130	1963	Adjacent to Rio Conchos	Meteor. Service of Mexico
El Cuarenta, Chihuahua	S	30° 33'	105° 50'	†	1965	Adjacent to Ft. Quitman Above Rio Conchos	Meteor. Service of Mexico
El Cuchillo, Nuevo Leon	S	25° 43'	99° 16'	590	June 1938	Rio San Juan	Hydr. Resources
El Cuervo, Chihuahua	S	30° 15'	105° 08'	3,840	# 1961	Adjacent to Ft. Quitman Above Rio Conchos	Hydr. Resources
El Llano, Tamaulipas	S	27° 24'	99° 31'	†	Nov. 1968	Laredo - Falcon Dam	I. B. & W. C.
El Maguey, Chihuahua	S	27° 37'	106° 09'	4,380	July 1955	Rio Conchos	Meteor. Service of Chihuahua
El Realito, Nuevo Leon	S	25° 18'	99° 21'	†	# 1970	Rio San Juan	Hydr. Resources
El Remolino, Coahuila	S	28° 45'	101° 05'	1,310	June 1958	Rio San Rodrigo	I. B. & W. C.
El Sitio, Chihuahua	S	27° 31'	106° 16'	†	July 1955	Rio Conchos	Meteor. Service of Chihuahua
El Sueco, Chihuahua	S	29° 54'	106° 24'	5,090	1958	Adjacent to Rio Conchos	Meteor. Service of Chihuahua
El Treinta, Coahuila	S	28° 20'	101° 24'	†	1961	Rio Salado	I. B. & W. C.
El Vergel, Chihuahua	S	26° 22'	106° 30'	7,350	# 1957	Rio Conchos	Meteor. Service of Mexico
Escalon, Chihuahua	S	26° 45'	104° 21'	4,144	# 1957	Adjacent to Rio Conchos	Meteor. Service of Mexico
Escuela Ganaderia, Chihuahua	S	28° 42'	106° 04'	4,680	1961	Rio Conchos	Meteor. Service of Chihuahua
Estacion Rosario, Durango	S	26° 30'	105° 38'	†	July 1962	Rio Conchos	Hydr. Resources
Gallego, Chihuahua	S	29° 50'	106° 23'	5,100	1958	Adjacent to Rio Conchos	Meteor. Service of Chihuahua
Garita Km. 28, Chihuahua	S	31° 33'	106° 28'	3,990	May 1958	El Paso - Ft. Quitman	I. B. & W. C.
Gral. Bravo, Nuevo Leon	S	25° 48'	99° 11'	590	#Sept.1906	Rio San Juan	Hydr. Resources
Gral. Cepeda, Coahuila	S	25° 23'	101° 29'	4,920	#Aug. 1926	Rio San Juan	Hydr. Resources
Gral. Teran (Experiment Station), Nv. Leon	S	25° 16'	99° 38'	1,090	# 1958	Rio San Juan	Agriculture and Livestock Dept.
Guadalupe, Chihuahua	S	31° 23'	105° 06'	3,650	1958	El Paso - Ft. Quitman	I. B. & W. C.
Hacienda El Alamo, Nuevo Leon	S	26° 29'	99° 47'	†	1968	Rio Alamo	I. B. & W. C.
Hacienda San Miguel, Coahuila	S	29° 13'	101° 30'	†	1961	Langtry - Below Amistad Dam	I. B. & W. C.
Higueras, Nuevo Leon	S	25° 58'	100° 01'	1,640	#Sept.1906	Rio San Juan	Meteor. Service of Mexico
Icamole, Nuevo Leon	S	25° 55'	100° 43'	4,900	# 1958	Rio San Juan	Hydr. Resources
Iturbide, Nuevo Leon	S	24° 44'	99° 54'	†	1941	Adjacent to Rio San Juan	Hydr. Resources
Jimenez, Chihuahua	S	27° 08'	104° 55'	4,490	# 1951	Rio Conchos	Hydr. Resources
Jimenez, Coahuila	S	29° 04'	100° 40'	810	# 1951	Below Amistad Dam - Eagle Pass	I. B. & W. C.
Juarez, Chihuahua	S	31° 44'	106° 29'	3,740	# 1903	El Paso - Ft. Quitman	Hydr. Resources
Km. 99, Chihuahua	S	28° 08'	105° 35'	†	# 1962	Rio Conchos	Hydr. Resources
Km. 135, Chihuahua	S	28° 13'	105° 37'	†	# 1962	Rio Conchos	Hydr. Resources
La Bandera, Tamaulipas	C	26° 42'	99° 22'	†	1962	Laredo - Falcon Dam	I. B. & W. C.
La Boquilla, Chihuahua	S	27° 32'	105° 25'	4,330	# 1910	Rio Conchos	Electric Industry of Mexico
La Campana, Chihuahua	S	29° 20'	106° 20'	4,820	# 1958	Rio Conchos	Meteor. Service of Mexico
La Cruz, Nuevo Leon	S	25° 28'	100° 26'	†	1958	Rio San Juan	Hydr. Resources
La Gloria, Nuevo Leon	S	26° 53'	99° 49'	390	#May 1958	Rio Salado	I. B. & W. C.
La Popa, Nuevo Leon	S	26° 10'	100° 50'	3,230	# 1958	Rio San Juan	Hydr. Resources
La Trasquila, Chihuahua	S	29° 08'	107° 03'	†	# 1962	Adjacent to Rio Conchos	Hydr. Resources
Laguna de Salinillas, Nuevo Leon	S	27° 26'	100° 23'	750	# 1940	Rio Salado	Hydr. Resources
Laguna de Sanchez, N. L.	R	25° 22'	100° 17'	6,500	Apr. 1941	Rio San Juan	Hydr. Resources
Lampazos, Nuevo Leon	S	27° 02'	100° 30'	1,120	# 1958	Rio Salado	Meteor. Service of Mexico
Las Burras, Chihuahua	S	28° 31'	105° 26'	3,590	July 1949	Rio Conchos	Hydr. Resources
Las Comitas, Nuevo Leon	S	25° 26'	100° 09'	1,670	# 1940	Rio San Juan	Hydr. Resources
Las Enramadas, Nuevo Leon	S	25° 30'	99° 31'	730	#Sept.1926	Rio San Juan	Hydr. Resources

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† Not available

LOCATION OF RAINFALL STATIONS ON THE RIO GRANDE WATERSHED

In Mexico

NAME OF STATION	TYPE GAGE	LATITUDE	LONGITUDE	ELEV. (FT.)	RECORD BEGAN	WATERSHED SUBDIVISION	OBSERVER
Las Tortillas, Tamaulipas	C	26° 50'	99° 34'	360	May 1961	Laredo - Falcon Dam	I. B. & W. C.
Las Varas, Chihuahua	S	29° 48'	106° 42'	†	1958	Adjacent to Rio Conchos	Meteor. Service of Mexico
Las Virgenes, Chihuahua	S	28° 10'	105° 38'	4,070	# 1943	Rio Conchos	Hydr. Resources
Lazaro Cardenas, Chihuahua	S	28° 23'	105° 37'	3,940	# 1961	Rio Conchos	Meteor Service of Mexico
Linares, Nuevo Leon	R	24° 52'	99° 34'	1,180	# 1900	Adjacent to Rio San Juan	Hydr. Resources
Loma Blanca, Chihuahua	S	31° 35'	106° 18'	3,650	1970	El Paso - Ft. Quitman	Hydr. Resources
Los Barriles, Chihuahua	S	30° 55'	105° 45'	4,860	July 1958	El Paso - Ft. Quitman	I. B. & W. C.
Los Herrera(La Tableta), Nuevo Leon	R	25° 54'	99° 24'	820	#Sept.1939	Rio San Juan	Hydr. Resources
Los Ramones, Nuevo Leon	R	25° 42'	99° 38'	260	#Sept.1939	Rio San Juan	Hydr. Resources
Luis L. Leon, Chihuahua	S	31° 05'	105° 38'	3,460	Apr. 1958	El Paso - Ft. Quitman	I. B. & W. C.
Maijoma, Chihuahua	S	28° 55'	104° 21'	4,270	Aug. 1955	Rio Conchos	Meteor. Service of Chihuahua
Majalca, Chihuahua	S	28° 53'	106° 21'	6,860	June 1963	Rio Conchos	Meteor. Service of Mexico
Manuel Benavides, Chihuahua	S	29° 06'	103° 54'	†	Oct. 1961	Above Rio Conchos - Johnson Ranch	Meteor. Service of Mexico
Matamoros, Tamaulipas	S	25° 52'	97° 30'	33	# 1958	Lower Rio Grande Valley	Hydr. Resources
Mendez, Tamaulipas	S	25° 07'	98° 35'	430	#Sept.1939	Adjacent to Lower Rio Grande Valley	Hydr. Resources
Meoqui, Chihuahua	S	28° 16'	105° 29'	3,790	1961	Rio Conchos	Meteor. Service of Mexico
Miguel Aleman, Tamaulipas	S	26° 24'	99° 02'	180	1964	Falcon Dam - Rio Grande City	Hydr. Resources
Mina, Nuevo Leon	S	26° 00'	100° 32'	†	# 1958	Rio San Juan	Hydr. Resources
Mina La Borrada, Coahuila	S	29° 21'	102° 36'	†	Aug. 1961	Johnson Ranch - Langtry	I. B. & W. C.
Monclova, Coahuila	S	26° 54'	101° 25'	1,920	# 1897	Rio Salado	Hydr. Resources
Montemorelos, Nuevo Leon	S	25° 12'	99° 50'	1,420	#Aug. 1904	Rio San Juan	Hydr. Resources
Monterrey, Nuevo Leon	S	25° 40'	100° 18'	1,740	# 1896	Rio San Juan	Hydr. Resources
Muzquiz, Coahuila	S	27° 53'	101° 31'	1,650	# 1923	Rio Salado	Meteor. Service of Mexico
Nonoava, Chihuahua	S	27° 29'	106° 44'	†	# 1963	Rio Conchos	Meteor. Service of Chihuahua
Nueva Cd. Guerrero, Tamaulipas	S	26° 34'	99° 14'	350	#May 1954	Laredo - Falcon Dam	I. B. & W. C.
Nuevo Laredo, Tamaulipas	V	27° 30'	99° 30'	430	1950	Laredo - Falcon Dam	I. B. & W. C.
Nuevo Laredo, Tamaulipas	S	27° 30'	99° 30'	430	# 1909	Laredo - Falcon Dam	Meteor. Service of Mexico
Nuevo Laredo Km. 26, SSW, Tamaulipas	C	27° 17'	99° 37'	†	Apr. 1961	Laredo - Falcon Dam	I. B. & W. C.
Ocampo, Coahuila	S	27° 19'	102° 24'	3,770	# 1960	Adjacent to Rio Salado	Hydr. Resources
Ojinaga, Chihuahua	S	29° 34'	104° 24'	2,590	#Apr. 1954	Rio Conchos	I. B. & W. C.
Ojinaga, Chihuahua	S	29° 34'	104° 25'	2,620	#Nov. 1906	Rio Conchos	Meteor. Service of Mexico
Ojo Caliente, Chihuahua	S	27° 41'	105° 12'	4,010	1942	Rio Conchos	Hydr. Resources
Pajonal, Nuevo Leon	S	25° 29'	100° 23'	†	1958	Rio San Juan	Hydr. Resources
Palestina, Coahuila	S	29° 09'	100° 59'	1,080	# 1931	Rio San Diego	Hydr. Resources
Parral, Chihuahua	S	26° 56'	105° 39'	5,450	# 1903	Rio Conchos	Meteor. Service of Mexico
Parras, Coahuila	S	25° 27'	102° 10'	5,510	1958	Adjacent to Rio San Juan	Hydr. Resources
Parrita, Chihuahua	S	29° 25'	106° 29'	†	# 1958	Adjacent to Rio Conchos	Hydr. Resources
Piedras Negras, Coahuila	S	28° 43'	100° 31'	820	# 1951	Below Amistad Dam - Eagle Pass	Meteor. Service of Mexico
Planta Zootecnica, Chihuahua	S	28° 41'	106° 04'	4,770	# 1957	Rio Conchos	Meteor. Service of Mexico
Porvenir, Chihuahua	S	31° 14'	105° 52'	3,530	1958	El Paso - Ft. Quitman	I. B. & W. C.
Potosi, Nuevo Leon	S	24° 51'	100° 19'	6,260	# 1958	Adjacent to Rio San Juan	Hydr. Resources
Potrero del Llano, Chihuahua	S	29° 13'	104° 26'	3,540	June 1964	Above Rio Conchos - Johnson Ranch	I. B. & W. C.
Potrero Redondo, Nuevo Leon	S	25° 16'	100° 10'	†	# 1958	Rio San Juan	Hydr. Resources
Praxedis G. Guerrero, Chihuahua	S	31° 22'	106° 00'	3,560	1958	El Paso - Ft. Quitman	I. B. & W. C.
Presa Anzalduas, Tamaulipas	V	26° 08'	98° 20'	105	Apr. 1960	Lower Rio Grande Valley	I. B. & W. C.
Presa Cabeceras, Coahuila	S	29° 02'	101° 05'	†	1964	Below Amistad Dam - Eagle Pass	Hydr. Resources
Presa Centenario, Coahuila	S	29° 13'	100° 57'	†	1964	Arroyo Las Vacas	Hydr. Resources
Presa Chihuahua, Chihuahua	S	28° 34'	106° 10'	5,230	Oct. 1961	Rio Conchos	Hydr. Resources

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† Not available

LOCATION OF RAINFALL STATIONS ON THE RIO GRANDE WATERSHED

In Mexico

NAME OF STATION	TYPE GAGE	LATITUDE	LONGITUDE	ELEV. (FT.)	RECORD BEGAN	WATERSHED SUBDIVISION	OBSERVER
Presa Luis L. Leon, Chihuahua	S	28° 57'	105° 17'	†	Oct. 1964	Rio Conchos	Hydr. Resources
Presa San Miguel, Coahuila	S	29° 02'	100° 57'	1,000	1964	Rio San Diego	Hydr. Resources
Progreso, Coahuila	S	27° 25'	101° 00'	1,210	#Feb. 1943	Rio Salado	Hydr. Resources
Ramos Arizpe, Coahuila	S	25° 32'	100° 57'	4,590	#Apr. 1907	Rio San Juan	Meteor. Service of Mexico
Rancho La Chuparrosa, Coahuila	R	29° 30'	101° 15'	1,150	1970	Langtry - Amistad Dam	I. B. & W. C.
Rancho Los Vidrios, Tamaulipas	C	27° 35'	99° 37'	450	Sept.1956	Eagle Pass - Laredo	I. B. & W. C.
Rancho Mercedes, Coahuila	S	28° 02'	100° 01'	540	May 1959	Eagle Pass - Laredo	I. B. & W. C.
Rancho San Diego, Coahuila	S	27° 59'	100° 35'	†	May 1959	Eagle Pass - Laredo	I. B. & W. C.
Rancho San Juan de la Palma, Tamaulipas	S	26° 54'	99° 20'	350	Apr. 1955	Laredo - Falcon Dam	I. B. & W. C.
Rancho San Rafael Bustamante, Tamps.	C	26° 54'	99° 30'	†	Nov. 1967	Rio Salado	I. B. & W. C.
Rayones, Nuevo Leon	S	25° 01'	100° 05'	1,970	#Oct. 1926	Rio San Juan	Hydr. Resources
Reata, Coahuila	S	26° 07'	101° 04'	3,070	#July 1944	Rio San Juan	Hydr. Resources
Retamal, Tamaulipas	S	26° 02'	98° 03'	82	Oct. 1949	Lower Rio Grande Valley	I. B. & W. C.
Reynosa, Tamaulipas	R	26° 05'	98° 17'	130	# 1941	Lower Rio Grande Valley	Hydr. Resources
Reynosa Km. 22, SW, Tamaulipas	C	26° 00'	98° 30'	†	# 1962	Lower Rio Grande Valley	I. B. & W. C.
Rinconada, Nuevo Leon	S	25° 41'	100° 42'	4,790	#Apr. 1944	Rio San Juan	Hydr. Resources
Rio Bravo, Tamaulipas	S	25° 59'	98° 06'	85	#Sept.1950	Lower Rio Grande Valley	Hydr. Resources
Rio Salado Riberena, Tamaulipas	S	26° 48'	99° 24'	330	July 1964	Laredo - Falcon Dam	I. B. & W. C.
Rosetilla, Chihuahua	S	28° 15'	105° 18'	3,780	1940	Rio Conchos	Electric Industry of Mexico
Rusio, Nuevo Leon	S	24° 42'	100° 26'	6,570	#June 1956	Adjacent to Rio San Juan	Hydr. Resources
Sabinas, Coahuila	S	27° 51'	101° 07'	1,120	#May 1922	Rio Salado	Hydr. Resources
Sabinas Hidalgo, Nuevo Leon	S	26° 30'	100° 10'	1,030	May 1958	Rio Salado	I. B. & W. C.
Saltillo, Coahuila	S	25° 26'	101° 00'	5,280	# 1886	Rio San Juan	Hydr. Resources
Samalayuca, Chihuahua	S	31° 21'	106° 28'	4,180	1958	El Paso - Ft. Quitman	Meteor. Service of Mexico
San Agustin, Chihuahua	S	31° 31'	106° 15'	3,650	1958	El Paso - Ft. Quitman	I. B. & W. C.
San Antonio de las Alazanas, Coahuila	S	25° 16'	100° 35'	†	1958	Rio San Juan	Hydr. Resources
San Antonio, Chihuahua	S	31° 01'	106° 00'	4,490	July 1958	El Paso - Ft. Quitman	I. B. & W. C.
San Antonio, Durango	S	26° 25'	105° 21'	5,430	# 1943	Rio Conchos	Hydr. Rsources
San Buenaventura, Coahuila	S	27° 05'	101° 33'	2,300	#Dec. 1926	Rio Salado	Meteor. Service of Mexico
San Fernando, Coahuila	S	29° 25'	101° 43'	†	Aug. 1961	Langtry - Below Amistad Dam	I. B. & W. C.
San Ignacio, Tamaulipas	C	27° 04'	99° 28'	†	1964	Laredo - Falcon Dam	I. B. & W. C.
San Javier, Nuevo Leon	C	26° 16'	99° 25'	†	1962	Rio Alamo	I. B. & W. C.
San Juan, Nuevo Leon	S	25° 33'	99° 50'	880	#Nov. 1943	Rio San Juan	Hydr. Resources
San Juanito, Chihuahua	S	27° 59'	107° 27'	†	# 1959	Adjacent to Rio Conchos	Meteor Service of Mexico
San Lorenzo, Chihuahua	S	28° 10'	106° 29'	3,770	# 1961	Rio Conchos	Hydr. Resources
Santa Barbara, Chihuahua	S	26° 48'	105° 49'	6,460	1964	Rio Conchos	Hydr. Resources
Santa Catarina, Nuevo Leon	R	25° 40'	100° 29'	2,230	Oct. 1937	Rio San Juan	Hydr. Resources
Santa Rita, Chihuahua	S	27° 49'	104° 31'	3,950	1956	Adjacent to Rio Conchos	Meteor. Service of Chihuahua
Santa Rosa, Coahuila	V	29° 38'	101° 28'	†	# 1958	Langtry - Below Amistad Dam	Ind. Co-operator
Santa Rosa, Nuevo Leon	S	24° 10'	100° 18'	†	1970	Adjacent to Rio San Juan	Hydr. Resources
Sierra Mojada, Coahuila	S	27° 17'	103° 42'	4,120	# 1897	Adjacent to Johnson Ranch - Langtry	Hydr. Resources
Siquirichic, Chihuahua	S	27° 09'	107° 12'	7,610	#July 1956	Adjacent to Rio Conchos	Meteor. Service of Mexico
Sombreretillo, Nuevo Leon	S	26° 18'	99° 58'	†	1970	Rio San Juan	Hydr. Resources
Tacubaya, Chihuahua	S	28° 08'	104° 23'	5,150	#July 1963	Adjacent to Rio Conchos	Meteor. Service of Mexico
Tinajas, Chihuahua	S	31° 09'	106° 05'	4,320	1958	El Paso - Ft. Quitman	I. B. & W. C.
Topo Chico, Nuevo Leon	R	25° 44'	100° 20'	1,640	#Aug. 1939	Rio San Juan	Hydr. Resources
Tunel San Francisco, Nuevo Leon	S	25° 25'	100° 10'	†	# 1958	Rio San Juan	Hydr. Resources
Vado de Cedillos, Chihuahua	S	31° 13'	105° 48'	3,500	Apr. 1958	El Paso - Ft. Quitman	I. B. & W. C.
Valadeces, Tamaulipas	S	26° 14'	98° 40'	†	1964	Lower Rio Grande Valley	Hydr. Resources
Vallecillo, Nuevo Leon	S	26° 40'	99° 59'	900	#June 1958	Rio Salado	Hydr. Resources
Valle Allende, Chihuahua	S	26° 56'	105° 23'	†	Mar. 1962	Rio Conchos	Meteor. Service of Chihuahua

\# *Some months or years missing* S *Standard* C Cumulative R Recording V Visual
† Not available

LOCATION OF RAINFALL STATIONS ON THE RIO GRANDE WATERSHED

In Mexico

NAME OF STATION	TYPE GAGE	LATITUDE	LONGITUDE	ELEV. (FT.)	RECORD BEGAN	WATERSHED SUBDIVISION	OBSERVER
Valle Hermoso, Tamaulipas	S	25° 41'	97° 48'	52	#June 1949	Lower Rio Grande Valley	Hydr. Resources
Victoria, Chihuahua	S	27° 58'	104° 33'	4,810	June 1963	Adjacent to Rio Conchos	Meteor. Service of Mexico
Villa Aldama, Chihuahua	S	28° 50'	105° 55'	4,140	1961	Rio Conchos	Meteor. Service of Mexico
Villa Allende, Nuevo Leon	S	25° 17'	100° 01'	2,210	#Nov. 1938	Rio San Juan	Hydr. Resources
Villa Coronado, Chihuahua	S	26° 44'	105° 08'	4,790	Aug. 1964	Rio Conchos	Hydr. Resources
Villa de Santiago, Nuevo Leon	S	25° 25'	100° 09'	1,460	# 1923	Rio San Juan	Hydr. Resources
Villa Guerrero, Coahuila	S	28° 19'	100° 23'	690	#June 1958	Eagle Pass - Laredo	I. B. & W. C.
Villa Hidalgo, Coahuila	S	27° 47'	99° 52'	660	1951	Eagle Pass - Laredo	I. B. & W. C.
Villalba, Chihuahua	S	28° 10'	105° 46'	3,940	Oct. 1940	Rio Conchos	Hydr. Resources

Some months or years missing S Standard

EVAPORATION IN THE RIO GRANDE BASIN IN THE UNITED STATES

In Inches

Tabulated below are records of evaporation observed at eight stations in Texas operated by the United States Section of the Commission from Presidio to Brownsville. At all stations, the exposure to wind was uniform and relatively unimpeded. The sites were kept cleared of all high brush and trees within 150 feet, and all brush, tall weeds, and other obstructions within 100 feet of the fenced enclosures. Within the enclosures, all vegetation has been eradicated or kept trimmed to within 3 inches of the ground surface. For specific location of these stations refer to data opposite same station name shown in "Location of Rainfall Stations on the Rio Grande Watershed," pages 136 through 139 in this bulletin.

Records were obtained by means of:

1. National Weather Service standard pan. A circular pan, 4 feet in diameter and 10 inches deep, made of 22-gage galvanized iron, is set on a wooden platform with the rim of the pan 16 inches above the ground. The water level is maintained between 2 and 3 inches below the rim of the pan and is measured with a micrometer gage. This type of pan was in operation at Amistad Dam and Falcon Dam.

2. A circular pan, 2 feet in diameter and 36 inches deep, made of 22-gage galvanized iron, is set in the ground with the rim of the pan 3 inches above the ground surface and the top covered with a circular screen of No. 4 (1/4" mesh) galvanized hardware cloth. The water level is maintained between 2.5 and 3.5 inches below the rim of the pan. This type of pan was in operation at Falcon Dam. This same type of pan, equipped with an automatic feed tank that maintains the water at a level 3 inches below the rim of the pan, was in operation at Martin King Ranch and Eagle Pass.

3. An evaporometer, developed by the United States Section of the Commission and calibrated against a 2-foot pan described above, was in operation at Presidio, Johnson Ranch, and at a site 7 miles east of Brownsville. On October 1, 1971, the Wardlaw Ranch station was relocated to the Long Ranch, about 1.5 miles west, where an evaporometer was installed to replace the pan at the former location.

Month	Presidio		Johnson Ranch		Martin King Ranch		Long Ranch	
	1972	Average 1950-1972	1972	Average 1950-1972	1972	#Average 1956-1972	1972	Average October 1971-1972
Jan.	3.50	3.73	3.19	3.44	3.04	3.06	2.09	
Feb.	4.87	5.20	3.96	5.03	2.76	3.62	2.82	
Mar.	7.85	8.27	7.96	8.25	6.22	6.27	6.18	
Apr.	9.80	10.13	10.96	10.62	8.69	7.40	7.24	
May	9.27	12.06	9.62	12.08	7.12	8.46	4.73	
June	8.63	12.92	9.62	12.48	9.40	10.22	7.88	
July	9.93	12.36	10.52	12.67	10.19	11.39	8.59	
Aug.	8.63	11.45	8.83	11.50	7.95	10.71	6.44	
Sept.	7.63	9.77	7.26	9.34	7.62	7.66	5.63	
Oct.	7.55	7.59	6.45	7.21	4.67	5.43	3.27	2.86
Nov.	5.00	4.90	3.75	4.66	4.15	3.92	2.64	2.50
Dec.	3.68	3.57	3.75	3.42	2.88	3.04	1.49	1.68
Total	86.34	101.95	85.87	100.70	74.69	81.18	59.00	

Month	Amistad Dam		Eagle Pass		Falcon Dam				Brownsville	
					2-Foot Pan		4-Foot Pan			
	1972	Average March 1963-1972	1972	#Average 1964-1972	1972	#Average 1950-1972	1972	#Average 1956-1972	1972	#Average 1958-1972
Jan.	3.91	4.00	3.23	3.27	4.56	3.49	4.20	4.10	2.32	2.50
Feb.	5.36	4.76	3.65	3.66	4.10	4.45	5.06	5.36	2.36	3.35
Mar.	9.37	8.69	7.15	5.51	8.23	6.72	7.68	8.56	4.15	4.41
Apr.	11.49	10.29	7.97	6.79	9.03	8.00	11.30	10.76	3.65	5.38
May	9.42	11.04	6.17	6.66	6.05	9.46	8.36	12.29	3.43	5.42
June	12.40	13.36	7.18	9.66	7.36	10.96	9.41	13.64	5.28	5.99
July	13.77	16.12	10.83	11.34	9.08	12.99	10.78	16.04	2.67	6.65
Aug.	9.80	13.82	7.86	9.92	10.64	11.57	13.02	14.62	5.21	6.41
Sept.	9.11	9.86	7.45	7.14	8.51	8.19	10.34	10.24	2.59	4.80
Oct.	6.83	7.22	6.88	5.67	6.12	6.56	6.72	7.62	4.19	4.13
Nov.	5.02	4.90	4.13	3.61	4.81	4.83	4.26	5.47	1.62	3.35
Dec.	4.06	3.64	2.92	3.28	3.54	3.74	3.72	4.02	1.42	2.69
Total	100.54	107.70	75.42	76.51	82.03	90.96	94.85	112.72	38.89	55.08

Some months missing

EVAPORATION IN THE RIO GRANDE BASIN IN MEXICO

In Inches

Tabulated below are records of evaporation observed at nine stations operated and maintained by the Mexican Section of the Commission. Eight stations are along the Rio Grande from Cd. Acuna, Coahuila to Retamal, Tamaulipas and one is located on the Rio Conchos near Ojinaga, Chihuahua. At all stations, except Ojinaga, the sites were kept cleared of all high brush and trees within 150 feet, and of all brush and tall weeds within 100 feet of the fenced enclosures. There are several large trees at the Ojinaga station. The corrugated iron gage well, 42 inches in diameter, and one A-frame of the cableway of the Rio Conchos stream gaging station are in the north end of the enclosure. Inside the enclosures, all vegetation had been eradicated or was kept trimmed to within 3 inches of the ground surface. Except for a water barrel and a thermometer shelter in the northeast and northwest corners of the enclosures, the exposure to wind was uniform and relatively unimpeded. For specific location of these stations refer to data opposite same station name shown in "Location of Rainfall Stations on the Rio Grande Watershed," pages 140 through 144 in this bulletin.

The type of pan used at all these stations was a standard Weather Service-type pan, 4 feet in diameter and 10 inches deep, made of 22-gage galvanized iron, set on a wooden platform with the rim of the pan 16 inches above the ground. The water level was maintained between 2 and 3 inches below the rim of the pan and was measured with a micrometer gage.

Data for other evaporation stations in the Rio Grande Basin in Mexico, which were operated by various Mexican agencies, are available in Water Bulletin No. 42 published by the Mexican Section of the Commission.

Month	Ojinaga, Chihuahua		Cd. Acuna, Coahuila		Jimenez, Coahuila		Hidalgo, Coahuila		Nuevo Laredo, Tamaulipas	
	1972	# Avg. April 1954-1972	1972	# Avg. 1951-1972	1972	# Avg. 1951-1972	1972	# Avg. 1951-1972	1972	Avg. August 1964-1972
Jan.	4.41	3.75	3.27	3.50	3.86	3.50	3.86	4.11	3.98	4.14
Feb.	5.79	5.19	5.20	4.74	5.67	4.45	3.98	5.26	4.61	4.98
Mar.	10.39	8.66	9.57	7.97	8.74	6.92	7.13	8.09	7.83	8.10
Apr.	13.03	11.22	10.71	9.00	10.59	7.77	8.03	10.33	11.57	10.36
May	12.40	13.49	8.31	10.10	8.39	8.84	8.19	12.28	8.62	10.85
June	11.85	13.76	11.42	11.82	10.55	10.76	7.48	14.00	9.92	12.60
July	13.39	13.44	12.24	13.64	11.69	12.31	10.39	15.67	12.01	14.26
Aug.	9.92	11.45	9.33	12.19	9.92	10.92	12.48	14.23	12.48	12.93
Sept.	9.06	9.28	7.40	8.87	8.86	7.77	8.62	10.14	10.08	10.00
Oct.	7.91	7.32	5.87	6.20	6.42	5.26	6.69	7.54	7.40	7.36
Nov.	4.92	4.51	4.25	4.02	4.84	3.51	4.17	4.91	4.06	5.00
Dec.	4.17	3.35	3.50	3.16	4.13	2.91	2.52	3.83	3.62	3.90
Total	107.24	105.42	91.07	95.21	93.66	84.92	83.54	110.39	96.18	104.48

Month	Rancho San Juan de la Palma, Tamaulipas		Nueva Cd. Guerrero, Tamaulipas		Cd. Mier, Tamaulipas		Retamal, Tamaulipas	
	1972	#Avg. April 1955-1972	1972	#Avg. June 1954-1972	1972	#Avg. Oct. 1955-1972	1972	#Average 1951-1972
Jan.	3.66	3.85	3.70	3.60	4.41	3.76	3.82	3.99
Feb.	4.49	4.94	4.33	4.44	5.04	4.83	3.94	4.65
Mar.	6.73	7.67	6.73	7.33	6.85	7.79	5.98	6.47
Apr.	9.88	9.80	10.08	9.25	11.26	9.74	7.83	8.06
May	7.76	11.60	7.95	10.72	9.53	11.19	5.87	8.59
June	8.07	12.19	9.49	11.67	10.12	12.47	6.77	9.04
July	10.51	13.93	10.12	13.73	12.56	14.88	7.01	9.92
Aug.	13.51	13.40	12.05	12.62	15.04	13.62	7.36	9.65
Sept.	11.65	10.13	9.41	9.18	11.14	10.04	7.83	7.32
Oct.	5.35	7.27	6.14	6.79	7.64	7.63	5.55	5.97
Nov.	3.15	4.96	3.35	4.80	3.78	5.02	2.95	4.33
Dec.	7.01	3.87	2.87	3.52	3.26	3.80	3.97	3.71
Total	91.57	103.61	86.22	97.65	100.63	104.77	68.88	81.70

Some months missing

TEMPERATURE, HUMIDITY AND WIND

The maximum and minimum temperatures shown for the stations in Mexico are from daily maximum and minimum thermometer observations. The mean monthly temperatures are averages of these daily maximum and minimum temperatures.

The mean monthly temperatures and relative humidities shown for stations in the United States were integrated from continuous records of hygrothermographs, housed in louvered shelters, with the sensing elements of the instruments 16 inches above the ground and 9 feet southwest of either a 2 or 4-foot diameter evaporation pan. The maximum and minimum temperatures shown below are the extreme temperatures for the month as recorded on the charts except for Falcon Dam and Amistad Dam where the readings are based on daily maximum and minimum thermometer observations.

Monthly mean wind velocities are based on the total miles of wind movement indicated by a standard 3-cup anemometer installed and operated according to specifications for a Class A National Weather Service evaporation station.

Temperature – Degrees Fahrenheit
In United States

Month	Amistad Dam, Texas				Eagle Pass, Texas				Falcon Dam, Texas			
	Mean 1972	Average March 1963-1972	1972 Max.	1972 Min.	Mean 1972	#Average 1964-1972	1972 Max.	1972 Min.	Mean 1972	Average July 1950-1972	1972 Max.	1972 Min.
Jan.	51.7	50.9	87	22	54.9	52.1	86	24	57.3	56.6	91	31
Feb.	55.4	52.9	89	26	58.0	54.6	90	28	57.3	60.3	89	28
Mar.	65.9	61.8	93	43	68.7	62.7	94	42	62.9	66.9	97	43
Apr.	73.3	72.3	98	50	77.4	73.8	104	52	76.4	75.7	105	49
May	72.5	76.2	93	58	75.4	77.1	98	60	74.4	80.1	93	65
June	80.0	82.3	102	57	81.6	82.9	104	60	79.1	84.3	100	67
July	80.9	85.5	103	68	83.4	86.3	104	66	80.3	86.4	100	70
Aug.	77.9	83.7	104	64	82.4	84.5	98	70	83.1	86.2	103	68
Sept.	77.5	78.5	96	60	80.8	78.6	100	62	81.4	81.6	103	69
Oct.	68.7	69.5	93	48	72.2	69.2	92	52	73.2	73.8	95	52
Nov.	53.8	59.8	85	33	55.0	60.5	86	32	56.7	64.0	95	39
Dec.	48.6	51.8	79	23	49.4	54.4	80	22	53.1	58.0	92	33
Yearly	67.2	68.8	104	22	70.0	69.7	104	22	69.6	72.8	105	28

Temperature – Degrees Fahrenheit
In Mexico

Month	Cd. Juarez, Chihuahua				Ojinaga, Chihuahua				Cd. Acuna, Coahuila			
	Mean 1972	#Average July 1960-1972	1972 Max.	1972 Min.	Mean 1972	#Average April 1954-1972	1972 Max.	1972 Min.	Mean 1972	#Average April 1951-1972	1972 Max.	1972 Min.
Jan.	46.4	45.3	79	18	51.8	49.3	82	14	51.8	49.6	90	14
Feb.	51.8	49.8	84	16	57.2	54.0	90	25	55.4	54.6	97	23
Mar.	64.4	56.8	88	32	68.0	61.0	93	39	69.8	62.7	102	41
Apr.	66.2	64.4	93	36	77.0	71.1	102	41	75.2	72.3	104	41
May	71.6	73.4	97	48	78.8	79.8	104	61	75.2	78.4	95	50
June	80.6	80.8	104	54	78.8	84.7	111	61	82.4	84.8	104	55
July	84.2	83.4	108	64	86.0	85.7	106	68	82.4	87.5	106	68
Aug.	78.8	80.2	99	63	82.4	84.1	106	66	80.6	87.0	104	66
Sept.	75.2	75.0	93	54	80.6	79.6	100	61	80.6	81.7	100	61
Oct.	68.0	64.7	95	39	77.0	70.2	102	50	71.6	71.5	95	45
Nov.	50.0	52.3	77	28	57.2	58.0	97	30	55.4	59.8	90	28
Dec.	46.4	46.8	73	21	51.8	50.5	84	25	48.2	51.4	86	16
Yearly	65.3	64.4	108	16	70.6	69.0	111	14	69.0	70.0	106	14

Month	Chupadero, Coahuila				Jimenez, Coahuila				El Remolino, Coahuila			
	Mean 1972	#Average 1961-1972	1972 Max.	1972 Min.	Mean 1972	#Average March 1951-1972	1972 Max.	1972 Min.	Mean 1972	Average June 1958-1972	1972 Max.	1972 Min.
Jan.	50.0	49.4	81	16	57.2	52.2	88	27	59.0	55.9	95	27
Feb.	53.6	54.2	82	16	59.0	56.4	84	30	60.8	59.9	86	34
Mar.	68.0	62.8	90	39	68.0	62.8	90	39	64.4	66.0	97	34
Apr.	73.4	72.8	95	47	71.6	71.5	100	41	73.4	74.9	102	48
May	73.4	77.0	88	57	73.4	77.3	90	52	77.0	79.1	104	46
June	78.8	82.8	100	59	78.8	83.6	99	54	84.2	84.2	109	59
July	84.2	86.3	111	68	84.2	85.7	102	68	86.0	86.4	113	64
Aug.	84.2	84.6	108	66	84.2	85.5	97	70	86.0	85.8	111	63
Sept.	82.4	80.3	108	64	78.8	80.2	95	46	82.4	81.9	111	50
Oct.	71.6	70.6	93	45	73.4	71.8	91	50	75.2	73.8	111	48
Nov.	53.6	59.8	79	32	57.2	60.8	84	34	69.8	66.3	97	37
Dec.	50.0	52.0	77	32	59.0	51.4	102	25	62.6	59.2	93	28
Yearly	68.6	69.4	111	16	70.4	70.2	102	25	73.4	72.8	113	27

Some months missing

TEMPERATURE, HUMIDITY AND WIND

Temperature - Degrees Fahrenheit
In Mexico

Month	Piedras Negras, Coahuila				Guerrero, Coahuila				Rancho Mercedes, Coahuila			
	Mean 1972	#Average April 1951-1972	1972 Max.	1972 Min.	Mean 1972	#Average June 1958-1972	1972 Max.	1972 Min.	Mean 1972	#Average June 1959-1972	1972 Max.	1972 Min.
Jan.	55.4	51.2	88	19	59.0	50.5	88	23	59.0	56.3	82	27
Feb.	59.0	55.6	90	25	59.0	53.9	95	28	57.2	58.6	84	32
Mar.	69.8	62.2	93	41	71.6	63.4	100	41	68.0	64.2	88	50
Apr.	77.0	71.8	102	48	78.8	72.6	106	50	75.2	72.2	95	55
May	77.0	77.3	93	57	84.2	78.3	104	52	75.2	76.4	91	59
June	84.2	83.9	106	59	84.2	82.7	104	68	82.4	82.8	102	68
July	84.2	86.6	106	70	86.0	85.3	102	75	82.4	85.2	99	66
Aug.	82.4	85.7	100	68	84.2	85.3	100	72	86.0	85.4	100	72
Sept.	82.4	80.1	100	63	82.4	80.5	104	59	86.0	81.6	99	63
Oct.	75.2	70.4	95	48	75.2	69.6	93	57	73.4	74.1	91	52
Nov.	57.2	58.8	86	32	66.2	60.7	88	41	62.6	65.0	82	32
Dec.	51.8	52.5	81	20	59.0	52.6	93	36	48.2	58.8	75	32
Yearly	71.3	69.7	106	19	74.2	69.6	106	23	71.3	71.7	102	27

Month	Nuevo Laredo, Tamps., C.I.L.A.				Nuevo Laredo, Tamps., M.S. of M.				Rancho San Juan de la Palma, Tamps.			
	Mean 1972	Average August 1964-1972	1972 Max.	1972 Min.	Mean 1972	Average 1945-1972	1972 Max.	1972 Min.	Mean 1972	#Average April 1955-1972	1972 Max.	1972 Min.
Jan.	57.2	56.5	93	25	57.2	56.0	100	28	60.8	56.0	95	32
Feb.	60.8	58.6	91	32	53.6	60.2	84	30	60.8	59.8	84	36
Mar.	71.6	67.3	100	45	69.8	67.2	93	46	69.8	66.0	95	48
Apr.	78.8	77.4	104	50	78.8	75.5	97	52	78.8	75.5	102	57
May	77.0	80.4	95	59	75.2	80.5	88	63	77.0	80.3	91	63
June	82.4	84.6	102	64	80.6	84.6	95	66	80.6	85.3	97	68
July	84.2	87.4	104	68	82.4	87.7	97	72	82.4	88.1	97	70
Aug.	86.0	86.6	104	70	84.2	87.5	97	73	84.2	87.5	99	72
Sept.	86.0	83.0	106	64	82.4	81.8	97	64	82.4	82.8	99	55
Oct.	77.0	74.2	99	50	75.2	73.4	93	52	75.2	75.6	90	54
Nov.	59.0	65.6	95	36	59.0	64.2	84	77	59.0	66.1	88	37
Dec.	57.2	59.4	97	28	55.4	57.1	81	27	53.6	58.9	86	34
Yearly	73.1	73.4	106	25	71.2	73.0	100	27	72.0	73.5	102	32

Month	El Treinta, Coahuila				Sabinas Hidalgo, Nuevo Leon				Nueva Cd. Guerrero, Tamaulipas			
	Mean 1972	Average 1961-1972	1972 Max.	1972 Min.	Mean 1972	Average October 1961-1972	1972 Max.	1972 Min.	Mean 1972	Average 1958-1972	1972 Max.	1972 Min.
Jan.	50.0	50.5	90	21	62.6	57.2	90	28	60.8	55.0	90	43
Feb.	59.0	55.2	97	21	60.8	60.5	90	27	60.8	58.7	90	32
Mar.	68.0	63.6	97	39	71.6	66.2	99	50	71.6	65.8	93	46
Apr.	77.0	74.8	104	39	77.0	76.7	106	45	80.6	76.4	104	52
May	73.4	77.6	97	54	75.2	79.8	95	55	78.8	80.5	93	64
June	78.8	81.5	104	55	80.6	84.2	100	63	82.4	84.7	102	68
July	78.8	83.8	104	63	82.4	85.7	104	66	82.4	86.6	100	66
Aug.	78.8	83.2	100	59	84.2	85.3	104	66	86.0	86.4	102	68
Sept.	78.8	78.4	97	59	80.6	80.9	106	64	84.2	82.2	100	70
Oct.	71.6	70.0	97	50	77.0	74.4	100	54	77.0	74.4	95	52
Nov.	55.4	60.0	68	32	60.8	65.2	90	39	60.8	65.0	95	39
Dec.	48.2	53.0	81	23	57.2	59.4	100	27	57.2	57.9	86	30
Yearly	68.2	69.3	104	21	72.5	73.0	106	27	73.6	72.8	104	30

Month	Cd. Mier, Tamaulipas				Retamal, Tamaulipas			
	Mean 1972	#Average October 1955-1972	1972 Max.	1972 Min.	Mean 1972	#Average 1951-1972	1972 Max.	1972 Min.
Jan.	62.6	55.3	91	28	64.4	60.6	95	32
Feb.	60.8	59.0	90	28	62.6	63.1	88	34
Mar.	71.6	66.3	100	43	69.8	69.2	99	37
Apr.	80.6	75.9	104	54	77.0	76.9	97	43
May	78.8	80.0	95	61	78.8	80.2	99	63
June	84.2	84.5	102	68	80.6	84.0	95	68
July	86.0	86.3	104	70	82.4	85.8	100	70
Aug.	87.8	86.2	104	73	82.4	86.4	99	68
Sept.	86.0	82.1	104	66	84.2	83.3	102	68
Oct.	77.0	74.3	95	54	77.0	77.0	97	52
Nov.	62.6	64.5	93	39	60.8	68.1	97	37
Dec.	57.2	58.5	88	32	57.2	62.2	90	32
Yearly	74.6	72.7	104	28	73.1	74.7	102	32

Some months missing

TEMPERATURE, HUMIDITY AND WIND

Mean Wind Speed – Miles Per Hour
In United States

Month	Martin King Ranch, Texas		Amistad Dam, Texas		Eagle Pass, Texas		Falcon Dam, Texas	
	1972	Average 1957-1972	1972	#Average March 1963-1972	1972	#Average December 1963-1972	1972	#Average July 1950-1972
Jan.	2.6	3.9	2.6	3.3	1.8	2.4	3.3	3.8
Feb.	3.9	4.9	3.2	4.0	2.2	3.1	3.6	4.5
Mar.	4.8	6.4	4.0	5.0	2.5	3.7	3.5	5.1
Apr.	6.4	6.5	4.9	4.8	3.1	3.6	5.0	5.7
May	6.0	6.9	4.5	5.0	2.7	3.6	3.1	5.8
June	6.0	7.4	4.2	5.4	2.2	3.7	2.6	6.0
July	6.7	6.9	4.9	5.0	3.7	3.7	3.6	6.4
Aug.	5.4	6.0	3.4	4.3	2.8	3.2	3.9	5.3
Sept.	4.6	5.2	3.3	3.8	2.4	2.8	3.0	4.2
Oct.	4.4	4.7	3.1	3.5	2.0	2.3	2.3	3.6
Nov.	3.8	4.1	3.4	3.2	2.2	2.1	3.3	3.9
Dec.	3.3	3.7	3.2	3.2	2.1	2.1	3.7	3.6
Yearly	4.8	5.6	3.7	4.2	2.5	3.0	3.4	4.8

Mean Relative Humidity-Percent
In United States

Month	Amistad Dam, Texas		Eagle Pass, Texas		Falcon Dam, Texas	
	1972	Average March 1963-1972	1972	#Average 1964-1972	1972	Average July 1950-1972
Jan.	63.3	59.9	55.0	62.1	67.4	66.7
Feb.	62.2	59.4	52.8	60.2	65.4	64.5
Mar.	58.1	53.4	49.5	55.5	63.5	61.9
Apr.	60.4	58.2	48.8	59.2	57.2	62.1
May	72.9	64.3	64.1	66.6	69.0	65.2
June	66.6	62.3	60.5	63.7	67.6	64.4
July	64.2	56.9	55.0	58.7	62.6	60.3
Aug.	73.0	60.5	59.8	62.7	55.1	61.6
Sept.	71.4	66.8	67.7	70.8	60.0	66.4
Oct.	72.0	66.2	70.2	69.6	63.2	67.3
Nov.	63.3	62.7	67.8	67.6	63.4	67.1
Dec.	61.1	63.3	71.2	66.6	63.3	65.6
Yearly	65.7	61.2	60.2	63.6	63.1	64.4

In Mexico

Month	Nueva Cd. Guerrero, Tamaulipas												
	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	Average August 1961-1972
Jan.		74	78	75	72	91	73	87	79	87	74	72	78
Feb.		77	77	77	78	91	72	85	77	79	67	74	78
Mar.		72	74	74	70	76	76	81	66	68	72	76	73
Apr.		79	78	76	76	81	78	82	61	62	70	73	74
May		78	83	84	84	87	75	84	76	74	77	79	80
June		81	80	81	76	83	71	80	76	76	77	78	78
July		75	77	76	74	73	70	84	74	75	71	73	75
Aug.	76	75	75	73	78	74	78	75	71	76	73	71	75
Sept.	84	80	81	80	79	78	87	82	83	84	82	76	81
Oct.	84	81	82	80	81	73	85	74	81	74	79	78	79
Nov.	86	80	84	79	86	73	89	75	73	71	72	80	79
Dec.	84	79	88	80	91	65	84	73	85	76	75	80	80
Yearly		78	80	78	79	79	78	80	75	75	74	76	78

Some months missing

DRAINAGE BASIN AND IRRIGATED AREAS
Along the Rio Grande and Tributaries – 1972

The total area within the outer rim of the Rio Grande basin is about 335,500 square miles but it contains large areas, especially along its southwestern boundary, that contribute no surface run-off to the Rio Grande. Such noncontributing areas constitute about 47 percent of the total area, leaving 176,333 square miles of productive watershed which is the only one included in the list below.

The irrigated areas shown below are listed in accordance with the location of their diversion points and are all within the Rio Grande basin, except in the Lower Rio Grande Valley where large portions of irrigated lands in both countries lie outside the basin boundary line.

Only areas irrigated in 1972 are shown except that, in the United States below Falcon Dam, the figures shown represent acreages which were subject to irrigation in 1972 but for which data on the portion actually irrigated is not known. On the Mexican side part of the data may have been gathered previous to 1972.

DESIGNATION OF AREAS AND GAGING STATIONS	Drainage Basin Square Miles			Irrigated Areas - Acres		
	United States	Mexico	Total	United States	Mexico	Total
Above Elephant Butte Dam	25,923	0	25,923			
Elephant Butte Dam to Caballo Dam	1,295	0	1,295	0	0	0
Above Caballo Dam	27,218	0	27,218	0	0	0
Caballo Dam to El Paso Station	2,049	0	2,049	88,468	0	88,468
Above El Paso Gaging Station	29,267	0	29,267	88,468	0	88,468
El Paso Station to American Dam	4	0	4	10,894	0	10,894
Above American Dam	29,271	0	29,271	99,362	0	99,362
American Dam to Island Station	187	285	472	26,670	3,672	30,342
Above Island Gaging Station	29,458	285	29,743	126,032	3,672	129,704
Island Station to County Line Station	485	259	744	0	0	0
American Dam to County Line Station - Total	672	544	1,216	26,670	3,672	30,342
Above County Line Gaging Station	29,943	544	30,487	126,032	3,672	129,704
County Line Station to Fort Quitman Station	663	794	1,457	6,933	0	6,933
Above Fort Quitman Gaging Station	30,606	1,338	31,944	132,965	3,672	136,637
Fort Quitman Station to Above Presidio Station	1,621	1,401	3,022	1,088	227	1,315
Above Presidio Station above Rio Conchos	32,227	2,739	34,966	134,053	3,899	137,952
Rio Conchos above Boquilla Dam	0	8,131	8,131	0	a) 5,831	5,831
Rio Conchos above Luis L. Leon Dam	0	22,992	22,992	0		
Rio Conchos - Total	0	26,404	26,404	0	377,802	377,802
Alamito Creek above Gaging Station	1,504	0	1,504	40	0	40
Presidio Station above Rio Conchos to Presidio Station below Rio Conchos - excluding above tributaries	367	98	465	3,642	168	3,810
Presidio Station above Rio Conchos to Presidio Station below Rio Conchos - Total	1,871	26,502	28,373	3,682	377,970	381,652
Above Presidio Station below Rio Conchos	34,098	29,241	63,339	137,735	381,869	519,604
Terlingua Creek above Gaging Station	1,070	0	1,070	140	0	140
Presidio Station below Rio Conchos to Johnson Ranch Station - excluding Terlingua Creek	1,093	2,258	3,351	1,064	1,473	2,537
Presidio Station below Rio Conchos to Johnson Ranch Station - Total	2,163	2,258	4,421	1,204	1,473	2,677
Above Johnson Ranch Gaging Station	36,261	31,499	67,760	138,939	383,342	522,281
Johnson Ranch Station to Foster Ranch Station	6,412	6,570	12,932	b) 3,042	0	3,042
Above Foster Ranch Gaging Station	42,673	38,069	80,742	141,981	383,342	525,323
Foster Ranch Station to Langtry Station	182	505	687	0	0	0
Above Langtry Gaging Station (Discontinued)	42,855	38,574	81,429	141,981	383,342	525,323
Pecos River above Girvin	29,562	0	29,562		0	
Pecos River, Girvin to Station near Langtry	5,617	0	5,617	0	0	0
Pecos River above Station at Mouth (Discontinued)	35,308	0	35,308	0	0	0
Devils River above Pafford Crossing Station	3,961	0	3,961	0	0	0
Devils River above Station near Mouth (Discontinued)	4,305	0	4,305	0	0	0
Langtry Station to Amistad Dam - excluding above tributaries	217	1,875	2,092	0	0	0
Langtry Station to Amistad Dam - Total	39,830	1,875	41,705	0	0	0

a) Includes area above Madero Reservoir b) Includes 2,827 acres irrigated by spreader dams

DRAINAGE BASIN AND IRRIGATED AREAS

Along the Rio Grande and Tributaries – 1972

DESIGNATION OF AREAS AND GAGING STATIONS	Drainage Basin Square Miles			Irrigated Areas - Acres		
	United States	Mexico	Total	United States	Mexico	Total
Above Amistad Dam	82,685	40,449	123,134	141,981	383,342	525,323
Amistad Dam to Below Amistad Dam Gaging Station	5	4	9	0	0	0
Above the Below Amistad Dam Gaging Station	82,690	40,453	123,143	141,981	383,342	525,323
Below Amistad Dam Station to Del Rio Station	60	100	160	635	0	635
Above Del Rio Gaging Station	82,750	40,553	123,303	142,616	383,342	525,958
Arroyo Las Vacas above Gaging Station	0	350	350	0	709	709
San Felipe Creek above Gaging Station	46	0	46	2,300	0	2,300
Pinto Creek above Gaging Station	249	0	249	400	0	400
Rio San Diego above Gaging Station	0	853	853	0	12,583	12,583
Rio San Diego - Total	0	859	859	0	13,700	13,700
Del Rio Station to Below Maverick Dam Station near Quemado - excluding above tributaries	669	110	779	40,000	2,721	42,721
Del Rio Station to Below Maverick Dam Station near Quemado - Total	964	1,319	2,283	42,700	17,130	59,830
Above the Below Maverick Dam Gaging Station near Quemado	83,714	41,872	125,586	185,316	400,472	585,788
Rio San Rodrigo near Mouth above Gaging Station	0	1,049	1,049	0	6,249	6,249
Rio San Rodrigo - Total	0	1,049	1,049	0	6,249	6,249
Below Maverick Dam Station near Quemado to Maverick Power Plant - excluding Rio San Rodrigo	287	114	401	1,350	0	1,350
Below Maverick Dam Station near Quemado to Maverick Power Plant - Total	287	1,163	1,450	1,350	6,249	7,599
Above Maverick Power Plant	84,001	43,035	127,036	186,666	406,721	593,387
Maverick Power Plant to Eagle Pass Station	244	32	276	65	227	292
Above Eagle Pass Gaging Station	84,245	43,067	127,312	186,731	406,948	593,679
Rio Escondido above Gaging Station	0	1,459	1,459	0	10,576	10,576
Rio Escondido - Total	0	1,471	1,471	0	10,576	10,576
Eagle Pass Station to San Antonio Crossing Station - excluding Rio Escondido	237	206	443	250	54	304
Eagle Pass Station to San Antonio Crossing Station - Total	237	1,677	1,914	250	10,630	10,880
Above San Antonio Crossing Gaging Station	84,482	44,744	129,226	186,981	417,578	604,559
San Antonio Crossing Station to Palafox Station	629	1,683	2,312	920	633	1,553
Above Palafox Gaging Station	85,111	46,427	131,538	187,901	418,211	606,112
Palafox Station to Laredo Station	607	433	1,040	3,238	2,427	5,665
Above Laredo Gaging Station	85,718	46,860	132,578	191,139	420,638	611,777
Rio Salado above Venustiano Carranza Dam	0	15,831	15,831	0	61,281	61,281
Rio Salado above Las Tortillas Gaging Station	0	23,155	23,155	0	125,269	125,269
Rio Salado above River Road Crossing	0	23,323	23,323	0	125,269	125,269
Laredo Station to Falcon Dam - excluding Rio Salado	2,042	1,327	3,369	c) 6,425	756	7,181
Laredo Station to Falcon Dam - Total	2,042	24,650	26,692	6,425	126,025	132,450
Amistad Dam to Falcon Dam - excluding above tributaries	4,780	4,009	8,789	52,883	6,818	59,701
Above Falcon Dam	87,760	71,510	159,270	197,564	546,663	744,227
Rio Alamo above Gaging Station	0	1,675	1,675	0	7,661	7,661
Rio San Juan above Marte Gomez Dam	0	12,745	12,745	0	102,548	102,548
Rio San Juan - Marte Gomez Dam to Camargo Gaging Station	0	195	195	0	164,000	164,000
Rio San Juan - Total	0	12,949	12,949	0	266,548	266,548
Falcon Dam to Ft. Ringgold Station - excluding above tributaries	222	246	468	8,160	4,045	12,205
Falcon Dam to Ft. Ringgold Station - Total	222	14,870	15,092	8,160	278,254	286,414
Above Fort Ringgold Gaging Station	87,982	86,380	174,362	205,724	824,917	1,030,641
Fort Ringgold Station to Anzalduas Dam	952	798	1,750	178,760	495,409	674,169
Above Anzalduas Dam	88,934	87,178	176,112	384,484	1,320,326	1,704,810
Anzalduas Dam to Progreso Station	13	163	176	137,920	5,300	143,220
Above Progreso Gaging Station	88,947	87,341	176,288	522,404	1,325,626	1,848,030
Progreso Station to San Benito Station	7	9	16	304,400	2,140	306,540
Above San Benito Gaging Station	88,954	87,350	176,304	826,804	1,327,766	2,154,570
San Benito Station to Brownsville Station	14	15	29	112,530	1,550	114,080
Falcon Dam to Brownsville Station - excluding Rio Alamo and Rio San Juan	1,208	1,231	2,439	741,770	508,444	1,250,214
Above Brownsville Gaging Station	88,968	87,365	176,333	939,334	1,329,316	2,268,650

c) Includes 110 acres irrigated from small reservoirs

DRAINAGE BASIN AND IRRIGATED AREAS
Along the Rio Grande and Tributaries – 1972

DESIGNATION OF AREAS AND GAGING STATIONS	Drainage Basin Square Miles			Irrigated Areas - Acres		
	United States	Mexico	Total	United States	Mexico	Total
Brownsville Station to Gulf of Mexico				6,170	279	6,449
Falcon Dam to Gulf of Mexico - excluding Rio Alamo and Rio San Juan				747,940	508,723	1,256,663
Amistad Dam to Gulf of Mexico - excluding above tributaries				800,823	515,541	1,316,364
Above Gulf of Mexico				945,504	1,329,595	2,275,099

SUPPLEMENTARY DATA–INTERNATIONAL FALCON RESERVOIR

Deduced Inflows

Considering that a knowledge of the mean daily inflows reaching the International Falcon Reservoir would serve a useful purpose, such data have been deduced for 1972 showing the flows as close as they can be approximated. These data are based on the daily operation of the International Falcon Reservoir, taking into account: a) record of gage-heights at the dam; b) releases as measured at both hydroelectric plants and outlet works; c) elevation-area-capacity tables based on 1971-1972 surveys; and d) rate of evaporation measured at the dam and at Nueva Cd. Guerrero applied to an area one foot higher than the average area of two consecutive days.

Flow contributions from different sources, irrigation diversion between Laredo and Falcon, river channel losses, reservoir evaporation, accuracy of gage-height records, displacement due to wind action on the reservoir, and bank storage and return incident to changes in reservoir level, all tend to cause variations in the deduced determinations and the inflows shown below should not necessarily be in agreement with the combined flow of the Rio Grande at Laredo and the Rio Salado at Las Tortillas.

In spite of the deficiencies noted above and others that may occur, the data shown below represent a reasonable approximation of the flows entering the International Falcon Reservoir.

Mean Daily Discharge in Second-Feet 1972 — Annual and Period Summary

Day	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1,830	307	1,320	501	2,400	590	505	347	1,920	4,480	607	1,720
2	968	2,540	1,210	195	6,670	289	498	869	2,150	6,140	735	2,140
3	4,630	1,250	1,480	1,680	8,050	1,240	840	399	1,650	6,040	1,500	1,830
4	2,380	1,200	1,900	1,300	2,700	1,250	2,350	427	1,880	5,760	795	1,670
5	893	1,750	1,440	1,370	2,440	1,180	2,140	738	1,300	5,930	1,210	1,200
6	441	1,920	1,060	2,450	1,350	1,150	480	773	1,150	5,540	975	161
7	1,350	1,810	2,740	1,110	3,380	1,340	526	1,630	1,860	4,240	675	1,020
8	2,640	2,800	1,430	865	242	9,180	597	1,690	1,850	4,700	480	632
9	2,650	2,210	364	780	1,320	3,100	611	1,050	4,410	6,000	1,060	1,080
10	2,810	3,780	639	403	13,600	3,020	692	279	3,100	6,430	883	1,330
11	2,850	1,010	1,450	862	14,400	3,740	197	1,110	1,100	5,370	1,170	49.8
12	2,680	1,430	1,010	1,570	7,420	5,760	367	2,380	961	6,110	763	692
13	3,430	1,420	3,090	604	3,510	3,070	147	5,330	2,340	5,090	770	911
14	1,540	2,500	784	2,080	5,400	1,850	381	12,700	1,330	5,160	194	1,120
15	876	1,880	1,750	2,840	3,710	2,000	317	10,300	1,180	6,360	491	378
16	185	1,210	1,200	381	4,770	6,360	1,060	5,440	788	5,330	770	385
17	1,240	3,810	1,070	1,620	4,590	1,170	240	2,480	480	3,990	890	399
18	1,920	618	657	957	784	1,590	335	3,300	2,810	5,690	505	332
19	2,070	1,320	650	501	1,270	2,240	1,590	3,310	1,370	4,030	183	586
20	671	1,320	2,670	1,080	1,420	1,840	2,130	1,820	2,010	2,070	315	1,230
21	1,330	2,710	1,510	1,470	2,130	1,910	858	1,800	3,430	487	289	618
22	3,080	1,950	876	650	4,450	1,050	3,510	1,930	3,030	1,510	1,700	364
23	1,360	2,930	1,440	1,430	1,960	1,170	2,730	1,110	13,100	1,370	1,710	1,390
24	1,460	1,910	1,150	540	1,970	1,510	1,470	992	6,820	858	1,480	893
25	1,410	2,240	939	929	1,850	1,110	798	671	2,910	406	1,210	1,210
26	932	1,730	872	855	572	288	844	2,620	15,300	137	823	304
27	3,340	1,290	2,660	812	299	291	932	2,230	17,500	562	1,300	313
28	2,240	2,210	2,980	14,000	228	246	689	2,560	7,980	795	3,150	51.9
29	1,990	1,960	848	622	1,570	403	519	1,380	6,820	805	3,370	876
30	1,440		735	1,210	961	463	1,660	1,390	4,870	1,160	579	1,930
31	445		696		1,420		155	1,970		826		2,010
Sum	57,581	55,065	42,620	45,667	106,836	60,400	30,168	75,025	117,399	113,376	30,582	28,825.7

Month	Current Year 1972 Extreme Gage Feet High	Extreme Gage Feet Low	∅ Extreme Second-Feet High Day	High	Low Day	Low	Average Second-Feet	Total Acre-Feet	Period 1968-1972 Acre-Feet Average	Maximum	Minimum
Jan.			3	4,630	16	185	1,860	114,198	92,988	124,065	50,635
Feb.			17	3,810	1	307	1,900	109,199	175,812	453,053	65,950
Mar.			13	3,090	9	364	1,370	84,517	89,919	149,942	53,064
Apr.			28	14,000	2	195	1,520	90,592	94,654	138,122	49,911
May			11	14,400	28	228	3,450	211,920	151,413	211,920	101,854
June			8	9,180	28	246	2,010	119,744	258,696	770,709	46,609
July			22	3,510	13	147	975	59,847	244,863	834,367	33,481
Aug.			14	12,700	10	279	2,420	148,904	207,825	581,600	64,413
Sept.			27	17,500	17	480	3,920	232,866	449,116	1,442,682	137,408
Oct.			10	6,430	26	137	3,670	224,837	416,450	1,365,884	122,189
Nov.			29	3,370	19	183	1,020	60,637	122,766	316,191	45,260
Dec.			2	2,140	28	49.8	929	57,192	104,245	188,564	55,945
Yearly				17,500		49.8	2,090	1,514,453	2,408,747	6,234,950	1,280,067

∅ Mean daily

CORRECTIONS TO PREVIOUS WATER BULLETINS

Water Bulletin and Page Numbers	Heading	Reference	Published As	Correction
37-155 38-136	Location of Rainfall Stations on the Rio Grande Watershed	Dead Mans Canyon near Comstock - Latitude	29° 45'	29° 47'
35-146 36-148 37-167 38-147 39-144 40-144 41-171	Temperature, Humidity, and Wind	Textual heading, second paragraph	Maximum and minimum temperatures shown for Amistad Dam are from hygrothermographs	
40-32	Published Discharges McKee Spring near Del Rio	DESCRIPTION, first line, weir capacity	3.5	21.5
40-147	Drainage Basin and Irrigated Areas	Pecos River above Girvin, Irrigated Areas - columns headed United States and Total	United States 0 Total 0	Delete 0 in both columns