

STATISTICAL SUMMARIES OF STREAMFLOW DATA IN NEW MEXICO THROUGH 1985

By Scott D. Waltemeyer

U.S. GEOLOGICAL SURVEY

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CONVERSION FACTORS

The inch-pound units in this report can be converted to the metric system of units as follows:

<u>Multiply inch-pound unit</u>	<u>By</u>	<u>To obtain metric unit</u>
acre	0.004047	square kilometer (km ²)
acre-foot per year (acre-ft/yr)	0.001233	cubic hectometer per year (hm ³ /yr)
cubic foot per second (ft ³ /s)	0.02832	cubic meter per second (m ³ /s)
foot (ft)	0.3048	meter (m)
inch per year (in/yr)	25.40	millimeter per year (mm/yr)
mile (mi)	1.609	kilometer (km)
square mile (mi ²)	2.590	square kilometer (km ²)

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Sea Level Datum of 1929."

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By Scott D. Waltemeyer

ABSTRACT

Statistical summaries of streamflow data collected at selected gaging stations are presented in this report to aid in appraising the hydrology of New Mexico. Streamflow records are presented for 169 gaging stations for their periods of record. Records for 17 stations are separated into periods before, after, and between changes in upstream regulation. For each gaging station, a brief description is given for station location, drainage area, period of record, revisions of previously published records, type and history of gages, regulation and diversions, average discharge, and extremes of discharge. These data are followed by statistical summaries of mean monthly and mean annual flow statistics, low-flow and high-flow frequency, and flow-duration information.

INTRODUCTION

As a prerequisite to comprehensive planning for the development and management of the State's surface-water resources, the State of New Mexico is actively appraising the hydrology of the State. The purpose of this report is to present statistical summaries of streamflow data collected at 169 selected streamflow-gaging stations in New Mexico to aid in that appraisal. Mean monthly and mean annual discharge, low-flow and high-flow frequency, and flow-duration information were determined for 169 stations. These data will be useful to individuals and agencies concerned with management of surface water in New Mexico. This report was prepared in cooperation with the State of New Mexico and other agencies. Special thanks are extended to two individuals: Gary D. Rogers, U.S. Geological Survey, who wrote the original computer program to merge all statistical data into one table, and Clyde Alexander, U.S. Geological Survey, who modified the program for use on the current Survey computer system.

PREVIOUS STUDIES

Reiland and Haynes (1963) presented duration of daily mean discharge and selected sequences of low-mean and high-mean discharge for 122 gaging stations. Techniques for determining flow-duration data and low- and high-flow frequency data were given. Borland (1970) presented regional relations based upon records of 64 gaging stations. The statewide relations were derived for selected sequences of low- and high-flow frequencies as related to basin and climatic characteristics. Mean monthly and mean annual discharge

relations also were derived. Reiland (1980) presented flow-duration data for 156 gaging stations in a part I series. A part II series was to include the log-Pearson Type III probability distribution of the low- and high-mean discharges for specified numbers of days. The report herein presents that low- and high-flow frequency data for the gaging stations of New Mexico.

STREAMFLOW RECORDS

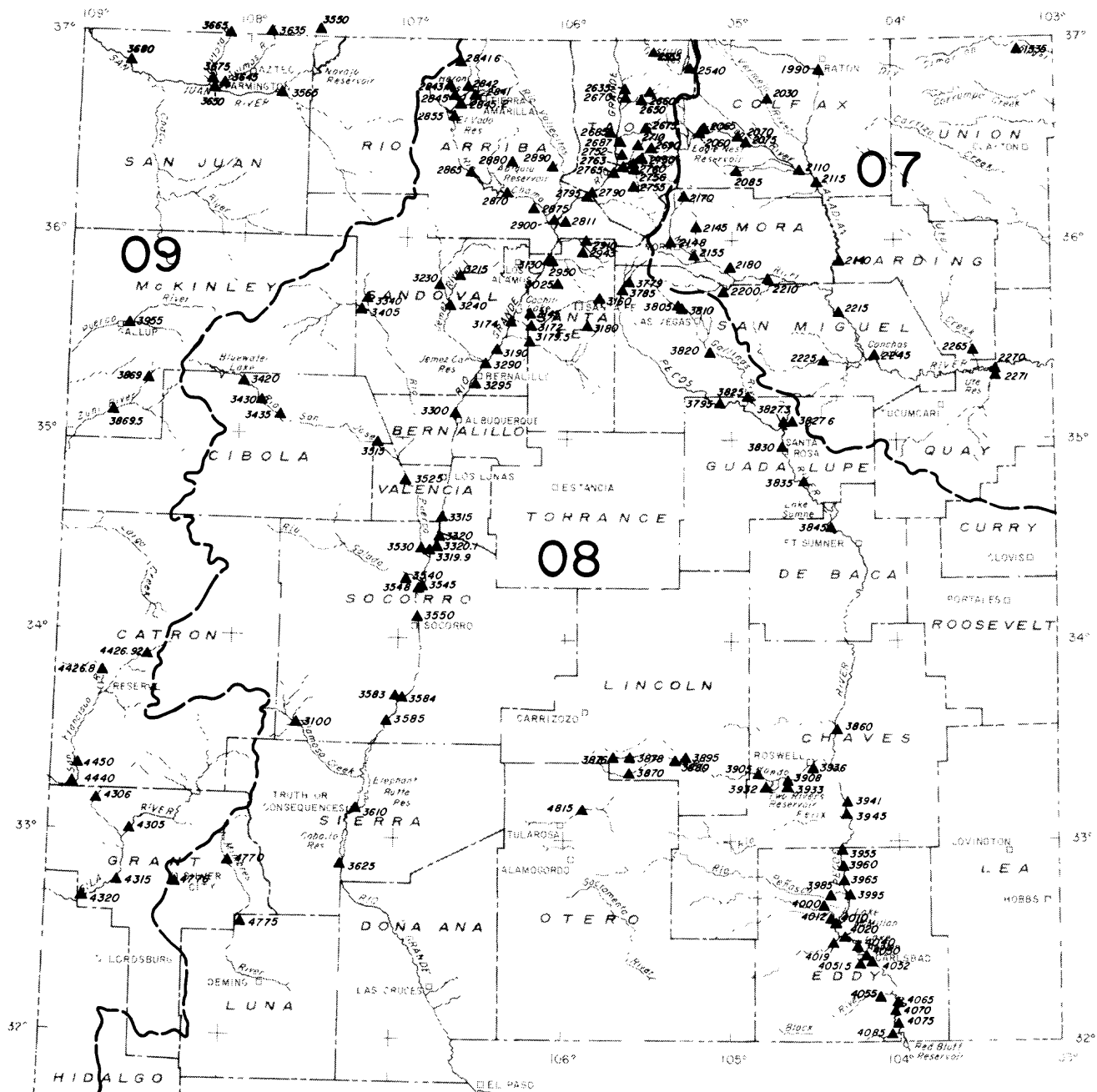
All existing and discontinued streamflow-gaging stations with 10 years or more of record of mean daily discharge were used for this compilation report. Streamflow statistics are presented in this report for the gaging stations shown in figure 1. The station numbering is by the standard downstream order of the U.S. Geological Survey.

Records through September 30, 1985 (or September 30 of the last year of record, if discontinued prior to 1985), were used in computing mean monthly and mean annual discharge, high-flow frequency, and flow-duration information. Low-flow frequency data were computed on the basis of the climatic year, which ends March 31. A station description of the gaging station precedes the statistical summaries for each station. The station description consists of location, drainage area, period of record, type and history of gages, remarks on regulation and diversions, average discharge, and extremes of discharge. The station descriptions are identical to the annual water-data report series such as "Water Resources Data--New Mexico" by Denis and others (1986), except for categories describing revised records, extremes, and remarks for a specific year of record. Detailed definitions and explanations of each category of the station descriptions are given in that report. Some revised records are referenced to "WSP" (Water-Supply Paper), a formal publication series of the Geological Survey.

The natural flow of streams has been altered by regulation and is reflected in the records of 17 stations. The statistical summaries for periods before, after, and between changes of regulation are separated into each respective period.

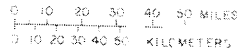
Statistical Summaries

Statistical summaries presented for the stations include mean monthly and mean annual discharge, magnitude and probability of annual low flow, magnitude and probability of annual high flow, and duration of flow. The monthly and annual data were processed using the Daily Values Monthly and Annual Statistics (Program W4422) computer program by Price and Meeks (1977). Low-flow, high-flow, and flow-duration data were processed by the Daily Value Statistics (Program A969) computer program by Meeks (1977). Statistics are missing in some cases because of a lack of monthly data, frequency-curve computation failures, or insufficient length of record. These cases are denoted by a dash (--).



EXPLANATION

- 07 LOWER MISSISSIPPI RIVER BASIN
- 08 WESTERN GULF OF MEXICO BASINS
- 09 COLORADO RIVER BASIN
- RIVER BASIN BOUNDARY
- ▲ 4085 GAGING STATION AND ABBREVIATED NUMBER--
08408500 is national station number



U.S. Geological Survey Base

Figure 1.--Location of streamflow-gaging stations.

Mean Monthly and Mean Annual Discharge

The tabulations for the mean monthly and mean annual discharges for the period of record include the minimum, maximum, mean, standard deviation, coefficient of variation (ratio of the standard deviation to the mean), and the percentage of mean annual runoff for each mean monthly discharge. Mean, standard deviation, and coefficient of variation are defined in standard textbooks on statistics. The general meaning of the mean is a measure of the central tendency of a group of data, standard deviation is a measure of the variability, and coefficient of variation is a dimension-free comparison of the standard deviation in units of the mean.

Low-Flow Frequency

Low-flow frequency analysis was made by fitting a log-Pearson Type III distribution to each annual series of flows. The log-Pearson Type III distribution is defined in standard textbooks on hydrology. The data necessary to plot standard low-flow frequency curves from the log-Pearson Type III frequency distribution are shown in the low-flow tabulations. Graphs may be desired of the low-flow frequency curves. The resulting plot shows the relation between non-exceedance probability as abscissa and average discharge for specified numbers of days as ordinate. An example low-flow frequency curve is shown in figure 2. The example in figure 2 shows there is a 20-percent chance that the lowest 1-day average flow in a given year will be less than 5.20 cubic feet per second. The smallest mean discharge for consecutive periods of 1, 3, 7, 14, 30, 60, 90, 120, and 183 days for recurrence intervals of 2, 5, 10, 20, 50, and 100 years is shown in the tabulation. The associated non-exceedance probabilities, expressed as percentages, are 50, 20, 10, 5, 2, and 1 percent, respectively. Recurrence intervals generally were extended to only twice the period of record. Records of more than 40 years were extended to the 100-year recurrence interval (0.01 non-exceedance probability).

High-Flow Frequency

High-flow frequency analysis also was made by fitting a log-Pearson Type III distribution to each annual series of flows. The data necessary to plot standard high-flow frequency curves from the log-Pearson Type III frequency distribution are shown in the high-flow tabulations. The resulting plot is a graph showing the relation between exceedance probability as abscissa and high-flow data as ordinate. An example high-flow frequency curve is shown in figure 3. The example shows that a flow of 240 cubic feet per second for 1 day has a 20-percent chance of being equaled or exceeded. The largest mean discharge for consecutive periods of 1, 3, 7, 15, 30, 60, and 90 days for recurrence intervals of 2, 5, 10, 25, 50, and 100 years is shown in the tabulation. The associated exceedance probabilities, expressed as percentages, are 50, 20, 10, 4, 2, and 1 percent, respectively. The criteria for extending records of high-flow data are the same as those for low-flow data.

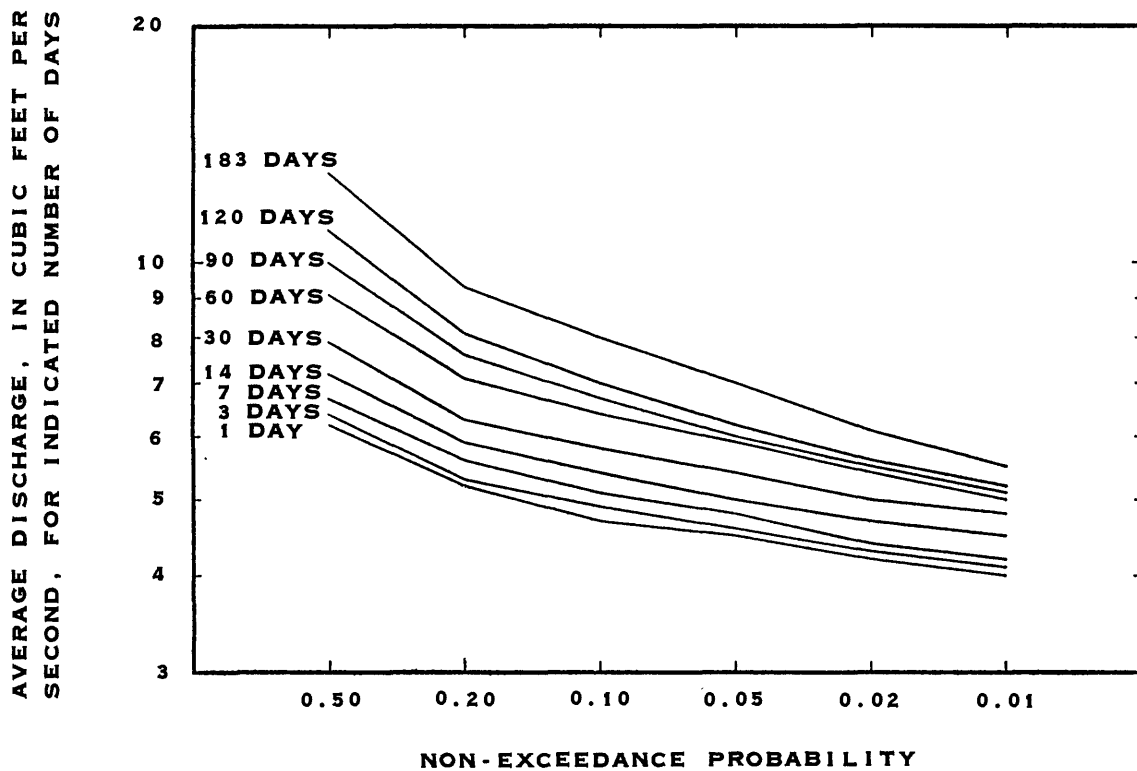


Figure 2.--Low-flow frequency curves of Arroyo Hondo at Arroyo Hondo, New Mexico.

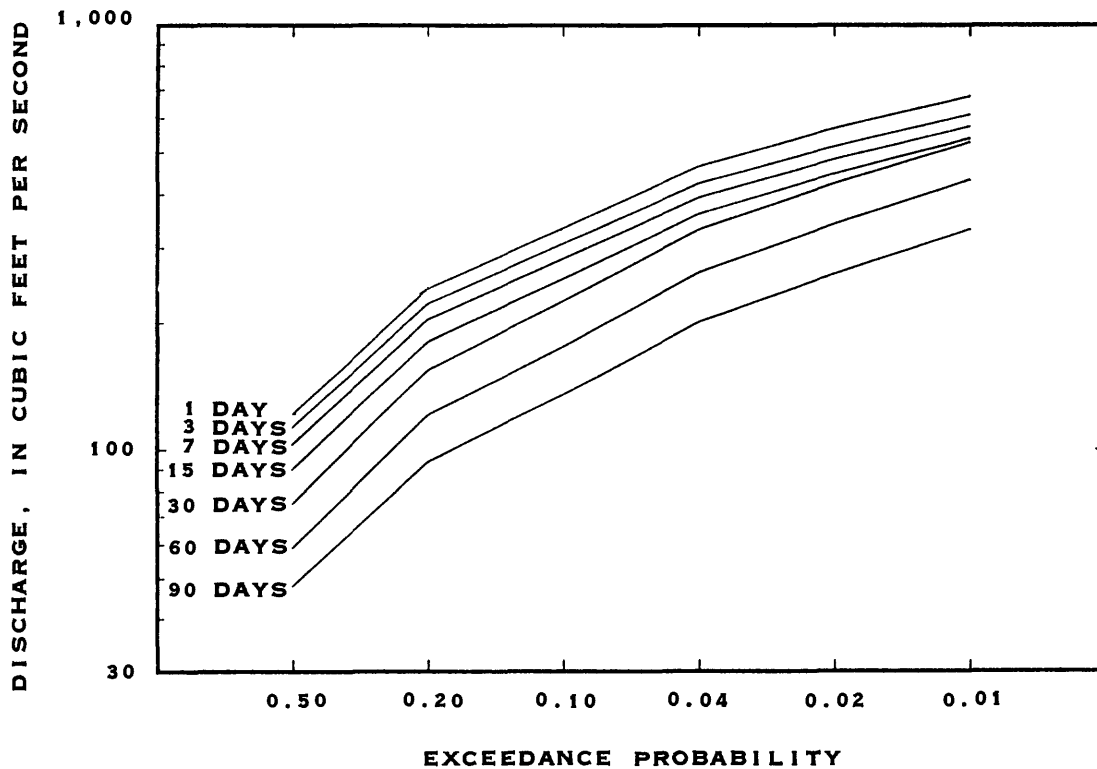


Figure 3.--High-flow frequency curves of Arroyo Hondo at Arroyo Hondo, New Mexico.

Flow Duration

The flow-duration tabulations list the data necessary to plot a standard flow-duration curve. The flow-duration curve is a cumulative frequency curve, also known as cumulative distribution function, that shows the percentage of time that specified discharges were equaled or exceeded. The discharges, in cubic feet per second, that were equaled or exceeded for a given percentage of time are shown in the tabulations. An example flow-duration curve for Arroyo Hondo is shown in figure 4. The example shows that a daily-average discharge of 54 cubic feet per second has been equaled or exceeded 10 percent of the time.

Effects of Regulation

The natural flow of many streams in New Mexico is altered by regulation by dams or diversions for irrigation. Where these conditions exist, the reported data reflect the pattern of operation of regulation and diversion. The "Remarks" section of the station description indicates known regulations and diversions. Periods of natural flow were segregated from periods of flow affected by regulation by dams or major diversions at 17 stations. If this information is needed for other sites, special requests can be directed to the District Office in Albuquerque, New Mexico. Depending upon the number of sites involved, a cost for computer services may be charged.

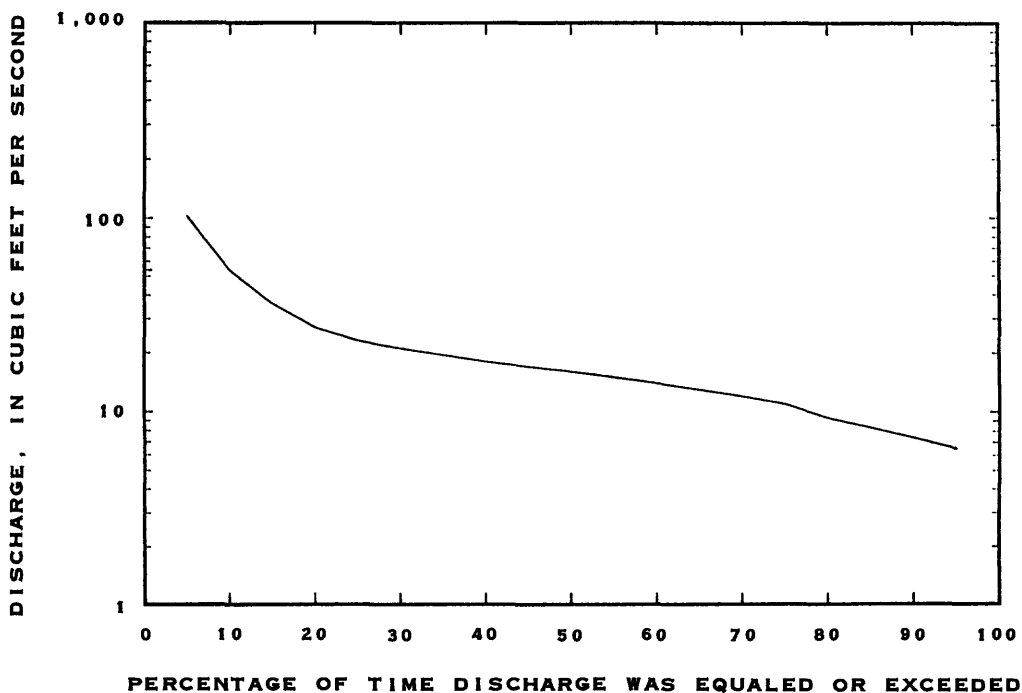


Figure 4.--Duration curve for daily flows of Arroyo Hondo at Arroyo Hondo, New Mexico.

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- Meeks, W.C., 1977, Daily values statistics (Program A969), chapter IV, section G, of WATSTORE User's Guide: U.S. Geological Survey Open-File Report 75-426, v. 1, p. G-1 to G-37.
- Price, W.E., Jr., and Meeks, W.C., 1977, Daily values monthly and annual statistics (Program W4422), chapter IV, section F, of WATSTORE User's Guide: U.S. Geological Survey Open-File Report 75-426, v. 1, p. F-1 to F-46.
- Reiland, L.J., 1980, Flow characteristics of New Mexico streams: New Mexico State Engineer Special Report, 115 p.
- Reiland, L.J., and Haynes, G.L., Jr., 1963, Flow characteristics of New Mexico streams: New Mexico State Engineer Special Report, 342 p.

LIST OF STREAMFLOW-GAGING STATIONS IN DOWNSTREAM ORDER

Station number	Station name	Page
<u>LOWER MISSISSIPPI RIVER BASIN</u>		
Arkansas River basin		
07153500	Dry Cimarron River near Guy, New Mexico.....	13
07199000	Canadian River near Hebron, New Mexico.....	14
07203000	Vermejo River near Dawson, New Mexico.....	15
07206000	Cimarron River below Eagle Nest Dam, New Mexico.....	16
07206500	Cimarron River at Ute Park, New Mexico.....	17
07207000	Cimarron River near Cimarron, New Mexico.....	18
07207500	Ponil Creek near Cimarron, New Mexico.....	19
07208500	Rayado Creek at Sauble Ranch, near Cimarron, New Mexico.....	20
07211000	Cimarron River at Springer, New Mexico.....	21
07211500	Canadian River near Taylor Springs, New Mexico.....	22
07214000	Canadian River near Roy, New Mexico.....	23
07214500	Mora River near Holman, New Mexico.....	24
07214800	Rio La Casa near Cleveland, New Mexico.....	25
07215500	Mora River at La Cueva, New Mexico.....	26
07216500	Mora River near Golondrinas, New Mexico.....	27
07217000	Coyote Creek below Black Lake, New Mexico.....	28
07218000	Coyote Creek near Golondrinas, New Mexico.....	29
07220000	Sapello River at Sapello, New Mexico.....	30
07221000	Mora River near Shoemaker, New Mexico.....	31
07221500	Canadian River near Sanchez, New Mexico.....	32
07222500	Conchas River at Variadero, New Mexico.....	33
07224500	Canadian River below Conchas Dam, New Mexico.....	34
07226500	Ute Creek near Logan, New Mexico.....	35
07227000	Canadian River at Logan, New Mexico.....	36
	Period after completion of Ute Dam.....	37
07227100	Revuelto Creek near Logan, New Mexico.....	38

WESTERN GULF OF MEXICO BASINS

Rio Grande basin		
08254000	Costilla Creek below Costilla Dam, New Mexico.....	39
08255500	Costilla Creek near Costilla, New Mexico.....	40
08263000	Latir Creek near Cerro, New Mexico.....	41
08263500	Rio Grande near Cerro, New Mexico.....	42
08264000	Red River near Red River, New Mexico.....	43
08265000	Red River near Questa, New Mexico.....	44
08266000	Cabresto Creek near Questa, New Mexico.....	45
08267000	Red River at Mouth, near Questa, New Mexico.....	46
08267500	Rio Hondo near Valdez, New Mexico.....	47
08268500	Arroyo Hondo at Arroyo Hondo, New Mexico.....	48
08268700	Rio Grande near Arroyo Hondo, New Mexico.....	49

LIST OF STREAMFLOW-GAGING STATIONS IN DOWNSTREAM ORDER--Continued

Station number	Station name	Page
Rio Grande basin - Continued		
08269000	Rio Pueblo de Taos near Taos, New Mexico.....	50
08271000	Rio Lucero near Arroyo Seco, New Mexico.....	51
08275000	Rio Fernando de Taos near Taos, New Mexico.....	52
08275300	Rio Pueblo de Taos near Ranchito, New Mexico.....	53
08275500	Rio Grande del Rancho near Talpa, New Mexico.....	54
08275600	Rio Chiquito near Talpa, New Mexico.....	55
08276000	Rio Pueblo de Taos at Los Cordovas, New Mexico.....	56
08276300	Rio Pueblo de Taos below Los Cordovas, New Mexico.....	57
08276500	Rio Grande below Taos Junction Bridge, near Taos, New Mexico....	58
08279000	Embudo Creek at Dixon, New Mexico.....	59
08279500	Rio Grande at Embudo, New Mexico.....	60
08281100	Rio Grande above San Juan Pueblo, New Mexico.....	61
08283500	Rio Chama at Park View, New Mexico.....	62
08284100	Rio Chama near La Puente, New Mexico.....	63
08284160	Azotea Tunnel at Outlet, near Chama, New Mexico.....	64
08284200	Willow Creek above Heron Reservoir, near Los Ojos, New Mexico...	65
	Period after completion of Azotea Tunnel.....	66
08284300	Horse Lake Creek above Heron Reservoir, near Los Ojos, New Mexico.....	67
08284500	Willow Creek near Park View, New Mexico.....	68
08284520	Willow Creek below Heron Dam, New Mexico.....	69
08285500	Rio Chama below El Vado Dam, New Mexico.....	70
	Period after completion of Heron Dam.....	71
08286500	Rio Chama above Abiquiu Reservoir, New Mexico.....	72
08287000	Rio Chama below Abiquiu Dam, New Mexico.....	73
08287500	Rio Chama near Abiquiu, New Mexico.....	74
08288000	El Rito Creek near El Rito, New Mexico.....	75
08289000	Rio Ojo Caliente at La Madera, New Mexico.....	76
08290000	Rio Chama near Chamita, New Mexico.....	77
	Period before regulation of Abiquiu Dam.....	78
	Period after completion of Heron Dam.....	79
08291000	Santa Cruz River at Cundiyo, New Mexico.....	80
08294300	Rio Nambe at Nambe Falls, near Nambe, New Mexico.....	81
08295000	Rio Nambe near Nambe, New Mexico.....	82
08302500	Tesuque Creek above diversions, near Santa Fe, New Mexico.....	83
08313000	Rio Grande at Otowi Bridge, near San Ildefonso, New Mexico.....	84
	Period after completion of Heron Dam.....	85
08314500	Rio Grande at Cochiti, New Mexico.....	86
08316000	Santa Fe River near Santa Fe, New Mexico.....	87
08317200	Santa Fe River above Cochiti Lake, New Mexico.....	88
08317400	Rio Grande below Cochiti Dam, New Mexico.....	89
08317950	Galisteo Creek below Galisteo Dam, New Mexico.....	90
08318000	Galisteo Creek at Domingo, New Mexico.....	91

LIST OF STREAMFLOW-GAGING STATIONS IN DOWNSTREAM ORDER—Continued

Station number	Station name	Page
Rio Grande basin - Continued		
08319000	Rio Grande at San Felipe, New Mexico.....	92
	Period before regulation of Cochiti Dam and after completion of Abiquiu Dam.....	93
	Period after completion of Cochiti Dam.....	94
08321500	Jemez River below East Fork, near Jemez Springs, New Mexico.....	95
08323000	Rio Guadalupe at Box Canyon, near Jemez, New Mexico.....	96
08324000	Jemez River near Jemez, New Mexico.....	97
08329000	Jemez River below Jemez Canyon Dam, New Mexico.....	98
	Period after completion of Jemez Canyon Dam.....	99
08329500	Rio Grande near Bernalillo, New Mexico.....	100
08330000	Rio Grande at Albuquerque, New Mexico.....	101
	Period before regulation of Cochiti Dam and after completion of Abiquiu Dam.....	102
	Period after completion of Cochiti Dam.....	103
08331500	Rio Grande near Belen, New Mexico.....	104
08331990	Rio Grande Conveyance Channel near Bernardo, New Mexico.....	105
	Period before regulation of Cochiti Dam and after completion of Abiquiu Dam.....	106
	Period after completion of Cochiti Dam.....	107
08332000	Rio Grande near Bernardo, New Mexico.....	108
08332010	Rio Grande Floodway near Bernardo, New Mexico.....	109
	Period after completion of Cochiti Dam.....	110
08334000	Rio Puerco above Arroyo Chico, near Guadalupe, New Mexico.....	111
08340500	Arroyo Chico near Guadalupe, New Mexico.....	112
08342000	Bluewater Creek near Bluewater, New Mexico.....	113
08343000	Rio San Jose at Grants, New Mexico.....	114
08343500	Rio San Jose near Grants, New Mexico.....	115
08351500	Rio San Jose at Correo, New Mexico.....	116
08352500	Rio Puerco at Rio Puerco, New Mexico.....	117
08353000	Rio Puerco near Bernardo, New Mexico.....	118
08354000	Rio Salado near San Acacia, New Mexico.....	119
08354500	Socorro Main Canal North at San Acacia, New Mexico.....	120
08354800	Rio Grande Conveyance Channel at San Acacia, New Mexico.....	121
	Period after completion of Cochiti Dam.....	122
08355000	Rio Grande at San Acacia, New Mexico.....	123
08358300	Rio Grande Conveyance Channel at San Marcial, New Mexico.....	124
	Period before regulation of Cochiti Dam and after completion of Abiquiu Dam.....	125
	Period after completion of Cochiti Dam.....	126
08358400	Rio Grande Floodway at San Marcial, New Mexico.....	127
	Period before regulation of Cochiti Dam and after completion of Abiquiu Dam.....	128
	Period after completion of Cochiti Dam.....	129
08358500	Rio Grande at San Marcial, New Mexico.....	130
08360000	Alamosa Creek near Monticello, New Mexico.....	131

LIST OF STREAMFLOW-GAGING STATIONS IN DOWNSTREAM ORDER—Continued

Station number	Station name	Page
Rio Grande basin - Continued		
08361000	Rio Grande below Elephant Butte Dam, New Mexico.....	132
08362500	Rio Grande below Caballo Dam, New Mexico.....	133
08377900	Rio Mora near Terrero, New Mexico.....	134
08378500	Pecos River near Pecos, New Mexico.....	135
08379500	Pecos River near Anton Chico, New Mexico.....	136
08380500	Gallinas Creek near Montezuma, New Mexico.....	137
08381000	Gallinas Creek at Montezuma, New Mexico.....	138
08382000	Gallinas River near Lourdes, New Mexico.....	139
08382500	Gallinas River near Colonias, New Mexico.....	140
08382730	Los Esteros Creek above Santa Rosa Lake, New Mexico.....	141
08382760	Los Esteros Creek tributary above Santa Rosa Lake, New Mexico...	142
08383000	Pecos River at Santa Rosa, New Mexico.....	143
08383500	Pecos River near Puerto de Luna, New Mexico.....	144
08384500	Pecos River below Sumner Dam, New Mexico.....	145
	Period before regulation of Santa Rosa Dam and after	
	completion of Sumner Dam.....	146
08386000	Pecos River near Acme, New Mexico.....	147
08387000	Rio Ruidoso at Hollywood, New Mexico.....	148
08387600	Eagle Creek below South Fork, near Alto, New Mexico.....	149
08387800	Eagle Creek near Alto, New Mexico.....	150
08388000	Rio Ruidoso at Hondo, New Mexico.....	151
08389500	Rio Bonito at Hondo, New Mexico.....	152
08390500	Rio Hondo at Diamond A Ranch, near Roswell, New Mexico.....	153
08390800	Rio Hondo below Diamond A Dam, near Roswell, New Mexico.....	154
08393200	Rocky Arroyo above Two Rivers Reservoir, near Roswell, New Mexico.....	155
08393300	Rocky Arroyo below Rocky Dam, near Roswell, New Mexico.....	156
08393600	North Spring River at Roswell, New Mexico.....	157
08394100	Pecos River near Hagerman, New Mexico.....	158
08394500	Rio Felix at Old Highway Bridge, near Hagerman, New Mexico.....	159
08395500	Pecos River near Lake Arthur, New Mexico.....	160
08396000	Cottonwood Creek near Lake Arthur, New Mexico.....	161
08396500	Pecos River near Artesia, New Mexico.....	162
	Period before regulation of Santa Rosa Dam and after	
	completion of Sumner Dam.....	163
08398500	Rio Peñasco at Dayton, New Mexico.....	164
08399500	Pecos River (Kaiser Channel) near Lakewood, New Mexico.....	165
08400000	Fourmile Draw near Lakewood, New Mexico.....	166
08401000	Pecos River below McMillan Dam, New Mexico.....	167
08401200	South Seven Rivers near Lakewood, New Mexico.....	168
08401900	Rocky Arroyo at Highway Bridge, near Carlsbad, New Mexico.....	169
08402000	Pecos River at Damsite 3, near Carlsbad, New Mexico.....	170
08404000	Pecos River below Avalon Dam, New Mexico.....	171
08405000	Pecos River at Carlsbad, New Mexico.....	172
08405150	Dark Canyon Draw at Carlsbad, New Mexico.....	173

LIST OF STREAMFLOW-GAGING STATIONS IN DOWNSTREAM ORDER—Concluded

Station number	Station name	Page
Rio Grande basin - Concluded		
08405200	Pecos River below Dark Canyon Draw, at Carlsbad, New Mexico.....	174
08405500	Black River above Malaga, New Mexico.....	175
08406500	Pecos River near Malaga, New Mexico.....	176
08407000	Pecos River at Pierce Canyon Crossing, near Malaga, New Mexico..	177
08407500	Pecos River at Red Bluff, New Mexico.....	178
08408500	Delaware River near Red Bluff, New Mexico.....	179
Mimbres River basin		
08477000	Mimbres River near Mimbres, New Mexico.....	180
08477500	Mimbres River near Faywood, New Mexico.....	181
08477600	San Vicente Arroyo at Silver City, New Mexico.....	182
Tularosa Valley basin		
08481500	Tularosa Creek near Bent, New Mexico.....	183
<u>COLORADO RIVER BASIN</u>		
San Juan River basin		
09355500	San Juan River near Archuleta, New Mexico.....	184
09356500	San Juan River near Blanco, New Mexico.....	185
09363500	Animas River near Cedar Hill, New Mexico.....	186
09364500	Animas River at Farmington, New Mexico.....	187
09365000	San Juan River at Farmington, New Mexico.....	188
	Period after completion of Navajo Dam.....	189
09366500	La Plata River at Colorado-New Mexico State line.....	190
09367500	La Plata River near Farmington, New Mexico.....	191
09368000	San Juan River at Shiprock, New Mexico.....	192
	Period after completion of Navajo Dam.....	193
Little Colorado River basin		
09386900	Rio Nutria near Ramah, New Mexico.....	194
09386950	Zuni River above Black Rock Reservoir, New Mexico.....	195
09395500	Puerco River at Gallup, New Mexico.....	196
09430500	Gila River near Gila, New Mexico.....	197
09430600	Mogollon Creek near Cliff, New Mexico.....	198
09431500	Gila River near Redrock, New Mexico.....	199
09432000	Gila River below Blue Creek, near Virden, New Mexico.....	200
09442680	San Francisco River near Reserve, New Mexico.....	201
09442692	Tularosa River above Aragon, New Mexico.....	202
09443000	San Francisco River near Alma, New Mexico.....	203
09444000	San Francisco River near Glenwood, New Mexico.....	204

ARKANSAS RIVER BASIN

07153500 DRY CIMARRON RIVER NEAR GUY, NM

LOCATION.--Lat 36°59'15", long 103°25'25", in SE¼ sec.21, T.32 N., R.33 E., Union County, on right bank 1.5 mi upstream from Baker damsite, 1.7 mi northwest of Valley, 3.0 mi upstream from Travesser Creek, 12 mi north of Guy, 26 mi northwest of Kenton, Okla., and at mile 634.5.

DRAINAGE AREA.--545 mi².

PERIOD OF RECORD.--April 1942 to December 1973 (discontinued). Prior to October 1965, published as Cimarron River near Guy.

REVISED RECORDS.--WSP 1177: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,900 ft from topographic map. Prior to Oct. 1, 1943, at datum 0.44 ft higher.

REMARKS.--Diversions for irrigation of about 6,500 acres above station.

AVERAGE DISCHARGE.--31 years (water years 1943-73), 10.0 ft³/s, 7,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,100 ft³/s Aug. 21, 1965 (gage height, 22.00 ft, from rating curve extended above 3,000 ft³/s on basis of slope-area measurements at gage heights 15.7 ft and 22.00 ft; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1943-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1944-73

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	.3	68	6.7	16	2.37	5.5	1	.3	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	1.1	20	3.7	3.3	.91	3.0	3	.4	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	1.2	17	3.7	3.0	.80	3.0	7	.5	.1	0.0	0.0	0.0	0.0	--
JANUARY	.7	18	3.8	3.1	.81	3.1	14	.7	.2	0.0	0.0	0.0	0.0	--
FEBRUARY	.8	15	3.5	2.6	.75	2.8	30	1.1	.4	.2	0.0	0.0	0.0	--
MARCH	.9	16	3.7	3.1	.84	3.0	60	1.7	.8	.4	.3	.1	--	
APRIL	.2	52	5.2	9.5	1.83	4.2	90	2.1	1.1	.8	.6	.4	--	
MAY	.6	278	18	52	2.93	14.3	120	2.4	1.6	1.2	1.0	.8	--	
JUNE	0.0	97	14	24	1.66	11.5	183	2.7	1.8	1.4	1.2	1.0	--	
JULY	1.4	61	19	18	.95	15.1								
AUGUST	.8	265	32	50	1.55	26.0								
SEPTEMBER	.7	71	11	17	1.62	8.5								
ANNUAL	3.1	39	10	8.4	.81	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1943-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	500	1190	1960	3460	5100	--
3	217	546	935	1730	2650	--
7	114	270	446	797	1190	--
15	64	146	233	392	559	--
30	41	89	137	224	310	--
60	26	56	84	132	178	--
90	20	42	64	103	141	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1943-73

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
19	7.7	6.0	5.0	4.4	3.9	3.2	2.7	2.2	1.8	1.6	1.4	1.1	.8	.4

ARKANSAS RIVER BASIN

07199000 CANADIAN RIVER NEAR HEBRON, NM

LOCATION.--Lat 36°47'14", long 104°27'42", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, near right bank at downstream end of bridge pier on U.S. Highways 64 and 85, 3.1 mi north of Hebron, 5.0 mi upstream from Chicorica Creek, 8.0 mi south of Raton, and at mile 888.1.

DRAINAGE AREA.--229 mi².

PERIOD OF RECORD.--June 1946 to current year.

REVISED RECORDS.--WSP 1281: 1946, 1947-48(P), 1949. WSP 1921: 1960(M).

GAGE.--Water-stage recorder. Elevation of gage is 6,248 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1921 for history of changes prior to Aug. 18, 1965.

REMARKS.--Diversions upstream from station for irrigation of a few hundred acres. Part or all of low flow can be diverted to left bank 1.6 mi upstream from station for stock water, off-channel storage and irrigation.

AVERAGE DISCHARGE.--39 years (water years 1947-85), 8.38 ft³/s, 6,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,400 ft³/s, June 17, 1965, gage height, 28.2 ft, from floodmarks, present datum, from rating curve extended above 1,300 ft³/s on basis of slope-area measurement of peak flow; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1942 reached a stage of about 28 ft, present datum, at site 150 ft upstream, from information by local residents.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1947-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	0.0	8.3	1.5	1.9	1.32	1.5
DECEMBER	0.0	4.4	1.1	1.3	1.17	1.1
JANUARY	0.0	6.2	1.0	1.3	1.27	1.0
FEBRUARY	0.0	4.4	.9	1.1	1.15	.9
MARCH	0.0	18	2.0	4.3	2.18	2.0
APRIL	0.0	134	10	27	2.70	10.0
MAY	.1	261	18	47	2.58	18.2
JUNE	.1	461	16	74	4.49	16.4
JULY	.2	94	16	22	1.34	16.0
AUGUST	0.0	209	24	41	1.73	23.6
SEPTEMBER	0.0	83	6.8	14	2.04	6.8
ANNUAL	.4	50	8.4	9.7	1.16	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1948-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.0	0.0	0.0	0.0	0.0	--
3	0.0	0.0	0.0	0.0	0.0	--
7	0.0	0.0	0.0	0.0	0.0	--
14	0.0	0.0	0.0	0.0	0.0	--
30	0.0	0.0	0.0	0.0	0.0	--
60	.1	0.0	0.0	0.0	0.0	--
90	.2	.1	0.0	0.0	0.0	--
120	.3	.1	0.0	0.0	0.0	--
183	.5	.1	.1	0.0	0.0	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1947-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	279	814	1500	2980	4750	--
3	148	444	807	1560	2400	--
7	84	252	444	811	1190	--
15	53	152	258	447	631	--
30	34	96	161	277	389	--
60	21	57	96	164	232	--
90	15	41	69	119	168	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1947-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
26	8.0	4.4	2.9	1.9	1.1	.4	.2	.1	.1	.1	.1	0.0	0.0	0.0

ARKANSAS RIVER BASIN

07203000 VERMEJO RIVER NEAR DAWSON, NM

LOCATION.--Lat 36°40'50", long 104°47'08", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, on left bank 1.3 mi north of Dawson, 2.3 mi upstream from Rail Canyon, and at mile 28.2.

DRAINAGE AREA.--301 mi².

PERIOD OF RECORD.--October 1915 to July 1918, April 1919 to May 1921, January 1927 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: 1947, drainage area. WSP 1281: 1932(M), 1934(M), 1936-38(M), 1941-42(P), 1944-46(M).

GAGE.--Water-stage recorder. Elevation of gage is 6,365 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1311 or 1731 for history of changes prior to Sept. 24, 1953.

REMARKS.--Diversions for irrigation of small acreage and mountain meadows upstream from station.

AVERAGE DISCHARGE.--61 years (water years 1916-17, 1920, 1928-85), 18.3 ft³/s, 13,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1926).--Maximum discharge, 12,600 ft³/s, June 17, 1965, gage height, 15.25 ft, from rating curve extended above 400 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred Aug. 2, 1921, when discharge probably exceeded 10,000 ft³/s.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1916-17, 1920, 1928-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1917, 1920-21, 1928-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	.2	52	8.5	8.8	1.04	3.7	1	.8	.3	.1	0.0	0.0	0.0	0.0
NOVEMBER	0.0	31	6.1	4.6	.76	2.7	3	.9	.3	.2	0.0	0.0	0.0	0.0
DECEMBER	.6	16	4.8	3.5	.73	2.1	7	1.1	.4	.2	0.0	0.0	0.0	0.0
JANUARY	.7	16	4.8	3.1	.64	2.1	14	1.6	.5	.2	.1	0.0	0.0	0.0
FEBRUARY	1.2	17	6.0	3.5	.59	2.6	30	2.3	.9	.4	.2	.1	.1	.1
MARCH	.8	18	6.0	4.0	.67	2.7	60	3.1	1.3	.7	.4	.2	.1	.1
APRIL	1.2	370	21	49	2.34	9.3	90	3.8	1.7	1.0	.6	.3	.2	.2
MAY	1.0	372	50	64	1.28	21.9	120	4.2	2.1	1.3	.9	.5	.4	.4
JUNE	.7	179	34	36	1.06	15.0	183	4.9	2.6	1.9	1.4	.9	.7	.7
JULY	1.9	138	30	22	.74	13.0								
AUGUST	4.5	147	40	35	.87	17.6								
SEPTEMBER	.4	78	17	17	1.02	7.3								
ANNUAL	2.1	89	18	14	.77	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1916-17, 1920, 1928-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	232	502	790	1340	1920	2700
3	146	302	460	743	1030	1400
7	103	208	306	470	626	815
15	79	155	220	318	404	500
30	62	120	166	233	287	346
60	46	86	117	159	192	226
90	38	69	94	127	153	181

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1916-17, 1920, 1928-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
72	43	31	22	17	14	9.1	6.8	5.0	3.8	3.3	2.7	2.1	1.5	.9

ARKANSAS RIVER BASIN

07206000 CIMARRON RIVER BELOW EAGLE NEST DAM, NM

LOCATION.--Lat 36°31'55", long 105°13'43", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on left bank 300 ft downstream from Eagle Nest Dam, 2.5 mi southeast of Eagle Nest, 6.7 mi west of Ute Park, and at mile 48.6.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--May 1950 to current year. Published as Cimarron Creek below Eagle Nest Dam October 1952 to September 1965.

REVISED RECORDS.--WSP 1281: Drainage area.

GAGE.--Water-stage recorder. Parshall flume since May 15, 1951. Elevation of gage is 8,080 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 15, 1951, at datum 0.81 ft higher.

REMARKS.--Flow regulated by Eagle Nest Lake (station 07205500). Diversions for irrigation of 2,500 acres upstream from station.

AVERAGE DISCHARGE.--35 years (water years 1951-85), 13.6 ft³/s, 9,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 205 ft³/s, June 14, 1955; maximum gage height, 3.04 ft, April 20, 1983; no flow at times most years.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1951-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1952-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.2	50	16	9.0	.58	9.6	1	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	26	5.7	6.0	1.05	3.5	3	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	1.4	.2	.4	1.58	.1	7	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	3.6	.3	.8	2.57	.2	14	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	5.2	.6	1.2	2.16	.3	30	0.0	0.0	0.0	0.0	0.0	--
MARCH	0.0	12	3.6	3.6	1.00	2.2	60	0.0	0.0	0.0	0.0	0.0	--
APRIL	0.0	43	16	12	.80	9.5	90	0.0	0.0	0.0	0.0	0.0	--
MAY	.7	102	28	22	.79	17.1	120	.2	0.0	0.0	0.0	0.0	--
JUNE	5.3	66	30	16	.54	18.5	183	3.7	2.2	1.6	1.3	.9	--
JULY	7.2	68	32	14	.44	19.5							
AUGUST	.7	48	17	12	.69	10.7							
SEPTEMBER	.1	51	14	11	.76	8.7							
ANNUAL	5.9	21	14	4.3	.31	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1951-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	89	129	156	188	211	--
3	85	124	150	184	208	--
7	75	111	135	168	193	--
15	61	88	108	134	155	--
30	48	65	75	88	98	--
60	38	50	58	66	71	--
90	34	44	50	55	59	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1951-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
51	38	31	26	22	18	11	5.3	.8	.2	.1	0.0	0.0	0.0	0.0

ARKANSAS RIVER BASIN

07206500 CIMARRON RIVER AT UTE PARK, NM

LOCATION.--Lat 36°33'30", long 105°05'20", in Maxwell Grant, half a mile downstream from Ute Creek and 1 mile east of post office at Ute Park, Colfax County.

DRAINAGE AREA.--297 mi².

PERIOD OF RECORD.--July 1907 to December 1914, and October 1930 to September 1950 (discontinued) in reports of Geological Survey. July 1907 to December 1931 in reports of State Engineer.

REVISED RECORDS.--WSP 1117: Drainage area.

REMARKS.--Flow regulated by Eagle Nest Reservoir (capacity, 79,120 acre-feet). Diversions above station for irrigation.

AVERAGE DISCHARGE.--30 years (1908-17, 1931-50; since completion of Eagle Nest Dam), 30.0 ft³/s, 21,730 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 404 ft³/s May 12, 1942 (gage height, 3.43 ft); minimum daily 1.5 ft³/s Jan. 18-20, 1936.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1908-17,
1931-50

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1909-17, 1932-50

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.1	35	18	8.5	.47	4.2	1	4.6	3.0	2.4	2.0	1.6	--
NOVEMBER	4.8	31	13	5.7	.43	3.1	3	4.8	3.2	2.6	2.1	1.7	--
DECEMBER	2.4	18	8.3	3.5	.42	1.9	7	5.2	3.5	2.9	2.4	2.0	--
JANUARY	2.8	20	9.1	4.7	.52	2.1	14	5.6	3.8	3.1	2.6	2.2	--
FEBRUARY	3.5	35	11	8.1	.73	2.6	30	6.3	4.3	3.5	2.9	2.4	--
MARCH	5.5	88	22	21	.96	5.1	60	7.0	4.8	3.9	3.2	2.7	--
APRIL	15	183	61	40	.66	14.2	90	7.5	5.1	4.1	3.5	2.9	--
MAY	29	388	110	77	.70	25.6	120	8.0	5.7	4.8	4.2	3.6	--
JUNE	15	126	70	29	.42	16.3	183	11	8.7	7.7	7.1	6.4	--
JULY	6.3	105	52	27	.53	12.1							
AUGUST	8.3	76	34	16	.46	8.0							
SEPTEMBER	3.1	43	20	10	.51	4.7							
ANNUAL	22	71	36	11	.30	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1908-17, 1931-50

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	172	270	359	509	653	--
3	161	249	332	471	606	--
7	148	226	299	420	538	--
15	131	198	260	365	467	--
30	112	167	218	301	381	--
60	93	133	167	219	265	--
90	81	111	135	170	201	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1908-17, 1931-50

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

ARKANSAS RIVER BASIN

07207000 CIMARRON RIVER NEAR CIMARRON, NM

LOCATION.--Lat 36°31'11", long 104°58'42", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on right bank 1,200 ft downstream from Turkey Creek Canyon, 3.6 mi west of Cimarron, and at mile 31.6.

DRAINAGE AREA.--294 mi².

PERIOD OF RECORD.--May 1950 to current year. Published as Cimarron Creek near Cimarron, October 1952 to September 1965.

REVISED RECORDS.--WSP 1281: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Nov. 6, 1963. Datum of gage is 6,599.58 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Eagle Nest Lake (station 07205500). Diversions upstream from station for irrigation of about 3,500 acres, part of which is downstream from station. Philmont ditch (formerly known as Cimarroncito ditch) diverts from left bank 1.5 mi upstream from station, flumes under river 0.9 mi upstream and bypasses station for off-channel storage and irrigation downstream; Cimarron Diversion pipeline 300 ft upstream from station for city of Raton Water Supply started June, 1983.

AVERAGE DISCHARGE.--35 years (water years 1951-85), 21.0 ft³/s, 15,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft³/s, June 17, 1965, gage height, 12.42 ft, from floodmark, from rating curve extended above 800 ft³/s on basis of slope-area measurements at gage heights 4.88 ft and 12.42 ft; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1951-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	3.7	27	11	5.4	.51	4.2
DECEMBER	1.3	8.3	4.2	1.6	.39	1.7
JANUARY	1.1	8.5	3.5	1.6	.45	1.4
FEBRUARY	1.4	8.0	3.7	1.8	.48	1.5
MARCH	1.7	13	6.6	3.0	.46	2.6
APRIL	2.7	43	27	9.5	.35	10.7
MAY	24	115	57	25	.43	22.5
JUNE	8.6	123	47	22	.47	18.8
JULY	6.1	71	35	15	.44	13.8
AUGUST	2.0	44	23	11	.46	9.3
SEPTEMBER	.1	50	16	9.3	.58	6.4
ANNUAL	9.1	32	21	5.4	.26	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1952-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.5	.7	.4	.2	0.0	--
3	1.7	.9	.6	.4	0.0	--
7	2.0	1.2	.8	.5	0.0	--
14	2.3	1.4	1.1	.7	0.0	--
30	2.6	1.8	1.4	1.1	0.0	--
60	3.6	2.1	1.3	.7	.3	--
90	3.4	2.4	1.9	1.6	1.2	--
120	3.9	2.8	2.3	1.9	1.5	--
183	8.1	5.7	4.3	3.2	2.2	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1951-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	93	157	233	395	588	--
3	92	149	207	314	426	--
7	89	135	173	229	278	--
15	78	111	135	168	193	--
30	64	88	105	126	142	--
60	52	70	81	95	105	--
90	48	62	70	78	83	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1951-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
68	52	42	35	30	26	19	13	7.7	5.2	4.4	3.7	3.1	2.6	2.0

ARKANSAS RIVER BASIN

07207500 PONIL CREEK NEAR CIMARRON, NM

LOCATION.--Lat 36°34'25", long 104°56'46", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on left bank 1.6 mi downstream from confluence of North and South Ponil Creeks, and 4.7 mi northwest of Cimarron.

DRAINAGE AREA.--171 mi².

PERIOD OF RECORD.--November 1915 to June 1919, August 1919 to July 1925, September 1925, September 1927 to July 1929, May 1950 to current year. Prior to May 1950 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 1281: Drainage area. WSP 1731: 1920.

GAGE.--Water-stage recorder. Elevation of gage is 6,630 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 8, 1922, at site 0.1 mi downstream at different datum. May 8, 1922 to Aug. 8, 1929, at site 0.4 mi upstream at different datum.

REMARKS.--Diversions for irrigation of about 250 acres upstream from station. Diversions 1,000 ft downstream from station for irrigation of about 300 acres.

AVERAGE DISCHARGE.--43 years (water years 1917-18, 1920-24, 1928, 1951-85), 11.2 ft³/s, 8,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,630 ft³/s, June 17, 1965, gage height, 11.13 ft, from rating curve extended above 230 ft³/s on basis of slope-area measurements at gage heights 3.56 ft, 5.80 ft, 7.15 ft, and 11.13 ft; no flow many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Discharge for flood of Aug. 8, 1929, which destroyed gage, was estimated as 5,200 ft³/s by State Engineer.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1917-18, 1920-24, 1928, 1951-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1918, 1921-25, 1929, 1952-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	23	3.4	4.8	1.44	2.7	1	.1	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	12	3.0	3.1	1.04	2.4	3	.2	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	.1	8.8	2.2	1.8	.81	1.8	7	.2	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	8.0	1.8	1.4	.78	1.5	14	.4	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	.1	7.0	2.0	1.4	.72	1.6	30	.6	.1	0.0	0.0	0.0	0.0	0.0
MARCH	.3	16	3.8	2.9	.76	3.0	60	.9	.2	0.0	0.0	0.0	0.0	0.0
APRIL	1.9	126	22	26	1.17	17.5	90	1.3	.3	0.0	0.0	0.0	0.0	0.0
MAY	1.0	196	45	44	.98	35.9	120	1.3	.4	.2	.1	0.0	0.0	0.0
JUNE	.2	122	18	24	1.31	14.4	183	1.6	.6	.3	.2	.1	.1	.1
JULY	0.0	32	7.6	7.4	.97	6.1								
AUGUST	.3	58	12	13	1.08	9.8								
SEPTEMBER	0.0	23	4.3	5.1	1.18	3.5								
ANNUAL	1.4	35	11	8.4	.78	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1917-18, 1920-24, 1928, 1951-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	101	197	271	374	456	541	
3	77	168	244	356	448	547	
7	61	139	205	301	381	465	
15	48	112	169	253	324	401	
30	37	89	136	206	265	330	
60	28	65	98	148	190	236	
90	21	49	73	109	140	175	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1917-18, 1920-24, 1928, 1951-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
53	27	16	11	7.8	5.9	3.9	2.8	2.0	1.4	1.1	.8	.6	.3	0.0

ARKANSAS RIVER BASIN

07208500 RAYADO CREEK AT SAUBLE RANCH, NEAR CIMARRON, NM

LOCATION.--Lat 36°22'20", long 104°58'10", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on right bank at Sauble Ranch (Carson-Maxwell Base Camp of Philmont Scout Ranch), 2.5 mi upstream from State Highway 21, 4.0 mi downstream from Bonito Creek, and 9.8 mi southwest of Cimarron.

DRAINAGE AREA.--65 mi².

PERIOD OF RECORD.--January 1909 to February 1910, June to August 1910, May 1911 to May 1913, July 1913 to February 1915, October 1915 to September 1918, March 1919 to September 1920, June 1923 to September 1924, March to May 1927, August 1927 to current year. Monthly discharge only for some periods, published in WSP 1311. Records for April and May 1910, published in WSP 287, are unreliable and should not be used. Published as Rayado River "at," "near," or "above" Abreu's Ranch near Cimarron prior to October 1925 and as Rayado River at Sauble Ranch, near Cimarron, October 1925 to September 1952.

REVISED RECORDS.--WSP 1281: 1914, 1934-35(M), 1937(M), 1941(P), 1942(M), 1944(M), drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Concrete control since Oct. 13, 1976. Elevation of gage is 6,720 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1921 for history of changes prior to Oct. 1, 1954. Oct. 1, 1954 to June 16, 1965, at site 270 ft downstream at datum 2.79 ft lower.

REMARKS.--No diversion upstream from station.

AVERAGE DISCHARGE.--58 years (water years 1912, 1917-18, 1931-85), 13.0 ft³/s, 9,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1909-12, and SINCE 1913).--Maximum discharge, 9,000 ft³/s, June 17, 1965, gage height, 11.5 ft, from floodmarks, from rating curve extended above 70 ft³/s on basis of field estimate of peak flow; minimum, 0.03 ft³/s, Dec. 3, 1950, but may have been less during periods of ice effect.

EXTREMES OUTSIDE PERIOD OF RECORD.--The major flood of June 10, 1913, destroyed the gage (stage and discharge not determined). Another major flood probably occurred Sept. 29 or 30, 1904.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1912, 1917-18, 1931-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1917-18, 1931-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	1.2	30	5.7	4.7	.82	3.6	1	1.7	1.0	.8	.6	.4	.4
NOVEMBER	1.4	20	4.7	3.0	.63	3.0	3	2.0	1.3	1.0	.8	.6	.5
DECEMBER	1.3	8.3	3.7	1.3	.35	2.3	7	2.3	1.5	1.2	1.0	.8	.6
JANUARY	1.6	8.0	3.4	1.0	.29	2.2	14	2.5	1.7	1.4	1.2	.9	.8
FEBRUARY	2.0	6.8	3.8	1.0	.27	2.4	30	2.7	2.0	1.7	1.5	1.2	1.1
MARCH	3.0	24	6.9	3.4	.48	4.4	60	3.1	2.3	2.0	1.8	1.5	1.4
APRIL	5.2	127	30	24	.81	18.7	90	3.3	2.5	2.2	1.9	1.7	1.5
MAY	3.7	287	52	49	.95	32.7	120	3.5	2.7	2.3	2.0	1.8	1.6
JUNE	1.8	231	21	31	1.47	13.5	183	3.8	2.9	2.6	2.3	2.1	2.0
JULY	1.4	55	9.7	8.7	.90	6.2							
AUGUST	2.1	72	11	12	1.06	6.9							
SEPTEMBER	.9	23	6.5	4.4	.68	4.1							
ANNUAL	2.8	42	13	8.5	.65	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1912, 1917-18, 1931-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	80	200	328	558	792	1090
3	73	176	278	454	623	827
7	64	149	227	354	468	599
15	53	119	178	270	351	442
30	44	96	141	210	270	336
60	34	70	100	146	185	228
90	27	53	75	108	137	167

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912, 1917-18, 1931-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
53	29	19	14	11	8.6	6.3	5.0	4.3	3.7	3.4	3.2	2.9	2.6	2.1

ARKANSAS RIVER BASIN

07211000 CIMARRON RIVER AT SPRINGER, NM

LOCATION.--Lat 36°21'37", long 104°35'53", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on left bank at Springer, 400 ft downstream from bridge on State Highway 199, 0.3 mi upstream from Salado Creek, and at mile 8.2.

DRAINAGE AREA.--1,032 mi².

PERIOD OF RECORD.--August 1907 to December 1909, January 1921 to February 1922, October 1924 to January 1926, September 1926 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Cimarron Creek at Springer, October 1952 to September 1965.

REVISED RECORDS.--WSP 827: 1934-36(M). WSP 1281: 1942, 1945-46(M).

GAGE.--Water-stage recorder. Concrete control since Nov. 5, 1954. Elevation of gage is 5,770 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1311 or 1731 for history of changes prior to July 17, 1942.

REMARKS.--Flow partly regulated by Eagle Nest Lake (station 07205500). Diversions for irrigation of about 23,000 acres upstream from station and a few hundred acres between station and mouth.

AVERAGE DISCHARGE.--60 years (water years 1908-09, 1925, 1927-28, 1931-85), 17.2 ft³/s, 12,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1930).--Maximum discharge, 29,500 ft³/s, June 18, 1965, gage height, 19.96 ft, from floodmarks, from rating curve extended above 1,800 ft³/s on basis of contracted-opening measurement of peak flow; no flow at times in 1954, 1956-57, 1978, 1983, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 22 ft, Sept. 29, 1904 (backwater from debris on railroad bridge). Another major flood occurred June 11, 1913. Maximum discharge of these floods probably extended 10,000 ft³/s, but probably were less than the 1965 flood.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1908-09, 1925, 1927-28, 1931-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1909, 1928, 1931-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	98	8.3	17	2.04	4.1	1	.6	.1	0.0	0.0	0.0	0.0	0.0
NOVEMBER	.2	68	6.6	10	1.57	3.3	3	.7	.2	.1	0.0	0.0	0.0	0.0
DECEMBER	.3	41	5.6	6.1	1.09	2.7	7	.8	.2	.1	0.0	0.0	0.0	0.0
JANUARY	.3	35	5.5	5.3	.96	2.7	14	1.0	.3	.2	.1	0.0	0.0	0.0
FEBRUARY	.3	45	6.0	6.8	1.12	3.0	30	1.4	.5	.3	.1	0.0	0.0	0.0
MARCH	.4	26	4.9	4.4	.90	2.4	60	2.6	1.0	.5	.2	.1	0.0	0.0
APRIL	.5	358	20	51	2.55	9.9	90	3.0	1.3	.7	.4	.2	.1	.1
MAY	.7	928	72	159	2.21	35.3	120	3.3	1.4	.9	.5	.3	.2	.2
JUNE	1.0	699	38	102	2.71	18.5	183	3.5	1.7	1.2	.9	.6	.5	.5
JULY	.4	146	11	21	1.93	5.4								
AUGUST	.2	116	15	22	1.45	7.5								
SEPTEMBER	0.0	118	11	21	1.92	5.3								
ANNUAL	.9	121	17	24	1.40	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1908-09, 1925, 1927-28, 1931-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	264	811	1390	2390	3340	4440	
3	155	480	832	1450	2050	2760	
7	95	311	566	1050	1560	2200	
15	61	211	404	807	1260	1890	
30	40	142	283	599	982	1540	
60	26	88	173	368	608	965	
90	20	63	121	250	407	638	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1908-09, 1925, 1927-28, 1931-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
51	17	11	8.3	6.9	5.9	4.7	3.7	3.1	2.4	2.1	1.9	1.5	1.1	.6

ARKANSAS RIVER BASIN

07211500 CANADIAN RIVER NEAR TAYLOR SPRINGS, NM

LOCATION.--Lat 36°17'49", long 104°29'36", in NW¼SE¼ sec.21, T.24 N., R.23 E., Colfax County, Hydrologic Unit 11080003, on left bank at head of gorge, 2.0 mi south of Taylor Springs, 2.3 mi downstream from Cimarron River, 2.4 mi upstream from Chico Creek, 7.1 mi southeast of Springer, and at mile 847.9.

DRAINAGE AREA.--2,850 mi².

PERIOD OF RECORD.--January 1940 to September 1958, annual maximum, water years 1959-63, June 1964 to current year. Water-year estimate for 1940, published in WSP 1311.

REVISED RECORDS.--WSP 1177: Drainage area. WSP 1281: 1941-42(P), 1945-47(M), 1948-50(P).

GAGE.--Water-stage recorder. Elevation of gage is 5,635 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 10, 1964, water-stage recorder at site 1.7 mi downstream at different datum; operated as crest-stage gage at that site and datum during water years 1959-64.

REMARKS.--Diversions for irrigation of about 30,000 acres upstream from station.

AVERAGE DISCHARGE.--40 years (water years 1940-58, 1965-85), 78.7 ft³/s, 57,020 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 162,000 ft³/s, June 18, 1965, gage height, 47.4 ft, from floodmarks, from rating curve extended above 7,000 ft³/s on basis of slope-area measurement of peak flow; no flow at times some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood prior to 1965 occurred Sept. 29, 1904, discharge published as 91,100 ft³/s in WSP 842, 847.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1940-58, 1965-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1941-58, 1966-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT							
								2	5	10	20	50	100		
								50%	20%	10%	5%	2%	1%		
OCTOBER	0.0	451	42	97	2.33	4.5	1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	.9	192	20	33	1.64	2.2	3	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	1.1	105	17	22	1.28	1.8	7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	1.2	121	17	20	1.13	1.9	14	2.1	.4	.1	0.0	0.0	0.0	0.0	0.0
FEBRUARY	1.0	186	23	31	1.38	2.4	30	3.9	1.5	.9	.5	0.0	0.0	0.0	0.0
MARCH	2.0	79	18	19	1.08	1.9	60	6.8	3.1	2.0	1.3	0.0	0.0	0.0	0.0
APRIL	1.4	2853	118	452	3.83	12.7	90	9.5	3.7	2.1	1.3	.7	.4	.4	.4
MAY	3.6	2174	236	454	1.92	25.3	120	10	4.3	2.6	1.7	1.0	.7	.7	.7
JUNE	2.7	2313	135	371	2.75	14.5	183	13	5.8	3.7	2.6	1.7	1.3	1.3	1.3
JULY	1.6	509	99	119	1.20	10.6									
AUGUST	4.7	563	123	117	.95	13.2									
SEPTEMBER	0.0	1354	85	228	2.68	9.1									
ANNUAL	7.6	564	79	106	1.35	100									

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1940-58, 1965-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1600	4540	8450	17400	28800	46300
3	907	2570	4790	9870	16300	26200
7	569	1590	2870	5650	8960	13800
15	377	1010	1750	3230	4890	7160
30	263	683	1150	2030	2960	4170
60	179	443	714	1190	1670	2260
90	131	320	513	855	1190	1610

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1940-58, 1965-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
298	119	65	42	30	25	17	13	9.3	6.5	5.5	4.4	3.2	2.4	1.2

ARKANSAS RIVER BASIN

07214000 CANADIAN RIVER NEAR ROY, NM

LOCATION.--Lat 35°55'10", long 104°21'10", in E½ sec.35, T.20 N., R.24 E., on right bank 1,080 ft upstream from bridge on State Highway 120 and 9 miles west of Roy.

DRAINAGE AREA.--4,066 mi², of which 107 mi² is probably noncontributing.

PERIOD OF RECORD.--April 1936 to September 1965 (discontinued). Monthly discharge only for April 1936, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 4,892.55 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 9, 1942, Jan. 5, 1943 to Jan. 20, 1945 and Aug. 6, 1945 to Apr. 30, 1946, at site 1,080 ft downstream at datum 0.39 ft higher. Oct. 10, 1942 to Jan. 4, 1943, Jan. 21 to Aug. 5, 1945 and May 1, 1946 to Sept. 30, 1958, at present site at datum 1.00 ft higher.

REMARKS.--Diversions for irrigation of about 30,000 acres above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, that of June 18, 1965; no flow at times. Prior to 1965 maximum flood known occurred Sept. 29 or 30, 1904, when peak near Taylor Springs was computed as 91,000 ft³/s (see WSP 842, 847).

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937-65

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	0.0	242	30	54	1.83	1.9
DECEMBER	0.0	127	22	30	1.33	1.4
JANUARY	0.0	114	21	25	1.15	1.4
FEBRUARY	0.0	271	38	58	1.52	2.4
MARCH	.2	105	26	30	1.14	1.7
APRIL	.1	3894	181	718	3.97	11.4
MAY	.6	2963	328	719	2.19	20.7
JUNE	.1	2951	263	598	2.27	16.6
JULY	1.1	552	157	164	1.04	9.9
AUGUST	16	702	223	164	.74	14.1
SEPTEMBER	.2	2423	206	492	2.39	13.0
ANNUAL	12	770	132	165	1.25	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1938-65

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.0	0.0	0.0	0.0	0.0	--
3	0.0	0.0	0.0	0.0	0.0	--
7	.4	0.0	0.0	0.0	0.0	--
14	.8	0.0	0.0	0.0	0.0	--
30	2.9	.2	0.0	0.0	0.0	--
60	6.6	2.8	1.8	1.1	0.0	--
90	10	4.6	3.0	1.9	0.0	--
120	12	5.9	4.2	3.0	0.0	--
183	17	8.3	5.9	4.3	0.0	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1937-65

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	3090	9470	18300	39200	66200	--
3	1780	5280	10100	21200	35600	--
7	1010	2940	5500	11300	18600	--
15	632	1770	3180	6180	9720	--
30	426	1140	1970	3580	5330	--
60	282	707	1170	2060	3000	--
90	211	524	857	1470	2090	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-65

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
453	197	114	71	48	37	24	17	12	7.8	6.2	4.7	2.6	1.5	.1

ARKANSAS RIVER BASIN

07214500 MORA RIVER NEAR HOLMAN, NM

LOCATION.--Lat 36°06'37", long 105°22'33", Mora County, in Mora Grant, on right bank 330 ft downstream from bridge, 2.4 mi south of Chacon, 4.5 mi downstream from confluence of Luna and Lujan Creeks, 5.0 mi north of Holman, 8.0 mi southwest of Guadalupe, and at mile 106.9.

DRAINAGE AREA.--57 mi².

PERIOD OF RECORD.--January 1953 to December 1973 (discontinued). Published as Rio Agua Negra near Holman prior to October 1965.

GAGE.--Water-stage recorder. Altitude of gage is 7,845 ft from topographic map. Prior to Apr. 28, 1972, at site 500 ft upstream at datum 7.86 ft higher.

REMARKS.--Diversions for irrigation of about 1,600 acres above station.

AVERAGE DISCHARGE.--21 calendar years, 13.5 ft³/s, 9,780 acre-ft/yr; 20 calendar years (1954-73), 13.9 ft/s, 10,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,700 ft³/s July 22, 1954 (gage height, 6.10 ft, site and datum then in use), from rating curve extended above 300 ft³/s on basis of slope-area measurement of peak flow; minimum, about 0.06 ft³/s Jan. 18, 1967, result of freezeup.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1954-73

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	.3	18	6.2	4.5	.72	3.8
NOVEMBER	.7	20	6.2	4.6	.74	3.7
DECEMBER	1.0	11	5.0	2.4	.48	3.0
JANUARY	1.2	12	4.5	2.4	.53	2.7
FEBRUARY	1.0	8.8	4.4	2.0	.46	2.7
MARCH	2.2	11	6.3	3.1	.48	3.8
APRIL	1.9	97	26	27	1.05	15.5
MAY	1.7	201	43	55	1.29	25.7
JUNE	1.1	98	20	27	1.31	12.3
JULY	2.0	35	11	8.8	.79	6.7
AUGUST	2.6	84	23	22	.99	13.7
SEPTEMBER	.4	40	11	11	1.00	6.4
ANNUAL	2.7	38	14	10	.72	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1955-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.5	.5	.3	.1	--	--
3	1.6	.7	.4	.3	--	--
7	1.9	.9	.6	.4	--	--
14	2.3	1.1	.7	.4	--	--
30	2.9	1.4	.8	.5	--	--
60	3.4	1.7	1.1	.7	--	--
90	3.7	1.9	1.3	.9	--	--
120	4.1	2.2	1.5	1.0	--	--
183	4.8	2.7	1.9	1.4	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1954-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	107	222	322	476	--	--
3	80	175	264	407	--	--
7	64	147	225	352	--	--
15	51	119	183	286	--	--
30	40	93	142	220	--	--
60	29	67	102	159	--	--
90	23	51	77	118	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-73

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
57	30	21	16	12	10	7.3	5.6	4.6	3.7	3.3	2.8	2.4	1.8	1.2

ARKANSAS RIVER BASIN

07214800 RIO LA CASA NEAR CLEVELAND, NM

LOCATION.--Lat 35°58'27", long 105°23'19", Mora County, in Mora Grant, on left bank 1.6 mi southwest of Cleveland, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--23.0 mi².

PERIOD OF RECORD.--May 1956 to September 1970 (discontinued). Prior to October 1964, published as Rio de la Casa near Cleveland.

GAGE.--Water-stage recorder. Altitude of gage is 7,635 ft (from topographic map).

REMARKS.--Diversions for irrigation of about 100 acres above station.

AVERAGE DISCHARGE.--14 years, 14.4 ft³/s, 10,430 acre-ft/year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,260 ft³/s Aug. 6, 1959, gage height, 6.00 ft, from rating curve extended above 170 ft³/s on basis of slope-area measurement of peak flow; minimum, 0.08 ft³/s Oct. 30, 1958.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1957-70

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1958-70

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.9	18	6.5	4.9	.75	3.7	1	1.9	1.1	.9	.7	--	--
NOVEMBER	.8	13	5.2	3.8	.72	3.0	3	2.0	1.3	1.0	.8	--	--
DECEMBER	.8	5.9	3.4	1.5	.43	2.0	7	2.2	1.6	1.3	1.0	--	--
JANUARY	1.6	4.5	2.8	.9	.33	1.6	14	2.4	1.7	1.5	1.3	--	--
FEBRUARY	1.5	4.0	2.8	.8	.28	1.6	30	2.6	2.0	1.7	1.5	--	--
MARCH	2.3	9.9	4.6	2.2	.49	2.7	60	2.8	2.2	1.9	1.7	--	--
APRIL	4.6	34	14	8.7	.62	8.2	90	2.9	2.2	2.0	1.7	--	--
MAY	7.3	63	36	15	.42	21.1	120	3.1	2.4	2.1	1.9	--	--
JUNE	7.0	105	45	29	.65	25.9	183	3.8	2.8	2.5	2.2	--	--
JULY	3.7	42	17	10	.60	9.7							
AUGUST	4.2	51	26	18	.68	15.1							
SEPTEMBER	3.9	19	9.2	4.6	.50	5.4							
ANNUAL	6.0	24	14	5.3	.37	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1957-70

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	114	184	231	290	--	--
3	101	157	192	233	--	--
7	87	127	151	176	--	--
15	70	99	115	134	--	--
30	57	79	91	104	--	--
60	42	60	70	83	--	--
90	36	51	60	71	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1957-70

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
60	39	27	21	16	13	8.5	5.9	4.4	3.6	3.3	3.0	2.7	2.4	1.9

ARKANSAS RIVER BASIN

07215500 MORA RIVER AT LA CUEVA, NM

LOCATION.--Lat 35°56'27", long 105°14'59", Mora County, Hydrologic Unit 11080004, in Mora Grant, on left bank 45 ft upstream from bridge on State Highway 3 at La Cueva, 0.3 mi downstream from La Cueva damsite, and at mile 86.8.

DRAINAGE AREA.--173 mi².

PERIOD OF RECORD.--August 1903 to April 1905 (gage heights and discharge measurements only), May to December 1905, May 1906 to July 1911, April 1931 to current year. Monthly discharge only for some periods, published in WSP 1311. Records for February to April 1905, published in WSP 173, are unreliable and should not be used.

REVISED RECORDS.--WSP 857: 1937. WSP 1281: 1931(M), 1932. WSP 1511: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 7,000 ft above National Geodetic Vertical Datum of 1929, from topographic map. Mar. 10, 1915 to June 4, 1921, water-stage recorder at site 2.8 mi upstream at different datum. July 6, 1921 to Jan. 5, 1929, nonrecording gage or water-stage recorder at site 0.7 mi downstream at datum about 14 ft lower and Jan. 6, 1929 to Apr. 1, 1972, water-stage recorder at site 0.7 mi downstream at datum about 15 ft lower.

REMARKS.--Diversions upstream from station for irrigation of about 7,000 acres, part of which are downstream from station.

AVERAGE DISCHARGE.--58 years (water years 1907-10, 1932-85), 27.8 ft³/s, 20,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1930).--Maximum discharge, 1,530 ft³/s, Sept. 23, 1941, gage height, 7.58 ft, site and datum then in use, from rating curve extended above 400 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1904, may have exceeded 20,000 ft³/s; another major flood occurred June 11, 1913, but is believed less than that of 1904.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1907-10,
1932-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1908-11, 1933-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	.6	88	17	16	.95	4.9	1	1.2	.3	.1	0.0	0.0	0.0	0.0
NOVEMBER	.4	61	11	12	1.06	3.2	3	1.3	.4	.2	0.0	0.0	0.0	0.0
DECEMBER	.6	39	8.6	8.4	.97	2.6	7	1.5	.6	.3	.2	0.0	0.0	0.0
JANUARY	0.0	22	7.7	6.1	.79	2.3	14	1.9	.7	.4	.2	.1	0.0	0.0
FEBRUARY	.5	26	7.4	5.3	.72	2.2	30	2.5	1.0	.6	.4	.1	0.0	0.0
MARCH	1.1	44	11	9.5	.90	3.2	60	3.6	1.4	.9	.6	.4	.3	.3
APRIL	2.1	244	33	49	1.48	10.0	90	4.3	1.7	1.0	.7	.4	.3	.3
MAY	1.5	555	77	102	1.32	23.1	120	5.1	2.1	1.3	.8	.5	.3	.3
JUNE	1.1	314	60	64	1.07	18.0	183	7.6	3.4	2.2	1.4	.9	.6	.6
JULY	3.0	142	32	29	.93	9.4								
AUGUST	1.4	182	43	38	.88	12.9								
SEPTEMBER	.5	83	27	20	.75	8.0								
ANNUAL	3.1	113	28	22	.78	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1907-10, 1932-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	222	398	510	640	727	805	
3	174	333	442	577	672	760	
7	139	276	374	499	590	677	
15	111	226	315	435	527	620	
30	86	179	254	362	450	543	
60	63	133	192	279	353	433	
90	50	106	153	223	283	348	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1907-10, 1932-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
113	70	49	35	27	21	16	11	8.1	5.5	4.3	3.2	2.2	1.5	.9

ARKANSAS RIVER BASIN

07216500 MORA RIVER NEAR GOLONDRINAS, NM

LOCATION.--Lat 35°53'27", long 105°09'47", Mora County, Hydrologic Unit 11080004, in Mora Grant, on right bank 0.7 mi upstream from bridge on State Highway 160, 1.2 mi east of Golondrinas, 1.9 mi upstream from Coyote Creek, 4.7 mi downstream from Rito Cebolla, and at mile 75.8.

DRAINAGE AREA.--267 mi².

PERIOD OF RECORD.--March 1915 to May 1921, October 1921 to March 1922, May, August, September 1922, July 1923 to July 1924, December 1924 to current year. Monthly discharge only 1915-30, published in WSP 1311.

REVISED RECORDS.--WSP 1281: 1951(M). WSP 1311: 1935(M), 1937-38(M), 1940-42(M), 1949(M). WSP 1511: Drainage area. WSP 1731: 1958(M).

GAGE.--Water-stage recorder. Elevation of gage is 6,750 ft above National Geodetic Vertical Datum of 1929, from topographic map. Mar. 10, 1915 to June 4, 1921, water-stage recorder at site 2.8 mi upstream at different datum. July 6, 1921 to Jan. 5, 1929, nonrecording gage or water-stage recorder at site 0.7 mi downstream at datum about 14 ft lower and Jan. 6, 1929 to Apr. 1, 1972, water-stage recorder at site 0.7 mi downstream at datum about 15 ft lower.

REMARKS.--Diversions for irrigation of about 12,000 acres upstream from station. Off-channel lakes make it possible to divert and store water during non-irrigation season.

AVERAGE DISCHARGE.--68 years (water years 1916-20, 1927-85), 33.8 ft³/s, 24,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s, Aug. 22, 1952, gage height, 14.4 ft, site and datum then in use, from rating curve extended above 660 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Sept. 29, 1904, and June 11, 1913, probably exceeded 25,000 ft³/s.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1916-20, 1927-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1917-20, 1927-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
							PERIOD (CON- SECU- TIVE DAYS)	2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.2	119	21	23	1.06	5.2	1	1.3	.4	.1	0.0	0.0	0.0
NOVEMBER	.4	87	14	15	1.03	3.5	3	1.4	.4	.2	0.0	0.0	0.0
DECEMBER	.5	39	12	9.3	.77	2.9	7	1.7	.5	.2	0.0	0.0	0.0
JANUARY	.7	30	12	7.5	.64	2.9	14	2.1	.7	.3	.1	0.0	0.0
FEBRUARY	.6	27	11	7.1	.63	2.7	30	2.9	1.0	.6	.3	.1	0.0
MARCH	.6	69	13	13	.97	3.2	60	5.4	2.2	1.3	.8	.5	.3
APRIL	.3	361	44	72	1.64	10.7	90	6.8	2.8	1.6	1.0	.5	.3
MAY	1.0	661	90	117	1.30	22.0	120	8.0	3.5	2.1	1.4	.8	.5
JUNE	0.0	377	68	77	1.13	16.7	183	11	4.9	3.0	1.9	1.1	.7
JULY	1.6	321	38	47	1.26	9.2							
AUGUST	0.0	307	55	57	1.04	13.3							
SEPTEMBER	.3	103	32	26	.83	7.7							
ANNUAL	3.4	144	34	28	.82	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1916-20, 1927-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	314	590	801	1090	1320	1560
3	239	448	599	798	946	1090
7	182	353	480	648	774	900
15	139	286	398	549	665	781
30	104	222	317	451	558	670
60	74	160	232	338	426	521
90	59	127	186	274	349	431

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1916-20, 1927-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
147	86	56	39	30	25	18	13	9.1	5.8	4.5	3.5	2.7	1.9	1.1

ARKANSAS RIVER BASIN

07217000 COYOTE CREEK BELOW BLACK LAKE, NM

LOCATION.--Lat 36°16'20", long 105°14'50", in NW¼ sec.33, T.14 N., R.16 E., on right bank 150 ft downstream from road crossing, a quarter of a mile downstream from Black Lake, 2 miles south of Black Lake Village, and 12 miles south of Agua Fria.

DRAINAGE AREA.--48 mi².

PERIOD OF RECORD.--December 1952 to September 1963 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 8,450 ft (from topographic map).

REMARKS.--Small amount of regulation possible at open flume in outlet from Black Lake. Diversions for irrigation for irrigation of several hundred acres above station. Surface waste from one small ditch may enter stream between station and Black Lake.

AVERAGE DISCHARGE.--10 years (1953-63), 4.62 ft³/s, 3,340 acre-ft/year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 913 ft³/s June 6, 1958 (gage height, 4.70 ft), from rating curve extended above 110 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1954-63

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1955-63

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STAN- DARD DEVI- ATION (FT³/S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.1	9.6	2.8	3.0	1.09	5.0	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	.2	7.1	2.8	2.6	.92	5.0	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	.1	4.2	2.0	1.5	.76	3.6	7	0.0	0.0	0.0	0.0	--	--
JANUARY	.1	3.3	1.5	.9	.59	2.7	14	.1	0.0	0.0	0.0	--	--
FEBRUARY	.1	7.5	2.9	2.2	.76	5.3	30	.3	.1	0.0	0.0	--	--
MARCH	1.0	10	4.6	3.1	.67	8.3	60	.6	.2	.1	0.0	--	--
APRIL	.2	53	12	19	1.55	22.2	90	1.0	.2	.1	.1	--	--
MAY	.1	68	13	21	1.60	23.5	120	1.1	.3	.1	.1	--	--
JUNE	.1	29	4.8	8.9	1.86	8.6	183	1.4	.4	.2	.1	--	--
JULY	.1	7.3	1.8	2.5	1.42	3.2							
AUGUST	.2	14	4.3	5.0	1.16	7.8							
SEPTEMBER	.1	8.2	2.6	2.8	1.08	4.7							
ANNUAL	.6	17	4.6	5.1	1.10	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1954-63

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	26	86	163	--	--	--
3	22	63	107	--	--	--
7	18	49	84	--	--	--
15	14	37	64	--	--	--
30	9.4	27	50	--	--	--
60	6.7	20	38	--	--	--
90	5.5	15	28	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-63

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
17	9.6	6.6	5.2	4.2	3.5	2.4	1.4	1.0	.5	.3	.2	.1	.1	.1

ARKANSAS RIVER BASIN

07218000 COYOTE CREEK NEAR GOLONDRINAS, NM

LOCATION.--Lat 35°55'00", long 105°09'49", Mora County, Hydrologic Unit 11080004, in Mora Grant, on left bank 0.5 mi downstream from Coyote Creek damsite, 2.3 mi northeast of Golondrin, and at mile 2.7.

DRAINAGE AREA.--215 mi².

PERIOD OF RECORD.--April 1928 to September 1930 (monthly discharge only, published in WSP 1311), October 1930 to current year.

REVISED RECORDS.--WSP 1281: 1939-40(M), 1941-42, 1945-47. WSP 1511: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,785 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 26, 1938, at site 0.4 mi downstream at different datum (nonrecording gage prior to Apr. 20, 1929). Apr. 26, 1938 to Sept. 25, 1946, at site 139 ft downstream at same datum.

REMARKS.--Diversions (including off-channel storage) for irrigation of about 4,000 acres upstream from station.

AVERAGE DISCHARGE.--56 years (water years 1930-85), 11.7 ft³/s, 8,480 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,050 ft³/s, Aug. 17, 1961, gage height, 9.60 ft, from rating curve extended above 250 ft³/s on basis of slope-area measurements at gage heights 5.54 ft, 7.74 ft, and 9.60 ft; maximum gage height, 10.1 ft, Aug. 30, 1936 (site and datum then in use); no flow Aug. 4, 1945, Apr. 10, May 9, 10, 1956, Feb. 20, 1978.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1930-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1931-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.7	80	8.5	13	1.57	6.1	1	.5	.2	.1	.1	0.0	0.0
NOVEMBER	1.7	54	7.7	8.5	1.10	5.5	3	.6	.2	.1	.1	.1	0.0
DECEMBER	1.6	24	7.1	4.3	.61	5.1	7	.7	.3	.2	.2	.1	.1
JANUARY	1.6	16	6.8	3.4	.50	4.9	14	.9	.4	.3	.2	.2	.2
FEBRUARY	1.1	19	7.2	3.9	.54	5.1	30	1.3	.6	.4	.3	.2	.2
MARCH	1.0	44	8.3	7.7	.92	6.0	60	2.1	1.0	.7	.5	.4	.3
APRIL	.3	191	19	38	2.00	13.6	90	2.7	1.4	.9	.7	.5	.4
MAY	.5	219	29	45	1.59	20.4	120	3.3	1.8	1.3	1.0	.8	.6
JUNE	.2	130	13	25	1.92	9.3	183	4.6	2.8	2.2	1.8	1.4	1.3
JULY	.8	67	8.9	12	1.29	6.4							
AUGUST	.8	135	15	20	1.34	10.8							
SEPTEMBER	.7	47	9.5	9.7	1.03	6.8							
ANNUAL	2.3	53	12	11	.95	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1930-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	122	262	390	595	781	995	
3	77	180	286	477	670	915	
7	54	130	211	358	508	699	
15	38	95	156	268	385	535	
30	29	69	113	194	278	386	
60	20	48	77	132	189	264	
90	16	37	58	99	140	195	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1930-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
42	22	16	12	10	8.5	6.5	5.1	3.8	2.8	2.3	1.9	1.5	1.1	.6

ARKANSAS RIVER BASIN

07220000 SAPELLO RIVER AT SAPELLO, NM

LOCATION.--Lat 35°46'11", long 105°15'05", San Miguel County, in Mora Grant, on downstream end of bridge pier nearest left bank, on State Highway 3, in Sapello, 0.5 mi downstream from Manuelitas Creek, and at mile 20.3.

DRAINAGE AREA.--132 mi².

PERIOD OF RECORD.--May to October 1915, January 1916 to November 1918, February 1919 to May 1921, July to September 1921, July 1956 to December 1973 (discontinued). Monthly discharge only for some periods, published in WSP 1311. Gage heights and discharge measurements published under same name for August 1903 to March 1904 are for a site above Manuelitas Creek, and are not equivalent.

REVISED RECORDS.--WSP 1511: Drainage area. WSP 1731: 1956(M).

GAGE.--Water-stage recorder. Altitude of gage is 6,910 ft from topographic map. May 1915 to September 1921, nonrecording gage at site 300 ft upstream at different datum.

REMARKS.--Diversions above station for irrigation of about 4,200 acres. Sapello Canal diverts from right bank 500 ft above station.

AVERAGE DISCHARGE.--18 years (1918, 1957-73), 21.0 ft³/s, 15,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,420 ft³/s Aug. 5, 1966 (gage height, 7.50 ft), from rating curve extended above 350 ft³/s on basis of computation of flow over dam at gage height 7.40 ft; maximum gage height, 10.6 ft Aug. 8, 1972; no flow at times.

The flood of June 11, 1913, reached a peak discharge of 11,400 ft³/s at a site 3 mi downstream.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1918, 1957-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1958-73

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
							PERIOD (CON- SECU- TIVE DAYS)	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	100	18	27	1.54	7.0	1	.7	.2	.1	0.0	--	--
NOVEMBER	0.0	63	13	16	1.28	5.0	3	.8	.2	.1	0.0	--	--
DECEMBER	.1	29	8.2	7.8	.95	3.3	7	.9	.2	.1	0.0	--	--
JANUARY	0.0	18	7.7	5.2	.68	3.0	14	1.1	.3	.2	.1	--	--
FEBRUARY	0.0	18	7.3	4.6	.63	2.9	30	1.6	.5	.3	.1	--	--
MARCH	.1	45	12	13	1.07	4.8	60	2.3	1.0	.6	.4	--	--
APRIL	.1	316	46	91	1.98	18.3	90	2.8	1.2	.8	.5	--	--
MAY	.7	224	35	62	1.78	13.9	120	5.2	2.5	1.6	1.1	--	--
JUNE	.4	63	15	19	1.25	6.0	183	7.6	3.3	2.1	1.4	--	--
JULY	.7	42	17	13	.80	6.6							
AUGUST	3.0	195	57	56	.99	22.5							
SEPTEMBER	.8	56	17	16	.95	6.6							
ANNUAL	2.5	66	21	20	.92	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1918, 1957-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	317	765	1160	1740	--	--
3	213	517	770	1130	--	--
7	140	344	518	767	--	--
15	95	234	353	524	--	--
30	70	169	255	381	--	--
60	48	112	170	257	--	--
90	36	83	124	188	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1918, 1957-73

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
81	43	29	21	17	15	10	6.7	4.8	3.4	2.8	1.9	1.3	.8	.3

ARKANSAS RIVER BASIN

07221000 MORA RIVER NEAR SHOEMAKER, NM

LOCATION.--Lat 35°48'01", long 104°46'58", Mora County, Hydrologic Unit 11080004, in Mora Grant, on left bank 5.5 mi east of Shoemaker, 12.3 mi upstream from Pedrosos Creek, and at mile 39.4.

DRAINAGE AREA.--1,104 mi², of which 71 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1914 to July 1915, October 1915 to August 1918, May 1919 to July 1924, September to November 1924, March to July 1925, June 1927 to current year. Prior to October 1930 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1281: 1931(M), 1933-1934(M), 1937(M), 1938(P), 1939-40(M), 1941-42(P). WSP 1731: 1921, 1928, 1951(M). WRD NM-75-1: 1974. WRD NM-78-1: 1977.

GAGE.--Water-stage recorder. Elevation of gage is 6,145 above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 10, 1934, at site 2,000 ft upstream at different datum.

REMARKS.--Diversions for irrigation of about 26,000 acres upstream from station. Off-channel lakes make it possible to divert and store water during non-irrigation season.

AVERAGE DISCHARGE.--63 years (water year 1920-24, 1928-85), 55.3 ft³/s, 40,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s, June 3, 1948, gage height, 12.79 ft, from rating curve extended above 2,800 ft³/s on basis of slope-area measurements at gage heights 10.09 ft and 12.79 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Sept. 29, 1904, and June 11, 1913, probably exceeded 30,000 ft³/s.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1920-24,
1928-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1921-24, 1929-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT							
								2	5	10	20	50	100		
								50%	20%	10%	5%	2%	1%		
OCTOBER	0.0	326	37	59	1.59	5.6	1	1.2	.3	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	.3	212	26	36	1.35	4.0	3	1.3	.3	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	.6	134	26	25	.99	3.9	7	1.4	.4	.1	0.0	0.0	0.0	0.0	0.0
JANUARY	1.0	94	26	20	.76	3.9	14	1.6	.5	.1	0.0	0.0	0.0	0.0	0.0
FEBRUARY	.8	62	22	17	.77	3.3	30	2.4	.7	.3	0.0	0.0	0.0	0.0	0.0
MARCH	.6	184	22	32	1.49	3.3	60	4.6	1.3	.6	.3	.1	.1	.1	.1
APRIL	.3	842	72	175	2.44	10.8	90	7.1	2.2	1.1	.6	.3	.2	.2	.2
MAY	1.6	1437	124	231	1.86	18.8	120	10	3.5	1.9	1.1	.5	.3	.3	.3
JUNE	.4	937	102	175	1.72	15.4	183	14	5.2	2.9	1.7	.9	.6	.6	.6
JULY	.3	700	59	105	1.79	8.9									
AUGUST	.1	587	91	115	1.26	13.8									
SEPTEMBER	0.0	359	56	75	1.34	8.5									
ANNUAL	2.7	302	55	60	1.08	100									

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1920-24, 1928-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	786	1840	2900	4730	6500	8690	
3	499	1160	1790	2850	3850	5050	
7	333	786	1200	1850	2430	3070	
15	231	563	861	1310	1700	2120	
30	168	408	621	941	1210	1500	
60	116	283	436	678	890	1130	
90	89	216	336	533	712	920	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1920-24, 1928-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
233	118	77	58	45	36	23	14	7.7	4.4	3.5	2.7	2.1	1.6	.8

ARKANSAS RIVER BASIN

07221500 CANADIAN RIVER NEAR SANCHEZ, NM
(Surveillance network station)

LOCATION.--Lat 35°39'08", long 104°22'39", in SW¼ sec.34, T.17 N., R.24 E., San Miguel County, Hydrologic Unit 11080003, on right bank 1,000 ft downstream from bridge on State Highway 65, 0.9 mi upstream from Lagartija Creek, 3.2 mi northeast of Sanchez, 10 mi downstream from Mora River, 25 mi southwest of Mosquero, and at mile 777.0.

DRAINAGE AREA.--6,015 mi², of which 303 mi² is probably noncontributing.

PERIOD OF RECORD.--May 1912 to December 1914, October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1177: Drainage area. WSP 1281: 1939, 1940(P), 1942, 1946. WSP 1731: 1956-57(M). WDR NM-82: 1965(M), 1979(M). The revised figures of discharge for September 1942, as published in WSP 1281, supersede those published in WSP 1311.

GAGE.--Water-stage recorder. Elevation of gage is 4,495 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 2121 for history of changes prior to November 1966. Supplemental water-stage recorder at site 0.6 mi upstream used at various times since 1966.

REMARKS.--Diversions for irrigation of about 56,000 acres upstream from station.

AVERAGE DISCHARGE.--51 years (water years 1913-14, 1937-85), 187 ft³/s, 135,480 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft³/s, June 18, 1965, gage height, about 36.6 ft, from floodmarks, present site and datum, from rating curve extended above 91,000 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Sept. 29, or 30, 1904, probably exceeded 100,000 ft³/s, but is believed to have been less than the peak of June 18, 1965.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1913-14,
1937-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1914, 1937-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	0.0	870	115	210	1.83	5.2	1	.5	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	1.4	506	52	83	1.61	2.3	3	.8	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	2.0	252	44	45	1.03	2.0	7	1.0	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	1.4	183	47	39	.85	2.1	14	1.5	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	1.5	363	55	61	1.10	2.5	30	4.2	.5	0.0	0.0	0.0	0.0	0.0
MARCH	.7	261	46	58	1.27	2.1	60	12	2.6	.9	.3	0.0	0.0	0.0
APRIL	0.0	5573	210	788	3.75	9.5	90	19	6.0	3.0	1.5	.7	.4	.4
MAY	0.0	4721	395	828	2.10	17.9	120	25	9.6	5.4	3.3	1.8	1.2	1.2
JUNE	0.0	4260	409	841	2.06	18.5	183	33	14	8.4	5.6	3.5	2.6	2.6
JULY	0.0	1129	250	246	.98	11.3								
AUGUST	8.4	1173	333	275	.83	15.1								
SEPTEMBER	1.0	4079	255	610	2.39	11.5								
ANNUAL	20	1191	187	210	1.12	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1913-14, 1937-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3230	9120	16700	33600	54200	84900
3	2080	5620	10100	19900	31600	49100
7	1300	3360	5840	11000	16900	25400
15	881	2170	3570	6220	9020	12700
30	639	1500	2360	3850	5280	7050
60	451	1010	1520	2340	3080	3930
90	348	769	1150	1750	2290	2900

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1913-14, 1937-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
760	344	209	140	104	81	53	36	25	16	12	8.7	5.8	3.2	.9

ARKANSAS RIVER BASIN

07222500 CONCHAS RIVER AT VARIADERO, NM

LOCATION.--Lat 35°24'10", long 104°26'35", in NE¼NE¼ sec.36, T.14 N., R.23 E., San Miguel County, Hydrologic Unit 11080005, on left bank 1.5 mi northeast of Variadero, 14 mi west of Conchas Dam, and at mile 15.0.

DRAINAGE AREA.--523 mi², of which 130 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1936 to current year.

REVISED RECORDS.--WSP 1281: 1937-39, 1941-47.

GAGE.--water-stage recorder. Elevation of gage is 4,390 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 30, 1942, at site 1.5 mi upstream at different datum. Mar. 30, 1942 to May 18, 1950, at present site at datum 0.5 ft higher.

REMARKS.--Diversions for irrigation of about 300 acres upstream from station.

AVERAGE DISCHARGE.--49 years (water years 1937-85), 14.1 ft³/s, 10,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,000 ft³/s, Sept. 1, 1942, gage height, 19.96 ft, present datum, from rating curve extended above 760 ft³/s on basis of slope-area measurements at gage heights 10.5 ft and 19.96 ft, present datum; no flow many days.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1938-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	91	9.7	22	2.22	5.7	1	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	15	1.3	2.9	2.30	.8	3	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	11	.9	2.3	2.40	.6	7	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	8.7	.8	1.6	2.13	.5	14	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	6.2	.7	1.4	1.97	.4	30	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	0.0	14	1.0	2.6	2.52	.6	60	0.0	0.0	0.0	0.0	0.0	0.0
APRIL	0.0	64	3.4	11	3.07	2.0	90	.1	0.0	0.0	0.0	0.0	0.0
MAY	0.0	302	14	48	3.49	8.2	120	.2	0.0	0.0	0.0	0.0	0.0
JUNE	0.0	503	28	79	2.82	16.6	183	.5	.1	0.0	0.0	0.0	0.0
JULY	0.0	144	33	38	1.15	19.4							
AUGUST	.2	154	35	37	1.06	20.6							
SEPTEMBER	0.0	549	42	119	2.87	24.6							
ANNUAL	.2	108	14	19	1.37	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1937-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	635	1630	2780	5080	7630	11100	
3	300	786	1360	2510	3810	5600	
7	150	395	683	1260	1910	2810	
15	91	236	394	686	985	1370	
30	58	147	234	381	518	681	
60	37	90	137	211	275	345	
90	27	67	104	161	210	265	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
32	9.5	4.2	2.3	1.3	.9	.3	.1	.1	0.0	0.0	0.0	0.0	0.0	0.0

ARKANSAS RIVER BASIN

07224500 CANADIAN RIVER BELOW CONCHAS DAM, NM

LOCATION.--Lat 35°24'32", long 104°10'10", San Miguel County, in Pablo Montoya Grant, on right bank 2.8 mi downstream from Conchas Dam, and 24 miles north of Newkirk.

DRAINAGE AREA.--7,417 mi², of which 433 mi² is probably noncontributing.

PERIOD OF RECORD.--May 1936 to December 1938, January 1942 to September 1972 (discontinued). Water-year estimate for 1942 published in WSP 1311.

REVISED RECORDS.--WSP 1177: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,021.90 ft above mean sea level. Prior to Dec. 13, 1941, at site 0.7 mi downstream at datum 6.2 ft higher.

REMARKS.--Flow regulated by Conchas Lake (see sta 07223500). Diversions above station for irrigation of about 90,000 acres, 36,000 of which are below station. Bell Ranch Canal (see sta 07223000) diverts directly from Conchas Dam and flumes from right to left bank just above river gage for irrigation of about 700 acres on Bell Ranch. Conchas Canal (see sta 07223300) diverts directly from Conchas Dam and bypasses gage for irrigation of about 35,000 acres around Tucumcari.

AVERAGE DISCHARGE.--32 years (1937-38, 1943-72), 54.0 ft³/s, 39,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,000 ft³/s June 3, 1937 (may have been affected by construction work on Conchas Dam); maximum gage height, 20.34 ft May 30, 1938, present datum (backwater from temporary construction dam); no flow at times.
Flood of Sept. 30, 1904 was estimated as 279,000 ft³/s by Corps of Engineers.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937-38, 1943-72

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1938, 1943-72

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	701	59	176	2.96	5.5	1	1.5	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	403	20	70	3.56	1.8	3	1.6	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	.1	146	13	26	2.06	1.2	7	1.7	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	264	17	47	2.70	1.6	14	2.0	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	338	19	59	3.08	1.8	30	2.4	.5	0.0	0.0	0.0	0.0	--
MARCH	0.0	116	12	23	1.94	1.1	60	3.5	.7	.2	0.0	0.0	0.0	--
APRIL	0.0	6063	198	1054	5.32	18.3	90	3.7	.9	.3	.1	0.0	0.0	--
MAY	0.0	2549	163	517	3.17	15.1	120	4.2	1.1	.4	.2	.1	0.0	--
JUNE	.1	3221	207	619	2.99	19.2	183	4.7	1.1	.5	.2	.1	0.0	--
JULY	.2	650	68	143	2.11	6.3								
AUGUST	.1	535	71	143	2.01	6.6								
SEPTEMBER	.1	4434	233	819	3.52	21.6								
ANNUAL	.1	485	54	107	1.99	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1937-38, 1943-72

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	193	1870	6440	25000	61500	--
3	102	1020	3740	16100	43300	--
7	64	619	2250	9650	25800	--
15	41	371	1280	5160	13200	--
30	29	242	800	3040	7450	--
60	21	155	474	1660	3830	--
90	18	125	373	1260	2850	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-38, 1943-72

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
74	19	13	11	9.1	7.8	5.6	4.2	3.4	2.8	2.5	2.1	1.3	1.1	.3

ARKANSAS RIVER BASIN

07226500 UTE CREEK NEAR LOGAN, NM

LOCATION.--Lat 35°26'18", long 103°31'31", in NW¼SE¼ sec.15, T.14 N., R.32 E., Harding County, Hydrologic Unit 11090007, on right bank 1.9 mi downstream from Alamosa Creek, 4.5 mi upstream from State Road 155, 4.7 mi upstream from high-water line of Ute Reservoir, 8.2 mi northwest of Logan, and at mile 10.0.

DRAINAGE AREA.--2,060 mi², of which 617 mi² is probably noncontributing.

PERIOD OF RECORD.--January 1912 to May 1914 (gage heights and discharge measurements only), January 1942 to current year. Records of discharge for August 1904 to June 1906, April 1909 to December 1911, published in WSP 307, are unreliable and should not be used.

REVISED RECORDS.--WSP 1281: 1942-48, 1950, 1951(P), WDR NM-81: 1965(P), 1967-68(M), 1969(P), 1971(M), 1972, 1975(M), 1977, 1979. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 3,815 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 2121 for history of changes prior to Oct. 1, 1964.

REMARKS.--Diversions for irrigation of a few hundred acres upstream from station.

AVERAGE DISCHARGE.--43 years (water years 1943-85), 23.2 ft³/s, 16,810 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s, May 28, 1946, July 12, 1951, gage height, 8.4 ft, site and datum then in use, from rating curve extended above 7,700 ft³/s on basis of slope-area measurements at gage heights 5.2 ft and 7.2 ft; maximum gage height, 9.94 ft, Aug. 11, 1981; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1, 1914, reached a stage of 22.95 ft, site and datum then in use. Another major flood reached a stage of 16.0 ft, 1942 datum, sometime in 1941, from information furnished by U.S. Bureau of Reclamation; discharge, about 70,000 ft³/s.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1943-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1944-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	139	11	29	2.59	4.0	1	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	93	3.4	14	4.22	1.2	3	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	40	2.2	6.6	3.01	.8	7	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	28	2.0	5.9	3.00	.7	14	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	15	1.7	3.8	2.18	.6	30	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	0.0	24	1.7	4.9	2.94	.6	60	0.0	0.0	0.0	0.0	0.0	0.0
APRIL	0.0	37	3.0	7.6	2.57	1.1	90	0.0	0.0	0.0	0.0	0.0	0.0
MAY	0.0	351	47	86	1.86	16.8	120	0.0	0.0	0.0	0.0	0.0	0.0
JUNE	0.0	191	28	45	1.59	10.2	183	.2	0.0	0.0	0.0	0.0	0.0
JULY	0.0	317	65	86	1.34	23.4							
AUGUST	0.0	520	82	101	1.23	29.7							
SEPTEMBER	0.0	261	30	54	1.83	10.8							
ANNUAL	.1	57	23	18	.76	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1943-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1380	3270	4550	5980	6870	7610
3	729	1660	2220	2770	3070	3300
7	375	866	1170	1470	1650	1780
15	219	491	648	796	874	930
30	127	279	361	435	472	497
60	82	178	228	271	291	304
90	63	134	170	200	214	223

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1943-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
73	19	6.3	2.5	.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ARKANSAS RIVER BASIN

07227000 CANADIAN RIVER AT LOGAN, NM

LOCATION.--Lat 35°21'25", long 103°25'03", in NE¼NE¼ sec.15, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080006, on left bank 1,100 ft upstream from bridge on U.S. Highway 54, 0.7 mi south of Logan, 1.4 mi upstream from Chicago, Rock Island & Pacific Railroad Co. bridge, 2.0 mi downstream from Ute Dam, 4.3 mi upstream from Revuelto Creek, and at mile 672.0.

DRAINAGE AREA.--11,141 mi², of which 1,100 mi² is probably noncontributing.

PERIOD OF RECORD.--June 1904 to November 1905 (gage heights and discharge measurements only), December 1908 to September 1909, February 1910, April to July 1910, August 1910 to September 1911 (gage heights and discharge measurements only), October 1911 to May 1914, January to May 1924, September 1924 to July 1925, January 1927 to April 1934, August 1934 to current year. Monthly discharge only for some periods, published in WSP 1311. Records for December 1909, January 1910, and May to July 1934, published in WSP 267, 287, and 762 are unreliable and should not be used. Published as South Canadian River June to September 1904.

REVISED RECORDS.--WSP 1087: 1935-36. WSP 1117: Drainage area. WSP 1281: 1912, 1932(M), 1934, 1945-47, 1949-50. WSP 1311: 1931(M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 3,668.1 ft above National Geodetic Vertical Datum of 1929. See WSP 1311 or 1731 for history of changes prior to Oct. 1, 1934.

REMARKS.--Flow regulated by Conchas Lake, 45 mi upstream (station 07223500) and Ute Reservoir, 2 mi upstream (station 07226800). Diversions for irrigation of about 90,000 acres upstream from station.

AVERAGE DISCHARGE.--36 years (water years 1912-13, 1928-29, 1931-62), 306 ft³/s, 221,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1925).--Maximum discharge, 219,000 ft³/s, Sept. 22, 1941, gage height, 29.3 ft, from floodmarks, from rating curve extended above 75,000 ft³/s; no flow at times prior to completion of Ute Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 278,000 ft³/s, Sept. 30, 1904, gage height, about 36.5 ft, site and datum used in 1909, from rating curve extended above 14,000 ft³/s, from Ninth Biennial Report of State Engineer.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF UTE DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1912-13, 1928-29, 1931-62							MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1913-14, 1928-29, 1931-62							
MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	0.0	4845	382	1022	2.68	10.6	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	663	51	130	2.55	1.4	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	477	33	80	2.41	.9	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	388	44	74	1.70	1.2	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	282	37	54	1.44	1.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	0.0	274	30	57	1.91	.8	60	2.0	.1	0.0	0.0	0.0	0.0	0.0
APRIL	0.0	6930	229	1079	4.71	6.4	90	5.2	.8	.3	.1	0.0	0.0	0.0
MAY	0.0	4109	539	933	1.73	14.9	120	7.3	1.4	.5	.2	0.0	0.0	0.0
JUNE	0.0	7407	774	1518	1.96	21.5	183	15	3.5	1.7	.9	.5	.3	.3
JULY	11	2255	433	445	1.03	12.0								
AUGUST	23	2054	473	468	.99	13.1								
SEPTEMBER	0.0	8027	581	1492	2.57	16.1								
ANNUAL	23	1819	306	410	1.34	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1912-13, 1928-29, 1931-62

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	8480	19700	31800	54100	77400	108000	
3	4570	11500	19700	36300	55200	81700	
7	2650	6760	11600	21400	32600	48200	
15	1510	3850	6700	12800	20000	30600	
30	964	2380	3980	7080	10500	15000	
60	604	1430	2340	4060	5900	8350	
90	481	1130	1830	3130	4490	6260	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1912-13, 1928-29, 1931-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME															
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%	
981	411	207	126	83	56	28	14	5.8	2.0	.9	.1	.1	0.0	0.0	

ARKANSAS RIVER BASIN

07227000 CANADIAN RIVER AT LOGAN, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF UTE DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	1.3	325	42	93	2.21	9.2	1	1.4	.9	.6	.5	--	--
NOVEMBER	1.2	287	23	62	2.74	5.0	3	1.5	1.0	.7	.5	--	--
DECEMBER	1.2	84	6.0	17	2.90	1.3	7	1.6	1.0	.7	.5	--	--
JANUARY	1.5	62	7.1	16	2.21	1.6	14	1.6	1.1	.8	.6	--	--
FEBRUARY	1.5	174	13	38	3.02	2.8	30	1.8	1.3	1.0	.8	--	--
MARCH	1.6	11	2.8	2.0	.70	.6	60	1.9	1.5	1.2	1.0	--	--
APRIL	1.7	77	10	21	2.05	2.3	90	--	--	--	--	--	--
MAY	1.0	10.0	2.7	1.8	.65	.6	120	1.9	1.6	1.5	1.5	--	--
JUNE	.8	575	48	131	2.75	10.5	183	3.4	1.5	1.1	.9	--	--
JULY	1.0	608	85	166	1.96	18.6							
AUGUST	1.5	720	111	185	1.67	24.4							
SEPTEMBER	1.4	838	105	207	1.97	23.1							
ANNUAL	1.6	145	38	44	1.15	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	307	1590	3620	8520	--	--
3	224	1250	2850	6510	--	--
7	166	897	1940	4070	--	--
15	126	686	1460	2990	--	--
30	85	453	968	2010	--	--
60	59	290	610	1260	--	--
90	44	212	447	941	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
288	10	4.4	3.3	3.1	2.9	2.5	2.3	2.2	2.0	2.0	1.9	1.8	1.6	1.4

ARKANSAS RIVER BASIN

07227100 REVUELTO CREEK NEAR LOGAN, NM

LOCATION.--Lat 35°20'29", long 103°23'37", in SW¼NW¼ sec.24, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080008, on right bank 0.3 mi upstream from bridge on State Highway 39, 1.9 mi southeast of Logan, and at mile 2.3.

DRAINAGE AREA.--786 mi².

PERIOD OF RECORD.--August 1959 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,665 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 16, 1981, at site 320 ft upstream at datum 0.56 ft higher.

REMARKS.--Low flows supplemented by surface and ground-water return from irrigation in vicinity of Tucumcari.

AVERAGE DISCHARGE.--26 years (water years 1960-85), 44.1 ft³/s, 31,950 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft³/s, July 9, 1960, gage height, 14.3 ft, site and datum then in use; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD (1941-47).--Maximum discharge determined, about 13,400 ft³/s, Sept. 18, 1946, gage height, 9.04 ft, at site 180 ft downstream at different datum, from unpublished records collected by U.S. Bureau of Reclamation.

A peak of 26,100 ft³/s, date unknown, gage height, 12.9 ft at former site and datum, was measured by slope-area method in May 1957.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1960-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1961-85

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STAN- DARD DEVI- ATION (FT³/S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	320	38	68	1.79	7.2	1	0.0	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	.1	34	7.4	9.1	1.23	1.4	3	0.0	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	129	9.5	25	2.65	1.8	7	0.0	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	19	3.9	4.9	1.26	.7	14	0.0	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	43	6.2	10	1.61	1.2	30	.3	0.0	0.0	0.0	0.0	0.0	--
MARCH	0.0	52	6.0	11	1.82	1.1	60	.9	.1	0.0	0.0	0.0	0.0	--
APRIL	.3	346	26	67	2.55	5.0	90	1.5	.3	.1	0.0	0.0	0.0	--
MAY	.1	177	42	41	.98	8.0	120	2.2	.5	.2	.1	0.0	0.0	--
JUNE	.9	492	62	96	1.53	11.9	183	6.4	1.8	.8	.4	.2	.2	--
JULY	.4	1203	135	239	1.77	25.7								
AUGUST	.9	575	118	135	1.14	22.4								
SEPTEMBER	1.7	515	71	104	1.46	13.5								
ANNUAL	4.7	204	44	39	.89	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1960-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	2000	4660	6900	10100	12600	--
3	940	2260	3480	5410	7110	--
7	505	1150	1740	2650	3450	--
15	299	649	938	1350	1680	--
30	182	373	525	737	905	--
60	121	248	348	490	602	--
90	94	192	269	375	459	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1960-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
133	56	36	25	19	14	7.7	4.2	2.0	.8	.3	.1	0.0	0.0	0.0

RIO GRANDE BASIN

08254000 COSTILLA CREEK BELOW COSTILLA DAM, NM

LOCATION.--Lat 36°52'26", long 105°16'47", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on left bank 125 ft downstream from Costilla Dam, 16 mi southeast of Costilla, and at mile 34.7.

DRAINAGE AREA.--54.6 mi².

PERIOD OF RECORD.--April 1937 to current year (no winter records 1937-44, 1947-49). Monthly discharge only for some periods, published in WSP 1312. Prior to October 1951, published as "below reservoir near Costilla."

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 9,290 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated by Costilla Reservoir (station 08253900). Diversions for irrigation of about 1,300 acres upstream from reservoir.

AVERAGE DISCHARGE.--39 years (water years 1945-47, 1950-85), 17.9 ft³/s, 12,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 301 ft³/s, June 19, 1979, gage height, 3.04 ft; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1945-47, 1950-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1946-47, 1951-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	0.0	11	.9	2.1	2.39	.4
DECEMBER	0.0	4.2	.3	.7	2.48	.1
JANUARY	0.0	2.8	.3	.5	2.12	.1
FEBRUARY	0.0	3.0	.3	.6	2.24	.1
MARCH	0.0	6.0	.4	1.1	2.63	.2
APRIL	0.0	62	3.4	11	3.31	1.4
MAY	0.0	173	26	35	1.38	10.6
JUNE	11	145	64	30	.47	26.7
JULY	17	172	69	33	.47	28.6
AUGUST	9.0	120	52	28	.54	21.5
SEPTEMBER	2.4	84	21	14	.67	8.6
ANNUAL	8.6	37	18	7.0	.39	100

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0	0.0
183	.2	0.0	0.0	0.0	0.0	0.0

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1945-47, 1950-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	123	151	168	190	206	221
3	118	145	164	188	206	225
7	87	117	142	177	206	239
15	79	106	126	155	180	206
30	72	97	114	139	158	179
60	65	86	99	117	130	143
90	56	75	88	104	115	127

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1945-47, 1950-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
97	71	51	34	21	12	1.8	.4	.1	.1	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08255500 COSTILLA CREEK NEAR COSTILLA, NM

LOCATION.--Lat 36°58'01", long 105°30'23", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on right bank 70 ft downstream from bridge on State Highway 196, 0.5 mi upstream from diversion dam, 1.6 mi southeast of Costilla, and at mile 15.9.

DRAINAGE AREA.--195 mi².

PERIOD OF RECORD.--March 1936 to current year (no winter records 1936-41, 1943). Monthly discharge for March 1943 and water-year estimate for 1943, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1937-39(M).

GAGE.--Water-stage recorder. Concrete control since Oct. 13, 1952. Elevation of gage is 7,900 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 18, 1944, at site 200 ft downstream at different datum. June 18, 1944 to Sept. 30, 1964, at site 0.4 mi upstream at different datum.

REMARKS.--Flow regulated by Costilla Reservoir (station 08253900) 19 mi upstream. Diversions for irrigation of about 2,000 acres upstream from station.

AVERAGE DISCHARGE.--25 years (water years 1961-85), 42.0 ft³/s, 30,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,150 ft³/s, May 11, 1942, gage height, 5.37 ft, site and datum then in use; minimum, 0.34 ft³/s, Mar. 15, 1969, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in 1886, from information by local residents.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1961-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1962-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.9	45	13	9.3	.71	2.6	1	3.7	2.9	2.5	2.3	2.0	--
NOVEMBER	4.1	23	10	4.4	.43	2.1	3	4.0	3.1	2.7	2.4	2.1	--
DECEMBER	3.7	19	7.6	3.3	.43	1.5	7	4.4	3.4	3.0	2.7	2.4	--
JANUARY	3.4	12	6.9	1.9	.27	1.4	14	4.9	3.7	3.3	2.9	2.6	--
FEBRUARY	3.4	13	8.0	2.3	.29	1.6	30	5.4	4.3	3.8	3.5	3.2	--
MARCH	6.9	26	14	4.9	.34	2.8	60	6.2	4.9	4.3	3.8	3.4	--
APRIL	15	124	45	29	.66	9.0	90	6.9	5.4	4.7	4.2	3.7	--
MAY	31	264	104	68	.65	20.9	120	7.5	5.9	5.1	4.6	4.0	--
JUNE	48	342	113	72	.64	22.7	183	9.2	6.8	5.9	5.2	4.5	--
JULY	24	140	79	36	.45	16.0							
AUGUST	17	137	65	32	.49	13.1							
SEPTEMBER	7.9	64	31	15	.50	6.3							
ANNUAL	17	87	42	20	.48	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1961-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	155	251	335	469	592	--
3	146	237	317	444	561	--
7	126	215	294	419	535	--
15	115	193	263	376	483	--
30	106	176	238	337	428	--
60	95	153	201	275	340	--
90	88	139	178	236	284	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
149	110	90	75	61	45	26	17	12	9.0	8.2	7.4	6.7	5.8	4.5

RIO GRANDE BASIN

08263000 LATIR CREEK NEAR CERRO, NM

LOCATION.--Lat 36°49'45", long 105°32'50", in SW¼SW¼ sec.15, T.30 N., R.13 E., Taos County, in Carson National Forest, on right bank at mouth of canyon, 100 ft upstream from heading of Cerro community ditch and 6.3 miles northeast of Cerro.

DRAINAGE AREA.--10.5 mi².

PERIOD OF RECORD.--June 1937 to September 1970 (discontinued). Monthly discharge only for some periods, published in WSP 1312. Records for April and May 1937, published in WSP 828, have been found to be unreliable (unknown portion of flow bypassing gage) and should not be used.

REVISED RECORDS.--WSP 1312: 1938(M). WRD N.Mex. 1968: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 8,280 ft (from topographic map).

REMARKS.--No diversion above station.

AVERAGE DISCHARGE.--25 years (water years 1946-70), 5.40 ft³/s (3,910 acre-ft/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 126 ft³/s June 18, 1965, from rating curve extended above 57 ft³/s; maximum gage height, 4.2 ft from floodmark, July 19, 1945 (log jam; discharge not determined, but may have exceeded 126 ft³/s); minimum discharge, 0.1 ft³/s Jan. 24, 25, 29, 1961.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1946-70

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1947-70

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STAN- DARD DEVI- ATION (FT³/S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	2.1	6.4	3.4	1.0	.29	5.2	1	1.5	.9	.6	.4	.3	--
NOVEMBER	1.9	4.5	2.8	.7	.24	4.3	3	1.6	1.1	.8	.6	.4	--
DECEMBER	1.5	3.0	2.3	.4	.19	3.5	7	1.8	1.3	.9	.7	.4	--
JANUARY	.6	2.9	2.0	.5	.25	3.2	14	2.0	1.4	1.1	.8	.5	--
FEBRUARY	1.5	3.1	2.2	.4	.18	3.4	30	2.0	1.5	1.2	1.0	.7	--
MARCH	1.5	3.1	2.3	.4	.18	3.6	60	2.0	1.7	1.5	1.4	1.2	--
APRIL	1.8	7.2	4.2	1.3	.32	6.5	90	2.0	1.7	1.6	1.5	1.4	--
MAY	4.0	29	11	5.5	.51	16.9	120	2.1	1.8	1.7	1.6	1.5	--
JUNE	3.4	42	17	11	.64	25.8	183	2.4	2.0	1.9	1.8	1.6	--
JULY	2.3	21	7.5	4.4	.58	11.6							
AUGUST	3.0	13	5.9	2.3	.38	9.2							
SEPTEMBER	2.1	7.6	4.5	1.5	.34	6.9							
ANNUAL	2.9	8.8	5.4	1.8	.33	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1946-70

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	24	40	54	73	89	--
3	22	37	50	67	82	--
7	20	35	46	62	75	--
15	18	31	41	55	66	--
30	16	27	34	45	53	--
60	13	21	26	32	37	--
90	11	17	21	26	30	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1946-70

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
18	12	8.6	6.8	5.7	5.0	3.9	3.2	2.8	2.5	2.4	2.2	2.1	1.9	1.7

RIO GRANDE BASIN
08263500 RIO GRANDE NEAR CERRO, NM

LOCATION.--Lat 36°44'24", long 105°40'59", in NW¼NE¼ sec.20, T.29 N., R.12 E., Taos County, Hydrologic Unit 13020101, on left bank 4 mi southwest of Cerro, 5.5 mi northwest of Questa, 7.4 mi upstream from Red River, and at mile 1,693.1.

DRAINAGE AREA.--8,440 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--May 1948 to current year.

REVISED RECORDS.--WDR NM-80-1: 1978(M).

GAGE.--Water-stage recorder. Elevation of gage is 7,110 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 7,000 acres in New Mexico.

AVERAGE DISCHARGE.--37 years (water years 1949-85), 429 ft³/s, 310,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,740 ft³/s, June 22, 1949, gage height, 15.78 ft; minimum, about 40 ft³/s, Sept. 10, 11, 1977.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1949-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	88	867	335	225	.67	6.5
DECEMBER	100	522	272	103	.38	5.3
JANUARY	116	401	266	75	.28	5.2
FEBRUARY	140	517	324	95	.29	6.3
MARCH	110	721	411	162	.39	8.0
APRIL	107	2329	460	422	.92	8.9
MAY	84	3740	885	907	1.02	17.2
JUNE	58	4400	1114	1203	1.08	21.6
JULY	52	2161	469	563	1.20	9.1
AUGUST	48	957	248	235	.95	4.8
SEPTEMBER	45	804	172	168	.98	3.3
ANNUAL	112	1187	429	258	.60	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1950-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	71	51	45	41	38	--
3	72	52	45	41	38	--
7	76	54	46	42	38	--
14	80	55	48	43	38	--
30	86	59	50	44	39	--
60	100	64	53	45	39	--
90	118	71	56	46	38	--
120	134	78	60	49	39	--
183	171	100	75	60	46	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1949-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1490	3170	4690	7120	9320	--
3	1420	3040	4490	6800	8880	--
7	1290	2750	4090	6240	8200	--
15	1110	2380	3580	5550	7400	--
30	971	2090	3140	4880	6510	--
60	809	1720	2571	3970	5290	--
90	700	1430	2090	3170	4150	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1949-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1580	898	633	518	446	387	311	253	193	143	124	107	91	76	61

RIO GRANDE BASIN

08264000 RED RIVER NEAR RED RIVER, NM

LOCATION.--Lat 36°37'30", long 105°23'20", in NE¼ sec.36, T.28 N., R.14 E. (projected), on right bank 100 ft downstream from confluence of Middle and East Forks and 6 miles south of Red River.

DRAINAGE AREA.--19.1 mi².

PERIOD OF RECORD.--July 1940 to September 1964, discontinued (no winter records 1956 to 1962). Prior to October 1947, published as "Rio Colorado near Red River."

GAGE.--Water-stage recorder. Datum of gage is 9,394.2 ft above mean sea level (plane-table levels by Division of Water and Power).

REMARKS.--None.

AVERAGE DISCHARGE.--17 years (1940-55, 1962-64), 17.5 ft³/s (12,670 acre-ft/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 264 ft³/s June 12, 1952 (gage height, 3.16 ft); maximum gage height recorded, 4.19 ft during period Jan. 9 to May 11, 1960 (ice jam); minimum daily discharge determined, 2.0 ft³/s Mar. 6-9, 1965, Jan. 12, 13, 1963, Dec. 13, 1963, Feb. 28, 1964.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1944-55

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1945-55

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.5	12	7.3	1.9	.26	3.7	1	3.2	2.6	2.3	2.0	--	--
NOVEMBER	4.1	8.6	5.7	1.3	.23	2.9	3	3.4	2.7	2.4	2.1	--	--
DECEMBER	3.2	6.7	4.7	1.0	.22	2.4	7	3.6	2.8	2.4	2.1	--	--
JANUARY	2.8	5.1	4.1	.7	.17	2.1	14	3.7	2.9	2.5	2.2	--	--
FEBRUARY	2.4	5.0	3.9	.9	.22	2.0	30	3.8	3.0	2.6	2.2	--	--
MARCH	2.3	6.0	4.3	1.1	.25	2.2	60	3.9	3.1	2.7	2.4	--	--
APRIL	4.9	16	11	3.7	.33	5.5	90	4.0	3.3	2.9	2.5	--	--
MAY	21	72	42	18	.43	21.0	120	4.2	3.4	3.0	2.7	--	--
JUNE	16	136	67	36	.53	33.7	183	4.9	4.0	3.6	3.3	--	--
JULY	9.5	46	25	12	.49	12.6							
AUGUST	7.7	28	15	5.7	.39	7.4							
SEPTEMBER	4.9	18	9.4	3.7	.40	4.8							
ANNUAL	9.5	26	17	5.5	.33	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1944-55

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	93	142	173	--	--	--
3	89	137	169	--	--	--
7	83	128	157	--	--	--
15	76	117	142	--	--	--
30	67	101	121	--	--	--
60	53	78	94	--	--	--
90	42	62	75	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1944-55

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
71	43	30	22	17	14	9.3	7.0	5.8	5.0	4.6	4.3	4.0	3.7	3.1

RIO GRANDE BASIN

08265000 RED RIVER NEAR QUESTA, NM

LOCATION.--Lat 36°42'12", long 105°34'04", in NE4SE4 sec.32, T.29 N., R.13 E. (projected), Taos County, Hydrologic Unit 13020101, in Carson National Forest, on left bank 1.3 mi upstream from Cabresto Creek, 1.5 mi east of Questa, and at mile 9.0.

DRAINAGE AREA.--113 mi².

PERIOD OF RECORD.--April to October 1910 and January to September 1911 (gage heights and discharge measurements only), October 1912 to March 1924, May 1924 to September 1925, January to March 1926, September 1926 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as Rio Colorado above Questa 1910-11, 1926-30, and as Rio Colorado near Questa 1912-25, 1930-48.

REVISED RECORDS.--WSP 808: 1935. WSP 1392: 1913, 1932, 1941, 1947-48. WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Wood or concrete control since Mar. 20, 1936. Datum of gage is 7,451.92 ft above National Geodetic Vertical Datum of 1929. See WSP 1923 for history of changes prior to Oct. 4, 1938.

REMARKS.--Diversion for irrigation of a few hundred acres upstream from station. Figures of discharge do not include flow in South ditch which diverts from left bank 1,500 ft upstream and bypasses gage for irrigation and stock water downstream. Since January 1966 surface- and ground-water diversions by Molybdenum Corp. of America (Molycorp) refinery 5.5 mi upstream bypass gage in tailings pipelines on left bank and discharge into settling pond 3 mi downstream. Effluent from this pond enters Red River as surface water and is included in discharge at Red River below Fish Hatchery, near Questa (station 08266820).

AVERAGE DISCHARGE.--56 years (water years 1925, 1931-85), 45.0 ft³/s, 32,600 acre-ft/yr, prior to extensive upstream diversions by Molycorp.
20 years (water years 1966-85), 38.1 ft³/s, 27,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1929).--Maximum discharge, 886 ft³/s, May 25, 1942, from rating curve extended above 450 ft³/s; maximum gage height, 5.80 ft, June 8, 1979; minimum discharge, 0.60 ft³/s, Jan. 21, 1981, result of freezeup.

The maximum discharge of May 25, 1942, may have been equaled or exceeded by the peak of June 15, 1921.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1925, 1931-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	8.1	40	18	6.4	.35	3.3
DECEMBER	3.9	33	15	6.1	.41	2.7
JANUARY	3.9	23	14	5.3	.37	2.6
FEBRUARY	4.8	24	15	5.1	.34	2.7
MARCH	5.1	35	17	6.1	.37	3.0
APRIL	9.7	143	45	28	.63	8.1
MAY	18	407	137	93	.68	24.6
JUNE	23	405	144	98	.68	25.9
JULY	12	172	61	38	.62	11.0
AUGUST	12	121	39	20	.52	6.9
SEPTEMBER	8.8	53	28	11	.40	5.0
ANNUAL	12	98	45	21	.47	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1931-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	7.8	4.8	3.6	2.8	2.1	1.7
3	8.7	5.4	4.1	3.2	2.3	1.9
7	9.8	6.1	4.6	3.6	2.6	2.1
14	11	7.1	5.3	4.1	3.0	2.4
30	12	8.0	6.0	4.6	3.3	2.6
60	13	8.7	6.6	5.1	3.7	3.0
90	14	9.2	7.0	5.5	4.1	3.3
120	14	9.7	7.6	6.0	4.6	3.7
183	16	12	9.4	7.8	6.2	5.3

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1925, 1931-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	196	358	485	662	806	957
3	188	346	464	625	751	880
7	175	320	428	574	687	802
15	161	287	377	495	583	670
30	146	258	337	439	515	589
60	120	209	272	353	412	470
90	99	170	219	283	330	377

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1925, 1931-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
174	109	75	55	44	37	27	23	20	17	16	14	13	11	7.5

RIO GRANDE BASIN

08266000 CABRESTO CREEK NEAR QUESTA, NM

LOCATION.--Lat 36°43'50", long 105°33'12", in SE¼SE¼ sec.21, T.29 N., R.13 E., Taos County, Hydrologic Unit 13020101, in Carson National Forest, on right bank 900 ft downstream from Llano ditch heading, 2.6 mi downstream from Lake Fork, 3 mi northeast of Questa, and at mile 3.5.

DRAINAGE AREA.--36.7 mi².

PERIOD OF RECORD.--September 1943 to current year.

REVISED RECORDS.--WSP 1712: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,845 ft above National Geodetic Vertical Datum of 1929, from river-profile map.

REMARKS.--Llano ditch (station 08265500), the only diversion upstream from station, diverts from right bank 900 ft upstream from gage for irrigation of about 800 acres downstream. Flow regulated by Cabresto Reservoir (capacity, 732 acre-feet, after reconstruction in 1928) on Lake Fork 1 mi upstream from mouth. Present capacity of Cabresto Reservoir is 1,100 acre-feet after further rehabilitation between 1959 and 1961.

AVERAGE DISCHARGE.--42 years (water years 1944-85), 10.3 ft³/s, 7,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 204 ft³/s, June 2, 1983, gage height, 4.82 ft; minimum, 0.44 ft³/s, Dec. 2, 1950, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 25, 1942, may have exceeded the maximum of record.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1944-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1945-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	2.7	10	5.7	1.9	.34	4.6	1	2.1	1.5	1.2	1.0	.9	.7
NOVEMBER	2.7	9.8	4.8	1.5	.31	3.9	3	2.4	1.8	1.5	1.3	1.1	1.0
DECEMBER	2.4	8.1	4.2	1.3	.30	3.4	7	2.8	2.2	1.9	1.7	1.5	1.4
JANUARY	2.3	6.5	4.1	1.0	.25	3.3	14	3.1	2.5	2.2	2.1	1.9	1.8
FEBRUARY	2.3	6.5	4.3	.9	.20	3.5	30	3.4	2.8	2.5	2.3	2.2	2.1
MARCH	3.0	7.7	5.0	1.0	.19	4.1	60	3.7	3.0	2.8	2.6	2.4	2.3
APRIL	6.7	30	13	5.4	.43	10.2	90	3.8	3.2	2.9	2.7	2.5	2.4
MAY	7.9	97	33	27	.82	26.7	120	4.0	3.4	3.1	2.8	2.6	2.5
JUNE	5.8	95	22	21	.93	17.9	183	4.5	3.7	3.3	3.1	2.8	2.6
JULY	4.6	27	11	4.0	.35	9.1							
AUGUST	4.3	21	9.3	3.5	.38	7.6							
SEPTEMBER	2.9	14	7.0	2.9	.40	5.7							
ANNUAL	5.3	23	10	4.5	.44	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1944-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	41	83	123	189	251	326	
3	38	79	119	185	249	327	
7	35	73	110	173	234	309	
15	31	64	97	151	205	270	
30	27	54	80	125	168	222	
60	22	40	57	84	110	141	
90	19	32	44	62	79	99	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1944-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
30	17	14	13	12	10	7.6	6.1	5.2	4.6	4.3	4.0	3.7	3.4	3.0

RIO GRANDE BASIN

08267000 RED RIVER AT MOUTH, NEAR QUESTA, NM

LOCATION.--Lat 36°38'53", long 105°41'34", in SW¼NW¼ sec.20, T.28 N., R.12 E., Taos County, Hydrologic Unit 13020101, in Carson National Forest, on left bank 250 ft upstream from Rio Grande, and 6.5 mi southwest of Questa.

DRAINAGE AREA.--190 mi².

PERIOD OF RECORD.--October 1950 to September 1978 (discontinued). Monthly discharge only for October and November 1950, published in WSP 1732.

GAGE.--Water-stage recorder. Altitude of gage is 6,600 ft, from topographic map.

REMARKS.--Diversions for irrigation of about 3,000 acres above station.

AVERAGE DISCHARGE.--27 years (water years 1952-78), 76.0 ft³/s, 55,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 730 ft³/s Aug. 12, 1964, gage height, 6.05 ft; minimum, 29 ft³/s Feb. 13, 1965.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1952-78

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1953-78

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	43	79	57	9.8	.17	6.3	1	40	37	36	35	34	--
NOVEMBER	42	73	54	7.1	.13	5.9	3	41	38	37	35	34	--
DECEMBER	38	69	49	6.8	.14	5.4	7	43	39	38	36	35	--
JANUARY	41	60	50	5.7	.11	5.5	14	44	41	39	37	36	--
FEBRUARY	42	63	50	4.8	.10	5.6	30	46	42	40	39	38	--
MARCH	42	62	51	4.9	.10	5.6	60	47	43	42	40	38	--
APRIL	44	141	71	25	.36	7.8	90	48	45	43	41	40	--
MAY	52	388	145	82	.56	16.0	120	49	45	44	42	41	--
JUNE	49	370	154	86	.56	17.0	183	51	47	45	44	42	--
JULY	46	158	88	33	.37	9.7							
AUGUST	50	135	75	21	.28	8.3							
SEPTEMBER	41	92	61	13	.22	6.8							
ANNUAL	48	119	76	19	.25	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1952-78

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	205	326	420	551	659	--
3	194	316	410	542	652	--
7	181	296	386	513	618	--
15	169	273	353	467	560	--
30	155	247	316	412	490	--
60	135	209	264	342	404	--
90	119	178	221	279	325	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1952-78

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
181	131	104	87	77	70	61	57	54	51	50	48	47	45	43

RIO GRANDE BASIN

08267500 RIO HONDO NEAR VALDEZ, NM

LOCATION.--Lat 36°32'30", long 105°33'21", Taos County, Hydrologic Unit 13020101, in Carson National Forest, on right bank 500 ft upstream from first diversion, 1.6 mi east of Valdez, 3.8 mi downstream from South Fork, and at mile 9.2.

DRAINAGE AREA.--36.2 mi².

PERIOD OF RECORD.--August 1934 to current year.

REVISED RECORDS.--WSP 1342: 1935. WSP 1712: Drainage area. WSP 1732: 1942(M).

GAGE.--Water-stage recorder. Concrete control since Oct. 28, 1938. Elevation of gage is 7,650 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 28, 1938, at datum 1.92 ft lower.

REMARKS.--No diversions upstream from station.

AVERAGE DISCHARGE.--51 years, 34.9 ft³/s, 25,280 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 541 ft³/s, May 13, 1941; maximum gage height, 4.81 ft, Jan. 5, 1970 (ice jam); minimum discharge, about 1 ft³/s, Jan. 27, 1942, result of freezeup.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1935-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1936-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	11	44	18	5.9	.34	4.2	1	7.7	6.2	5.5	5.0	4.5	4.1
NOVEMBER	8.3	36	15	4.5	.31	3.5	3	8.2	6.7	6.0	5.5	4.9	4.5
DECEMBER	7.5	23	12	2.9	.24	2.9	7	8.8	7.3	6.6	6.1	5.5	5.1
JANUARY	6.0	20	11	2.3	.22	2.5	14	9.3	7.9	7.3	6.8	6.4	6.1
FEBRUARY	6.1	17	11	2.0	.19	2.5	30	9.7	8.4	7.9	7.5	7.1	6.8
MARCH	7.6	28	13	3.5	.26	3.1	60	10	8.8	8.2	7.7	7.3	7.0
APRIL	11	92	33	17	.51	7.9	90	10	9.0	8.4	8.0	7.5	7.2
MAY	21	246	96	56	.58	23.0	120	11	9.4	8.7	8.2	7.8	7.5
JUNE	26	299	113	70	.62	27.0	183	12	11	9.8	9.3	8.8	8.5
JULY	15	144	48	31	.64	11.4							
AUGUST	11	60	29	12	.40	6.8							
SEPTEMBER	9.9	49	21	8.0	.38	5.1							
ANNUAL	16	70	35	15	.42	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1935-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	146	247	319	414	486	559
3	141	239	309	400	470	540
7	133	223	287	371	434	498
15	124	205	262	336	392	448
30	113	187	238	305	355	406
60	93	154	197	255	299	345
90	77	125	159	204	240	276

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
128	85	59	44	34	29	22	18	15	13	12	12	11	9.6	8.6

RIO GRANDE BASIN

08268500 ARROYO HONDO AT ARROYO HONDO, NM

LOCATION.--Lat 36°31'56", long 105°41'06", Taos County, Hydrologic Unit 13020101, in Arroyo Hondo Grant, on left bank 0.9 mi downstream from Arroyo Hondo, and at mile 1.4.

DRAINAGE AREA.--65.6 mi².

PERIOD OF RECORD.--April 1910 to June 1912 (discharge measurements and fragmentary gage-height record), July 1912 to December 1928 (fragmentary), and January 1932 to current year. Monthly discharge only for some periods, published in WSP 1312. Statement in WSP 328 that there was no flow in January and much of February 1912 is erroneous. Published as Rio Hondo near Arroyo Hondo prior to 1928, and as Rio Hondo at Arroyo Hondo 1928-65. Discontinued October 1, 1985.

REVISED RECORDS.--WSP 1342: 1915, 1932(M), 1934-38(M). WSP 1712: Drainage area. WSP 1732: 1926. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 6,670 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1923 for history of changes prior to Sept. 11, 1963. Sept. 11, 1963 to Apr. 2, 1969, at site 25 ft downstream on right bank at same datum.

REMARKS.--Diversions upstream from station for irrigation of about 2,500 acres, of which about 1,700 acres is a transbasin diversion to Rio Lucero.

AVERAGE DISCHARGE.--66 years (water years 1913-24, 1927-28, 1933-85), 27.2 ft³/s, 19,710 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1937).--Maximum discharge, 1,060 ft³/s, July 19, 1948, gage height, 3.75 ft, from rating curve extended above 200 ft³/s; maximum gage height, 5.06 ft, June 8, 1979, backwater from debris; minimum discharge, 3.3 ft³/s, May 7, 1977.
Maximum gage height observed, 5.45 ft, site and datum then in use, Aug. 23, 1935; discharge uncertain, but probably exceeded 1,200 ft³/s. A minimum daily discharge of 3 ft³/s occurred Oct. 19, 1912. Discharge not determined for the major floods of Oct. 6, 1911, Sept. 1, 1932 and July 22, 1934.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1913-24, 1927-28, 1933-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1914-25, 1927-28, 1933-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	4.0	44	13	7.5	.57	3.9	1	6.2	5.2	4.7	4.5	4.2	4.0
NOVEMBER	6.3	41	15	6.6	.43	4.6	3	6.4	5.3	4.9	4.6	4.3	4.1
DECEMBER	7.8	33	18	4.3	.24	5.4	7	6.7	5.6	5.1	4.8	4.4	4.2
JANUARY	9.8	30	17	3.2	.20	5.0	14	7.2	5.9	5.4	5.0	4.7	4.5
FEBRUARY	9.7	27	17	3.2	.19	5.0	30	7.9	6.3	5.8	5.4	5.0	4.8
MARCH	8.6	42	17	4.9	.29	5.0	60	9.1	7.1	6.4	5.9	5.4	5.1
APRIL	6.1	85	26	18	.70	7.9	90	10	7.6	6.7	6.0	5.4	5.1
MAY	4.8	277	75	65	.86	22.8	120	11	8.1	7.0	6.2	5.4	5.2
JUNE	5.8	293	81	73	.90	24.5	183	13	9.3	8.0	7.0	6.1	5.5
JULY	5.1	107	26	23	.91	7.7							
AUGUST	5.8	61	14	9.2	.68	4.1							
SEPTEMBER	4.0	44	13	8.1	.64	3.8							
ANNUAL	9.6	65	27	15	.55	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1913-24, 1927-28, 1933-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	121	240	333	463	566	673	
3	113	222	307	423	515	609	
7	103	204	283	393	481	572	
15	90	181	254	360	446	538	
30	75	155	225	331	423	526	
60	59	121	176	263	341	431	
90	48	94	135	201	261	331	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1913-24, 1927-28, 1933-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
103	54	36	27	23	21	18	16	14	12	11	9.3	8.3	7.4	6.5

RIO GRANDE BASIN

08268700 RIO GRANDE NEAR ARROYO HONDO, NM

LOCATION.--Lat 36°32'04", long 105°42'34", in NW¼ sec.31, T.27 N., R.12 E., Taos County, Hydrologic Unit 13020101, on right bank 350 ft downstream from Arroyo Hondo, 400 ft downstream from bridge on county road, 2.2 mi west of Arroyo Hondo, 11.6 mi northwest of Taos, and at mile 1,677.4.

DRAINAGE AREA.--8,760 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--February 1963 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Diversion upstream from station for irrigation of about 620,000 acres in Colorado and 15,000 acres in New Mexico.

AVERAGE DISCHARGE.--22 years (water years 1964-85), 643 ft³/s, 465,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,940 ft³/s, June 14, 1985, gage height, 8.08 ft; minimum, 136 ft³/s, Aug. 2, 1963.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-85

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STAN- DARD DEVI- ATION (FT³/S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	155	905	363	213	.59	4.7	1	198	160	146	137	--	--
NOVEMBER	220	1018	510	248	.49	6.6	3	201	163	149	140	--	--
DECEMBER	210	657	402	121	.30	5.2	7	206	165	151	142	--	--
JANUARY	260	547	400	82	.21	5.2	14	210	167	152	142	--	--
FEBRUARY	292	657	457	98	.21	5.9	30	222	175	158	147	--	--
MARCH	369	850	610	153	.25	7.9	60	245	188	167	153	--	--
APRIL	220	2620	659	514	.78	8.5	90	280	208	180	160	--	--
MAY	203	4381	1245	1056	.85	16.1	120	304	221	189	166	--	--
JUNE	168	5013	1570	1406	.90	20.4	183	345	248	208	181	--	--
JULY	171	2487	726	593	.82	9.4							
AUGUST	168	941	434	230	.53	5.6							
SEPTEMBER	158	988	335	209	.62	4.3							
ANNUAL	233	1435	643	301	.47	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	2000	3730	5090	7010	--	--	
3	1930	3630	4970	6840	--	--	
7	1780	3350	4600	6380	--	--	
15	1600	3020	4170	5850	--	--	
30	1420	2700	3770	5370	--	--	
60	1200	2270	3180	4570	--	--	
90	1040	1920	2660	3770	--	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2000	1260	917	743	662	597	498	430	374	306	276	250	226	204	180

RIO GRANDE BASIN

08269000 RIO PUEBLO DE TAOS NEAR TAOS, NM

LOCATION.--Lat 36°26'22", long 105°30'11", in SW¼SE¼ sec.36, T.26 N., R.13 E., Taos County, Hydrologic Unit 13020101, in Taos Pueblo Grant, on right bank 2.3 mi east of Taos Pueblo, 4.5 mi northeast of Taos, 5.8 mi upstream from Rio Lucero, and at mile 15.1.

DRAINAGE AREA.--66.6 mi².

PERIOD OF RECORD.--January 1911 to December 1916, January 1940 to December 1951, annual maximum, water years 1952-62, October 1962 (monthly discharge only), November 1962 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1911-12, 1914. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Nov. 20, 1962. Elevation of gage is 7,380 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1923 for history of changes prior to Nov. 20, 1962.

REMARKS.--No diversions upstream from station.

AVERAGE DISCHARGE.--34 years (water years 1915, 1941-51, 1964-85), 29.8 ft³/s, 21,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft³/s, May 26, 1979, gage height, 3.42 ft, from rating curve extended above 370 ft³/s; maximum gage height, 3.90 ft, from floodmark, May 14, 1941, site and datum then in use; minimum discharge, about 0.9 ft³/s, Jan. 9, 1964, result of freezeup.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1915, 1941-51, 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1941-51, 1964-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	4.8	19	9.2	3.4	.37	2.7	1	4.4	3.3	2.8	2.4	2.1	--
NOVEMBER	4.8	18	8.5	2.7	.32	2.5	3	4.8	3.7	3.2	2.8	2.5	--
DECEMBER	4.1	12	7.4	2.0	.27	2.2	7	5.3	4.2	3.7	3.3	3.0	--
JANUARY	3.4	11	6.7	1.6	.25	1.9	14	5.7	4.5	3.9	3.5	3.0	--
FEBRUARY	3.6	13	7.2	1.8	.25	2.1	30	6.1	4.9	4.3	3.8	3.3	--
MARCH	5.6	27	12	4.2	.36	3.4	60	6.4	5.1	4.5	4.1	3.6	--
APRIL	13	155	46	31	.67	13.5	90	6.7	5.4	4.7	4.2	3.7	--
MAY	11	356	121	96	.79	35.4	120	7.0	5.6	5.0	4.5	4.0	--
JUNE	8.6	268	75	65	.87	21.9	183	7.5	6.0	5.3	4.8	4.4	--
JULY	4.6	75	23	16	.71	6.8							
AUGUST	4.5	32	15	7.0	.46	4.5							
SEPTEMBER	4.2	32	11	5.9	.53	3.2							
ANNUAL	7.7	72	30	18	.59	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1915, 1941-51,
1964-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	153	345	515	773	996	--
3	145	322	475	704	897	--
7	134	290	419	605	758	--
15	121	251	354	499	613	--
30	105	214	299	417	510	--
60	85	168	233	323	394	--
90	68	132	182	250	304	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1915, 1941-51, 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
133	73	45	31	24	19	14	11	8.7	7.6	7.1	6.6	6.1	5.6	4.9

RIO GRANDE BASIN

08271000 RIO LUCERO NEAR ARROYO SECO, NM

LOCATION.--Lat 36°30'30", long 105°31'49", Taos County, Hydrologic Unit 13020101, in Tract C Taos Pueblo Grant, on right bank 200 ft upstream from diversion dam for Tenorio and Indian ditches, 2.2 mi east of Arroyo Seco, 7.4 mi northeast of Taos, and at mile 8.1.

DRAINAGE AREA.--16.6 mi².

PERIOD OF RECORD.--April to December 1910 (discharge measurements and occasional gage heights), January 1911 to September 1915, March to December 1916 (fragmentary), October 1933 to December 1951, annual maximum, water years 1952-62, October 1962 (monthly discharge only), November 1962 to current year. Monthly discharge only for some periods, published in WSP 1312. Fragmentary records for October 1915 to February 1916, published in WSP 438, are unreliable and should not be used. Published as "near Taos," 1910-16.

REVISED RECORDS.--WSP 1512: 1912, 1916, 1949. WSP 1732: Drainage area. WDR NM-75-1: 1973. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Concrete control since Nov. 21, 1962. Datum of gage is 8,051.44 ft above National Geodetic Vertical Datum of 1929. See WSP 1923 for history of changes prior to Nov. 21, 1962.

REMARKS.--No diversions upstream from station.

AVERAGE DISCHARGE.--39 years (water years 1914-15, 1935-51, 1964-85), 22.0 ft³/s, 15,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 310 ft³/s, June 8, 1979, gage height, 2.33 ft; maximum gage height, 3.12 ft, May 13, 1941, datum then in use; minimum discharge, about 1.4 ft³/s, Nov. 2, 1951, result of freezeup.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1914-15, 1935-51, 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1915, 1936-51, 1964-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	6.3	28	11	4.3	.38	4.2	1	4.5	3.5	3.0	2.6	2.1	1.9
NOVEMBER	5.4	22	8.7	3.1	.35	3.3	3	4.7	3.7	3.2	2.8	2.4	2.2
DECEMBER	4.3	14	6.9	1.9	.27	2.6	7	4.9	4.0	3.5	3.1	2.8	2.5
JANUARY	3.5	10	5.9	1.3	.22	2.2	14	5.0	4.2	3.8	3.5	3.2	3.0
FEBRUARY	3.5	9.0	5.7	1.3	.23	2.2	30	5.2	4.4	4.0	3.7	3.4	3.2
MARCH	4.1	16	8.3	2.6	.31	3.2	60	5.5	4.6	4.2	3.9	3.6	3.4
APRIL	8.8	48	22	9.1	.42	8.3	90	5.7	4.8	4.4	4.1	3.8	3.6
MAY	15	156	60	32	.53	22.9	120	6.1	5.1	4.7	4.4	4.1	3.9
JUNE	14	178	72	46	.64	27.6	183	7.2	6.0	5.5	5.1	4.8	4.6
JULY	7.9	97	30	20	.66	11.5							
AUGUST	6.6	38	18	7.6	.41	7.0							
SEPTEMBER	6.7	35	13	5.3	.40	5.0							
ANNUAL	9.9	47	22	8.8	.40	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1914-15, 1935-51, 1964-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	109	178	221	270	303	332
3	104	168	207	250	278	304
7	96	153	188	227	253	277
15	87	140	172	208	232	254
30	77	125	155	191	216	239
60	63	101	126	157	179	201
90	51	81	101	125	143	160

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-15, 1935-51, 1964-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
86	54	38	29	23	19	14	11	8.9	7.3	6.8	6.3	5.8	5.3	4.8

RIO GRANDE BASIN

08275000 RIO FERNANDO DE TAOS NEAR TAOS, NM

LOCATION.--Lat 36°22'32", long 105°32'55", in W₄NW₄ sec.27, T.25 N., R.13 E., Taos County, Hydrologic Unit 13020101, in Carson National Forest, on right bank 175 ft upstream from Acequia Madre del Norte del Canon, 2.5 mi southeast of Taos, and at mile 5.0.

DRAINAGE AREA.--71.7 mi².

PERIOD OF RECORD.--April to September 1910 (gage heights and discharge measurements only), October 1910 to June 1911 (discharge measurements only), October 1912 to September 1917, October 1927 to December 1928, October to November 1962 (monthly discharge only), December 1962 to September 1980 (discontinued).

REVISED RECORDS.--WSP 1512: 1914-15. WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Dec. 13, 1962. Altitude of gage is 7,140 ft, from topographic map. See WSP 1923 for history of changes prior to Dec. 13, 1962.

REMARKS.--A few very small diversions above station for irrigation.

AVERAGE DISCHARGE.--17 years (water years 1964-80), 5.70 ft³/s, 4,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1962).--Maximum discharge, 219 ft³/s May 13, 1973, gage height, 2.38 ft; minimum, 0.02 ft³/s part or all of each day Jan. 14-18, 1967, Sept. 15-19, 1972, Sept. 2, 4, 5, 8-13, 16, 19, Oct. 7, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood of undetermined magnitude occurred July 21, 1921.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-80

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.1	3.7	1.2	.9	.77	1.7	1	.2	.1	0.0	0.0	--	--
NOVEMBER	.1	4.2	1.4	1.0	.69	2.0	3	.2	.1	0.0	0.0	--	--
DECEMBER	0.0	3.8	1.3	1.0	.72	1.9	7	.3	.1	0.0	0.0	--	--
JANUARY	0.0	3.8	1.3	1.0	.80	1.9	14	.3	.1	0.0	0.0	--	--
FEBRUARY	.2	4.2	1.7	1.0	.57	2.5	30	.4	.1	.1	0.0	--	--
MARCH	.9	7.9	3.7	1.7	.46	5.4	60	.6	.2	.1	.1	--	--
APRIL	2.8	46	13	10	.78	19.3	90	.8	.3	.1	.1	--	--
MAY	2.0	115	29	35	1.20	42.3	120	.9	.4	.2	.1	--	--
JUNE	.6	60	9.2	15	1.57	13.5	183	1.2	.5	.3	.2	--	--
JULY	.1	15	2.8	3.6	1.28	4.1							
AUGUST	.1	8.1	2.2	2.0	.91	3.2							
SEPTEMBER	0.0	4.2	1.3	1.2	.88	1.9							
ANNUAL	1.3	20	5.7	5.2	.91	100							

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-80

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	.2	.1	0.0	0.0	--	--
3	.2	.1	0.0	0.0	--	--
7	.3	.1	0.0	0.0	--	--
14	.3	.1	0.0	0.0	--	--
30	.4	.1	.1	0.0	--	--
60	.6	.2	.1	.1	--	--
90	.8	.3	.1	.1	--	--
120	.9	.4	.2	.1	--	--
183	1.2	.5	.3	.2	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-80

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	26	68	116	207	--	--
3	25	67	113	199	--	--
7	23	62	103	180	--	--
15	21	54	92	161	--	--
30	18	45	74	129	--	--
60	14	34	55	92	--	--
90	11	26	41	68	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-80

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
23	12	7.5	5.1	4.1	3.3	2.5	1.9	1.4	1.0	.8	.7	.5	.3	.1

RIO GRANDE BASIN

08275300 RIO PUEBLO DE TAOS NEAR RANCHITO, NM

LOCATION.--Lat 36°23'38", long 105°37'23", Taos County, Hydrologic Unit 13020101, in Gijosa Grant, on left bank 1,100 ft downstream from Rio Fernando de Taos, 1.6 mi southwest of Ranchito, and at mile 7.9.

DRAINAGE AREA.--199 mi².

PERIOD OF RECORD.--March 1957 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,747 ft, from topographic map.

REMARKS.--Diversions for irrigation of about 9,000 acres above station.

AVERAGE DISCHARGE.--22 years (water years 1958-80), 31.0 ft³/s, 22,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft³/s May 26, 1979, gage height, 4.82 ft; minimum, 0.21 ft³/s Aug. 24, 1972, result of regulation.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1958-80

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1959-80

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.0	45	15	9.9	.68	3.9	1	3.0	1.4	.9	.6	--	--
NOVEMBER	8.2	52	19	9.0	.48	5.1	3	3.2	1.5	1.0	.7	--	--
DECEMBER	10	35	18	5.8	.32	5.0	7	3.5	1.7	1.1	.8	--	--
JANUARY	8.3	26	17	4.4	.25	4.7	14	3.8	2.0	1.4	1.0	--	--
FEBRUARY	12	33	20	4.8	.24	5.4	30	4.5	2.4	1.8	1.4	--	--
MARCH	14	39	23	6.7	.29	6.3	60	5.8	2.9	2.1	1.5	--	--
APRIL	4.7	150	51	41	.79	13.9	90	6.7	3.4	2.4	1.7	--	--
MAY	2.8	454	103	125	1.21	28.0	120	7.7	4.0	2.8	2.1	--	--
JUNE	2.6	461	64	103	1.61	17.3	183	11	5.8	4.0	2.9	--	--
JULY	1.5	109	16	24	1.51	4.3							
AUGUST	1.7	33	12	10	.86	3.2							
SEPTEMBER	2.2	30	10	8.6	.82	2.8							
ANNUAL	9.2	108	31	24	.78	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1958-80

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	115	288	485	870	--	--
3	106	267	449	806	--	--
7	94	237	396	706	--	--
15	83	205	342	606	--	--
30	70	171	285	507	--	--
60	58	134	219	381	--	--
90	49	107	170	290	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-80

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
105	56	39	30	26	24	20	18	15	12	9.7	7.2	5.3	4.0	2.6

RIO GRANDE BASIN

08275500 RIO GRANDE DEL RANCHO NEAR TALPA, NM

LOCATION.--Lat 36°17'52", long 105°34'55", Taos County, Hydrologic Unit 13020101, in Carson National Forest, Rancho del Rio Grande Grant, on right bank 1.4 mi downstream from Rito de la Olla (locally known as Pot Creek), 3.2 mi south of Talpa, 4.3 mi upstream from Rio Chiquito, and at mile 6.9.

DRAINAGE AREA.--83 mi², approximately.

PERIOD OF RECORD.--October 1952 to September 1982 (discontinued). Prior to October 1955, published as Rio Grande del Rancho near Ranchos de Taos and October 1955 to September 1960 as Rio Grande de Ranchos near Talpa.

GAGE.--Water-stage recorder. Altitude of gage is 7,238 ft, from topographic map. Prior to Nov. 11, 1952, nonrecording gage at site 1,035 ft downstream at lower datum. Nov. 11, 1952 to Nov. 5, 1968, water-stage recorder at site 1,000 ft downstream at lower datum. Nov. 6, 1968 to Aug. 28, 1980, water-stage recorder at present site on left bank at same datum.

REMARKS.--Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--30 years (water years 1953-82), 19.7 ft³/s, 14,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 497 ft³/s May 21, 1973, gage height 3.87 ft; maximum gage height, 4.01 ft Sept. 10, 1964, site and datum then in use; minimum discharge, 0.2 ft³/s Jan. 5, 1955, result of freezeup.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1953-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1954-82

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	2.1	14	6.7	2.8	.43	2.8	1	3.1	2.0	1.5	1.1	.8	--
NOVEMBER	3.0	11	5.9	1.9	.32	2.5	3	3.2	2.2	1.7	1.3	1.0	--
DECEMBER	3.0	10	5.3	1.6	.31	2.2	7	3.6	2.5	1.9	1.6	1.2	--
JANUARY	2.1	9.2	4.8	1.5	.32	2.0	14	3.8	2.7	2.2	1.8	1.4	--
FEBRUARY	2.7	8.8	5.2	1.4	.27	2.2	30	4.1	3.0	2.4	2.0	1.6	--
MARCH	4.7	13	7.8	2.3	.29	3.3	60	4.5	3.3	2.7	2.3	1.9	--
APRIL	9.6	92	30	20	.67	12.7	90	4.7	3.5	3.0	2.6	2.2	--
MAY	13	237	88	63	.72	37.1	120	4.9	3.7	3.2	2.8	2.4	--
JUNE	6.4	171	49	45	.91	20.7	183	5.4	4.1	3.5	3.0	2.6	--
JULY	3.1	29	13	6.9	.53	5.5							
AUGUST	2.3	36	12	8.5	.69	5.2							
SEPTEMBER	1.6	25	8.6	6.0	.69	3.7							
ANNUAL	6.0	42	20	11	.54	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1953-82

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	116	233	319	432	515	--	
3	112	223	306	413	493	--	
7	105	207	282	380	452	--	
15	94	184	250	336	400	--	
30	79	155	212	289	349	--	
60	59	113	153	209	252	--	
90	46	85	115	154	185	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1953-82

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
88	46	28	20	15	13	9.2	7.4	6.3	5.4	5.0	4.6	4.2	3.7	3.1

RIO GRANDE BASIN

08275600 RIO CHIQUITO NEAR TALPA, NM

LOCATION.--Lat 36°19'55", long 105°34'42", Taos County, Hydrologic Unit 13020101, in Carson National Forest, Rancho del Rio Grande Grant, on right bank 1 mi southeast of Talpa, and at mile 2.1.

DRAINAGE AREA.--37.0 mi².

PERIOD OF RECORD.--March 1957 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 7,223 ft, from topographic map.

REMARKS.--No diversions above station.

AVERAGE DISCHARGE.--23 years (water years 1958-80), 8.41 ft³/s, 6,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 309 ft³/s June 8, 1979, gage height, 2.81 ft; maximum gage height, 3.50 ft May 20, 1973 (backwater from debris); minimum discharge, 0.16 ft³/s Jan. 31, 1972, result of freezeup.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1958-80

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	1.8	4.8	3.1	.8	.26	3.1
DECEMBER	1.6	4.7	2.7	.8	.29	2.7
JANUARY	1.5	3.8	2.4	.6	.26	2.4
FEBRUARY	1.6	4.0	2.7	.7	.24	2.7
MARCH	2.4	5.8	3.7	1.0	.27	3.6
APRIL	4.4	39	14	8.4	.61	13.7
MAY	4.4	100	36	29	.81	35.8
JUNE	2.4	87	17	20	1.15	16.8
JULY	1.3	15	6.3	3.7	.58	6.3
AUGUST	1.4	12	5.4	2.9	.54	5.3
SEPTEMBER	1.4	9.4	4.0	2.1	.52	4.0
ANNUAL	2.6	21	8.4	4.8	.57	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1959-80

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.2	.8	.6	.4	--	--
3	1.4	1.0	.7	.6	--	--
7	1.7	1.2	.9	.8	--	--
14	1.8	1.3	1.1	1.0	--	--
30	2.0	1.6	1.4	1.2	--	--
60	2.2	1.7	1.5	1.4	--	--
90	2.4	1.9	1.7	1.5	--	--
120	2.5	2.0	1.8	1.6	--	--
183	2.8	2.2	1.9	1.7	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1958-80

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	42	92	136	200	--	--
3	40	89	130	188	--	--
7	38	82	119	170	--	--
15	34	73	105	151	--	--
30	30	63	90	129	--	--
60	22	45	64	91	--	--
90	18	35	48	67	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-80

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
36	17	12	8.3	6.8	5.6	4.5	3.8	3.2	2.8	2.6	2.4	2.2	1.9	1.6

RIO GRANDE BASIN

08276000 RIO PUEBLO DE TAOS AT LOS CORDOVAS, NM

LOCATION.--Lat 36°23'20", long 105°38'00", in SE1/2 sec.23, T.25 N., R.12 E.,(projected), in Martinez Grant, on left bank 200 ft downstream from Rio Grande de Ranchos, 0.2 mile downstream from Arroyo Seco, half a mile northeast of Los Cordovas, and 3 1/2 miles west of Taos.

DRAINAGE AREA.--359 mi².

PERIOD OF RECORD.--April 1910 to January 1926, September 1926 to September 1965 (discontinued). Monthly discharge only for some periods, published in WSP 1312. Prior to October 1955, published as Rio Taos at Los Cordovas. All records include flow of Rio Grande de Ranchos.

GAGE.--Water-stage recorder. Datum of gage is 6,709.59 ft above mean sea level, datum of 1929. Prior to Oct. 4, 1921, staff gages at nearby sites at different datums. Oct. 4, 1921 to Sept. 30, 1934, water-stage recorder at site 200 ft upstream at datum about 1.26 ft higher and Oct. 1, 1934 to Apr. 30, 1957, at site 200 ft upstream at datum 1.00 ft higher.

REMARKS.--Diversions above station for irrigation of about 12,000 acres, a small part of which is below station.

AVERAGE DISCHARGE.--54 years (1910-25, 1926-65), 58.5 ft³/s (42, 350 acre-ft/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,830 ft³/s May 14, 1941 (gage height, 5.81 ft, site and datum then in use), from rating curve extended above 1,300 ft³/s by logarithmic plotting; minimum, 0.8 ft³/s July 17, 1951.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1911-25, 1927-65

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1912-25, 1928-65

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	3.9	149	25	22	.90	3.6	1	4.9	2.8	2.1	1.7	1.3	1.1
NOVEMBER	11	75	29	13	.46	4.1	3	5.4	3.2	2.4	2.0	1.5	1.3
DECEMBER	15	59	29	9.3	.33	4.1	7	6.0	3.5	2.6	2.1	1.7	1.4
JANUARY	15	53	29	8.1	.28	4.2	14	6.9	4.0	3.0	2.4	1.9	1.6
FEBRUARY	17	72	35	11	.32	5.0	30	8.6	5.0	3.8	3.0	2.4	2.0
MARCH	19	89	43	16	.36	6.2	60	11	6.0	4.5	3.5	2.7	2.3
APRIL	16	452	102	82	.80	14.6	90	12	7.0	5.2	4.1	3.1	2.6
MAY	10	1038	230	225	.98	32.8	120	14	8.1	6.1	4.7	3.6	3.0
JUNE	4.1	480	116	121	1.04	16.6	183	18	11	8.9	7.3	5.8	5.0
JULY	2.3	148	25	32	1.27	3.6							
AUGUST	3.4	131	19	22	1.11	2.8							
SEPTEMBER	2.6	73	18	15	.81	2.6							
ANNUAL	15	204	59	38	.66	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1911-25, 1927-65

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	335	700	995	1410	1750	2090
3	309	649	923	1310	1620	1950
7	273	573	819	1170	1460	1770
15	235	489	700	1010	1260	1530
30	194	405	584	851	1080	1330
60	146	300	434	639	819	1020
90	116	230	328	479	613	764

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1911-25, 1927-65

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
244	126	77	57	47	41	33	28	24	19	17	14	11	7.7	5.5

RIO GRANDE BASIN

08276300 RIO PUEBLO DE TAOS BELOW LOS CORDOVAS, NM

LOCATION.--Lat 36°22'39", long 105°40'05", Taos County, Hydrologic Unit 13020101, in Gijosa Grant, on left bank 1.9 mi southwest of Los Cordovas, 2.5 mi downstream from Rio Grande del Rancho, and at mile 5.1.

DRAINAGE AREA.--380 mi².

PERIOD OF RECORD.--March 1957 to current year.

REVISED RECORDS.--WSP 1732: 1957(M). WSP 1923: 1957(P), 1958. WDR NM-81-1: 1979(P).

GAGE.--Water-stage recorder. Elevation of gage is 6,652 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 4, 1984 at site 700 ft downstream at same datum.

REMARKS.--Diversions for irrigation of about 12,000 acres upstream from station, of which about 1,700 acres are irrigated by water from Rio Hondo.

AVERAGE DISCHARGE.--28 years (water years 1958-85), 59.9 ft³/s, 43,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,380 ft³/s, Aug. 24, 1957, gage height, 5.80 ft; maximum gage height, 6.00 ft (site then in use), July 30, 1982, from rating curve extended above 900 ft³/s; minimum, 1.9 ft³/s, July 31, Aug. 1, 1972.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1958-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1959-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	7.9	75	23	14	.60	3.2	1	7.2	4.3	3.3	2.6	2.1	--
NOVEMBER	14	72	29	12	.42	4.0	3	7.6	4.6	3.5	2.8	2.2	--
DECEMBER	14	50	31	9.8	.32	4.3	7	8.1	4.9	3.7	3.0	2.3	--
JANUARY	14	47	30	7.7	.26	4.1	14	8.6	5.2	4.0	3.2	2.5	--
FEBRUARY	22	54	34	8.9	.26	4.7	30	10	5.8	4.4	3.5	2.7	--
MARCH	24	91	41	15	.37	5.8	60	12	6.9	5.1	3.9	2.9	--
APRIL	8.3	301	101	85	.84	14.1	90	14	7.9	5.8	4.5	3.4	--
MAY	5.7	844	241	258	1.07	33.6	120	16	8.8	6.4	4.9	3.6	--
JUNE	4.7	708	121	164	1.36	16.8	183	20	12	8.5	6.4	4.6	--
JULY	3.9	113	26	27	1.06	3.6							
AUGUST	4.3	64	22	16	.74	3.0							
SEPTEMBER	4.3	52	20	14	.69	2.7							
ANNUAL	15	168	60	44	.74	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1958-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	273	683	1090	1770	2410	--
3	249	645	1040	1720	2370	--
7	222	582	947	1580	2180	--
15	195	505	824	1380	1920	--
30	162	413	675	1140	1610	--
60	125	306	495	837	1180	--
90	102	235	372	618	866	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1958-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
261	106	65	51	44	40	34	29	25	21	18	15	12	8.2	6.0

RIO GRANDE BASIN

08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM
(Surveillance network station)

LOCATION.--Lat 36°19'12", long 105°45'14", in NW¼NE¼ sec.15, T.24 N., R.11 E., Taos County, Hydrologic Unit 13020101, on left bank 1.7 mi downstream from bridge on State Highway 96, 2.0 mi downstream from Rio Pueblo de Taos, 11.8 mi southwest of Taos, and at mile 1,657.7.

DRAINAGE AREA.--9,730 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--July 1925 to current year. Prior to October 1930 monthly discharge only, published in WSP 1312. Published as "at Taos Junction Bridge, near Taos" prior to 1934.

REVISED RECORDS.--WSP 788: 1934(M). WSP 828: Drainage area. WSP 1392: 1931-1932, 1935, 1937, 1945, 1950.

GAGE.--Water-stage recorder. Datum of gage is 6,050.3 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1934, at bridge 1.7 mi upstream at different datum.

REMARKS.--Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 30,000 acres in New Mexico.

AVERAGE DISCHARGE.--60 years (water years 1926-85), 742 ft³/s, 537,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft³/s, June 7, 1948, gage height, 9.18 ft, and June 22, 1949, gage height, 9.23 ft; minimum, 155 ft³/s, Sept. 21, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1888, about 14,000 ft³/s June 19, 1903, from records for Rio Grande at Embudo and estimated inflow. Other floods exceeding 10,000 ft³/s occurred June 9, 1905, May 28, 1920, and June 16, 1921, from comparison of records for stations near Lobatos and at Embudo.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1926-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	224	1532	516	256	.50	5.8
DECEMBER	243	1018	482	136	.28	5.4
JANUARY	263	748	465	90	.19	5.2
FEBRUARY	290	757	530	108	.20	6.0
MARCH	259	1151	630	180	.29	7.1
APRIL	250	3020	809	584	.72	9.1
MAY	233	5993	1774	1515	.85	19.9
JUNE	188	6007	1789	1634	.91	20.1
JULY	185	2945	710	679	.96	8.0
AUGUST	184	1537	415	281	.68	4.7
SEPTEMBER	161	2087	375	311	.83	4.2
ANNUAL	271	1840	742	366	.49	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1927-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	223	187	173	164	156	151
3	225	188	174	165	157	153
7	230	191	176	167	158	153
14	236	196	180	170	161	156
30	249	205	187	176	165	159
60	272	215	195	181	168	161
90	292	226	202	186	171	163
120	312	236	209	191	174	164
183	357	266	233	210	189	177

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1926-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	2560	5160	7340	10600	13300	16300
3	2460	4980	7100	10300	13000	15900
7	2250	4590	6590	9630	12200	15200
15	2000	4070	5850	8560	10900	13600
30	1750	3570	5160	7600	9750	12200
60	1440	2890	4160	6150	7910	9940
90	1230	2340	3300	4780	6090	7580

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1926-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2590	1450	972	784	687	618	527	460	398	335	310	285	260	237	209

RIO GRANDE BASIN

08279000 EMBUDO CREEK AT DIXON, NM

LOCATION.--Lat 36°12'39", long 105°54'47", in NE¼SE¼ sec.19, T.23 N., R.10 E., Rio Arriba County, Hydrologic Unit 13020101, on right bank 750 ft upstream from U.S. Highway 64, 0.5 mi upstream from mouth, 0.5 mi east of Embudo Post Office, and 1.7 mi northwest of Dixon.

DRAINAGE AREA.--305 mi².

PERIOD OF RECORD.--October 1923 to February 1926, October 1926 to September 1955, annual maximum, water years 1956-62, September 1962 to current year. Monthly discharge only for some periods, published in WSP 1312. Figures of daily discharge for July 6-25, 1932, published in WSP 733, and maximum discharges for water years 1931-33, 1935, 1937-38, 1941, are unreliable and should not be used.

REVISED RECORDS.--WSP 1512: 1931-32, 1941, 1947(M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 5,858.60 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 30, 1938, at site about 1 mi upstream at different datum. Nov. 30, 1938 to Aug. 1, 1941, at site about 0.9 mi upstream at datum about 59.9 ft higher. Aug. 2, 1941 to Sept. 1, 1971, at site 750 ft downstream at datum 9.10 ft lower. April 1956 to Sept. 21, 1962, crest-stage gage.

REMARKS.--Diversions upstream from station for irrigation of about 6,500 acres, a small part of which are are downstream from gage.

AVERAGE DISCHARGE.--59 years (water years 1924-25, 1927-29, 1931-85), 80.7 ft³/s, 58,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1941).--Maximum discharge, 4,200 ft³/s, Aug. 29, 1977, gage height, 7.10 ft, from rating curve extended above 1,600 ft³/s; maximum gage height, 7.6 ft, Aug. 4, 1967; minimum discharge, 0.06 ft³/s, June 26, 27, 1950.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1924-25, 1928-29, 1931-85
MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1925, 1928-29, 1932-85

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STAN- DARD DEVI- ATION (FT³/S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	3.1	116	36	23	.64	3.7	1	9.0	3.9	2.1	1.1	.4	.2
NOVEMBER	4.2	96	33	13	.40	3.4	3	9.0	4.2	2.4	1.4	.7	.4
DECEMBER	9.8	54	30	8.3	.28	3.1	7	9.6	4.7	2.9	1.9	1.0	.7
JANUARY	12	42	28	5.9	.21	2.9	14	11	5.5	3.4	2.2	1.2	.8
FEBRUARY	15	73	29	9.1	.31	3.0	30	14	6.7	4.2	2.7	1.6	1.1
MARCH	16	112	42	19	.45	4.4	60	17	8.6	5.6	3.7	2.3	1.6
APRIL	13	505	140	107	.76	14.5	90	20	11	7.9	5.6	3.6	2.6
MAY	8.9	1231	306	258	.84	31.7	120	23	14	9.6	6.8	4.4	3.1
JUNE	5.5	813	190	197	1.04	19.7	183	27	17	12	9.2	6.2	4.7
JULY	.9	204	46	47	1.02	4.8							
AUGUST	2.7	166	45	41	.91	4.7							
SEPTEMBER	2.8	190	39	35	.91	4.0							
ANNUAL	13	235	81	51	.63	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1924-25, 1928-29,
1932-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	424	850	1180	1640	2010	2380
3	396	796	1100	1510	1820	2140
7	361	722	988	1330	1590	1840
15	324	652	890	1200	1420	1640
30	274	558	769	1050	1250	1450
60	214	444	621	860	1040	1230
90	168	344	484	677	830	988

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1924-25, 1928-29, 1931-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
371	205	124	84	63	52	40	33	29	25	22	20	16	12	7.5

RIO GRANDE BASIN

08279500 RIO GRANDE AT EMBUDO, NM

LOCATION.--Lat 36°12'20", long 105°57'49", in SW¼SW¼ sec.23, T.23 N., R.9 E., Rio Arriba County, Hydrologic Unit 13020101, on right bank 0.2 mi downstream from bridge at Embudo, 2.8 mi downstream from Embudo Creek, and at mile 1,643.1.

DRAINAGE AREA.--10,400 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--January 1889 to current year. Monthly discharge only for some periods, published in WSP 1312. Figures of daily discharge for Oct. 4 to Nov. 30, 1896, published in WSP 358, are unreliable and should not be used.

REVISED RECORDS.--WSP 358: 1900-1902. WSP 828: Drainage area. WSP 878: 1915-16. WSP 1512: 1892-99, 1904, 1916, 1931-32, 1939, 1944-45, 1950. WSP 1712: 1903(M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 5,789.14 ft above National Geodetic Vertical Datum of 1929. Jan. 1 to Feb. 28, 1889, nonrecording gage 1.2 mi upstream at different datum. March 1889 to December 1903, nonrecording gage 1,300 ft upstream at different datum. September 1912 to June 1914, water-stage recorder on downstream end of bridge pier at site 200 ft upstream at present datum.

REMARKS.--Diversions upstream from station for irrigation about 620,000 acres in Colorado and 40,000 acres in New Mexico. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--86 years (water years 1890-93, 1895-1903, 1913-85), 929 ft³/s, 673,100 acre-ft/yr. 55 years (water years 1931-85), 807 ft³/s, 584,700 acre-ft/yr, subsequent to upstream development.

EXTREMES FOR PERIOD OF RECORD (1889-1903 AND SINCE 1911).--Maximum discharge, 16,200 ft³/s, June 19, 1903, gage height, about 15.9 ft; minimum daily, 130 ft³/s, June 30, 1902. A flood of about 14,000 ft³/s occurred between May 20 and June 10, 1905, from a comparison of records for Lobatos and Otowi Bridge. Another major flood occurred Sept. 29 or 30, 1904.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1890-93, 1895-93, 1913-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1891-93, 1896-1904, 1914-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	182	1888	505	387	.77	4.5	1	244	194	174	161	148	141
NOVEMBER	231	1611	563	262	.47	5.1	3	250	198	177	164	150	143
DECEMBER	264	1052	514	139	.27	4.6	7	257	202	181	166	152	144
JANUARY	280	799	488	95	.20	4.4	14	266	209	186	171	156	148
FEBRUARY	290	803	552	111	.20	5.0	30	286	222	197	179	162	153
MARCH	280	1132	701	191	.27	6.3	60	316	238	209	188	168	157
APRIL	274	3773	1125	772	.69	10.1	90	341	254	221	198	176	163
MAY	249	7228	2448	1837	.75	22.0	120	367	271	234	208	183	168
JUNE	199	8974	2422	2087	.86	21.8	183	413	303	261	232	205	190
JULY	158	3466	863	769	.89	7.8							
AUGUST	173	1742	505	356	.70	4.5							
SEPTEMBER	171	2254	435	321	.74	3.9							
ANNUAL	308	2077	929	444	.48	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1890-93, 1895-1903, 1913-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3550	7010	9740	13500	16600	19800
3	3420	6810	9500	13300	16300	19500
7	3180	6370	8930	12600	15500	18600
15	2850	5680	7950	11200	13800	16600
30	2510	4960	6920	9680	11900	14300
60	2070	4010	5530	7660	9380	11200
90	1730	3200	4350	5940	7220	8560

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1890-93, 1895-1903, 1913-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3530	2030	1350	982	828	731	614	531	465	398	362	328	295	263	227

RIO GRANDE BASIN

08281100 RIO GRANDE ABOVE SAN JUAN PUEBLO, NM

LOCATION.--Lat 36°03'58", long 106°04'34", in NE¼SE¼ sec.10, T.21 N., R.8 E., Rio Arriba County, Hydrologic Unit 13020101, in San Juan Pueblo Grant, on left bank 0.8 mi upstream from bridge on State Highway 74, 1.0 mi northwest of San Juan Pueblo, 1.8 mi upstream from Rio Chama, 5.1 mi north of Espanola, and at mile 1,630.1.

DRAINAGE AREA.--10,550 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--March 1963 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 42,000 acres in New Mexico. San Juan lateral (station 08280100 - discontinued, Sept. 1984) and San Juan Pueblo ditch (station 08280200), both on left bank, and Guique ditch (station 08280700), on right bank, bypass gage for irrigation of several hundred acres downstream from station.

AVERAGE DISCHARGE.--22 years, 783 ft³/s, 567,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,220 ft³/s, June 9, 1979, gage height, 6.94 ft; minimum, 92 ft³/s, Aug. 10-11, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--For years of outstanding floods see records for Rio Grande at Embudo (station 08279500).

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	181	1056	418	237	.57	4.5	1	209	149	127	111	--	--
NOVEMBER	257	1213	586	266	.45	6.2	3	214	154	132	117	--	--
DECEMBER	278	811	493	135	.27	5.2	7	222	163	142	128	--	--
JANUARY	335	639	484	89	.18	5.2	14	230	170	149	135	--	--
FEBRUARY	369	727	540	102	.19	5.8	30	251	185	161	145	--	--
MARCH	439	1147	724	186	.26	7.7	60	278	202	174	155	--	--
APRIL	233	3266	856	663	.77	9.1	90	317	224	188	163	--	--
MAY	217	5066	1715	1433	.84	18.3	120	345	242	201	174	--	--
JUNE	142	5951	1877	1697	.90	20.0	183	398	278	229	196	--	--
JULY	165	2722	801	673	.84	8.5							
AUGUST	173	1151	510	285	.56	5.4							
SEPTEMBER	152	1155	387	241	.62	4.1							
ANNUAL	292	1645	783	377	.48	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2410	4560	6350	9030	--	--
3	2330	4480	6280	8950	--	--
7	2170	4190	5880	8420	--	--
15	1970	3820	5380	7760	--	--
30	1750	3400	4820	6990	--	--
60	1470	2870	4080	5950	--	--
90	1280	2410	3380	4880	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2500	1570	1130	891	778	702	596	518	452	367	326	292	263	232	191

RIO GRANDE BASIN

08283500 RIO CHAMA AT PARK VIEW , NM

LOCATION.--Lat 36°44'15", long 106°34'40", in Tierra Amarilla Grant, at downstream end of bridge pier nearest right bank on State Highway 51, just below mouth of Rio Brazos and half a mile northwest of Park View.

DRAINAGE AREA.--405 mi².

PERIOD OF RECORD.--November 1912 to September 1916 and October 1930 to September 1955 (discontinued) in reports of Geological Survey. November 1912 to September 1916 and April 1925 to December 1931 in reports of State Engineer. All records include flow in Rio Brazos.

REVISED RECORDS.--WSP 1342: 1914-15, 1931(M), 1946-47(M).

GAGE.--Water-stage recorder. Altitude of gage is 7,280 ft (from river-profile map). Prior to July 21, 1945, intermittently at present or either of two other sites within 150 ft of present gage at different datums.

REMARKS.--Diversion for irrigation of about 7,000 acres above station.

AVERAGE DISCHARGE.--27 years (water years 1914-15, 1931-55), 334 ft³/s (241,900 acre-ft/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,530 ft³/s Apr. 16, 1937, from rating curve extended above 3,800 ft³/s; maximum gage height, 8.12 ft May 26, 1941, site and datum then in use; minimum daily discharge, 1.3 ft³/s Aug. 15, 16, Oct. 27, 1951.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1914-15, 1931-55

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1915, 1932-55

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.2	380	75	77	1.03	1.9	1	14	5.8	3.4	2.2	1.2	--
NOVEMBER	19	228	54	44	.81	1.3	3	15	6.3	3.7	2.3	1.3	--
DECEMBER	18	111	45	22	.49	1.1	7	17	7.6	4.5	2.8	1.5	--
JANUARY	19	100	45	18	.40	1.1	14	20	9.3	5.8	3.8	2.2	--
FEBRUARY	26	143	54	22	.41	1.3	30	24	12	7.6	5.1	3.1	--
MARCH	42	246	116	57	.49	2.9	60	29	16	11	7.6	5.0	--
APRIL	231	2710	916	564	.62	22.9	90	34	20	14	10	7.2	--
MAY	286	3814	1694	927	.55	42.4	120	39	23	16	12	8.1	--
JUNE	48	2391	736	627	.85	18.4	183	42	26	20	17	14	--
JULY	6.7	550	141	140	.99	3.5							
AUGUST	9.5	189	66	47	.71	1.7							
SEPTEMBER	4.3	133	58	40	.69	1.4							
ANNUAL	128	644	334	160	.48	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1914-15, 1931-55

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2950	4320	5240	6420	7290	--
3	2790	4020	4830	5840	6580	--
7	2530	3630	4350	5260	5940	--
15	2220	3270	3970	4870	5530	--
30	1850	2760	3370	4150	4720	--
60	1360	2080	2570	3200	3670	--
90	1030	1580	1960	2440	2800	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-15, 1931-55

	DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
	5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1910	1040	604	374	224	151	85	62	51	42	38	34	29	23	15	

RIO GRANDE BASIN

08284100 RIO CHAMA NEAR LA PUENTE, NM

LOCATION.--Lat 36°39'45", long 106°37'57", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on right bank 0.7 mi downstream from Rito de Tierra Amarilla, 3.1 southwest of La Puente, 6.7 mi upstream from flow line of El Vado Reservoir, and at mile 91.4.

DRAINAGE AREA.--480 mi², approximately.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Concrete control since Nov. 9, 1965. Elevation of gage is 7,083 ft above National Geodetic Vertical Datum of 1929, from river profile map.

REMARKS.--Diversions for irrigation of about 10,300 acres upstream from station (1962 determination).

AVERAGE DISCHARGE.--30 years (water years 1956-85), 345 ft³/s, 250,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s, May 28, 1979, gage height, 6.35 ft, from rating curve extended above 5,400 ft³/s; maximum gage height, 6.46 ft, May 14, 1984; minimum, 4.0 ft³/s, Sept. 19, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of about 9,000 ft³/s occurred Apr. 16, 1937, based on flow of Rio Chama at Los Ojos (Park View) with allowance for tributary inflow. A peak on May 21 or 22, 1926, may have exceeded 10,000 ft³/s.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1956-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1957-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
							PERIOD (CON- SECU- TIVE DAYS)	2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	9.8	215	77	55	.71	1.9	1	19	9.7	6.8	5.0	3.5	--
NOVEMBER	25	169	71	39	.55	1.7	3	20	11	7.5	5.5	3.9	--
DECEMBER	26	104	56	23	.42	1.4	7	22	12	8.2	6.1	4.3	--
JANUARY	16	85	51	18	.36	1.2	14	25	13	9.5	7.1	5.0	--
FEBRUARY	26	174	67	30	.45	1.6	30	29	16	11	8.3	5.8	--
MARCH	50	445	153	93	.61	3.7	60	37	21	15	12	8.2	--
APRIL	244	1846	787	427	.54	19.1	90	42	25	19	15	11	--
MAY	123	4195	1794	1074	.60	43.5	120	47	29	22	17	13	--
JUNE	19	3091	763	769	1.01	18.5	183	56	36	29	24	19	--
JULY	9.2	571	133	135	1.02	3.2							
AUGUST	9.0	352	99	87	.87	2.4							
SEPTEMBER	8.0	320	76	71	.93	1.8							
ANNUAL	63	723	345	173	.50	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1956-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3000	5040	6500	8420	9890	--
3	2860	4790	6150	7890	9200	--
7	2600	4340	5540	7080	8220	--
15	2270	3720	4670	5830	6650	--
30	1890	3040	3750	4580	5130	--
60	1390	2230	2740	3320	3700	--
90	1050	1690	2080	2510	2800	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1956-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1870	989	590	356	228	163	103	75	60	49	45	40	34	27	19

RIO GRANDE BASIN

08284160 AZOTEA TUNNEL AT OUTLET, NEAR CHAMA, NM

LOCATION.--Lat 36°51'12", long 106°40'18", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on left bank at south portal, 0.2 mi upstream from Azotea Creek, and 6.2 mi southwest of Chama.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 7,519.87 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Records represent regulated diversions from Rio Blanco, Little Navajo River, and Navajo River in San Juan River Basin.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

AVERAGE DISCHARGE.--15 years (water years 1971-85), 138 ft³/s, 99,980 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft³/s, May 17, 1978, gage height, 7.85 ft; no flow many days most years.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1971-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1972-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	272	29	70	2.44	1.7	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	65	8.0	19	2.39	.5	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	34	3.3	8.9	2.72	.2	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	25	2.3	6.5	2.82	.1	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	21	2.1	5.5	2.67	.1	30	.1	0.0	0.0	0.0	--	--
MARCH	0.0	91	15	26	1.72	.9	60	.2	0.0	0.0	0.0	--	--
APRIL	76	633	250	133	.53	15.1	90	.2	0.0	0.0	0.0	--	--
MAY	68	789	529	249	.47	32.0	120	.2	0.0	0.0	0.0	--	--
JUNE	46	1003	569	354	.62	34.4	183	1.1	.1	.1	0.0	--	--
JULY	7.7	543	188	200	1.06	11.4							
AUGUST	.6	88	44	33	.74	2.6							
SEPTEMBER	0.0	35	16	13	.86	.9							
ANNUAL	27	242	138	67	.49	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	859	1120	1230	1320	--	--
3	823	1120	1240	1340	--	--
7	794	1110	1240	1340	--	--
15	757	1070	1190	1270	--	--
30	698	1030	1170	1280	--	--
60	588	902	1050	1180	--	--
90	486	751	873	976	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1971-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
863	580	342	195	120	70	25	5.1	.8	.3	.2	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08284200 WILLOW CREEK ABOVE HERON RESERVOIR, NEAR LOS OJOS, NM

LOCATION.--Lat 36°44'33", long 106°37'34", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on right bank 200 ft downstream from bridge, 0.2 mi downstream from Iron Spring Creek, 3.3 mi west of Los Ojos, and at mile 9.7.

DRAINAGE AREA.--112 mi².

PERIOD OF RECORD.--October and November 1962 (monthly discharge only), December 1962 to current year. Published as "near Park View" prior to 1976.

GAGE.--Water-stage recorder. Concrete control since June 6, 1963. Datum of gage is 7,196.29 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Apr. 1, 1971, at site 900 ft downstream at lower datum.

REMARKS.--Records represent inflow to Heron Reservoir and since Nov. 17, 1970, include San Juan River water imported through Azotea tunnel (station 08284160).

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

AVERAGE DISCHARGE.--22 years (water years 1964-85), 107 ft³/s, 77,520 acre-ft/yr, prior to completion of Azotea tunnel.
15 years (water years 1971-85), 152 ft³/s, 110,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,610 ft³/s, Mar. 12, 1985, gage height, 6.65 ft; no flow at times most years prior to 1971.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.1	266	21	57	2.75	1.6	1	.1	0.0	0.0	0.0	--	--
NOVEMBER	.2	80	6.8	19	2.78	.5	3	.1	0.0	0.0	0.0	--	--
DECEMBER	.1	35	2.8	7.6	2.73	.2	7	.1	0.0	0.0	0.0	--	--
JANUARY	.1	25	2.9	6.0	2.04	.2	14	.1	0.0	0.0	0.0	--	--
FEBRUARY	.1	58	6.1	13	2.11	.5	30	.2	.1	.1	0.0	--	--
MARCH	.9	201	54	49	.90	4.2	60	.3	.1	.1	.1	--	--
APRIL	2.3	752	242	202	.83	18.9	90	.5	.2	.1	.1	--	--
MAY	1.6	813	370	331	.89	28.9	120	.6	.2	.2	.1	--	--
JUNE	2.2	997	390	396	1.02	30.5	183	2.4	.9	.6	.5	--	--
JULY	3.1	547	133	187	1.41	10.4							
AUGUST	1.4	107	38	34	.90	3.0							
SEPTEMBER	.1	38	13	14	1.03	1.0							
ANNUAL	3.4	267	107	91	.85	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	670	1070	1250	1420	--	--
3	571	1020	1280	1550	--	--
7	509	1020	1310	1610	--	--
15	428	971	1330	1730	--	--
30	356	926	1350	1870	--	--
60	265	792	1250	1870	--	--
90	210	672	1100	1720	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
770	382	200	120	66	37	11	3.5	1.5	.7	.5	.3	.2	.2	.1

RIO GRANDE BASIN

08284200 WILLOW CREEK ABOVE HERON RESERVOIR, NEAR LOS OJOS, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF AZOTEA TUNNEL)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1971-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	.2	80	9.5	23	2.38	.5
DECEMBER	.1	35	3.7	9.1	2.46	.2
JANUARY	.1	25	2.8	6.4	2.32	.2
FEBRUARY	.2	58	8.0	15	1.91	.4
MARCH	.9	201	61	52	.84	3.4
APRIL	76	752	331	181	.55	18.2
MAY	69	813	540	259	.48	29.7
JUNE	46	997	571	354	.62	31.4
JULY	10	547	193	200	1.04	10.6
AUGUST	1.5	107	49	35	.73	2.7
SEPTEMBER	.9	38	18	14	.78	1.0
ANNUAL	28	267	152	75	.49	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1972-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	.1	.1	0.0	0.0	--	--
3	.1	.1	0.0	0.0	--	--
7	.2	.1	.1	0.0	--	--
14	.2	.1	.1	.1	--	--
30	.3	.1	.1	.1	--	--
60	.4	.2	.1	.1	--	--
90	.5	.2	.1	.1	--	--
120	.7	.2	.1	.1	--	--
183	3.7	1.2	.7	.5	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	878	1160	1290	1400	--	--
3	836	1150	1280	1390	--	--
7	796	1120	1260	1370	--	--
15	759	1080	1210	1310	--	--
30	704	1040	1180	1300	--	--
60	594	913	1060	1190	--	--
90	504	791	924	1040	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1971-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
904	623	369	228	155	100	42	15	3.2	1.0	.6	.5	.3	.2	.2

RIO GRANDE BASIN

08284300 HORSE LAKE CREEK ABOVE HERON RESERVOIR, NEAR LOS OJOS, NM

LOCATION.--Lat 36°42'24", long 106°44'42", Rio Arriba County, in Tierra Amarilla Grant, on right bank 3.7 mi northwest of Heron Dam, 7.8 mi downstream from Horse Lake, and 9.9 mi west of Los Ojos.

DRAINAGE AREA.--45 mi², approximately.

PERIOD OF RECORD.--October and November 1962 (monthly discharge only), December 1962 to current year.

GAGE.--Water-stage recorder. Concrete control since June 10, 1963. Datum of gage is 7,188.85 ft above mean sea level (levels by Bureau of Reclamation). Prior to July 1, 1971, at site 1,100 ft upstream at higher datums.

REMARKS.--Diversions above station for irrigation of meadows and for off-channel stock tanks.

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--12 years (water years 1963-73, 1985), 1.70 ft³/s, 1,230 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft³/s July 30, 1968 (gage height, 4.9 ft, site and datum then in use), from rating curve extended above 37 ft³/s on basis of slope-area measurements at gage heights 3.20 ft and 4.9 ft; no flow most of time.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1963-73, 1985

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1964-73, 1985

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	3.3	.3	.8	2.29	1.5	1	--	--	--	--	--	--
NOVEMBER	0.0	1.2	.2	.4	1.79	1.1	3	--	--	--	--	--	--
DECEMBER	0.0	.4	.1	.1	2.20	.2	7	--	--	--	--	--	--
JANUARY	0.0	1.4	.2	.4	2.60	.7	14	--	--	--	--	--	--
FEBRUARY	0.0	2.4	.5	.8	1.80	2.0	30	--	--	--	--	--	--
MARCH	0.0	36	7.7	9.3	1.21	34.7	60	--	--	--	--	--	--
APRIL	0.0	41	8.1	11	1.41	36.5	90	0.0	0.0	0.0	0.0	--	--
MAY	0.0	12	1.4	2.8	1.93	6.5	120	0.0	0.0	0.0	0.0	--	--
JUNE	0.0	6.6	.5	1.5	3.11	2.1	183	.1	0.0	0.0	0.0	--	--
JULY	0.0	7.2	.8	1.9	2.34	3.6							
AUGUST	0.0	13	1.7	3.0	1.79	7.7							
SEPTEMBER	0.0	4.0	.8	1.2	1.55	3.5							
ANNUAL	.1	8.4	1.7	2.3	1.33	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1963-73, 1985

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	48	97	133	180	--	--
3	36	68	88	108	--	--
7	26	48	59	67	--	--
15	17	35	44	52	--	--
30	9.7	22	30	38	--	--
60	5.2	13	20	29	--	--
90	3.5	9.4	14	22	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1963-73,1985

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
9.3	3.6	1.0	.2	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08284500 WILLOW CREEK NEAR PARK VIEW, NM

LOCATION.--Lat 36°40'05", long 106°42'15", Rio Arriba County, in Tierra Amarilla Grant, at Heron damsite, 0.4 mi above mouth, 0.7 mi downstream from Horse Lake Creek, and 8.6 miles southwest of Park View.

DRAINAGE AREA.--193 mi².

PERIOD OF RECORD.--May 1936 to September 1942 (no winter periods), October 1942 to February 1971 (discontinued). Monthly or yearly discharge only for some periods prior to 1943, published in WSP 1312.

REVISED RECORDS.--WSP 858: 1936. WSP 1312: 1943(M), 1949(M).

GAGE.--Water-stage recorders 0.7 mi upstream on Horse Lake Creek at mouth and 3 mi upstream on Willow Creek at steel bridge (construction of Heron Dam prevented collection of a record at Heron damsite subsequent to Nov. 8, 1965). At Heron damsite, datum of gage at time of discontinuance was 6,944.99 ft above mean sea level (Bureau of Reclamation datum). Prior to Oct. 1, 1937, at datum 0.79 ft higher. Apr. 19, 1949 to Aug. 8, 1951, at different datums. Aug. 9, 1951 to Sept. 30, 1960, at datum 0.41 ft higher.

REMARKS.--Small diversions above station for irrigation and stock tanks. Subsequent to Nov. 8, 1965, published record is the composite of Horse Lake Creek at mouth and Willow Creek at steel bridge pending construction of Heron Dam. Diversions through Azotea tunnel were made on Nov. 17, Dec. 7, 11, 1970.

AVERAGE DISCHARGE.--28 years (water years 1943-70), 14.0 ft³/s (10,140 acre-ft/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s Apr. 23, 1942 (gage height, 10.45 ft, site and datum then in use), from rating curve extended above 1,400 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1943-70

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1944-70

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	0.0	11	2.9	2.8	.96	1.7	1	0.0	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	11	2.3	2.7	1.15	1.4	3	0.0	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	5.3	.8	1.2	1.52	.5	7	0.0	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	30	1.8	5.8	3.30	1.0	14	0.0	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	36	5.3	9.1	1.71	3.1	30	0.0	0.0	0.0	0.0	0.0	0.0	--
MARCH	1.5	164	47	45	.98	27.4	60	.1	0.0	0.0	0.0	0.0	0.0	--
APRIL	2.1	390	72	94	1.31	42.6	90	.2	0.0	0.0	0.0	0.0	0.0	--
MAY	.2	71	10	14	1.40	6.1	120	.5	.1	.1	0.0	0.0	0.0	--
JUNE	.2	13	4.7	3.7	.78	2.8	183	1.4	.5	.3	.2	.1	--	
JULY	0.0	18	6.1	5.2	.85	3.6								
AUGUST	.2	79	13	17	1.33	7.4								
SEPTEMBER	0.0	20	4.1	6.1	1.49	2.4								
ANNUAL	1.5	48	14	11	.78	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1943-70

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	306	606	807	1050	1210	--
3	218	467	656	906	1090	--
7	148	350	527	794	1020	--
15	101	251	394	627	837	--
30	66	168	267	430	581	--
60	41	102	160	254	337	--
90	30	74	114	177	233	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1943-70

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
64	24	13	8.7	6.3	4.9	3.4	1.9	1.1	.4	.1	.1	0.0	0.0	0.0

RIO GRANDE BASIN

08284520 WILLOW CREEK BELOW HERON DAM, NM

LOCATION.--Lat 36°39'56", long 106°42'13", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, in outlet conduits of Heron Dam, 0.2 mi upstream from Rio Chama, 5.1 mi northeast of El Vado Dam, and 8.7 mi southwest of Los Ojos.

DRAINAGE AREA.--193 mi².

PERIOD OF RECORD.--January 1971 to current year.

GAGE.--Totalizing flowmeters in each of two outlet conduits in Heron Dam.

REMARKS.--Flow regulated by Heron Reservoir (station 08284510) since Oct. 21, 1970. Outlet conduits are 14 in. and 120 in. in diameter.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

AVERAGE DISCHARGE.--14 years (water years 1972-85), 119 ft³/s, 86,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,780 ft³/s, Dec. 18, 19, 1982; no flow many days each year.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1972-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1973-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.3	94	18	23	1.30	1.3	1	--	--	--	--	--	--
NOVEMBER	0.0	169	28	49	1.73	2.0	3	--	--	--	--	--	--
DECEMBER	2.0	1290	548	353	.64	38.8	7	--	--	--	--	--	--
JANUARY	0.0	267	63	108	1.73	4.4	14	--	--	--	--	--	--
FEBRUARY	0.0	354	54	115	2.11	3.8	30	--	--	--	--	--	--
MARCH	13	591	146	169	1.16	10.3	60	1.4	0.0	0.0	0.0	--	--
APRIL	2.2	834	231	231	1.00	16.3	90	7.2	3.1	1.9	0.0	--	--
MAY	0.0	74	34	24	.70	2.4	120	17	8.3	5.9	4.5	--	--
JUNE	0.0	288	86	94	1.10	6.1	183	38	17	10	7.0	--	--
JULY	5.6	422	108	127	1.18	7.6							
AUGUST	6.2	206	57	58	1.03	4.0							
SEPTEMBER	0.0	259	42	73	1.75	2.9							
ANNUAL	45	203	119	50	.42	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1972-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1510	2140	2450	2720	--	--
3	1470	2100	2390	2650	--	--
7	1370	1940	2190	2400	--	--
15	1000	1430	1630	1810	--	--
30	598	925	1140	1410	--	--
60	334	503	618	763	--	--
90	240	359	444	556	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1972-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
704	358	233	135	73	43	16	.1	.1	.1	.1	.1	0.0	0.0	0.0

RIO GRANDE BASIN

08285500 RIO CHAMA BELOW EL VADO DAM, NM

LOCATION.--Lat 36°34'48", long 106°43'24", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on left bank 1.5 mi downstream from El Vado Dam, 2.8 mi upstream from Rio Nutrias, 13 mi southwest of Tierra Amarilla, and at mile 76.2.

DRAINAGE AREA.--877 mi², of which about 100 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1913 to November 1915, April to November 1916, March, April 1920, September 1920 to August 1924, October 1935 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "Chama River" prior to 1935, as "near Tierra Amarilla" 1913-14, 1935-47, as "near El Vado" 1915-16, and as "at El Vado" 1920-24.

REVISED RECORDS.--WSP 1312: 1914, 1949. WSP 1392: 1949.

GAGE.--Water-stage recorder. Datum of gage is 6,696.12 ft above National Geodetic Vertical Datum of 1929. Prior to October 1935, at site 1.5 mi upstream at different datum. October 1935 to September 1938 at site 1.1 mi upstream at datum 30.34 ft higher.

REMARKS.--Flow regulated by El Vado Reservoir (station 08285000) since 1935. Flow affected by release of transmountain water from Heron Reservoir (station 08284510) since May 1971. Diversions for irrigation of about 10,600 acres upstream from station.

AVERAGE DISCHARGE.--34 years (water years 1937-70), 367 ft³/s, 265,900 acre-ft/yr.
35 years (water years 1936-70), 373 ft³/s, 270,200 acre-ft/yr, prior to release of transmountain water.
15 years (water years 1971-85), 461 ft³/s, 334,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft³/s, May 22, 1920, gage height, 12 ft, site and datum then in use, from rating curve extended above 3,500 ft³/s; no flow Mar. 25, 26, 31, 1955.
Maximum discharge since construction of El Vado Dam in 1935, 6,010 ft³/s, May 17, 1941, gage height, 6.89 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4 or 5, 1911, was greater than floods in September 1904 and May 1920, from information by local residents.

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF EL VADO DAM AND BEFORE REGULATION OF HERON DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937-70

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1937-70

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	8.0	610	131	127	.97	2.9	1	2.7	.7	.3	.1	0.0	--
NOVEMBER	2.6	1270	265	350	1.32	6.0	3	3.4	.9	.4	.2	.1	--
DECEMBER	.9	926	124	233	1.88	2.8	7	4.4	1.3	.7	.4	.2	--
JANUARY	.5	172	35	40	1.14	.8	14	6.4	1.8	.9	.5	.3	--
FEBRUARY	2.0	1414	134	267	1.99	3.0	30	9.7	2.8	1.4	.8	.4	--
MARCH	1.8	1280	248	323	1.30	5.6	60	13	3.6	1.7	.9	.4	--
APRIL	4.0	1614	459	446	.97	10.3	90	18	5.8	3.1	1.9	1.0	--
MAY	16	3916	1045	850	.81	23.5	120	37	12	6.4	3.6	1.8	--
JUNE	143	2151	767	459	.60	17.2	183	88	46	33	25	19	--
JULY	61	1688	486	419	.86	10.9							
AUGUST	18	1316	478	367	.77	10.7							
SEPTEMBER	12	751	280	231	.83	6.3							
ANNUAL	148	823	367	170	.46	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1937-70

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1720	2690	3520	4830	6010	--
3	1670	2570	3330	4540	5630	--
7	1580	2400	3110	4200	5190	--
15	1430	2150	2760	3710	4580	--
30	1270	1870	2370	3110	3770	--
60	997	1460	1810	2310	2730	--
90	816	1210	1500	1910	2250	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-70

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1470	1130	938	726	548	414	181	181	54	32	21	14	9.6	4.9	2.4

RIO GRANDE BASIN

08285500 RIO CHAMA BELOW EL VADO DAM,-NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF HERON DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1971-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1972-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	37	453	169	97	.57	3.1	1	19	14	13	12	--	--
NOVEMBER	44	445	167	142	.85	3.0	3	20	16	14	13	--	--
DECEMBER	63	1272	370	390	1.05	6.7	7	26	18	15	13	--	--
JANUARY	24	387	121	124	1.02	2.2	14	34	21	17	15	--	--
FEBRUARY	17	433	117	130	1.11	2.1	30	40	24	19	17	--	--
MARCH	28	962	253	247	.98	4.6	60	54	30	23	18	--	--
APRIL	33	1876	704	528	.75	12.8	90	84	44	31	23	--	--
MAY	262	3412	1741	1070	.61	31.6	120	119	72	56	46	--	--
JUNE	186	2184	955	549	.57	17.3	183	147	92	73	60	--	--
JULY	126	568	342	136	.40	6.2							
AUGUST	54	574	288	160	.56	5.2							
SEPTEMBER	51	692	280	193	.69	5.1							
ANNUAL	194	754	461	189	.41	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2860	4670	5850	7270	--	--
3	2780	4520	5640	6970	--	--
7	2590	4130	5100	6210	--	--
15	2220	3590	4460	5480	--	--
30	1770	2900	3600	4390	--	--
60	1380	2210	2730	3330	--	--
90	1100	1730	2130	2610	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1971-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2020	1210	873	695	562	444	287	163	103	74	62	49	39	30	25

RIO GRANDE BASIN

08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, NM

LOCATION.--Lat 36°19'06", long 106°35'50", Rio Arriba County, Hydrologic Unit 13020102, on left bank 40 ft downstream from site of former bridge, 7.7 mi downstream from Rio Gallina, 9 mi northwest of Youngsville, 15.6 mi upstream from Abiquiu Dam, 30.3 mi downstream from El Vado Dam, and at mile 47.4.

DRAINAGE AREA.--1,600 mi², of which about 100 mi² is probably noncontributing.

PERIOD OF RECORD.--August 1961 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,275 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated by El Vado Reservoir (station 08285000). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions for irrigation of about 15,000 acres upstream from station.

AVERAGE DISCHARGE.--15 years (water years 1971-85), 493 ft³/s, 357,200 acre-ft/yr. water.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,680 ft³/s, May 8, 1985, gage height, 7.67 ft; maximum gage height, 8.70 ft, May 20, 1973; minimum, 7.5 ft³/s, Oct. 17, 18, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred on Sept. 29, 1904, Oct. 4 or 5, 1911, and May 22, 1920.

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF HERON DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1971-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1972-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	40	487	180	103	.57	3.1	1	27	18	15	13	--	--
NOVEMBER	48	455	170	137	.81	2.9	3	28	19	17	15	--	--
DECEMBER	74	1273	381	390	1.02	6.5	7	33	22	19	16	--	--
JANUARY	29	404	134	122	.91	2.3	14	41	26	22	19	--	--
FEBRUARY	30	475	135	138	1.02	2.3	30	52	33	27	23	--	--
MARCH	44	1050	303	260	.86	5.1	60	66	39	30	25	--	--
APRIL	106	1985	760	544	.72	12.9	90	105	65	50	40	--	--
MAY	259	3741	1863	1198	.64	31.6	120	135	86	68	56	--	--
JUNE	185	2409	1027	634	.62	17.4	183	163	106	84	70	--	--
JULY	132	579	354	140	.40	6.0							
AUGUST	86	587	301	155	.51	5.1							
SEPTEMBER	78	724	288	193	.67	4.9							
ANNUAL	204	823	493	209	.42	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2930	5000	6460	8340	--	--
3	2850	4870	6270	8040	--	--
7	2700	4540	5780	7300	--	--
15	2330	3980	5110	6520	--	--
30	1850	3170	4030	5060	--	--
60	1440	2390	3010	3760	--	--
90	1160	1870	2340	2920	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1971-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2140	1250	909	726	585	455	306	183	118	87	76	64	53	42	32

RIO GRANDE BASIN

08287000 RIO CHAMA BELOW ABIQUIU DAM, NM

LOCATION.--Lat 36°14'12", long 106°24'59", in SE¼SE¼ sec.8, T.23 N., R.5 E., Rio Arriba County, Hydrologic Unit 13020102, on right bank 0.8 mi downstream from Abiquiu Dam, 5.9 mi northwest of Abiquiu, and at mile 31.3.

DRAINAGE AREA.--2,147 mi², of which about 100 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1961 to current year (monthly discharge only, October 1961).

GAGE.--Water-stage recorder. Concrete control since Jan. 25, 1966. Elevation of gage is 6,040 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 25, 1966, at datum 1.60 ft lower.

REMARKS.--Flow controlled by El Vado Reservoir (station 08285000) 46.4 mi upstream and Abiquiu Reservoir (station 08286900) 0.8 mi upstream. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 54.5 mi upstream. Diversions for irrigation of about 17,600 acres upstream from station. U.S. Army Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--15 years (water years 1971-85), 497 ft³/s, 360,100 acre-ft/yr, prior to release of transmountain water.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft³/s, July 1, 1965, gage height, 6.69 ft, datum then in use; maximum gage height, 7.29 ft, Jan. 14, 1967 (backwater from ice); minimum discharge, about 0.5 ft³/s, Mar. 17, 1966, Jan. 28, 1972.

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF HERON DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1971-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1972-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	45	555	208	121	.58	3.5	1	18	13	11	10	--	--
NOVEMBER	59	1181	322	333	1.03	5.4	3	21	16	14	13	--	--
DECEMBER	44	1308	387	416	1.07	6.5	7	29	22	19	18	--	--
JANUARY	36	717	157	189	1.20	2.6	14	37	27	24	22	--	--
FEBRUARY	38	264	114	70	.62	1.9	30	53	39	34	30	--	--
MARCH	52	1046	313	249	.80	5.3	60	74	48	39	32	--	--
APRIL	111	1894	753	502	.67	12.7	90	112	68	51	41	--	--
MAY	242	2055	1148	608	.53	19.3	120	147	83	62	49	--	--
JUNE	184	2418	1144	735	.64	19.2	183	183	106	80	64	--	--
JULY	201	1488	670	414	.62	11.3							
AUGUST	98	1084	407	246	.60	6.8							
SEPTEMBER	64	779	326	199	.61	5.5							
ANNUAL	213	828	497	170	.34	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	1780	2250	2520	2820	--	--	
3	1720	2240	2530	2840	--	--	
7	1680	2210	2490	2800	--	--	
15	1630	2180	2470	2770	--	--	
30	1550	2130	2410	2650	--	--	
60	1350	1910	2200	2490	--	--	
90	1120	1660	1980	2340	--	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1971-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1880	1490	1060	881	727	593	372	226	142	99	85	72	58	45	34

RIO GRANDE BASIN

08287500 RIO CHAMA NEAR ABIQUIU, NM

LOCATION.--Lat 36°13'00", long 106°15'00", in Juan Jose Lobato Grant, at downstream end of bridge pier on State Highway 96, 1 3/4 mi upstream from El Rito Creek, 5 mi downstream from Abiquiu, Rio Arriba County, 13.5 mi downstream from Abiquiu Dam, and at mile 18.2.

DRAINAGE AREA.--2,284 mi², of which about 100 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1941 to September 1967 (discontinued). Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Datum of gage is 5,873.17 ft above mean sea level, datum of 1929.

REMARKS.--Flow regulated by El Vado Reservoir (see station 08286900) and Abiquiu Reservoir (see station 08286900). Diversions above station for irrigation of about 19,100 acres a few hundred of which is below station.

AVERAGE DISCHARGE.--21 years (water years 1942-62), 408 ft³/s, 295,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,870 ft³/s July 28, 1952, from rating curve extended above 2,900 ft³/s by logarithmic plotting; maximum gage height, 6.38 ft Aug. 5, 1959; minimum daily discharge, 1 ft³/s June 11, 1947.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1942-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1943-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	7.5	730	159	167	1.05	3.3	1	9.3	3.5	2.0	1.2	--	--
NOVEMBER	15	1265	295	407	1.38	6.0	3	10	4.2	2.5	1.5	--	--
DECEMBER	9.4	794	152	242	1.59	3.1	7	13	5.2	3.0	1.8	--	--
JANUARY	12	157	49	38	.79	1.0	14	18	7.1	3.9	2.3	--	--
FEBRUARY	28	1382	219	322	1.47	4.5	30	23	9.7	5.7	3.5	--	--
MARCH	23	1382	319	399	1.25	6.5	60	26	15	12	10	--	--
APRIL	13	2728	623	659	1.06	12.7	90	32	21	18	16	--	--
MAY	150	3165	1006	806	.80	20.6	120	50	30	23	20	--	--
JUNE	150	2083	793	482	.61	16.2	183	103	58	44	35	--	--
JULY	62	1697	492	426	.87	10.1							
AUGUST	48	1324	483	339	.70	9.9							
SEPTEMBER	4.1	818	302	262	.87	6.2							
ANNUAL	179	1061	408	211	.52	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1942-62

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1790	2690	3450	4630	--	--
3	1720	2520	3150	4090	--	--
7	1650	2390	2970	3820	--	--
15	1500	2130	2610	3300	--	--
30	1340	1910	2320	2880	--	--
60	1020	1550	1960	2550	--	--
90	835	1290	1660	2210	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1942-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1560	1230	996	765	609	474	239	123	72	49	40	32	26	20	14

RIO GRANDE BASIN

08288000 EL RITO CREEK NEAR EL RITO, NM

LOCATION.--Lat 36°23'30", long 106°14'20", in NW¼ sec.19, T.25 N., R.7 E., on right bank three-quarters of a mi upstream from Carson National forest boundary and 3 miles northwest of El Rito.

DRAINAGE AREA.--52 mi².

PERIOD OF RECORD.--May 1931 to September 1951 (no winter records 1937-41), discontinued.

GAGE.--Water-stage recorder. Altitude of gage is 6,950 ft (from topographic map). May 15, 1931 to May 3, 1934 and Apr. 29, 1937 to Apr. 5, 1938, about same site at different datum. May 4, 1934 to Apr. 28, 1937, at site about 200 ft upstream at datum 4.50 ft higher.

REMARKS.--Diversion for irrigation of less than a hundred acres above station.

AVERAGE DISCHARGE.--18 years (water years 1932-50), 19.0 ft³/s, 13,770 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined; minimum daily recorded, that of July 9, 10, 12, 1951.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1932-50

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1933-50

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STAN- DARD DEVI- ATION (FT³/S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.8	20	3.1	4.3	1.39	1.4	1	.5	.4	.3	.3	--	--
NOVEMBER	1.0	12	2.4	2.6	1.06	1.1	3	.6	.4	.3	.3	--	--
DECEMBER	1.0	4.6	1.9	.8	.44	.8	7	.7	.5	.4	.4	--	--
JANUARY	1.0	5.5	2.1	1.0	.47	.9	14	.8	.6	.5	.5	--	--
FEBRUARY	1.5	4.9	2.6	.9	.36	1.2	30	1.0	.7	.6	.6	--	--
MARCH	2.8	41	8.7	9.3	1.07	3.9	60	1.2	.9	.9	.8	--	--
APRIL	15	234	81	55	.69	35.7	90	1.3	1.1	1.0	.9	--	--
MAY	5.5	367	102	89	.88	45.2	120	1.4	1.1	1.0	1.0	--	--
JUNE	1.4	75	15	17	1.13	6.7	183	1.5	1.2	1.1	1.1	--	--
JULY	1.0	9.2	3.3	2.4	.71	1.5							
AUGUST	.8	5.5	2.2	1.2	.54	1.0							
SEPTEMBER	.7	5.0	1.7	1.1	.67	.7							
ANNUAL	3.4	47	19	12	.66	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1932-50

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	211	378	488	619	--	--
3	196	341	433	538	--	--
7	173	304	388	487	--	--
15	149	257	326	404	--	--
30	118	205	261	327	--	--
60	80	142	184	236	--	--
90	57	102	133	173	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932-50

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
112	51	24	13	7.2	5.2	3.4	2.5	2.0	1.7	1.5	1.4	1.2	1.0	.8

RIO GRANDE BASIN

08289000 RIO OJO CALIENTE AT LA MADERA, NM

LOCATION.--Lat 36°20'59", long 106°02'37", in NW¼NE¼ sec.1, T.24 N., R.8 E., Rio Arriba County, Hydrologic Unit 13020102, on left bank 400 ft upstream from bridge on State Highway 96, 2.4 mi south of La Madera, 2.6 mi downstream from confluence of Rio Vallecitos and Rio Tusas, 3.1 mi north of Ojo Caliente, and at mile 19.9.

DRAINAGE AREA.--419 mi².

PERIOD OF RECORD.--April 1932 to current year.

REVISED RECORDS.--WSP 1712: 1959.

GAGE.--Water-stage recorder. Datum of gage is 6,358.84 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 23, 1934, at site about 2.6 mi upstream at different datum. Apr. 23, 1934 to Apr. 21, 1936, at datum 12.58 ft lower and Apr. 22, 1936 to Oct. 26, 1956, at datum 13.84 ft lower, both at site 1,400 ft downstream.

REMARKS.--Diversion upstream from station for irrigation of about 3,500 acres (1962 determination).

AVERAGE DISCHARGE.--53 years (water years 1933-85), 69.2 ft³/s, 50,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,140 ft³/s, Apr. 21, 1958, gage height, 6.42 ft, from rating curve extended above 1,300 ft³/s; maximum gage height, 7.25 ft, from floodmarks, June 19, 1966; minimum discharge, 0.2 ft³/s, Aug. 17, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Apr. 21, 1958, may have been exceeded by a flood in May 1920, from information by local resident.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1933-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1934-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- UTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.0	54	13	9.1	.68	1.6	1	3.2	1.9	1.4	1.1	.7	.6
NOVEMBER	8.8	49	16	8.3	.51	2.0	3	3.5	2.2	1.7	1.3	1.0	.8
DECEMBER	11	32	17	4.6	.28	2.0	7	3.8	2.5	2.0	1.6	1.3	1.1
JANUARY	10	34	18	4.6	.26	2.1	14	4.3	3.0	2.5	2.1	1.7	1.5
FEBRUARY	12	56	22	7.5	.34	2.7	30	5.0	3.6	3.0	2.6	2.3	2.1
MARCH	16	164	52	34	.65	6.3	60	6.4	4.3	3.5	3.0	2.5	2.2
APRIL	45	979	280	218	.78	33.8	90	7.7	5.2	4.3	3.7	3.2	2.9
MAY	9.3	1256	326	283	.87	39.4	120	8.6	6.0	5.0	4.3	3.7	3.3
JUNE	5.1	275	51	61	1.20	6.1	183	11	7.9	6.8	6.1	5.4	5.1
JULY	2.6	33	9.8	6.8	.69	1.2							
AUGUST	3.1	68	14	12	.91	1.6							
SEPTEMBER	2.3	30	9.8	5.8	.59	1.2							
ANNUAL	13	205	69	44	.64	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1933-85

PERIOD (CON- SEC- UTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	651	1210	1620	2180	2600	3040
3	599	1120	1500	2010	2400	2790
7	533	1000	1350	1800	2150	2500
15	454	856	1150	1530	1810	2080
30	360	691	941	1280	1530	1790
60	251	481	657	897	1080	1280
90	183	348	476	652	792	938

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1933-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
375	161	83	50	35	28	21	17	14	12	9.9	8.1	6.5	5.1	3.9

RIO GRANDE BASIN

08290000 RIO CHAMA NEAR CHAMITA, NM

LOCATION.--Lat 36°04'26", long 106°06'40", in NE¼NE¼ sec.8, T.21 N., R.8 E., Rio Arriba County, Hydrologic Unit 13020102, in San Juan Pueblo Grant, at downstream end of pier nearest left bank of bridge on U.S. Highway 285, 0.5 mi west of Chamita, 2.5 mi northwest of San Juan Pueblo, and at mile 2.8.

DRAINAGE AREA.--3,144 mi², of which about 100 mi² is probably noncontributing.

PERIOD OF RECORD.--October 1912 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as Chama River near Chamita prior to 1928, and Chama River at Chamita 1929-30.

REVISED RECORDS.--WSP 1512: 1913-15, 1934, 1936. WSP 1632: 1929(M). WSP 1732: 1931(M). WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Jan. 1, 1964. Datum of gage is 5,653.61 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 4, 1933, at railroad bridge 2.3 mi downstream at different datums. Oct. 4, 1933 to Mar. 1, 1942, at site 50 ft downstream at datum 0.22 ft higher. Mar. 2, 1942 to Dec. 31, 1963, at site 200 ft downstream, present datum.

REMARKS.--Diversions upstream from station for irrigation of about 27,600 acres. Chamita ditch (station 08289500), on left bank, and Hernandez ditch (station 08289800), on right bank, bypass gage for irrigation of several hundred acres downstream from station. Flow regulated by El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900), 74.9 mi and 29.3 mi upstream respectively. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 83.0 mi upstream. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--13 years (water years 1913-15, 1917-19, 1922, 1928, 1930-34), 561 ft³/s, 406,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s, May 22, 1920, from rating curve extended above 2,300 ft³/s; maximum gage height, 10.45 ft, Aug. 22, 1961; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The floods of Sept. 29, 1904, and Oct. 4 or 5, 1911, probably exceeded 15,000 ft³/s. Another major flood occurred in 1884, from newspaper accounts.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF EL VADO DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1913-15,
1917-19, 1922
1928, 1930-34

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1914-15, 1918-19,
1923, 1928, 1931-34

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT							
							PERIOD (CON- SECU- TIVE DAYS)	EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	22	706	213	218	1.02	3.1	1	12	0.0	0.0	0.0	0.0	--	--
NOVEMBER	58	247	123	63	.51	1.8	3	14	0.0	0.0	0.0	0.0	--	--
DECEMBER	28	167	98	39	.40	1.4	7	18	4.4	0.0	0.0	0.0	--	--
JANUARY	45	150	100	33	.33	1.4	14	24	9.0	5.1	3.1	--	--	--
FEBRUARY	70	364	159	77	.48	2.3	30	38	17	10	6.7	--	--	--
MARCH	150	1039	396	232	.59	5.7	60	52	30	22	16	--	--	--
APRIL	524	4129	1522	1021	.67	22.0	90	66	45	37	31	--	--	--
MAY	297	4984	2458	1215	.49	35.6	120	82	56	47	40	--	--	--
JUNE	71	3679	1137	944	.83	16.5	183	98	67	57	50	--	--	--
JULY	25	1309	372	337	.91	5.4								
AUGUST	11	350	158	98	.62	2.3								
SEPTEMBER	5.5	934	168	237	1.41	2.4								
ANNUAL	160	1130	561	278	.50	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1913-15, 1917-19
1922, 1928, 1930-34

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3790	5350	6210	7140	--	--
3	3560	5030	5860	6750	--	--
7	3230	4570	5350	6220	--	--
15	3010	4250	4940	5670	--	--
30	2650	3780	4370	4970	--	--
60	2020	3090	3730	4460	--	--
90	1560	2440	3000	3660	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1913-15, 1917-19, 1922, 1928, 1930-34

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2830	1760	1140	730	515	390	229	159	125	95	83	72	58	42	16

RIO GRANDE BASIN

08290000 RIO CHAMA NEAR CHAMITA, NM--Continued

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1936-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1937-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	1.6	863	197	186	.94	3.1	1	8.0	.2	0.0	0.0	0.0	0.0	--
NOVEMBER	21	1236	282	365	1.29	4.5	3	11	.9	0.0	0.0	0.0	0.0	--
DECEMBER	25	831	145	222	1.53	2.3	7	16	3.1	1.0	.4	.1	--	--
JANUARY	30	246	69	45	.65	1.1	14	24	5.9	2.2	.8	.2	--	--
FEBRUARY	50	1362	237	288	1.22	3.8	30	36	9.1	3.4	1.3	.4	--	--
MARCH	45	1476	396	391	.99	6.3	60	45	20	12	7.7	4.5	--	--
APRIL	57	3273	1032	883	.86	16.5	90	52	31	24	20	16	--	--
MAY	188	6542	1555	1490	.96	24.8	120	72	40	30	24	19	--	--
JUNE	110	3153	899	643	.72	14.3	183	131	75	56	45	35	--	--
JULY	51	1712	554	413	.75	8.8								
AUGUST	40	1373	559	358	.64	8.9								
SEPTEMBER	2.3	802	345	257	.74	5.5								
ANNUAL	197	1210	523	289	.55	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1936-62

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	2280	3860	5220	7350	9280	--
3	2130	3610	4910	6970	8860	--
7	2010	3410	4670	6690	8570	--
15	1810	3080	4210	6050	7770	--
30	1610	2720	3690	5210	6610	--
60	1280	2180	2960	4160	5240	--
90	1050	1770	2370	3290	4090	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1936-62

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1860	1380	1110	907	724	564	351	194	107	71	59	49	39	29	15

RIO GRANDE BASIN

08290000 RIO CHAMA NEAR CHAMITA, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF HERON DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1971-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1972-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	37	512	209	117	.56	3.2	1	28	12	6.1	3.0	--	--
NOVEMBER	76	1224	337	326	.97	5.1	3	30	13	6.6	3.3	--	--
DECEMBER	77	1291	416	412	.99	6.3	7	38	16	8.0	4.0	--	--
JANUARY	64	736	194	186	.96	2.9	14	52	24	14	8.4	--	--
FEBRUARY	67	281	153	72	.47	2.3	30	76	54	46	39	--	--
MARCH	85	1060	358	245	.68	5.4	60	100	74	64	58	--	--
APRIL	120	2534	953	664	.70	14.4	90	140	96	80	69	--	--
MAY	204	2741	1551	906	.58	23.4	120	170	109	88	74	--	--
JUNE	117	2346	1132	738	.65	17.1	183	206	126	99	82	--	--
JULY	170	1477	632	401	.63	9.5							
AUGUST	96	1020	380	228	.60	5.7							
SEPTEMBER	83	682	307	179	.58	4.6							
ANNUAL	234	919	553	205	.37	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2220	3080	3600	4210	--	--
3	2120	3000	3540	4160	--	--
7	1990	2860	3380	4000	--	--
15	1860	2700	3200	3780	--	--
30	1690	2540	3040	3600	--	--
60	1450	2220	2700	3260	--	--
90	1230	1950	2430	3020	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1971-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2220	1630	1180	914	734	601	385	239	161	120	105	90	76	64	49

RIO GRANDE BASIN

08291000 SANTA CRUZ RIVER AT CUNDIYO, NM

LOCATION.--Lat 35°57'53", long 105°54'14", in SE¼NW¼ sec.17, T.20 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, on left bank 135 ft downstream from bridge on State Highway 4, 200 ft downstream from confluence of Rio Medio and Rio Frijoles, 0.6 mi northwest of Cundiyo, 1.8 mi upstream from Santa Cruz Dam, and at mile 11.9.

DRAINAGE AREA.--86 mi², approximately.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only from some periods, published in WSP 1312. Prior to October 1953, published as Rio Santa Cruz at Cundiyo.

REVISED RECORDS.--WSP 1392: 1931(M), 1932-33, 1934-39(M), 1942, 1943(M).

GAGE.--Water-stage recorder. Concrete control since Jan. 3, 1954. Elevation of gage is 6,460 ft above National Geodetic Vertical Datum of 1929, from topographic map. Sept. 1, 1930 to Aug. 12, 1932, water-stage recorder at site about 1 mi downstream at different datum. Aug. 13, 1932 to Oct. 29, 1934, water-stage recorder at site 35 ft upstream at datum 0.42 ft higher. Oct. 30, 1934 to Jan. 2, 1954, water-stage recorder at present site at datum 0.64 ft lower.

REMARKS.--Diversions for irrigation of about 1,000 acres upstream from station.

AVERAGE DISCHARGE.--53 years(water years 1933-85), 30.2 ft³/s, 21,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft³/s, Sept. 24, 1931, gage height, 7.80 ft, site and datum then in use, from rating curve extended above 170 ft³/s; minimum, 0.19 ft³/s, Mar. 13, 1954, result of freezeup.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1933-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1934-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	4.7	43	11	5.5	.49	3.1
DECEMBER	3.8	23	9.7	3.4	.35	2.7
JANUARY	4.8	18	8.9	2.4	.27	2.5
FEBRUARY	5.4	17	9.5	2.5	.26	2.7
MARCH	7.0	51	18	10	.57	5.0
APRIL	13	205	50	35	.70	13.9
MAY	16	329	95	71	.75	26.6
JUNE	7.1	294	73	67	.91	20.5
JULY	5.6	73	26	17	.66	7.4
AUGUST	4.6	69	24	15	.63	6.6
SEPTEMBER	2.5	42	18	9.3	.53	4.9
ANNUAL	8.9	75	30	17	.57	100

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4.8	3.3	2.6	2.1	1.7	1.4
3	5.8	4.3	3.6	3.1	2.6	2.3
7	6.8	5.1	4.3	3.7	3.1	2.7
14	7.4	5.5	4.6	3.9	3.2	2.7
30	8.0	6.1	5.2	4.4	3.7	3.2
60	8.4	6.5	5.7	5.0	4.3	3.8
90	8.7	6.8	6.0	5.3	4.7	4.3
120	9.0	7.1	6.3	5.7	5.1	4.7
183	10	7.8	6.9	6.3	5.8	5.5

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1933-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	118	223	315	459	588	737
3	111	209	292	417	525	647
7	104	195	269	378	469	568
15	95	178	246	344	425	513
30	85	162	224	314	389	470
60	71	133	184	258	320	388
90	59	109	149	208	257	310

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1933-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
110	72	51	38	29	24	18	14	12	10	9.4	8.6	7.9	7.2	6.0

RIO GRANDE BASIN

08294300 RIO NAMBE AT NAMBE FALLS, NEAR NAMBE, NM

LOCATION.--Lat 35°50'46", long 105°54'29", in NW¼SW¼ sec.29, T.19 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, in Nambe Indian Reservation, on left bank 800 ft downstream from Nambe Falls, 1,100 ft downstream from Nambe Falls Dam, 2.4 mi upstream from Rio En Medio, 4.2 mi southeast of Nambe Pueblo and 5.2 mi southeast of Nambe.

DRAINAGE AREA.--34.2 mi².

PERIOD OF RECORD.--March 1963 to December 1978 (discontinued).

REVISED RECORDS.--WDR NM-77-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6,513.68 ft above National Geodetic Vertical Datum, 1929 (levels by Bureau of Reclamation).

REMARKS.--Flow regulated by Nambe Falls Reservoir (station 08294200) since Feb. 22, 1976. Outlet conduits are one 6-in and two 12-in diameter pipes. No diversions above station.

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--15 years (water years 1964-78), 10.7 ft³/s, 7,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft³/s Aug. 8, 1967, gage height, about 6.0 ft, from floodmarks, from rating curve extended above 44 ft³/s on basis of field estimate of peak flow; minimum daily, 0.30 ft³/s Aug. 21, 1977.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-78

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-78

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	4.9	9.3	6.9	1.3	.19	5.7	1	1.9	.9	.6	.4	--	--
NOVEMBER	1.0	8.2	5.4	1.7	.31	4.5	3	2.2	1.2	.8	.6	--	--
DECEMBER	1.0	7.6	4.2	1.9	.45	3.5	7	2.6	1.5	1.0	.7	--	--
JANUARY	1.3	5.1	3.6	1.0	.28	3.0	14	2.9	1.6	1.1	.8	--	--
FEBRUARY	1.3	6.2	3.6	1.2	.32	3.0	30	3.1	1.9	1.3	.9	--	--
MARCH	1.4	11	4.8	2.6	.53	4.0	60	3.6	2.3	1.7	1.3	--	--
APRIL	3.0	39	11	8.4	.75	9.3	90	3.9	2.6	1.9	1.4	--	--
MAY	7.6	86	23	19	.80	19.3	120	4.2	2.7	1.9	1.4	--	--
JUNE	6.9	110	25	25	1.02	20.5	183	4.9	3.8	3.3	2.8	--	--
JULY	4.1	41	13	9.6	.75	10.6							
AUGUST	4.7	19	11	4.3	.39	9.2							
SEPTEMBER	3.5	15	9.1	3.1	.33	7.5							
ANNUAL	6.2	28	10	5.5	.54	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-78

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	29	48	67	102	--	--
3	28	45	63	97	--	--
7	26	42	59	92	--	--
15	24	39	56	86	--	--
30	22	36	52	81	--	--
60	18	31	45	71	--	--
90	16	27	39	60	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-78

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
28	21	17	14	12	9.8	7.9	6.6	5.6	4.8	4.4	4.0	3.7	3.3	1.6

RIO GRANDE BASIN

08295000 RIO NAMBE NEAR NAMBE, NM

LOCATION.--Lat 35°52', long 105°57', in sec.24, T.19 N., R.9 E., on right bank, in Nambe Pueblo Grant, 1,000 ft downstream from diversion dam for Nambe Canal, 2½ mi southeast of Nambe, and 6½ mi upstream from Rio Tesuque.

DRAINAGE AREA.--37.0 mi².

PERIOD OF RECORD.--October 1932 to September 1951.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,200 ft (from topographic map).

REMARKS.--Nambe Canal diverts water 1,000 ft upstream for irrigation of about 200 acres below station.

AVERAGE DISCHARGE.--19 years (water years 1933-51), 10.7 ft³/s, 7,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 878 ft³/s Aug. 23, 1935 (gage height, 6.43 ft), from rating curve extended above 78 ft³/s by logarithmic plotting; no flow for several days in October 1934.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1933-51

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1934-51

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STAN- DARD DEVI- ATION (FT³/S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	2.1	27	7.3	5.2	.72	5.8	1	1.6	.7	.4	.2	--	--
NOVEMBER	1.2	20	5.3	3.8	.71	4.2	3	2.0	.9	.5	.3	--	--
DECEMBER	.8	10	3.9	1.9	.48	3.1	7	2.3	1.4	1.0	.8	--	--
JANUARY	.7	7.3	3.6	1.3	.35	2.9	14	2.7	1.7	1.2	.9	--	--
FEBRUARY	1.0	5.3	3.4	1.0	.30	2.7	30	3.1	2.0	1.5	1.1	--	--
MARCH	1.3	8.1	4.8	2.0	.41	3.8	60	3.5	2.3	1.7	1.2	--	--
APRIL	3.4	55	15	11	.76	11.6	90	3.7	2.5	1.9	1.4	--	--
MAY	4.7	106	32	25	.80	25.0	120	3.8	2.6	1.9	1.5	--	--
JUNE	3.3	96	25	24	.95	19.8	183	4.3	2.8	2.3	1.8	--	--
JULY	1.4	45	10	9.8	.95	8.1							
AUGUST	2.5	21	8.6	5.1	.60	6.8							
SEPTEMBER	2.3	23	8.0	5.4	.67	6.3							
ANNUAL	3.2	29	11	6.5	.62	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1933-51

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	40	69	96	142	--	--
3	36	64	89	130	--	--
7	34	62	85	119	--	--
15	31	57	79	111	--	--
30	28	53	74	104	--	--
60	24	45	63	89	--	--
90	20	37	51	73	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1933-51

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
37	25	18	14	11	9.1	6.6	5.3	4.5	3.8	3.5	3.2	2.9	2.5	1.9

RIO GRANDE BASIN

08302500 TESUQUE CREEK ABOVE DIVERSIONS, NEAR SANTA FE, NM

LOCATION.--Lat 35°44', long 105°54', IN SE¼ sec.32, T.18 N., R.10 E., on right bank 1 mile upstream from Rito Tesuque and 4 miles northeast of Santa Fe.

DRAINAGE AREA.--11 mi², approximately.

PERIOD OF RECORD.--March 1936 to January 1952 (discontinued) in reports of Geological Survey. May to October 1919 in reports of State Engineer.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,100 ft (from topographic map). May to October 1919 at site 175 ft downstream at datum 6.00 ft lower.

REMARKS.--One diversion for irrigation of about 2 acres above station.

AVERAGE DISCHARGE.--15 years (water years 1937-51), 3.21 ft³/s, 2,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 425 ft³/s July 19, 1938 (gage height, 4.2 ft, from floodmark), from rating curve extended above 10 ft³/s on basis of slope-area determination at gage height 4.0 ft; no flow Aug. 25, 31, 1950, July 11, 1951.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937-51

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1938-51

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.4	10	2.0	2.4	1.17	5.3	1	.5	.3	.2	0.0	--	--
NOVEMBER	.4	6.6	1.5	1.5	.98	3.9	3	.6		.2	.1	--	--
DECEMBER	.4	2.7	1.1	.5	.48	2.8	7	.6		.3	.2	--	--
JANUARY	.4	2.0	1.0	.4	.36	2.6	14	.8		.3	.3	--	--
FEBRUARY	.5	2.0	1.0	.4	.35	2.7	30	.9		.4	.3	--	--
MARCH	.4	4.3	2.1	1.2	.57	5.4	60	.9	.6	.5	.4	--	--
APRIL	.8	26	6.3	6.1	.97	16.4	90	.9	.7	.5	.4	--	--
MAY	.8	37	11	9.6	.89	28.1	120	1.0	.7	.6	.5	--	--
JUNE	.5	27	7.0	6.7	.96	18.2	183	1.0	.7	.6	.5	--	--
JULY	.3	7.7	2.5	2.1	.87	6.4							
AUGUST	.3	3.7	1.7	1.1	.61	4.5							
SEPTEMBER	.4	4.4	1.5	.9	.64	3.9							
ANNUAL	.7	8.1	3.2	2.2	.68	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1937-51

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	13	28	41	59	--	--
3	12	25	37	54	--	--
7	11	24	34	49	--	--
15	10	22	32	45	--	--
30	9.0	19	27	39	--	--
60	7.7	16	22	31	--	--
90	6.5	13	18	25	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-51

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
13	8.0	5.6	4.1	3.1	2.5	1.8	1.4	1.2	1.0	.9	.8	.7	.6	.5

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 35°52'29", long 106°08'30", in SW¼SW¼ sec.18, T.19 N., R.8 E., Santa Fe County, Hydrologic Unit 13020101, in San Ildefonso Pueblo Grant, near right bank on downstream end of pier of former railway bridge, 400 ft downstream from bridge on State Highway 4, 1.8 mi southwest of San Ildefonso Pueblo, 2.5 mi downstream from Pojoaque River, 6.8 mi west of Pojoaque, and at mile 1,614.2.

DRAINAGE AREA.--14,300 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--February 1895 to December 1905, June 1909 to current year. Monthly discharge only for some periods, published in WSP 1312. In early reports this record was published as "at Water Tank," as "at Rio Grande," and as "near Buckman."

REVISED RECORDS.--WSP 828: Drainage area. WSP 1512: 1895-99, 1904-6, 1911-12, 1914, 1931(M), 1935. WSP 1712: 1904(M).

GAGE.--Water-stage recorder. Datum of gage is 5,488.48 ft above National Geodetic Vertical Datum of 1929. See WSP 1312, 1732, or 1923 for history of changes prior to June 1, 1910.

REMARKS.--Considerable regulation by Heron Reservoir (station 08284510), El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900) on Rio Chama, which can contribute a major portion of the total flow. Flow affected by release of transmountain water from Heron Reservoir since May 1971. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 75,000 acres in New Mexico. Gage-height telemeter at station.

AVERAGE DISCHARGE.--59 years (water years 1896-1905, 1910-14, 1919-62), 1,495 ft³/s, 1,083,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft³/s, May 23, 1920; maximum gage height, 14.5 ft, Sept. 29, 1904, present site and datum; minimum daily discharge, 60 ft³/s, July 4, 5, 1902.

EXTREMES OUTSIDE PERIOD OF RECORD.--The 1920 flood is greatest since at least 1884 and probably since 1741; information from W. H. Yeo's file on floods.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF ABIQUIU DAM)

MONTH	MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1896-1905, 1910-14, 1919-62						MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1897-1905, 1911-14, 1920-62						
	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON-SECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	168	5475	769	756	.98	4.3	1	279	173	131	103	77	63
NOVEMBER	281	2421	862	469	.54	4.8	3	290	180	136	107	80	65
DECEMBER	313	1959	757	351	.46	4.2	7	310	194	148	117	88	72
JANUARY	376	1326	646	159	.25	3.6	14	340	216	168	135	104	87
FEBRUARY	445	2191	780	251	.32	4.3	30	398	263	208	170	135	115
MARCH	401	3251	1154	520	.45	6.4	60	450	309	252	212	173	151
APRIL	366	7329	2296	1571	.68	12.7	90	512	364	303	259	217	192
MAY	433	14590	4395	3288	.75	24.4	120	526	379	320	278	238	214
JUNE	274	11920	3386	2753	.81	18.8	183	595	430	369	329	291	269
JULY	179	5692	1317	1069	.81	7.3							
AUGUST	165	3308	899	548	.61	5.0							
SEPTEMBER	191	3411	754	563	.75	4.2							
ANNUAL	498	3322	1495	710	.47	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1896-1905, 1910-14, 1919-62

PERIOD (CON-SECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	6150	11000	14600	19500	23300	27400
3	5720	10300	13900	18800	22800	27000
7	5260	9620	13100	18000	22000	26300
15	4790	8780	11900	16400	20100	24000
30	4260	7860	10600	14500	17700	21000
60	3870	7010	9320	12400	14800	17200
90	3190	5620	7380	9700	11500	13200

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1896-1905, 1910-14, 1919-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
6120	3680	2520	1880	1500	1250	954	779	666	570	523	471	414	348	268

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWJ BRIDGE, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF HERON DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1971-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1972-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	361	1026	665	200	.30	3.8	1	282	217	194	179	--	--
NOVEMBER	401	1618	949	397	.42	5.4	3	290	226	203	188	--	--
DECEMBER	450	1959	959	466	.49	5.4	7	318	249	225	209	--	--
JANUARY	436	1326	718	242	.34	4.1	14	367	278	244	220	--	--
FEBRUARY	500	1021	727	158	.22	4.1	30	457	353	308	275	--	--
MARCH	612	2346	1170	450	.38	6.6	60	516	402	354	320	--	--
APRIL	489	6412	2017	1528	.76	11.5	90	577	445	390	350	--	--
MAY	433	8390	3718	2639	.71	21.1	120	628	468	403	357	--	--
JUNE	470	7914	3476	2489	.72	19.7	183	688	512	439	387	--	--
JULY	394	3579	1592	1043	.66	9.0							
AUGUST	391	1612	891	309	.35	5.1							
SEPTEMBER	263	1547	721	341	.47	4.1							
ANNUAL	602	2672	1469	658	.45	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	4580	8260	11200	15300	--	--
3	4410	8040	10900	15000	--	--
7	4150	7600	10300	14200	--	--
15	3880	7120	9690	13400	--	--
30	3570	6600	8960	12300	--	--
60	3130	5730	7730	10500	--	--
90	2720	5010	6790	9290	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1971-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5360	3710	2340	1700	1450	1270	1030	867	749	641	587	536	469	414	334

RIO GRANDE BASIN

08314500 RIO GRANDE AT COCHITI, NM

LOCATION.--Lat 35°37'56", long 106°19'08", in SE¼NE¼ sec.17, T.16 N., R.6 E., Sandoval County, on downstream end of concrete pier near left end of highway bridge, 1.5 mi northeast of Cochiti, 3.2 mi north of Pena Blanca, and 8 miles upstream from Galisteo Creek.

DRAINAGE AREA.--14,600 mi², approximately (includes 2,940 mi² in closed basin in San Luis Valley, CO.).

PERIOD OF RECORD.--October 1924 to September 1970 (discontinued). Monthly discharge only for some periods, published in WSP 1312. Published as "near Cochiti" prior to 1928.

REVISED RECORDS.--WSP 1312: 1925-29. WSP 1512: 1931-33, 1935, 1939-40(M).

GAGE.--Water-stage recorder. Datum of gage is 5,224.70 ft above mean sea level, datum of 1929. Prior to July 16, 1925, staff gage 1 mi upstream at different datum. July 16, 1925 to Jan. 28, 1947, at or near right abutment of bridge at same datum. Jan. 28 to May 15, 1947, 600 ft upstream at same datum.

REMARKS.--Diversions above station for irrigation of about 620,000 acres in Colorado and about 81,000 acres in New Mexico. Cochiti eastside main canal, on left bank, and Sili main canal, on right bank, bypass gage for irrigation of about 6,000 acres below station.

AVERAGE DISCHARGE.--44 years (water years 1927-70), 1,301 ft³/s, 942,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,400 ft³/s May 15, 1941 (gage height, 10.93 ft); minimum, 0.7 ft³/s Aug. 10, 11, 1934.
The flood of May 23, 1920, probably exceeded 23,400 ft³/s, and is likely the highest since 1905.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF HERON DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1927-70

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1928-70

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	76	2864	578	536	.93	3.7	1	189	61	26	11	3.5	1.5
NOVEMBER	254	2798	876	562	.64	5.6	3	215	75	33	14	4.7	2.0
DECEMBER	357	1861	764	348	.46	4.9	7	265	117	62	33	14	7.7
JANUARY	394	1032	650	124	.19	4.2	14	279	138	87	57	33	22
FEBRUARY	450	2162	827	291	.35	5.3	30	337	175	115	78	48	34
MARCH	378	2194	1011	493	.49	6.5	60	401	223	155	111	74	55
APRIL	267	7387	1948	1526	.78	12.5	90	464	278	203	152	107	83
MAY	487	15330	3667	3157	.86	23.5	120	495	308	234	184	138	113
JUNE	148	10110	2677	2269	.85	17.2	183	595	386	302	244	189	159
JULY	71	4276	1067	1004	.94	6.8							
AUGUST	81	3217	876	632	.72	5.6							
SEPTEMBER	116	2894	664	539	.81	4.3							
ANNUAL	455	3298	1301	676	.52	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1927-70

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5160	9210	12300	16700	20200	23900
3	4780	8610	11600	16000	19700	23600
7	4430	8080	11000	15400	19000	23000
15	3990	7290	9980	13900	17300	21000
30	3520	6510	8940	12500	15500	18900
60	2830	5260	7250	10200	12700	15400
90	2360	4300	5870	8170	10100	12200

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1927-70

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4650	2920	2060	1650	1340	1120	900	738	639	537	483	429	355	275	181

RIO GRANDE BASIN

08316000 SANTA FE RIVER NEAR SANTA FE, NM

LOCATION.--Lat 35°41'12", long 105°50'35", in NE¼SE¼ sec.23, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, on left bank 0.4 mi downstream from McClure Dam, 5.3 mi east of Santa Fe, and at mile 36.6.

DRAINAGE AREA.--18.2 mi².

PERIOD OF RECORD.--June 1910, January 1913 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1953, published as Santa Fe Creek near Santa Fe.

REVISED RECORDS.--WSP 1512: 1933, 1936-37(M), 1942, drainage area. WSP 1732: 1923, 1925. WDR NM-75-1: 1927.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,718 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1312 for history of changes prior to Oct. 1, 1947.

REMARKS.--Flow regulated by McClure Reservoir (station 08315500), completed in 1926, raised in 1935 and again in 1947.

AVERAGE DISCHARGE.--69 years (water years 1914-27, 1931-85), 8.06 ft³/s, 5,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft³/s, Aug. 14, 1921, gage height, 5.17 ft, site and datum then in use, from rating curve extended above 150 ft³/s; minimum, 0.05 ft³/s, Apr. 7, 8, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 1,000 ft³/s occurred Aug. 19, 1872, and Sept. 29 or 30, 1904. Without regulation the flood of Sept. 23, 1929, might have exceeded 1,500 ft³/s.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1914-27,
1931-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1915-27, 1931-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.6	23	4.6	3.6	.79	4.8	1	.9	.4	.3	.2	.1	.1
NOVEMBER	.3	14	3.0	2.2	.74	3.1	3	.9	.5	.3	.2	.1	.1
DECEMBER	.3	7.2	2.6	1.6	.64	2.7	7	1.0	.5	.3	.2	.2	.1
JANUARY	.5	6.9	2.4	1.4	.57	2.4	14	1.1	.6	.4	.3	.2	.1
FEBRUARY	.4	14	2.6	2.0	.78	2.7	30	1.2	.7	.5	.4	.2	.2
MARCH	.3	30	4.7	4.7	1.00	4.8	60	1.5	.9	.7	.5	.4	.3
APRIL	.2	69	13	14	1.13	13.3	90	1.8	1.1	.8	.6	.5	.4
MAY	.5	93	23	21	.89	24.2	120	2.0	1.2	.9	.7	.6	.5
JUNE	.7	75	17	14	.84	17.6	183	2.6	1.6	1.2	1.0	.8	.6
JULY	1.1	56	9.1	8.6	.95	9.4							
AUGUST	.8	74	8.2	9.3	1.13	8.5							
SEPTEMBER	.9	36	6.3	5.6	.89	6.5							
ANNUAL	1.9	26	8.0	5.2	.65	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1914-27, 1931-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	35	77	116	182	244	319	
3	32	68	102	158	210	271	
7	29	59	87	133	175	225	
15	25	50	73	111	145	186	
30	21	42	60	89	116	147	
60	17	33	48	72	94	120	
90	15	28	40	58	75	95	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914-27, 1931-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
33	18	13	10	8.4	7.2	5.3	4.1	3.0	2.2	1.9	1.6	1.3	1.1	.8

RIO GRANDE BASIN

08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM

LOCATION.--Lat 35°32'49", long 106°13'41", in NW¼ sec.8, T.15 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201 in Mesita de Juana Lopez Grant, on right bank at foot of La Bajada Hill, 5.0 mi upstream from Cochiti Dam, 6.3 mi east of Pena Blanca, and at mile 7.9.

DRAINAGE AREA.--231 mi².

PERIOD OF RECORD.--March 1970 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,505 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Surface and ground-water diversions and returns for municipal supply of city of Santa Fe in upper part of basin. Diversions for irrigation of about 400 acres upstream from station.

AVERAGE DISCHARGE.--15 years (water years 1971-85), 9.56 ft³/s, 6,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s, July 26, 1971, gage height, 9.58 ft, from rating curve extended above 160 ft³/s on basis of slope-area measurements at gage heights 5.69 ft and 9.58 ft; no flow July 16-18, 1971.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1971-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1972-85

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STAN- DARD DEVI- ATION (FT³/S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.0	11	6.3	1.8	.29	5.5	1	1.0	.6	.4	0.0	--	--
NOVEMBER	5.5	10	7.6	1.3	.17	6.7	3	1.3	.8	.6	0.0	--	--
DECEMBER	6.8	11	8.6	1.1	.12	7.5	7	--	--	--	--	--	--
JANUARY	6.5	11	9.3	1.3	.14	8.1	14	2.0	1.1	.7	.4	--	--
FEBRUARY	7.2	11	9.3	1.0	.11	8.1	30	2.4	1.7	1.4	1.2	--	--
MARCH	6.2	19	9.2	3.1	.33	8.1	60	3.0	2.2	1.8	1.5	--	--
APRIL	3.6	46	10	11	1.06	9.0	90	3.7	2.8	2.4	2.1	--	--
MAY	2.3	69	19	23	1.24	16.1	120	4.4	3.7	3.4	3.2	--	--
JUNE	1.2	75	16	22	1.37	13.7	183	5.6	4.9	4.5	4.2	--	--
JULY	2.3	28	7.8	6.2	.80	6.8							
AUGUST	2.1	10	5.6	2.6	.46	4.9							
SEPTEMBER	3.1	15	6.4	3.3	.52	5.6							
ANNUAL	6.1	19	9.6	4.6	.48	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	104	210	318	518	--	--
3	61	122	179	274	--	--
7	37	78	120	195	--	--
15	25	53	84	142	--	--
30	18	39	62	108	--	--
60	15	30	46	79	--	--
90	13	24	36	58	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1971-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
28	15	11	10	9.8	9.2	8.1	7.1	6.1	4.8	4.1	3.6	3.0	2.5	1.9

RIO GRANDE BASIN

08317400 RIO GRANDE BELOW COCHITI DAM, NM

LOCATION.--Lat 35°37'05", long 106°19'24", in SW¼NE¼ sec.17, T.16 N., R.6 E., Sandoval County, Hydrologic Unit 13020201, in Pueblo de Cochiti Grant, on right bank 320 ft upstream from bridge on State Highway 22, 700 ft downstream from Cochiti Dam, 1.4 mi northeast of Cochiti Pueblo, and at mile 1,587.6.

DRAINAGE AREA.--14,900 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,226.08 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Nov. 14, 1973, at site 2.4 mi downstream at elevation 5,210 ft, from topographic map. Nov. 14, 1973 to Jan. 8, 1976, at site 320 ft downstream at datum 1.79 ft lower.

REMARKS.--Discharges include flow of Santa Fe River which is intercepted by Cochiti Dam and released through the combined outlet works. Flow regulated by Cochiti Dam since Nov. 12, 1973. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and about 81,000 acres in New Mexico. Cochiti eastside main canal, on left bank, and Sili main canal, on right bank, head at Cochiti Dam and bypass gage for irrigation of about 6,000 acres downstream from station.

AVERAGE DISCHARGE.--12 years (water years 1974-85), 1,378 ft³/s, 998,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 10,300 ft³/s, July 26, 1971, gage height, 7.90 ft, site and datum then in use, from rating curve extended above 2,600 ft³/s; minimum, 0.51 ft³/s, Aug. 3-5, 1977, Aug. 27-28, 1978, result of regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 15, 1941, reached a discharge of 23,400 ft³/s at a nearby site upstream from mouth of Santa Fe River. The flood of May 23, 1920, probably exceeded 23,400 ft³/s, and is likely the highest since 1905.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	214	846	425	206	.48	2.6	1	75	15	4.6	1.4	--	--
NOVEMBER	368	1485	821	376	.46	5.0	3	80	37	24	16	--	--
DECEMBER	461	1688	953	449	.47	5.8	7	116	63	47	37	--	--
JANUARY	428	1301	725	286	.39	4.4	14	177	93	66	50	--	--
FEBRUARY	493	1119	716	188	.26	4.3	30	273	175	139	114	--	--
MARCH	438	2184	1001	499	.50	6.1	60	340	231	191	164	--	--
APRIL	281	6320	1991	1694	.85	12.0	90	419	307	265	235	--	--
MAY	432	6101	3542	2187	.62	21.4	120	492	365	316	281	--	--
JUNE	739	6205	3384	2163	.64	20.5	183	593	430	365	319	--	--
JULY	467	5643	1760	1534	.87	10.7							
AUGUST	447	993	681	186	.27	4.1							
SEPTEMBER	121	1337	525	329	.63	3.2							
ANNUAL	452	2336	1378	634	.46	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4340	7090	8840	--	--	--
3	4200	6960	8740	--	--	--
7	4070	6820	8620	--	--	--
15	3920	6630	8400	--	--	--
30	3690	6370	8140	--	--	--
60	3290	5680	7240	--	--	--
90	2850	5010	6480	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5570	3930	2630	1720	1380	1190	918	759	654	548	493	438	370	282	161

RIO GRANDE BASIN

08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM

LOCATION.--Lat 35°27'53", long 106°12'49", in NE¼NE¼ sec.8, T.14 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, on right bank 0.4 mi downstream from Galisteo Dam, 5.3 mi northwest of Cerrillos, and at mile 11.4.

DRAINAGE AREA.--597 mi².

PERIOD OF RECORD.--March 1970 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,450 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 21, 1981, at site 1,200 ft downstream at different datum.

REMARKS.--Flow regulated by Galisteo Reservoir 0.4 mi upstream. Diversions for irrigation of about 50 acres upstream from station.

AVERAGE DISCHARGE.--15 years (water years 1971-85), 6.33 ft³/s, 4,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft³/s July 27, 1971, gage height, 7.00 ft; maximum gage height, 7.33 ft July 20, 1971; no flow for many days each year.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1971-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1972-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	0.0	29	4.9	8.4	1.72	6.5	1	--	--	--	--	--	--
NOVEMBER	0.0	3.0	1.0	1.0	1.00	1.3	3	--	--	--	--	--	--
DECEMBER	0.0	5.9	1.2	1.5	1.28	1.6	7	--	--	--	--	--	--
JANUARY	0.0	2.4	1.2	.6	.51	1.5	14	--	--	--	--	--	--
FEBRUARY	0.0	7.0	1.9	1.8	.95	2.5	30	--	--	--	--	--	--
MARCH	0.0	10	2.1	2.8	1.34	2.7	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	24	3.4	7.2	2.08	4.6	90	.2	0.0	0.0	0.0	--	--
MAY	0.0	32	4.0	8.5	2.11	5.3	120	.6	.3	0.0	0.0	--	--
JUNE	0.0	30	5.8	9.8	1.69	7.7	183	1.3	.6	.3	0.0	--	--
JULY	.1	110	23	30	1.32	29.8							
AUGUST	1.4	45	16	13	.81	20.8							
SEPTEMBER	0.0	52	12	17	1.41	15.8							
ANNUAL	1.3	13	6.3	3.7	.58	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	309	622	885	1280	--	--
3	147	290	407	577	--	--
7	78	154	214	300	--	--
15	49	98	136	187	--	--
30	33	63	84	111	--	--
60	21	41	57	79	--	--
90	16	31	41	54	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1971-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME															
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%	
21	7.0	3.2	2.1	1.5	1.2	.6	.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

RIO GRANDE BASIN

08318000 GALISTEO CREEK AT DOMINGO, NM

LOCATION.--Lat 35°30'43", long 106°19'01", in SW¼SW¼ sec.21, T.15 N., R.6 E., Sandoval County, in Santo Domingo Pueblo Grant, on left bank 160 ft downstream from highway bridge, 0.2 mile northeast of Domingo, 2.8 mi east of Santo Domingo Pueblo, and 4 miles upstream from mouth.

DRAINAGE AREA.--640 mi², approximately.

PERIOD OF RECORD.--October 1941 to June 1971 (discontinued).

REVISED RECORDS.--WSP 1148: 1942, 1943(M), 1944, 1945(M), 1946-47. WRD N. MEX. 1970: 1967.

GAGE.--Water-stage recorder. Datum of gage is 5,255.50 ft above mean sea level, datum of 1929. Prior to July 20, 1956, at site 160 ft upstream at same datum.

REMARKS.--Flow regulated by Galisteo Dam, 8.5 miles upstream. Diversions for irrigation of about 50 acres above station.

AVERAGE DISCHARGE.--29 years (water years 1942-70), 10.2 ft³/s, 7,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,800 ft³/s Aug. 2, 1966, (gage height, 8.08 ft inside, 10.4 ft from floodmarks), from rating curve extended above 1,000 ft³/s on basis of field estimate of peak flow; no flow most of time.
The floods of Sept. 23, 1929 and Aug. 20, 1935, probably exceeded 20,000 ft³/s. Discharge for the flood of Aug. 20, 1935, was estimated as 24,300 ft³/s by H. W. Yeo.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1942-70

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1943-70

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	146	8.9	28	3.13	7.4	1	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	7.8	.6	1.6	2.69	.5	3	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	2.7	.4	.7	1.64	.4	7	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	2.4	.3	.5	1.82	.2	14	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	1.1	.1	.3	2.00	.1	30	0.0	0.0	0.0	0.0	0.0	--
MARCH	0.0	7.9	.4	1.5	3.75	.3	60	0.0	0.0	0.0	0.0	0.0	--
APRIL	0.0	66	2.9	12	4.23	2.4	90	0.0	0.0	0.0	0.0	0.0	--
MAY	0.0	26	2.1	5.2	2.50	1.7	120	.1	0.0	0.0	0.0	0.0	--
JUNE	0.0	65	8.6	16	1.86	7.2	183	.3	.1	0.0	0.0	0.0	--
JULY	0.0	91	27	28	1.04	22.6							
AUGUST	.4	232	50	49	.98	41.9							
SEPTEMBER	0.0	143	18	33	1.82	15.1							
ANNUAL	1.5	28	10	6.8	.67	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1942-70

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	740	1610	2300	3260	4000	--
3	358	749	1060	1480	1810	--
7	191	368	490	637	738	--
15	117	218	282	352	397	--
30	72	134	171	211	235	--
60	43	78	101	127	144	--
90	31	58	76	97	113	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1942-70

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
21	3.0	1.3	.4	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08319000 RIO GRANDE AT SAN FELIPE, NM
(Surveillance network station)

LOCATION.--Lat 35°26'39", long 106°26'23", in SW¼NW¼ sec.17, T.14 N., R.5 E., Sandoval County, Hydrologic Unit 13020201, in San Felipe Grant, on right bank 200 ft downstream from Tongue Arroyo, 1,700 ft upstream from steel highway bridge, 0.8 mi upstream from San Felipe Pueblo, 11 mi northeast of Bernalillo, and at mile 1.572.7.

DRAINAGE AREA.--16,100 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1926-30, WSP 1392: 1937(M), WSP 1512: 1931-32, 1933(M), 1934-36, 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 5,115.73 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1957, at site 1,800 ft downstream at datum 5.35 ft lower, except period May 16, 1945 to Sept. 30, 1946 when it was 5.94 ft lower than present datum.

REMARKS.--Flow completely regulated since November 1973 by Cochiti Dam (station 08317300) 17 mi upstream. Prior to November 1973 some regulation of flow by El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions for irrigation of about 705,000 acres upstream from station, some of which is irrigated downstream by Cochiti eastside main canal and San Felipe eastside acequia, which bypass station.

AVERAGE DISCHARGE.--33 years (water years 1928, 1931-62), 1,394 ft³/s, 1,010,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,300 ft³/s, June 26, 1937, gage height, 11.13 ft site and datum then in use, from rating curve extended above 15,000 ft³/s; minimum, 32 ft³/s, July 7, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Other major floods occurred in 1874, 1884, and 1904.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1928, 1931-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1932-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	123	3328	671	607	.90	4.0	1	236	124	85	60	40	--
NOVEMBER	279	3019	850	583	.69	5.1	3	255	136	94	67	44	--
DECEMBER	351	1488	751	294	.39	4.5	7	292	163	114	83	56	--
JANUARY	400	1169	657	143	.22	3.9	14	334	187	130	93	61	--
FEBRUARY	498	2241	876	329	.38	5.2	30	399	223	154	109	71	--
MARCH	439	2263	1081	519	.48	6.4	60	458	272	195	144	98	--
APRIL	336	7133	2110	1682	.80	12.6	90	503	319	241	186	135	--
MAY	580	15090	3982	3340	.84	23.7	120	533	357	283	231	182	--
JUNE	212	10660	2916	2484	.85	17.4	183	614	422	345	292	241	--
JULY	97	4438	1204	1051	.87	7.2							
AUGUST	130	3465	992	705	.71	5.9							
SEPTEMBER	141	1760	697	413	.59	4.2							
ANNUAL	503	3402	1394	759	.54	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1928, 1931-62

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	5790	10500	14100	18900	22600	--	
3	5160	9600	13100	17900	21800	--	
7	4690	8880	12300	17300	21400	--	
15	4280	8100	11200	15800	19600	--	
30	3750	7190	10000	14200	17700	--	
60	3010	5790	8120	11600	14600	--	
90	2520	4700	6500	9150	11400	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1928, 1931-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5180	2990	2130	1670	1380	1200	921	755	660	572	529	472	408	333	238

RIO GRANDE BASIN

08319000 RIO GRANDE AT SAN FELIPE, NM--Continued

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF COCHITI DAM AND AFTER COMPLETION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-73

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	190	1430	606	418	.69	4.3	1	149	96	80	71	--	--
NOVEMBER	553	1751	1211	400	.33	8.6	3	173	114	95	84	--	--
DECEMBER	358	1886	850	456	.54	6.0	7	200	136	116	104	--	--
JANUARY	441	915	722	139	.19	5.1	14	230	161	140	127	--	--
FEBRUARY	484	1031	793	159	.20	5.6	30	308	214	184	165	--	--
MARCH	520	1665	1011	311	.31	7.2	60	412	281	234	203	--	--
APRIL	493	2473	1384	747	.54	9.8	90	550	381	311	263	--	--
MAY	366	5671	2506	1683	.67	17.7	120	588	404	333	285	--	--
JUNE	411	5111	2207	1761	.80	15.6	183	695	487	403	344	--	--
JULY	264	3374	1105	1130	1.02	7.8							
AUGUST	428	2344	1077	677	.63	7.6							
SEPTEMBER	216	1114	649	343	.53	4.6							
ANNUAL	503	1978	1178	451	.38	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4350	6880	8720	--	--	--
3	3870	5780	7060	--	--	--
7	3470	5210	6410	--	--	--
15	3070	4720	5940	--	--	--
30	2710	4310	5520	--	--	--
60	2240	3750	4920	--	--	--
90	1940	3260	4300	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-73

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3740	2630	1960	1630	1350	1160	952	823	720	608	520	450	379	303	212

RIO GRANDE BASIN

08319000 RIO GRANDE AT SAN FELIPE, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF COCHITI DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	289	1035	553	217	.39	3.1
NOVEMBER	440	1658	897	409	.46	5.0
DECEMBER	500	1749	1009	467	.46	5.7
JANUARY	462	1443	773	295	.38	4.3
FEBRUARY	552	1064	755	169	.22	4.2
MARCH	546	2190	1103	464	.42	6.2
APRIL	378	6126	2053	1612	.79	11.5
MAY	521	6160	3620	2176	.60	20.4
JUNE	776	6534	3524	2235	.63	19.8
JULY	565	5979	1965	1622	.83	11.0
AUGUST	596	1228	857	205	.24	4.8
SEPTEMBER	206	1651	675	378	.56	3.8
ANNUAL	547	2424	1484	640	.43	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	167	111	90	76	--	--
3	178	129	111	99	--	--
7	226	161	138	122	--	--
14	294	203	170	148	--	--
30	407	289	239	202	--	--
60	473	345	292	255	--	--
90	548	416	360	319	--	--
120	609	459	397	354	--	--
183	691	518	446	394	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	4350	7060	8820	--	--	--
3	4250	6960	8730	--	--	--
7	4130	6860	8660	--	--	--
15	3990	6710	8490	--	--	--
30	3760	6430	8200	--	--	--
60	3380	5760	7350	--	--	--
90	2960	5100	6580	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5870	4020	2670	1790	1530	1340	1040	868	751	633	571	515	455	384	267

RIO GRANDE BASIN

08321500 JEMEZ RIVER BELOW EAST FORK, NEAR JEMEZ SPRINGS, NM

LOCATION.--Lat 35°49'39", long 106°38'52", in NW¼ sec.5, T.18 N., R.3 E., Sandoval County, Hydrologic Unit 13020202, on left bank 0.4 mi downstream from East Fork and boundary of Santa Fe National Forest, 5.3 mi northeast of Jemez Springs, and at mile 43.0.

DRAINAGE AREA.--173 mi².

PERIOD OF RECORD.--July 1949 to October 1950 (gaged separately upstream from East Fork), May 1951 to September 1957 (irrigation seasons only), March 1958 to September 1976, July 1981 to current year.

REVISED RECORDS.--WSP 1512: 1951-54(M), 1955, 1956(M). WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,703 ft above National Geodetic Vertical Datum of 1929 (plane-table survey by Topographic Division, U.S. Geological Survey, 1952). Prior to May 1951, at sites 3,000 ft upstream, at different datums and on separate channels.

REMARKS.--No diversion upstream from station.

AVERAGE DISCHARGE.--22 years (water years 1959-76, 1982-85), 33.0 ft³/s, 23,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 2,500 ft³/s, Apr. 21, 1958, gage height, 7.35 ft, from rating curve extended above 1,100 ft³/s on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.91 ft³/s, Jan. 24, 1969, result of freezeup.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1982-85,

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1960-76, 1983-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	9.9	48	19	8.4	.45	4.7	1	8.2	6.0	5.1	4.3	--	--
NOVEMBER	11	29	17	5.5	.32	4.4	3	8.5	6.8	6.1	5.6	--	--
DECEMBER	8.9	21	14	3.6	.25	3.7	7	9.2	7.7	7.2	6.8	--	--
JANUARY	9.0	30	15	5.0	.34	3.7	14	9.6	8.2	7.8	7.5	--	--
FEBRUARY	12	37	18	6.5	.37	4.6	30	11	9.1	8.5	8.1	--	--
MARCH	17	93	42	23	.54	10.7	60	12	10	9.4	8.9	--	--
APRIL	13	387	123	98	.80	31.3	90	13	11	9.9	9.3	--	--
MAY	10.0	385	68	89	1.30	17.4	120	14	11	11	9.9	--	--
JUNE	9.3	49	20	12	.60	5.2	183	15	12	11	10	--	--
JULY	11	25	16	4.5	.27	4.2							
AUGUST	11	39	22	8.4	.39	5.6							
SEPTEMBER	12	33	18	6.4	.36	4.6							
ANNUAL	15	74	33	16	.50	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1959-76, 1982-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	343	637	824	1030	--	--
3	295	560	734	934	--	--
7	233	449	597	778	--	--
15	175	343	467	628	--	--
30	122	243	341	484	--	--
60	83	157	219	312	--	--
90	64	115	159	225	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-76, 1982-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
108	55	36	29	25	23	19	17	15	14	13	12	12	11	9.7

RIO GRANDE BASIN

08323000 RIO GUADALUPE AT BOX CANYON, NEAR JEMEZ, NM

LOCATION.--Lat 35°43'52", long 106°45'44", Sandoval County, Hydrologic Unit 13020202, in Canon de San Diego Grant, on left bank at downstream end of Guadalupe Box Canyon, 4.8 mi upstream from mouth, 5 mi southwest of Jemez Springs, and 7 mi north of Jemez.

DRAINAGE AREA.--235 mi².

PERIOD OF RECORD.--November 1938 to September 1942, August 1949 to September 1950, (monthly discharge only for November, December 1938 and August 1949 published in WSP 1312), May 1951 to September 1957 (irrigation seasons only), May 1958 to September 1976, July 1981 to current year. Prior to 1951 published as "08323500 Rio Guadalupe near Jemez Springs".

REVISED RECORDS.--WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,015 ft above National Geodetic Vertical Datum of 1929 (plane-table survey by Topographic Division, U.S. Geological Survey, 1952). Prior to 1951 at site 2.4 mi downstream at lower datums.

REMARKS.--Flow regulated to some extent since October 1958 by San Gregorio Reservoir on Clear Creek, 24 mi upstream (capacity, 345 acre-ft), and by transmountain diversion into Rio Puerco Basin for irrigation of about 300 acres in vicinity of Cuba.

AVERAGE DISCHARGE.--22 years (water years 1959-76, 1982-1985), 42.0 ft³/s, 30,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,190 ft³/s, May 13 or 14, 1941, gage height, 8.4 ft, from floodmarks, site and datum in use June 1941 to September 1942, from rating curve extended above 1,000 ft³/s; minimum, 2.8 ft³/s, Dec. 9, 1967.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1959-76,
1982-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1960-76, 1983-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.9	33	13	7.0	.52	2.7	1	5.7	4.2	3.6	3.1	--	--
NOVEMBER	6.2	34	14	6.7	.49	2.7	3	6.0	4.4	3.8	3.3	--	--
DECEMBER	6.3	20	12	4.0	.34	2.4	7	6.3	4.7	4.0	3.5	--	--
JANUARY	5.8	33	12	5.7	.49	2.3	14	6.6	4.9	4.2	3.7	--	--
FEBRUARY	6.3	24	13	4.6	.34	2.7	30	7.5	5.6	4.9	4.4	--	--
MARCH	11	85	33	19	.56	6.6	60	8.7	6.5	5.7	5.1	--	--
APRIL	30	404	133	95	.71	26.6	90	9.7	7.4	6.5	5.8	--	--
MAY	15	654	181	168	.93	36.2	120	10	7.8	6.9	6.2	--	--
JUNE	6.3	174	43	46	1.06	8.6	183	11	8.7	7.6	6.8	--	--
JULY	5.3	31	15	7.7	.50	3.1							
AUGUST	6.7	45	18	9.5	.52	3.7							
SEPTEMBER	4.8	23	13	4.7	.37	2.6							
ANNUAL	15	104	42	27	.64	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1959-76, 1982-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	269	512	726	1060	--	--	
3	249	487	697	1020	--	--	
7	221	440	633	935	--	--	
15	190	386	560	831	--	--	
30	161	329	474	697	--	--	
60	125	250	358	521	--	--	
90	95	187	265	383	--	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-76, 1982-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
203	95	55	38	29	24	18	15	13	11	9.7	8.8	8.0	7.2	6.1

RIO GRANDE BASIN

08324000 JEMEZ RIVER NEAR JEMEZ, NM

LOCATION.--Lat 35°39'42", long 106°44'34", Sandoval County, Hydrologic Unit 13020202, in Canon de San Diego Grant, on left bank 0.7 mi downstream from Rio Guadalupe, 3.5 mi north of Jemez, and at mile 29.5.

DRAINAGE AREA.--470 mi².

PERIOD OF RECORD.--June 1936 to May 1941, August 1949 to October 1950, May 1951 to September 1952 (irrigation seasons only), March 1953 to current year. Monthly discharge only for some periods, published in WSP 1732. Published as Jemez Creek near Jemez, 1936-41.

REVISED RECORDS.--WSP 1712: Drainage area. WSP 1923, 1957-58.

GAGE.--Water-stage recorder. Concrete control since Dec. 6, 1965. Datum of gage is 5,622 ft above National Geodetic Vertical Datum of 1929 (plane-table survey by Topographic Division, U.S. Geological Survey 1952). June 22, 1936 to Mar. 11, 1937, at site 60 ft upstream at datum 0.50 ft higher. Mar. 12, 1937, to July 8, 1938, at present site at datum 0.7 ft higher. July 9, 1938, to May 6, 1941, at site 60 ft upstream at datum 0.70 ft higher.

REMARKS.--Diversions for irrigation of about 300 acres upstream from station.

AVERAGE DISCHARGE.--37 years (water years 1937-40, 1950, 1954-85), 74.9 ft³/s, 54,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft³/s, Apr. 21, 1958, from rating curve extended above 2,200 ft³/s on basis of contracted-opening measurement of peak flow; maximum gage height, 10.10 ft, July 15, 1985, present datum; minimum, 1.2 ft³/s, July 25, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1890 occurred between May 6 and 15, 1941, after gage was destroyed (discharge probably exceeded 6,000 ft³/s), from information by local residents.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937-40, 1950, 1954-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1938-41, 1954-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	15	91	35	20	.57	3.9	1	14	9.9	7.4	5.5	3.6	--
NOVEMBER	18	103	34	17	.51	3.8	3	14	10.0	8.2	6.9	5.5	--
DECEMBER	17	51	27	7.7	.28	3.0	7	14	11	9.3	8.1	6.8	--
JANUARY	17	42	27	5.7	.22	3.0	14	15	12	11	9.5	8.4	--
FEBRUARY	20	57	34	9.7	.29	3.8	30	18	14	12	11	9.5	--
MARCH	32	221	81	45	.56	9.0	60	21	17	15	14	13	--
APRIL	43	961	266	224	.84	29.7	90	23	19	17	16	15	--
MAY	23	1118	229	236	1.03	25.5	120	24	20	18	17	15	--
JUNE	12	274	61	62	1.01	6.8	183	27	22	20	18	17	--
JULY	15	63	30	12	.39	3.4							
AUGUST	15	121	42	25	.60	4.6							
SEPTEMBER	11	110	31	18	.57	3.5							
ANNUAL	29	189	75	45	.60	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1937-40, 1950, 1954-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	446	912	1370	2180	2980	--
3	390	814	1230	1970	2710	--
7	333	705	1080	1730	2380	--
15	280	585	885	1410	1920	--
30	240	497	746	1170	1590	--
60	193	382	554	831	1090	--
90	151	290	414	611	791	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-40, 1950, 1954-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
299	160	104	74	59	49	38	32	28	24	23	21	20	18	15

RIO GRANDE BASIN

08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, NM

LOCATION.--Lat 35°23'24", long 106°32'03", in NE¼ sec.5, T.13 N., R.4 E., Sandoval County, Hydrologic Unit 13020202, on right bank 0.8 mi downstream from Jemez Canyon Dam, 2.0 mi upstream from mouth, and 6 mi north of Bernalillo.

DRAINAGE AREA.--1,038 mi².

PERIOD OF RECORD.--March 1936 to January 1938, March 1943 to current year. Published as "Jemez Creek" prior to 1948, and as "near Bernalillo" prior to 1954.

REVISED RECORDS.--WSP 1178: 1949. WSP 1212: 1950. WSP 1512: 1936, 1943, 1945, 1947-48, 1949(M), 1950. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,095.60 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Apr. 24, 1951, at site 0.8 mi upstream at datum 24.51 ft higher. Apr. 24, 1951, to June 25, 1958, at site 37 ft upstream at datum 4.40 ft above present datum. Supplementary water-stage recorder at gages on Jemez Canyon Dam at datum 5,125.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark) used at times since January 1953.

REMARKS.--Subsequent to October 1953, flow at this station can be completely regulated by Jemez Canyon Reservoir (station 08328500). However, reservoir is designed essentially for desilting and flood control rather than storage. Diversions for irrigation of about 3,000 acres upstream from station.

AVERAGE DISCHARGE.--11 years (water years 1937, 1944-53), 49.0 ft³/s, 35,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft³/s, Aug. 29, 1943, gage height, 5.62 ft, site and datum then in use, from rating curve extended above 3,000 ft³/s; no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in 1900 was probably less than 16,000 ft³/s, but highest observed outside period of record.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF JEMEZ CANYON DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937, 1944-53

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1944-53

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.1	106	20	32	1.56	3.6	1	--	--	--	--	--	--
NOVEMBER	4.3	51	19	15	.78	3.3	3	--	--	--	--	--	--
DECEMBER	6.8	33	18	8.8	.49	3.2	7	--	--	--	--	--	--
JANUARY	3.1	40	16	11	.67	2.8	14	--	--	--	--	--	--
FEBRUARY	14	62	28	14	.49	4.8	30	--	--	--	--	--	--
MARCH	20	67	39	15	.39	6.9	60	2.4	1.0	.6	.4	--	--
APRIL	5.6	578	234	208	.89	40.9	90	2.4	1.0	.6	.4	--	--
MAY	3.4	390	144	137	.95	25.2	120	7.3	2.9	1.3	.5	--	--
JUNE	0.0	91	17	26	1.53	3.0	183	8.3	6.1	5.4	5.1	--	--
JULY	0.0	37	10	12	1.22	1.8							
AUGUST	.1	87	21	24	1.14	3.7							
SEPTEMBER	0.0	23	4.8	7.1	1.49	.8							
ANNUAL	11	104	49	34	.70	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1937, 1944-53

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	691	1130	1340	--	--	--
3	469	959	1300	--	--	--
7	324	759	1130	--	--	--
15	258	602	898	--	--	--
30	193	469	730	--	--	--
60	144	336	509	--	--	--
90	108	242	361	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937, 1944-53

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
275	102	61	46	37	29	20	12	5.8	1.1	.1	.1	.1	0.0	0.0

RIO GRANDE BASIN

08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF JEMEZ CANYON DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1954-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1955-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	178	28	45	1.64	3.6	1	0.0	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	3.8	179	28	31	1.10	3.7	3	0.0	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	.2	50	19	10	.53	2.4	7	0.0	0.0	0.0	0.0	0.0	0.0	--
JANUARY	.3	51	23	9.7	.43	2.9	14	0.0	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	.3	57	27	12	.44	3.6	30	0.0	0.0	0.0	0.0	0.0	0.0	--
MARCH	14	250	59	46	.77	7.7	60	1.1	.1	0.0	0.0	0.0	0.0	--
APRIL	14	772	188	162	.86	24.6	90	5.5	1.3	.4	0.0	0.0	0.0	--
MAY	0.0	968	211	245	1.16	27.6	120	7.9	3.5	2.3	1.6	1.0	1.0	--
JUNE	0.0	988	95	200	2.10	12.5	183	14	8.8	7.2	6.1	5.2	5.2	--
JULY	0.0	137	21	29	1.43	2.7								
AUGUST	.2	187	46	47	1.02	6.0								
SEPTEMBER	0.0	99	19	27	1.42	2.5								
ANNUAL	18	178	64	45	.71	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1954-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	688	1290	1780	2520	3150	--
3	534	1060	1520	2260	2930	--
7	383	813	1230	1950	2650	--
15	285	612	929	1470	2000	--
30	223	478	720	1130	1510	--
60	168	360	543	850	1140	--
90	129	270	402	620	825	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
307	149	90	61	46	38	27	19	13	4.3	1.4	.3	0.0	0.0	0.0

RIO GRANDE BASIN

08329500 RIO GRANDE NEAR BERNALILLO, NM

LOCATION.--Lat 35°17'05", long 106°35'45", Sandoval County, on right bank 2 mi northwest of Sandia Pueblo, 3 mi southwest of Bernalillo, 3.5 mi downstream from State Highway 44, and 8.5 miles downstream from Jemez River.

DRAINAGE AREA.--17,300 mi², approximately (includes 2,940 mi² in closed basin in San Luis Valley, CO.).

PERIOD OF RECORD.--May 1941 to September 1969 (discontinued). Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1943(M). WSP 1923: 1953-54.

GAGE.--Water-stage recorder. Datum of gage is 5,030.57 ft above mean sea level, datum of 1929. Supplemental water-stage recorder at a site 1,900 ft downstream used alternately 1953-58, 1961, 1964, 1966 at the same datum 1953-55, variable 1956-58 and 1.26 ft lower than primary gage in 1961.

REMARKS.--Diversions above station for irrigation of about 710,000 acres, some of which is below station. Possible regulation by operation of two reservoirs on Rio Chama and flood-and-silt detention reservoir on Jemez River (see sta 08328500).

AVERAGE DISCHARGE.--21 years (water years 1942-62), 1,132 ft³/s, 820,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,400 ft³/s May 16, 1941; maximum gage height, 6.83 ft Sept. 20, 1941, no flow at times.

Other major floods occurred as follows (based primarily on records for station at San Felipe); Sept. 23, 1929, about 23,000 ft³/s; Aug. 21, 1935, about 22,000 ft³/s; June 26, 1937, about 27,000 ft³/s.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1942-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1943-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	12	3200	413	687	1.66	3.0	1	19	0.0	0.0	0.0	--	--	--
NOVEMBER	177	2800	804	703	.87	5.9	3	25	0.0	0.0	0.0	--	--	--
DECEMBER	284	1498	738	353	.48	5.4	7	52	4.6	0.0	0.0	--	--	--
JANUARY	367	1059	624	152	.24	4.6	14	71	12	0.0	0.0	--	--	--
FEBRUARY	470	2167	844	385	.46	6.2	30	126	12	1.2	0.0	--	--	--
MARCH	259	2021	808	499	.62	5.9	60	199	42	14	4.5	--	--	--
APRIL	133	8341	1802	1913	1.06	13.3	90	274	109	59	33	--	--	--
MAY	311	11160	3222	3050	.95	23.7	120	300	151	101	70	--	--	--
JUNE	52	7176	2444	2391	.98	18.0	183	420	250	184	141	--	--	--
JULY	40	4498	845	1077	1.27	6.2								
AUGUST	31	3599	680	759	1.12	5.0								
SEPTEMBER	.3	1607	363	384	1.06	2.7								
ANNUAL	373	3403	1132	763	.67	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1942-62

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	4990	9540	13400	19100	--	--
3	4290	8510	12100	17600	--	--
7	3920	7780	11100	16100	--	--
15	3520	7030	10000	14700	--	--
30	3030	6240	9050	13400	--	--
60	2350	4980	7380	11300	--	--
90	1960	4040	5940	9010	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1942-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4570	2700	1910	1450	1140	935	715	599	486	372	308	236	150	66	17

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM

LOCATION.--Lat 35°05'21", long 106°40'48", Bernalillo County, Hydrologic Unit 13020203, in Atrisco Grant, on downstream side of Central Ave. bridge in Albuquerque, and at mile 1,540.0.

DRAINAGE AREA.--17,440 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1946(M).

GAGE.--Water-stage recorder. Datum of gage is 4,946.16 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 18, 1947, at various sites at datum about 2.00 ft higher; Sept. 18, 1947, to Apr. 12, 1959, at site 550 ft to the left of present site; Apr. 13, 1959, to June 29, 1960, at site 150 ft to right of present site. Supplemental water-stage recorders at sites 75 ft and 150 ft to right of present site used at various times since 1964.

REMARKS.--Flow completely regulated since November 1973 by Cochiti Dam (station 08317300) 50 mi upstream. Possible regulation by operation of reservoirs on Rio Chama and by flood-and-silt-detention reservoirs on Galisteo Creek and Jemez River (stations 08285000, 08286900, 08317900, 08328500). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions upstream from station for irrigation of about 718,000 acres, several hundred of which are downstream from station. National Weather Service gage height telemeter at station.

COOPERATION.--Records for Albuquerque Riverside drain and Arenal, Armijo, and Atrisco canals provided by Middle Rio Grande Conservancy District.

AVERAGE DISCHARGE.--20 years (water years 1943-62), 1,004 ft³/s, 773,800 acre-ft/yr, prior to closure of Abiquiu Dam.
12 years (water years 1974-85), 1,352 ft³/s, 979,500 acre-ft/yr, since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s, Apr. 24, 1942, from rating curve extended above 13,900 ft³/s; maximum gage height, 7.82 ft, Aug. 10, 1967; no flow at times.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1943-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	66	2211	724	640	.88	6.0
DECEMBER	270	1557	735	357	.49	6.1
JANUARY	406	806	619	117	.19	5.1
FEBRUARY	473	2146	862	390	.45	7.1
MARCH	167	2103	749	491	.66	6.2
APRIL	55	4166	1436	1274	.89	11.9
MAY	226	8831	2840	2639	.93	23.5
JUNE	109	6114	2157	2244	1.04	17.9
JULY	88	4183	746	1053	1.41	6.2
AUGUST	28	3687	630	801	1.27	5.2
SEPTEMBER	16	1615	299	362	1.21	2.5
ANNUAL	333	2190	1004	597	.59	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1944-62

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	25	1.2	0.0	0.0	--	--
3	25	3.3	0.0	0.0	--	--
7	34	6.9	2.1	0.0	--	--
14	50	18	9.4	0.0	--	--
30	140	22	3.8	.5	--	--
60	156	49	24	12	--	--
90	223	94	55	33	--	--
120	260	129	85	59	--	--
183	379	203	140	100	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1943-62

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	4510	8370	11400	15700	--	--
3	3940	7710	10800	15500	--	--
7	3650	7190	10200	14600	--	--
15	3270	6570	9400	13700	--	--
30	2790	5710	8270	12200	--	--
60	2160	4480	6540	9770	--	--
90	1790	3630	5230	7740	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1943-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4160	2520	1750	1270	973	861	667	553	434	304	231	158	98	59	26

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM--Continued

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF COCHITI DAM AND AFTER COMPLETION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-73

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.9	1404	382	472	1.24	3.1	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	444	1829	1196	476	.40	9.8	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	305	2054	863	516	.60	7.1	7	0.0	0.0	0.0	0.0	--	--
JANUARY	392	1016	708	167	.24	5.8	14	2.0	.1	0.0	0.0	--	--
FEBRUARY	453	1084	788	184	.23	6.5	30	13	1.5	.5	1.2	--	--
MARCH	279	1569	868	376	.43	7.1	60	74	13	4.4	1.8	--	--
APRIL	152	2350	1229	821	.67	10.1	90	198	54	24	12	--	--
MAY	28	6290	2334	1961	.84	19.2	120	244	71	34	17	--	--
JUNE	3.6	5284	1927	1901	.99	15.8	183	465	204	123	78	--	--
JULY	.9	3015	752	1138	1.51	6.2							
AUGUST	70	2029	768	711	.93	6.3							
SEPTEMBER	13	843	360	311	.86	3.0							
ANNUAL	290	1962	1015	498	.49	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4120	6640	8400	--	--	--
3	3770	5750	7030	--	--	--
7	3390	5240	6480	--	--	--
15	2930	4630	5870	--	--	--
30	2520	4200	5520	--	--	--
60	2040	3640	4920	--	--	--
90	1730	3150	4290	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-73

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3680	2520	1900	1540	1240	1050	841	688	563	375	282	175	55	9.1	.1

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF COCHITI DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	38	666	261	194	.74	1.6
NOVEMBER	401	1723	911	432	.47	5.6
DECEMBER	480	1736	1050	471	.45	6.5
JANUARY	486	1487	824	301	.37	5.1
FEBRUARY	590	1031	778	154	.20	4.8
MARCH	480	2287	1057	548	.52	6.5
APRIL	137	6343	1995	1748	.88	12.3
MAY	148	6203	3577	2290	.64	22.1
JUNE	445	6113	3193	2285	.72	19.7
JULY	287	5439	1572	1543	.98	9.7
AUGUST	278	1001	570	230	.40	3.5
SEPTEMBER	51	1495	419	415	.99	2.6
ANNUAL	356	2295	1352	668	.49	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	7.2	.9	.1	0.0	--	--
3	13	2.6	.5	0.0	--	--
7	20	5.1	1.4	0.0	--	--
14	40	9.8	4.5	2.3	--	--
30	109	38	21	13	--	--
60	218	97	61	41	--	--
90	303	185	144	117	--	--
120	391	254	205	172	--	--
183	543	349	275	225	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4820	7630	9400	--	--	--
3	4640	7480	9250	--	--	--
7	4390	7220	8960	--	--	--
15	4140	6900	8520	--	--	--
30	3910	6590	8080	--	--	--
60	3390	5790	7190	--	--	--
90	2920	5070	6450	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5500	3890	2680	1880	1490	1240	932	741	605	480	419	347	262	128	36

RIO GRANDE BASIN

08331500 RIO GRANDE NEAR BELEN, NM

LOCATION.--Lat 34°39'10", long 106°44'10", in Tome Claim, on left bank 300 ft downstream from highway bridge on State Highway 6 and 2 miles east of Belen.

DRAINAGE AREA.--18,230 mi², approximately (includes 2,940 mi² in closed basin in San Luis Valley, CO).

PERIOD OF RECORD.--January 1942 to June 1957 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 4,797.32 ft above mean sea level, datum of 1929. Prior to Apr. 9, 1953, at bridge 300 ft upstream at same datum.

REMARKS.--Diversions for irrigation of about 725,000 acres above station. Station is bypassed by 1 canal, 3 ditches, and 1 riverside drain.

AVERAGE DISCHARGE.--14 years (water years 1943-56), 811 ft³/s, 587,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,100 ft³/s Apr. 24, 1942 (gage height, 5.05 ft), from rating curve extended above 12,500 ft³/s by logarithmic plotting; minimum daily, that of Oct. 10, 11, 14, 15, 1956.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1943-56

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1944-57

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	14	665	196	204	1.04	2.0	1	50	24	15	11	--	--
NOVEMBER	26	1753	431	465	1.08	4.4	3	51	24	16	11	--	--
DECEMBER	154	1636	702	373	.53	7.2	7	55	24	16	11	--	--
JANUARY	339	864	652	149	.23	6.7	14	59	26	18	13	--	--
FEBRUARY	469	1981	851	371	.44	8.7	30	69	30	20	14	--	--
MARCH	147	1798	635	456	.72	6.5	60	92	38	24	16	--	--
APRIL	69	2585	830	792	.95	8.5	90	128	53	32	21	--	--
MAY	114	6661	2298	2415	1.05	23.5	120	160	67	41	27	--	--
JUNE	101	5899	2062	2395	1.16	21.1	183	234	105	66	43	--	--
JULY	46	2327	567	739	1.30	5.8							
AUGUST	35	1253	362	343	.95	3.7							
SEPTEMBER	21	465	174	150	.86	1.8							
ANNUAL	253	1592	811	560	.69	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1943-56

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3440	7640	11700	18400	--	--
3	3130	7150	11100	18000	--	--
7	2850	6580	10300	16700	--	--
15	2510	5840	9250	15300	--	--
30	2020	4790	7750	13300	--	--
60	1530	3580	5750	9780	--	--
90	1320	2880	4460	7270	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1943-56

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2960	1860	1180	944	808	726	580	445	293	168	115	90	74	58	42

RIO GRANDE BASIN

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, NM

LOCATION.--Lat 34°24'52", long 106°48'11", Socorro County, Hydrologic Unit 13020203, in Sevilleta or Belen Grant, 0.2 mi south of U.S. Highway 60, 1.8 mi east of Bernardo, about 3 mi upstream from floodway, and 4 mi upstream from Rio Puerco.

PERIOD OF RECORD.--June 1936 to September 1937, October 1964 to current year. July 1943 to September 1964, included in composite flow of "Rio Grande near Bernardo". October 1960 to September 1964, monthly acre-feet published in WSP 1923 (daily records available in district files). Beginning October 1952, flow in conveyance channel represents controlled diversion from Rio Grande. Prior to October 1952, records called "San Francisco Riverside drain near Bernardo", are not equivalent.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,720.00 ft above National Geodetic Vertical Datum of 1929. Prior to October 1964, 0.2 mi upstream at various datums.

REMARKS.--Conveyance channel is 1 of 4 channels (stations 08332010, 08332030, and 08332050) carrying flow in valley cross section. Original design and plan was for conveyance channel to carry flow up to about 2,000 ft³/s. For combined monthly flow in acre-ft of this channel, floodway, Bernardo interior drain and Lower San Juan Riverside drain.

AVERAGE DISCHARGE.--10 years (water years 1953-62), 462 ft³/s, 334,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,220 ft³/s, Apr. 22, 1958; no flow many days most years.

STATISTICAL SUMMARIES (PERIOD BEFORE COMPLETION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1953-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1954-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.4	790	159	230	1.45	2.9	1	.5	0.0	0.0	0.0	--	--
NOVEMBER	9.9	1413	571	532	.93	10.3	3	.5	0.0	0.0	0.0	--	--
DECEMBER	7.6	1200	643	396	.62	11.6	7	.8	0.0	0.0	0.0	--	--
JANUARY	8.2	768	540	221	.41	9.7	14	1.7	0.0	0.0	0.0	--	--
FEBRUARY	134	880	611	208	.34	11.0	30	2.9	0.0	0.0	0.0	--	--
MARCH	203	1025	484	262	.54	8.7	60	14	1.2	0.0	0.0	--	--
APRIL	51	1597	567	472	.83	10.2	90	31	3.8	1.2	.4	--	--
MAY	309	1724	778	484	.62	14.0	120	55	12	5.5	2.8	--	--
JUNE	46	1354	519	463	.89	9.3	183	167	50	24	13	--	--
JULY	.9	1625	213	498	2.34	3.8							
AUGUST	2.2	1752	286	538	1.88	5.2							
SEPTEMBER	0.0	982	182	304	1.67	3.3							
ANNUAL	165	864	462	217	.47	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1953-62

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	1640	1940	2070	--	--	--	
3	1460	1840	2040	--	--	--	
7	1360	1750	1980	--	--	--	
15	1200	1660	1960	--	--	--	
30	1050	1520	1840	--	--	--	
60	931	1390	1700	--	--	--	
90	857	1260	1510	--	--	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1953-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1490	1190	984	825	720	626	506	345	182	81	46	26	12	4.8	.3

RIO GRANDE BASIN

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, NM--Continued

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF COCHITI DAM AND AFTER COMPLETION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-73

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	234	1395	916	404	.44	13.5
DECEMBER	293	1335	760	314	.41	11.2
JANUARY	377	870	702	153	.22	10.4
FEBRUARY	446	1006	754	158	.21	11.1
MARCH	165	1028	621	286	.46	9.2
APRIL	7.3	1354	675	506	.75	10.0
MAY	4.1	1259	693	462	.67	10.2
JUNE	0.0	1665	605	532	.88	8.9
JULY	0.0	1690	315	566	1.80	4.7
AUGUST	.3	890	281	309	1.10	4.2
SEPTEMBER	0.0	570	210	206	.98	3.1
ANNUAL	183	1017	562	227	.40	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.0	0.0	0.0	0.0	--	--
3	0.0	0.0	0.0	0.0	--	--
7	0.0	0.0	0.0	0.0	--	--
14	0.0	0.0	0.0	0.0	--	--
30	0.0	0.0	0.0	0.0	--	--
60	9.2	0.0	0.0	0.0	--	--
90	58	1.1	0.0	0.0	--	--
120	61	4.2	.7	.1	--	--
183	221	95	59	39	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1650	1820	1930	--	--	--
3	1560	1750	1850	--	--	--
7	1480	1680	1790	--	--	--
15	1380	1610	1710	--	--	--
30	1220	1480	1600	--	--	--
60	1100	1390	1500	--	--	--
90	1020	1290	1390	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-73

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1500	1290	1140	995	908	840	703	543	336	137	68	14	.1	0.0	0.0

RIO GRANDE BASIN

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF COCHITI DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	322	43	99	2.27	6.6	1	.3	0.0	0.0	0.0	--	--
NOVEMBER	1.5	874	102	257	2.52	15.5	3	.4	0.0	0.0	0.0	--	--
DECEMBER	3.6	1579	143	453	3.17	21.8	7	.6	0.0	0.0	0.0	--	--
JANUARY	3.0	1417	126	407	3.23	19.2	14	.6	0.0	0.0	0.0	--	--
FEBRUARY	3.4	873	81	250	3.11	12.3	30	1.8	0.0	0.0	0.0	--	--
MARCH	3.9	699	67	199	2.95	10.3	60	2.2	1.0	0.0	0.0	--	--
APRIL	2.9	350	39	98	2.55	5.9	90	3.8	.2	0.0	0.0	--	--
MAY	.6	178	25	49	1.94	3.8	120	4.4	.2	0.0	0.0	--	--
JUNE	0.0	25	9.6	7.3	.76	1.5	183	4.5	.9	.4	.1	--	--
JULY	0.0	49	8.5	14	1.58	1.3							
AUGUST	0.0	36	5.8	9.9	1.70	.9							
SEPTEMBER	0.0	42	6.9	12	1.68	1.0							
ANNUAL	2.3	537	55	152	2.78	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	25	97	269	--	--	--
3	22	93	267	--	--	--
7	19	81	241	--	--	--
15	15	70	217	--	--	--
30	14	64	204	--	--	--
60	12	56	181	--	--	--
90	11	48	152	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
265	29	18	13	11	9.9	7.7	6.0	5.0	4.0	3.5	2.9	2.2	.7	0.0

RIO GRANDE BASIN

08332000 RIO GRANDE NEAR BERNARDO, NM

LOCATION.--Lat 34°25'00", long 106°48'00", in E4NE4 sec.11, T.2 N., R. 1 E., (projected), in Sevilleta or Belen Grant, at bridge on U.S. Highway 60, 2 miles east of Bernardo and 4½ miles upstream from Rio Puerco.

DRAINAGE AREA.--19,230 mi², approximately (includes 2,940 mi² in closed basin San Luis Valley, CO.).

PERIOD OF RECORD.--June 1936 to January 1939, October 1941 to September 1964. Monthly discharge only October 1942 to June 1943 published in WSP 1312. Prior to October 1951, flow of Bernardo interior drain was included only when it carried river overflow; since that date entire flow is included.

GAGE.--Water-stage recorders. There are 3 gages, 1 on a conveyance channel designed to carry 2,000 ft³/s, 5 miles downstream from heading, formerly San Francisco Riverside drain, 1 on the floodway (former river channel) which will now carry water when total flow exceeds about 1,700 ft³/s, and 1 on Bernardo interior drain. Datum of conveyance channel gage is 4,720.00 ft above mean sea level, datum of 1929, leveling of 1951. Prior to October 1952, main gage was on river channel (the present floodway gage, present datum) at datum 4,722.55 ft above mean sea level, datum of 1929, leveling of 1951. Datum of Bernardo interior drain supplementary recording gage is 4,713.99 ft above mean sea level, datum of 1929, leveling of 1951.

REMARKS.--Records represent total discharge of the river and are a summation of discharge in river channel (now called floodway), conveyance channel, and Bernardo interior drain. Flow in La Joya Eastside drain along left side of floodway is not included in the composite. Diversions for irrigation of about 740,000 acres above station.

AVERAGE DISCHARGE.--22 years (water years 1937-38, 1942, 1944-62), 1,093 ft³/s, 791,900 acre-ft/yr.

COOPERATION.--Records for La Joya Eastside drain are furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft³/s Apr. 25, 1942 (gage height, 6.90 ft); no flow at times.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937-38, 1942, 1944-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1938, 1945-62

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STANDARD DEVIATION (FT³/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.4	2857	415	625	1.51	3.2	1	12	2.0	0.0	0.0	--	--
NOVEMBER	11	2728	758	703	.93	5.8	3	14	2.1	0.0	0.0	--	--
DECEMBER	150	1682	803	389	.48	6.1	7	16	2.2	0.0	0.0	--	--
JANUARY	367	1148	670	152	.23	5.1	14	20	2.5	0.0	0.0	--	--
FEBRUARY	498	1962	874	340	.39	6.6	30	35	4.1	.9	0.0	--	--
MARCH	150	1907	791	514	.65	6.0	60	63	9.0	2.2	0.0	--	--
APRIL	50	7863	1696	1992	1.17	12.9	90	114	22	7.6	2.9	--	--
MAY	98	10610	3323	3205	.96	25.3	120	153	43	20	9.8	--	--
JUNE	51	7052	2352	2383	1.01	17.9	183	272	97	51	28	--	--
JULY	4.4	4024	682	981	1.44	5.2							
AUGUST	7.6	3235	452	674	1.49	3.4							
SEPTEMBER	0.0	1516	333	445	1.34	2.5							
ANNUAL	237	3251	1093	780	.71	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1937-38, 1942, 1944-62

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4790	9940	14100	20100	--	--
3	4480	9380	13400	19100	--	--
7	4100	8550	12200	17300	--	--
15	3620	7580	10900	15600	--	--
30	3100	6670	9710	14200	--	--
60	2470	5400	7960	11900	--	--
90	2060	4300	6230	9140	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-38, 1942, 1944-62

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4700	2660	1870	1390	1070	876	701	561	409	221	148	91	52	28	8.3

RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM

LOCATION.--Lat 34°25'01", long 106°48'00", Socorro County, Hydrologic Unit 13020203, in Belen or Sevilleta Grant, on downstream side of bridge on U.S. Highway 60, 5 mi downstream from heading of conveyance channel, 2 mi east of Bernardo, and at mile 1,487.2.

DRAINAGE AREA.--19,230 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--June 1936 to January 1939, October 1941 to current year. Monthly discharge only October 1942 to June 1943 published in WSP 1312, and October 1960 to September 1964, published in WSP 1923 (daily records available in district files). Published as "Rio Grande near Bernardo" prior to October 1964. Prior to October 1952, flow of Bernardo interior drain was included only when it carried river overflow, the entire flow has been included from October 1952 to September 1964. Flow in the conveyance channel, formerly San Francisco Riverside drain, has been included in record prior to October 1964.

GAGE.--Water-stage recorder. Datum of gage is 4,722.55 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Since November 1973 flow completely regulated by Cochiti Dam (station 08317300) 100 mi upstream. Floodway is 1 of 4 channels (stations 08331990, 08332030, and 08332050) carrying flow in valley cross section. Diversions for irrigation of about 740,000 acres upstream from station.

AVERAGE DISCHARGE.--10 years (water years 1964-73), 272 ft³/s, 197,100 acre-ft/yr. Includes flow of floodway, conveyance channel, and Bernardo interior drain.

EXTREMES FOR PERIOD OF RECORD (1936-39 AND SINCE 1941).--Maximum discharge, 21,000 ft³/s, Apr. 25, 1942, gage height, 6.90 ft; no flow for many days most years.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF COCHITI DAM AND AFTER COMPLETION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-73

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	321	32	101	3.14	1.0	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	563	130	185	1.42	4.0	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	600	90	194	2.17	2.8	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	81	18	30	1.69	.6	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	124	16	39	2.48	.5	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	319	50	103	2.06	1.5	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	715	215	263	1.22	6.6	90	0.0	0.0	0.0	0.0	--	--
MAY	0.0	4655	1213	1523	1.26	37.4	120	.9	0.0	0.0	0.0	--	--
JUNE	0.0	3477	988	1240	1.26	30.5	183	1.5	0.0	0.0	0.0	--	--
JULY	0.0	1204	221	459	2.08	6.8							
AUGUST	0.0	1321	253	439	1.74	7.8							
SEPTEMBER	0.0	113	17	36	2.12	.5							
ANNUAL	.4	805	272	267	.98	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1964-73

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2760	5320	6450	--	--	--
3	2480	4740	5560	--	--	--
7	2140	4460	5320	--	--	--
15	1610	3900	4900	--	--	--
30	1190	3390	4560	--	--	--
60	734	2500	3670	--	--	--
90	583	2000	2940	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-73

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2080	864	363	110	7.2	.3	.3	.2	.2	.1	.1	.1	.1	0.0	0.0

RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF COCHITI DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	0.0	823	176	262	1.49	1.3
NOVEMBER	3.7	1683	805	521	.65	6.1
DECEMBER	117	1765	898	499	.56	6.8
JANUARY	37	1265	691	319	.46	5.2
FEBRUARY	0.0	1054	655	285	.44	4.9
MARCH	0.0	1910	758	551	.73	5.7
APRIL	0.0	5160	1478	1551	1.05	11.1
MAY	0.0	5746	3242	2292	.71	24.4
JUNE	0.0	6178	2731	2345	.86	20.6
JULY	0.0	5261	1251	1573	1.26	9.4
AUGUST	0.0	769	297	243	.82	2.2
SEPTEMBER	0.0	1179	291	380	1.31	2.2
ANNUAL	13	2111	1107	720	.65	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	0.0	0.0	0.0	0.0	--	--
3	0.0	0.0	0.0	0.0	--	--
7	0.0	0.0	0.0	0.0	--	--
14	0.0	0.0	0.0	0.0	--	--
30	23	0.0	0.0	0.0	--	--
60	103	0.0	0.0	0.0	--	--
90	53	.8	0.0	0.0	--	--
120	127	11	.4	0.0	--	--
183	346	59	3.9	0.0	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4600	8470	10500	--	--	--
3	4350	8070	10100	--	--	--
7	4150	7710	9530	--	--	--
15	3830	7290	9070	--	--	--
30	3510	6850	8470	--	--	--
60	3190	6030	7180	--	--	--
90	2780	5260	6210	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5030	3420	2360	1620	1310	1050	743	560	350	129	52	5.0	0.0	0.0	0.0

RIO GRANDE BASIN

08334000 RIO PUERCO ABOVE ARROYO CHICO, NEAR GUADALUPE, NM

LOCATION.--Lat 35°38'08", long 107°09'56", in SW¼ sec.21, T.16 N., R.3 W., Sandoval County, Hydrologic Unit 13020204, on right bank 1.6 mi upstream from Arroyo Chico, 5.5 mi northeast of village of Guadalupe, and at mile 106.8.

DRAINAGE AREA.--420 mi², approximately.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,950 ft above National Geodetic Vertical Datum of 1929. Prior to July 14, 1966 at datum 1.01 ft higher.

REMARKS.--Diversions for irrigation of about 3,700 acres upstream from station in past years, but present diversion negligible.

AVERAGE DISCHARGE.--34 years (water years 1952-85), 13.6 ft³/s, 9,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,940 ft³/s July 29, 1967, gage height, 13.53 ft, from rating curve extended above 1,300 ft³/s on basis of slope-area measurements at gage heights 7.75 ft and 10.60 ft; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1943, probably exceeded 5,000 ft³/s based on records for stations upstream and downstream.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1952-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1953-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	0.0	129	8.3	23	2.75	5.1	1	0.0	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	17	2.5	4.9	1.95	1.5	3	0.0	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	8.8	1.3	2.3	1.86	.8	7	0.0	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	24	1.8	4.4	2.40	1.1	14	0.0	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	79	11	20	1.77	6.9	30	0.0	0.0	0.0	0.0	0.0	0.0	--
MARCH	0.0	161	18	32	1.83	10.8	60	0.0	0.0	0.0	0.0	0.0	0.0	--
APRIL	0.0	99	18	25	1.37	11.2	90	.1	0.0	0.0	0.0	0.0	0.0	--
MAY	0.0	236	37	48	1.30	22.7	120	.3	0.0	0.0	0.0	0.0	0.0	--
JUNE	0.0	98	13	22	1.66	8.1	183	1.3	.2	0.0	0.0	0.0	0.0	--
JULY	0.0	78	15	17	1.13	9.0								
AUGUST	0.0	101	25	25	1.00	15.5								
SEPTEMBER	0.0	90	12	19	1.63	7.2								
ANNUAL	1.1	49	14	10	.75	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1952-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	399	713	945	1250	1490	--
3	228	404	544	744	911	--
7	138	238	313	415	495	--
15	86	149	194	256	306	--
30	61	107	143	193	233	--
60	41	74	99	133	159	--
90	32	59	77	100	117	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1952-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
70	37	20	11	5.6	3.0	.6	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08340500 ARROYO CHICO NEAR GUADALUPE, NM

LOCATION.--Lat 35°35'33", long 107°11'19", in NE¼ sec.30, T.16 N., R.3 W., Sandoval County, Hydrologic Unit 13020205, on left bank 0.2 mi upstream from mouth, 4.1 mi northwest of Guadalupe, and 5.5 mi southwest of Cabezón.

DRAINAGE AREA.--1,390 mi², approximately.

PERIOD OF RECORD.--November 1943 to current year.

REVISED RECORDS.--WSP 1282: 1944-50.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,920 ft above National Geodetic Vertical Datum of 1929. Prior to June 21, 1968 at site 500 ft upstream at datum 2.00 ft higher.

REMARKS.--Diversions for irrigation of about 100 acres upstream from station.

AVERAGE DISCHARGE.--42 years (water years 1944-85), 21.1 ft³/s, 15,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s, Sept. 12, 1972, gage height, 17.5 ft from floodmarks, from rating curve extended above 2,900 ft³/s on basis of slope-area measurements at gage heights 11.6 ft and 14.8 ft; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1944-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1945-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	131	19	29	1.54	7.5	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	20	3.0	4.6	1.55	1.2	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	15	1.6	3.6	2.18	.6	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	27	2.4	5.9	2.46	1.0	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	210	13	34	2.55	5.3	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	0.0	169	12	29	2.33	4.9	60	0.0	0.0	0.0	0.0	0.0	0.0	0.0
APRIL	0.0	75	4.2	12	2.95	1.7	90	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAY	0.0	12	2.5	3.7	1.52	1.0	120	.3	0.0	0.0	0.0	0.0	0.0	0.0
JUNE	0.0	44	4.2	9.4	2.22	1.7	183	2.4	.4	.1	0.0	0.0	0.0	0.0
JULY	0.0	218	41	51	1.26	16.2								
AUGUST	.6	577	106	126	1.19	42.2								
SEPTEMBER	0.0	230	42	56	1.32	16.9								
ANNUAL	3.8	62	21	14	.64	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1944-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1140	1980	2580	3350	3920	4490
3	597	1090	1450	1940	2320	2710
7	322	601	826	1150	1420	1710
15	184	345	478	673	838	1020
30	119	231	324	464	583	715
60	77	144	195	266	323	383
90	56	102	138	189	230	273

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1944-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
73	20	9.2	5.5	2.9	1.4	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08342000 BLUEWATER CREEK NEAR BLUEWATER, NM

LOCATION.--Lat 35°17'40", long 108°01'40", in W4SW4 sec.5, T.12 N., R.11 W., Valencia County, on left bank, 3.5 mi northwest of Bluewater Village, and 8 mi downstream from Bluewater Dam.

DRAINAGE AREA.--209 mi².

PERIOD OF RECORD.--July 1912 to August 1915, April 1916 to June 1919, water years 1919-22, 1924, 1926 (annual maximum), January 1927 to December 1972 (discontinued). Monthly discharge only for some periods, published in WSP 1312. Figures of daily discharge for July 20-23, 1912, published in WSP 358, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1512: 1912-15, 1931, 1943(M), 1945(M). WSP 1312: 1915, 1917-18, 1929. WSP 1732: 1931(M).

GAGE.--Water-stage recorder. Altitude of gage is 6,720 ft (by barometer). See WSP 1732 or 1923 for history of changes prior to Mar. 18, 1939.

REMARKS.--Flow regulated by Bluewater Lake (see sta 08341400).

AVERAGE DISCHARGE.--12 years (water years 1961-72), 5.00 ft³/s, 3,620 acre-ft/yr.
years (1953-72), 3.52 ft³/s (2,550 acre-ft year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 4,000 ft³/s, during period July 12-19, 1919 (gage height, 13.5 ft, from floodmarks, site and datum in use Mar. 4, 1918 to June 28, 1919); no flow at times.
The flood of Sept. 6, 1909, when Bluewater Dam washed out exceeded all other observed floods at this location (stage and discharge not determined). For other major floods during period 1919-26, see WSP 1732, p. 429, and WSP 1682, p 410.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1961-72

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1962-72

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.7	3.6	1.9	1.1	.56	3.2	1	.7	.4	.3	.3	--	--
NOVEMBER	.9	2.4	1.5	.5	.30	2.6	3	.7	.5	.4	.3	--	--
DECEMBER	.7	1.9	1.4	.4	.28	2.3	7	.8	.6	.5	.4	--	--
JANUARY	.6	2.2	1.4	.5	.32	2.4	14	.9	.6	.5	.4	--	--
FEBRUARY	.8	2.0	1.3	.3	.26	2.2	30	1.0	.7	.6	.5	--	--
MARCH	.7	2.7	1.4	.5	.40	2.3	60	1.0	.8	.7	.6	--	--
APRIL	.8	5.3	2.1	1.4	.65	3.5	90	1.1	.8	.7	.6	--	--
MAY	.9	27	9.8	9.1	.93	16.5	120	1.2	.9	.8	.7	--	--
JUNE	.6	32	13	12	.92	22.0	183	1.4	1.0	.9	.7	--	--
JULY	.6	23	11	9.4	.84	19.0							
AUGUST	.5	26	9.9	8.4	.85	16.6							
SEPTEMBER	.5	17	4.5	5.3	1.18	7.6							
ANNUAL	.9	11	5.0	3.6	.73	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1961-72

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	18	34	44	57	--	--
3	14	32	48	70	--	--
7	12	31	48	73	--	--
15	11	28	45	73	--	--
30	9.5	26	41	68	--	--
60	8.3	23	37	60	--	--
90	7.8	21	34	55	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-72

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
25	19	13	5.7	3.2	2.5	2.0	1.7	1.4	1.2	1.1	1.0	.9	.8	.6

RIO GRANDE BASIN

08343000 RIO SAN JOSE AT GRANTS, NM

LOCATION.--Lat 35°09'16", long 107°52'11", in SW¼NW¼ sec.26, T.11 N., R.10 W., Cibola County, Hydrologic Unit 13020207, on right bank at bridge on El Morro St., 0.2 mi south of Santa Fe Ave. in Grants, and at mile 67.8.

DRAINAGE AREA.--1,020 mi², approximately.

PERIOD OF RECORD.--October 1912 to February 1914, June 1914, October 1914 to February 1915, May 1915 to June 1921, September 1921 to June 1923, October 1923 to May 1926, September to December 1926, May 1949 to September 1966, June 1968 to current year. Monthly discharge only for some periods published in WSP 1312. Prior to October 1967, published as "Bluewater Creek at Grants".

REVISED RECORDS.--WSP 1512: 1913-14. WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,468.34 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). See WSP 1732 or 1923 for history of changes prior to Jan. 1, 1926.

REMARKS.--Flow slightly regulated by Bluewater Lake (station 08341400) 24 mi upstream. Diversions and groundwater withdrawals for irrigation of about 4,500 acres upstream from station.

AVERAGE DISCHARGE.--45 years (water years 1913, 1916-20, 1922, 1924-25, 1950-85), 2.90 ft³/s, 2,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1950-66 AND SINCE 1968).--Maximum discharge recorded, 1,760 ft³/s, Aug. 28, 1952, gage height, 5.35 ft, from rating curve extended above 300 ft³/s on basis of velocity-area studies; no flow for long periods.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood observed occurred Sept. 6 or 7, 1909, when Bluewater Dam washed out. A flood in July 1919 probably exceeded the one in 1952.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1913, 1916-20, 1922, 1924-25, 1950-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1917-23, 1925-26, 1950-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	11	.6	1.7	2.62	1.9	1	--	--	--	--	--	--	--
NOVEMBER	0.0	3.1	.2	.5	2.60	.6	3	--	--	--	--	--	--	--
DECEMBER	0.0	15	.5	2.3	5.13	1.4	7	--	--	--	--	--	--	--
JANUARY	0.0	14	.5	2.2	4.49	1.5	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	89	2.5	13	5.28	7.7	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	0.0	205	6.8	32	4.67	20.4	60	0.0	0.0	0.0	0.0	0.0	0.0	0.0
APRIL	0.0	133	13	30	2.43	37.7	90	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAY	0.0	23	1.5	4.6	3.18	4.4	120	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUNE	0.0	1.9	.2	.4	2.10	.6	183	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JULY	0.0	93	3.6	14	4.03	10.8								
AUGUST	0.0	37	3.5	7.5	2.19	10.4								
SEPTEMBER	0.0	11	.9	2.0	2.18	2.7								
ANNUAL	0.0	29	2.9	6.3	2.19	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1913, 1916-20, 1922, 1924-25, 1950-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	44	151	257	420	556	698
3	23	96	190	375	570	820
7	12	59	133	315	548	903
15	6.5	37	92	242	457	816
30	3.7	22	58	162	321	600
60	2.1	13	34	100	205	397
90	1.4	8.9	24	72	148	291

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1913, 1916-20, 1922, 1924-25, 1950-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2.7	1.0	.3	.2	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08343500 RIO SAN JOSE NEAR GRANTS, NM

LOCATION.--Lat 35°04'27", long 107°45'01", in SE¼SE¼ sec.23, T.10 N., R.9 W., Cibola County, Hydrologic Unit 13020207, on right bank at west boundary of Acoma Pueblo Grant, 8.5 mi southeast of Grants, and at mile 57.4.

DRAINAGE AREA.--2,300 mi², approximately, of which 1,130 mi² does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1936 to current year. Prior to October 1955, published as "San Jose River near Grants".

REVISED RECORDS.--WSP 898: 1936-39(M). WSP 1512: 1943. WSP 1712: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6,269.47 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Flow slightly regulated by Bluewater Lake (station 08341400), 34 mi upstream. Diversions and ground-water withdrawal for irrigation of about 5,100 acres upstream from station.

AVERAGE DISCHARGE.--49 years (water years 1937-85), 6.81 ft³/s, 4,930 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft³/s, Sept. 20, 1963, gage height, 4.87 ft, from rating curve extended above 450 ft³/s on basis of slope-area measurements at gage heights 3.19 ft and 4.87 ft; minimum, 1.9 ft³/s, Feb. 21, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood probably occurred Sept. 6 or 7, 1909, following destruction of Bluewater dam. The peak of Sept. 20, 1963 may have been exceeded by those of July 1919, August and September 1929, and August 1935.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1938-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	4.0	17	5.9	2.3	.39	7.2	1	3.9	3.5	3.2	3.0	2.8	2.6
NOVEMBER	4.1	9.8	5.4	1.0	.18	6.6	3	4.0	3.6	3.3	3.1	2.9	2.8
DECEMBER	4.0	7.8	5.3	.9	.17	6.5	7	4.1	3.7	3.5	3.3	3.0	2.9
JANUARY	3.8	11	5.7	1.4	.25	7.0	14	4.2	3.8	3.6	3.4	3.2	3.1
FEBRUARY	4.5	12	5.9	1.5	.25	7.2	30	4.4	4.0	3.8	3.7	3.4	3.3
MARCH	4.0	11	5.8	1.6	.27	7.1	60	4.6	4.2	4.0	3.9	3.7	3.6
APRIL	3.7	91	9.1	15	1.68	11.2	90	4.8	4.4	4.2	4.1	3.9	3.8
MAY	4.0	128	8.9	18	2.05	10.9	120	4.9	4.5	4.3	4.2	4.0	3.9
JUNE	3.7	10	5.5	1.3	.24	6.7	183	5.3	4.8	4.6	4.4	4.3	4.2
JULY	3.6	24	7.1	4.0	.57	8.7							
AUGUST	4.7	53	10	9.3	.92	12.4							
SEPTEMBER	4.2	25	7.0	4.0	.56	8.6							
ANNUAL	4.4	19	6.8	2.7	.40	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1937-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	59	147	236	393	547	737	
3	38	91	150	263	385	546	
7	23	56	97	186	294	456	
15	15	35	59	116	188	300	
30	11	24	39	71	112	173	
60	9.2	17	25	43	63	93	
90	8.1	13	19	31	43	60	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
9.5	7.6	6.7	6.4	6.0	5.8	5.5	5.3	5.0	4.8	4.7	4.6	4.5	4.4	4.1

RIO GRANDE BASIN

08351500 RIO SAN JOSE AT CORREO, NM

LOCATION.--Lat 34°58'03", long 107°10'10", in NE¼ sec.32, T.9 N., R.3 W., Cibola County, Hydrologic Unit 13020207, on left bank 0.3 mi downstream from State Highway 6, 1.2 mi northeast of Correo, and 13 mi upstream from mouth.

DRAINAGE AREA.--3,660 mi², approximately, of which about 1,130 mi² does not contribute directly to surface runoff.

PERIOD OF RECORD.--April 1943 to current year. Prior to October 1955, published as "San Jose River at Correo".

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,474.88 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1958 to Sept. 30, 1975, water-stage recorder at site 1 mi upstream at datum 17.55 ft higher.

REMARKS.--Flow regulated to some extent since 1927 by Bluewater Lake (station 08341400) 79 mi upstream.

AVERAGE DISCHARGE.--42 years (water years 1944-85), 11.1 ft³/s, 8,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,150 ft³/s, Aug. 11, 1955; maximum gage height, 20.7 ft, Aug. 22, 1958, backwater from dam (present datum); no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood which probably occurred Aug. 21, 1935, reached a stage of 15.4 ft, from floodmarks, (discharge, about 11,000 ft³/s), but was probably exceeded by the flood of Sept. 23, 1929 (discharge not determined), based on study of records for Rio Puerco at Rio Puerco.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1944-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1945-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	123	13	28	2.08	10.1	1	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	19	2.4	3.6	1.54	1.8	3	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	9.7	1.9	2.5	1.33	1.4	7	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	10	3.4	3.0	.87	2.6	14	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	14	4.5	3.3	.74	3.4	30	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	0.0	39	4.7	7.2	1.52	3.6	60	0.0	0.0	0.0	0.0	0.0	0.0
APRIL	0.0	83	5.8	17	2.98	4.4	90	0.0	0.0	0.0	0.0	0.0	0.0
MAY	0.0	33	4.5	9.6	2.16	3.4	120	.4	0.0	0.0	0.0	0.0	0.0
JUNE	0.0	33	2.6	7.1	2.79	1.9	183	2.0	.5	.2	0.0	0.0	0.0
JULY	0.0	170	17	30	1.77	12.7							
AUGUST	0.0	363	51	73	1.43	38.6							
SEPTEMBER	0.0	126	21	28	1.30	16.2							
ANNUAL	1.5	40	11	8.9	.80	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1944-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	496	1070	1530	2180	2690	3210	
3	274	579	816	1140	1380	1630	
7	152	314	435	592	709	822	
15	88	197	289	420	525	636	
30	55	122	177	254	317	382	
60	33	73	106	157	200	246	
90	24	52	74	108	136	167	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1944-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
35	11	6.9	5.2	4.0	3.1	.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08352500 RIO PUERCO AT RIO PUERCO, NM

LOCATION.--Lat 34°47'38", long 106°59'20", in NW¼ sec.31, T.7 N., R.1 W., Valencia County, Hydrologic Unit 13020204, in San Clemente Grant, on downstream end of pier nearest left abutment of the Atchison, Topeka and Santa Fe Railway Co. bridge, 7 mi downstream from Rio San Jose, and at mile 36.2.

DRAINAGE AREA.--6,590 mi², approximately, of which at least 1,130 mi² does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1909 to December 1912 (records fragmentary, gage heights only), March 1934 to December 1976. Records for January 1913 to December 1914 published in WSP 358, 388, and 408 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1512: 1937 (calendar year figures only), 1941, 1944. WSP 1712: 1958. WSP 1732: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,008.59 ft above mean sea level.

REMARKS.--Diversions for irrigation of about 11,500 acres above station (includes 3,700 acres irrigated partly or entirely from wells).

AVERAGE DISCHARGE.--42 years (water years 1935-76), 57.0 ft³/s, 41,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s Aug. 21, 1935, gage height, 7.24 ft, by computation of peak flow over dam; no flow many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--The damaging flood of Sept. 23, 1929, is the greatest since about 1880; it reached a stage of 18 ft conditions prior to destruction of railroad bridge. Discharge, 37,700 ft³/s, by weir formula, from reports of State Engineer. The flood of Aug. 12, 1929, reached a stage of about 16 ft (discharge, 31,300 ft³/s, by weir formula, from reports of State Engineer). A flood on Oct. 4, 1913, reached a stage of 9.5 ft (discharge not determined) prior to construction of the concrete control.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1935-76

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1936-76

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	566	63	119	1.89	9.4	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	76	5.8	13	2.28	.9	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	14	1.1	2.3	2.09	.2	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	43	3.9	7.6	1.94	.6	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	193	19	40	2.10	2.8	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	0.0	290	25	57	2.29	3.7	60	.1	0.0	0.0	0.0	0.0	0.0	0.0
APRIL	0.0	191	18	37	2.10	2.6	90	.3	0.0	0.0	0.0	0.0	0.0	0.0
MAY	0.0	990	53	154	2.91	7.9	120	.9	.2	.1	0.0	0.0	0.0	0.0
JUNE	0.0	219	20	38	1.96	2.9	183	8.0	1.7	.6	.2	0.0	0.0	0.0
JULY	0.0	396	86	109	1.27	12.7								
AUGUST	5.4	1161	260	275	1.06	38.6								
SEPTEMBER	0.0	461	120	149	1.24	17.8								
ANNUAL	7.8	197	57	41	.72	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1935-76

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	2370	4270	5790	8010	9860	11900
3	1400	2450	3240	4320	5170	6050
7	820	1390	1800	2320	2710	3090
15	485	870	1160	1570	1890	2220
30	321	596	807	1100	1330	1570
60	200	375	514	711	873	1050
90	143	266	364	507	625	754

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-76

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
244	80	33	16	8.5	5.0	1.7	.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, NM

LOCATION.--Lat 34°24'33", long 106°51'09", in SE¼ sec.8, T.2 N., R.1 E., Socorro County, Hydrologic Unit 13020204, on bridge on former U.S. Highway 85 and 0.2 mi upstream from Interstate Highway 25, 1.2 mi southwest of Bernardo, 3 mi upstream from mouth, and 18 mi south of Belen.

DRAINAGE AREA.--7,350 mi², approximately, of which at least 1,130 mi² does not contribute directly to surface runoff.

PERIOD OF RECORD.--November 1939 to current year. Fragmentary gage height record and footnotes concerning no flow for the period September 1910 to August 1914, published in WSP 358 and 388, are in error and should not be used.

REVISED RECORDS.--WSP 1512: 1941-42, 1944-45, 1946(P), 1947-49. WSP 1632: 1957. WSP 1732: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 4,722.34 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 24, 1969, at datum 3.10 ft higher.

REMARKS.--Diversions for irrigation of about 11,500 acres upstream from station (includes 3,700 acres irrigated wholly or partly from wells).

AVERAGE DISCHARGE.--45 years (water years 1941-85), 45.2 ft³/s, 32,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft³/s, Sept. 23, 1941, from rating curve extended above 7,800 ft³/s; maximum gage height, 16.9 ft, present datum, Aug. 12, 1955; no flow for extended periods.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since about 1880 occurred Sept. 23, 1929, from information by local residents (discharge, about 35,000 ft³/s, estimated on basis of peak at Rio Puerco). Another flood occurred Aug. 12, 1929 (discharge, 30,600 ft³/s, by slope-area method, from reports of State Engineer).

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1941-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	0.0	79	6.1	15	2.41	1.1
DECEMBER	0.0	27	.9	4.2	4.51	.2
JANUARY	0.0	19	1.3	3.9	2.90	.2
FEBRUARY	0.0	142	14	32	2.27	2.7
MARCH	0.0	208	20	47	2.34	3.7
APRIL	0.0	179	15	34	2.24	2.8
MAY	0.0	885	47	134	2.87	8.7
JUNE	0.0	203	20	41	2.04	3.7
JULY	0.0	362	64	99	1.55	11.8
AUGUST	2.3	922	201	233	1.16	37.3
SEPTEMBER	0.0	584	92	133	1.45	17.0
ANNUAL	5.5	171	45	35	.77	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1942-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0	0.0
183	4.0	.2	0.0	0.0	0.0	0.0

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1941-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1670	3140	4330	6050	7480	9040
3	1110	2050	2770	3760	4540	5350
7	652	1200	1600	2120	2510	2900
15	391	746	1010	1360	1620	1890
30	251	493	686	961	1180	1420
60	155	303	421	588	724	867
90	111	215	302	432	544	669

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
192	65	27	11	3.7	.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08354000 RIO SALADO NEAR SAN ACACIA, NM

LOCATION.--Lat 34°17'50", long 106°53'59", in NW¼ sec.24, T.1 N., R.1 W., Socorro County, Hydrologic Unit 13020209, at former bridge site 0.3 mi upstream from bridge on Interstate Highway 25, 3.1 mi upstream from mouth, 2.9 mi north of San Acacia, and 15 mi north of Socorro.

DRAINAGE AREA.--1,380 mi², approximately.

PERIOD OF RECORD.--October 1947 to September 1984.

REVISED RECORDS.--WSP 1512: 1948-49, 1955. WSP 1632: 1953.

GAGE.--Water-stage recorder. Altitude of gage is 4,765 ft from topographic map. Prior to Sept. 14, 1966, at site 1.7 mi downstream at different datum.

REMARKS.--Diversions for irrigation of about 100 acres above station.

AVERAGE DISCHARGE.--37 years (water years 1948-84), 14.3 ft³/s, 10,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,200 ft³/s July 31, 1965, gage height, 5.54 ft, from floodmarks, present site and datum, from rating curve extended above 900 ft³/s on basis of slope-area measurements of peak flow; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Another flood occurred Aug. 12, 1929 (discharge, 27,400 ft³/s, by slope-area method), from reports of State Engineer.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1948-84

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1949-84

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	230	13	40	3.01	7.8	1	0.0	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	37	1.0	6.0	6.00	.6	3	0.0	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	.8	0.0	.1	6.50	0.0	7	0.0	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	0.0	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	1.0	0.0	.2	5.33	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0	--
MARCH	0.0	.1	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	0.0	0.0	--
APRIL	0.0	2.4	.1	.4	5.13	0.0	90	0.0	0.0	0.0	0.0	0.0	0.0	--
MAY	0.0	5.1	.3	1.1	4.00	.2	120	0.0	0.0	0.0	0.0	0.0	0.0	--
JUNE	0.0	43	3.3	8.1	2.45	1.9	183	.1	0.0	0.0	0.0	0.0	0.0	--
JULY	0.0	185	26	39	1.49	15.5								
AUGUST	.1	451	78	89	1.13	46.1								
SEPTEMBER	0.0	429	47	81	1.70	27.8								
ANNUAL	.4	89	14	15	1.08	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1948-84

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	750	1620	2270	3120	3750	--
3	417	957	1380	1930	2330	--
7	215	513	747	1060	1290	--
15	130	319	470	671	821	--
30	82	209	310	443	541	--
60	51	128	189	268	325	--
90	37	91	131	181	216	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1948-84

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME															
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%	
26	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

RIO GRANDE BASIN

08354500 SOCORRO MAIN CANAL NORTH AT SAN ACACIA, NM

LOCATION.--Lat 34°15'17", long 106°53'43", in SE¼NW¼ sec.1, T.1 S., R.1 W., Socorro County, Hydrologic Unit 13020203, on right bank at San Acacia, and 0.5 mi downstream from point of diversion.

PERIOD OF RECORD.--April 1936 to September 1964 (monthly discharge only), October 1964 to current year.

REVISED RECORDS.--WSP 1242: 1951.

GAGE.--Water-stage recorder. Datum of gage is 4,660.16 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 8, 1958, at site 300 ft upstream (in old channel) at datum 0.42 ft lower.

REMARKS.--This canal is 1 of 3 channels (stations 08354800, 08354900) carrying flow in valley cross section. Canal diverts water from right bank of Rio Grande for irrigation of about 8,000 acres. Alamillo Acequia and 3 other smaller ditches divert water from canal upstream from station for irrigation of about 400 acres. Discharge records collected at the canal heading from October 1964 to September 1965 indicate that 7,770 acre-ft or 9% of the initial canal flow was diverted before reaching the regular gaging station.

AVERAGE DISCHARGE.--49 years (water years 1937-85), 88 ft³/s, 63,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 274 ft³/s, June 22, 1980; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1938-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	176	90	46	.51	8.5	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	128	27	36	1.30	2.6	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	79	9.7	18	1.84	.9	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	71	8.3	19	2.30	.8	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	101	15	26	1.74	1.4	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	35	191	118	41	.34	11.2	60	0.0	0.0	0.0	0.0	0.0	0.0	0.0
APRIL	78	239	158	40	.25	15.0	90	.7	0.0	0.0	0.0	0.0	0.0	0.0
MAY	46	226	153	47	.31	14.5	120	2.8	0.0	0.0	0.0	0.0	0.0	0.0
JUNE	34	253	145	57	.39	13.8	183	40	20	12	6.6	3.2	1.8	
JULY	8.8	244	126	57	.45	12.0								
AUGUST	29	202	116	43	.37	11.0								
SEPTEMBER	0.0	191	89	46	.52	8.4								
ANNUAL	43	136	88	23	.26	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1937-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	216	247	263	281	293	304
3	209	238	254	271	283	293
7	202	232	249	266	278	288
15	195	226	243	261	273	284
30	186	219	236	255	267	277
60	176	208	225	241	251	260
90	164	198	216	235	248	259

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
216	197	179	164	152	141	117	90	54	7.0	.9	.1	.1	0.0	0.0

RIO GRANDE BASIN

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM
(Surveillance network)

LOCATION.--Lat 34°14'54", long 106°54'04", in SW¼ sec.1, T.1 S., R.1 W., Socorro County, Hydrologic Unit 13020203, on right bank 75 ft upstream from railway crossing, 0.5 mi south of San Acacia, and 1.2 mi downstream from San Acacia diversion dam.

PERIOD OF RECORD.--October 1958 to September 1964 included in composite flow of station "08355000 Rio Grande at San Acacia," October 1960 to September 1964 (monthly discharge published in WSP 1923 with records for station 08355000), October 1964 to current year. Daily records 1958-64 are available in files at district office.

GAGE.--Water-stage recorder. Datum of gage is 4,652.50 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Conveyance channel, constructed in 1958, is 1 of 3 channels (stations 08354500, 08354900) carrying flow in valley cross section. Original design and plan was for conveyance channel to carry all flows up to about 2,000 ft³/s.

AVERAGE DISCHARGE.--10 years (water years 1964-73), 635 ft³/s, 460,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,950 ft³/s, May 12, 13, 1966; no flow at times.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF COCHITI DAM AND AFTER COMPLETION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-73

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STAN- DARD DEVI- TION (FT³/S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.3	708	274	297	1.08	3.6	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	228	1644	1037	499	.48	13.6	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	296	1823	879	457	.52	11.5	7	.3	0.0	0.0	0.0	--	--
JANUARY	397	961	758	171	.23	9.9	14	.6	0.0	0.0	0.0	--	--
FEBRUARY	480	1060	817	161	.20	10.7	30	2.9	.4	.2	.1	--	--
MARCH	153	1240	625	337	.54	8.2	60	25	5.6	2.7	1.5	--	--
APRIL	9.0	1491	688	570	.83	9.0	90	60	13	5.6	2.7	--	--
MAY	1.1	1548	874	644	.74	11.4	120	111	28	12	5.4	--	--
JUNE	1.4	1456	675	552	.82	8.8	183	288	160	120	95	--	--
JULY	4.2	1492	339	514	1.52	4.4							
AUGUST	3.9	829	363	274	.75	4.8							
SEPTEMBER	3.8	633	307	251	.82	4.0							
ANNUAL	207	1033	635	244	.38	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1820	1890	1910	--	--	--
3	1780	1870	1880	--	--	--
7	1640	1780	1820	--	--	--
15	1570	1760	1810	--	--	--
30	1470	1730	1810	--	--	--
60	1290	1620	1730	--	--	--
90	1180	1480	1580	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-73

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1730	1560	1390	1200	1050	943	743	585	366	156	74	19	4.6	2.3	.7

RIO GRANDE BASIN

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF COCHITI DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	.4	1630	741	533	.72	12.6
DECEMBER	.7	1733	947	605	.64	16.1
JANUARY	1.0	1513	733	434	.59	12.4
FEBRUARY	.3	1065	630	406	.64	10.7
MARCH	4.9	1066	493	382	.77	8.4
APRIL	.3	1506	387	500	1.29	6.6
MAY	.2	1663	663	743	1.12	11.2
JUNE	.1	1580	532	687	1.29	9.0
JULY	.1	1522	326	469	1.44	5.5
AUGUST	.2	705	198	240	1.21	3.4
SEPTEMBER	0.0	377	102	126	1.24	1.7
ANNUAL	3.3	974	491	308	.63	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	.3	.1	0.0	0.0	--	--
3	.5	.1	0.0	0.0	--	--
7	.7	.2	.1	0.0	--	--
14	1.0	.2	.1	.1	--	--
30	3.2	.7	.3	.2	--	--
60	9.3	1.3	.5	.2	--	--
90	16	2.1	.7	.3	--	--
120	44	4.9	1.4	.4	--	--
183	111	12	3.1	.9	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1390	2940	3520	--	--	--
3	1320	3040	3730	--	--	--
7	1240	2970	3680	--	--	--
15	1160	2820	3520	--	--	--
30	1080	2720	3440	--	--	--
60	1010	2620	3350	--	--	--
90	894	2340	3000	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1700	1490	1290	1060	857	742	520	225	24	6.2	4.2	3.0	2.0	.9	.3

RIO GRANDE BASIN

08355000 RIO GRANDE AT SAN ACACIA, NM

LOCATION.--Lat 34°15'13", long 106°53'45", in NE¼SW¼ sec.1, T.1 S., R.1 W., on right bank an eighth of a mi southeast of San Acacia, 0.7 mi downstream from San Acacia diversion dam, and 2½ mi downstream from Rio Salado.

DRAINAGE AREA.--26,770 mi², approximately (includes 2,940 mi² in closed basin in San Luis Valley, CO.).

PERIOD OF RECORD.--April 1936 to September 1964.

GAGE.--Water-stage recorders. There are two recorders here, one on the conveyance channel designed to carry 2,000 ft³/s, 0.8 mi below heading established February 1959 at elevation of 4,652.5 ft above mean sea level (from U.S.B.R. specifications). The other recorder is 0.7 mile downstream from heading on floodway or main channel at elevation of 4,658.10 ft above mean sea level, datum of 1929. Prior to Mar. 19, 1953 floodway gage at site 0.5 mi upstream, which from Apr. 16, 1936 to July 24, 1941, and Nov. 29 to Dec. 14, 1946, at datum 4.46 ft higher and July 25, 1941 to Nov. 28, 1946 and Dec. 15, 1946 to Mar. 18, 1953, was at datum 2.06 ft higher than present datum. Prior to about October 1958, all flow in floodway.

REMARKS.--Record is composite of main stem and conveyance channel (constructed in 1985, headgates opened May 18, 1959). Divisions above station for irrigation of about 760,000 acres; this includes Socorro Main Canal North, which bypasses station and irrigates about 8,000 acres.

AVERAGE DISCHARGE.--26 years (water years 1937-62), 1,121 ft³/s, 812,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft³/s Aug. 5, 1936 (gage height, 10.75 ft, site and datum then in use); no flow at times.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1937-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1938-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	0.0	3386	447	700	1.57	3.3	1	1.7	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	3.5	2701	687	681	.99	5.1	3	2.1	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	158	1596	800	360	.45	6.0	7	3.4	0.0	0.0	0.0	0.0	0.0	--
JANUARY	372	1118	702	144	.21	5.2	14	7.7	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	509	1971	880	331	.38	6.5	30	31	1.4	.1	0.0	0.0	0.0	--
MARCH	112	2087	824	582	.71	6.1	60	102	8.6	1.2	.1	0.0	0.0	--
APRIL	4.5	7615	1515	1761	1.16	11.3	90	183	32	10	3.4	.8	--	--
MAY	30	16370	3399	3971	1.17	25.3	120	241	88	48	29	15	--	--
JUNE	6.8	10020	2292	2728	1.19	17.1	183	380	173	108	71	43	--	--
JULY	3.2	4084	818	1127	1.38	6.1								
AUGUST	5.0	4055	661	799	1.21	4.9								
SEPTEMBER	0.0	1715	416	489	1.18	3.1								
ANNUAL	248	3354	1121	843	.75	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1937-62

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5840	10600	14200	19300	23400	--
3	4970	9570	13200	18400	22500	--
7	4120	8530	12300	18000	22900	--
15	3540	7600	11300	17000	22200	--
30	2960	6580	9980	15500	20700	--
60	2320	5170	7920	12600	17000	--
90	1920	4130	6240	9800	13200	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1937-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4800	2660	1890	1400	1110	941	721	586	414	227	138	63	19	4.4	1.0

RIO GRANDE BASIN

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 33°41'15", long 106°59'40", Socorro County, Hydrologic Unit 13020203, in Pedro Armendaris Grant No. 34, on right bank 0.4 mi northwest of Atchison, Topeka and Santa Fe Railway Co. bridge over floodway channel, 1.0 mi southwest of former site of San Marcial, 3.5 mi downstream from railroad bridge near Tiffany siding, and 51 mi downstream from heading at San Acacia.

PERIOD OF RECORD.--October 1958 to September 1959, October 1969 to current year. Prior to October 1964 monthly discharge only published with record for Rio Grande at San Marcial (station 08358500).

GAGE.--Water-stage recorder. Datum of gage is 4,454.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Apr. 29, 1958, at datum 4.19 ft higher.

REMARKS.--Estimated daily discharges: Nov. 19-27, Dec. 12-25, Dec. 30 to Jan. 5, Jan. 9-21, and Aug. 21 to Sept. 4. Water-discharge records good except for estimated daily discharges, which are poor. Original design and plan was for conveyance channel to carry all flows up to about 2,000 ft³/s. Conveyance channel is 1 of 2 channels (station 08358400) carrying flow in valley cross section. For combined monthly flow in acre-ft of this channel and floodway see tabulation below daily table for station 08358400.

AVERAGE DISCHARGE.--10 years (water years 1953-62), 296 ft³/s, 214,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1954).--Maximum daily discharge, 2,200 ft³/s, May 14, 1966; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1953-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1954-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	4.6	271	117	91	.78	3.3	1	1.1	0.0	0.0	0.0	--	--
NOVEMBER	6.5	1430	305	445	1.46	8.6	3	1.3	0.0	0.0	0.0	--	--
DECEMBER	.4	1250	314	381	1.21	8.8	7	1.2	0.0	0.0	0.0	--	--
JANUARY	.4	780	321	265	.83	9.0	14	1.5	.1	0.0	0.0	--	--
FEBRUARY	.4	1243	386	369	.96	10.8	30	3.2	.5	.2	.1	--	--
MARCH	.4	771	348	264	.76	9.8	60	8.8	1.0	.3	.1	--	--
APRIL	.6	1149	373	361	.97	10.5	90	24	3.1	.9	.3	--	--
MAY	.4	1172	505	424	.84	14.2	120	30	9.6	2.6	.7	--	--
JUNE	.3	1409	328	441	1.34	9.2	183	97	39	23	14	--	--
JULY	1.9	1074	206	314	1.52	5.8							
AUGUST	25	643	207	186	.90	5.8							
SEPTEMBER	5.5	431	148	147	.99	4.2							
ANNUAL	43	738	296	211	.71	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1953-62

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1160	1670	1840	--	--	--
3	1020	1550	1760	--	--	--
7	849	1390	1670	--	--	--
15	773	1300	1590	--	--	--
30	655	1180	1510	--	--	--
60	520	997	1340	--	--	--
90	467	902	1200	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1953-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1130	824	643	519	433	354	247	171	90	45	28	17	7.6	1.8	.4

RIO GRANDE BASIN

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM--Continued

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF COCHITI DAM AND AFTER COMPLETION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-73

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-73

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	0.0	745	310	304	.98	3.7	1	13	0.0	0.0	0.0	0.0	--	--
NOVEMBER	214	1729	1037	531	.51	12.2	3	13	0.0	0.0	0.0	0.0	--	--
DECEMBER	291	1880	911	495	.54	10.7	7	15	0.0	0.0	0.0	0.0	--	--
JANUARY	375	1071	777	206	.27	9.2	14	18	0.0	0.0	0.0	0.0	--	--
FEBRUARY	467	1079	819	181	.22	9.7	30	16	.3	0.0	0.0	0.0	--	--
MARCH	255	1394	732	342	.47	8.6	60	57	17	9.1	5.6		--	--
APRIL	77	1679	792	582	.73	9.3	90	123	47	29	19		--	--
MAY	37	1782	989	696	.70	11.7	120	156	82	62	50		--	--
JUNE	24	1652	816	639	.78	9.6	183	358	196	144	111		--	--
JULY	38	1690	459	570	1.24	5.4								
AUGUST	145	986	458	281	.61	5.4								
SEPTEMBER	29	730	383	306	.80	4.5								
ANNUAL	223	1137	706	275	.39	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1980	2100	2130	--	--	--
3	1920	2050	2080	--	--	--
7	1720	1940	2020	--	--	--
15	1660	1900	1980	--	--	--
30	1560	1900	2010	--	--	--
60	1370	1770	1920	--	--	--
90	1260	1640	1790	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-73

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1950	1690	1470	1270	1110	956	776	630	439	281	196	135	78	32	2.2

RIO GRANDE BASIN

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF COCHITI DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
OCTOBER	0.0	759	151	231	1.53	5.0	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	1400	339	520	1.53	11.3	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	1658	437	630	1.44	14.6	7	.1	0.0	0.0	0.0	--	--
JANUARY	0.0	1558	319	563	1.76	10.6	14	.1	0.0	0.0	0.0	--	--
FEBRUARY	0.0	1112	267	454	1.70	8.9	30	.2	0.0	0.0	0.0	--	--
MARCH	0.0	1035	252	383	1.52	8.4	60	.6	0.0	0.0	0.0	--	--
APRIL	0.0	893	236	328	1.39	7.9	90	1.1	0.0	0.0	0.0	--	--
MAY	0.0	1376	287	405	1.41	9.6	120	2.3	0.0	0.0	0.0	--	--
JUNE	0.0	1632	291	480	1.65	9.7	183	7.6	0.0	0.0	0.0	--	--
JULY	0.0	1108	222	337	1.52	7.4							
AUGUST	0.0	440	109	134	1.23	3.6							
SEPTEMBER	0.0	249	86	99	1.15	2.9							
ANNUAL	1.4	819	250	291	1.16	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	398	1400	2510	--	--	--
3	386	1360	2460	--	--	--
7	374	1330	2400	--	--	--
15	346	1290	2350	--	--	--
30	313	1270	2350	--	--	--
60	266	1170	2180	--	--	--
90	224	1020	1930	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1390	951	672	375	254	199	109	19	2.9	.4	.1	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 33°40'50", long 106°59'30", Socorro County, Hydrologic Unit 13020203, in Pedro Armendaris Grant No. 33, on pier of the Atchison, Topeka, and Santa Fe Railway Co. bridge, 1.1 mi downstream from former site of San Marcial, 18.5 mi southwest of San Antonio, and at mile 1,425.2.

DRAINAGE AREA.--27,700 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--October 1964 to current year. Records collected at this site January 1895 to September 1964 represented total flow of the river and were published as Rio Grande at San Marcial (station 08358500). Records of daily discharge for floodway only April 1950 to September 1964 are available in files of district office.

GAGE.--Water-stage recorder. Datum of gage is 4,455.19 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Floodway is 1 of 2 channels (station 08358300) carrying flow in valley cross section. Prior to 1950 all flow was in floodway channel. Normal plan is for floodway to carry flow when capacity of conveyance channel (about 2,000 ft³/s) is exceeded. Diversions for irrigation of about 775,000 acres upstream from station (includes about 13,800 acre-ft diverted from conveyance channel, as based on weekly measurements, data provided by U.S. Bureau of Reclamation).

AVERAGE DISCHARGE.--13 years (water years 1950-62), 533 ft³/s, 386,200 acre-ft/yr.
Total flow of river.--90 years (water years 1895-1985), 1,248 ft³/s, 904,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, since January 1895 about 50,000 ft³/s Oct. 11, 1904; no flow at times.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1950-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1951-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	540	105	158	1.50	1.6	1	0.0	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	1604	266	442	1.66	4.2	3	0.0	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	1795	310	496	1.60	4.9	7	0.0	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	1347	280	412	1.47	4.4	14	0.0	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	1168	292	402	1.38	4.6	30	0.0	0.0	0.0	0.0	0.0	0.0	--
MARCH	0.0	1467	328	462	1.41	5.1	60	0.0	0.0	0.0	0.0	0.0	0.0	--
APRIL	0.0	4764	719	1120	1.56	11.3	90	0.0	0.0	0.0	0.0	0.0	0.0	--
MAY	0.0	5323	1679	1821	1.08	26.3	120	9.3	0.0	0.0	0.0	0.0	0.0	--
JUNE	0.0	5338	1365	1722	1.26	21.4	183	39	2.1	0.0	0.0	0.0	0.0	--
JULY	0.0	4655	547	1029	1.88	8.6								
AUGUST	0.0	1831	292	424	1.45	4.6								
SEPTEMBER	0.0	1152	203	318	1.57	3.2								
ANNUAL	1.2	1956	533	576	1.08	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1960-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	3100	6020	7530	8870	9540	--	
3	2770	5870	7550	9060	9830	--	
7	2260	5550	7530	9420	10400	--	
15	1790	5000	7170	9430	10700	--	
30	1410	4500	6830	9450	11000	--	
60	1120	2450	3820	6210	8680	--	
90	893	2000	3140	5110	7150	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1950-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2440	1410	946	681	497	353	97	4.4	.1	.1	.1	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF COCHITI DAM AND AFTER COMPLETION OF ABIQUIU DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-73

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	0.0	540	87	175	2.02	4.0
NOVEMBER	0.0	101	11	32	2.90	.5
DECEMBER	0.0	21	2.1	6.5	3.16	.1
JANUARY	0.0	0.0	0.0	0.0	--	0.0
FEBRUARY	0.0	2.1	.2	.7	3.19	0.0
MARCH	0.0	76	8.5	24	2.79	.4
APRIL	0.0	277	63	103	1.64	2.9
MAY	0.0	3642	708	1181	1.67	32.9
JUNE	0.0	2841	680	973	1.43	31.6
JULY	0.0	833	180	334	1.86	8.4
AUGUST	.8	1831	346	596	1.72	16.1
SEPTEMBER	0.0	213	65	77	1.17	3.0
ANNUAL	1.2	671	180	220	1.22	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	0.0	0.0	0.0	0.0	--	--
3	0.0	0.0	0.0	0.0	--	--
7	0.0	0.0	0.0	0.0	--	--
14	0.0	0.0	0.0	0.0	--	--
30	0.0	0.0	0.0	0.0	--	--
60	0.0	0.0	0.0	0.0	--	--
90	0.0	0.0	0.0	0.0	--	--
120	0.0	0.0	0.0	0.0	--	--
183	3.1	0.0	0.0	0.0	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-73

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2220	5410	7600	--	--	--
3	1750	5070	7690	--	--	--
7	1140	4010	6730	--	--	--
15	754	3010	5390	--	--	--
30	489	2260	4370	--	--	--
60	287	1500	3160	--	--	--
90	206	1150	2520	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-73

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1370	442	80	5.6	.1	.1	.1	.1	.1	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF COCHITI DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	0.0	500	151	161	1.07	1.4	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	1604	564	514	.91	5.1	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	1795	659	558	.85	5.9	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	1347	588	434	.74	5.3	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	1168	601	406	.68	5.4	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	1467	665	488	.73	6.0	60	13	0.0	0.0	0.0	--	--
APRIL	0.0	4764	1199	1377	1.15	10.7	90	30	.1	0.0	0.0	--	--
MAY	0.0	5323	2701	2019	.75	24.2	120	90	.1	0.0	0.0	--	--
JUNE	0.0	5338	2288	2032	.89	20.5	183	239	42	13	4.1	--	--
JULY	0.0	4655	1034	1351	1.31	9.3							
AUGUST	1.2	983	336	292	.87	3.0							
SEPTEMBER	0.0	1152	381	399	1.05	3.4							
ANNUAL	20	1956	931	621	.67	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	4260	6530	7420	--	--	--
3	4000	6310	7270	--	--	--
7	3800	6150	7090	--	--	--
15	3460	5890	6890	--	--	--
30	3070	5620	6790	--	--	--
60	2570	4870	5990	--	--	--
90	2210	4180	5090	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4420	2870	1950	1430	1140	912	624	464	229	64	9.8	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08358500 RIO GRANDE AT SAN MARCIAL, NM

LOCATION.--Lat 33°40'50", long 106°59'30", in Pedro Armendaris Grant 33, on pier of the Atchison, Topeka and Santa Fe Railway Co. bridge, 1.1 miles downstream from former site of San Marcial, Socorro County, and 18½ miles southwest of San Antonio.

DRAINAGE AREA.--27,700 mi², approximately (includes 2,940 mi² in closed basin in San Luis Valley, CO).

PERIOD OF RECORD.--January 1895 to September 1964.

GAGE.--Water-stage recorder (river channel now called floodway). Datum of gage is 4,455.19 ft above mean sea level, datum of 1929. Prior to June 25, 1943, floodway had water-stage recorder, inverted rod, inclined staff, and wire-weight gages at several sites within 2 mi of present site at various datums.

Conveyance channel: Water-stage recorder. Datum of gage is 4,454.00 ft above mean sea level (levels by Bureau of Reclamation). Prior to Apr. 29, 1958, at datum 4.19 ft higher. Apr. 14, 1950 to Feb. 28, 1954, bypass flow forming composite, measured at Tiffany Channel, 4 miles upstream; prior to 1950 all flow through floodway.

REMARKS.--Record is composite of floodway and conveyance channel (flows below 2,000 ft³/s generally routed through conveyance channel). Discharge measurements generally made once a week on each channel. Diversions for irrigation of about 775,000 acres above station (includes about 13,800 acre-ft diverted from conveyance channel, as based on weekly measurements, data furnished by Bureau of Reclamation).

AVERAGE DISCHARGE.--51 years (water years 1901-03, 1905-08, 1914-15, 1917-20, 1925-62), 1,277 ft³/s, 925,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 50,000 ft³/s Oct. 11, 1904; no flow at times.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF ABIQUIU DAM)

MONTH	MEAN MONTHLY AND MEAN ANNUAL DISCHARGES						MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1901-03, 1906-08, 1915, 1919-20, 1926-62							
	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	0.0	6630	604	1090	1.80	3.9	1	1.7	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	.3	2871	577	553	.96	3.7	3	2.6	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	39	1551	653	342	.52	4.2	7	4.5	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	224	1180	645	187	.29	4.2	14	12	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	314	1861	787	296	.38	5.1	30	44	1.3	0.0	0.0	0.0	0.0	0.0
MARCH	129	3544	923	612	.66	6.0	60	113	9.2	.9	0.0	0.0	0.0	0.0
APRIL	46	7257	1756	1584	.90	11.4	90	198	41	14	4.9	1.3	.5	
MAY	49	16160	4034	3677	.91	26.1	120	246	90	50	29	15	9.7	
JUNE	.6	12000	3151	3319	1.05	20.4	183	382	171	105	67	39	27	
JULY	0.0	5346	1067	1281	1.20	6.9								
AUGUST	0.0	4468	714	860	1.20	4.6								
SEPTEMBER	0.0	5178	554	904	1.63	3.6								
ANNUAL	184	3922	1277	871	.68	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1901-03, 1905-08,
1914-15, 1917-20, 1925-62

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	7420	13800	18300	24200	28600	32900
3	6440	12100	16200	21500	25500	29500
7	5430	10700	14800	20500	24900	29500
15	4590	9300	13100	18400	22800	27300
30	3870	8010	11300	16000	19700	23600
60	3010	6260	8960	12900	16100	19600
90	2420	4940	7010	10000	12500	15200

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1901-03, 1905-08, 1914-15, 1917-20,
1925-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5730	3410	2170	1580	1240	978	774	600	442	264	185	113	54	19	.1

RIO GRANDE BASIN

08360000 ALAMOSA CREEK NEAR MONTICELLO, NM

LOCATION.--Lat 33°34'09", long 107°35'33", in SE¼ sec.31, T.8 S., R.7 W., Socorro County, on left bank at Alamosa damsite and below Old Fort Ojo Caliente, just downstream from Wildhorse Creek, and 15 miles northwest of Monticello.

DRAINAGE AREA.--403 mi².

PERIOD OF RECORD.--October to December 1929, May 1931 to April 1942, July 1956 to June 1958 (annual maximum only), July 1958 to September 1971 (discontinued). Monthly discharge only for some periods, published in WSP 1312. Prior to 1966 published as Alamosa River.

REVISED RECORDS.--WSP 1562: 1931, 1932-34(M), 1935-36, 1937-38(M), 1940-41(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 6,142.04 ft above mean sea level. Prior to August 17, 1930, at different datum. May 2, 1931 to December 14, 1939, at datum 0.20 ft lower. July 16, 1956 to July 27, 1958, crest-stage only.

REMARKS.--No diversion above station. Entire normal flow diverted below station for irrigation.

AVERAGE DISCHARGE.--23 years (water years 1932-41, 1959-71), 8.27 ft³/s, 5,990 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s Aug. 13, 1964 (gage height, 14.04 ft), from rating curve extended above 390 ft³/s on basis of slope-area measurements at gage heights 6.66 and 12.0 ft; minimum, 5.0 ft³/s on several days in June, July and August 1969.

A flood in 1895 exceeded all other floods at this location from information by local residents. A flood in August 1943 was the highest since 1917.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1932-41, 1959-71

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1933-42, 1960-71

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	6.2	12	7.5	1.3	.17	7.6	1	5.8	5.5	5.3	5.2	--	--
NOVEMBER	6.1	9.2	7.3	.7	.09	7.4	3	5.9	5.5	5.4	5.3	--	--
DECEMBER	6.5	8.3	7.3	.5	.07	7.3	7	6.0	5.6	5.5	5.4	--	--
JANUARY	6.1	7.8	7.1	.5	.07	7.1	14	6.1	5.7	5.6	5.5	--	--
FEBRUARY	6.0	9.5	7.1	.7	.10	7.1	30	6.3	5.9	5.7	5.6	--	--
MARCH	5.8	8.5	6.9	.6	.08	7.0	60	6.5	6.1	5.9	5.7	--	--
APRIL	5.3	8.3	6.9	.7	.10	7.0	90	6.7	6.3	6.0	5.9	--	--
MAY	5.8	15	7.4	2.1	.28	7.5	120	7.0	6.5	6.2	5.9	--	--
JUNE	5.4	16	7.8	2.3	.29	7.8	183	7.1	6.7	6.5	6.4	--	--
JULY	5.4	19	10	3.5	.35	10.1							
AUGUST	6.3	50	14	9.5	.69	13.8							
SEPTEMBER	6.7	19	10	3.0	.30	10.3							
ANNUAL	6.4	13	8.3	1.3	.15	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1932-41, 1959-71

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	89	188	311	577	--	--
3	43	85	133	230	--	--
7	27	48	69	111	--	--
15	18	29	39	59	--	--
30	14	20	27	38	--	--
60	11	16	20	26	--	--
90	10	13	16	21	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1932-41, 1959-71

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
11	8.7	8.3	7.9	7.7	7.6	7.3	7.1	6.9	6.7	6.6	6.4	6.2	6.1	5.9

RIO GRANDE BASIN

08361000 RIO GRANDE BELOW ELEPHANT BUTTE DAM, NM

LOCATION.--Lat 33°08'54", long 107°12'22", Sierra County, Hydrologic Unit 13030101, in Pedro Armendaris Grant, on left bank 1.0 mi downstream from dam, 1.5 mi upstream from Cuchillo Negro River, and at mile 1,382.2.

DRAINAGE AREA.--29,450 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--January 1915 to current year. Monthly or annual discharge only for some periods, published in WSP 1732. Figures of daily discharge, published in WSP 458 for October to December 1916, are unreliable.

REVISED RECORDS.--WSP 1562: 1920. WSP 1632: Drainage area. WSP 1732: 1917, 1920. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 4,241.09 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 24, 1980 at datum 1.0 ft higher. See WSP 1732 for history of changes prior to Apr. 24, 1942.

REMARKS.--Flow regulated by Elephant Butte Reservoir (station 08360500). Diversion for irrigation of about 800,000 acres upstream from station.

AVERAGE DISCHARGE.--69 years (water years 1917-85), 968 ft³/s, 701,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8,220 ft³/s, May 22, 1942; no flow at times prior to 1929, Mar. 2-4, 1979.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1917-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1918-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT							
								2	5	10	20	50	100		
								50%	20%	10%	5%	2%	1%		
OCTOBER	2.7	1785	333	463	1.39	2.9	1	3.7	.8	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	1.3	2662	290	449	1.55	2.5	3	4.7	1.1	.6	0.0	0.0	0.0	0.0	0.0
DECEMBER	2.9	1872	324	442	1.36	2.8	7	5.3	1.1	.5	.2	0.0	0.0	0.0	0.0
JANUARY	0.0	1553	328	430	1.31	2.8	14	5.9	1.4	.8	.4	0.0	0.0	0.0	0.0
FEBRUARY	3.4	1920	664	482	.73	5.7	30	10	2.9	1.8	1.3	.8	0.0	0.0	0.0
MARCH	17	2097	1073	477	.44	9.2	60	29	6.4	3.0	1.6	.6	0.0	0.0	0.0
APRIL	188	2717	1484	513	.35	12.8	90	51	11	4.6	2.3	1.1	.7	.7	.7
MAY	8.3	7601	1520	981	.65	13.1	120	81	16	6.3	2.9	1.1	.6	.6	.6
JUNE	284	6098	1713	731	.43	14.8	183	309	82	33	13	4.4	1.9	1.9	1.9
JULY	673	3431	1668	523	.31	14.4									
AUGUST	155	2623	1415	557	.39	12.2									
SEPTEMBER	2.7	2169	790	554	.70	6.8									
ANNUAL	253	2665	968	350	.36	100									

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1917-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	2060	2610	3110	3890	4600	5440	
3	2020	2570	3060	3840	4540	5360	
7	1980	2540	3030	3780	4440	5220	
15	1930	2490	2970	3700	4340	5080	
30	1850	2430	2870	3510	4040	4620	
60	1790	2350	2730	3210	3570	3930	
90	1740	2260	2570	2940	3160	3420	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1917-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2480	2210	1930	1770	1620	1470	1210	979	681	144	18	12	7.7	5.2	3.1

RIO GRANDE BASIN

08362500 RIO GRANDE BELOW CABALLO DAM, NM

LOCATION.--Lat 32°53'05", long 107°17'31", in NE¼SW¼ sec.30, T.16 S., R.4 W., Sierra County, Hydrologic Unit 13030102, on left bank 2,000 ft upstream from Interstate Highway 25, 4,200 ft downstream from Caballo Dam, 1.2 mi downstream from Apache Canyon, 1.3 mi upstream from Percha diversion dam, 3 mi northeast of Arrey, 5 mi south of Caballo, and at mile 1,355.6.

DRAINAGE AREA.--30,700 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--January 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,140.9 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1938, at datum 7.0 ft higher, Oct. 7-12, 1938, at datum 6.0 ft higher, and Oct. 13, 1938, to Dec. 31, 1945, at datum 5.0 ft higher than present datum.

REMARKS.--Flow regulated by Caballo Reservoir (station 08362000) capacity, 344,000 acre-ft, 1958 survey and Elephant Butte Reservoir (station 08360500) capacity, 2,109,000 acre-ft, 1974 survey. Diversions for irrigation of about 800,000 acres upstream from station. Figures of daily discharge do not include Bonita ditch which diverts from Caballo Dam and bypasses station for irrigation below.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

AVERAGE DISCHARGE.--25 years (water years 1961-85), 764 ft³/s, 553,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,650 ft³/s, May 20, 1942; minimum daily, 0.1 ft³/s, Oct. 31 to Nov. 14, 1954, Nov. 7 to Dec. 31, 1955, Feb. 15-29, 1972.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1961-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1962-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.9	59	4.9	12	2.43	.1	1	1.1	.7	.4	.3	.2	--
NOVEMBER	.7	3.2	1.5	.6	.40	0.0	3	1.1	.7	.4	.3	.2	--
DECEMBER	.7	3.3	1.4	.6	.43	0.0	7	1.1	.7	.4	.3	.2	--
JANUARY	.8	342	26	73	2.82	.3	14	1.2	.7	.5	.3	.2	--
FEBRUARY	.2	433	104	142	1.37	1.1	30	1.2	.8	.6	.4	.3	--
MARCH	510	2158	1452	445	.31	15.9	60	1.2	.9	.8	.7	.6	--
APRIL	428	1581	1053	310	.29	11.6	90	1.2	.9	.8	.8	.7	--
MAY	1.4	1770	1026	496	.48	11.3	120	--	--	--	--	--	--
JUNE	425	2039	1577	419	.27	17.3	183	100	26	9.6	3.6	1.0	--
JULY	671	2315	1651	401	.24	18.1							
AUGUST	681	2306	1521	415	.27	16.7							
SEPTEMBER	114	1397	697	322	.46	7.6							
ANNUAL	284	936	764	178	.23	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1961-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2510	2840	2980	3100	3160	--
3	2460	2780	2910	3020	3070	--
7	2370	2680	2810	2910	2960	--
15	2260	2550	2660	2740	2770	--
30	2060	2310	2390	2440	2460	--
60	1800	2050	2130	2180	2200	--
90	1720	1960	2030	2080	2090	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1961-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
2230	2010	1780	1600	1450	1310	993	603	2.8	1.7	1.5	1.4	1.3	1.1	1.0

RIO GRANDE BASIN

08377900 RIO MORA NEAR TERRERO, NM
(Hydrologic bench-mark station)

LOCATION.--Lat 35°46'38", long 105°39'27", in E4NE4 sec.22, T.18 N., R.12 E., San Miguel County, Hydrologic Unit 13060001, in Santa Fe National Forest, on left bank 450 ft upstream from bridge on State Highway 63, 600 ft upstream from mouth, and 2.6 mi north of Terrero.

DRAINAGE AREA.--53.2 mi².

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--About 90 percent of the drainage is in the Pecos Wilderness Area and not subject to development, watershed management, or the building of highways; there is limited cattle grazing by permit.

AVERAGE DISCHARGE.--22 years (water years 1964-85), 31.1 ft³/s, 22,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft³/s, June 8, 1979, gage height, 4.15 ft; minimum determined, 0.90 ft³/s, Jan. 12-14, 1964, but may have been less during periods of ice effect.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since 1886 probably occurred Sept. 29, 1904 (based on statement for Pecos River near Pecos and history of that flood period).

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	4.6	18	9.4	4.1	.43	2.5
DECEMBER	4.2	13	6.9	2.5	.36	1.9
JANUARY	1.7	9.0	5.3	1.8	.34	1.4
FEBRUARY	2.4	10.0	5.4	1.8	.34	1.5
MARCH	3.4	21	9.5	4.7	.50	2.6
APRIL	11	88	33	20	.62	8.8
MAY	14	319	114	81	.71	30.7
JUNE	8.3	256	82	76	.93	22.0
JULY	8.6	61	26	16	.59	7.1
AUGUST	11	118	43	30	.70	11.4
SEPTEMBER	6.9	73	25	17	.66	6.8
ANNUAL	12	65	31	16	.51	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3.7	2.8	2.4	2.1	--	--
3	3.9	2.9	2.5	2.2	--	--
7	4.1	3.2	2.8	2.5	--	--
14	4.3	3.5	3.1	2.8	--	--
30	4.7	3.8	3.4	3.1	--	--
60	5.0	4.0	3.6	3.3	--	--
90	5.5	4.3	3.9	3.5	--	--
120	5.9	4.6	4.1	3.8	--	--
183	7.7	5.8	5.0	4.5	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	191	325	428	572	--	--
3	179	306	404	543	--	--
7	165	278	363	480	--	--
15	145	249	329	441	--	--
30	117	204	274	377	--	--
60	85	149	202	283	--	--
90	67	117	158	219	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
131	75	51	38	30	24	17	13	9.3	7.4	6.5	5.8	5.2	4.6	3.8

RIO GRANDE BASIN

08378500 PECOS RIVER NEAR PECOS, NM

LOCATION.--Lat 35°42'30", long 105°40'55", in NE¼NE¼ sec.17, T.17 N., R.12 E., San Miguel County, Hydrologic Unit 13060001, in Santa Fe National Forest, on left bank 30 ft downstream from bridge on private road, 270 ft upstream from Indian Creek, 2.4 mi downstream from Holy Ghost Creek, 9.0 mi north of Pecos, and at mile 896.6.

DRAINAGE AREA.--189 mi².

PERIOD OF RECORD.--August 1919 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "near Cowles" 1919-25, "at Irvins Ranch" 1926-29, and as "at Irvins Ranch near Pecos" 1930-39.

REVISED RECORDS.--WSP 898: Drainage area. WSP 1312: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 7,502.94 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1977, at site 30 ft upstream at same datum.

REMARKS.--Diversions for irrigation of about 75 acres, 1959 determinations, upstream from station. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--57 years (water years 1920, 1924, 1931-85) 99.3 ft³/s, 71,950 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 4,500 ft³/s, Sept. 21 or 22, 1929, gage height, 6.2 ft, from floodmark, from rating curve extended above 1,600 ft³/s; minimum, 2.0 ft³/s, Mar. 19, 1971, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1904, was greatest since 1886, from information by local residents.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1920, 1924, 1931-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1924, 1931-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
							PERIOD (CON- SECU- TIVE DAYS)	2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	12	217	50	32	.64	4.3	1	16	12	9.6	8.2	6.8	6.0
NOVEMBER	12	138	37	19	.53	3.1	3	17	13	11	9.1	7.6	6.7
DECEMBER	9.5	62	29	11	.38	2.5	7	19	14	12	10	8.6	7.7
JANUARY	11	50	25	7.6	.30	2.1	14	20	16	13	12	10	9.2
FEBRUARY	15	42	26	6.5	.25	2.2	30	22	17	15	14	12	11
MARCH	18	81	38	14	.38	3.2	60	23	19	16	15	13	12
APRIL	40	366	132	75	.57	11.2	90	24	19	17	16	14	13
MAY	44	1158	330	224	.68	28.0	120	26	20	18	16	15	14
JUNE	29	950	242	201	.83	20.5	183	30	23	20	19	17	16
JULY	21	299	92	55	.60	7.8							
AUGUST	20	402	106	71	.67	9.0							
SEPTEMBER	11	284	72	49	.67	6.1							
ANNUAL	31	267	99	49	.50	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1920, 1924, 1931-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	500	870	1120	1440	1670	1900
3	469	813	1050	1340	1540	1740
7	427	742	959	1230	1430	1620
15	378	660	858	1110	1300	1480
30	330	579	755	984	1160	1330
60	261	454	594	781	924	1070
90	210	362	472	619	733	849

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1920, 1924, 1931-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
388	243	165	125	99	80	59	46	37	31	28	26	24	22	19

RIO GRANDE BASIN

08379500 PECOS RIVER NEAR ANTON CHICO, NM

LOCATION.--Lat 35°10'44", long 105°06'30", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 2.1 mi upstream from Canon Blanco, 2.3 mi southeast of Anton Chico, 9.7 mi downstream from Tecolote Creek, and at mile 808.0.

DRAINAGE AREA.--1,050 mi², approximately (contributing area).

PERIOD OF RECORD.--April 1910 to May 1916, October 1916 to September 1924, August to December 1925, January 1927 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1342: 1951(M), 1952-53. WSP 1512: 1912-14, 1931, 1933(M), 1935-36(M), 1938(P), 1939-40, 41-42(P), 1945(M), 1946(P). WSP 1712: 1942(P).

GAGE.--Water-stage recorder. Elevation of gage is 5,130 ft above National Geodetic Vertical Datum of 1929, from river-profile map. See WSP 1732 for history of changes prior to June 21, 1951.

REMARKS.--Diversions upstream from station for irrigation of about 4,900 acres, 1959 determinations, upstream and downstream from station. Acequia del Bodo Juan Paiz (see table below) diverts water about 8 mi upstream from gage and bypasses this station on left bank; ditch flow not included in record measurements made at point opposite regular gage. A portion of this flow may be returned to the river about 5.0 mi downstream.

AVERAGE DISCHARGE.--61 years (1911-14, 1929-85), 124 ft³/s, 89,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,300 ft³/s, June 1, 1937, gage height, 20.34 ft, from floodmarks, at site and datum then in use, by slope-area measurement; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since 1879 occurred Sept. 29, 1904, discharge about 73,000 ft³/s, from information by a local resident.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1911-14, 1929-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1912-14, 1916, 1930-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	500	67	97	1.46	4.4	1	1.2	.1	0.0	0.0	0.0	0.0
NOVEMBER	0.0	279	38	46	1.21	2.5	3	1.7	.2	0.0	0.0	0.0	0.0
DECEMBER	0.0	103	27	20	.74	1.8	7	2.9	.4	.1	0.0	0.0	0.0
JANUARY	1.8	78	25	15	.62	1.6	14	4.1	.8	.3	.1	0.0	0.0
FEBRUARY	.9	150	25	22	.87	1.7	30	8.4	2.2	.9	.3	0.0	0.0
MARCH	.3	331	59	63	1.05	3.9	60	12	5.5	3.4	2.2	.8	0.0
APRIL	1.5	854	190	197	1.04	12.6	90	15	8.1	5.7	4.1	2.0	0.0
MAY	2.9	2031	371	355	.96	24.5	120	18	10	7.4	5.6	3.1	0.0
JUNE	4.2	1150	269	268	1.00	17.8	183	31	13	7.1	4.1	2.1	1.2
JULY	3.8	507	140	112	.80	9.3							
AUGUST	13	837	187	157	.84	12.4							
SEPTEMBER	0.0	679	116	140	1.21	7.7							
ANNUAL	23	489	124	86	.70	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1911-14, 1929-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1460	2560	3450	4780	5920	7190
3	935	1530	2020	2770	3420	4170
7	652	1060	1400	1930	2410	2960
15	505	854	1140	1580	1960	2390
30	419	720	958	1300	1590	1900
60	317	561	754	1030	1260	1510
90	260	462	617	832	1000	1190

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1911-14, 1929-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
551	350	243	173	123	93	55	38	27	19	15	12	8.5	5.1	1.9

RIO GRANDE BASIN

08380500 GALLINAS CREEK NEAR MONTEZUMA, NM

LOCATION.--Lat 35°39'07", long 105°19'06", San Miguel County, Hydrologic Unit 13060001, in Las Vegas Grant, on left bank 2.4 mi west of Montezuma, 6.9 mi northwest of Las Vegas, and at mile 74.4.

DRAINAGE AREA.--84 mi², approximately.

PERIOD OF RECORD.--March to September 1915, June 1916 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1964, published as Gallinas River near Montezuma.

REVISED RECORDS.--WSP 898: Drainage area. WSP 1562: 1951(P), 1952(M), 1955(P), 1957. WSP 1632: 1931-32, 1933(M), 1934, 1935(M), 1938, 1939-40(M), 1941-42, 1945, 1949-50(M).

GAGE.--Water-stage recorder. Elevation of gage is 6,875 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 21, 1934, at different datum.

REMARKS.--Diversions for irrigation of about 80 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--59 years (water years 1927-85), 18.3 ft³/s, 13,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,120 ft³/s, Aug. 2, 1966, gage height, 9.7 ft, from floodmarks, from rating curve extended above 500 ft³/s on basis of slope-area measurements at gage heights 5.25 ft, 8.25 ft, and 9.7 ft; minimum, 0.20 ft³/s, Oct. 6-9, 1922, Sept. 21, Oct. 9-14, 1956, Dec. 13, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since about 1900 occurred the night of Sept. 29, 1904 (discharge not determined), from information by local residents and G. B. Monk's report on floods.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1927-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1928-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.4	108	12	18	1.48	5.6	1	2.1	1.2	.8	.6	.4	.3
NOVEMBER	.5	58	9.0	11	1.16	4.1	3	2.2	1.3	.9	.7	.5	.3
DECEMBER	.8	21	6.2	4.1	.67	2.8	7	2.4	1.4	1.0	.7	.5	.4
JANUARY	1.8	13	5.0	2.4	.47	2.3	14	2.7	1.5	1.1	.8	.6	.4
FEBRUARY	1.5	14	5.4	2.9	.54	2.4	30	3.2	1.9	1.3	1.0	.7	.5
MARCH	2.4	44	11	9.4	.86	5.0	60	3.8	2.3	1.7	1.2	.9	.7
APRIL	3.1	184	35	40	1.13	15.9	90	4.3	2.6	1.9	1.4	1.0	.8
MAY	2.0	380	54	66	1.23	24.3	120	4.7	2.9	2.1	1.6	1.1	.9
JUNE	.7	119	21	25	1.19	9.6	183	5.5	3.1	2.4	1.9	1.5	1.3
JULY	1.2	78	15	14	.94	6.6							
AUGUST	1.1	159	28	30	1.07	12.8							
SEPTEMBER	.4	141	19	25	1.32	8.6							
ANNUAL	2.5	81	18	15	.80	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1927-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	152	346	523	799	1040	1310
3	125	264	374	525	641	759
7	99	202	278	375	447	517
15	75	154	216	301	367	435
30	58	118	165	230	281	333
60	42	84	117	163	200	238
90	33	64	90	127	157	190

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1927-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
72	43	30	22	17	14	9.2	7.0	5.4	4.4	3.9	3.5	3.1	2.6	2.0

RIO GRANDE BASIN

08381000 GALLINAS CREEK AT MONTEZUMA, NM

LOCATION.--Lat 35°39'15", long 105°16'30", in Las Vegas Grant, at downstream end of middle pier of highway bridge, half a mile downstream from Montezuma, San Miguel County, and 5 mi northwest of Las Vegas.

DRAINAGE AREA.--87 mi², approximately.

PERIOD OF RECORD.--August 1903 to September 1904 (gage heights only), October 1904 to May 1912, October 1912 to September 1966. Yearly estimate for water year 1912 (incomplete) and monthly discharge only for some periods, published in WSP 1312. Figures of daily discharge for the periods Oct. 8-22, 1904 and Jan. 1 to Feb. 20, 1906, published in WSP 177 and 213, respectively, have been found to be unreliable and should not be used. Prior to October 1964 published as Gallinas River at Montezuma.

GAGE.--Water-stage recorder. Altitude of gage is 6,675 ft (from topographic map). Prior to Mar. 24, 1926, staff gage at site a quarter of a mile upstream. Gages at various datums prior to Sept. 3, 1942.

REMARKS.--Flow partly regulated at low flows by reservoirs owned by Public Service Co. of New Mexico. Diversions above station for irrigation of about 180 acres (1959 determination) and for Las Vegas city water supply.

AVERAGE DISCHARGE.--57 years (water years 1907-11, 1914-15, 1917-66), 18.0 ft³/s, 13,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,140 ft³/s Aug. 4, 1957 (gage height, 11.8 ft, from floodmark), from rating curve extended above 450 ft³/s on basis of slope-area measurement of peak flow; no flow at times in 1934, 1956-57, 1963.

Flood of Sept. 30, 1904, is the highest since about 1900 (discharge, 11,600 ft³/s by slope-area method), from G. B. Monk's report on floods and WSP 147.

STATISTICAL SUMMARIES

MONTH	MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1907-11, 1914-15, 1917-66						MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1907-12, 1914-16, 1918-66						
	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.1	101	9.6	17	1.77	4.3	1	.4	.2	.1	0.0	0.0	0.0
NOVEMBER	.1	47	7.0	10.0	1.43	3.1	3	.5	.2	.1	0.0	0.0	0.0
DECEMBER	.1	46	4.9	6.9	1.42	2.2	7	.5	.2	.1	.1	0.0	0.0
JANUARY	.1	14	3.4	3.2	.95	1.5	14	.7	.3	.2	.1	.1	.1
FEBRUARY	.1	40	4.5	5.7	1.28	2.0	30	1.0	.4	.2	.2	.1	.1
MARCH	.1	93	12	15	1.27	5.1	60	1.4	.5	.3	.2	.1	.1
APRIL	.5	195	39	50	1.26	17.4	90	1.8	.6	.4	.2	.1	.1
MAY	.4	394	55	66	1.19	24.5	120	2.1	.8	.4	.3	.1	.1
JUNE	.3	115	22	28	1.26	9.8	183	3.2	1.1	.6	.4	.2	.1
JULY	.2	225	22	39	1.75	9.7							
AUGUST	.2	166	31	37	1.20	13.5							
SEPTEMBER	.1	115	16	22	1.42	7.0							
ANNUAL	1.0	75	18	16	.90	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1907-11, 1914-15, 1917-66

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	196	404	544	709	818	915
3	148	298	398	513	589	655
7	114	227	301	386	440	488
15	84	171	230	299	345	386
30	66	136	184	241	280	315
60	47	95	128	168	195	219
90	36	74	101	134	157	179

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1907-11, 1914-15, 1917-66

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
82	46	30	22	16	12	6.9	4.6	2.9	1.8	1.4	1.0	.8	.5	.4

RIO GRANDE BASIN

08382000 GALLINAS RIVER NEAR LOURDES, NM

LOCATION.--Lat 35°28'15", long 105°09'35", in Las Vegas Grant, on right bank 0.8 mi upstream from ford on Lourdes-Romeroville road, 1.2 mi northwest of Lourdes, San Miguel County, 2.8 miles downstream from Pagosa Canyon, and 9 miles south of Las Vegas.

DRAINAGE AREA.--313 mi².

PERIOD OF RECORD.--June 1951 to September 1963.

GAGE.--Water-stage recorder. Datum of gage is 5,928 ft above mean sea level (levels from plane-table bench mark).

REMARKS.--Diversions for irrigation of about 6,600 acres (1959 determination) above station.

AVERAGE DISCHARGE.--12 years (water years 1952-63), 14.5 ft³/s, 10,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,680 ft³/s Aug. 17, 1961 (gage height 9.40 ft), from rating curve extended above 2,100 ft³/s on basis of slope-area measurement of peak flow; no flow June 17, July 2-10, 1957.
Flood of Sept. 30, 1904, is probably highest known. Other major floods occurred June 9, 1903 and June 1, 1937.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1952-63

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1953-63

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.4	82	18	23	1.28	10.4	1	.8	.1	0.0	0.0	--	--
NOVEMBER	.8	11	5.8	3.2	.55	3.4	3	.9	.2	0.0	0.0	--	--
DECEMBER	.9	9.3	5.0	2.9	.58	2.9	7	1.2	.3	0.0	0.0	--	--
JANUARY	1.2	13	4.9	3.7	.76	2.8	14	1.3	.4	.2	.1	--	--
FEBRUARY	1.1	7.5	4.1	2.5	.60	2.4	30	1.9	.8	.4	.3	--	--
MARCH	1.3	35	6.4	9.3	1.46	3.7	60	2.9	1.2	.7	.5	--	--
APRIL	1.0	248	24	71	2.93	14.0	90	3.0	1.4	.9	.6	--	--
MAY	1.5	184	22	52	2.38	12.5	120	3.9	1.8	1.1	.7	--	--
JUNE	1.1	30	11	9.9	.91	6.3	183	6.6	3.0	1.8	1.1	--	--
JULY	8.4	46	16	11	.69	9.0							
AUGUST	9.7	188	42	50	1.20	24.3							
SEPTEMBER	.4	46	15	14	.94	8.4							
ANNUAL	4.6	54	15	14	.96	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1952-63

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	466	854	1140	1510	--	--
3	228	397	524	697	--	--
7	123	258	386	601	--	--
15	73	168	267	449	--	--
30	44	107	179	324	--	--
60	30	68	112	204	--	--
90	23	50	81	141	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1952-63

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
42	16	11	9.1	8.3	7.5	6.1	4.8	3.7	2.7	2.1	1.6	1.3	1.0	.7

RIO GRANDE BASIN

08382500 GALLINAS RIVER NEAR COLONIAS, NM

LOCATION.--Lat 35°10'55", long 104°53'59", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 2.1 mi upstream from Canon Blanco, 2.3 mi southeast of Anton Chico, and Preston Beck Grants, on right bank 2.3 mi south of San Miguel-Guadalupe County line, 2.4 mi upstream from mouth, 5.8 mi northwest of Colonias, and 9.0 mi east of Dilia. Mouth at Pecos River mile 789.2.

DRAINAGE AREA.--610 mi², approximately.

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,944 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Diversions for irrigation of about 7,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--34 years (water years 1952-85), 15.6 ft³/s, 11,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft³/s, July 11, 1982, gage height, 19.67 ft, from rating curve extended above 1,900 ft³/s on basis of slope-area measurements at gage heights 8.64 ft, 12.74 ft, 16.65 ft, and 27.2 ft; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about June 1, 1937, reached a stage of about 27.2 ft; discharge determined as 26,700 ft³/s by slope-area measurement made in 1951. A flood of about the same magnitude occurred Sept. 29-30, 1904.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1952-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	0.0	29	2.9	5.9	2.02	1.6
DECEMBER	0.0	12	1.5	2.4	1.65	.8
JANUARY	0.0	8.2	1.1	2.1	1.94	.6
FEBRUARY	0.0	6.6	1.0	1.7	1.78	.5
MARCH	0.0	48	3.1	9.2	2.97	1.7
APRIL	0.0	269	17	62	3.65	9.2
MAY	0.0	261	17	53	3.16	9.0
JUNE	0.0	64	14	17	1.27	7.4
JULY	0.0	151	34	40	1.16	18.4
AUGUST	1.1	222	61	58	.95	32.8
SEPTEMBER	0.0	178	20	34	1.65	11.0
ANNUAL	.9	67	16	14	.90	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1953-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.0	0.0	0.0	0.0	0.0	--
3	0.0	0.0	0.0	0.0	0.0	--
7	0.0	0.0	0.0	0.0	0.0	--
14	0.0	0.0	0.0	0.0	0.0	--
30	0.0	0.0	0.0	0.0	0.0	--
60	0.0	0.0	0.0	0.0	0.0	--
90	0.0	0.0	0.0	0.0	0.0	--
120	.2	0.0	0.0	0.0	0.0	--
183	1.0	0.0	0.0	0.0	0.0	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1952-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	691	1290	1660	2070	2320	--
3	371	688	888	1110	1260	--
7	208	399	526	675	775	--
15	125	250	336	440	511	--
30	81	165	222	290	335	--
60	53	110	148	192	221	--
90	41	82	109	140	160	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1952-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
66	20	7.6	4.4	2.8	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08382730 LOS ESTEROS CREEK ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°05'42", long 104°39'49", Guadalupe County, Hydrologic Unit 13060001 in Preston-Beck Grant, on left bank, 3.7 mi upstream from mouth, 4.9 mi north-northeast of Santa Rosa Dam, and 10.4 mi north-northeast of Santa Rosa. Mouth at Pecos River mile 763.0.

DRAINAGE AREA.--65.6 mi².

PERIOD OF RECORD.--July 1973 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,767 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No known diversions or groundwater withdrawals for irrigation upstream from station.

AVERAGE DISCHARGE.--12 years (water years 1974-85), 1.26 ft³/s, 913 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft³/s, July 24, 1976, gage height, 9.3 ft, from rating curve extended above 70 ft³/s on basis of velocity-area studies and slope-area measurements at gage heights 6.5 ft and 9.3 ft; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood of unknown date reached a discharge of about 6,800 ft³/s, gage height, 11.6 ft, from floodmarks, from rating curve extended as explained above.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1975-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	1.5	.2	.4	2.26	1.3	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	2.3	.2	.7	3.25	1.3	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	0.0	0.0	0.0	--	0.0	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	0.0	0.0	0.0	--	0.0	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	0.0	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	1.6	.1	.5	3.46	.9	90	0.0	0.0	0.0	0.0	--	--
MAY	0.0	1.7	.2	.5	2.29	1.4	120	0.0	0.0	0.0	0.0	--	--
JUNE	0.0	11	1.6	3.0	1.86	10.9	183	0.0	0.0	0.0	0.0	--	--
JULY	0.0	34	4.1	9.7	2.34	27.7							
AUGUST	0.0	48	7.3	13	1.81	48.8							
SEPTEMBER	0.0	6.8	1.2	1.9	1.67	7.8							
ANNUAL	.1	5.4	1.3	1.7	1.33	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	91	270	498	--	--	--
3	39	107	187	--	--	--
7	19	50	86	--	--	--
15	9.1	27	52	--	--	--
30	4.9	15	29	--	--	--
60	3.0	9.3	18	--	--	--
90	2.1	6.4	12	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08382760 LOS ESTEROS CREEK TRIBUTARY ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°05'35", long 104°40'20", Preston-Beck Grant, Guadalupe County, Hydrologic Unit 13060001, 0.5 mi west-southwest of Los Esteros Creek gage, 0.8 mi upstream from confluence with Los Esteros Creek, 4.6 mi north-northeast of Santa Rosa Dam, and 10.2 mi north-northeast of Santa Rosa.

DRAINAGE AREA.--13.7 mi².

PERIOD OF RECORD.--July 1973 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,758 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No known diversions or groundwater withdrawals for irrigation upstream from station.

AVERAGE DISCHARGE.--12 years (water years 1974-85), 0.31 ft³/s, 225 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft³/s, Aug. 29, 1977, gage height, 7.80 ft, from rating curve extended above 0.5 ft³/s on basis of velocity-area studies and slope-area measurement at gage height 7.80 ft; no flow most of the time.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	0.0	0.0	0.0	--	0.0	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	0.0	0.0	0.0	--	0.0	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	0.0	0.0	0.0	--	0.0	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	0.0	0.0	0.0	--	0.0	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	0.0	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	0.0	0.0	0.0	--	0.0	90	0.0	0.0	0.0	0.0	--	--
MAY	0.0	.7	.1	.2	3.17	1.6	120	0.0	0.0	0.0	0.0	--	--
JUNE	0.0	1.0	.1	.3	2.31	3.6	183	0.0	0.0	0.0	0.0	--	--
JULY	0.0	4.2	.4	1.2	2.70	12.1							
AUGUST	0.0	28	2.9	8.1	2.76	80.8							
SEPTEMBER	0.0	.5	.1	.2	2.14	1.9							
ANNUAL	0.0	2.6	.3	.7	2.35	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	6.4	56	184	--	--	--
3	2.8	23	72	--	--	--
7	1.2	10	32	--	--	--
15	.6	5.1	16	--	--	--
30	.4	3.0	9.1	--	--	--
60	0.0	0.0	0.0	--	--	--
90	0.0	0.0	0.0	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08383000 PECOS RIVER AT SANTA ROSA, NM

LOCATION.--Lat 34°56'36", long 104°41'55", in NW¼sec.3, T.8 N., R.21 E., Guadalupe County, Hydrologic Unit 13060001, on left bank, 0.4 mi downstream from bridge on U.S. Highway I-40, 0.6 mi upstream from bridge on U.S. Highway I-40 (Business) in Santa Rosa, 1.9 mi upstream from El Rito Creek, and at mile 748.4.

DRAINAGE AREA.--2,650 mi², approximately (contributing area).

PERIOD OF RECORD.--May 1903 to December 1905 (gage heights only), January to December 1906, February 1910 to July 1911, September 1912 to December 1924, March to May 1927, July 1927, January 1928 to current year. Monthly discharge only for some periods, published in WSP 1312. Figures of daily discharge for Apr. 5-20, May 4-7, 11, Aug. 13, 16-18, 24, Sept. 7-9, 11, 13, 19, 21, 23, 25, 27, Oct. 1-31, Nov. 3, 4, 9, 11, 20, 22, 1910, and Feb. 1 to Mar. 31, June 1 to July 31, 1911, published in WSP 358 are unreliable and should not be used.

REVISED RECORDS.--WSP 1512: 1913-15. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and partial concrete control. Elevation of gage is 4,537.56 ft above National Geodetic Vertical Datum of 1929. For history of changes prior to Sept. 13, 1967, see WSP 2123.

REMARKS.--Flow regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions for irrigation of about 12,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--53 years (1913-14, 1929-79), 126 ft³/s, 91,290 acre-ft/yr, prior to completion of Santa Rosa Dam.
6 years (1980-1985), 83.1 ft³/s, 60,210 acre-ft/yr, since completion of Santa Rosa Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft³/s, June 2, 1937, gage height, 25.7 ft, site and datum then in use, from rating curve extended above 32,000 ft³/s; minimum, 0.28 ft³/s, Jan. 7, 1971. The flood of June 2, 1937, is the greatest since about 1886. Flood of Sept. 30, 1904, reached a stage of 24.7 ft, site and datum then in use, discharge, 45,000 ft³/s, by Kutter's formula. Flood of June 9, 1903, reached a stage of 21.1 ft, same site and datum as in 1904, discharge, 34,000 ft³/s, by comparison with 1904 flood.
Since completion of Santa Rosa Dam in 1980, maximum discharge, 7,050 ft³/s, Aug. 11, 1981, gage height, 6.56 ft; minimum daily, 2.0 ft³/s, July 23-25, 31, and Aug. 1, 12, 1985.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF SANTA ROSA DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1913-14, 1929-79

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1914, 1929-79

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON-SECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	5.5	806	94	155	1.66	6.2	1	9.9	5.3	3.7	2.7	1.9	1.5
NOVEMBER	7.5	273	32	38	1.19	2.1	3	11	6.1	4.5	3.5	2.6	2.1
DECEMBER	7.6	82	23	13	.55	1.5	7	12	7.2	5.6	4.6	3.6	3.1
JANUARY	6.9	61	21	10	.51	1.4	14	13	8.2	6.5	5.4	4.3	3.7
FEBRUARY	6.3	51	20	8.9	.46	1.3	30	15	9.8	7.9	6.6	5.3	4.7
MARCH	6.8	166	26	27	1.00	1.8	60	16	11	9.4	8.1	6.8	6.1
APRIL	6.4	1061	123	213	1.73	8.2	90	17	12	10	8.8	7.6	6.9
MAY	9.7	2452	289	424	1.47	19.3	120	18	13	11	9.4	8.1	7.4
JUNE	8.6	1693	238	339	1.42	15.9	183	25	15	12	11	9.3	8.6
JULY	11	1002	187	191	1.02	12.5							
AUGUST	23	1205	257	222	.86	17.2							
SEPTEMBER	5.8	1909	190	358	1.88	12.7							
ANNUAL	25	663	126	112	.89	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1913-14, 1929-79

PERIOD (CON-SECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	3010	6030	8780	13200	17300	22100	
3	1700	3280	4670	6870	8840	11100	
7	1010	1870	2600	3740	4750	5910	
15	655	1230	1730	2500	3200	4000	
30	454	849	1180	1680	2120	2610	
60	305	586	833	1220	1570	1980	
90	246	468	655	937	1180	1450	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1913-14, 1929-79

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
503	273	168	105	64	46	32	25	21	17	16	14	13	11	8.7

RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM
(Surveillance network station)

LOCATION.--Lat 34°43'48", long 104°31'28", in NE¼SE¼NW¼ sec.20, T.6 N., R.23 E., Guadalupe County, Hydrologic Unit 13060001, on left bank 9.0 mi southeast of Puerto de Luna, 17.5 mi upstream from Sumner Dam, and at mile 719.5.

DRAINAGE AREA.--3,970 mi², approximately (contributing area).

PERIOD OF RECORD.--April 1938 to current year.

REVISED RECORDS.--WSP 1512: 1939.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,311.34 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 15, 1954, at datum 1.0 ft higher.

REMARKS.--Flow regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions for irrigation of about 12,500 acres, 1959 determination, upstream from station. Discharge represents inflow to Lake Sumner.

AVERAGE DISCHARGE.--42 years (1938-79), 209 ft³/s, 151,400 acre-ft/yr, prior to completion of Santa Rosa Dam. 6 years (1980-85), 166 ft³/s, 120,300 acre-ft/yr, since completion of Santa Rosa Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,600 ft³/s, Sept. 1, 1942, gage height, 17.00 ft, from rating curve extended above 7,400 ft³/s on basis of flow "at Santa Rosa"; minimum, 11 ft³/s, Jan. 31, 1951.
Since completion of Santa Rosa Dam in 1980, maximum discharge, 10,900 ft³/s, June 10, 1982, gage height, 7.44 ft; minimum, 41 ft³/s, Aug. 13, 14, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1886 occurred June 2, 1937, when peak at Santa Rosa was 55,200 ft³/s and peak inflow to Lake Sumner was about 75,000 ft³/s. Flood of July 24, 1895, was reported as "highest in 10 years." Other major floods occurred on June 9, 1903, Sept. 30, 1904, and May 1, 1914.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF SANTA ROSA DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1939-79

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1940-79

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	62	1174	189	220	1.16	7.6	1	63	50	44	40	36	33
NOVEMBER	73	379	116	50	.43	4.6	3	65	52	46	42	38	35
DECEMBER	75	158	106	17	.16	4.2	7	69	56	51	46	42	39
JANUARY	77	147	103	14	.14	4.1	14	74	61	56	51	47	44
FEBRUARY	80	144	101	13	.13	4.0	30	82	69	63	58	54	51
MARCH	80	232	104	29	.28	4.2	60	90	77	71	66	61	58
APRIL	67	1084	193	230	1.19	7.7	90	94	81	75	70	65	62
MAY	68	2563	342	478	1.40	13.7	120	98	86	80	76	72	69
JUNE	60	1687	290	309	1.07	11.6	183	101	90	89	88	88	88
JULY	69	978	290	211	.73	11.6							
AUGUST	78	1389	373	260	.70	14.9							
SEPTEMBER	58	2342	290	465	1.60	11.6							
ANNUAL	100	798	209	133	.64	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1939-79

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2890	5660	8580	14100	20000	27900
3	1790	3240	4690	7310	10000	13600
7	1120	1920	2650	3830	4950	6310
15	763	1340	1870	2730	3540	4520
30	563	975	1340	1910	2440	3060
60	396	677	931	1350	1750	2230
90	324	543	741	1070	1370	1750

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1939-79

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
653	348	242	183	147	128	112	105	99	92	89	85	80	75	67

RIO GRANDE BASIN

08384500 PECOS RIVER BELOW SUMNER DAM, NM
(National stream-quality accounting network station)

LOCATION.--Lat 34°36'15", long 104°23'14", in lot 1, sec.2, T.4 N., R.24 E., DeBaca County, Hydrologic Unit 13060003, on left bank 1,200 ft downstream from Sumner Dam, 2.9 mi upstream from Salado Creek, 4.6 mi northeast of Guadalupe, 12.2 mi northwest of Fort Sumner, and at mile 701.7.

DRAINAGE AREA.--4,390 mi², approximately (contributing area).

PERIOD OF RECORD.--October 1912 to April 1926, August 1926 to current year. Monthly discharge only for some periods, published in WSP 1312. October 1944 to September 1974, published as "below Alamogordo Dam." Prior to October 1944, published as "near Guadalupe."

REVISED RECORDS.--WSP 1512: 1932. WSP 1632: 1942. WSP 1712: 1944.

GAGE.--Water-stage recorder and Marshall flume, with concrete control above top of flume. Elevation of gage is 4,142.67 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). Prior to Sept. 10, 1936, at site 1.5 mi upstream at different datum. Sept. 14, 1936 to Mar. 8, 1941, and June 11 to Sept. 21, 1941, at site 0.2 mi downstream at different datums.

REMARKS.--Flow completely regulated by Santa Rosa Lake (station 08382810) beginning April 1980 and Lake Sumner (station 08484000) 0.3 mi upstream beginning August 1937. Diversion for irrigation of about 12,500 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--21 years (1913-20, 1922, 1925, 1927-37), 240 ft³/s, 173,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft³/s, Sept. 1, 1942, by computation of flow over spillway and through outlet gates of Sumner Dam by U.S. Bureau of Reclamation; maximum gage height, 13.58 ft, Sept. 22, 1941; no flow at times.
Flood of June 2, 1937, about 75,000 ft³/s at site 1.5 mi upstream, from peak inflow to Lake Sumner.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF SUMNER DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1913-20, 1922
1922, 1927-37

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1914-20, 1926,
1928-37

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	72	676	177	145	.82	6.2	1	54	43	38	34	--	--
NOVEMBER	74	120	98	12	.12	3.4	3	57	47	41	37	--	--
DECEMBER	78	126	97	13	.13	3.4	7	62	52	48	44	--	--
JANUARY	76	150	96	16	.17	3.4	14	67	58	53	50	--	--
FEBRUARY	74	112	92	8.1	.09	3.2	30	77	67	62	58	--	--
MARCH	68	393	111	77	.69	3.9	60	87	78	74	70	--	--
APRIL	73	1212	247	310	1.26	8.7	90	89	81	77	74	--	--
MAY	76	1637	501	413	.82	17.6	120	92	85	82	80	--	--
JUNE	73	2905	471	615	1.31	16.5	183	106	90	84	80	--	--
JULY	74	1536	372	379	1.02	13.0							
AUGUST	107	677	368	184	.50	12.9							
SEPTEMBER	59	562	222	150	.68	7.8							
ANNUAL	112	602	240	119	.50	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1913-20, 1922, 1925,
1927-37

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	3610	7340	11100	17700	--	--
3	2160	4060	5960	9360	--	--
7	1360	2430	3480	5340	--	--
15	919	1590	2290	3570	--	--
30	699	1190	1630	2360	--	--
60	520	863	1150	1580	--	--
90	431	726	976	1360	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1913-20, 1922, 1925, 1927-37

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
876	526	356	261	196	151	116	107	98	88	84	79	74	69	64

RIO GRANDE BASIN

08384500 PECOS RIVER BELOW SUMNER DAM, NM--Continued

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF SANTA ROSA DAM AND AFTER COMPLETION OF SUMNER DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1938-79

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	30	1184	120	181	1.51	5.1
NOVEMBER	.2	910	43	145	3.36	1.8
DECEMBER	.2	170	15	33	2.26	.6
JANUARY	.2	143	20	35	1.73	.9
FEBRUARY	.2	193	16	36	2.26	.7
MARCH	2.1	605	274	212	.77	11.6
APRIL	46	1317	284	270	.95	12.0
MAY	62	1404	290	349	1.20	12.2
JUNE	62	2282	411	381	.93	17.3
JULY	69	894	317	220	.69	13.4
AUGUST	72	796	297	195	.66	12.5
SEPTEMBER	37	2789	282	525	1.86	11.9
ANNUAL	92	710	198	113	.57	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1939-79

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	.3	0.0	0.0	0.0	0.0	0.0
3	.6	0.0	0.0	0.0	0.0	0.0
7	.9	.1	0.0	0.0	0.0	0.0
14	1.0	.2	.1	0.0	0.0	0.0
30	1.2	.3	.2	.1	.1	0.0
60	1.7	.5	.3	.2	.1	.1
90	3.0	.7	.4	.2	.1	.1
120	4.9	1.3	.7	.4	.2	.1
183	31	19	16	15	14	13

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1938-79

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1330	2490	4270	9100	16500	30100
3	1290	2190	3400	6250	10000	16300
7	1210	1770	2430	3770	5290	7480
15	1010	1380	1810	2660	3600	4910
30	722	1030	1310	1790	2250	2820
60	474	686	880	1200	1500	1880
90	393	562	705	926	1130	1360

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1938-79

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1140	731	165	108	103	98	88	78	59	7.8	4.0	2.4	1.5	.7	.4

RIO GRANDE BASIN

08386000 PECOS RIVER NEAR ACME, NM
(Surveillance network station)

LOCATION.--Lat 33°32'10", long 104°22'34", in SW¼NW¼ sec.14, T.9 S., R.25 E., Chaves County, Hydrologic Unit 13060007, on right bank 3.0 mi downstream from U.S. Highway 70, 3.7 mi downstream from Salt Creek, 4.7 mi southwest of Acme, 14 mi northeast of Roswell, and at mile 585.3.

DRAINAGE AREA.--11,380 mi², approximately (contributing area).

PERIOD OF RECORD.--September 1921 to June 1923, July 1937 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Elevation of gage is 3,507 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 1, 1938, at site on highway bridge 3 mi upstream at various datums. Since Oct. 25, 1963, supplemental water-stage recorder at site opposite base gage at same datum.

REMARKS.--Flow regulated by Santa Rosa Lake (station 08382810) since April 1980 and by Lake Sumner (station 08384000) since August 1937. Diversions for irrigation of about 20,000 acres, 1959 determination upstream from station.

AVERAGE DISCHARGE.--42 years (1938-79), 185 ft³/s, 134,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft³/s, Sept. 23, 1941, gage height, 13.71 ft, from rating curve extended above 27,000 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 28, 1937, reached a discharge of 53,000 ft³/s, gage height, 14.82 ft, from floodmarks, site and datum then in use, by slope-area method, but may have been exceeded by the flood of Oct. 1, 1904.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF SANTA ROSA DAM AND AFTER COMPLETION OF SUMNER DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1938-79

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1939-79

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	2200	152	378	2.49	6.9	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	858	60	148	2.47	2.7	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	236	27	43	1.60	1.2	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	190	26	41	1.59	1.2	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	233	22	40	1.81	1.0	30	2.5	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	.2	595	194	189	.97	8.8	60	7.8	1.8	.6	0.0	0.0	0.0	0.0
APRIL	3.6	1217	233	252	1.08	10.5	90	11	3.5	1.8	.9	0.0	0.0	0.0
MAY	1.8	2680	254	483	1.90	11.5	120	13	4.4	2.3	1.2	0.0	0.0	0.0
JUNE	0.0	2186	319	356	1.12	14.4	183	28	7.5	3.3	1.6	.7	.3	.3
JULY	.2	1611	336	303	.90	15.2								
AUGUST	.9	726	271	195	.72	12.2								
SEPTEMBER	0.0	3527	320	655	2.05	14.5								
ANNUAL	57	964	185	161	.87	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1938-79

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	2360	5450	9430	18500	29900	47900	
3	1680	3410	5560	10400	16400	25800	
7	1220	2110	3170	5380	8020	11900	
15	922	1440	2040	3240	4600	6540	
30	641	990	1330	1930	2530	3300	
60	426	667	904	1320	6.8	2290	
90	333	527	717	1050	1390	1820	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1938-79

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1030	660	278	132	81	57	32	20	14	8.3	6.0	3.7	1.4	0.0	0.0

RIO GRANDE BASIN

08387000 RIO RUIDOSO AT HOLLYWOOD, NM

LOCATION.--Lat 33°19'43", long 105°36'34", in SW¼SE¼NE¼ sec.30, T.11 S., R.14 E., Lincoln County, Hydrologic Unit 13060008, on right upstream bridge abutment on road leading to Ruidoso Downs Race Track, 0.2 mi north of U.S. Highway 70, 1.1 mi east of the Hollywood Post Office, 1.8 mi downstream from Gavilan Canyon, 2.8 mi downstream from Carrizo Creek, and at mile 23.4. Due to construction work, a temporary gage was installed Mar. 28, 1985, 0.95 mi upstream at different datum and used for the remainder of the water year.

DRAINAGE AREA.--120 mi², approximately.

PERIOD OF RECORD.--March 1953 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,365.42 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1961, at datum 0.30 ft higher. Oct. 14, 1961 to Mar. 8, 1962 at datum 0.60 ft higher. Mar. 9, 1962 to June 18, 1965, at datum 1.0 ft higher.

REMARKS.--Village of Ruidoso diverts from right bank 7.0 mi upstream for municipal use and return on this water as effluent from sewage disposal plant downstream from the gage.

AVERAGE DISCHARGE.--32 years (1954-1985), 17.0 ft³/s, 12,320 acre-ft/yr, for period when sewage disposal plant effluent was discharged upstream from gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft³/s, Aug. 11, 1984, gage height, 9.68 ft, from rating curve extended above 510 ft³/s, on basis of slope-area measurement of peak flow; maximum gage height, 10.05 ft, present datum, June 17, 1965; minimum discharge, 0.30 ft³/s, Jan. 1, 1962, May 8-9, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Sept. 29, 1941, is probably the highest since at least 1904 (discharge not determined).

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1954-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	2.4	66	11	12	1.15	5.4
DECEMBER	2.7	130	13	25	1.92	6.5
JANUARY	2.7	62	10	12	1.14	5.1
FEBRUARY	2.9	59	12	11	.97	5.9
MARCH	3.1	91	21	20	.96	10.3
APRIL	2.2	93	34	28	.84	16.8
MAY	1.8	102	27	26	.94	13.6
JUNE	1.2	48	11	11	.97	5.5
JULY	2.3	23	9.4	5.6	.59	4.7
AUGUST	4.2	162	22	28	1.26	11.0
SEPTEMBER	2.3	44	19	12	.64	9.4
ANNUAL	4.2	49	17	11	.66	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1955-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2.3	1.1	.7	.5	.3	--
3	2.6	1.2	.8	.6	.4	--
7	2.9	1.5	1.0	.7	.5	--
14	3.2	1.7	1.2	.9	.7	--
30	3.6	2.0	1.5	1.1	.8	--
60	4.5	2.7	2.0	1.6	1.2	--
90	5.1	3.1	2.3	1.9	1.4	--
120	5.9	3.6	2.8	2.3	1.8	--
183	7.8	4.7	3.7	3.0	2.4	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1954-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	97	217	357	645	977	--
3	85	176	266	424	584	--
7	69	134	191	281	363	--
15	55	102	140	197	246	--
30	43	79	108	150	184	--
60	32	59	80	109	132	--
90	26	48	66	93	115	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
59	40	28	22	18	16	12	9.3	7.4	5.8	5.0	4.2	3.5	2.9	2.2

RIO GRANDE BASIN

08387600 EAGLE CREEK BELOW SOUTH FORK, NFAR ALTO, NM

LOCATION.--Lat 33°23'33", long 105°43'16", in SE¼SW¼ sec.31, T.10 S., R.13 E., Lincoln County, Hydrologic Unit 13060008, in Lincoln National Forest at right bank, 100 ft downstream from culvert under State Road No. 532, 0.1 mi downstream from South Fork, and 2.4 mi west of Alto. Mouth at Rio Ruidoso mile 11.3.

DRAINAGE AREA.--8.14 mi².

PERIOD OF RECORD.--August 1969 to December 1980.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,600 ft, from topographic map.

REMARKS.--Some water is stored in small unregulated recreational ponds on the Mescalero Apache Indian Reservation upstream.

AVERAGE DISCHARGE.--11 years (water years 1970-80), 3.14 ft³/s, 2,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 206 ft³/s Dec. 19, 1978, gage height, 3.79 ft, from rating curve extended above 21 ft³/s; minimum, 0.05 ft³/s June 30, July 3, 4, 1974.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1970-80

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1971-80

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.4	14	3.1	4.2	1.35	8.4	1	.2	.1	.1	.1	--	--
NOVEMBER	.3	17	3.0	4.9	1.64	8.0	3	.2	.1	.1	.1	--	--
DECEMBER	.2	20	2.6	5.4	2.11	6.9	7	.3	.1	.1	.1	--	--
JANUARY	.3	7.9	2.0	2.3	1.15	5.4	14	.3	.2	.1	.1	--	--
FEBRUARY	.4	8.2	2.6	2.6	.97	7.1	30	.4	.2	.1	.1	--	--
MARCH	.3	11	3.9	3.5	.89	10.4	60	.4	.2	.1	.1	--	--
APRIL	.3	14	5.6	4.8	.86	15.0	90	.6	.3	.2	.1	--	--
MAY	.2	16	4.7	4.5	.94	12.7	120	.7	.3	.2	.2	--	--
JUNE	.1	5.9	1.7	1.8	1.06	4.7	183	1.1	.6	.4	.3	--	--
JULY	.1	4.6	1.5	1.2	.84	4.0							
AUGUST	1.3	5.8	2.7	1.5	.56	7.2							
SEPTEMBER	.4	9.3	3.9	3.1	.81	10.4							
ANNUAL	.4	8.5	3.1	2.4	.77	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1970-80

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	24	61	102	--	--	--
3	19	43	67	--	--	--
7	14	28	41	--	--	--
15	11	20	27	--	--	--
30	8.6	16	20	--	--	--
60	6.6	12	15	--	--	--
90	5.3	9.6	12	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1970-80

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
12	7.8	5.9	4.5	3.6	3.0	2.1	1.5	1.0	.8	.7	.5	.4	.3	.3

RIO GRANDE BASIN

08387800 EAGLE CREEK NEAR ALTO, NM

LOCATION.--Lat 33°23'29", long 105°36'39", in SW¼SE¼SE¼ sec.31, T.10 S., R.14 E., Lincoln County, Hydrologic Unit 13060008, on left bank 200 ft north of Lincoln National Forest boundary, 500 ft northeast of windmill, and 4.0 mi east of Alto. Mouth at Rio Ruidoso mile 11.3.

DRAINAGE AREA.--15.7 mi².

PERIOD OF RECORD.--October 1969 to December 1980.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,840 ft, from topographic map.

REMARKS.--Discharge at this station is affected by Alto Reservoir and municipal water supply diversions for Ruidoso and Capitan.

AVERAGE DISCHARGE.--11 years (water years 1970-80), 1.73 ft³/s, 1,250 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72 ft³/s Sept. 16, 1976, gage height, 2.03 ft; from rating curve extended above 22 ft³/s; no flow most of time.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1970-80

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1971-80

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	13	1.6	3.8	2.42	7.8	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	15	2.2	4.6	2.15	10.6	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	18	1.7	5.1	3.10	8.1	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	6.8	1.0	2.1	2.15	4.8	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	7.6	1.5	3.0	1.96	7.5	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	9.8	2.4	4.1	1.72	11.6	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	13	3.7	5.0	1.37	18.1	90	0.0	0.0	0.0	0.0	--	--
MAY	0.0	13	2.9	4.0	1.40	14.1	120	0.0	0.0	0.0	0.0	--	--
JUNE	0.0	4.1	.6	1.3	2.15	3.1	183	0.0	0.0	0.0	0.0	--	--
JULY	0.0	1.9	.4	.7	1.78	2.0							
AUGUST	0.0	4.1	.9	1.6	1.86	4.2							
SEPTEMBER	0.0	8.8	1.7	2.9	1.76	8.1							
ANNUAL	0.0	7.1	1.7	2.4	1.40	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1970-80

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	12	41	80	--	--	--
3	9.5	31	57	--	--	--
7	7.6	23	39	--	--	--
15	5.8	18	29	--	--	--
30	3.9	13	22	--	--	--
60	2.5	8.8	16	--	--	--
90	1.7	6.8	13	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1970-80

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
11	6.8	3.5	1.6	.6	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08388000 RIO RUIDOSO AT HONDO, NM

LOCATION.--Lat 33°23'00", long 105°16'30" in NE¼SW¼ sec.4, T.11 S., R.17 E., on right bank a quarter of a mile upstream from confluence with Rio Bonito and half a mile southwest of Hondo.

DRAINAGE AREA.--290 mi² (revised).

PERIOD OF RECORD.--October 1930 to September 1955 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 5,181.38 ft above mean sea level, datum of 1929.

REMARKS.--Diversions for irrigation of about 1,700 acres above station.

AVERAGE DISCHARGE.--25 years (water years 1931-55), 19.0 ft³/s, 13,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 12,400 ft³/s Sept. 29, 1941 (gage height, 21.13 ft, from floodmark), from rating curve extended above 3,700 ft³/s on basis of velocity-area studies; no flow Aug. 15, 16, 1935, June 2-7, 1950.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1931-55

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1932-55

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.7	307	25	60	2.42	10.9	1	.4	.2	.1	0.0	0.0	--
NOVEMBER	.7	105	12	20	1.77	5.1	3	.4	.2	.1	.1	0.0	--
DECEMBER	1.0	59	9.1	12	1.28	4.0	7	.7	.2	.1	.1	0.0	--
JANUARY	.9	48	9.2	10	1.10	4.0	14	.8	.4	.3	.2	.2	--
FEBRUARY	1.0	39	10	9.0	.90	4.4	30	1.1	.5	.4	.3	.3	--
MARCH	.7	70	17	16	.99	7.3	60	1.9	.8	.5	.4	.3	--
APRIL	.6	96	25	32	1.25	11.2	90	2.5	1.0	.7	.5	.4	--
MAY	.5	365	33	74	2.23	14.6	120	3.2	1.3	.8	.6	.4	--
JUNE	.8	100	12	21	1.77	5.2	183	5.4	2.2	1.4	1.0	.7	--
JULY	.4	94	18	23	1.28	7.8							
AUGUST	.7	123	19	26	1.35	8.5							
SEPTEMBER	.4	524	39	104	2.69	17.0							
ANNUAL	2.8	114	19	25	1.29	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1931-55

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	136	433	871	1970	3490	--
3	90	273	541	1220	2180	--
7	66	185	349	748	1280	--
15	48	127	234	489	826	--
30	38	91	157	301	476	--
60	27	63	106	196	303	--
90	23	53	87	155	232	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-55

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
67	39	28	23	18	15	10	6.7	3.7	1.9	1.4	1.1	.9	.8	.6

RIO GRANDE BASIN

08389500 RIO BONITO AT HONDO, NM

LOCATION.--Lat 33°23'20", long 105°16'30", in NE¼NW¼ sec.4, T.11 S., R.17 E., near center of span on downstream side of bridge on U.S. Highway 70 at Hondo, half a mile upstream from confluence with Rio Ruidoso.

DRAINAGE AREA.--295 mi², revised (contributing area).

PERIOD OF RECORD.--October 1930 to September 1955 (discontinued).

REVISED RECORDS.--WSP 1212: 1950.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,205.17 ft above mean sea level, datum of 1929. Prior to Feb. 4, 1933, at site a quarter mile upstream at different datum. (Datum lowered 0.23 ft Oct. 10, 1931).

REMARKS.--Diversions for irrigation of about 1,700 acres above station.

AVERAGE DISCHARGE.--25 years (water years 1931-55), 10.3 ft³/s, 7,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s Sept. 28 or 29, 1941 (gage height, 20.92 ft, from floodmark), from rating curve extended above 220 ft³/s on basis of slope-area determination at gage height 19.0 ft; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1931-55

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1932-55

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	0.0	230	13	46	3.61	10.2	1	0.0	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	79	5.2	16	2.99	4.2	3	0.0	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	39	2.4	7.7	3.21	1.9	7	0.0	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	30	1.6	6.0	3.72	1.3	14	0.0	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	26	1.5	5.3	3.51	1.2	30	0.0	0.0	0.0	0.0	0.0	0.0	--
MARCH	0.0	18	1.9	4.7	2.46	1.5	60	0.0	0.0	0.0	0.0	0.0	0.0	--
APRIL	0.0	87	9.2	20	2.12	7.5	90	0.0	0.0	0.0	0.0	0.0	0.0	--
MAY	0.0	175	18	40	2.26	14.2	120	.1	0.0	0.0	0.0	0.0	0.0	--
JUNE	0.0	36	7.0	12	1.64	5.7	183	.7	.1	.1	0.0	0.0	0.0	--
JULY	1.0	46	15	13	.86	11.8								
AUGUST	.8	55	16	13	.79	13.3								
SEPTEMBER	0.0	424	34	83	2.48	27.1								
ANNUAL	1.6	59	10	15	1.46	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1931-55

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	241	621	1090	2080	3270	--
3	117	310	558	1110	1790	--
7	72	184	318	594	908	--
15	43	113	200	390	621	--
30	29	72	122	224	340	--
60	20	47	78	141	212	--
90	16	38	62	105	151	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-55

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME															
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%	
42	21	11	6.6	4.4	2.9	.9	.1	.1	.1	.1	0.0	0.0	0.0	0.0	

RIO GRANDE BASIN

08390500 RIO HONDO AT DIAMOND A RANCH, NEAR ROSWELL, NM

LOCATION.--33°20'57", long 104°51'05", in NE¼NE¼ sec.20, T.11 S, R.21 E., Chaves County, Hydrologic Unit 13060008, on right bank 15 ft downstream from county road bridge at Diamond A Ranch, 1.3 mi south of U.S. Highway 70-380, 13 mi upstream from Two Rivers Reservoir, 21 mi upstream from mouth of Rocky Arroyo, 18 mi west of Roswell, and at mile 44.7.

DRAINAGE AREA.--947 mi², contributing area.

PERIOD OF RECORD.--May 1908 to August 1909, May 1939 to current year. Monthly discharge only for 1908-9, published in Technical Report No. 7, State of New Mexico, State Engineer Office, Streamflow and Reservoir Content 1888-1954.

REVISED RECORDS.--WSP 1392: Drainage area. WSP 1512: 1939-40(P), 1941, 1942-43(P), 1946(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,190 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 11, 1965 at site on left bank at same datum.

REMARKS.--Diversions and groundwater withdrawals upstream from station for irrigation upstream and downstream from station of about 6,500 acres, 1959 determination.

AVERAGE DISCHARGE.--46 years (1940-85) 22.3 ft³/s, 16,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,800 ft³/s, June 18, 1965, gage height, 26.40 ft, from rating curve extended above 3,100 ft³/s, on basis of slope-area measurement of peak flow; maximum gage height, 28.78 ft, Sept. 22, 1941; no flow most of the time.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood on June 1, 1937, reached a discharge of 24,900 ft³/s at Riverside about 13 mi upstream. Other major floods occurred Oct. 31, 1901, Sept. 29, 30, 1904 and July 25, 1905.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1940-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1941-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	0.0	199	14	34	2.53	5.1
DECEMBER	0.0	222	16	44	2.83	5.9
JANUARY	0.0	160	11	29	2.55	4.3
FEBRUARY	0.0	96	7.8	19	2.46	2.9
MARCH	0.0	106	8.0	20	2.47	3.0
APRIL	0.0	165	22	42	1.93	8.2
MAY	0.0	519	28	80	2.85	10.5
JUNE	0.0	182	18	42	2.34	6.7
JULY	0.0	163	28	45	1.63	10.4
AUGUST	0.0	241	38	52	1.37	14.3
SEPTEMBER	0.0	1090	53	163	3.05	20.0
ANNUAL	1.3	181	22	33	1.49	100

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0
120	.2	0.0	0.0	0.0	0.0	0.0
183	1.5	0.0	0.0	0.0	0.0	0.0

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1940-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	489	1270	2160	3880	5730	8210
3	267	685	1160	2090	3090	4450
7	165	405	661	1130	1620	2240
15	107	265	436	755	1090	1520
30	74	178	281	455	619	817
60	46	112	177	286	390	514
90	35	84	135	228	321	438

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1940-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
101	51	28	18	9.8	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08390800 RIO HONDO BELOW DIAMOND A DAM, NEAR ROSWELL, NM

LOCATION.--Lat 33°18'05", long 104°43'12", in NE¼SE¼NE¼ sec.4, T.12 S., R.22 E., Chaves County, Hydrologic Unit 13060008, on left bank, 500 ft downstream from outlet conduit of Diamond A Dam (Two Rivers Reservoir), 13 mi southwest of Roswell, and at mile 33.3.

DRAINAGE AREA.--963 mi², contributing area.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,949.68 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Diversions and ground-water withdrawals for irrigation of about 6,500 acres, 1959 determination, upstream from station. This record represents the outflow from Two Rivers Reservoir through Diamond A Dam. Flow from reservoir can also be discharged into Rocky Arroyo through Rocky Dam.

AVERAGE DISCHARGE.--22 years (water years 1964-85), 11.0 ft³/s, 7,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 659 ft³/s, July 29, 1965, gage height, 4.91 ft; no flow most of time.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	0.0	70	7.7	18	2.31	5.9
DECEMBER	0.0	118	9.2	28	3.08	7.0
JANUARY	0.0	128	11	32	2.96	8.2
FEBRUARY	0.0	80	7.2	21	2.86	5.5
MARCH	0.0	104	8.5	25	2.89	6.5
APRIL	0.0	89	14	26	1.88	10.5
MAY	0.0	108	13	28	2.11	10.2
JUNE	0.0	52	6.0	13	2.08	4.6
JULY	0.0	46	4.9	12	2.36	3.7
AUGUST	0.0	137	22	34	1.57	16.4
SEPTEMBER	0.0	104	21	33	1.56	16.3
ANNUAL	.2	50	11	13	1.16	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	0.0	0.0	0.0	0.0	--	--
3	0.0	0.0	0.0	0.0	--	--
7	0.0	0.0	0.0	0.0	--	--
14	0.0	0.0	0.0	0.0	--	--
30	0.0	0.0	0.0	0.0	--	--
60	0.0	0.0	0.0	0.0	--	--
90	0.0	0.0	0.0	0.0	--	--
183	.5	0.0	0.0	0.0	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	234	350	394	427	--	--
3	160	282	348	413	--	--
7	118	215	264	306	--	--
15	84	166	212	258	--	--
30	56	120	158	197	--	--
60	32	75	103	136	--	--
90	23	55	80	114	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
77	35	13	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08393200 ROCKY ARROYO ABOVE TWO RIVERS RESERVOIR, NEAR ROSWELL, NM

LOCATION.--Lat 33°17'07", long 104°47'47", in NE¼SW¼ sec.11, T.12, S., R.21¼ E., Chaves County, Hydrologic Unit 13060008, on left bank, 2.1 mi upstream from mouth of Buchanan Draw, 5.2 mi upstream from Rocky Dam, (Two Rivers Reservoir), and 17 mi southwest of Roswell.

DRAINAGE AREA.--31 mi², approximately.

PERIOD OF RECORD.--May 1963 to September 1980.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,059.17 ft Corps of Engineers datum. Prior to Dec. 7, 1968, at site on opposite bank at datum 3.72 ft lower.

REMARKS.--Flow past station represents inflow to Two Rivers Reservoir.

AVERAGE DISCHARGE.--17 years (water years 1964-80), 0.90 ft³/s, 652 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s July 5, 1968, gage height, 11.53 ft, from floodmarks, present datum, from rating curve extended above 350 ft³/s on basis of slope-area measurements at gage heights 5.92 ft, 7.14 ft, and 11.53 ft, present datum; no flow most of time.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-80

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-80

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	23	1.4	5.7	4.06	13.2	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	0.0	0.0	0.0	--	0.0	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	0.0	0.0	0.0	--	0.0	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	0.0	0.0	0.0	--	0.0	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	0.0	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	1.4	.1	.3	4.25	.8	90	0.0	0.0	0.0	0.0	--	--
MAY	0.0	0.0	0.0	0.0	--	0.0	120	0.0	0.0	0.0	0.0	--	--
JUNE	0.0	1.4	.1	.4	3.00	1.1	183	0.0	0.0	0.0	0.0	--	--
JULY	0.0	26	2.0	6.4	3.20	19.0							
AUGUST	0.0	26	2.9	6.5	2.29	26.9							
SEPTEMBER	0.0	23	4.1	7.9	1.91	39.0							
ANNUAL	.1	4.2	.9	1.2	1.34	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-80

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	81	306	565	1000	--	--	
3	31	118	220	397	--	--	
7	13	52	96	171	--	--	
15	7.5	32	61	112	--	--	
30	3.8	16	31	56	--	--	
60	2.0	8.6	17	31	--	--	
90	1.3	5.7	11	21	--	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-80

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08393300 ROCKY ARROYO BELOW ROCKY DAM, NEAR ROSWELL, NM

LOCATION.--Lat 33°16'11", long 104°43'13", SE₄SE₄NE₄ sec.16, T.12 S., R.22 E., Chaves County, Hydrologic Unit 13060008, on left bank, 300 ft downstream from outlet structure in Rocky Dam (Two Rivers Reservoir) and 13.5 mi southwest of Roswell.

DRAINAGE AREA.--64 mi², approximately.

PERIOD OF RECORD.--May 1963 to September 1980.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,935.66 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers benchmark). Prior to Jan. 12, 1972, at site 1.4 mi downstream at datum 28.76 ft lower.

REMARKS.--This record represents the outflow from Two River Reservoir through Rocky Dam. Outlet conduits in Rocky Dam have fixed openings.

AVERAGE DISCHARGE.--17 years (water years 1964-80), 1.80 ft³/s, 1,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 548 ft³/s Aug. 21, 1966, gage height, 4.57 ft, site and datum then in use, from rating curve extended above 260 ft³/s; no flow most of time.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-80

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-80

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	0.0	19	1.1	4.7	4.14	5.4	1	--	--	--	--	--	--
NOVEMBER	0.0	0.0	0.0	0.0	--	0.0	3	--	--	--	--	--	--
DECEMBER	0.0	57	3.3	14	4.11	15.9	7	--	--	--	--	--	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	--	--	--	--	--	--
FEBRUARY	0.0	0.0	0.0	0.0	--	0.0	30	--	--	--	--	--	--
MARCH	0.0	0.0	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	0.0	0.0	0.0	--	0.0	90	--	--	--	--	--	--
MAY	0.0	0.0	0.0	0.0	--	0.0	120	0.0	0.0	0.0	0.0	--	--
JUNE	0.0	67	4.2	16	3.88	20.0	183	0.0	0.0	0.0	0.0	--	--
JULY	0.0	32	3.3	8.7	2.64	15.7							
AUGUST	0.0	28	3.7	7.2	1.91	17.9							
SEPTEMBER	0.0	26	5.3	8.5	1.60	25.3							
ANNUAL	0.0	8.8	1.8	2.4	1.37	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-80

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	101	271	311	325	--	--	
3	65	217	263	284	--	--	
7	34	139	181	204	--	--	
15	18	68	104	142	--	--	
30	9.7	36	54	73	--	--	
60	4.9	19	31	43	--	--	
90	3.3	13	22	32	--	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-80

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%

RIO GRANDE BASIN

08393600 NORTH SPRING RIVER AT ROSWELL, NM

LOCATION.--Lat 33°23'47", long 104°32'53", in NW¼SW¼SE¼ sec.31, T.10 S., R.24 E., Chaves County, Hydrologic Unit 13060008, on left bank, in Roswell Municipal Golf Course, 2,400 ft upstream from Montana Avenue, and 2 blocks north of West Second Street, Roswell.

DRAINAGE AREA.--19.5 mi².

PERIOD OF RECORD.--May 1958 to December 1977.

GAGE.--Water-stage recorder. Altitude of gage is 3,575 ft, from topographic map.

REMARKS.--No diversions above station.

AVERAGE DISCHARGE.--19 years (water years 1959-77), 0.004 ft³/s, 2.90 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 387 ft³/s June 13, 1964, gage height, 4.65 ft, from rating curve extended above 80 ft³/s on basis of slope-area measurement; no flow most of time.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1959-77

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1960-77

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	0.0	.2	0.0	.1	2.50	3.8	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	0.0	0.0	0.0	--	0.0	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	0.0	0.0	0.0	--	0.0	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	0.0	0.0	0.0	--	0.0	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	0.0	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	0.0	0.0	0.0	--	0.0	90	0.0	0.0	0.0	0.0	--	--
MAY	0.0	0.0	0.0	0.0	--	0.0	120	0.0	0.0	0.0	0.0	--	--
JUNE	0.0	2.3	.3	.7	2.38	55.8	183	0.0	0.0	0.0	0.0	--	--
JULY	0.0	1.4	.1	.3	2.83	23.1							
AUGUST	0.0	1.4	.1	.3	3.88	15.4							
SEPTEMBER	0.0	.1	0.0	0.0	2.00	1.9							
ANNUAL	0.0	.3	0.0	.1	1.75	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1959-77

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	2.1	13	29	64	--	--	
3	.8	5.4	12	25	--	--	
7	.4	2.0	4.7	11	--	--	
15	.2	1.0	2.3	5.4	--	--	
30	.1	.5	1.4	3.5	--	--	
60	.1	.3	.8	1.8	--	--	
90	0.0	.2	.5	1.2	--	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1959-77

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08394100 PECOS RIVER NEAR HAGERMAN, NM

LOCATION.--Lat 33°10'08", long 104°18'24", in SE¼SW¼SE¼ sec.23, T.13 S., R.26 E., Chaves County, Hydrologic Unit 13060007, on left bank 3.4 mi upstream from Rio Felix, 4.9 mi north of Hagerman, and at mile 544.6.

DRAINAGE AREA.--13,630 mi², approximately (contributing area).

PERIOD OF RECORD.--February 1968 to December 1981 (operated as a low-flow station only).

GAGE.--Water-stage recorder. Elevation of gage is 3,390 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated by Santa Rosa Lake (station 08382810) since April 1980, by Lake Sumner (station 08384000) since August 1937 and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigations of about 80,000 acres upstream from station.

AVERAGE DISCHARGE.--21 years (water years 1959-79), 164 ft³/s, 118,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined, 3,700 ft³/s, Sept. 11, 1969; no flow at times in 1971, 1974, 1976, 1977.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF SANTA ROSA DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1969-79

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1970-79

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	21	284	87	84	.97	5.2	1	4.6	0.0	0.0	0.0	--	--
NOVEMBER	32	92	58	22	.38	3.4	3	4.1	.5	.1	0.0	--	--
DECEMBER	35	128	53	27	.51	3.2	7	5.9	2.0	1.1	.6	--	--
JANUARY	32	102	49	21	.42	2.9	14	7.7	3.6	2.4	1.7	--	--
FEBRUARY	24	61	41	11	.27	2.5	30	19	12	9.1	7.2	--	--
MARCH	29	424	186	165	.89	11.1	60	26	18	15	14	--	--
APRIL	21	522	209	190	.91	12.5	90	31	23	20	19	--	--
MAY	13	358	140	144	1.03	8.4	120	36	28	24	22	--	--
JUNE	4.7	628	272	255	.94	16.3	183	43	31	27	24	--	--
JULY	2.9	333	202	121	.60	12.1							
AUGUST	14	454	224	186	.83	13.4							
SEPTEMBER	10	723	150	228	1.52	9.0							
ANNUAL	106	236	164	56	.34	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1969-79

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	2120	3370	4220	--	--	--
3	1690	2120	2310	--	--	--
7	1100	1230	1300	--	--	--
15	894	1000	1080	--	--	--
30	715	806	833	--	--	--
60	477	583	624	--	--	--
90	384	513	576	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1969-79

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
897	626	273	159	110	84	61	47	38	32	29	25	21	17	13

RIO GRANDE BASIN

08394500 RIO FELIX AT OLD HIGHWAY BRIDGE, NEAR HAGERMAN, NM

LOCATION.--Lat 33°07'30", long 104°20'40", in SW¼SW¼SE¼ sec.4, T.14 S., R.26 E., Chaves County, Hydrologic Unit 13060009, near left bank on downstream side of abandoned bridge pier, 0.6 mi upstream from alternate U.S. Highway 285, 1.3 mi northwest of Hagerman, and 2.7 mi upstream from mouth. Mouth at Pecos River mile 541.4.

DRAINAGE AREA.--932 mi², contributing area.

PERIOD OF RECORD.--April 1939 to current year. March 1932 to April 1939 at site 1 mi downstream; records for periods of low flow not equivalent, owing to inflow between sites.

REVISED RECORDS.--WSP 928: 1940(M). WSP 1562: 1939-40, 1941(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,403.40 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Diversions for irrigation of about 350 acres, 1959 determination, upatream from station.

AVERAGE DISCHARGE.--46 years (water years 1940-85), 13.6 ft³/s, 9,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,000 ft³/s, Oct. 7, 1954, gage height, 27.5 ft, from floodmarks, from rating curve extended above 12,000 ft³/s on basis of slope-area measurement at point 5.5 mi upstream from gage (adjusted for channel storage); no flow for many periods. Flood in 1954 is the highest since 1894 (information from local residents).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 1, 1904, is probably second highest since 1894; another major flood occurred in April 1915.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1940-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1941-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	687	28	105	3.79	17.1	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	61	5.1	12	2.25	3.2	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	37	3.1	7.2	2.35	1.9	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	45	2.9	7.5	2.62	1.8	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	44	3.3	8.6	2.64	2.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	0.0	12	.9	2.1	2.29	.6	60	0.0	0.0	0.0	0.0	0.0	0.0	0.0
APRIL	0.0	33	1.5	5.5	3.56	.9	90	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAY	0.0	173	11	31	2.81	6.7	120	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUNE	0.0	182	14	33	2.43	8.4	183	1.0	0.0	0.0	0.0	0.0	0.0	0.0
JULY	0.0	231	24	49	2.02	15.0								
AUGUST	0.0	302	22	52	2.40	13.3								
SEPTEMBER	0.0	705	47	138	2.92	29.2								
ANNUAL	0.0	87	14	19	1.37	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1940-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	1020	3190	4200	4870	5100	5220	
3	359	1360	2460	4310	6000	7930	
7	192	658	1120	1830	2430	3060	
15	108	338	547	842	1070	1300	
30	64	185	281	401	484	560	
60	36	103	154	215	256	292	
90	27	74	108	145	168	188	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1940-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
26	7.2	2.5	1.3	.7	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08395500 PECOS RIVER NEAR LAKE ARTHUR, NM

LOCATION.--Lat 32°59'18", long 104°19'20", in SW¼NE¼ sec.27, T.15 S., R.26 E., Chaves County, Hydrologic Unit 1306007, on left bank 400 ft upstream from county bridge, 2.5 mi east of Lake Arthur, 7 mi upstream from Cottonwood Creek, 11 mi northeast of Artesia, and at mile 522.0.

DRAINAGE AREA.--14,760 mi², approximately (contributing area).

PERIOD OF RECORD.--August 1938 to current year.

GAGE.--Water-stage recorder and rock control. Elevation of gage is 3,327.07 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Santa Rosa Lake (station 08382810) since April 1980, by Lake Sumner (station 08384000) since August 1937, and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigation of about 124,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--41 years (water years 1939-79), 235 ft³/s, 170,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft³/s, Sept. 24, 1941, gage height, 21.90 ft, from rating curve extended above 16,100 ft³/s on basis of slope-area measurement at gage height 21.77 ft; no flow at times in 1947, 1953-4, 1962, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1937, reached a stage of 21.77 ft, discharge, 51,500 ft³/s, on basis of slope-area measurement of peak flow.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF SANTA ROSA DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1939-79

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1940-79

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	3.9	3701	278	692	2.49	9.9	1	1.8	.4	0.0	0.0	0.0	0.0	0.0
NOVEMBER	32	983	129	200	1.55	4.6	3	2.3	.6	.3	.1	0.0	0.0	0.0
DECEMBER	30	546	98	87	.89	3.5	7	3.4	.9	.4	.2	.1	.1	.1
JANUARY	35	451	93	78	.83	3.3	14	5.7	1.6	.8	.4	.2	.1	.1
FEBRUARY	27	446	81	68	.84	2.9	30	16	4.6	2.2	1.1	.5	.3	.3
MARCH	17	682	202	177	.88	7.2	60	37	13	6.5	3.4	1.5	.8	.8
APRIL	7.4	1308	251	259	1.03	8.9	90	57	25	14	8.2	4.1	2.5	2.5
MAY	12	3673	304	614	2.02	10.8	120	62	30	19	13	7.8	5.4	5.4
JUNE	4.8	2436	322	390	1.21	11.4	183	67	39	32	28	25	23	23
JULY	1.0	1521	360	331	.92	12.8								
AUGUST	.4	913	285	213	.75	10.1								
SEPTEMBER	1.3	5407	410	908	2.21	14.6								
ANNUAL	62	1314	235	226	.96	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1939-79

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2810	6280	10400	19100	29400	44400
3	1970	4250	7200	13900	22600	36200
7	1330	2560	4130	7690	12300	19500
15	923	1600	2440	4290	6600	10200
30	638	1100	1620	2670	3870	5600
60	440	752	1080	1720	2400	3340
90	349	596	855	1340	1860	2560

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1939-79

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
948	647	364	209	149	125	90	68	52	40	34	28	20	13	5.1

RIO GRANDE BASIN

08396000 COTTONWOOD CREEK NEAR LAKE ARTHUR, NM

LOCATION.--Lat 32°54'55", long 104°22'00", in SW¼SE¼ sec.15, T.16 S., R.26 E., on right bank 75 ft upstream from road bridge, 1½ miles upstream from mouth, and 6 miles south of town of Lake Arthur.

DRAINAGE AREA.--199 mi² (contributing area).

PERIOD OF RECORD.--March 1932 to January 6, 1965 (discontinued). All figures of discharge above 150 ft³/s prior to June 1937 and daily discharges Sept. 24-30, 1932, June 13, 14, Sept. 5, 1935 and May 29, 1937, as published in previous Water Supply Papers have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder (digital) and concrete control. Datum of gage is 3,316.3 ft above mean sea level (river-profile survey). At site 75 ft downstream at different datum Mar. 7, 1932 to Mar. 28, 1935, and at datum 1.36 ft and 2.10 ft lower than present datum Mar. 29, 1935 to Sept. 30, 1936, and Oct. 1, 1936 to Aug. 29, 1938, respectively. Aug. 30, 1938 to May 22, 1948, at present site at datum 1.54 ft lower.

REMARKS.--Diversions and ground-water withdrawals for irrigation of about 4,500 acres (1959 determination) above station. Capacity of original excavated channel at and above gage has been progressively reduced by salt-cedar growth, blow sand, and bank erosion. Since 1957 a compacted earth plug in channel (forms pond for pump diversion) 1 mile above gage has reduced low-flow record to leakage through or under plug, ground-water inflow, and irrigation return entering channel in the 1-mile reach above gage. Higher sustained discharges originating above plug (moderate rises can originate below) will overflow banks and levees into swamps, farm areas, and Pecos River flood plain, most of over-bank flow remaining ponded or bypassing gage. Low-flow record represents contribution to Pecos River, based on comparative discharge measurements of March 1961.

AVERAGE DISCHARGE.--30 years (water years 1934, 1936-64), 5.40 ft³/s, 3,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, occurred June 13, 1935; maximum gage height, 12.0 ft May 30, 1937, present datum, from floodmarks (backwater from Pecos River); no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1934, 1936-64

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1934-35, 1937-64

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	.1	54	7.0	11	1.50	10.4	1	.2	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	.2	41	7.1	8.8	1.24	10.6	3	.2	.1	.1	0.0	0.0	0.0	--
DECEMBER	.2	32	7.5	7.8	1.04	11.2	7	.3	.1	.1	.1	0.0	0.0	--
JANUARY	.2	31	7.4	7.4	.99	11.1	14	.4	.2	.1	.1	0.0	0.0	--
FEBRUARY	.3	22	6.2	5.1	.83	9.2	30	.5	.2	.1	.1	.1	.1	--
MARCH	.3	14	4.9	3.8	.78	7.4	60	.8	.3	.1	.1	.1	.1	--
APRIL	.2	17	4.1	4.1	1.01	6.1	90	1.0	.3	.2	.1	.1	.1	--
MAY	.2	100	6.4	17	2.72	9.6	120	1.3	.4	.2	.1	.1	.1	--
JUNE	.2	36	5.3	7.8	1.48	7.9	183	1.9	.6	.3	.2	.1	.1	--
JULY	.1	32	4.2	6.2	1.48	6.3								
AUGUST	.1	19	2.5	3.7	1.48	3.8								
SEPTEMBER	.1	52	4.4	10.0	2.28	6.5								
ANNUAL	.3	22	5.4	5.6	1.02	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1934, 1936-64

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	39	123	208	345	466	--
3	28	84	139	226	302	--
7	18	51	83	137	185	--
15	13	33	53	84	111	--
30	9.2	24	38	62	83	--
60	6.9	18	29	46	62	--
90	6.0	16	25	39	52	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1934, 1936-64

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
19	13	9.6	8.2	6.8	5.5	3.3	2.1	1.4	.9	.6	.4	.3	.2	.1

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM
(Surveillance program station)

LOCATION.--Lat 32°50'27", long 104°19'23", in NW¼NW¼ sec.18, T.17 S., R.27 E., Eddy County, Hydrologic Unit 13060007, on left bank 250 ft upstream from bridge on State Highway 83, 4.3 mi east of Artesia, 7.0 mi upstream from Rio Penasco, 17 mi upstream from McMillan Dam, and at mile 503.9.

DRAINAGE AREA.--15,300 mi², approximately (contributing area).

PERIOD OF RECORD.--September 1905 to June 1909, August 1909 to current year. Monthly discharge only for some periods, published in WSP 1312 and 1712. Records for Aug. 22-31, 1934, and October 1936 to April 1937, published in WSP 763 and 828, respectively are not reliable and should not be used. Prior to February 1936, published as "near Dayton."

REVISED RECORDS.--WSP 1312 and 1512: 1913, 1915, 1917-18(M), 1920, 1923, 1931-36. WSP 1712: 1906(M), 1908-11(M), 1919, 1921-23(M), 1929, 1931-32(M), 1935-36(M), 1937, 1939(M), 1941(M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 3,291.92 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). See WSP 1923 or 2123 for history of changes prior to Apr. 5, 1941. Apr. 5, 1941 to Apr. 2, 1981, water-stage recorder at site 250 ft downstream at same datum.

REMARKS.--Flow regulated by Santa Rosa Lake (station 08382810) since April 1980, by Lake Sumner (station 08384000) since August 1937, and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigation of about 154,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--36 years, (1906-08, 1910-37), 379 ft³/s, 274,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge probably occurred May 30, 1937, when a discharge of 51,500 ft³/s was measured by slope-area method at a point 15 mi upstream, gage height, 14.7 ft, site and datum then in use; no flow at times in 1934, 1946-47, 1953-54, 1957, 1964-65.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1893 occurred Oct. 2, 1904, discharge not determined; the peak inflow to Lake McMillan, which includes Rio Penasco and Fourmile Draw, was estimated at 82,000 ft³/s. The second highest flood occurred July 25, 1905, discharge below Rio Penasco, 50,300 ft³/s, based on gain in storage and spill from Lake McMillan. The floods in August 1893 and October 1904 damaged McMillan Dam and washed out Avalon Dam.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF SUMNER DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1906-08,
1910-37

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1907-09, 1911-37

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	45	1839	365	427	1.17	8.2	1	41	19	11	5.6	2.4	--
NOVEMBER	72	648	246	124	.50	5.5	3	42	21	13	7.4	3.7	--
DECEMBER	130	657	293	122	.42	6.5	7	46	25	17	11	6.6	--
JANUARY	147	469	296	83	.28	6.6	14	54	32	22	16	10	--
FEBRUARY	161	395	246	61	.25	5.5	30	77	45	31	22	14	--
MARCH	79	2067	222	340	1.53	5.0	60	122	75	56	43	31	--
APRIL	49	3696	326	651	2.00	7.3	90	162	108	84	68	52	--
MAY	44	2971	545	586	1.08	12.2	120	185	129	104	86	68	--
JUNE	48	3495	598	768	1.28	13.4	183	218	163	140	124	109	--
JULY	9.4	1472	445	402	.90	9.9							
AUGUST	41	1561	478	386	.81	10.7							
SEPTEMBER	73	2831	417	545	1.31	9.3							
ANNUAL	143	998	379	189	.50	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1906-08, 1910-37

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5830	14000	22800	38800	55300	--
3	3750	8610	13900	24200	35200	--
7	2380	4980	7690	12700	17900	--
15	1570	3080	4570	7200	9840	--
30	1090	1970	2780	4130	5410	--
60	744	1270	1710	2400	3020	--
90	604	1020	1370	1890	2350	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1906-08, 1910-37

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
1090	699	514	403	354	305	258	215	174	139	123	106	89	72	51

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM--Continued

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF SANTA ROSA DAM AND AFTER COMPLETION OF SUMNER DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1938-79

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1939-79

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	2.3	4203	284	731	2.57	10.0	1	1.7	.3	0.0	0.0	0.0	0.0	0.0
NOVEMBER	32	1240	143	232	1.62	5.0	3	2.1	.4	0.0	0.0	0.0	0.0	0.0
DECEMBER	34	614	108	98	.91	3.8	7	3.1	.7	0.0	0.0	0.0	0.0	0.0
JANUARY	35	499	103	86	.84	3.6	14	6.9	.7	0.0	0.0	0.0	0.0	0.0
FEBRUARY	29	504	90	76	.85	3.2	30	16	4.2	1.8	.8	0.0	0.0	0.0
MARCH	22	768	208	179	.86	7.3	60	48	13	5.3	2.1	.7	.3	
APRIL	11	1292	248	257	1.04	8.7	90	65	25	13	6.2	2.5	1.2	
MAY	16	3834	303	633	2.09	10.6	120	68	31	19	12	6.7	4.4	
JUNE	5.4	2524	327	397	1.21	11.5	183	72	41	33	28	24	23	
JULY	.8	1453	354	321	.91	12.4								
AUGUST	.1	880	274	198	.72	9.6								
SEPTEMBER	.3	5704	408	931	2.28	14.3								
ANNUAL	65	1378	238	238	1.00	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1938-79

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2440	5280	8910	17100	27600	44000
3	1810	3890	6650	13200	22000	36300
7	1260	2420	3950	7540	12300	20000
15	886	1550	2390	4290	6680	10500
30	614	1070	1600	2690	3970	5850
60	426	737	1080	1750	2490	3540
90	340	588	855	1370	1930	2700

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1938-79

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
946	634	382	215	162	135	97	74	57	43	37	30	21	13	5.7

RIO GRANDE BASIN

08398500 RIO PENASCO AT DAYTON, NM

LOCATION.--Lat 32°44'36", long 104°24'49", in NE¼SE¼ sec.18, T.18 S., R.26 E., Eddy County, Hydrologic Unit 13060010, on left bank 1.2 mi upstream from U.S. Highway 285, 1.9 mi northwest of old Dayton railway station, 5.6 mi upstream from mouth, and 7.0 mi south of Artesia. Mouth at Pecos River mile 496.4.

DRAINAGE AREA.--1,060 mi², approximately.

PERIOD OF RECORD.--April 1951 to current year. Prior to October 1953, published as "near Dayton."

REVISED RECORDS.--WSP 1242: 1951(M). WSP 1512: 1956. WSP 1923: 1955.

GAGE.--Water-stage recorder and rock and concrete control. Elevation of gage is 3,385.19 ft above National Geodetic Vertical Datum of 1929. Prior to May 9, 1968, at site 2.4 mi downstream, at datum 44.30 ft lower. May 9, 1968 to June 12, 1975, at present site at datum 1.98 ft higher.

REMARKS.--Diversions and ground-water withdrawals for irrigation of about 3,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--34 years (water years 1952-85), 5.34 ft³/s, 3,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft³/s, Aug. 23, 1966, gage height, 16.4 ft, from floodmarks, present site and datum, from rating curve extended above 6,000 ft³/s on basis of slope-area measurements at gage heights 6.82 ft and 7.90 ft at previous site and datum; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about Sept. 22, 1941, reached a stage of about 9 ft from floodmark, previous site and datum, discharge not determined. Peak discharge at discontinued station "near Dunken" (station 08397600), about 60 mi upstream, was 70,000 ft³/s, determined in 1956 from rating curve extended above a slope-area measurement of 36,300 ft³/s for peak of Oct. 6 or 7, 1954.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1952-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1953-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	0.0	201	7.1	35	4.85	11.2	1	0.0	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	73	2.1	13	5.84	3.4	3	0.0	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	0.0	0.0	0.0	--	0.0	7	0.0	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	0.0	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	0.0	0.0	0.0	--	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0	--
MARCH	0.0	0.0	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	0.0	0.0	--
APRIL	0.0	.7	0.0	.1	4.00	0.0	90	0.0	0.0	0.0	0.0	0.0	0.0	--
MAY	0.0	41	1.7	7.3	4.19	2.7	120	0.0	0.0	0.0	0.0	0.0	0.0	--
JUNE	0.0	19	2.0	4.6	2.23	3.2	183	0.0	0.0	0.0	0.0	0.0	0.0	--
JULY	0.0	221	13	40	3.17	19.8								
AUGUST	0.0	328	23	65	2.86	35.6								
SEPTEMBER	0.0	372	15	64	4.24	23.9								
ANNUAL	0.0	31	5.3	8.6	1.61	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1952-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	429	1990	3490	5450	6840	--
3	177	832	1490	2410	3090	--
7	78	373	680	1120	1460	--
15	39	181	325	525	674	--
30	21	94	165	261	330	--
60	11	49	86	133	167	--
90	7.1	32	57	91	116	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1952-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08399500 PECOS RIVER (KAISER CHANNEL) NEAR LAKEWOOD, NM

LOCATION.--Lat 32°41'22", long 104°17'53", in NW¼SE¼ sec.5, T.19 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on left bank 3.0 mi upstream from high-water line of Lake McMillan, 6.0 mi northeast of Lakewood, 7.0 mi northeast of gates in McMillan Dam, 12 mi southeast of Artesia, and at mile 492.1.

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1954, published as Kaiser Lake-McMillan Channel near Lakewood.

GAGE.--Water-stage recorder. Elevation of gage is 3,268.53 ft above National Geodetic Vertical Survey of 1929 (U.S. Bureau of Reclamation bench mark). Prior to Mar. 23, 1955, at site 3.0 mi downstream at datum 7.83 ft lower. Mar. 23, 1955 to Sept. 30, 1963, at present site at datum 2.00 ft higher.

REMARKS.--Flow regulated by Santa Rosa Lake (station 08382810) since April 1980, by Lake Sumner (station 08384000) since August 1937, and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigation of about 170,000 acres, 1959 determination, upstream from station. Above about 1,500 ft³/s flow will begin bypassing station and depending on the magnitude and duration of flow, may reach Lake McMillan (station 08400500).

AVERAGE DISCHARGE.--28 years (water years 1951-55, 1957-79), 151 ft³/s, 109,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,920 ft³/s, July 12, 1960; no flow at times in most years.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF SANTA ROSA DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1951-55,
1957-79

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1952-55, 1957-79

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	695	119	170	1.43	6.6	1	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	26	216	75	48	.64	4.2	3	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	29	197	71	42	.58	4.0	7	0.0	0.0	0.0	0.0	0.0	--
JANUARY	31	204	68	36	.53	3.8	14	.2	0.0	0.0	0.0	0.0	--
FEBRUARY	25	181	60	33	.56	3.3	30	5.8	1.5	0.0	0.0	0.0	--
MARCH	19	402	169	134	.79	9.4	60	18	7.0	3.6	1.4	0.0	--
APRIL	8.1	451	152	139	.91	8.4	90	33	20	15	11	0.0	--
MAY	15	1220	197	301	1.53	10.9	120	--	--	--	--	--	--
JUNE	1.9	511	206	167	.81	11.4	183	52	32	24	20	16	--
JULY	.2	886	271	196	.72	15.0							
AUGUST	0.0	600	261	168	.64	14.5							
SEPTEMBER	0.0	624	157	199	1.27	8.7							
ANNUAL	64	303	151	56	.37	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1951-55, 1957-79

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1550	2030	2290	2580	2770	--
3	1290	1770	2080	2500	2810	--
7	1000	1360	1630	2000	2300	--
15	766	1010	1180	1420	1610	--
30	556	772	920	1110	1260	--
60	367	526	644	809	942	--
90	290	420	516	648	755	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1951-55, 1957-79

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
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RIO GRANDE BASIN

08400000 FOURMILE DRAW NEAR LAKEWOOD, NM

LOCATION.--Lat 32°40'20", long 104°22'07", in SW¼NW¼SE¼ sec.10, T.19 S., R.26 E., Eddy County, Hydrologic Unit 13060011, in left side of channel 360 ft downstream from ford on Lakewood-Dayton road, 1.9 mi downstream from U.S. Highway 285, 2.8 mi north of Lakewood, 3.8 mi upstream from mouth, and 11.5 mi south of Artesia. Mouth at Pecos River mile 490.6.

DRAINAGE AREA.--265 mi², approximately.

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WRD 1968: 1967.

GAGE.--Water-stage recorder. Elevation of gage is 3,299.14 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1951 to June 19, 1962, at site 1.8 mi upstream at datum 30.61 ft higher. June 19, 1962 to Oct. 12, 1966 at site 410 ft upstream at datum 6.08 ft higher.

REMARKS.--No surface diversions upstream from station.

AVERAGE DISCHARGE.--34 years (water years 1952-85), 3.69 ft³/s, 2,670 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,300 ft³/s, Aug. 23, 1966, gage height, 19.9 ft, from floodmarks, present datum, from rating curve extended above 5,000 ft³/s on basis of slope-area measurement of peak flow; no flow most of time.
The flood of Aug. 23, 1966 (information from local resident) is believed to be the greatest since at least 1920.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1952-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1953-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	73	2.4	13	5.21	5.5	1	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	0.0	0.0	0.0	--	0.0	3	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	0.0	0.0	0.0	--	0.0	7	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	0.0	0.0	0.0	--	0.0	30	0.0	0.0	0.0	0.0	0.0	--
MARCH	0.0	0.0	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	0.0	--
APRIL	0.0	.1	0.0	0.0	--	0.0	90	0.0	0.0	0.0	0.0	0.0	--
MAY	0.0	35	1.2	6.0	5.21	2.6	120	0.0	0.0	0.0	0.0	0.0	--
JUNE	0.0	15	.9	2.9	3.12	2.1	183	0.0	0.0	0.0	0.0	0.0	--
JULY	0.0	78	3.7	14	3.77	8.4							
AUGUST	0.0	488	22	88	3.98	50.5							
SEPTEMBER	0.0	424	14	73	5.35	30.9							
ANNUAL	0.0	42	3.7	9.3	2.53	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1952-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	75	926	2710	7130	12600	--	
3	33	423	1230	3180	5510	--	
7	15	187	529	1330	2250	--	
15	7.6	83	235	608	1080	--	
30	3.8	42	118	299	522	--	
60	2.1	21	59	152	274	--	
90	1.4	14	39	100	179	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1952-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08401000 PECOS RIVER BELOW MCMILLAN DAM, NM

LOCATION.--Lat 32°35'40", long 104°20'59", in NW¼NE¼ sec.11, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on left bank 700 ft downstream from gates in McMillan Dam, 3.4 mi southeast of Lakewood, and at mile 484.1.

DRAINAGE AREA.--16,990 mi², approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1908, January 1909 to December 1911, August 1939 to December 1940, December 1946 to current year (January 1906, and January 1910 to December 1911, gage heights and discharge measurements only). Published as "near Lakewood" 1906-11, and as "below McMillan Dam, near Lakewood" 1939-40.

REVISED RECORDS.--WSP 1512: 1909.

GAGE.--Water-stage recorder and rock control. Elevation of gage is 3,238.21 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). See WSP 1732 for history of changes prior to Mar. 12, 1957. Supplemental water-stage recorders on McMillan Dam spillways No. 1 and 2, Apr. 6, 1960, to Sept. 30, 1970.

REMARKS.--Flow completely regulated by Lake McMillan (station 08400500). Flow also regulated by several other reservoirs. Discharge figures do not include flow, if any, over Lake McMillan spillways No. 1 and 2 which enters the Pecos River downstream from this gage. Diversions and ground-water withdrawals for irrigation of about 171,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--40 years (1907, 1940, 1948-85), 95.8 ft³/s, 69,410 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s, Aug. 23, 1966, includes flow of spillways; no flow many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 2, 1904, may have reached 60,000 ft³/s. The flood of Aug. 3, 1893, damaged McMillan Dam, then under construction, and destroyed Avalon Dam; this flood was described as "highest in 50 years" at Carlsbad.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1907, 1940, 1948-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1906, 1948-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	1862	111	292	2.63	9.6	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	430	22	70	3.27	1.9	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	582	29	103	3.54	2.5	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	364	23	72	3.18	1.9	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	0.0	169	13	32	2.50	1.1	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	0.0	160	33	34	1.04	2.9	60	0.0	0.0	0.0	0.0	0.0	0.0	0.0
APRIL	24	288	196	54	.28	17.0	90	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAY	.4	1059	121	182	1.50	10.5	120	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUNE	0.0	417	119	85	.72	10.3	183	13	1.1	0.0	0.0	0.0	0.0	0.0
JULY	.6	712	169	109	.64	14.6								
AUGUST	0.0	978	178	149	.84	15.4								
SEPTEMBER	0.0	455	141	113	.80	12.2								
ANNUAL	42	252	96	48	.50	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1907, 1940, 1948-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	774	1870	3340	6820	11400	18800
3	682	1590	2810	5680	9460	15600
7	553	1150	1880	3460	5390	8300
15	422	770	1150	1880	2690	3820
30	298	496	700	1080	1480	2010
60	212	327	438	633	827	1070
90	180	272	354	486	609	756

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1907, 1940, 1948-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
374	270	221	173	138	105	42	1.1	.1	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08401200 SOUTH SEVEN RIVERS NEAR LAKEWOOD, NM

LOCATION.--Lat 32°35'19", long 104°25'17", in SE¼SE¼NW¼ sec.7, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on downstream side of center pier of bridge on U.S. Highway 285, 0.4 mi south of Seven Rivers, 2.6 mi upstream from mouth, and 4.0 mi southwest of Lakewood. Mouth at Pecos River mile 480.9.

DRAINAGE AREA.--220 mi², approximately.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,276 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 8, 1965, at site 400 ft upstream at datum 0.52 ft higher.

REMARKS.--No surface diversions upstream from station, ground-water withdrawals for 240 acres, upstream from station.

AVERAGE DISCHARGE.--22 years, 4.29 ft³/s, 3,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft³/s, May 30, 1965, gage height, 20.0 ft, from floodmarks, present site and datum, from rating curve extended above 5,700 ft³/s on basis of slope-area measurements at gage heights 18.15 ft and 20.0 ft; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1941, about 30,000 ft³/s, gage height, 22.8 ft, from old debris on left bank, former site and datum, from rating curve extended above 5,700 ft³/s on basis of slope-area measurement at gage height 21.8 ft. Probable date of flood, Oct. 7, 1954.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1965-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	16	1.3	3.9	2.93	2.6	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	2.1	.1	.4	4.89	.2	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	0.0	0.0	0.0	--	0.0	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	0.0	0.0	0.0	--	0.0	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	0.0	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	.2	0.0	0.0	4.00	0.0	90	0.0	0.0	0.0	0.0	--	--
MAY	0.0	84	4.0	18	4.51	7.8	120	0.0	0.0	0.0	0.0	--	--
JUNE	0.0	12	1.6	3.6	2.31	3.0	183	0.0	0.0	0.0	0.0	--	--
JULY	0.0	28	2.7	6.6	2.43	5.3							
AUGUST	0.0	369	26	83	3.24	50.0							
SEPTEMBER	0.0	237	16	52	3.27	31.1							
ANNUAL	0.0	32	4.3	8.0	1.86	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	103	1000	3090	9760	--	--
3	45	468	1480	4830	--	--
7	20	210	666	2160	--	--
15	9.8	100	311	980	--	--
30	5.0	50	156	488	--	--
60	2.7	27	81	252	--	--
90	1.9	19	58	175	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08401900 ROCKY ARROYO AT HIGHWAY BRIDGE, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'23", long 104°22'28", in SE¼SE¼ sec.3, T.21 S., R.25 E., Eddy County, Hydrologic Unit 13060011, at downstream end of bridge pier nearest left bank on U.S. Highway 285, 2.1 mi upstream from mouth and 10 mi northwest of Carlsbad. Mouth at Pecos River mile 475.2.

DRAINAGE AREA.--285 mi, approximately.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,250 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Diversions for irrigation of 220 acres, upstream from station.

AVERAGE DISCHARGE.--22 years (water years 1964-85), 7.49 ft³/s, 5,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft³/s, Aug. 23, 1966, gage height, 15.35 ft, from rating curve extended above 8,500 ft³/s on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Since about 1941 the maximum discharge probably occurred Oct. 7, 1954, discharge 63,600 ft³/s, gage height, 19.2 ft, from highwater marks on downstream end of bridge pier, by slope-area measurement at site 5 mi upstream.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	185	14	44	3.15	15.7	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	7.7	.4	1.6	4.21	.4	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	.6	0.0	.1	4.00	0.0	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	0.0	0.0	0.0	--	0.0	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	0.0	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	1.5	.1	.3	3.78	.1	90	0.0	0.0	0.0	0.0	--	--
MAY	0.0	38	3.4	11	3.24	3.8	120	0.0	0.0	0.0	0.0	--	--
JUNE	0.0	55	3.9	12	3.07	4.4	183	0.0	0.0	0.0	0.0	--	--
JULY	0.0	19	3.2	5.9	1.84	3.6							
AUGUST	0.0	616	36	132	3.68	40.3							
SEPTEMBER	0.0	335	28	82	2.90	31.6							
ANNUAL	0.0	54	7.5	13	1.71	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	403	2980	6130	10900	--	--
3	157	1230	2660	5030	--	--
7	73	558	1190	2190	--	--
15	34	258	561	1060	--	--
30	17	133	292	559	--	--
60	8.9	70	155	298	--	--
90	6.1	48	104	194	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08402000 PECOS RIVER AT DAMSITE 3, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'40", long 104°19'58", in lot 14, sec.6, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank at damsite 3 of Carlsbad project of Bureau of Reclamation, about 1 mi upstream from flow line of Lake Avalon, 1.3 mi downstream from Rocky Arroyo, 8.0 mi northwest of Carlsbad, and at mile 473.8.

DRAINAGE AREA.--17,980 mi², approximately (contributing area).

PERIOD OF RECORD.--August 1939 to December 1940, August 1944 to current year.

REVISED RECORDS.--WSP 1512: 1946-47(M), 1948(P), 1949, 1950(P). WSP 1712: Drainage area.

GAGE.--Elevation of gage is 3,171.31 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Aug. 10, 1944, at site 1,000 ft downstream, at datum 1.00 ft higher. Aug. 10, 1944 to Dec. 31, 1966, at present datum 1.00 ft higher.

REMARKS.--Flow regulated by Lake McMillan (station 08400500) since 1893 and by several other reservoirs. Diversions and ground-water withdrawals for irrigation of about 173,000 acres, 1959 determination, upstream from station. Discharge represents inflow to Lake Avalon.

AVERAGE DISCHARGE.--42 years (1940, 1945-85), 155 ft³/s, 112,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,000 ft³/s, Aug. 23, 1966, gage height, 21.32 ft, present datum, from floodmark, from rating curve extended above 25,000 ft³/s on basis of slope-area measurement at gage height 19.53 ft; minimum, 4.3 ft³/s, Aug. 5, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 40,000 ft³/s occurred in Aug. 1893, Oct. 2, 1904, July 25, 1905, Apr. 17, 1915, Aug. 7, 1916, and May 30, 1937, based primarily on records for station "at Carlsbad." Peak of May 22, 1941, was estimated at 60,000 ft³/s. Floods of 1893 and 1904 originated upstream from McMillan Dam and contributed to the two failures of Avalon Dam.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1940, 1945-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1946-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STANDARD DEVIATION (FT ³ /S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	9.9	2609	191	403	2.11	10.3	1	21	13	9.2	6.9	4.8	3.7
NOVEMBER	12	229	71	61	.86	3.8	3	22	13	9.7	7.3	5.1	4.0
DECEMBER	17	214	69	57	.83	3.7	7	23	14	10	7.8	5.5	4.3
JANUARY	19	195	68	50	.74	3.7	14	25	15	11	8.5	6.5	5.4
FEBRUARY	20	202	68	51	.74	3.7	30	28	17	13	11	8.6	7.4
MARCH	18	195	78	42	.54	4.2	60	33	22	18	16	14	13
APRIL	133	345	252	54	.21	13.6	90	38	24	20	17	15	13
MAY	46	1055	174	175	1.01	9.4	120	41	25	20	17	15	13
JUNE	19	353	160	78	.49	8.6	183	57	33	26	21	17	15
JULY	11	794	230	133	.58	12.4							
AUGUST	22	2267	274	337	1.23	14.8							
SEPTEMBER	12	1156	217	193	.89	11.7							
ANNUAL	67	395	155	65	.42	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1940, 1945-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1600	4190	7460	14600	23300	36300
3	981	2390	4240	8450	13800	22300
7	681	1520	2600	5080	8280	13300
15	501	975	1530	2690	4070	6090
30	367	649	955	1550	2200	3110
60	283	455	619	901	1180	1530
90	248	382	498	681	848	1040

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1940, 1945-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
417	321	264	225	195	171	124	88	56	41	36	32	28	24	20

RIO GRANDE BASIN

08404000 PECOS RIVER BELOW AVALON DAM, NM

LOCATION.--Lat 32°28'55", long 104°15'47", in SW¼SW¼NE¼ sec.14, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank 4,800 ft downstream from Avalon Dam, 4.5 mi northwest of Carlsbad, and at mile 466.3.

DRAINAGE AREA.--18,080 mi², approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1907, (published as "at Avalon"), June 1951 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,130 ft above National Geodetic Vertical Datum of 1929, from topographic map. January 1906 to March 1907 nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--Flow completely regulated by Lake Avalon (station 08403800) since 1891. Flow also regulated by several other reservoirs. Diversions and ground-water withdrawals upstream from station for irrigation of about 198,000 acres, 1959 determination. Station bypassed by Carlsbad Main Canal (station 08403500).

AVERAGE DISCHARGE.--34 years (water years 1952-85), 29.7 ft³/s, 21,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,500 ft³/s, Aug. 23, 1966, gage height, 26.4 ft, from floodmarks, from rating curve extended above 33,000 ft³/s on basis of computation of peak flow over Tansill Dam 5.8 mi downstream; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 2, 1904, caused in part, by failure of Avalon Dam, probably exceeded 90,000 ft³/s and is probably the greatest flood since 1842. A major flood occurred Aug. 3, 1893, and was described as "greatest in 50 years"; it damaged McMillan Dam, then under construction, and washed out the original Avalon Dam. Another major flood occurred Aug. 7, 1916, discharge 70,000 ft³/s at site 6.5 mi downstream.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1952-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1953-85

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STANDARD DEVIATION (FT³/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT							
								2	5	10	20	50	100		
OCTOBER	0.0	2365	112	419	3.74	31.7	1	0.0	0.0	0.0	0.0	0.0	0.0	--	
NOVEMBER	0.0	117	11	30	2.65	3.2	3	0.0	0.0	0.0	0.0	0.0	0.0	--	
DECEMBER	0.0	159	11	32	2.93	3.1	7	0.0	0.0	0.0	0.0	0.0	0.0	--	
JANUARY	0.0	82	6.7	17	2.62	1.9	14	0.0	0.0	0.0	0.0	0.0	0.0	--	
FEBRUARY	0.0	111	6.3	21	3.36	1.8	30	0.0	0.0	0.0	0.0	0.0	0.0	--	
MARCH	0.0	6.7	.6	1.6	2.73	.2	60	0.0	0.0	0.0	0.0	0.0	0.0	--	
APRIL	0.0	.1	0.0	0.0	--	0.0	90	0.0	0.0	0.0	0.0	0.0	0.0	--	
MAY	0.0	739	39	152	3.94	10.9	120	0.0	0.0	0.0	0.0	0.0	0.0	--	
JUNE	0.0	53	3.4	12	3.58	1.0	183	0.0	0.0	0.0	0.0	0.0	0.0	--	
JULY	0.0	595	18	102	5.73	5.0									
AUGUST	0.0	2034	82	358	4.38	23.2									
SEPTEMBER	0.0	1111	64	205	3.21	18.1									
ANNUAL	0.0	206	30	50	1.67	100									

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1952-85

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
1	303	4690	12600	28300	43800	--
3	156	2840	7970	18200	28200	--
7	83	1660	4780	11100	17200	--
15	46	959	2730	6220	9540	--
30	26	545	1540	3450	5230	--
60	14	292	824	1840	2770	--
90	9.4	206	580	1280	1920	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1952-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
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RIO GRANDE BASIN

08405000 PECOS RIVER AT CARLSBAD, NM

LOCATION.--Lat 32°25'03", long 104°13'27", in SW¼SE¼SE¼ sec.6, T.22 S., R.27 E., Eddy County, in downstream end of pier near center of Greene Street bridge in Carlsbad, 0.6 mile upstream from Dark Canyon.

DRAINAGE AREA.--18,100 mi², approximately (contributing area).

PERIOD OF RECORD.--May 1903 to March 1908 (January 1907 to March 1908, gage heights and discharge measurements only), May 1914 to September 1915, and April 1920 to December 1969. Monthly discharge only for some periods, published in WSP 1312. Records (except maximum discharges) for October 1915 to March 1920, published in WSP 438, 458, 478, and 508, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1632: 1903-6, 1936, 1938. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 3,080.28 ft above mean sea level, datum of 1929. Prior to June 1, 1920, staff gages in immediate vicinity of present site, and at different datums prior to Jan. 6, 1938.

REMARKS.--Flow regulated by Lake Sumner, Lake McMillan and Lake Avalon (sta 08384000, 08400500, 08403800) and at low stages by power plant above station. Gage is bypassed on left bank by Carlsbad main canal east which irrigates several hundred acres adjacent to and below gage site, and on right bank by Carlsbad main canal south, which with supplemental ground-water withdrawals irrigates about 23,000 acres below. This bypass flow is not presently gaged. Diversions and ground-water withdrawals above station for irrigation of about 198,000 acres (1959 determination).

AVERAGE DISCHARGE.--52 years (water years 1904, 1906, 1915, 1921-69), 200 ft³/s, 144,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge probably exceeded 90,000 ft³/s Oct. 2, 1904 (gage height, 23.44 ft, present datum, from floodmarks); minimum determined, 0.1 ft³/s June 19, 1954. Flood of Oct. 2, 1904, caused in part by failure of Avalon Dam, was described at that time as "greatest flood known at Carlsbad." Flood in August 1893 is probably second highest, and was described as "greatest in 50 years"; it damaged McMillan Dam and washed out the original Avalon Dam.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1904, 1906, 1915, 1921-69

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1906, 1921-69

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	.8	4895	323	766	2.37	12.3	1	13	2.5	1.0	.4	.2	.1
NOVEMBER	6.5	1185	198	256	1.29	7.5	3	24	5.9	2.4	1.0	.4	.2
DECEMBER	7.2	790	165	178	1.08	6.3	7	39	11	4.5	1.9	.6	.3
JANUARY	9.5	664	160	161	1.01	6.1	14	48	16	7.0	3.1	1.1	.5
FEBRUARY	8.8	1056	142	170	1.20	5.4	30	54	20	9.5	4.6	1.8	.9
MARCH	8.9	1266	115	176	1.53	4.4	60	55	23	13	8.0	4.4	2.8
APRIL	4.6	3874	177	541	3.06	6.7	90	58	24	14	9.1	5.2	3.5
MAY	8.9	5475	283	785	2.77	10.7	120	62	26	16	11	6.7	4.8
JUNE	3.0	6341	354	1010	2.85	13.4	183	68	30	20	14	9.8	7.7
JULY	3.7	5236	247	736	2.98	9.4							
AUGUST	3.9	2040	188	357	1.90	7.1							
SEPTEMBER	2.7	5821	282	822	2.91	10.7							
ANNUAL	13	1364	200	256	1.28	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1904, 1906, 1915,
1921-69

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1440	6940	15600	36600	63300	103000
3	989	4800	11000	26600	47200	79000
7	661	3090	7030	17100	30500	51600
15	452	1860	3970	9070	15600	25600
30	325	1170	2330	4920	8030	12600
60	237	770	1450	2870	4500	6780
90	204	618	1110	2090	3150	4570

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1904, 1906, 1915, 1921-69

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
484	281	203	154	126	106	91	76	61	46	38	32	25	18	10

RIO GRANDE BASIN

08405150 DARK CANYON DRAW AT CARLSBAD, NM

LOCATION.--Lat 32°24'24", long 104°13'34", in NE¼NW¼SE¼ sec.7, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on downstream side of U.S. Highway 62-285 (Canal Street) bridge in Carlsbad, and 0.6 mi upstream from mouth. Mouth at Pecos River mile 459.2.

DRAINAGE AREA.--450 mi², approximately.

PERIOD OF RECORD.--January 1973 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,088.21 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--A Soil Conservation Service flood control project on Hackberry Draw, an upstream tributary, has some effect on flood peaks and flow duration. Ground-water withdrawals upstream from station for irrigation of approximately 2,100 acres, 1973 determination and for municipal supply for Carlsbad.

AVERAGE DISCHARGE.--12 years (water years 1974-85), 7.27 ft³/s, 5,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s, Sept. 26, 1980, gage height, 12.10 ft, from rating curve extended above 7,100 ft³/s; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a discharge of 66,000 ft³/s as determined by slope-area measurement at site 1.2 mi upstream. Another flood of approximately the same magnitude occurred Sept. 20, 1941.
Other major peaks occurred July 17, 1906, July 24, 1908, July 24, 1911, Apr. 18, 1915, Aug. 8, 1916, Sept. 15, 1919, Aug. 4, 1925, and May 23, 1941.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1974-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1975-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	196	16	57	3.47	18.6	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	20	1.6	5.7	3.47	1.9	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	0.0	0.0	0.0	--	0.0	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	0.0	0.0	0.0	--	0.0	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	0.0	0.0	0.0	--	0.0	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	0.0	0.0	0.0	--	0.0	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	0.0	0.0	0.0	--	0.0	90	0.0	0.0	0.0	0.0	--	--
MAY	0.0	8.8	.7	2.5	3.48	.8	120	0.0	0.0	0.0	0.0	--	--
JUNE	0.0	5.0	.4	1.4	3.51	.5	183	0.0	0.0	0.0	0.0	--	--
JULY	0.0	12	1.0	3.6	3.47	1.2							
AUGUST	0.0	162	14	47	3.47	15.4							
SEPTEMBER	0.0	331	54	107	1.99	61.6							
ANNUAL	1.1	27	7.3	9.1	1.26	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1974-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	500	3500	6180	--	--	--	
3	237	1790	2930	--	--	--	
7	104	774	1270	--	--	--	
15	49	361	590	--	--	--	
30	24	184	303	--	--	--	
60	12	92	152	--	--	--	
90	8.1	61	101	--	--	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1974-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
.1	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RIO GRANDE BASIN

08405200 PECOS RIVER BELOW DARK CANYON DRAW, AT CARLSBAD, NM

LOCATION.--Lat 32°24'37", long 104°12'58", in NE¼SW¼NW¼ sec.8, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on left bank, 700 ft downstream from mouth of Dark Canyon Draw, 0.3 mi downstream from Lower Tansill Dam and Bataan recreational area, 0.8 mi downstream from bridge on U.S. Highway 62-180 in Carlsbad, and at mile 459.1.

DRAINAGE AREA.--18,550 mi², approximately, contributing area.

PERIOD OF RECORD.--January 1970 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,075.19 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by Lake Avalon (station 08403800) since 1891 and by several other reservoirs and up to Nov. 1982 at low stages by power plant. Power Plant discontinued operation Nov. 1982. Gage is bypassed on left bank by Carlsbad Main Canal East which irrigates several hundred acres adjacent to and downstream from gage site and on right bank by Carlsbad Main Canal South, which with supplemental ground-water withdrawals irrigates about 23,000 acres downstream. Diversions and ground-water withdrawals upstream from station for irrigation of about 198,000 acres, 1959 determination.

AVERAGE DISCHARGE.--15 years (water years 1971-85), 45.7 ft³/s, 33,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft³/s, Sept. 26, 1980, gage height, 14.60 ft, from floodmarks, from rating curve extended above 12,000 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a stage of about 22 ft, discharge not determined. (For dates of other historical floods see station 08404000.)

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1971-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1972-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	9.1	728	67	183	2.72	12.3	1	.1	0.0	0.0	0.0	--	--
NOVEMBER	8.1	160	32	39	1.25	5.7	3	.1	0.0	0.0	0.0	--	--
DECEMBER	9.6	109	25	24	.98	4.5	7	.2	0.0	0.0	0.0	--	--
JANUARY	9.8	102	28	24	.87	5.0	14	.9	0.0	0.0	0.0	--	--
FEBRUARY	11	90	31	24	.79	5.6	30	1.4	.2	.1	0.0	--	--
MARCH	6.0	54	24	15	.62	4.4	60	3.6	.9	.4	.2	--	--
APRIL	.1	36	16	11	.65	3.0	90	5.5	1.7	.8	.4	--	--
MAY	1.1	702	60	178	2.96	11.0	120	6.8	2.6	1.4	.8	--	--
JUNE	.3	79	17	20	1.23	3.0	183	15	7.3	5.4	4.3	--	--
JULY	.1	40	12	13	1.06	2.2							
AUGUST	.2	674	54	172	3.18	9.9							
SEPTEMBER	3.2	1252	183	347	1.90	33.4							
ANNUAL	11	117	46	35	.78	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	905	4980	12300	33000	--	--
3	550	2850	6860	17800	--	--
7	336	1630	3760	9200	--	--
15	216	907	1930	4350	--	--
30	144	522	1020	2100	--	--
60	94	283	505	940	--	--
90	74	198	336	595	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1971-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
75	41	33	28	26	23	19	16	14	10	8.6	6.4	4.0	1.1	.2

RIO GRANDE BASIN

08405500 BLACK RIVER ABOVE MALAGA, NM

LOCATION.--Lat 32°13'44", long 104°09'02", in SW¼NW¼SW¼ sec.12, T.24 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on right bank 0.6 mi upstream from Black River diversion dam, 4.6 mi west of Malaga, and 7.1 mi upstream from mouth. Mouth at Pecos River mile 436.3.

DRAINAGE AREA.--343 mi².

PERIOD OF RECORD.--March to December 1940, December 1946 to current year.

REVISED RECORDS.--WSP 1632: 1948, 1949-50(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,070 ft above National Geodetic Vertical Datum of 1929, from topographic map. March to December 1940 water-stage recorder and Cippoletti weir at site 0.3 mi downstream at different datum.

REMARKS.--Diversions and ground-water withdrawals for irrigation of about 1,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--38 years (1948-85), 12.9 ft³/s, 9,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,600 ft³/s, Aug. 23, 1966, gage height, 21.7 ft, from floodmarks, from rating curve extended above 5,900 ft³/s on basis of slope-area measurements at gage heights 12.60 ft and 21.7 ft; minimum, 0.51 ft³/s, June 1, 1983.
The flood of Aug. 23, 1966, exceeded the previous maximum stage which occurred in 1908 by about 1.0 ft, from information by local resident.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 20 or 21, 1941, reached a stage of 19.0 ft, present site and datum, determined in 1947 from well defined floodmarks, discharge, 33,000 ft³/s, from rating curve extended above 1,400 ft³/s on basis of slope-area measurements at gage heights 8.41 ft and 12.60 ft.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1948-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1949-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	2.5	80	13	19	1.39	8.7	1	2.3	1.6	1.3	1.1	.9	--
NOVEMBER	1.2	33	8.7	5.0	.57	5.7	3	2.5	1.7	1.4	1.2	1.0	--
DECEMBER	3.8	15	8.9	3.1	.35	5.8	7	2.8	1.9	1.6	1.3	1.1	--
JANUARY	2.8	18	9.7	3.6	.37	6.3	14	3.2	2.2	1.8	1.5	1.2	--
FEBRUARY	4.1	16	9.1	2.9	.32	5.9	30	3.8	2.7	2.2	1.8	1.5	--
MARCH	2.0	13	5.7	2.6	.46	3.7	60	5.2	3.9	3.2	2.7	2.2	--
APRIL	4.7	56	10	7.9	.78	6.6	90	5.8	4.5	3.9	3.4	2.9	--
MAY	4.3	106	13	17	1.32	8.3	120	6.5	5.1	4.4	3.9	3.4	--
JUNE	2.8	60	13	13	1.02	8.5	183	7.9	5.9	5.2	4.6	4.1	--
JULY	3.1	111	14	19	1.35	9.2							
AUGUST	3.3	553	28	89	3.20	18.0							
SEPTEMBER	3.4	121	21	26	1.27	13.4							
ANNUAL	6.8	58	13	8.5	.66	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1948-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	400	1290	2380	4570	6960	--
3	185	558	1010	1930	2960	--
7	92	256	451	841	1270	--
15	51	126	214	391	590	--
30	31	69	113	203	306	--
60	21	41	64	109	159	--
90	17	31	46	75	108	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1948-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
17	14	13	11	10	9.4	8.3	7.3	6.5	5.7	5.3	4.9	4.4	3.8	3.0

RIO GRANDE BASIN

08406500 PECOS RIVER NEAR MALAGA, NM

LOCATION.--Lat 32°12'26", long 104°01'22", in SW¼NW¼NE¼ sec.19, T.24 S., R.29 E., Eddy County, Hydrologic Unit 13060011, on right bank 3.1 mi southeast of Malaga, 4.3 mi downstream from Black River, and at mile 432.2.

DRAINAGE AREA.--19,190 mi², approximately (contributing area).

PERIOD OF RECORD.--May 1920 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1632: 1925, 1932-37.

GAGE.--Water-stage recorder. Elevation of gage is 2,895.64 ft above National Geodetic Vertical Datum of 1929. May 1, 1920 to Mar. 24, 1949, at datum 3 ft higher.

REMARKS.--Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals upstream from station for irrigation of about 202,000 acres, 1959 determination. Harroun canal bypasses gage on left bank and irrigates approximately 1,000 acres adjacent to and downstream from gage. This bypass is not gaged.

AVERAGE DISCHARGE.--53 years (1921-25, 1938-85), 172 ft³/s, 124,600 acre-ft/yr.
49 years (1938-85), 166 ft³/s, 120,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s, Aug. 23, 1966, gage height, 42.1 ft, from floodmarks, from rating curve extended above 36,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 3.7 ft³/s, Oct. 20, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in 1904, discharge not determined. Flood of Aug. 7, 1916, reached a discharge of 70,000 ft³/s at Carlsbad, 27 mi upstream. Flood in September 1919 reached a stage of 29.4 ft, present datum, discharge, 40,400 ft³/s.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1921-25,
1938-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1922-25, 1938-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	8.5	5302	315	822	2.61	14.3	1	17	9.2	6.9	5.5	4.4	3.8
NOVEMBER	7.8	1338	158	241	1.53	7.2	3	18	9.5	7.2	5.7	4.6	4.0
DECEMBER	7.9	822	132	147	1.11	6.0	7	20	10	7.6	6.0	4.8	4.2
JANUARY	11	738	128	138	1.08	5.8	14	21	11	7.9	6.3	4.9	4.2
FEBRUARY	12	557	108	108	1.00	4.9	30	24	12	6.5	6.6	5.0	4.3
MARCH	9.4	380	80	78	.97	3.6	60	30	14	9.8	7.5	5.7	4.8
APRIL	8.8	697	64	97	1.53	2.9	90	35	16	11	8.3	6.2	5.1
MAY	7.9	6887	247	942	3.81	11.3	120	41	19	13	10	7.6	6.3
JUNE	8.9	6639	312	1056	3.38	14.2	183	56	26	19	14	11	9.3
JULY	6.7	1171	120	242	2.02	5.5							
AUGUST	6.2	4200	211	609	2.89	9.6							
SEPTEMBER	8.3	6975	321	976	3.04	14.6							
ANNUAL	17	1652	172	272	1.58	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1921-25, 1938-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1860	7360	15000	32100	52200	80900
3	1080	4470	9550	21800	37400	61100
7	643	2640	5760	13600	24200	41100
15	414	1520	3160	7150	12400	20500
30	292	944	1840	3920	6540	10500
60	204	597	1120	2290	3760	5970
90	170	466	845	1680	2690	4200

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1921-25, 1938-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
368	245	184	146	125	104	73	54	40	29	25	21	18	14	11

RIO GRANDE BASIN

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM

LOCATION.--Lat 32°11'19", long 103°58'43", in SW¼SW¼NW¼ sec.27, T.24 S., R.29 E., Eddy County, Hydrologic Unit 13060011, on right bank 550 ft upstream from Pierce Canyon Crossing, and 6.0 mi southeast of Malaga, and at mile 425.7.

DRAINAGE AREA.--19,260 mi², approximately (contributing area).

PERIOD OF RECORD.--July 1938 to September 1941, August 1951 to current year.

REVISED RECORDS.--WSP 898: 1938(M). WSP 1712: 1959.

GAGE.--Water-stage recorder. Elevation of gage is 2,889.18 ft above National Geodetic Vertical Datum of 1929. July 1938 to Sept. 1941 at datum 1.19 ft higher.

REMARKS.--Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals upstream from station for irrigation of about 202,000 acres, 1959 determination.

AVERAGE DISCHARGE.--36 years (1939-40, 1952-85), 85 ft³/s, 61,580 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined, 65,000 ft³/s, Aug. 23, 1966, maximum gage height, 31.6 ft, Aug. 23, 1966, from floodmarks; minimum discharge, 0.54 ft³/s, May 30, 1965.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1939-40,
1952-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1940-41, 1953-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	8.7	2718	184	463	2.52	13.6	1	9.1	4.5	3.1	2.3	1.6	--
NOVEMBER	6.8	230	76	55	.72	5.6	3	9.8	4.9	3.4	2.5	1.8	--
DECEMBER	9.4	237	75	50	.66	5.6	7	11	5.5	3.9	2.9	2.2	--
JANUARY	11	189	71	44	.62	5.3	14	12	6.6	4.9	3.8	3.0	--
FEBRUARY	13	202	61	45	.74	4.5	30	14	7.8	5.9	4.8	3.8	--
MARCH	10	149	44	31	.70	3.2	60	17	10	7.9	6.6	5.4	--
APRIL	7.5	111	34	24	.72	2.5	90	21	12	9.0	7.2	5.7	--
MAY	6.4	7108	266	1164	4.38	19.7	120	25	15	11	9.5	7.9	--
JUNE	7.8	3040	121	494	4.08	9.0	183	40	22	16	13	9.7	--
JULY	4.4	1184	85	229	2.69	6.3							
AUGUST	6.2	4182	197	696	3.53	14.6							
SEPTEMBER	5.7	1304	135	242	1.79	10.0							
ANNUAL	19	390	85	74	.87	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1939-40, 1952-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1200	5230	11800	29100	53100	--
3	717	3070	6930	17200	31800	--
7	429	1730	3850	9520	17600	--
15	273	970	2030	4740	8460	--
30	192	584	1130	2400	4060	--
60	135	349	617	1200	1900	--
90	115	267	445	809	1230	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1939-40, 1952-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
170	115	87	72	64	57	46	37	29	23	20	18	15	12	8.3

RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, NM
(National stream-quality accounting network station)

LOCATION.--Lat 32°04'30", long 104°02'21", in SW¼NW¼NE¼ sec.1, T.26 S., R.28 E., Eddy County, Hydrologic Unit 13060011, on right bank at Red Bluff, 0.2 mi downstream from Red Bluff Draw, 1.6 mi northwest of the El Paso Natural Gas (Pecos River) compressor station, 5.2 mi north of the New Mexico-Texas State line, 5.5 mi upstream from Delaware River, and at mile 411.2.

DRAINAGE AREA.--19,540 mi², approximately (contributing area).

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,850.05 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals upstream from station for irrigation of about 202,000 acres, 1959 determination.

AVERAGE DISCHARGE.--48 years (1938-85), 161 ft³/s, 116,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 111,000 ft³/s, Aug. 23, 1966, gage height, 33.32 ft, from rating curve extended above 32,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 0.19 ft³/s, Aug. 1, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1904 reached a stage of 28.0 ft, from information by Panhandle and Santa Fe Railway Co. (For dates of other historical floods see stations 08404000, 08406500.)

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1938-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1939-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	10	5255	306	835	2.73	15.9	1	12	3.7	1.8	.9	.4	.2
NOVEMBER	6.7	1382	149	249	1.67	7.8	3	14	4.3	2.1	1.1	.5	.3
DECEMBER	8.6	813	118	134	1.14	6.1	7	16	5.3	2.7	1.5	.8	.5
JANUARY	11	703	115	118	1.03	6.0	14	17	6.5	3.7	2.3	1.3	.9
FEBRUARY	14	534	96	93	.97	5.0	30	20	8.2	5.1	3.5	2.2	1.6
MARCH	7.8	295	69	59	.86	3.6	60	26	12	8.0	5.9	4.3	3.4
APRIL	6.4	681	60	98	1.64	3.1	90	31	14	9.7	7.2	5.2	4.3
MAY	7.9	6954	251	1007	4.01	13.1	120	37	18	12	9.5	7.2	6.0
JUNE	5.1	3181	145	463	3.19	7.5	183	53	26	19	16	13	11
JULY	2.6	1273	103	216	2.10	5.4							
AUGUST	5.1	4212	182	615	3.38	9.5							
SEPTEMBER	5.8	6521	329	976	2.97	17.1							
ANNUAL	19	1655	161	274	1.70	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1938-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1760	6460	13100	28300	47100	75100
3	1130	4230	8750	19600	33400	54800
7	674	2490	5210	12000	20900	35300
15	413	1410	2870	6430	11100	18600
30	278	864	1680	3620	6130	10100
60	190	537	999	2060	3410	5490
90	157	416	747	1490	2400	3780

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1938-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
335	212	163	134	110	91	69	53	40	30	26	21	17	13	8.5

RIO GRANDE BASIN

08408500 DELAWARE RIVER NEAR RED BLUFF, NM

LOCATION.--Lat 32°01'23", long 104°03'15", in NE¼SW¼SE¼ sec.23, T.26 S., R.28 E., Eddy County, Hydrologic Unit 13070002, near center of channel on downstream side of pier of bridge on U.S. Highway 285, 2.1 mi north of the New Mexico-Texas state line, 3.6 mi southwest of Red Bluff, 3.7 mi upstream from mouth and 14 mi south of Malaga. Mouth at Pecos River mile 405.6.

DRAINAGE AREA.--689 mi².

PERIOD OF RECORD.--April 1912 to September 1913, May 1914 to June 1915, October 1937 to current year. Published as "near Malaga" 1912-13, and as "near Angeles, Tex." 1914-15.

GAGE.--Water-stage recorder. Elevation of gage is 2,900.66 ft above National Geodetic Vertical Datum of 1929 (U.S. Boundary Commission post). Prior to May 1914, at site 3.0 mi upstream at different datum. May 1914 to June 1915 at site 2.5 mi downstream at different datum.

REMARKS.--One small upstream diversion.

AVERAGE DISCHARGE.--48 years (1938-85), 12.9 ft³/s, 9,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,400 ft³/s, Oct. 2, 1955, gage height, 27.0 ft, from floodmarks, from rating curve extended above 6,500 ft³/s on basis of slope-area measurements at gage heights 12.84 ft, 17.55 ft, and 27.0 ft; no flow many days most years.
Maximum discharge since at least 1911 is that of Oct. 2, 1955.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1938-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1939-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	0.0	748	34	115	3.37	22.2	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	19	3.6	3.1	.86	2.3	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	.2	7.8	3.1	1.6	.51	2.0	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	.4	7.6	3.2	1.6	.51	2.1	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	.1	7.0	3.0	1.6	.52	2.0	30	.2	0.0	0.0	0.0	0.0	0.0	0.0
MARCH	.7	6.7	2.6	1.5	.56	1.7	60	.9	.2	.1	0.0	0.0	0.0	0.0
APRIL	.2	135	6.4	20	3.10	4.1	90	1.5	.5	.3	.1	0.0	0.0	0.0
MAY	0.0	233	11	34	3.10	7.1	120	1.9	.9	.6	.4	.3	.2	.2
JUNE	0.0	281	20	45	2.29	12.7	183	3.3	1.6	1.1	.8	.5	.4	.4
JULY	0.0	166	16	28	1.71	10.6								
AUGUST	0.0	326	26	55	2.17	16.6								
SEPTEMBER	0.0	303	26	49	1.90	16.6								
ANNUAL	1.9	66	13	13	.98	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1938-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	717	2220	4180	8460	13600	21100	
3	329	973	1770	3450	5390	8130	
7	168	473	831	1540	2320	3380	
15	89	241	413	745	1100	1570	
30	51	130	217	385	562	797	
60	31	75	120	201	282	384	
90	22	53	86	144	204	280	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1938-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
18	7.1	5.7	4.6	4.0	3.4	2.8	2.2	1.7	1.2	.8	.5	.2	0.0	0.0

MIMBRES RIVER BASIN

08477000 MIMBRES RIVER NEAR MIMBRES, NM

LOCATION.--Lat 32°52'28", long 107°59'05", in SE¼NW¼ sec.33, T.16 S., R.11 W., Grant County, Hydrologic Unit 13030202, on left bank 0.7 mi downstream from Bear Canyon, 1.5 mi northwest of Mimbres, and at mile 74.8.

DRAINAGE AREA.--152 mi².

PERIOD OF RECORD.--June 1921 to September 1930 (fragmentary), October 1930 to September 1976 (destroyed by flood of September 1976). Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1282: Drainage area. WSP 1512: 1931, 1933(M), 1935(M), 1938, 1939-40(M), 1941, 1942-43(M), 1944, 1945(M), 1946, 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 5,972 ft above mean sea level. Prior to Sept.12, 1923, at site 10 ft downstream at datum 0.3 ft higher. Sept. 12, 1923 to Jan. 17, 1934, at datum of 0.1 ft lower.

REMARKS.--Some regulation by Bear Canyon Reservoir 1.3 mi upstream, capacity, 700 acre-ft. Diversions for irrigation of about 300 acres above station.

AVERAGE DISCHARGE.--46 years (water years 1931-76), 11.2 ft³/s, 8,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,370 ft³/s Oct. 20, 1972, gage height, 7.49 ft, from rating curve extended above 600 ft³/s on basis of slope-area measurements at gage heights 6.20 ft and 7.49 ft; minimum, 0.7 ft³/s Aug. 10, 1951.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1931-76

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1932-76

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	1.6	111	10	16	1.59	7.5	1	1.8	1.3	1.2	1.0	.9	.9
NOVEMBER	2.1	25	7.2	3.9	.55	5.3	3	1.9	1.4	1.2	1.1	1.0	1.0
DECEMBER	2.0	66	8.1	9.1	1.12	6.0	7	2.0	1.5	1.4	1.2	1.1	1.1
JANUARY	1.9	52	8.6	9.2	1.06	6.4	14	2.3	1.7	1.4	1.3	1.1	1.1
FEBRUARY	1.8	63	12	15	1.21	8.9	30	2.7	1.9	1.6	1.4	1.2	1.1
MARCH	1.9	109	21	30	1.43	15.4	60	3.2	2.2	1.9	1.6	1.4	1.3
APRIL	1.8	93	19	24	1.27	13.7	90	3.6	2.5	2.1	1.8	1.5	1.3
MAY	1.9	66	11	14	1.27	8.3	120	4.0	2.8	2.3	2.0	1.7	1.5
JUNE	1.7	12	5.5	3.0	.55	4.1	183	5.5	3.6	2.9	2.4	1.9	1.7
JULY	1.6	14	6.8	3.5	.52	5.0							
AUGUST	2.4	49	13	12	.91	9.5							
SEPTEMBER	1.5	105	14	17	1.27	10.0							
ANNUAL	2.7	37	11	8.7	.77	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1931-76

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	108	268	424	681	919	1200
3	70	179	289	482	670	899
7	47	115	183	300	412	548
15	34	81	127	206	282	373
30	25	56	86	136	183	238
60	18	39	60	96	131	173
90	15	32	49	80	110	148

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-76

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
40	20	14	12	9.6	8.7	7.0	5.9	4.9	4.0	3.5	3.0	2.6	2.3	1.9

MIMBRES RIVER BASIN

08477500 MIMBRES RIVER NEAR FAYWOOD, NM

LOCATION.--Lat 32°35'10", long 107°55'10", in NW¼ sec.7, T.20 S., R.10 W., on right bank 6 mi northeast of Faywood Hot Springs, 10 mi northeast of Faywood, and 12 miles upstream from San Vicente Arroyo.

DRAINAGE AREA.--440 mi².

PERIOD OF RECORD.--January 1909 to May 1914, January 1916 to December 1917, October 1920 to May 1921, October to September 1930, all fragmentary. October 1930 to September 1955, October 1963 to September 1968 (discontinued). Monthly discharge only for some periods, published in WSP 1312. Records for August and September 1934, published in WSP 763, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 5,033 ft above mean sea level, datum of 1929. Prior to Aug. 16, 1909, chain gage 300 ft upstream at different datums. Aug. 16, 1909 to Sept. 25, 1920, water-stage recorder at site 500 ft upstream at different datums (datum lowered 0.5 ft Jan. 21, 1915, and 1.0 ft Jan. 1, 1916). Water-stage recorder at present site since Sept. 26, 1920, at datums 2.0 ft higher Sept. 26, 1920 to Sept. 30, 1942, and 1 ft higher Oct. 1, 1942 to Sept. 30, 1949.

REMARKS.--Diversions for irrigation of 1,750 acres above station.

AVERAGE DISCHARGE.--37 years (water years 1935-68), 15.0 ft³/s, 10,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s Aug. 4, 1939 (gage height, 12 ft, present site and datum), from rating curve extended above 600 ft³/s on basis of slope-area measurements at gage heights 7.80 and 11.7 ft; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1931-33, 1935-68

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1932-34, 1936-68

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STANDARD DEVIATION (FT³/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON-EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	0.0	40	5.7	8.3	1.47	3.3	1	.1	0.0	0.0	0.0	0.0	0.0	--
NOVEMBER	0.0	20	3.9	4.8	1.23	2.2	3	.3	0.0	0.0	0.0	0.0	0.0	--
DECEMBER	0.0	149	11	27	2.37	6.5	7	.4	0.0	0.0	0.0	0.0	0.0	--
JANUARY	0.0	124	14	26	1.84	8.2	14	.6	0.0	0.0	0.0	0.0	0.0	--
FEBRUARY	0.0	105	20	30	1.51	11.5	30	1.0	0.0	0.0	0.0	0.0	0.0	--
MARCH	0.0	190	29	51	1.77	16.8	60	.8	0.0	0.0	0.0	0.0	0.0	--
APRIL	0.0	77	16	24	1.54	9.0	90	1.0	0.0	0.0	0.0	0.0	0.0	--
MAY	0.0	72	7.7	16	2.05	4.4	120	1.7	.1	0.0	0.0	0.0	0.0	--
JUNE	0.0	28	4.4	6.8	1.52	2.6	183	3.6	.8	.3	.1	0.0	0.0	--
JULY	0.0	57	11	13	1.22	6.3								
AUGUST	.7	157	33	37	1.14	19.0								
SEPTEMBER	0.0	63	18	21	1.16	10.3								
ANNUAL	1.5	50	15	13	.91	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1931-33, 1935-68

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	395	938	1450	2270	3010	--
3	212	489	740	1130	1470	--
7	127	266	387	573	734	--
15	81	164	236	345	440	--
30	54	109	155	222	277	--
60	34	74	109	166	216	--
90	25	56	86	135	181	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-33, 1935-68

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
69	31	18	12	8.2	6.2	3.8	2.9	2.2	1.4	1.0	.4	.1	.1	0.0

MIMBRES RIVER BASIN

08477600 SAN VICENTE ARROYO AT SILVER CITY, NM

LOCATION.--Lat 32°46'15", long 108°16'30", in NW¼Sec.3, T.18 S., R.14 W. (projected), on left bank in Silver City, 800 ft upstream from bridge at Broadway Street and 1,300 ft downstream from confluence of Silva Creek and Pinos Altos Creek.

DRAINAGE AREA.--26.5 mi².

PERIOD OF RECORD.--August 1953 to September 1965 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,862.58 ft above mean sea level, datum of 1929. Prior to May 25, 1958, at site 500 ft downstream at datum 17.99 ft lower.

REMARKS.--No diversion above station.

AVERAGE DISCHARGE.--12 years (water years 1954-65), 0.79 ft³/s, 572 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,680 ft³/s Aug. 16, 1963 (gage height, 8.30 ft in gage well, 10.0 ft from outside gage); no flow for many days in most years.

Maximum flood known occurred July 21, 1895 (discharge probably exceeded 10,000 ft³/s), from newspaper accounts. A peak of 6,800 ft³/s was measured by slope-area method from old floodmarks found in 1956 (probably occurred Sept. 9, 1938).

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1954-65

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	0.0	4.1	.6	1.3	1.95	6.7
NOVEMBER	0.0	.5	.1	.2	1.88	.8
DECEMBER	0.0	.7	.2	.2	1.35	1.8
JANUARY	0.0	2.5	.3	.7	2.16	3.4
FEBRUARY	0.0	.2	.1	.1	1.14	.7
MARCH	0.0	1.4	.2	.4	1.86	2.3
APRIL	0.0	.1	0.0	.1	1.50	.4
MAY	0.0	.1	0.0	0.0	1.33	.3
JUNE	0.0	2.5	.4	.9	2.02	4.6
JULY	.1	7.6	2.7	2.4	.89	28.5
AUGUST	.3	14	3.8	3.8	.99	39.6
SEPTEMBER	0.0	3.3	1.0	1.2	1.13	10.8
ANNUAL	.5	1.7	.8	.4	.45	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1955-65

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	0.0	0.0	0.0	0.0	--	--
3	0.0	0.0	0.0	0.0	--	--
7	0.0	0.0	0.0	0.0	--	--
14	0.0	0.0	0.0	0.0	--	--
30	0.0	0.0	0.0	0.0	--	--
60	0.0	0.0	0.0	0.0	--	--
90	0.0	0.0	0.0	0.0	--	--
120	0.0	0.0	0.0	0.0	--	--
183	.1	0.0	0.0	0.0	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1954-65

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	83	117	139	--	--	--
3	35	50	60	--	--	--
7	18	26	31	--	--	--
15	9.0	13	16	--	--	--
30	5.6	8.6	11	--	--	--
60	3.3	5.0	6.3	--	--	--
90	2.3	3.5	4.6	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1954-65

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
.7	.2	.1	.1	.1	.1	.1	.1	.1	.1	0.0	0.0	0.0	0.0	0.0

TULAROSA VALLEY BASIN

08481500 TULAROSA CREEK NEAR BENT, NM
(National stream-quality accounting network station)

LOCATION.--Lat 33°08'41", long 105°53'50", in SE¼NW¼ sec.32, T.13 S., R.11 E., Otero County, Hydrologic Unit 13044503, on right bank 50 ft downstream from old U.S. Highway 70 bridge, 2.6 mi west of Bent, and 8.5 mi northeast of Tularosa, and at mile 19.4.

DRAINAGE AREA.--120 mi², approximately.

PERIOD OF RECORD.--December 1947 to current year. Prior to October 1982 published as "Rio Tularosa near Bent."

REVISED RECORDS.--WSP 1312: 1949(M).

GAGE.--Water-stage recorder. Elevation of gage is 5,450 ft above National Geodetic Vertical Datum of 1929, from topographic map. Since Jan. 20, 1983, supplemental water-stage recorder at site 200 ft upstream and at datum 9.70 ft higher.

REMARKS.--Diversions for irrigation of about 1,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--37 years (water years 1949-85), 10.6 ft³/s, 7,680 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4.280 ft³/s, June 18, 1965, gage height, 5.02 ft, from rating curve extended above 160 ft³/s on basis of slope-area measurement of peak flow; no flow May 14, 1955, result of unusual regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood probably occurred Sept. 3, 1938, when a peak of 9,640 ft³/s was computed for station approximately 6 mi downstream near Tularosa. Another flood may have occurred July 2, 1914.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1949-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1950-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	6.9	16	10	2.1	.21	7.9	1	3.2	2.3	1.9	1.7	1.5	--
NOVEMBER	7.7	17	11	2.2	.20	8.7	3	3.7	2.7	2.3	2.0	1.7	--
DECEMBER	6.9	18	11	2.4	.21	9.0	7	4.7	3.4	2.9	2.5	2.1	--
JANUARY	7.4	20	12	2.6	.22	9.1	14	5.7	4.4	3.8	3.4	2.9	--
FEBRUARY	8.1	20	12	2.5	.21	9.2	30	6.5	5.2	4.7	4.3	3.8	--
MARCH	7.7	19	11	2.6	.23	9.0	60	7.5	6.1	5.6	5.1	4.6	--
APRIL	7.7	22	11	3.0	.28	8.6	90	8.0	6.6	6.0	5.5	5.0	--
MAY	5.8	20	9.6	2.9	.30	7.5	120	8.4	7.0	6.3	5.9	5.4	--
JUNE	5.1	18	8.5	2.7	.32	6.7	183	9.1	7.7	7.1	6.6	6.2	--
JULY	4.2	18	9.4	3.3	.35	7.4							
AUGUST	4.9	35	11	5.2	.46	8.8							
SEPTEMBER	5.7	21	10	3.1	.30	8.1							
ANNUAL	8.2	19	11	2.4	.23	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1949-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	39	77	120	212	320	--	
3	23	36	52	85	123	--	
7	17	24	32	47	64	--	
15	15	19	23	31	39	--	
30	13	17	20	24	28	--	
60	12	15	17	19	22	--	
90	12	14	16	18	20	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1949-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
17	16	15	14	13	12	12	11	9.6	8.7	8.1	7.5	6.9	6.2	5.1

SAN JUAN RIVER BASIN

09355500 SAN JUAN RIVER NEAR ARCHULETA, NM

LOCATION.--Lat 36°48'05", long 107°41'51", in N sec.20, T.30 N., R.8 W., San Juan County, Hydrologic Unit 14080101, on left bank 0.5 mi upstream from Gobernador Canyon, 0.8 mi northeast of Archuleta, 7.2 mi downstream from Navajo Dam, and at mile 291.4.

DRAINAGE AREA.--3,260 mi², approximately.

PERIOD OF RECORD.--December 1954 to current year.

REVISED RECORDS.--The annual runoff for the 1958 water year as published in table 2, WSP 1733, is 455,000 acre-ft. The correct value is 1,455,000 acre-ft.

GAGE.--Water-stage recorder. Elevation of gage is 5,653 ft above National Geodetic Vertical Datum of 1929, from river-profile survey. Prior to Dec. 29, 1959, at site 5.0 mi upstream at elevation 55 ft higher. Dec. 29, 1959 to Nov. 15, 1964, at site 0.4 mi upstream at elevation 5 ft higher. Prior to Nov. 28, 1966, at elevation 2.0 ft higher.

REMARKS.--Flow completely regulated by Navajo Reservoir (station 09355100) 7 mi upstream except for minor inflow from 30 mi² intervening drainage area. Highwater diversions through Azotea tunnel (station 08284160) into Rio Grande Basin began in March 1971. Diversions for irrigation of about 47,000 acres upstream from station. Releases from Navajo Reservoir, beginning in January 1976, for use on Navajo Indian Irrigation Project bypass gage in tunnel on left bank.

AVERAGE DISCHARGE.--22 years (water years 1964-85), 1,221 ft³/s, 884,600 acre-ft/yr.
23 years (water years 1963-85), 1,180 ft³/s, 854,900 acre-ft/yr, since closure of Navajo Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft³/s, July 27, 1957, gage height, 11.00 ft, site and datum then in use; minimum determined, 8 ft³/s, Feb. 28, 1963. Maximum discharge since construction of Navajo Dam in 1962, 6,500 ft³/s, June 20, 1965, gage height, 4.57 ft.

STATISTICAL SUMMARIES (PERIOD AFTER REGULATION OF NAVAJO DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	350	2131	974	563	.58	6.6	1	372	253	197	156	--	--
NOVEMBER	306	3018	937	695	.74	6.4	3	387	292	250	218	--	--
DECEMBER	344	2886	1118	681	.61	7.6	7	408	308	263	231	--	--
JANUARY	283	2733	1215	689	.57	8.3	14	443	333	287	253	--	--
FEBRUARY	229	2362	1274	680	.53	8.7	30	508	363	306	267	--	--
MARCH	207	2618	1172	689	.59	8.0	60	580	398	332	289	--	--
APRIL	244	4768	1381	1186	.86	9.4	90	617	419	348	302	--	--
MAY	279	4962	1602	1305	.81	10.9	120	659	445	371	322	--	--
JUNE	300	5169	1536	1419	.92	10.5	183	769	520	430	370	--	--
JULY	320	5126	1325	1252	.94	9.0							
AUGUST	472	3508	1087	718	.66	7.4							
SEPTEMBER	439	2674	1028	536	.52	7.0							
ANNUAL	515	2431	1221	522	.43	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	2330	3630	4680	6240	--	--
3	2370	3670	4620	5910	--	--
7	2350	3620	4530	5740	--	--
15	2320	3520	4350	5440	--	--
30	2230	3330	4070	5020	--	--
60	2030	3100	3830	4780	--	--
90	1860	2910	3650	4600	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3080	2340	2020	1840	1680	1550	1230	919	636	517	497	478	454	401	336

SAN JUAN RIVER BASIN

09356500 SAN JUAN RIVER NEAR BLANCO, NM

LOCATION.--Lat 36°43'50", long 107°48'50", in NE¼ sec.18, T.29 N., R.9 W., on left bank half a mile upstream from highway bridge, 1 mile upstream from Canon Largo, and 1¼ miles east of Blanco.

DRAINAGE AREA.--3,560 mi², approximately.

PERIOD OF RECORD.--June 1907 to November 1908, January to December 1909, January to October 1910, (gage heights only), October 1927 to January 1955 (discontinued). Monthly discharge only for some periods, published in WSP 1313. Published as "at Turley" 1907-8.

GAGE.--Water-stage recorder. Altitude of gage is 5,540 ft (from river-profile map). Prior to Nov. 30, 1908, staff gage at site 4 miles upstream at different datum. Dec. 9, 1908 to Sept. 27, 1909, chain gage and Sept. 28, 1909 to Oct. 31, 1910, staff gage, at site half a mile downstream at different datums. Oct. 1, 1927 to Dec. 20, 1950, water-stage recorder at present site at datum 1.0 ft higher.

REMARKS.--Diversions above station for irrigation of about 52,000 acres, of which 4,500 are below station.

AVERAGE DISCHARGE.--24 years (water years 1931-54), 1,376 ft³/s, 996,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s Aug. 11, 1929 (gage height, 9.70 ft, present datum); minimum daily, 17 ft³/s Aug. 18, 24, 25, 1939.

Maximum stage known, 21 ft Oct. 5 or 6, 1911, present datum. Flood of Sept. 6, 1909, reached a stage of about 11 ft, site and datum then in use (discharge probably exceeded that of 1929). Flood of June 29, 1927, was of about the same magnitude as those of 1909 and 1929.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1931-54

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1932-54

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	125	4181	626	790	1.26	3.8	1	100	48	31	21	13	--
NOVEMBER	119	1388	340	246	.72	2.1	3	108	53	35	24	15	--
DECEMBER	136	788	267	126	.47	1.6	7	126	65	43	30	19	--
JANUARY	126	681	273	111	.41	1.7	14	145	76	51	35	23	--
FEBRUARY	174	1035	399	200	.50	2.4	30	171	113	92	78	65	--
MARCH	296	2420	959	559	.58	5.8	60	201	145	124	109	96	--
APRIL	465	6904	3001	1970	.66	18.2	90	229	175	155	142	129	--
MAY	1166	12750	4290	2629	.61	26.0	120	259	199	178	164	151	--
JUNE	255	9501	3885	2766	.71	23.6	183	305	228	205	192	182	--
JULY	116	4967	1267	1207	.95	7.7							
AUGUST	90	1619	616	403	.65	3.7							
SEPTEMBER	121	1477	568	343	.60	3.4							
ANNUAL	458	3248	1376	752	.55	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1931-54

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	6970	11700	15200	20100	24000	--
3	6410	10500	13500	17600	20900	--
7	5710	9300	12000	15800	18900	--
15	5210	8510	11000	14400	17100	--
30	4580	7380	9410	12100	14200	--
60	3830	6310	8170	10700	12800	--
90	3240	5480	7180	9540	11400	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-54

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
6100	4050	2800	2020	1470	1110	688	477	357	289	261	236	211	182	132

SAN JUAN RIVER BASIN

09363500 ANIMAS RIVER NEAR CEDAR HILL, NM

LOCATION.--Lat 37°02'17", long 107°52'25", in sec.7, T.32 N., R.9 W., La Plata County, Colorado, Hydrologic Unit 14080104, on right bank 0.8 mi downstream from Florida River, 2.5 mi upstream from Colorado-New Mexico State line, 8.5 mi north of Cedar Hill, and at mile 32.9.

DRAINAGE AREA.--1,090 mi², approximately.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for October and November 1933, published in WSP 1313.

REVISED RECORDS.--WSP 1563: 1940 and 1946 (monthly figures only).

GAGE.--Water-stage recorder. Elevation of gage is 5,960 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 14, 1937, at datum between 1.52 ft and 1.36 ft higher. Sept. 15, 1937, to Sept. 30, 1946, at datum 1.36 ft higher.

REMARKS.--Diversions for irrigation of about 20,000 acres upstream from station. During water years 1944-49, Twin Rocks Canal diverted upstream from station for irrigation downstream. Slight regulation by Lemon Dam about 30 mi upstream on Florida River since November 1963 (capacity, 40,100 acre-ft).

AVERAGE DISCHARGE.--51 years (water years 1935-85), 924 ft³/s, 669,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s, June 19, 1949, gage height, 11.45 ft; minimum, 63 ft³/s, Jan. 21, 1935.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in October 1911 at this location.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1935-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	158	1069	324	151	.47	3.0
DECEMBER	159	542	256	72	.28	2.3
JANUARY	169	388	235	51	.22	2.2
FEBRUARY	151	455	247	57	.23	2.3
MARCH	141	768	393	154	.39	3.6
APRIL	273	2192	1080	535	.50	9.9
MAY	449	5686	2514	1088	.43	23.0
JUNE	458	6145	3023	1578	.52	27.7
JULY	223	3710	1273	861	.68	11.7
AUGUST	232	1681	608	295	.49	5.6
SEPTEMBER	155	1922	501	313	.62	4.6
ANNUAL	340	1713	924	334	.36	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1935-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	162	134	122	113	103	98
3	171	143	132	123	115	110
7	182	155	144	136	129	124
14	194	166	154	146	137	132
30	207	177	164	154	145	139
60	217	187	175	167	158	154
90	226	194	182	173	165	161
120	237	203	190	181	173	168
183	272	227	213	205	199	196

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1935-85

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	5100	7340	8760	10500	11700	12900
3	4840	6850	8100	9590	10600	11600
7	4400	6210	7330	8670	9620	10500
15	3880	5480	6480	7670	8520	9330
30	3460	4850	5670	6580	7190	7750
60	2790	3990	4710	5550	6110	6640
90	2290	3310	3950	4710	5240	5750

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3620	2460	1800	1310	981	780	535	396	322	273	255	239	223	207	186

SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, NM
(National stream-quality accounting network station)

LOCATION.--Lat 36°43'17", long 108°12'05", in SW¼SW¼ sec.15, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080104, in Boyd City Park, on right bank 900 ft upstream from bridge on Miller Ave., 0.4 mi downstream from bridge on U.S. Highway 64 in Farmington, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--1,360 mi², approximately.

PERIOD OF RECORD.--June 1904 to October 1905 (published as "near Farmington"), September 1912 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1243: 1931. WSP 1313: 1913.

GAGE.--Water-stage recorder. Elevation of gage is 5,280 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 1, 1905, non-recording gage at old bridge 0.1 mi upstream at different datum. Sept. 17, 1912, to Oct. 4, 1938, water-stage recorder at site 0.8 mi downstream at lower datums (datum lowered 2.0 ft Aug. 15, 1927, and raised 0.2 ft Dec. 16, 1929). Oct. 5, 1938 to Nov. 1, 1973 at site 900 ft downstream at datum 1.74 ft lower.

REMARKS.--Diversions for irrigation of about 30,000 acres upstream from station.

AVERAGE DISCHARGE.--62 years (water years 1914, 1920-25, 1931-85), 881 ft³/s, 638,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 25,000 ft³/s, June 29, 1927, gage height, 8.5 ft, site and datum then in use, from rating curve extended above 10,000 ft³/s; minimum, 1.0 ft³/s, Aug. 11, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911, when a stage of about 16.5 ft was reached (datum in use Oct. 1938 to Nov. 1973). Flood of Sept. 6, 1909, reached a stage of 11.1 ft, 1904-5 site and datum (discharge, about 19,000 ft³/s).

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1914, 1920-25,
1931-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1921-25, 1932-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	87	2726	421	377	.90	4.0	1	74	23	11	5.7	2.5	1.4
NOVEMBER	152	1140	335	158	.47	3.2	3	79	26	13	7.2	3.4	2.0
DECEMBER	174	565	285	83	.29	2.7	7	91	33	18	10	5.3	3.3
JANUARY	163	554	269	69	.26	2.5	14	112	48	28	17	9.7	6.4
FEBRUARY	162	675	292	88	.30	2.8	30	157	77	48	31	18	12
MARCH	112	875	432	186	.43	4.1	60	205	122	86	61	40	29
APRIL	54	2489	998	554	.56	9.5	90	238	164	127	99	73	58
MAY	195	6126	2437	1229	.50	23.1	120	252	187	156	133	109	95
JUNE	235	6930	3040	1684	.55	28.8	183	268	203	179	163	148	139
JULY	46	3609	1136	873	.77	10.8							
AUGUST	50	1971	488	381	.78	4.6							
SEPTEMBER	11	2182	424	394	.93	4.0							
ANNUAL	239	1733	881	377	.43	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1914, 1920-25,
1931-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	5090	7560	9110	11000	12300	13500
3	4780	7000	8360	9940	11000	12000
7	4270	6300	7570	9080	10100	11100
15	3730	5530	6670	8040	9000	9920
30	3290	4890	5850	6940	7670	8340
60	2660	4010	4820	5720	6310	6850
90	2150	3300	4020	4860	5450	6000

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1914, 1920-25, 1931-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME

5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
3610	2380	1690	1230	921	718	481	368	302	262	242	222	201	181	123

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, NM

LOCATION.--Lat 36°43'22", long 108°13'30", in NW¼SE¼ sec.17, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080105, on left bank 360 ft downstream from highway bridge on State Highway 371 in Farmington, 4,000 ft downstream from Animas River, 2.3 mi upstream from La Plata River, and at mile 251.4.

DRAINAGE AREA.--7,240 mi², approximately.

PERIOD OF RECORD.--June to December 1904, January 1905 to September 1906 (gage heights and discharge measurements only), September 1912 to current year. Monthly discharge only for some periods, published in WSP 1313. Discharge records for January to December 1905, published in WSP 175, are unreliable and should not be used.

REVISED RECORDS.--WSP 1119: Drainage area. WSP 1243: 1938. WSP 1313: 1905, 1914. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 5,230.37 ft above National Geodetic Vertical Datum of 1929. See WSP 1313 or 1733 for history of changes prior to Nov. 19, 1933.

REMARKS.--Since June 1962 flow is partly controlled by operation of Navajo Reservoir (station 09355100) 50 mi upstream. Diversions upstream from station for irrigation of about 86,000 acres, 4,000 of which is irrigated by Farmers Mutual ditch which diverts from Animas River and bypasses this station; ditch flow not included in record. At times this ditch may be supplied partly or entirely by diversion from San Juan River downstream from this station. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--32 years (water years 1931-62), 2,205 ft³/s, 1,598,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 68,000 ft³/s, June 29, 1927, gage height, 10.2 ft, site and datum then in use, from rating curve extended above 37,000 ft³/s; minimum, 14 ft³/s, Aug. 22, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911. Flood of Sept. 6, 1909, reached a stage of about 12.3 ft, site and datum in use May to September 1906.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF NAVAJO DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1931-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1932-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	286	7271	1106	1223	1.11	4.2	1	235	109	66	41	23	--
NOVEMBER	315	2729	722	468	.65	2.7	3	243	115	72	46	26	--
DECEMBER	362	1403	568	229	.40	2.1	7	266	129	81	53	31	--
JANUARY	375	1121	556	153	.28	2.1	14	306	155	100	67	40	--
FEBRUARY	444	1931	773	356	.46	2.9	30	370	229	172	133	98	--
MARCH	453	4287	1464	915	.63	5.5	60	457	312	249	203	160	--
APRIL	702	9133	3942	2559	.65	14.9	90	490	376	331	299	268	--
MAY	2067	18830	6395	3679	.58	24.2	120	536	424	383	356	332	--
JUNE	517	14990	6592	4136	.63	24.9	183	599	460	418	393	373	--
JULY	192	8639	2222	2174	.98	8.4							
AUGUST	166	4938	1145	958	.84	4.3							
SEPTEMBER	170	2620	959	654	.68	3.6							
ANNUAL	843	5054	2205	1090	.49	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1931-62

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	10900	17300	22100	28800	34300	--	
3	10200	15800	20000	25700	30300	--	
7	9230	14300	18100	23500	27800	--	
15	8270	12900	16300	21200	25100	--	
30	7360	11300	14200	18200	21300	--	
60	6050	9540	12100	15700	18500	--	
90	5110	8230	10500	13700	16200	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
9250	6130	4430	3280	2430	1820	1180	851	670	564	519	478	437	382	284

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF NAVAJO DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	409	2785	1359	708	.52	5.6	1	435	305	258	227	--	--
NOVEMBER	425	3532	1242	751	.60	5.1	3	472	324	272	239	--	--
DECEMBER	504	3381	1444	730	.51	6.0	7	526	352	292	253	--	--
JANUARY	476	3184	1558	698	.45	6.5	14	592	399	332	287	--	--
FEBRUARY	374	2733	1641	721	.44	6.8	30	684	468	392	342	--	--
MARCH	349	3323	1669	787	.47	6.9	60	812	551	458	396	--	--
APRIL	391	6844	2145	1673	.78	8.9	90	906	613	509	440	--	--
MAY	576	8840	3643	2151	.59	15.1	120	1010	680	560	480	--	--
JUNE	983	9803	4196	2584	.62	17.4	183	1180	827	690	596	--	--
JULY	512	6856	2350	1881	.80	9.7							
AUGUST	440	3768	1498	857	.57	6.2							
SEPTEMBER	478	3331	1380	867	.63	5.7							
ANNUAL	859	3633	2011	820	.41	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	6390	9460	11500	14000	--	--
3	5860	8860	10900	13600	--	--
7	5410	8300	10300	12800	--	--
15	4890	7570	9400	11700	--	--
30	4240	6710	8490	10900	--	--
60	3640	5800	7410	9640	--	--
90	3240	5150	6600	8620	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5740	3970	3260	2810	2430	2200	1910	1570	1260	921	822	732	638	547	448

SAN JUAN RIVER BASIN

09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 36°59'51", long 108°11'17", in NW¼SE¼ sec.10, T.32 N., R.13 W., La Plata County, Colorado, Hydrologic Unit 14080105, on right bank at Colorado-New Mexico State line, 0.2 mi downstream from Ponds Arroyo, and 4.8 mi north of La Plata, NM.

DRAINAGE AREA.--331 mi².

PERIOD OF RECORD.--January 1920 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1934(M), 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 5,975.15 ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 17, 1934.

REMARKS.--Diversion upstream from station for irrigation of about 15,000 acres, most of which are upstream from station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--65 years (water years 1921-85), 35.6 ft³/s, 25,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft³/s, Aug. 24, 1927, gage height, 11.36 ft, present datum, from rating curve extended above 750 ft³/s on basis of slope-area measurement of peak flow; no flow at times in many years.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1921-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1922-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	.1	260	14	34	2.55	3.2	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	1.0	99	11	13	1.25	2.5	3	.1	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	1.2	34	11	7.6	.67	2.6	7	.5	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	.8	38	11	6.9	.62	2.6	14	1.1	.2	0.0	0.0	0.0	0.0	0.0
FEBRUARY	3.0	54	16	9.9	.62	3.7	30	2.1	.5	.1	0.0	0.0	0.0	0.0
MARCH	.6	97	32	25	.78	7.6	60	3.9	1.3	.5	.2	0.0	0.0	0.0
APRIL	3.1	364	108	99	.92	25.3	90	5.2	1.9	.9	.5	.2	.1	.1
MAY	5.3	506	113	102	.90	26.5	120	5.6	2.5	1.6	1.0	.6	.4	.4
JUNE	1.9	306	68	68	1.01	15.8	183	6.9	3.5	2.5	1.9	1.3	1.1	1.1
JULY	0.0	99	20	21	1.01	4.8								
AUGUST	0.0	65	12	13	1.07	2.9								
SEPTEMBER	0.0	126	11	19	1.74	2.6								
ANNUAL	4.4	109	36	25	.69	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1921-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1	299	542	735	1010	1240	1490	
3	224	422	590	848	1080	1330	
7	184	353	500	731	937	1170	
15	145	287	415	618	804	1020	
30	116	231	333	496	643	815	
60	91	181	260	381	488	610	
90	76	149	210	303	383	472	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1921-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
160	88	63	45	32	24	16	12	8.0	5.2	4.3	3.3	2.4	1.5	.3

SAN JUAN RIVER BASIN

09367500 LA PLATA RIVER NEAR FARMINGTON, NM

LOCATION.--Lat 36°44'23", long 108°14'51", in NE¼SW¼ sec.7, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080105, on right bank 1,300 ft upstream from bridge on U.S. Highway 550 in Farmington, and 1,800 ft upstream from mouth.

DRAINAGE AREA.--583 mi².

PERIOD OF RECORD.--March 1938 to current year.

REVISED RECORDS.--WSP 1243: 1944-45. WSP 1313: 1943-44(M), 1946-50(M). WSP 1733: 1951(M).

GAGE.--Water-stage recorder. Elevation of gage is 5,210 ft above National Geodetic Vertical Datum of 1929, from river-profile map. Prior to July 28, 1978 at elevation 1.0 ft higher.

REMARKS.--Diversions for irrigation of about 24,000 acres upstream from station.

AVERAGE DISCHARGE.--47 years (water years 1939-85), 27.8 ft³/s, 10,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, that of Sept. 10, 1939, "discharge not determined", gage height, 6.03 ft, site and datum then in use; no flow for long periods in some years. Major floods occurred Sept. 5 or 6, 1909, and Oct. 5 or 6, 1911.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1939-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1940-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	537	22	79	3.68	6.5	1	0.0	0.0	0.0	0.0	0.0	0.0
NOVEMBER	0.0	116	9.2	18	1.95	2.7	3	0.0	0.0	0.0	0.0	0.0	0.0
DECEMBER	0.0	49	11	12	1.02	3.4	7	0.0	0.0	0.0	0.0	0.0	0.0
JANUARY	0.0	100	16	16	1.02	4.8	14	0.0	0.0	0.0	0.0	0.0	0.0
FEBRUARY	1.0	89	22	19	.89	6.5	30	.1	0.0	0.0	0.0	0.0	0.0
MARCH	.2	111	29	32	1.12	8.5	60	.5	0.0	0.0	0.0	0.0	0.0
APRIL	0.0	408	85	116	1.36	25.6	90	1.1	.2	.1	0.0	0.0	0.0
MAY	0.0	783	73	143	1.97	21.7	120	1.7	.4	.1	0.0	0.0	0.0
JUNE	0.0	252	36	68	1.88	10.8	183	4.0	1.4	.8	.5	.3	.2
JULY	0.0	47	8.0	11	1.37	2.4							
AUGUST	0.0	65	12	15	1.23	3.7							
SEPTEMBER	0.0	170	11	28	2.44	3.4							
ANNUAL	.5	134	28	32	1.16	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1939-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	335	712	1040	1520	1930	2380
3	227	510	758	1130	1460	1810
7	156	380	592	934	1240	1600
15	103	279	470	818	1170	1620
30	72	205	354	634	926	1300
60	48	142	250	458	675	957
90	38	112	196	352	511	713

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1939-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
143	62	36	25	18	13	7.0	3.5	1.6	.9	.4	0.0	0.0	0.0	0.0

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM

(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 36°47'32", long 108°43'54", in NW¼ sec.27, T.30 N., R.18 W., San Juan County, Hydrologic Unit 14080105, on left bank 3 mi west of Shiprock, 6 mi downstream from Chaco River, and at mile 215.0.

DRAINAGE AREA.--12,900 mi², approximately.

PERIOD OF RECORD.--January to October 1911, February 1927 to current year. Monthly or yearly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1243: 1931, 1934-38, 1951. WSP 1313: 1911, 1933. WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 4,848.68 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Apr. 6, 1922, nonrecording gage and Apr. 7, 1922, to Oct. 25, 1933, water-stage recorder, at site 3 mi upstream at different datum. Oct. 26, 1933, to Sept. 30, 1936, water-stage recorder at present site at datum 3.31 ft higher and Oct. 1, 1936, to Sept. 30, 1952, at datum 1.77 ft higher. Supplementary water-stage recorders at nearby sites, same datum, used at times.

REMARKS.--Since 1962 flow partly regulated by Navajo Reservoir (station 09355100). Diversions for irrigation of about 118,000 acres upstream from station. Ungaged canals bypass station on both right and left bank, though some of bypass flow is returned to river downstream from gage.

AVERAGE DISCHARGE.--28 years (water years 1935-62), 2,309 ft³/s, 1,673,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1927).--Maximum discharge, about 80,000 ft³/s, Aug. 11, 1929, gage height, 5.7 ft, site and datum then in use; minimum daily, 8 ft³/s, Aug. 25, 26, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911, and reached a stage of 22 ft, site and datum then in use.

STATISTICAL SUMMARIES (PERIOD BEFORE REGULATION OF NAVAJO DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1935-62

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1936-62

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	247	8370	1234	1500	1.22	4.5	1	168	54	26	14	6.0	--
NOVEMBER	365	2812	835	507	.61	3.0	3	186	60	29	15	6.7	--
DECEMBER	386	1445	657	251	.38	2.4	7	226	78	39	20	9.0	--
JANUARY	437	1066	612	161	.26	2.2	14	286	109	57	31	15	--
FEBRUARY	489	1821	856	351	.41	3.1	30	406	205	130	85	49	--
MARCH	534	4443	1527	907	.59	5.5	60	504	309	224	166	113	--
APRIL	602	9275	4069	2512	.62	14.7	90	549	408	348	305	262	--
MAY	2038	19790	6483	3785	.58	23.4	120	614	469	411	370	330	--
JUNE	1922	15540	6812	4291	.63	24.6	183	672	506	454	423	397	--
JULY	199	8869	2284	2253	.99	8.2							
AUGUST	126	5171	1243	1091	.88	4.5							
SEPTEMBER	44	3329	1082	883	.82	3.9							
ANNUAL	861	5324	2309	1107	.48	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1935-62

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	11800	19500	25500	34300	41600	--
3	11000	17200	21900	28200	33200	--
7	9550	14900	18900	24500	29000	--
15	8420	13200	16800	21900	26200	--
30	7470	11700	14800	19100	22500	--
60	6200	9840	12600	16300	19300	--
90	5280	8500	10800	14000	16500	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1935-62

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
9410	6300	4590	3450	2570	1950	1260	919	732	624	576	525	474	415	263

SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM--Continued

STATISTICAL SUMMARIES (PERIOD AFTER COMPLETION OF NAVAJO DAM)

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1964-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1965-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	318	3058	1360	810	.60	5.7	1	305	142	94	66	--	--
NOVEMBER	488	3526	1271	749	.59	5.3	3	338	157	104	73	--	--
DECEMBER	576	3420	1476	702	.48	6.1	7	385	180	118	83	--	--
JANUARY	508	3169	1579	698	.44	6.6	14	454	224	152	109	--	--
FEBRUARY	395	2602	1680	711	.42	7.0	30	559	292	204	151	--	--
MARCH	359	3264	1722	820	.48	7.2	60	723	417	313	246	--	--
APRIL	274	7212	2177	1781	.82	9.1	90	832	515	405	334	--	--
MAY	268	9045	3531	2264	.64	14.7	120	951	621	505	428	--	--
JUNE	630	9508	4055	2612	.64	16.9	183	1140	784	648	555	--	--
JULY	222	7237	2319	2005	.86	9.7							
AUGUST	213	3696	1496	934	.62	6.2							
SEPTEMBER	404	3238	1348	883	.66	5.6							
ANNUAL	783	3706	2001	865	.43	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1964-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	6870	10200	12500	15600	--	--
3	6320	9580	11800	14800	--	--
7	5480	8520	10700	13700	--	--
15	4840	7520	9450	12000	--	--
30	4170	6610	8450	11000	--	--
60	3570	5700	7360	9730	--	--
90	3210	5120	6600	8710	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1964-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
5780	4040	3330	2840	2500	2250	1920	1550	1200	891	804	708	602	479	337

LITTLE COLORADO RIVER BASIN

09386900 RIO NUTRIA NEAR RAMAH, NM

LOCATION.--Lat 35°16'57", long 108°33'10", in NW¼SW¼ sec.8, T.12 N., R.16 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank at mouth of Nutria Canyon, 0.9 mi upstream from Nutria Diversion Dam, 1.3 mi northeast of Upper Nutria, and 10.4 mi northwest of Ramah.

DRAINAGE AREA.--71.4 mi².

PERIOD OF RECORD.--October 1969 to current year.

REVISED RECORDS.--WDR NM-78-1: 1977.

GAGE.--Water-stage recorder and concrete control. Concrete control raised 1.0 ft June 6, 1975. Control raised 2.35 ft June 28, 1984. Elevation of gage is 6,860 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No diversion above station.

AVERAGE DISCHARGE.--16 years (water years 1970-85), 7.59 ft³/s, 5,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 782 ft³/s, Apr. 14, 1973, gage height, 5.58 ft, datum then in use, from rating curve extended above 470 ft³/s; maximum gage height, 7.90 ft, Mar. 12, 1985; no flow Oct. 1-20, 1969.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1970-85

MONTH	MINIMUM (FT³/S)	MAXIMUM (FT³/S)	MEAN (FT³/S)	STAN- DARD DEVIA- TION (FT³/S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
NOVEMBER	0.0	2.6	.3	.6	1.88	.4
DECEMBER	0.0	3.8	1.0	1.4	1.34	1.1
JANUARY	.1	4.4	.7	1.1	1.59	.8
FEBRUARY	.1	25	3.9	6.5	1.70	4.2
MARCH	.1	100	31	35	1.13	33.8
APRIL	.1	187	47	68	1.44	51.3
MAY	.1	34	5.0	9.0	1.79	5.5
JUNE	0.0	1.3	.4	.5	1.20	.4
JULY	0.0	3.5	.6	1.1	1.70	.7
AUGUST	0.0	3.0	.9	1.0	1.10	1.0
SEPTEMBER	0.0	1.9	.3	.5	1.55	.4
ANNUAL	.1	22	7.6	8.6	1.14	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1971-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.0	0.0	0.0	0.0	--	--
3	0.0	0.0	0.0	0.0	--	--
7	0.0	0.0	0.0	0.0	--	--
14	0.0	0.0	0.0	0.0	--	--
30	0.0	0.0	0.0	0.0	--	--
60	.1	0.0	0.0	0.0	--	--
90	.1	0.0	0.0	0.0	--	--
120	.1	.1	0.0	0.0	--	--
183	.2	.1	.1	.1	--	--

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1970-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT³/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	92	291	506	883	--	--
3	62	239	461	895	--	--
7	40	184	387	825	--	--
15	29	147	325	721	--	--
30	19	102	232	534	--	--
60	11	65	152	359	--	--
90	8.1	46	108	256	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1970-85

DISCHARGE, IN FT³/S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
41	10	3.4	1.4	.7	.4	.2	.2	.1	.1	.1	.1	.1	.1	0.0

LITTLE COLORADO RIVER BASIN

09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM

LOCATION.--Lat 35°06'03", long 108°45'03", in NE¼ sec.17, T.10 N., R.18 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank downstream from highway bridge on State Highway 36, 0.8 mi upstream from flow line of Black Rock Reservoir, 2.3 mi northeast of Black Rock, and 5.9 mi northeast of Zuni Pueblo.

DRAINAGE AREA.--810 mi², approximately.

PERIOD OF RECORD.--October 1969 to current year. Prior to October 1974 published as "above Zuni Reservoir".

GAGE.--Water-stage recorder, crest-stage gage and concrete control. Elevation of gage is 6,480 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No diversion above station.

AVERAGE DISCHARGE.--16 years (water years 1970-85), 14.9 ft³/s, 10,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft³/s, Aug. 4, 1974, gage height, 6.61 ft, from rating curve extended above 670 ft³/s on basis of slope-area measurements at gage heights 4.05 ft, 3.94 ft, 5.16 ft, and 6.61 ft; no flow for many days.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1970-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1971-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	0.0	13	2.5	3.5	1.41	1.4	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	14	1.8	3.3	1.88	1.0	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	5.9	1.5	1.6	1.06	.8	7	0.0	0.0	0.0	0.0	--	--
JANUARY	.1	4.7	1.5	1.4	.88	.9	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	.3	73	12	21	1.83	6.4	30	0.0	0.0	0.0	0.0	--	--
MARCH	.7	263	54	81	1.49	30.1	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	308	79	126	1.60	44.0	90	.3	.1	0.0	0.0	--	--
MAY	0.0	65	8.7	18	2.02	4.9	120	.6	.2	.1	.1	--	--
JUNE	0.0	2.0	.3	.5	2.04	.1	183	1.1	.5	.3	.2	--	--
JULY	0.0	26	4.7	6.7	1.43	2.6							
AUGUST	.5	24	10.0	8.8	.88	5.6							
SEPTEMBER	0.0	18	4.0	5.3	1.32	2.2							
ANNUAL	1.4	47	15	18	1.19	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1970-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	312	697	1050	1610	--	--
3	165	463	816	1520	--	--
7	95	303	578	1190	--	--
15	59	202	414	945	--	--
30	38	136	286	667	--	--
60	26	94	198	460	--	--
90	18	68	146	344	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1970-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
79	17	7.9	4.3	2.7	2.1	1.3	.8	.5	.1	0.0	0.0	0.0	0.0	0.0

LITTLE COLORADO RIVER BASIN

09395500 PUERCO RIVER AT GALLUP, NM

LOCATION.--Lat 35°31'45", long 108°44'41", in NE¼SE¼ sec.16, T.15 N., R.18 W., McKinley County, Hydrologic Unit 15020006, near center of span on downstream side of Third Street bridge in Gallup, 0.8 mi upstream from Gamarco Wash, 3.5 mi downstream from Hogback, and 4.9 mi downstream from South Fork.

DRAINAGE AREA.--558 mi².

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--June 1940 to July 1946, June 1957 to August 1977 (annual maximum only), September 1977 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,480 ft from topographic map. Prior to September 1977 at site 2,000 ft upstream at different datum.

REMARKS.--No diversion above station.

AVERAGE DISCHARGE.--10 years (water years 1941-45, 1978-82), 9.42 ft³/s, 6,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s July 17, 1972, gage height, 15.3 ft site and datum then in use; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1941-45,
1978-82

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1942-46, 1979-82

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.7	23	5.9	6.6	1.11	5.5	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	0.0	6.0	2.2	2.6	1.15	2.1	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	0.0	14	3.3	4.2	1.27	3.1	7	0.0	0.0	0.0	0.0	--	--
JANUARY	0.0	14	4.1	4.2	1.04	3.8	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	0.0	55	15	16	1.08	13.6	30	0.0	0.0	0.0	0.0	--	--
MARCH	0.0	57	20	21	1.02	18.7	60	0.0	0.0	0.0	0.0	--	--
APRIL	0.0	59	16	22	1.39	14.8	90	.5	0.0	0.0	0.0	--	--
MAY	0.0	20	4.2	6.0	1.42	3.9	120	.9	.1	0.0	0.0	--	--
JUNE	0.0	9.0	2.0	2.8	1.42	1.8	183	3.1	1.1	.5	.3	--	--
JULY	.2	26	8.3	8.5	1.03	7.7							
AUGUST	.7	56	16	19	1.20	15.0							
SEPTEMBER	.5	60	11	17	1.53	10.2							
ANNUAL	2.0	20	9.4	5.7	.61	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1941-45, 1978-82

PERIOD (CON- SEC- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	210	448	631	--	--	--
3	143	248	310	--	--	--
7	89	139	164	--	--	--
15	57	92	112	--	--	--
30	37	63	80	--	--	--
60	26	47	64	--	--	--
90	19	35	48	--	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1941-45, 1978-82

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
45	22	12	9.0	6.8	5.5	3.9	2.8	1.2	.1	0.0	0.0	0.0	0.0	0.0

GILA RIVER BASIN

09430500 GILA RIVER NEAR GILA, NM

LOCATION.--Lat 33°03'40", long 108°32'12", in NE¼NW¼ sec.30, T.14 S., R.16 W., Grant County, Hydrologic Unit 15040001, on left bank at Hooker damsite, 1.6 mi upstream from Mogollon Creek, 7 mi northeast of Gila, and at mile 572.5.

DRAINAGE AREA.--1,864 mi².

PERIOD OF RECORD.--April to December 1914, December 1927 to current year. Monthly discharge only December 1927 to September 1930, published in WSP 1313.

REVISED RECORDS.--WSP 1283: Drainage area. WSP 1313: 1944 (M), 1949 (M). WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 4,655.8 ft above National Geodetic Vertical Datum of 1929, (river-profile survey). Prior to Dec. 31, 1928, at site 5 mi upstream at different datum. Dec. 31, 1928, to Jan. 7, 1942, at site 200 ft upstream at same datum.

REMARKS.--Diversions for irrigation of about 500 acres upstream from station. National Weather Service gage height and rain gage satellite telemeter at station.

AVERAGE DISCHARGE.--57 years (water years 1929-85), 148 ft³/s, 107,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,200 ft³/s, Dec. 28, 1984, gage height, 13.0 ft, from floodmark, from rating curve extended above 7,000 ft³/s on basis of slope-area measurement at gage height 12.5 ft; maximum gage height, 17.2 ft from floodmark, Sept. 29, 1941; minimum, 14 ft³/s, July 15, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Other major floods occurred in November 1905, December 1906, and January 1916.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1929-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1930-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	29	994	112	175	1.56	6.3	1	26	21	18	17	15	14
NOVEMBER	48	581	87	78	.90	4.9	3	27	21	19	17	15	15
DECEMBER	50	1632	162	301	1.86	9.1	7	29	22	20	18	16	15
JANUARY	50	893	149	175	1.17	8.4	14	31	24	21	19	17	16
FEBRUARY	51	902	221	228	1.03	12.4	30	35	27	24	22	20	19
MARCH	54	1049	312	308	.99	17.6	60	43	33	30	27	24	22
APRIL	49	903	221	190	.86	12.4	90	49	39	35	31	28	26
MAY	38	716	138	123	.89	7.8	120	55	44	38	35	31	28
JUNE	24	167	58	36	.62	3.3	183	67	52	47	43	41	40
JULY	22	119	62	26	.42	3.5							
AUGUST	38	527	124	94	.76	7.0							
SEPTEMBER	24	882	132	168	1.27	7.4							
ANNUAL	48	477	148	102	.69	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1929-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1140	3340	6190	12400	20000	31100
3	883	2330	4040	7480	11300	16700
7	672	1570	2490	4140	5810	7910
15	495	1050	1560	2420	3230	4190
30	366	723	1040	1540	1990	2520
60	263	512	739	1110	1450	1860
90	219	435	640	984	1310	1720

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1929-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
486	293	204	157	127	108	84	72	64	58	55	51	46	40	31

GILA RIVER BASIN

09430600 MOGOLLON CREEK NEAR CLIFF, NM
(Hydrologic bench-mark station)

LOCATION.--Lat 33°10'01", long 108°38'58", in SE¼SE¼ sec.13, T.13 S., R.18 W., Grant County, Hydrologic Unit 15040001, on right bank 0.3 mi downstream from Rain Creek, 0.8 mi downstream from Gila Wilderness Boundary, 12 mi upstream from mouth, and 14 mi north of Cliff.

DRAINAGE AREA.--69 mi².

PERIOD OF RECORD.--March 1967 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No diversion above station.

AVERAGE DISCHARGE.--18 years (water years 1968-85), 32.0 ft³/s, 23,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s, Aug. 12, 1967, gage height, 13.7 ft, from floodmarks, from rating curve extended above 220 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1968-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1969-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVIA- TION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
								2	5	10	20	50	100	
								50%	20%	10%	5%	2%	1%	
OCTOBER	.1	237	28	61	2.19	7.2	1	0.0	0.0	0.0	0.0	0.0	--	--
NOVEMBER	1.1	166	19	39	2.10	4.8	3	0.0	0.0	0.0	0.0	0.0	--	--
DECEMBER	1.0	410	52	107	2.08	13.4	7	0.0	0.0	0.0	0.0	0.0	--	--
JANUARY	1.1	107	30	34	1.13	7.8	14	0.0	0.0	0.0	0.0	0.0	--	--
FEBRUARY	1.4	211	58	62	1.07	15.0	30	.1	0.0	0.0	0.0	0.0	--	--
MARCH	1.3	272	74	79	1.07	19.1	60	.8	.4	0.0	0.0	0.0	--	--
APRIL	.9	182	61	58	.95	15.9	90	1.5	.6	.3	.2	--	--	--
MAY	.3	130	31	35	1.15	8.0	120	1.9	.9	.6	.5	--	--	--
JUNE	0.0	15	3.6	4.8	1.33	.9	183	4.0	2.1	1.5	1.2	--	--	--
JULY	0.0	21	4.7	5.5	1.16	1.2								
AUGUST	1.0	26	10	7.6	.75	2.6								
SEPTEMBER	.4	120	16	29	1.86	4.0								
ANNUAL	1.8	97	32	29	.90	100								

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1968-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	398	1410	2810	5970	--	--
3	284	923	1720	3360	--	--
7	196	555	937	1610	--	--
15	133	336	525	821	--	--
30	93	227	344	515	--	--
60	63	155	235	354	--	--
90	55	141	214	318	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
143	89	59	37	25	19	11	6.2	3.3	2.0	1.6	1.3	.9	.4	0.0

GILA RIVER BASIN

09431500 GILA RIVER NEAR REDROCK, NM
(National stream-quality accounting network and radiochemical network station)

LOCATION.--Lat 32°43'37", long 108°40'30", in W sec.23, T.18 S., R.18 W., Grant County, Hydrologic Unit 15040002, on left bank 0.2 mi downstream from Copper Canyon, 0.2 mi upstream from lower end of box canyon, 4.7 mi northeast of Redrock, 14 mi downstream from Mangas Creek, and at mile 539.2.

DRAINAGE AREA.--2,829 mi².

PERIOD OF RECORD.--September 1904 to February 1905 (gage heights only). May 1905 to December 1906, January to December 1907 and July to October 1908 (gage heights only). November 1908 to December 1910, January 1911 to January 1912 and May to June 1912 (gage heights only). August 1912 to September 1955, October 1962 to current year. Monthly or annual discharge only for some periods, published in WSP 1313. Published as "near Cliff" 1904-7.

REVISED RECORDS.--WSP 1213: 1906, 1911-15, 1931, 1936-37, 1939, 1941, 1944, 1945(P), 1946(M), 1947. WSP 1283: Drainage area. WSP 1926: 1955. WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Elevation of gage is 4,090 ft above National Geodetic Vertical Datum of 1929, from plane table survey. Prior to Dec. 31, 1907, nonrecording gage at site 13.5 mi upstream at different datum. May 14, 1908, to July 16, 1909, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.--Diversion for irrigation of about 5,000 acres upstream from station. Gage height and rain gage satellite telemeter at gage.

AVERAGE DISCHARGE.--55 years (water years 1931-85), 200 ft³/s, 144,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,800 ft³/s, Dec. 19, 1978, gage height, 29.8 ft, in gage well, 34.1, ft from floodmarks, from rating curve extended above 9,500 ft³/s on basis of slope-area measurement of peak flow; minimum, 2.2 ft³/s, Aug. 5, 1947.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1931-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1932-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	16	1768	166	319	1.92	6.9	1	12	6.8	4.9	3.7	2.7	2.2
NOVEMBER	48	674	111	103	.93	4.6	3	14	7.6	5.5	4.1	3.0	2.4
DECEMBER	60	2200	242	447	1.85	10.0	7	16	9.1	6.5	4.9	3.5	2.7
JANUARY	64	1362	222	286	1.29	9.2	14	19	11	8.0	6.2	4.5	3.7
FEBRUARY	54	1231	329	350	1.06	13.7	30	26	15	12	9.3	7.2	6.1
MARCH	40	1438	424	432	1.02	17.6	60	37	23	18	14	11	9.5
APRIL	34	1155	269	262	.97	11.2	90	48	32	26	21	17	15
MAY	27	996	163	186	1.14	6.8	120	60	40	31	25	19	16
JUNE	12	174	56	44	.79	2.3	183	80	55	47	42	37	34
JULY	11	239	76	46	.60	3.1							
AUGUST	21	632	166	126	.76	6.9							
SEPTEMBER	9.8	1355	186	268	1.44	7.7							
ANNUAL	48	629	200	154	.77	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1931-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1960	6080	11500	23400	37700	58700
3	1390	3910	6910	13000	19800	29300
7	1030	2480	3980	6660	9330	12700
15	725	1560	2360	3700	4980	6510
30	524	1050	1520	2280	2970	3780
60	364	731	1070	1640	2180	2820
90	299	616	923	1450	1960	2600

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1931-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
705	415	289	221	172	137	106	91	76	63	56	48	39	30	20

GILA RIVER BASIN

09432000 GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, NM

LOCATION.--Lat 32°38'53", long 108°50'43", in SE¼SW¼ sec.18, T.19 S., R.19 W., Grant County, Hydrologic Unit 15040002, on right bank at head of canyon, 1.4 mi downstream from Blue Creek, 10 mi east of Virden, 16 mi upstream from New Mexico-Arizona State line, and at mile 523.6.

DRAINAGE AREA.--3.203 mi², excluding Animas River Basin.

PERIOD OF RECORD.--May to November 1914, March to September 1915, July 1927 to current year. July 1927 to May 1931 monthly discharge only, published in WSP 1313, computed as sum of flow at Virden Bridge, 9 mi downstream, and in Sunset Canal. Published as Gila River near Duncan, AZ, 1914-15 and as Gila River at Fuller's Ranch, near Duncan, AZ, 1931-38.

REVISED RECORDS.--WSP 1283: Drainage area. WSP 1313: 1929, 1931-32(M).

GAGE.--Water-stage recorder. Altitude of gage is 3,875 ft, from river-profile map. May 11, 1914 to Sept. 30, 1915, at site 6 mi downstream, 1,000 ft upstream from intake of Sunset Canal. June 1 to July 7, 1931, nonrecording gage at present site and datum. Since April 18, 1980, supplementary gage on left bank 800 ft downstream at same datum., Since June 1980, crest-stage gage at supplementary gage site.

REMARKS.--Station is above all Duncan Valley diversions. Diversions for irrigation of about 6,200 acres above station.

AVERAGE DISCHARGE.--57 years (water years 1929-85), 188 ft³/s, 136,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,700 ft³/s Dec. 19, 1978, gage height, 29.00 ft from rating curve extended above 38,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 1 ft³/s July 14, 1934.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1929-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT						
							2 50%	5 20%	10 10%	20 5%	50 2%	100 1%	
OCTOBER	5.4	1667	150	273	1.82	6.4	1	5.9	3.0	2.2	1.7	1.3	1.1
NOVEMBER	35	707	111	105	.95	4.7	3	6.3	3.2	2.3	1.8	1.4	1.2
DECEMBER	48	2485	226	416	1.84	9.7	7	7.2	3.6	2.6	2.0	1.5	1.3
JANUARY	64	1387	233	298	1.28	10.0	14	9.5	4.5	3.1	2.2	1.6	1.2
FEBRUARY	61	1277	319	347	1.09	13.6	30	15	6.9	4.5	3.2	2.1	1.6
MARCH	45	1464	395	435	1.10	16.9	60	29	15	9.9	7.0	4.7	3.5
APRIL	28	1138	258	264	1.02	11.0	90	41	23	16	12	8.3	6.4
MAY	14	907	142	168	1.18	6.1	120	58	33	23	16	11	7.8
JUNE	4.4	183	46	43	.95	1.9	183	87	52	38	29	21	17
JULY	4.9	217	75	53	.70	3.2							
AUGUST	9.4	966	200	193	.97	8.6							
SEPTEMBER	4.9	1507	183	270	1.48	7.8							
ANNUAL	43	640	188	139	.74	100							

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1930-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	5.9	3.0	2.2	1.7	1.3	1.1
3	6.3	3.2	2.3	1.8	1.4	1.2
7	7.2	3.6	2.6	2.0	1.5	1.3
14	9.5	4.5	3.1	2.2	1.6	1.2
30	15	6.9	4.5	3.2	2.1	1.6
60	29	15	9.9	7.0	4.7	3.5
90	41	23	16	12	8.3	6.4
120	58	33	23	16	11	7.8
183	87	52	38	29	21	17

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1929-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1940	4910	8170	14300	20700	29100
3	1390	3340	5380	9040	12700	17400
7	982	2150	3260	5110	6840	8920
15	714	1450	2090	3080	3940	4920
30	526	1010	1410	1990	2460	2980
60	361	705	1000	1470	1880	2350
90	291	582	850	1290	1700	2200

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1929-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
692	404	280	209	165	138	106	88	74	59	51	42	31	20	9.1

GILA RIVER BASIN

09442680 SAN FRANCISCO RIVER NEAR RESERVE, NM

LOCATION.--Lat 33°44'12", long 108°46'14", in NE¼NW¼SE¼ sec.35, T.6 S., R.19 W., Catron County, Hydrologic Unit 15040004, on left bank 1,300 ft downstream from Rainbow Bridge Canyon, 1.7 mi northwest of Reserve, and at mile 563.1.

DRAINAGE AREA.--350 mi², approximately.

PERIOD OF RECORD.--March 1959 to current year.

REVISED RECORDS.--WDR NM-78-1: 1977. WRD Nm-84-1: 1973, 1979-80.

GAGE.--Water-stage recorder. Elevation of gage is 5,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 15, 1972 at site 1,800 ft upstream at different datum.

REMARKS.--Possible minor regulation by Luna Lake, 27 mi upstream. Diversions for irrigation of about 280 acres upstream from station.

AVERAGE DISCHARGE.--26 years (water years 1960-85), 28.3 ft³/s, 20,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,830 ft³/s, Oct. 1, 1983, gage height, 11.71 ft recorded, 11.3 ft, from outside floodmarks, from rating curve extended above 1,400 ft³/s on basis of slope-area measurement of peak flow; minimum, 1.0 ft³/s, Mar. 16, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 15 ft, as determined in 1962 from old floodmarks. Major floods of Nov. 26, 1905 and Dec. 3, 1906, exceeded 20,000 ft³/s at Alma (downstream). See WSP 1313.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1960-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1961-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	3.3	430	38	97	2.56	11.1	1	2.3	1.6	1.4	1.2	1.1	--
NOVEMBER	5.2	211	18	40	2.17	5.4	3	2.5	1.7	1.5	1.3	1.1	--
DECEMBER	5.1	159	24	40	1.65	7.1	7	2.8	1.9	1.6	1.4	1.2	--
JANUARY	5.7	78	19	20	1.04	5.6	14	3.0	2.1	1.7	1.5	1.3	--
FEBRUARY	5.1	178	36	46	1.28	10.5	30	3.5	2.4	1.9	1.7	1.4	--
MARCH	4.2	336	78	97	1.23	23.0	60	4.1	2.8	2.3	1.9	1.6	--
APRIL	3.4	398	57	86	1.50	16.9	90	4.7	3.3	2.7	2.3	2.0	--
MAY	2.8	162	18	32	1.77	5.3	120	5.7	4.2	3.5	3.0	2.5	--
JUNE	2.0	22	5.5	4.4	.80	1.6	183	7.2	5.2	4.8	4.5	4.3	--
JULY	1.8	28	8.8	6.4	.72	2.6							
AUGUST	4.6	79	16	15	.94	4.7							
SEPTEMBER	5.1	172	21	33	1.57	6.1							
ANNUAL	6.1	101	28	27	.94	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1960-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	261	1010	2250	5640	10600	--
3	181	652	1320	2890	4870	--
7	133	421	777	1510	2320	--
15	97	276	477	853	1240	--
30	72	197	331	574	818	--
60	51	134	222	381	541	--
90	41	108	178	306	434	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1960-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
113	56	32	23	18	14	9.6	7.9	6.8	5.8	5.3	4.8	4.3	3.6	2.8

GILA RIVER BASIN

09442692 TULAROSA RIVER ABOVE ARAGON, NM

LOCATION.--Lat 33°53'29", long 108°30'54", in NE¼NW¼ sec.9, T.5 S., R.16 W., Catron County, Hydrologic Unit 15040004, on right bank 0.4 mi upstream from first diversion, 1.4 mi northeast of Aragon, and 8 mi upstream from Apache Creek.

DRAINAGE AREA.--94 mi².

PERIOD OF RECORD.--July 1966 to current year. 1955 to 1965 at site 0.6 mi upstream (drainage area, 89 mi²), annual maximum only.

REVISED RECORD.--WDR NM-78-1: 1977.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No diversion above station.

AVERAGE DISCHARGE.--19 years (water years 1967-85), 3.47 ft³/s, 2,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 660 ft³/s Oct. 2, 1983, gage height, 3.90 ft in gage well, 4.23 ft from floodmarks, from rating curve extended above 80 ft³/s on basis of slope-area measurements at gage heights 3.13 ft and 3.90 ft; minimum, 1.1 ft³/s July 22, 1969.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1967-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1968-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
OCTOBER	2.6	11	3.5	2.0	.57	8.3	1	2.5	2.3	2.2	2.1	--	--
NOVEMBER	2.6	3.9	2.9	.3	.10	6.9	3	2.5	2.3	2.2	2.2	--	--
DECEMBER	2.6	7.7	3.6	1.4	.38	8.5	7	2.5	2.3	2.3	2.2	--	--
JANUARY	2.3	3.6	3.0	.3	.09	7.2	14	2.5	2.4	2.3	2.2	--	--
FEBRUARY	2.5	11	4.1	2.2	.54	9.9	30	2.6	2.5	2.4	2.3	--	--
MARCH	2.4	17	5.0	4.0	.80	12.1	60	2.7	2.6	2.5	2.4	--	--
APRIL	2.3	24	4.9	5.3	1.08	11.7	90	2.8	2.6	2.6	2.5	--	--
MAY	2.7	3.6	3.0	.2	.07	7.1	120	2.8	2.7	2.6	2.6	--	--
JUNE	2.4	3.2	2.9	.2	.07	6.9	183	2.8	2.7	2.7	2.7	--	--
JULY	2.5	4.2	3.0	.4	.12	7.2							
AUGUST	2.7	3.4	3.0	.2	.07	7.1							
SEPTEMBER	2.5	3.7	3.0	.3	.11	7.1							
ANNUAL	2.7	5.7	3.5	.8	.24	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1967-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	21	58	101	181	--	--
3	13	35	60	108	--	--
7	9.0	22	36	63	--	--
15	6.8	14	23	38	--	--
30	5.4	10	15	24	--	--
60	4.5	7.7	11	16	--	--
90	4.1	6.6	8.9	13	--	--

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1967-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
4.3	3.5	3.3	3.2	3.2	3.1	3.0	3.0	2.9	2.8	2.7	2.7	2.6	2.6	2.5

GILA RIVER BASIN

09443000 SAN FRANCISCO RIVER NEAR ALMA, NM

LOCATION.--Lat 33°22'05", long 108°54'35", in SW¼SE¼ sec.4, T.11 S., R.20 W., Catron County, Hydrologic Unit 15040004, on right bank 1.2 mi downstream from Alma, 4 mi northwest of Glenwood, 6 mi upstream from Whitewater Creek, and at mile 523.5.

DRAINAGE AREA.--1,546 mi².

PERIOD OF RECORD.--September 1904 to January 1914, fragmentary (see WSP 1313), January 1964 to current year. Prior to October 1911, published as "at Alma".

REVISED RECORD.--WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Elevation of gage is 4,840 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 11, 1912, nonrecording gages at various sites, within 500 ft of each other, 0.8 mi upstream, at different datums. Aug. 11, 1912, to Feb. 2, 1914, nonrecording gage at approximately present site and datum. Jan. 10, 1964 to Nov.1, 1972, at datum 3.00 ft higher.

REMARKS.--Diversions for irrigation of about 1,600 acres upstream from station.

AVERAGE DISCHARGE.--21 years (water years 1965-85), 88.4 ft³/s, 64,050 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,600 ft³/s, Oct. 2, 1983, gage height, 21.44 ft, present datum, from floodmarks in well, from rating curve extended above 9,000 ft³/s on basis of slope-area measurements at gage heights 18.16 ft and 21.44 ft; no flow many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred Jan. 19 and Oct. 14, 1916, when discharges of 60,000 ft³/s were computed at Clifton, Az.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1965-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1966-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	.1	1792	155	431	2.78	14.5	1	0.0	0.0	0.0	0.0	--	--
NOVEMBER	.2	502	42	109	2.60	3.9	3	0.0	0.0	0.0	0.0	--	--
DECEMBER	6.3	1009	141	292	2.07	13.2	7	0.0	0.0	0.0	0.0	--	--
JANUARY	6.9	420	71	108	1.53	6.6	14	0.0	0.0	0.0	0.0	--	--
FEBRUARY	2.5	586	130	185	1.42	12.2	30	.5	0.0	0.0	0.0	--	--
MARCH	0.0	870	225	277	1.23	21.1	60	.9	.1	0.0	0.0	--	--
APRIL	0.0	855	140	213	1.52	13.1	90	2.8	.5	0.0	0.0	--	--
MAY	0.0	427	47	96	2.04	4.4	120	7.2	2.0	.8	.3	--	--
JUNE	0.0	42	6.2	11	1.70	.6	183	11	6.2	5.0	4.4	--	--
JULY	1.0	40	15	12	.83	1.4							
AUGUST	4.1	251	48	55	1.14	4.5							
SEPTEMBER	.3	301	49	82	1.68	4.6							
ANNUAL	6.3	283	89	94	1.05	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1965-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT						
	2	5	10	25	50	100	
	50%	20%	10%	4%	2%	1%	
1	1500	6310	13200	28900	--	--	
3	898	3630	7470	16100	--	--	
7	574	2030	3830	7430	--	--	
15	370	1190	2130	3870	--	--	
30	249	751	1280	2210	--	--	
60	161	478	821	1430	--	--	
90	125	396	703	1280	--	--	

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1965-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
404	184	106	65	43	31	18	12	7.6	3.7	2.2	1.2	.5	0.0	0.0

GILA RIVER BASIN

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM

LOCATION.--Lat 33°14'48", long 108°52'47", in NE¼NW¼ sec.23, T.12 S., R.20 W., Catron County, Hydrologic Unit 15040004, on left bank 0.2 mi upstream from hot springs, 5 mi south of Glenwood, 6 mi downstream from Whitewater Creek, and at mile 511.5.

DRAINAGE AREA.--1,653 mi².

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1931, 1934, 1936-37, 1940-42, 1943-44(M), 1945-47. WSP 1283: Drainage area. WDR NM-78-1: 1977. WDR NM-79-1: 1973, 1975-77 (P).

GAGE.--Water-stage recorder. Elevation of gage is 4,560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Feb. 15, 1934, at site 4.5 mi upstream at datum 98.82 ft higher.

REMARKS.--Diversions for irrigation of about 2,000 acres upstream from station. Gage height and rain gage satellite telemeter at station.

AVERAGE DISCHARGE.--58 years (water years 1928-85), 82.9 ft³/s, 60,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,100 ft³/s, Oct. 2, 1983, gage height, 18.15 ft recorded, 20.80 ft from outside floodmarks, from rating curve extended above 4,200 ft³/s on basis of slope-area measurements at gage heights 10.74 ft, 15.6 ft and 20.8 ft; minimum, 1.5 ft³/s Aug. 6, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred Jan. 19 and Oct. 14, 1916 when discharges of 60,000 ft³/s or greater were computed for station at Clifton, AZ. On Nov. 26, 1905, a peak of 25,000 ft³/s was measured (by float-area method) at station at Alma (about 12 mi upstream, drainage area, 1,560 mi²); a similar measurement of 21,000 ft³/s was made at the Alma station for peak of Dec. 3, 1906.

STATISTICAL SUMMARIES

MEAN MONTHLY AND MEAN ANNUAL DISCHARGES 1928-85

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW BASED ON PERIOD OF RECORD 1929-85

MONTH	MINIMUM (FT ³ /S)	MAXIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF	PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL NON- EXCEEDANCE PROBABILITY, IN PERCENT					
								2	5	10	20	50	100
								50%	20%	10%	5%	2%	1%
OCTOBER	9.8	2026	92	297	3.24	9.2	1	9.9	6.2	4.7	3.8	2.9	2.4
NOVEMBER	11	520	42	66	1.58	4.2	3	11	7.1	5.6	4.6	3.6	3.1
DECEMBER	13	1068	86	188	2.19	8.6	7	12	8.3	6.8	5.7	4.7	4.2
JANUARY	14	509	76	110	1.44	7.7	14	13	9.5	7.9	6.7	5.6	5.0
FEBRUARY	15	602	111	158	1.42	11.2	30	15	11	9.6	8.5	7.4	6.8
MARCH	11	1036	182	237	1.30	18.3	60	18	13	11	10	9.1	8.4
APRIL	10	1049	138	190	1.38	13.9	90	20	15	13	11	9.9	9.1
MAY	8.7	593	71	102	1.43	7.2	120	23	17	15	14	12	11
JUNE	5.7	93	27	18	.69	2.7	183	29	22	19	18	17	16
JULY	13	108	37	18	.49	3.8							
AUGUST	14	392	76	67	.87	7.7							
SEPTEMBER	7.7	282	56	49	.87	5.7							
ANNUAL	14	351	83	79	.95	100							

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW BASED ON PERIOD OF RECORD 1928-85

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND ANNUAL EXCEEDANCE PROBABILITY, IN PERCENT					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	854	2730	5330	11400	19200	31300
3	542	1680	3220	6750	11200	17800
7	363	1020	1820	3540	5550	8440
15	257	659	1120	2020	3020	4370
30	191	455	737	1260	1800	2500
60	139	326	525	892	1270	1760
90	112	267	438	765	1110	1580

DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1928-85

DISCHARGE, IN FT ³ /S, THAT WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME														
5%	10%	15%	20%	25%	30%	40%	50%	60%	70%	75%	80%	85%	90%	95%
303	155	100	73	57	47	36	31	26	23	21	19	17	15	12