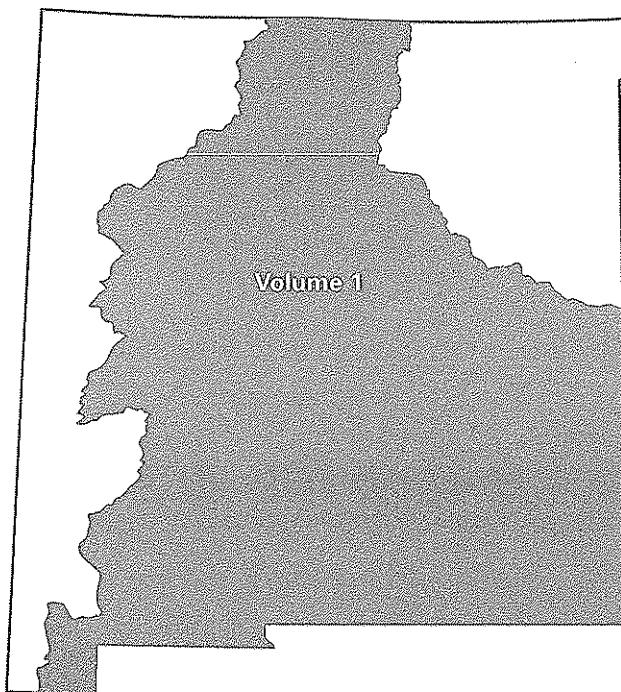


Water Resources Data New Mexico Water Year 1998

**Volume 1. The Rio Grande Basin, the Mimbres River
Basin, and the Tularosa Valley Basin**

Water-Data Report NM-98-1



**U.S. Department of the Interior
U.S. Geological Survey**



**Prepared in cooperation with the
State of New Mexico
and with other agencies**

CALENDAR FOR WATER YEAR 1998

1997

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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1998

JANUARY							FEBRUARY							MARCH						
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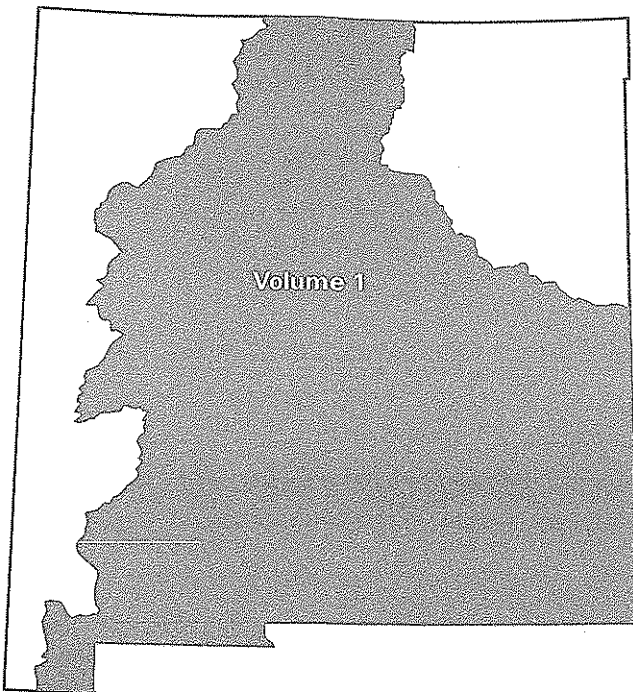
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JULY							AUGUST							SEPTEMBER						
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26	27	28	29	30	31		23	24	25	26	27	28	29	27	28	29	30			
							30	31												

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1998

JANUARY							FEBRUARY							MARCH						
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APRIL							MAY							JUNE						
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26	27	28	29	30			24	25	26	27	28	29	30	28	29	30				
							31													

JULY							AUGUST							SEPTEMBER					
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
			1	2	3	4							1			1	2	3	4
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12	13	14	15	16	17	18	9	10	11	12	13	14	15	13	14	15	16	17	18
19	20	21	22	23	24	25	16	17	18	19	20	21	22	20	21	22	23	24	25
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PREFACE

This annual hydrologic data report of New Mexico is one of a series of annual reports that documents hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and the quality of water provide the hydrologic information needed by Federal, State, and local agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey of the New Mexico District who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policies and guidelines.

The following personnel are recognized for their significant contributions to this report:

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This report was prepared under the general supervision of Linda S. Weiss, District Chief, New Mexico, and in cooperation with the State of New Mexico and with other agencies.

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SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

[Letters after station names designate type of data: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (r) radiochemical, (s) sediment, (t) daily water temperature, (e) elevation, (v) contents]

Station
Number Page

WESTERN GULF OF MEXICO BASINS

RIO GRANDE BASIN

RIO GRANDE NEAR LOBATOS, CO (c,d,m,s)	08251500	29
COSTILLA CREEK ABOVE COSTILLA DAM, NM (d)	08252500	33
CASIAS CREEK NEAR COSTILLA, NM (d)	08253000	35
SANTISTEVAN CREEK NEAR COSTILLA, NM (d)	08253500	37
COSTILLA RESERVOIR NEAR COSTILLA, NM (v)	08253900	39
COSTILLA CREEK BELOW COSTILLA DAM, NM (d)	08254000	40
COSTILLA CREEK NEAR COSTILLA, NM (d)	08255500	42
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RED RIVER NEAR QUESTA, NM (d)	08265000	48
RED RIVER BELOW FISH HATCHERY, NEAR QUESTA, NM (d)	08266820	50
RIO HONDO NEAR VALDEZ, NM (c,d)	08267500	52
RIO PUEBLO DE TAOS NEAR TAOS, NM (d)	08269000	55
RIO LUCERO NEAR ARROYO SECO, NM (d)	08271000	57
RIO GRANDE DEL RANCHO NEAR TALPA, NM (d)	08275500	59
RIO PUEBLO DE TAOS BELOW LOS CORDOVAS, NM (c,d)	08276300	61
RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM (c,d,m)	08276500	64
RIO PUEBLO NEAR PENASCO, NM (d)	08277470	68
RIO SANTA BARBARA NR PENASCO, NM (d)	08278500	70
EMBUDO CREEK AT DIXON, NM (d)	08279000	72
RIO GRANDE AT EMBUDO, NM (c,d)	08279500	74
RIO CHAMA NEAR LA PUENTE, NM (c,d,s)	08284100	77
WILLOW CREEK:		
AZOTEA CREEK:		
AZOTEA TUNNEL AT OUTLET, NEAR CHAMA, NM (d)	08284160	80
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HORSE LAKE CREEK ABOVE HERON RESERVOIR, NEAR LOS OJOS, NM (d)	08284300	84
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ABIQUIU RESERVOIR NEAR ABIQUIU, NM (v)	08286900	93
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RIO CHAMA NEAR CHAMITA, NM (c,d,m,s)	08290000	98
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NAMBE FALLS RESERVOIR NEAR NAMBE, NM (v)	08294200	105
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TESUQUE CREEK ABOVE DIVERSIONS NEAR SANTA FE, NM (d)	08302500	108
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COCHITI LAKE:		
SANTA FE RIVER:		
MCCLURE RESERVOIR NEAR SANTA FE, NM (v)	08315500	117
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NICHOLS RESERVOIR NEAR SANTA FE, NM (v)	08316500	120
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HAHN ARROYO		
CAMPUS WASH AT ALBUQUERQUE, NM (d)	08329700	145
NORTH FLOODWAY CHANNEL AT ALBUQUERQUE, NM (d)	08329835	147
SOUTH FORK HAHN ARROYO AT ALBUQUERQUE, NM (d)	08329838	148

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Number Page

WESTERN GULF OF MEXICO BASINS

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NORTH FORK HAHN ARROYO AT ALBUQUERQUE, NM (d)	08329839	149
HAHN ARROYO AT ALBUQUERQUE, NM (d)	08329840	150
GRANT LINE ARROYO AT VILLA DEL OSO AT ALBUQUERQUE, NM (d)	08329860	151
PINO ARROYO AT VENTURA BOULEVARD AT ALBUQUERQUE, NM. (d)	08329872	152
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PECOS RIVER NEAR ACME, NM (c,d)	08386000	285
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TWO RIVERS RESERVOIR NEAR ROSWELL, NM (v)	08390600	295
RIO HONDO BELOW DIAMOND A DAM, NEAR ROSWELL, NM (d)	08390800	296
RIO HONDO NEAR ROSWELL, NM (d)	08393610	297

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RIO GRANDE BASIN - CONTINUED		
PECOS RIVER NEAR LAKE ARTHUR, NM (d)	08395500	299
PECOS RIVER NEAR ARTESIA, NM (c,d,m,s)	08396500	301
RIO PENASCO AT DAYTON, NM (d)	08398500	305
PECOS RIVER (KAISER CHANNEL) NEAR LAKEWOOD, NM (d)	08399500	306
FOURMILE DRAW NEAR LAKEWOOD, NM (d)	08400000	308
BRANTLEY LAKE NEAR CARLSBAD, NM (v)	08401450	309
PECOS RIVER BELOW BRANTLEY DAM NEAR CARLSBAD, NM (c,d)	08401500	310
ROCKY ARROYO AT HIGHWAY BRIDGE, NEAR CARLSBAD, NM (d)	08401900	312
PECOS RIVER AT DAMSITE 3, NEAR CARLSBAD, NM (d)	08402000	313
LAKE AVALON:		
CARLSBAD MAIN CANAL AT HEAD, NEAR CARLSBAD, NM (d)	08403500	315
LAKE AVALON NEAR CARLSBAD, NM (v)	08403800	317
PECOS RIVER BELOW AVALON DAM, NM (d)	08404000	318
DARK CANYON DRAW AT CARLSBAD, NM (d)	08405150	319
PECOS RIVER BELOW DARK CANYON DRAW, AT CARLSBAD, NM (c,d)	08405200	320
BLACK RIVER ABOVE MALAGA, NM (d)	08405500	323
PECOS RIVER NEAR MALAGA, NM (c,d)	08406500	325
PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM (c,d)	08407000	328
PECOS RIVER AT RED BLUFF, NM (c,d,m,s)	08407500	331
DELAWARE RIVER NEAR RED BLUFF, NM (d)	08408500	333
RED BLUFF RESERVOIR NEAR ORLA, TX (v)	08410000	335
PECOS RIVER NEAR ORLA, TX (c,d)	08412500	336
MIMBRES RIVER:		
MIMBRES RIVER AT MIMBRES, NM (d)	08477110	340
TULAROSA VALLEY BASIN:		
SALT CREEK NEAR TULAROSA, NM (c,d)	08480595	342

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record surface-water discharge stations (gaging stations) in New Mexico have been discontinued. Daily streamflow records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as crest-stage partial-record stations. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

Station name	Station number	Drainage area (mi ²)	Period of record
BRAZOS RIVER BASIN			
Running Water Draw near Clovis, NM	08080600*	109	1956-64
RIO GRANDE BASIN			
Latir Creek Outflow Lake #9 near Amalia, NM	08254400	--	1987-88
Latir Creek Outflow Lake #2 near Amalia, NM	08254425	--	1986-88
Costilla Creek near Amalia, NM	08254500	152	1949-59, 1961-81
Ute Creek near Amalia, NM	08255000	12	1949-59
Acequia Madre at Costilla, NM	08256000	--	1944-92
Mesa ditch near Garcia, CO	08256500	--	1944-65, 1969-83
Middle ditch at Garcia, CO	08257000	--	1944-56
Cerro Canal at Costilla, NM	08258000	--	1944-92
Association ditch at Costilla, NM	08258500	--	1955-71
Cerro Canal below Association Ditch at Costilla, NM	08258600	--	1972-92
Cerro Canal near Jaroso, CO	08259000	--	1944-72
Cerro Canal at State line near Jaroso, CO	08259600	--	1973-92
Penasquito ditch at Costilla, NM	08260000	--	1955-61
Costilla Creek below diversion dam, at Costilla, NM	08260500	197	1952-86
Alire ditch at Garcia, CO	08261500	--	1944-59
Costilla Creek near Jaroso, CO (near Mouth, NM	08262500	290	1912-13, 1948-61
Latir Creek near Cerro, NM	08263000	10	1937-70
Red River near Red River, NM	08264000	19.1	1940-64
Red River below Zwergle Damsite, near Red River, NM	08264500	25.7	1963-73
Cabresto Creek near Questa, NM	08266000	36.7	1943-96
Red River below Questa, NM	08266500	180	1910-22
Red River at mouth, near Questa, NM	08267000	190	1950-78
Rio Hondo at Valdez, NM	08268000	38	1916-34
Rio Hondo at Damsite at Valdez, NM	08268200	40.3	1963-66
Arroyo Hondo at Arroyo Hondo, NM	08268500	65.6	1912-28, 1932-85
Rio Grande near Arroyo Hondo, NM	08268700	8,760	1963-96
Acequia Madre at Taos, NM	08269500	--	1940-41
North channel of Rio Pueblo de Taos at Taos, NM	08270000	80	1936-41

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
RIO GRANDE BASIN--Continued			
Rio Pueblo de Taos at Taos, NM	08270500	80	1936-41
Tenorio ditch near Arroyo Seco, NM	08271500	--	1935-50
Rio Lucero diversions near Arroyo Seco, NM	08272000	--	1932-33
Indian ditch near Arroyo Seco, NM	08272500	--	1934-50
Seco ditch near Arroyo Seco, NM	08273000	--	1934-50
Juan Manuel ditch near Arroyo Seco, NM	08273500	--	1935-50
Prado ditch near Arroyo Seco, NM	08274000	--	1934-50
Rio Lucero below diversions, near Arroyo Seco, NM	08274500	25	1934-41
Rio Fernando de Taos near Taos, NM	08275000	71.7	1912-17, 1927-28, 1962-80
Rio Pueblo de Taos near Ranchito, NM	08275300	199	1957-80
Rio Chiquito near Talpa, NM	08275600	37.0	1957-80
Rio Pueblo de Taos at Los Cordovas, NM	08276000	359	1910-65
Carson Reservoir near Carson, NM	08277000	190	1940-60
Picuris ditch near Penasco, NM	08277500	--	1936-41
Pueblo Creek near Penasco, NM	08278000	--	1936-41
Alcalde ditch at Chamita, NM	08280000	--	1936-41
San Rafael ditch at Alcalde, NM	08280500	--	1936-41
Acequia Madre at Alcalde, NM	08281000	--	1936-41
Rio Grande above San Juan Pueblo, NM	08281100	10,530	1963-87
Rio Chama near Chama, NM	08281500	--	1912-16
Rio Brazos near Brazos, NM	08282000	--	1913-17
Chavez Creek near Brazos, NM	08282500	--	1914-15
Rio Brazos at Brazos, NM	08283000	--	1912-13
Rio Chama at Park View, NM	08283500	405	1912-15, 1916, 1924-55
Rito de Tierra Amarilla at Tierra Amarilla, NM	08284000	49.7	1914-15
Willow Creek near Park View, NM	08284500	193	1936-71
Rio Nutrias near Cebolla, NM	08286000	--	1914-15
Canjilon Creek near Canjilon, NM	08286600	--	1911-12, 1913
Rio Chama at Abiquiu, NM	08287100	--	1895-97
Rio Chama near Abiquiu, NM	08287500	2,284	1941-67
El Rito Creek near El Rito, NM	08288000	50.5	1931-51
Rio Vallecitos at Vallecitos, NM	08288500	--	1911-14
Santa Clara ditch near Espanola, NM	08290500	--	1936-41

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
RIO GRANDE BASIN--Continued			
Santa Cruz River at Riverside, NM	08291500	188	1942-51
Santa Clara Creek near Espanola, NM	08292000	34.5	1936-41, 1949-50, 1984-94
Hill Acequia at head, near Espanola, NM	08292500	--	1940-41
Hill Acequia near Espanola, NM	08293000	--	1940
Guachupangue ditch near Espanola, NM	08293500	--	1936-41
San Ildefonso ditch near Espanola, NM	08294000	--	1940-41
Rio Nambe at Nambe Falls, NM	08294300	25.1	1963-78
Nambe Canal near Nambe, NM	08294500	--	1932-51
Rio Nambe near Nambe, NM	08295000*	38.2	1932-51
Rio En Medio near Santa Fe, NM	08295200	.63	1963-73
Llano Frio ditch near Nambe, NM	08295500	--	1936-50
Llano ditch near Nambe, NM	08296000	--	1936-50
Mioses Pena ditch near Nambe, NM	08296500	--	1936-38
Mocha ditch at Nambe, NM	08297000	--	1936-50
Comunidad ditch at Nambe, NM	08297500	--	1936-50
Ortiz ditch at Nambe, NM	08298000	--	1936-50
Canyon ditch near Nambe, NM	08298500	--	1936-50
Acequia Rincon near Nambe, NM	08299000	--	1936-50
Las Joyas ditch near Nambe, NM	08299500	--	1936-50
Trujillo ditch near Nambe, NM	08300000	--	1936-45
Barranco Alto ditch near Nambe, NM	08300500	--	1936-50
Pojoaque River at Pojoaque Bridge, near Nambe, NM	08301000	--	1936-41
Jacona ditch near Nambe, NM	08301500	--	1936-39
Jacona ditch near San Ildefonso, NM	08302000	--	1940-48
North Fork Tesuque Creek near Santa Fe, NM	08302200	1.60	1962-73
Middle Fork Tesuque Creek near Santa Fe, NM	08302300	.43	1961-73
South Fork Tesuque Creek near Santa Fe, NM	08302400	.47	1962-73
Tesuque Creek above diversions near Santa Fe, NM	08302500	11.7	1936-52
Cajon Grande ditch near Santa Fe, NM	08303000	--	1936-41
De La Cruz ditch near Santa Fe, NM	08303500	--	1936-41
Acequia Madre near Santa Fe, NM	08304000	--	1936-41
Acequia Madre at head, near Santa Fe, NM	08304050	--	1936-41
Little Tesuque Creek near Santa Fe, NM	08304100	.64	1962-73
Little Tesuque Creek tributary No. 4 near Santa Fe, NM	08304200	.69	1964-73

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
RIO GRANDE BASIN--Continued			
Little Tesuque Creek tributary No. 3 near Santa Fe, NM	08304300	.65	1963-73
Little Tesuque Creek tributary No. 2 near Santa Fe, NM	08304400	.45	1962-73
Little Tesuque Creek near Santa Fe, NM	08305000	7.06	1936-41
Rio Tesuque at Tesuque, near Santa Fe, NM	08305500	--	1938-41
Acequia Medio near Santa Fe, NM	08306000	--	1936-46
Acequia Medio at waste, near Santa Fe, NM	08306500	--	1936-38
Hubbard ditch near Santa Fe, NM	08307500	--	1938-41
Mitchell ditch near Santa Fe, NM	08308000	--	1936-51
Post ditch near Tesuque Pueblo, NM	08308500	--	1936-41
Qwiyo ditch near Tesuque Pueblo, NM	08309000	--	1936-41
Corral ditch near Tesuque Pueblo, NM	08309500	--	1936-41
Acequia Indios near San Ildefonso, NM	08310000	--	1936-41
Acequia de la Otra Banda near San Ildefonso, NM	08310500	--	1936-41
El Rancho ditch near San Ildefonso, NM	08311000	--	1936-41
San Antonio ditch near San Ildefonso, NM	08311500	--	1936-41
Well ditch at San Ildefonso, NM	08312000	--	1937, 1938-51
Ortiz ditch at San Ildefonso, NM	08312500	--	1936-41
Pojoaque River near San Ildefonso Pueblo, NM	08312600	184	1972-79
Los Alamos Canyon near Los Alamos, NM	08313042	9.1	1970-71 1991-95
Rito de los Frijoles near Los Alamos, NM	08313300	8.9	1959-63
Rito de los Frijoles in Bandelier National Monument, NM	08313350	18.1	1963-69 1977-82 1983-96
Rio Grande at Cochiti, NM	08314500	14,600	1924-70
Santa Fe River at Monument Rock, near Santa Fe, NM	08315000	14	1910
Galisteo Creek above Galisteo Reservoir, NM	08317850	567	1970-76
Galisteo Creek at Domingo, NM	08318000	640	1941-71
San Felipe east side acequia near Domingo, NM	08318500	--	1936-41
Rito San Antonio near Los Alamos, NM	08319500	--	1949-50
Redondo Creek near Jemez Springs, NM	08319945	12.1	1982-85
Sulfur Creek near Jemez Springs, NM	08319950	38.0	1982-85
Jemez River near Jemez Springs, NM	08320000	--	1949-50
East Fork Jemez River near Los Alamos, NM	08320500	--	1949-50
East Fork Jemez River near Jemez Springs, NM	08321000	--	1949-50
Jemez River below East Fork, near Jemez Springs, NM	08321500	173	1951-90

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

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Station name	Station number	Drainage area (mi ²)	Period of record
RIO GRANDE BASIN--Continued			
Rio Las Vacas near Cuba, NM	08322000	--	1939-41
Rio Cebolla near Jemez Springs, NM	08322500	--	1939
Rio Guadalupe at Box Canyon near Jemez, NM	08323000	235	1938-42
Rio Guadalupe near Jemez Springs, NM	08323500	230	1938-42, 1949-50
Jemez east side ditch near Jemez, NM	08324500	-	1936-41
Jemez west side ditch near Jemez, NM	08325000	--	1936-41
Antonio Pecos ditch near Jemez, NM	08325500	--	1936-41
San Ysidro ditch near San Ysidro, NM	08326000	--	1936-41
Jemez River at San Ysidro, NM	08326500	854	1937-41
Zia ditch near San Ysidro, NM	08327000	--	1936-41
Zia Reservoir near San Ysidro, NM	08327500	2.4	1954-60
Jemez River above Jemez Canyon Dam, NM	08328000	961	1953-58
Piedra Lisa Arroyo near Bernalillo, NM	08329100	4.1	1955-74
Rio Grande near Bernalillo, NM	08329500	17,300	1941-69
Grant Line Arroyo at Albuquerque, NM	08329865	0.052	1987-91
Hoffmantown Church Outlet No. 1 at Albuquerque, NM	08329873	.00859	1990-97
Hoffmantown Church Outlet No. 2 at Albuquerque, NM	08329874	.0413	1990-97
Cherry Hills Arroyo No. 1 at Albuquerque, NM	08329875	0.147	1990-97
Cherry Hills Arroyo No. 2 at Albuquerque, NM	08329876	0.796	1990-97
Pino Arroyo at Wyoming Blvd at Albuquerque, NM	08329877	5.80	1990-97
Taylor Ranch Drain at Albuquerque, NM	08329936	0.132	1978-97
Rio Grande near Alameda, NM	08329928	17,263	1989-95
Rio Grande at Rio Bravo Bridge near Albuquerque, NM	08330150	17,500	1991-95
Tijeras Arroyo at Albuquerque, NM	08330500*	75.3	1921-22, 1943-49
Tijeras Arroyo above Four Hills Bridge at Albuquerque, NM	08330505	77.0	1989-91
Tijeras Arroyo at Kirtland Air Force Base, NM	08330560	80.6	1987-88
Arroyo Del Coyote near Albuquerque, NM	08330565	35	1989-95
Arroyo Del Coyote at Mouth near Albuquerque, NM	08330567	39	1989-95
Tijeras Arroyo below Arroyo Del Coyote near Albuquerque, NM	08330569	121	1989-95
Tijeras Arroyo at Montessa Park near Albuquerque, NM	08330580	122	1987-95
Tijeras Arroyo below South Diversion Channel Inlet near Albuquerque, NM	08330800	--	1974-88
Rio Grande near Isleta, NM	08331000	17,900	1925-29, 1936-38
North Pajarito Arroyo at Albuquerque, NM	08331130	.58	1979-87

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
RIO GRANDE BASIN--Continued			
North Pajarito Arroyo at Albuquerque, NM	08331140	.81	1979-83
Rio Grande near Belen, NM	08331500	18,230	1941-57
Rio Grande near Bernardo, NM	08332000	19,230	1936-39, 1941-64
Lower San Juan Riverside drain near Bernardo, NM	08332030	--	1954-75
La Jara Creek near La Jara, NM	08332500	--	1932-33
Rio Puerco near Cabezón, NM	08333000	360	1943-51
Rio Puerco at Cabezón, NM	08333500	397	1944-51
Papers Wash near Star Lake Trading Post, NM	08334300	20.3	1978-82
Arroyo Chico near Guadalupe, NM	08340500	1,390	1943-86
Rio Puerco near Guadalupe, NM	08341000	1,860	1943
Bluewater Creek near Bluewater, NM	08342000	209	1912-19, 1927-72
San Mateo Creek near San Mateo, NM	08342600	75.6	1977-82
Arroyo del Puerto near San Mateo, NM	08342700	96.8	1980-82
Rio San Jose at Grants	08343000	1,020	1949-66, 1968-94
Grants Canyon at Grants	08343100	13	1961-95
McCartys south side ditch near San Fidel, NM	08344000	--	1940-42, 1950-51
McCartys north side ditch near San Fidel, NM	08344500	--	1940-42, 1950-51
Acomita Reservoir outlet near San Fidel, NM	08345000	--	1938-41
Rio San Jose near San Fidel, NM	08345500	2,310	1936-42, 1950-51
Seama-Paraje ditch near Casa Blanca, NM	08346000	--	1937-41
Casa Blanca ditch at Casa Blanca, NM	08346500	--	1937-41
New Laguna ditch wasteway near Casa Blanca, NM	08347000	--	1937-41
New Laguna ditch near New Laguna, NM	08347500	--	1937-41
Rio San Jose near Casa Blanca, NM	08348000	--	1936-41
Encinal Creek near Casa Blanca, NM	08348500*	6.19	1937-39
Laguna ditch at New Laguna, NM	08349000	--	1936-41
Paguate Creek near Laguna, NM	08349500	--	1937-41
Rio Paguate below Jackpile Mine near Laguna, NM	08349800	107	1976-93
Paguate Reservoir outlet near Laguna, NM	08350000	--	1940-41
Rio San Jose near Laguna, NM	08350500	3,040	1937-41, 1973-76
Mesita ditch near Laguna, NM	08351000	--	1936-41
Rio San Jose at Correo, NM	08351500	3,660	1943-94

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

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Station name	Station number	Drainage area (mi ²)	Period of record
RIO GRANDE BASIN--Continued			
Rio Puerco at Rio Puerco, NM	08352500	6,590	1909-12, 1934-76
Alamo Creek near Alamo, NM	08353130	22.4	1983-85
Rio Salado near Alamo, NM	08353150	540	1983-85
Rio Salado near San Acacia, NM	08354000	1,380	1947-84
Rio Grande at San Acacia, NM	08355000	26,770	1936-64
Nogal Arroyo Floodway near Socorro, NM	08355200	--	1969-77
Arroyo de la Matanza near Socorro, NM	08355300	46.0	1969-77
Rio Grande at San Antonio, NM	08355500	27,400	1951-57
Socorro Main Canal South near San Antonio, NM	08356000	--	1937-38, 1948-71
San Antonio Riverside Drain near San Antonio, NM	08356500	--	1948-71
Elmendorf Interior Drain near San Antonio, NM	08357000	--	1936-38, 1948-71
San Antonio Riverside Drain near San Marcial, NM	08357500	--	1948-71
Rio Grande Conveyance Channel below heading, near San Marcial, NM	08358000	--	1953-57
Rio Grande at San Marcial, NM	08358500	27,700	1895-1964
Milligan Gulch near San Marcial, NM	08358550	413	1968-78
Rio Grande Conveyance Channel at mouth of Nogal Canyon, near Truth or Consequences, NM	08359000	--	1953-57
Rio Grande at the narrows, in Elephant Butte Reservoir, NM	08359500	28,500	1951-57
Alamosa Creek near Monticello, NM	08360000*	403	1931-42
Las Cruces Arroyo near Las Cruces, NM	08363600	13.5	1958-66
Tortugas Arroyo near Las Cruces, NM	08363700	20.7	1962-74
Rio Grande at Vinton Bridge near Anthony, TX	08363840	28,680	1970-74
Pecos River near Cowles, NM	08378000	189	1910-19
Pecos River near San Jose, NM	08379000	539	1939-40
Tecolote Creek below Wright Canyon near El Porvenir, NM	08379187	5.42	1987-92
Tecolote Creek near San Pablo, NM	08379200	83	1960-65
South Fork Gallinas Creek near El Porvenir, NM	08380000	25	1911-20
Gallinas Creek at Montezuma, NM	08381000	87	1903, 1904-66
Storrie feeder canal near Las Vegas, NM	08381500	--	1949-52
Gallinas River near Lourdes, NM	08382000	313	1951-63
Pecos River near Colonias, NM	08382700	2,340	1970-74
Los Esteros Creek above Santa Rosa Lake, NM	08382730	65.6	1993-97
Los Esteros Creek Tributary above Santa Rosa Lake, NM	08382760	13.7	1973-90

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
RIO GRANDE BASIN--Continued			
Pecos River above Los Esteros Dam Site, near Santa Rosa, NM	08382800	2,430	1965-77
Pecos River at Santa Rosa, NM	08383000	2,650	1928-92
Pecos River near Fort Sumner, NM	08385500	5,300	1904-10, 1912-13, 1921-23
Pecos River below Fort Sumner, NM	08385520	5,600	1957-58, 1962-70
Pecos River below Yeso Arroyo, near Fort Sumner, NM	08385620	7,000	1965-68
Pecos River above Huggins Creek, near Roswell, NM	08385640	7,800	1965-68
F. Herrera ditch S. at Hollywood, NM	08386900	--	1973-84
Rio Ruidoso near Glencoe, NM	08387500	--	1910-11
Eagle Creek near Alto, NM	08387800	15.7	1969-80
Rio Ruidoso at Hondo, NM	08388000	290	1930-55
Rio Bonito at Angus, NM	08388500	45.5	1930-31
Rio Bonito at Hondo, NM	08389500	295	1930-55
Rio Hondo at Hondo, NM	08390000	1,000	1930-31 1981-97
Rio Hondo at Picacho, NM	08390100	715	1908-9, 1956-62
Rio Hondo at Hondo Reservoir site, near Roswell, NM	08392500	970	1903-5
Rio Hondo below reservoir outlet, near Roswell, NM	08393000	--	1908
Taylor-Moore ditch near Roswell, NM	08393100	--	1905
Rocky Arroyo above Two Rivers Reservoir near Roswell, NM	08393200	31	1963-80
Rocky Arroyo below Rocky Dam, near Roswell, NM	08393300	65	1963-80
Rio Hondo at Roswell, NM	08393500	--	1903-6 1981-97
North Spring River at Roswell, NM	08393600	19.5	1958-77
Pecos River near Roswell, NM	08394000	--	1903-6
Pecos River near Hagerman, NM	08394100	13,360	1968-90
Rio Felix at old highway bridge near Hagerman, NM	08394500	932	1939-87
Rio Felix near Hagerman, NM	08395000	934	1932-39
Cottonwood Creek near Lake Arthur, NM	08396000	199	1932-65
Rio Penasco at Elk, NM	08397450	--	1910-11
Rio Penasco near Elk, NM	08397500	--	1911
Rio Penasco near Dunken, NM	08397600*	583	1956-62
Pecos River below McMillan Dam, NM	08401000	16,990	1906-09, 1910-11, 1939-40, 1946-88

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
RIO GRANDE BASIN--Continued			
Pecos River above Seven Rivers near Lakewood, NM	08401100	17,000	1974-87
Pecos River below Avalon Dam, NM	08404500	--	1940
Pecos River at Carlsbad, NM	08405000	8,100	1903-09, 1907-08, 1914-15, 1920-69
Rattlesnake Springs near White City, NM	08405300	--	1961-62
Black River at Malaga, NM	08406000	360	1939-40
MIMBRES RIVER BASIN			
Mimbres River at McKnight Dam Site, near Mimbres, NM	08476300	97.3	1963-72
Bear Canyon near Mimbres, NM	08476500	14.5	1937-55
Mimbres River near Mimbres, NM	08477000	152	1921-76
Mimbres River near Faywood, NM	08477500	440	1909-11, 1912-14, 1916-17, 1920-21, 1927-55, 1963-68
Mimbres River near Spalding, NM	08477530	472	1963-68
San Vicente Arroyo at Silver City, NM	08477600	26.5	1953-65
Rio de Arena near Hurley, NM	08477700	16	1913-14
Stevens Creek near Fort Bayard, NM	08478004	--	1907-12, 1912-14
Cameron Creek at Fort Bayard, NM	08478008	--	1911-13
Cameron Creek near Hurley, NM	08478012	46	1913-14
Whitewater Creek at Hurley, NM	08478016	35	1913-14
Wamel Canal at head, near Deming, NM	08478300	--	1963-68
Mimbres River below Wamel heading near Deming, NM	08478400	1,101	1963-68
TULAROSA VALLEY			
Three Rivers near Three Rivers, NM	08480600	6.9	1956-58
Indian Creek near Three Rivers, NM	08480700*	6.8	1956-58
Indian Creek flume near Three Rivers, NM	08480800	--	1956-58
Indian Creek at Mouth, near Three Rivers, NM	08480900	10.9	1956-58
Rio Tularosa at Mescalero, NM	08481300	--	1910-11
Tularosa Creek near Bent, NM	08481500	120	1947-96
Rio Tularosa near Tularosa, NM	08482000	--	1938-47
Rio La Luz near La Luz, NM	08483000	30	1911-12
Rio Fresno near Mountain Park, NM	08484000	44	1911-12

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
TULAROSA VALLEY BASIN--Continued			
Rio La Luz at La Luz, NM	08484500	74	1910-13
Alamogordo-La Luz ditch at La Luz, NM	08485000	--	1934-49
Alamo Creek at Woods Ranch, near Alamogordo, NM	08485500	--	1931-37
Alamogordo water supply near Alamogordo, NM	08486000	--	1932-51
Tularosa Valley tributary near White Sands, NM	08486250	17.2	1965-74
Tularosa Valley tributary at White Sands, NM	08486260	21.0	1965-74
SALT CREEK BASIN			
Sacramento River near Sunspot, NM	08492900	12.8	1984-89
			1951-58

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following stations were discontinued as continuous-record surface-water-quality stations prior to the 1990 water year. Records of (c) chemical, (b) biological, (m) microbiological, (s) sediment, or (t) daily water temperature were collected and published for the record shown for each station.

An inventory of chemical data analyzed prior to 1962 can be found in U.S. Geological Survey Water-Supply Paper 1786, "Inventory of Published and Unpublished Chemical Analyses of Surface Water in the Continental United States and Puerto Rico, 1961."

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record
Rio Grande above Culebra Creek near Lobatos, CO	08249200	--	b,c,t	1962-69
Costilla Creek near Costilla, NM	08255500	195	c,s	1966-76
Rio Grande near Cerro, NM	08263500	8,440	c,m,s	1977; 1979-87
Rio Grande above Red River near Cerro, NM	08263510	--	c,m,s	1979-81
Red River near Red River, NM	08264000	19.1	s	1963
Red River below Zwergle Damsite near Red River, NM	08264500	28.9	c,m,s	1962-65 1979-82
Red River at MolyCorp Mine near Red River, NM	08264970	78.3	c,m,s	1979-82
Red River near Questa, NM	08265000	113	c,m,s	1979-87
Cabresto Creek near Questa, NM	08266000	26.7	c,m,s	1979-82
Red River below Questa, NM	08266500	160	c,m,s	1979-87
Red River above State Fish Hatchery near Questa, NM	08266790	175	c,m,s	1979-87 1994
Red River at Fish Hatchery near Questa, NM	08266800	185	c,k,s,t	1966-77
Red River below Fish Hatchery, near Questa, NM	08266820	185	c,m,s	1978-87
Red River at mouth, near Questa, NM	08267000	190	c,m,s	1966-68; 1979-85
Rio Grande above Rio Hondo at Dunn Bridge, NM	08267400	8,690	c,m,s	1979-87
Rio Hondo at Damsite at Valdez, NM	08268200	40.3	s	1962-65
Arroyo Hondo at Arroyo Hondo, NM	08268500	65.6	c,m,s	1979-82
Rio Grande del Rancho near Talpa, NM	08275500	83	s	1962-65
Embudo Creek at Dixon, NM	08279000	305	c	1970-97
Rio Grande above San Juan Pueblo, NM	08281100	10,550	c,m,s	1987-88
Willow Creek above Azotea Creek near Park View, NM	08284150	42	c,s	1973
Azotea Tunnel at Outlet near Chama, NM	08284160	--	c,s	1974-75
Willow Creek above Heron Reservoir near Park View, NM	08284200	112	c,s	1973-74
Horse Lake Creek above Heron Reservoir near Los Ojos, NM	0828430	0.45	c,s	1973
Willow Creek near Park View, NM	08284500	193	c,s	1962-65
Rio Chama below Heron Dam, NM	08284540	--	c,s	1973-74
El Vado Reservoir near Tierra Amarilla, NM	08285000	873	c	1973
Rio Chama Seep below El Vado Dam, NM	08285100	873	c	1973-74

DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record
Rio Chama below El Vado Dam, NM	08285500	877	c,s	1974
Rio Chama above Abiquiu Reservoir, NM	08286500	1,600	c,k,s,t	1963-85
Rio Chama below Abiquiu Dam, NM	08287000	2,147	c,k,s,t	1963-85
Rio Ojo Caliente at La Madera, NM	08289000	419	c	1976-77
Rio Grande at Santa Clara, NM	08291600		c,m,s	1987-94
Rio Nambe at Nambe Falls, near Nambe, NM	08294300	25.1	s	1962-65
Rito de los Frijoles in Bandelier National Monument, NM	08313350	18.1	b,c,m,s,t	1977-82
Cochiti Lake near Cochiti, NM	08317300		c,s	1991-97
Rio Grande below Cochiti Dam, NM	08317400	14,900	c,s,t	1974-84; 1985-88
Galisteo Creek below Galisteo Dam, NM	08317950	597	c,k,s,t	1971-78
Galisteo Creek at Domingo, NM	08318000	640	c,s,t	1962-71
Jemez River below East Fork near Jemez Springs, NM	08321500	173	c,s	1963-67
Jemez River below Jemez Canyon Dam, NM	08329000	1,038	c,s	1966-88
Piedra Lisa Arroyo near Bernalillo, NM	08329100	4.1	c,s	1962-74
Rio Grande near Bernalillo, NM	08329500	17,300	c,s,t	1962-69
Campus Wash at Albuquerque, NM	08329700	3.80	c,m,s	1991-94
Tijeras Arroyo near Albuquerque, NM	08330600	133	c	1979
Rio Grande Conveyance Channel near Bernardo, NM	08331990	--	c,k,s,t	1962-75
Rio Grande near Bernardo, NM	08332000	19,230	c,s,t	1962-64
Bernardo Interior Drain near Bernardo, NM	08332050	--	c,s,t	1965-68
San Pablo Creek near Cuba, NM	08332700	12.8	c,s	1982
Papers Wash near Star Lake Trading Post, NM	08334300	c,m,s,		1978-82
Arroyo Chico near Guadalupe, NM	08340500	1,390	c,s	1978-86
Bluewater Lake near Bluewater, NM	08341400	201	c	1966-69
Rio San Jose at Grants, NM	08343000	1,020	c,s	1980
Rio Pagate below Jackpile Mine near Luguna, NM	08349800	107	c	1977-93
Rio Salado near San Acacia, NM	08354000	1,380	c,s	1962-84
Socorro Main Canal North at San Acacia, NM	08354500	--	s	1985
Rio Grande Conveyance Channel at San Marcial, NM	08358300	--	c,m,s,t	1954-94
Rio Grande below Elephant Butte Dam, NM	08361000	29,450		1975-82
Rio Grande below Caballo Dam, NM	08362500	30,700	c	1966-68
Rio Grande at Leasburg Dam, NM	08363500		b,c,m	1975-79
Tortugas Arroyo at Las Cruces, NM	08363700	20.7	c,s	1963-74
Rio Grande at Vinton Bridge near Anthony, TX	08363840	28,680	b,c,m,s	1975-78

DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record
Rio Grande below Old Fort Quintman, TX	08370500	31,990	c,m,s	1930-93
Pecos River near Pecos, NM	08378500	189	c	1970-73
Pecos River near Anton Chico, NM	08379500	1,050	b,c,m,s	1967-77
Gallinas Creek near Montezuma, NM	08380500	84	c	1964-67
Pecos River at Santa Rosa, NM	08383000	2650	c	1905-07 1959-98
Pecos River below Sumner Dam, NM	08384500	4,390	b,c,m,s,t	1962-66; 1972-87
Pecos River below Taiban Creek near Fort Sumner, NM	08385522	--	c	1937-97
Pecos River near Acme, NM	08386600	11,380	c,s	1962-98
Rio Ruidoso at Hollywood, NM	08387000	120	c	1963-67; 1987-97
Rio Hondo at Diamond A Ranch near Roswell, NM	08390500	947	c,s	1962
Hagerman Canal at Dexter, NM	08393800	--	c	1964-67
Rio Penasco at Dayton, NM	08398500	1,060	s	1962-72
Pecos River (Kaiser Channel) near Lakewood, NM	08399500		c	1968-70; 1978-79
Lake McMillan near Lakewood, NM	08400500	16,990	c	1962-67; 1978-79
Pecos River below McMillan Dam, NM	08401000	16,990	c	1962-66; 1978-79
Pecos River at Ford Crossing above Major Johnson Springs, NM	08401300	16,990	c	1962-67
Pecos River at Damsite 3 near Carlsbad, NM	08402000	17,980	c,t	1962-67
Pecos River at Carlsbad, NM	08405000	18,100	c,k,t	1962-87
Pecos River below Sixmile Dam near Carlsbad, NM	08405260	18,650	b,c,m,s	1975-77
Black River at Harkey Crossing near Malaga, NM	08405400	343	c	1947-66
Pecos River below Red Bluff Dam, near Orla, TX	08410100		c,t	1962-63
Mimbres River at McKnight Damsite near Mimbres, NM	08476300	97.3	c,s	1967-72
Mimbres River at Mimbres, NM	08477110	184	b,c,m,s	1978-86
Tularosa Creek near Bent, NM	08481500	120	c	1963-95

VOLUME 1: RIO GRANDE BASIN, MIMBRES RIVER BASIN, AND TULAROSA RIVER BASIN

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with Federal, State, and local agencies, obtains a large quantity of data pertaining to the water resources of New Mexico each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - New Mexico."

Volumes 1 and 2 of this report include records of discharge and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This report contains discharge records for 158 gaging stations and contents for 26 lakes and reservoirs; water quality for 34 gaging stations, 23 wells, and 41 partial-record stations and miscellaneous sites, and water levels at 122 observation wells. Also included are 36 crest-stage, partial-record stations. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements. Four seepage investigations were made during the year. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating Federal, State, and local agencies in New Mexico.

Data on stream discharge and stage, and on lake or reservoir contents and stage were first published in a series of U.S. Geological Survey Water-Supply Papers entitled "Surface Water Supply of the United States." Through September 30, 1960, these Water-Supply Papers were in an annual series, then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperature, and suspended sediment were published from 1941 to 1970 in an annual series of Water-Supply Papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of Water-Supply Papers entitled "Ground-Water Levels in the United States." Water-Supply Papers generally are available in the libraries of the principal cities of the United States or may be purchased from U.S. Geological Survey, Books and Open-File Reports, Federal Center, Box 25425 Denver, Colorado 80225.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports for each State. Water-quality records for water years 1964 through 1974 were similarly released in separate reports. Beginning with water year 1975, data for streamflow, water quality, and groundwater were combined in reports published annually for each State. These reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NM-98-1." These Water-Data Reports are for sale by the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22162.

WATER RESOURCES DATA - NEW MEXICO 1998

COOPERATION

The U.S. Geological Survey and State and local agencies have had joint-funding agreements for the collection of streamflow records since 1930 and for water-quality records since 1940. Organizations that assisted in collecting the data in this report through joint-funding agreements with the Survey are:

New Mexico Office of the State Engineer
New Mexico Interstate Stream Commission
Pecos River Commission
New Mexico State Highway and Transportation Department
Canadian River Municipal Water Authority
Costilla Creek Compact Commission
Albuquerque Metropolitan Arroyo Flood Control Authority
City of Albuquerque
Rio San Jose Flood Control District
City of Santa Rosa
City of Raton
Village of Ruidoso
New Mexico Environment Department, Surface-Water, Quality Bureau

Financial assistance for the collection of water-resources data published in this report was provided by the Corps of Engineers, U.S. Army, for 31 gaging stations; by the Bureau of Reclamation, U.S. Department of Interior, for 29 gaging stations; by the Bureau of Indian Affairs, U.S. Department of Interior, for 5 gaging stations; and by the Bureau of Land Management, U.S. Department of Interior, for 1 gaging station.

Some data have been collected by contractors in accordance with U.S. Geological Survey specifications and under Geological Survey quality control. Organizations that provided data are recognized in the station description.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Perennial streams in New Mexico generally are in mountainous regions in the north-central, south-central, and southwestern parts of the State. Other perennial streams include the San Juan and Animas Rivers in northwestern New Mexico, which originate in the San Juan Mountains of southwestern Colorado. When flow is not regulated by releases from dams, several reaches of the Pecos River south of Santa Rosa have perennial flow that is maintained by relatively large spring runoff. Large discharges in perennial streams normally are the result of spring snowmelt in the mountains, which may last several months.

Ephemeral streams are present in the remainder of the State. Some of these streams, such as the Rio Puerco, have deeply incised channels, whereas others, especially those on the eastern plains, are swale without any well-defined channel. Large discharges in ephemeral streams generally are caused by intense, short-duration thunderstorms (normally occurring from mid-June to mid-October); the runoff usually lasts for only a few hours.

The quantity of water in the hydrologic system, as evidenced by precipitation records, was generally moderate throughout the State at the beginning of water year 1998. This was followed by moderate to major increases in precipitation, but as the year went on precipitation declined greatly, and the year ended with well below normal values. Specifically, precipitation varied greatly from area to area in New Mexico at the beginning of water year 1998. In October, for example, precipitation was 198 percent of normal in Carlsbad, 36 percent of normal in Albuquerque, 45 percent of normal in Farmington, and only 5 percent of normal in Las Cruces. This variability continued through November. By December precipitation was well above normal in most areas of the State; recorded precipitation ranged from 95 to 651 percent of normal at most sites. January witnessed a major decrease in precipitation totals when most stations recorded amounts less than one-half of normal. Measurements of snowpack at the beginning of February were generally normal or above normal in most areas with the exception of the San Juan River Basin where snowpack was only 69 percent of normal. The streamflow forecast made at this time predicted near-normal flows in the Canadian, Pecos, and Rio Grande Basins; below-normal flows in all other areas; and a sufficient supply of water for irrigation. Precipitation rebounded to near-normal amounts in February, then increased dramatically in March; for example, Carlsbad recorded 523 percent of normal and Albuquerque recorded 431 percent of normal. The streamflow forecast made at the beginning of April predicted near-normal to well above normal streamflows for most of the State. Following the plentiful precipitation totals in March, precipitation dropped off greatly and remained well below normal until the end of the water year.

The quantity of water stored in New Mexico's reservoirs often does not represent natural hydrologic conditions because operators of those reservoirs need to meet demands such as irrigation, flood control, legal compacts, and recreation. During periods of heavy storm activity, for example, reservoir operators can reduce the amount of water in storage. With this in mind a review of water storage during water year 1998 indicates various trends. Storage at Brantley, Cochiti, Ute, and Abiquiu Reservoirs varied only slightly; storage at Brantley ranged from 2 to 4 percent of capacity, at Cochiti ranged from 11 to 12 percent of capacity, at Ute ranged from 71 to 73 percent of capacity, and at Abiquiu ranged from 13 to 15 percent of capacity. Storage in other reservoirs, however, did partly reflect hydrologic conditions during water year 1998. In El Vado Reservoir, for example, the quantity of water stored in March (65 percent of normal) represented the precipitation trends. By the end of the water year storage had decreased to 41 percent of normal because of the lack of precipitation. Water storage in Eagle Nest and Conchas Reservoirs had an overall decrease in storage between the beginning and the end of the water year. Storage in Elephant Butte-Caballo and Sumner-Santa Rosa Reservoirs increased and decreased at various times during water year 1998 in response to water demands, but these reservoirs also had less water in storage at the end of the water year than they had at the beginning of the water year. Reservoir storage in most of the State's reservoirs at the end of water year 1998 generally was at lower levels than at the beginning of the water year. Specifically, the combined storage of 13 major reservoirs in the State decreased by 543,000 acre-feet during water year 1998, totaling 4,194,000 acre-feet by September 30, 1998. The combined capacity of these 13 reservoirs is 8,530,000 acre-feet.

Streamflow in New Mexico has been normal or above normal since 1979. Continuing this trend, streamflows recorded at the index gaging stations were near-normal or above normal at the beginning of water year 1998. The index sites with near-normal or above-normal streamflow at the beginning of the water year generally had lower levels of streamflow at the end of the water year. For example, streamflow at Rio Grande at Taos Junction Bridge (station 08276500) was 492 percent of normal in October, decreased to 47 percent of normal in June, and recovered to 83 percent of normal at the end of water year 1998. Streamflow at Gila River near Gila (station 09430500) was 191 percent of normal at the beginning of the water year and continued to be well above normal until it decreased dramatically to 55 percent of normal in September. In contrast, streamflow at Pecos River near Pecos (station 08378500) was 122 percent of normal at the beginning of water year 1998 and increased to 177 percent of normal at the end of water year 1998.

Discharges for water year 1998 at four index streamflow-gaging stations compared to median annual discharge for water years 1968-97 at the same stations are listed below:

Station number	Station name	Median annual discharge in acre-ft water years 1968-97	Annual mean discharge in acre-ft water year 1998	1998 discharge as a percentage of median
08276500	Rio Grande below Taos Junction Bridge	564,500	566,200	100
08378500	Pecos River near Pecos	74,990	98,070	131
08408500	Delaware River near Red Bluff	3,960	1,140	29
09430500	Gila River near Gila	132,900	147,800	111

Surface-Water Quality

Suspended-sediment loads for water year 1988 at three index stations and median suspended-Sediment loads for water years 1988-97 at the same stations are listed below:

Station number	Station name	Median suspended-sediment load for water years 1988-97 in tons	Suspended-sediment load for water year 1998, in tons	1998 load as a percentage of 1988-97 median
08313000	Rio Grande at Otowi Bridge	1,917,300	1,176,564	61
08330000	Rio Grande at Albuquerque	511,280	391,641	77
08358400	Rio Grande Floodway at San Marcial	3,527,832	4,382,422	124

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country. The purpose of the network is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare with conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and to determine global cycles of carbon, nutrients, and other chemicals.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to accomplish the following objectives; (1) To provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites. (2) To provide the mechanism to evaluate the effectiveness of the significant reduction in SO₂ emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred. (3) To provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO₂ and NO_x scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at:

<http://nadp.nrel.colostate.edu/NADP>

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 53 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies.

Additional information about the NAWQA Program is available through the world wide web at:

http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html

Tritium Network is a network of stations that has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data also are obtained at a number of precipitation stations. The purpose of collecting tritium data at precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for water year 1998, which began October 1, 1997 and ended September 30, 1998. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station in this report, whether a stream site or well, in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. Generally, the "downstream-order" system is used for surface-water stations, the "latitude-longitude" system is used for wells and, in New Mexico, for surface-water stations where only miscellaneous measurements are made.

Downstream-Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned in downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of all types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 08313000, which appears just to the left of the station name, includes the two-digit Part number "08" plus the six-digit downstream-order number "313000." The Part number designates the major river basin; for example, Part "08" is the Rio Grande basin.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of north latitude, the next seven digits denote degrees, minutes, and seconds of west longitude, and the last two digits (assigned sequentially) identify the order of sites if more than one within a 1-second grid. This site-identification number, once assigned, is arbitrary and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below.)

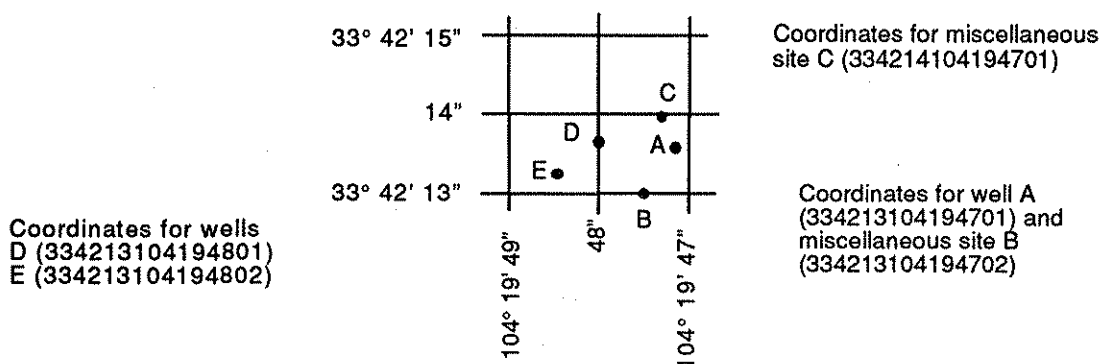
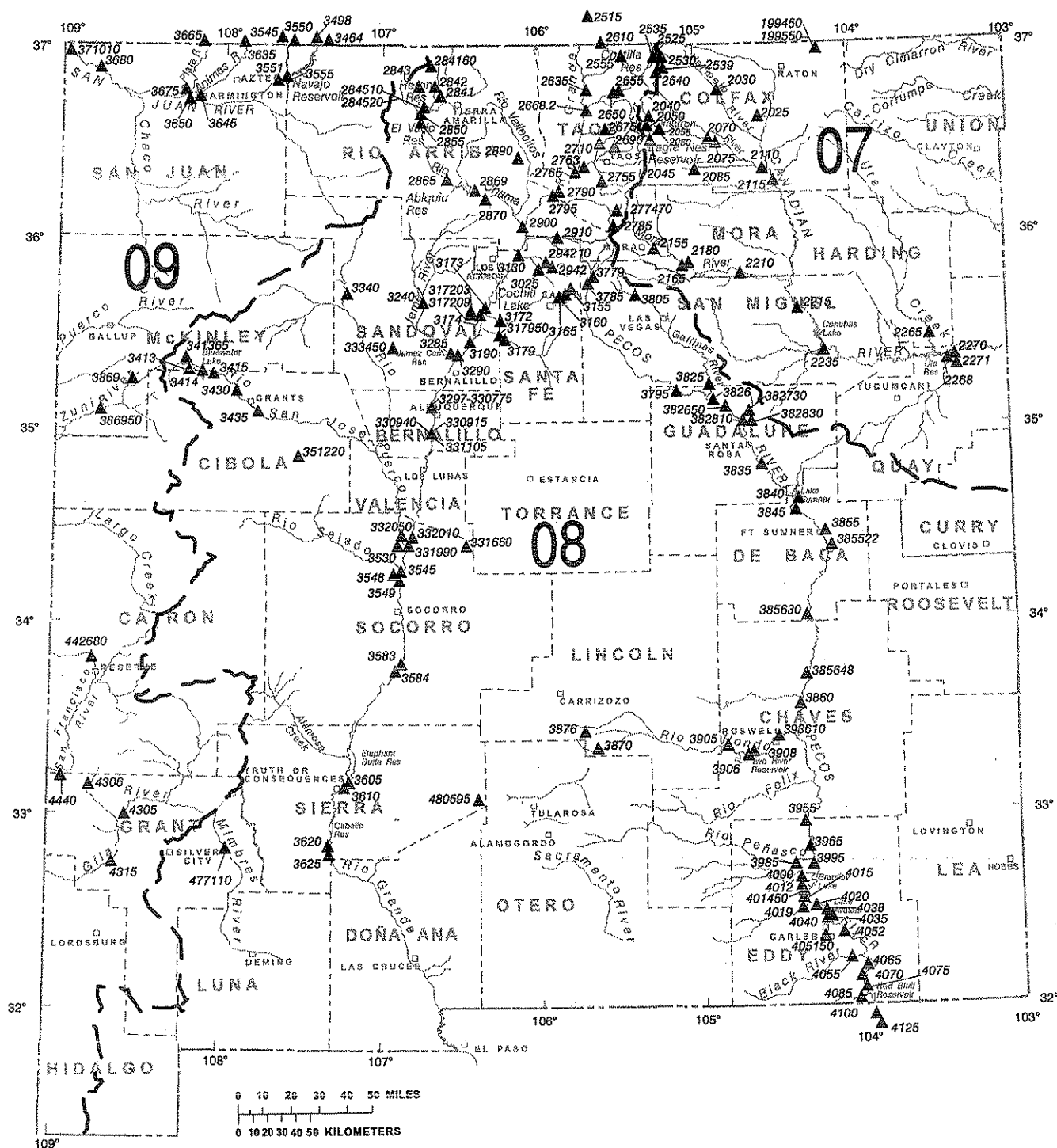


Figure 1.--System for assigning latitude longitude numbers to wells, springs, and miscellaneous sites.

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily reservoir storage and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles. Records of miscellaneous discharge measurements or of measurements from special studies may be considered as partial records, but they are presented separately in this report. Location of all complete-record stations and partial-record stations for which data are given in this report are shown in figures 2 and 3.



U.S. Geological Survey base

EXPLANATION

- 07 LOWER MISSISSIPPI RIVER BASIN NUMBER
- 08 WESTERN GULF OF MEXICO BASIN NUMBER
- 09 COLORADO RIVER BASIN NUMBER
- RIVER BASIN BOUNDARY

401450 ▲ GAGING STATION AND NUMBER--
 Number by symbol is abbreviated
 station number. Complete national
 station number is: 08 401450
 Basin number + station number

Figure 2.--Location of surface-water gaging stations.

07 LOWER MISSISSIPPI RIVER BASIN NUMBER
08 WESTERN GULF OF MEXICO BASIN NUMBER
09 COLORADO RIVER BASIN NUMBER

Basin number + station number

Figure 3.--Location of partial-record stations.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals, with electronic data loggers that store stage values on computer cards at selected time intervals, or with satellite data collection platform that transmit real time data at selected time intervals to office computers. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some streamgaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available (from surveys) curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly incorrect as the lapsed time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so incorrect that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in sections "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a format considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of reformatting the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) consist of five parts: the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; a hydrograph.

Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record, record accuracy, and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that flow at it reasonably can be considered equivalent to flow at the present station.

REVISED RECORDS.--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph also is used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data always is accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph. No changes have been made to the data presentations of lake contents.

Data table of daily mean values

The daily table of discharge records for streamgaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month usually is expressed in cubic feet per second per square mile (line headed "CFSM"); or in inches (line headed "IN."); or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS ____-____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____-____," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (See line headings below.), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data also are given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that has been exceeded 90 percent of the time for the designated period.

Hydrograph

A hydrograph for the current year follows the table for most stations. Streamflow hydrograph are semi-log plot of mean daily values with no flow day showing as blanks.

Data collected at partial-record stations follow the information for continuous-record sites. The tables of partial-record stations are followed by listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage of those events. Those measurements and others collected for some special reason are called miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote (e-- Estimated) or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. No rounding rules apply to discharges listed for partial-record stations and miscellaneous sites. Listed discharges are those actually computed.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff because of the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation from artificial causes, or to other factors. For such stations, figures for cubic feet per second per square mile and for runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the New Mexico district office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained at the address given on the back of the title page of this report.

Records of Surface-Water Quality

Records of surface-water quality in this report represent a variety of data types and measurement frequencies. Whenever possible, records of surface-water quality are obtained at or near streamgaging stations because interpretation of surface-water quality and seasonal variation is enhanced by knowledge of corresponding discharge data. Location of surface-water-quality are shown in figure 4.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where water-quality data are collected systematically over a period of years, but frequency of sampling usually is less than quarterly. A miscellaneous sampling site is a location where samples are collected one time or intermittently to provide better areal coverage for defining water-quality conditions over a broad area in a river basin.

<u>BASIN AND STATION NUMBER</u>		<u>STATION AND SAMPLING FREQUENCY</u>	
07	LOWER MISSISSIPPI RIVER BASIN NUMBER	CHEMICAL QUALITY: ▲ Daily	▲ Other than daily
08	WESTERN GULF OF MEXICO BASIN NUMBER	SUSPENDED SEDIMENT: △ Daily	△ Other than daily
09	COLORADO RIVER BASIN NUMBER	CHEMICAL QUALITY AND SUSPENDED SEDIMENT: ▲ Both daily	▲ Both other than daily
——— RIVER BASIN BOUNDARY 330775 ▲ STATION AND NUMBER—Number by symbol is abbreviated station number. Complete national station number is: 08 330775 Basin number + station number		▲ Daily chemical quality and other than daily suspended sediment	▲ Daily suspended sediment and other than daily chemical quality

Figure 4.--Location of active surface-water-quality stations.

A distinction needs to be made between "continuing records", as used in reference to data for continuing-record stations, and "continuous record," which refers to a continuous graph over time or a series of discrete values recorded at short time intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, most water-quality data are obtained on a monthly or less frequent basis.

On-site Measurements and Sample Collection

When obtaining water-quality data, a major concern is assuring that onsite water-quality measurements and the samples collected for laboratory analysis are representative of the actual quality of the water. Measurements such as water temperature, pH, and dissolved oxygen are made onsite when the samples are collected because of the potential for significant change with time. To assure that measurements made in the laboratory also represent the actual environmental concentrations of constituents, prescribed procedures need to be followed in collection and processing of samples. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," (TWRI) Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Also, detailed information on collecting, treating, and shipping samples may be obtained from other references and from the New Mexico district office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see Special Networks and Programs) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the sampler.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and a relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For water-quality stations equipped with electronic monitors and digital recorders, the record consists of a daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records of the individual hourly values (unit values) may be obtained from the New Mexico district office.

Water Temperature

Water temperatures are measured at water-quality stations at the time of sampling. In addition, water temperatures are taken at the time of discharge measurements at streamgaging stations. For stations where water temperatures are measured manually once daily, the water temperatures are taken at about the same time each day for consistency in the record. Deep streams commonly have a small diurnal temperature change, whereas shallow streams may have a daily range of several degrees, which closely follows the changes in air temperature. The water temperature in some streams may be affected by industrial discharges of warm water.

For stations where recording instruments are used, the record consisting of either daily mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements and those taken manually once-daily are on file in the New Mexico district office.

Sediment

Suspended-sediment concentrations are determined from samples collected using depth-integrating samplers. Samples usually are obtained from several verticals in the cross section. At daily sediment stations, daily samples may be obtained from a single vertical and a coefficient applied to determine the mean concentration in the cross section. Daily mean suspended-sediment concentrations are computed using sample concentrations and the continuous streamflow

record according to the methods described in TWRI Book 3, Chap. C3. Daily suspended-sediment discharge then is computed as the product of stream discharge times the daily mean concentration times a unit conversion factor of 0.0027.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration are computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between suspended-sediment concentration and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of particle-size distribution of the suspended sediment and bed material for periodic samples are included for some stations.

Laboratory Analyses

Samples for indicator bacteria are analyzed locally. Samples for suspended-sediment are analysed at the U.S. Geological Survey laboratory in Albuquerque, New Mexico. Samples for all other constituents are analyzed at the Geological Survey National Water-Quality Laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1 and C3. Methods used by the National Water-Quality Laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

In March 1989, the National Water-Quality Laboratory identified a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989.

New protocols have been established by the U.S. Geological Survey for the collection and processing of surface-water samples that are analyzed for dissolved inorganic constituents¹. These protocols are designed to produce trace-element data that are free of potential contamination associated with sample collection and filtration procedures. Because of the very low concentrations of some trace constituents in the environment, special precautions are necessary to protect the sample from the introduction of trace constituents during processing that could lead to a positive bias in reported concentrations. The protocols have been tested to assure reliable results at the microgram per liter (parts per billion) level. Dissolved trace-element data published prior to implementation of the protocols in 1994 may have a potential positive bias ranging from negligible to several micrograms per liter, depending on the procedures and sampling equipment used at the site.

Data Presentation

Water-quality records collected at a streamgaging station are published immediately following the daily discharge record. Station number and name are the same for both records. Where a daily discharge record is not available or where the location of the water quality station differs significantly from that of the nearby streamgaging station, the water-quality record is published with its own station number and name in the standard downstream-order sequence.

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperating agencies, and extremes for parameters measured on a daily basis. Tables of chemical, physical, biological, and radiochemical data obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, water temperature, and suspended sediment then follow in sequence.

¹ Horowitz, A.J., Demas, C.R., Fitzgerald, K.K., Miller, T.L., and Rickert, D.A., 1994, U.S. Geological Survey Protocol for the Collection and Processing of Surface-Water Samples for the Subsequent Determination of Inorganic Constituents in Filtered Water: U.S. Geological Survey Open-File Report 94-539, 57 p.

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In the descriptive headings, if the location is identical to that of the streamgaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuing record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature monitor, pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptable range (non-ideal colony count)
L	Biological organism count less than 0.5 percent than 0.5 percent
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
V	Analyte was detected in both the environmental sample and the associated blanks.

Water Quality-Control Data

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are: Sequential samples - a type of replicate sample in which the samples are collected one after the other, typically over a short time. Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

Dissolved Trace-Element Concentrations

*NOTE.--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (ug/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the ug/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

Change in National Trends Network Procedures

*NOTE.--Sample handling procedures at all National Trends Network stations were changed substantially on January 1, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at: <http://www.water.usgs.gov>

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page.)

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often formed into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Escherichia coli (E. coli) also are present in the digestive tract of warm-blooded animals. In the laboratory, E. coli is defined as all organisms that produce orange/yellow colonies when incubated for two hours at $35^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ and transferred to $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ for 22-24 hours on mTEC agar (nutrient medium for E. coli growth), and stained with phenol red solution. Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine and feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C plus or minus 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria also are bacteria found in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C plus or minus 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Non-ideal colony count (K) is a remark code used in reporting bacteria densities when plate counts fall outside of an ideal range. The lower limit of 20 colonies is set as the number below which statistically valid results become increasingly questionable. The upper limit, which differs according to type of bacteria, represents numbers above which interference from colony crowding, deposition of extraneous material, and other factors appear to result in increasingly questionable results.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Bottom material: See Bed material.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Continuing-record station is a specified site which meets one or all conditions listed:

1. When chemical samples are collected daily or monthly for 10 or more months during the water year.
2. When water temperature records include observations taken one or more times daily.
3. When sediment discharge records include periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic-foot-per-second day (cfs-day) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,447 cubic meters.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

Instantaneous discharge is the discharge at a particular instant of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Dissolved refers to that material in a representative water sample which passes through a 0.45 micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determination of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.493 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G H) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Micrograms per gram (UG/G, $\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Microsiemens per centimeter at 25 degrees Celsius (US/CM, $\mu\text{S/cm}$) is a unit for reporting specific electrical conductance.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine all diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay	0.00024 - 0.004	Sedimentation
Silt	.004 - .062	Sedimentation
Sand	.062 - 2.0	Sedimentation or sieve
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

pH indicates the degree of acidity or alkalinity of water and is expressed in logarithmic units. The pH value of a solution is the negative logarithm of the hydrogen-ion concentration, in moles per liter.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Polychlorinated biphenyls (PCB's) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN., in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sea level in this report 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.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour period

Suspended-sediment discharge (tons/day) is the rate at which a quantity of sediment, as measured by dry mass or volume, passes a stream section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to the total mass of material in suspension. It is not synonymous with sediment discharge, which is a rate of transport.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 degrees Celsius. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 60 to 65 percent of the specific conductance (in microsiemens per centimeter at 25 degrees Celsius). This relation is not constant from stream to stream, and may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured in acres. In localities not covered by topographic maps, the areas are computed from the best maps available. All areas shown are those for the stage when the map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as pertains to chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 μ m membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Synoptic Studies Short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentration of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity, in tons, of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" indicates both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total in bottom material is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total load (tons) is the quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Total recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily-soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Turbidity of a sample is the reduction of transparency because of the presence of particulate matter. In this report it is expressed in Nephelometric turbidity units (NTU), obtained from the nephelometric method for turbidity determination which measures the intensity of light scattered by suspended particles at 90 degrees from the path of an incident light source.

Volatile Organic Compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are man-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through the following September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1990, is called "water year 1990."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir

.WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Branch of Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W. E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathbun, Nobuhiro Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS-- TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R. L. Cooley and R. L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R. L. Cooley: USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.
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- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
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- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

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- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L. C. Friedman, editors: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
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- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greenson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R. L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L. J. Torak: USGS--TWRI Book 6, Chapter A5, 1993. 243 pages.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler. 1995. 125 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

LOCATION.--Lat 37°04'43", long 105°45'23", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.27, T.33 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on right bank at highway bridge, 5.7 mi north of Colorado-New Mexico State line, 8 mi downstream from Culebra Creek, 11 mi east of Lobatos, and 14 mi east of Antinoco.

WATER-DISCHARGE RECORDS

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1828, that of June 8, 1905.

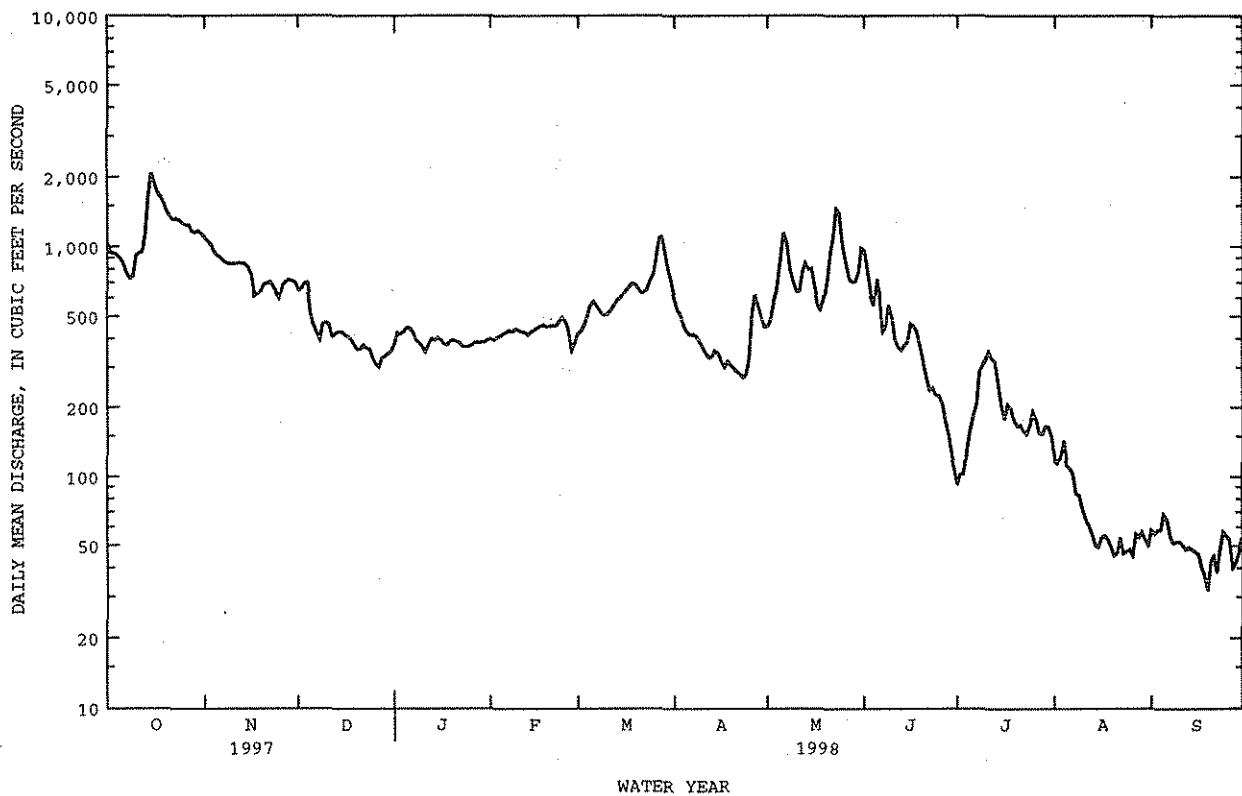
MEAN	188	318	286	263	315	422	531	1125	1242	441	159	128
MAX	1401	1199	763	521	595	884	2326	4958	4470	2754	842	779
(WY)	1942	1942	1942	1986	1986	1987	1985	1987	1941	1995	1957	1982
MIN	12.9	59.6	61.7	75.7	102	66.0	32.3	42.9	19.8	1.28	3.21	1.91
(WY)	1957	1955	1964	1957	1957	1957	1935	1963	1977	1951	1956	1956

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1931 - 1998	
ANNUAL TOTAL	280803		177444		^a 451	
ANNUAL MEAN	769		486		1264	
HIGHEST ANNUAL MEAN					70.9	
LOWEST ANNUAL MEAN					^b 9110	
HIGHEST DAILY MEAN	3470	Jun 5	2070	Oct 15	Jun 22 1949	
LOWEST DAILY MEAN	218	Apr 18	32	Sep 19	^c .00	
ANNUAL SEVEN-DAY MINIMUM	239	Apr 13	40	Sep 16	Jul 16 1950	
INSTANTANEOUS PEAK FLOW			2100	Oct 15	^d 11600	
INSTANTANEOUS PEAK STAGE			3.75	Oct 15	8.76	
ANNUAL RUNOFF (AC-FT)	557000		352000		May 8 1952	
10 PERCENT EXCEEDS	1630		940		326900	
50 PERCENT EXCEEDS	513		420		970	
90 PERCENT EXCEEDS	330		55		245	
					40	

e Estimated

^a Average discharge for 31 years (water years 1900-30), 846 ft³/s; 612900 acre-ft/yr, includes period of extensive development for irrigation.^b Maximum daily discharge for period of record, 13100 ft³/s, Jun 8, 1905.^c No flow at times in 1950-51, 1956.^d Maximum discharge and stage for period of record, 13200 ft³/s, Jun 8, 1905, gage height, 9.1 ft, from rating curve extended above 8000 ft³/s.

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD---September 1969 to September 1993 (also see REMARKS). February 1996 to current year.

PERIOD OF DAILY RECORD---

SPECIFIC CONDUCTANCE: October 1975 to September 1981.

WATER TEMPERATURE: October 1975 to September 1981.

REMARKS---Periodic water-quality data available Sept. 1969 to Sept. 1993 under the National Stream-Quality Accounting Network (NASQAN), and Apr. 1993 to Sept. 1996 under the Rio Grande National Water-Quality Assessment Program, for this site.

EXTREMES FOR PERIOD OF DAILY RECORD---

SPECIFIC CONDUCTANCE: Maximum, 1,040 microsiemens, Sept. 17-18, 1977; minimum, 89 microsiemens, May 9, 1979.

WATER TEMPERATURE: Maximum, 30.0°C, July 17, 1977; minimum, 0.0°C, many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	pH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC ^a UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT 29...	0945	1260	151	8.1	3.5	10.0	16	3.0	9.4	2.3	58	11
MAR 03...	0930	e455	239	8.4	0.0	8.7	26	4.7	17	3.3	89	26
MAY 22...	1300	1090	167	8.0	14.5	8.0	16	3.5	11	2.5	58	19
JUN 30...	1000	145	471	8.2	19.5	7.1	40	8.3	45	6.3	147	76
JUL 23...	1045	174	372	8.6	22.0	6.8	30	6.5	38	6.7	135	42
AUG 26...	0930	45	496	8.4	17.5	7.2	32	7.7	61	7.2	162	65

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 29...	2.7	0.12	23	96	<0.01	0.090	<0.020	0.16	<0.10	0.067	0.043	0.039
MAR 03...	4.6	0.28	30	172	<0.01	0.193	<0.020	0.19	<0.10	0.057	0.022	0.037
MAY 22...	2.6	0.18	20	125	<0.01	<0.050	0.026	0.60	0.30	0.152	0.024	0.032
JUN 30...	12	0.58	28	323	<0.01	<0.050	0.064	0.42	0.32	0.094	0.054	0.055
JUL 23...	9.3	0.49	24	258	<0.01	<0.050	<0.020	0.72	0.35	0.155	0.053	0.049
AUG 26...	17	0.67	21	324	<0.01	<0.050	<0.020	0.48	0.28	0.065	0.030	0.024

DATE	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
OCT 29...	3.4	<1	<1	16	<1	<1	1.2	<1	1.0
MAR 03...	--	--	--	--	--	--	--	--	--
MAY 22...	5.5	<1	1	20	<1	<1	1.1	<1	--
JUN 30...	1.0	<1	3	49	<1	<1	1.2	<1	2.4
JUL 23...	2.3	<1	3	33	<1	<1	2.0	<1	2.0
AUG 26...	--	--	--	--	--	--	--	--	--

e Estimated

a Lab total dissolved alkalinity, determined by fixed-endpoint titration method.

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
OCT 29...	49	<1	6.2	<1.0	<1	<1	<1	<1	<1.0
MAR 03...	24	--	15	--	--	--	--	--	--
MAY 22...	40	<1	11	1.0	<1	<1	<1	--	<1.0
JUN 30...	16	<1	15	3.3	<1	<1	<1	<1	2.0
JUL 23...	<10	<1	12	3.8	<1	<1	<1	<1	1.7
AUG 26...	<10	--	8.2	--	--	--	--	--	--

08252500 COSTILLA CREEK ABOVE COSTILLA DAM, NM

LOCATION.--Lat 36°53'52", long 105°15'16", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on left bank 1,900 ft upstream from normal high-water line of Costilla Reservoir, 2.1 mi northeast of Costilla Dam, 16 mi southeast of Costilla, and at mile 36.9.

DRAINAGE AREA.--25.1 mi².

PERIOD OF RECORD.--April 1937 to current year (seasonal records). Monthly discharge only for some periods, published in WSP 1312 and 1732. Prior to October 1951, published as "above reservoir, near Costilla."

REVISED RECORDS.--WSP 878: 1937. WSP 1923: 1937-50, drainage area.

GAGE.--Water-stage recorder. Concrete control since Sept. 17, 1965. Elevation of gage is 9,428 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1923 for history of changes prior to Sept. 17, 1965.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow may be augmented by transbasin diversions or irrigation returns from about 1,300 acres irrigated from Casias Creek (station 08253000). Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 3,870 ft³/s, July 22, 1954, gage height, about 4.8 ft, from floodmarks, site and datum then in use, on basis of slope-area measurement of peak flow; minimum not determined. The flood in 1954 destroyed the gaging station and is highest since about 1909 from information by local range rider. A portion of this flow may have originated in Casias Creek basin (see REMARKS).

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 51 ft³/s, at 2245 hours Aug. 21, gage height 2.81 ft; minimum daily discharge 2.4 ft³/s, Sept. 27.

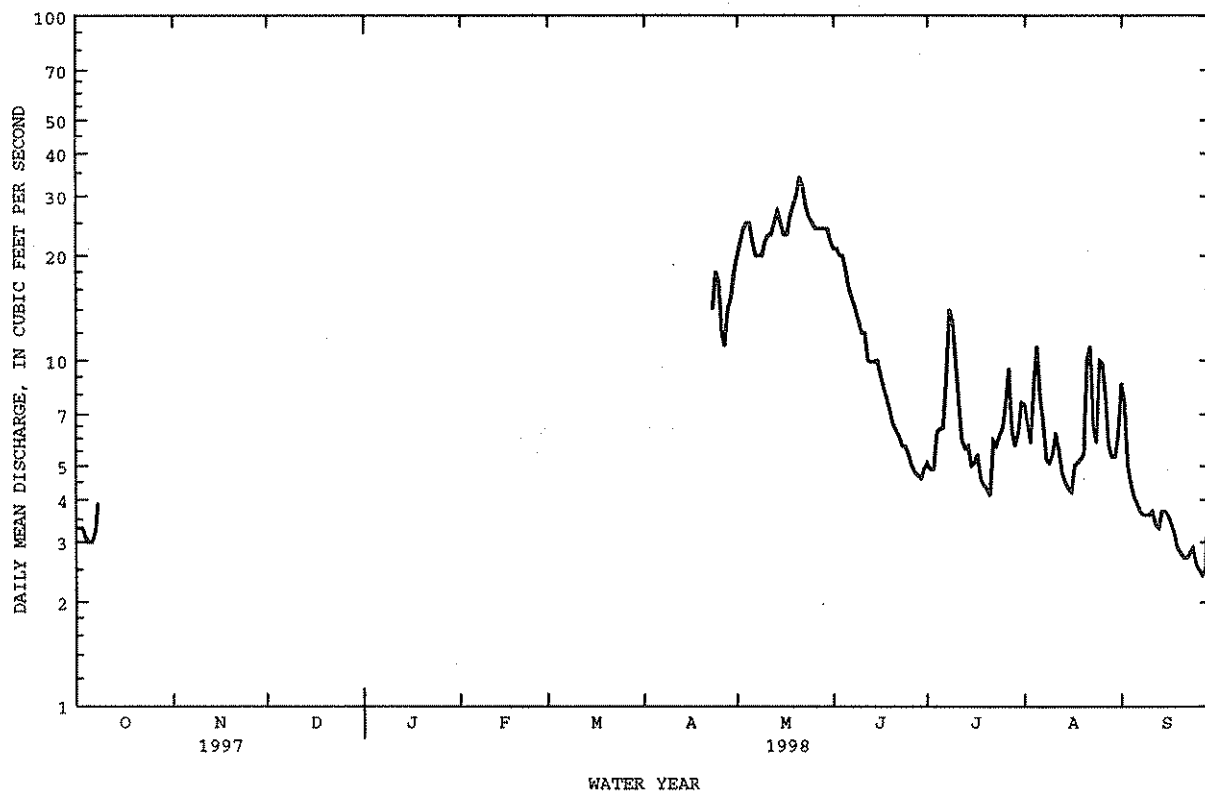
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	---	---	---	---	---	---	20	21	5.1	7.5	8.6
2	3.3	---	---	---	---	---	---	22	21	4.9	6.6	7.7
3	3.3	---	---	---	---	---	---	24	20	4.9	5.8	5.1
4	3.1	---	---	---	---	---	---	25	20	6.2	8.6	4.5
5	3.0	---	---	---	---	---	---	25	18	6.4	11	4.1
6	3.0	---	---	---	---	---	---	22	16	6.4	7.9	3.9
7	3.2	---	---	---	---	---	---	20	15	9.0	6.7	3.7
8	3.9	---	---	---	---	---	---	20	14	14	5.2	3.6
9	---	---	---	---	---	---	---	20	13	13	5.1	3.6
10	---	---	---	---	---	---	---	22	12	9.8	5.4	3.6
11	---	---	---	---	---	---	---	23	12	7.5	6.2	3.7
12	---	---	---	---	---	---	---	23	10	5.9	5.6	3.4
13	---	---	---	---	---	---	---	25	9.9	5.6	4.8	3.3
14	---	---	---	---	---	---	---	27	9.9	5.7	4.5	3.7
15	---	---	---	---	---	---	---	25	10	5.0	4.3	3.7
16	---	---	---	---	---	---	---	23	9.1	5.1	4.2	3.6
17	---	---	---	---	---	---	---	23	8.4	5.4	5.0	3.4
18	---	---	---	---	---	---	---	26	7.8	4.6	5.1	3.2
19	---	---	---	---	---	---	---	28	7.2	4.4	5.2	2.9
20	---	---	---	---	---	---	---	30	6.6	4.3	5.4	2.8
21	---	---	---	---	---	---	---	34	6.3	4.1	10	2.7
22	---	---	---	---	---	---	---	32	6.1	5.9	11	2.7
23	---	---	---	---	---	---	---	14	28	5.7	6.5	2.8
24	---	---	---	---	---	---	---	18	26	5.7	5.8	2.9
25	---	---	---	---	---	---	---	17	25	5.4	10	2.6
26	---	---	---	---	---	---	---	12	24	5.0	9.8	2.5
27	---	---	---	---	---	---	---	e11 24	4.8	9.5	7.9	2.4
28	---	---	---	---	---	---	---	14	24	4.7	5.7	2.5
29	---	---	---	---	---	---	---	15	24	4.6	5.3	4.2
30	---	---	---	---	---	---	---	18	24	4.9	6.2	6.2
31	---	---	---	---	---	---	---	22	---	7.6	6.2	---
TOTAL	---	---	---	---	---	---	---	760	314.1	204.3	203.6	113.6
MEAN	---	---	---	---	---	---	---	24.5	10.5	6.59	6.57	3.79
MAX	---	---	---	---	---	---	---	34	21	14	11	8.6
MIN	---	---	---	---	---	---	---	20	4.6	4.1	4.2	2.4
AC-FT	---	---	---	---	---	---	---	1510	623	405	404	225

e Estimated

RIO GRANDE BASIN

08252500 COSTILLA CREEK ABOVE COSTILLA DAM, NM--Continued



08253000 CASIAS CREEK NEAR COSTILLA, NM

LOCATION.--Lat 36°53'48", long 105°15'35", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on left bank 200 ft downstream from road crossing, 900 ft upstream from normal high-water line of Costilla Reservoir, 1.8 mi northeast of Costilla Dam, and 16 mi southeast of Costilla.

DRAINAGE AREA.--16.6 mi².

PERIOD OF RECORD.--April 1937 to current year (seasonal records). Monthly discharge only for some periods, published in WSP 1312 and 1732. Records for Nov. 1-7, 1947 and Nov. 1-16, 1948, published in WSP 1118 and 1148, are unreliable and should not be used.

REVISED RECORDS.--WSP 1282: 1948-51. WSP 1923: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 9,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 18, 1940, water-stage recorder and wooden control 100 ft downstream at datum 1.56 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversion 3.5 mi upstream for irrigation of about 1,300 acres, part of which is in Costilla Creek basin. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft³/s, July 20, 1971, gage height, 2.07 ft, from rating curve extended above 85 ft³/s; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 51 ft³/s, at 2015 hours July 8, gage height 1.20 ft; minimum daily discharge 4.2 ft³/s, Apr. 26.

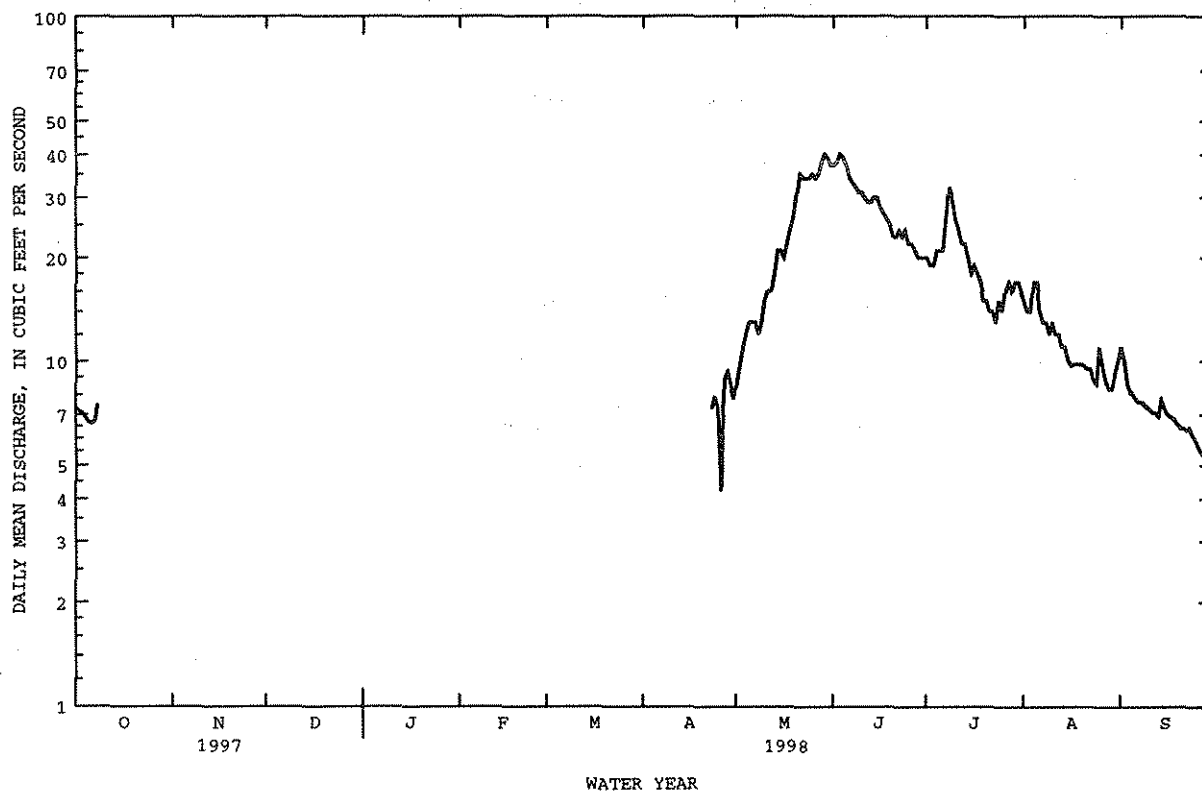
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	---	---	---	---	---	---	8.7	37	20	15	11
2	7.2	---	---	---	---	---	---	9.8	38	19	14	10
3	7.1	---	---	---	---	---	---	11	40	19	14	8.5
4	6.9	---	---	---	---	---	---	12	39	21	17	8.1
5	6.7	---	---	---	---	---	---	13	37	21	17	8.0
6	6.6	---	---	---	---	---	---	13	34	21	14	7.7
7	6.7	---	---	---	---	---	---	13	33	26	13	7.6
8	7.5	---	---	---	---	---	---	12	32	32	13	7.6
9	---	---	---	---	---	---	---	13	31	30	12	7.4
10	---	---	---	---	---	---	---	15	31	26	13	7.3
11	---	---	---	---	---	---	---	16	30	24	12	7.1
12	---	---	---	---	---	---	---	16	29	22	12	7.1
13	---	---	---	---	---	---	---	18	29	22	11	6.9
14	---	---	---	---	---	---	---	21	30	20	11	7.7
15	---	---	---	---	---	---	---	21	30	18	10	7.3
16	---	---	---	---	---	---	---	20	28	19	9.7	7.0
17	---	---	---	---	---	---	---	22	27	18	9.8	6.9
18	---	---	---	---	---	---	---	24	26	17	9.8	6.8
19	---	---	---	---	---	---	---	26	25	15	9.8	6.6
20	---	---	---	---	---	---	---	30	23	15	9.7	6.4
21	---	---	---	---	---	---	---	35	23	14	9.5	6.4
22	---	---	---	---	---	---	---	34	24	14	9.5	6.3
23	---	---	---	---	---	---	---	7.3	34	23	13	6.4
24	---	---	---	---	---	---	---	7.9	34	24	15	6.1
25	---	---	---	---	---	---	---	7.3	35	22	14	5.9
26	---	---	---	---	---	---	---	4.2	34	22	16	5.6
27	---	---	---	---	---	---	---	e8.9	35	21	17	5.4
28	---	---	---	---	---	---	---	e9.3	38	20	16	5.3
29	---	---	---	---	---	---	---	e8.5	40	20	e17	7.7
30	---	---	---	---	---	---	---	e7.8	39	20	e17	9.1
31	---	---	---	---	---	---	---	---	37	---	16	---
TOTAL	---	---	---	---	---	---	---	729.5	848	594	348.4	217.2
MEAN	---	---	---	---	---	---	---	23.5	28.3	19.2	11.2	7.24
MAX	---	---	---	---	---	---	---	40	40	32	17	11
MIN	---	---	---	---	---	---	---	8.7	20	13	8.3	5.3
AC-FT	---	---	---	---	---	---	---	1450	1680	1180	691	431

e Estimated

RIO GRANDE BASIN

08253000 CASIAS CREEK NEAR COSTILLA, NM--Continued



08253500 SANTISTEVAN CREEK NEAR COSTILLA, NM

LOCATION.--Lat 36°53'03", long 105°16'50", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on left bank 200 ft upstream from road crossing, 1,300 ft upstream from normal high-water line of Costilla Reservoir, 0.6 mi north of Costilla Dam, and 16 mi southeast of Costilla.

DRAINAGE AREA.--2.15 mi².

PERIOD OF RECORD.--April 1937 to current year (seasonal records). Monthly discharge only for some periods, published in WSP 1312 and 1732.

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 9,480 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 27, 1940, water-stage recorder and wooden control at datum 0.99 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20 ft³/s, June 29, 1995; maximum gage height, 1.73 ft, Aug. 11, 1941; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 14 ft³/s, at 1900 hours July 8, gage height 1.33; minimum daily 0.84 ft³/s, Sept. 25, 28.

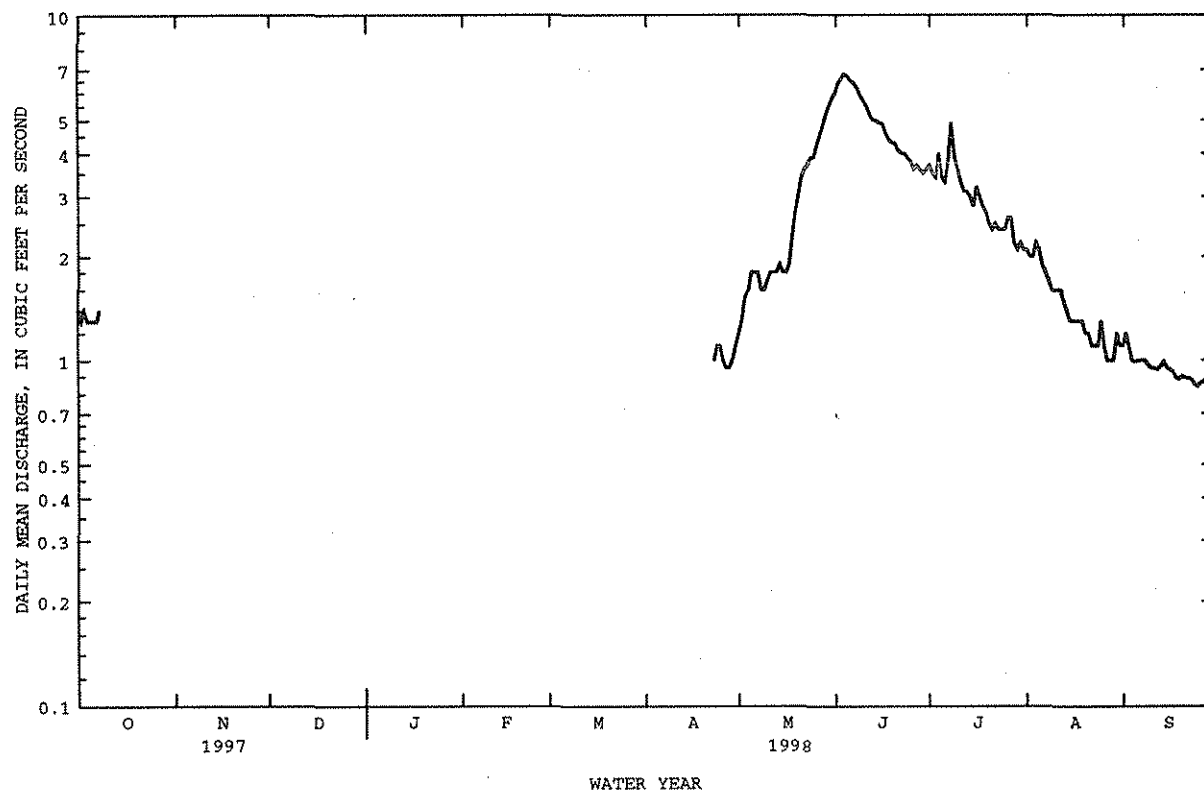
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	---	---	---	---	---	---	1.2	6.0	3.7	2.1	1.1
2	1.3	---	---	---	---	---	---	1.3	6.4	3.5	2.0	1.2
3	1.4	---	---	---	---	---	---	1.5	6.6	3.4	2.0	1.1
4	1.3	---	---	---	---	---	---	1.6	6.8	4.0	2.2	1.0
5	1.3	---	---	---	---	---	---	1.8	6.7	3.4	2.1	.99
6	1.3	---	---	---	---	---	---	1.8	6.5	3.3	1.9	1.0
7	1.3	---	---	---	---	---	---	1.8	6.4	3.8	1.8	1.0
8	1.4	---	---	---	---	---	---	1.6	6.2	4.9	1.7	1.0
9	---	---	---	---	---	---	---	1.6	5.9	3.9	1.6	.97
10	---	---	---	---	---	---	---	1.7	5.7	3.6	1.6	.95
11	---	---	---	---	---	---	---	1.8	5.5	3.3	1.6	.95
12	---	---	---	---	---	---	---	1.8	5.2	3.1	1.6	.94
13	---	---	---	---	---	---	---	1.8	5.0	3.1	1.5	.96
14	---	---	---	---	---	---	---	1.9	5.0	3.0	1.4	.99
15	---	---	---	---	---	---	---	1.8	4.9	2.8	1.3	.95
16	---	---	---	---	---	---	---	1.8	4.9	3.2	1.3	.94
17	---	---	---	---	---	---	---	1.9	4.6	3.0	1.3	.93
18	---	---	---	---	---	---	---	e2.3	4.4	2.8	1.3	.89
19	---	---	---	---	---	---	---	e2.7	4.3	2.7	1.3	.88
20	---	---	---	---	---	---	---	3.0	4.3	2.5	1.2	.90
21	---	---	---	---	---	---	---	3.4	4.1	2.4	1.2	.89
22	---	---	---	---	---	---	---	3.6	4.0	2.5	1.1	.89
23	---	---	---	---	---	---	1.0	3.7	4.0	2.4	1.1	.88
24	---	---	---	---	---	---	1.1	3.9	3.9	2.4	1.1	.85
25	---	---	---	---	---	---	1.1	3.9	3.8	2.4	1.3	.84
26	---	---	---	---	---	---	e1.0	4.2	3.6	2.6	1.1	.86
27	---	---	---	---	---	---	e.95	4.5	3.7	2.6	1.0	.87
28	---	---	---	---	---	---	e.95	4.8	3.6	2.2	1.0	.84
29	---	---	---	---	---	---	e1.0	5.2	3.5	2.1	1.0	1.4
30	---	---	---	---	---	---	1.1	5.5	3.6	2.2	1.2	1.2
31	---	---	---	---	---	---	---	5.8	---	2.1	1.1	---
TOTAL	---	---	---	---	---	---	---	85.2	149.1	92.9	45.0	29.16
MEAN	---	---	---	---	---	---	---	2.75	4.97	3.00	1.45	.97
MAX	---	---	---	---	---	---	---	5.8	6.8	4.9	2.2	1.4
MIN	---	---	---	---	---	---	---	1.2	3.5	2.1	1.0	.84
AC-FT	---	---	---	---	---	---	---	169	296	184	89	58

e Estimated

RIO GRANDE BASIN

08253500 SANTISTEVAN CREEK NEAR COSTILLA, NM--Continued



08253900 COSTILLA RESERVOIR NEAR COSTILLA, NM

LOCATION.--Lat 36°52'36", long 105°16'45", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on face of Costilla Dam on Costilla Creek, 16 mi southeast of Costilla, and at mile 34.8.

DRAINAGE AREA.--54.6 mi².

PERIOD OF RECORD.--May 1922 to September 1965 (monthend contents only), October 1965 to September 1983, April 1990 to current year. Records prior to October 1960 published in WSP 1732. Prior to October 1966, published as Costilla Lake near Costilla.

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Water-stage recorder with satellite telemete. Elevation of gage is 9,300 above National Geodetic Vertical datum of 1929, from topographic map.

REMARKS.--Records good except for estimated periods which are poor. Reservoir is formed by earthfill dam faced with rock. Storage began in 1920. Diversions for irrigation of about 1,300 acres above Reservoir. Reservoir is used for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 16,500 acre-ft June 1-4, 1994, June 19-22, 1995, gage height, 107.61 ft; no storage October 1925 to February 1926, September 1956, Aug. 22 to Sept. 24, 1972, July 29 to Sept. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 11,000 acre-ft, June 1-7, gage height, 93.30 ft; minimum contents, 3,200 acre-ft, Sept. 29-30, gage height, 62.47 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4570	5270	5870	6410	6850	7290	8060	9050	11000	8640	6640	4770
2	4590	5280	5890	6430	6870	7310	8080	9120	11000	8490	6620	4690
3	4620	5310	5910	6440	6880	7320	8100	9180	11000	8440	6560	4610
4	4640	5320	5930	6460	6900	7330	8140	9260	11000	8470	6530	4570
5	4660	5340	5950	6470	6910	7340	8170	9340	11000	8430	6520	4570
6	4690	5360	5970	6490	6930	7370	8180	9410	11000	8280	6530	4550
7	4710	5390	5990	6510	6940	7390	8210	9480	11000	8160	6520	4480
8	4740	5400	6010	6520	6950	7390	8240	9540	10900	8090	6510	4410
9	4760	5420	6030	6540	6970	7410	8270	9610	10800	8020	6470	4340
10	4780	5440	6050	6540	6980	7420	8290	9680	10700	8010	6380	4270
11	4810	5460	6060	6570	7000	7430	8330	9760	10600	8000	6300	4240
12	4830	5490	6080	6580	7010	7450	8370	9840	10600	7960	6200	4230
13	4850	5520	6100	6590	7030	7460	8400	9930	10600	7850	6120	4210
14	4880	5530	6120	6610	7040	7480	8420	10000	10500	7760	6080	4130
15	4900	5550	6130	6620	7060	7500	8440	10100	10400	7680	6080	4040
16	4920	5570	6150	6630	7090	7520	8470	10200	10300	7610	6040	3950
17	4940	5590	6170	6650	7110	7540	8490	10300	10100	7580	5920	3860
18	4960	5600	6180	6660	7130	7560	8510	10300	10000	7580	5810	3820
19	4980	5630	6200	6680	7140	7570	8530	10400	9950	7540	5690	3820
20	5010	5650	6210	6690	7160	7590	8560	10400	9940	7400	5580	3780
21	5020	5670	6230	6700	7180	7600	8580	10500	9900	7300	5560	3670
22	5040	5680	6250	6720	7190	7620	8610	10600	9740	7210	5580	3570
23	5060	5710	6270	6730	7200	7660	8650	10700	9580	7100	5560	3470
24	5100	5720	6290	6750	7230	7740	8710	10700	9420	7080	5400	3370
25	5120	5740	6300	6760	7230	7820	8750	10800	9250	7100	5280	3330
26	5130	5760	6320	6770	7250	7890	8810	10800	9170	7080	5150	3330
27	5160	5790	6330	6780	7270	7920	8850	10800	9170	6970	5020	3300
28	5190	5820	6340	6800	7280	7970	8900	10800	9110	6860	4980	3230
29	5210	5830	6360	6810	---	7980	8940	10900	8930	6760	4970	3200
30	5230	5850	6380	6820	---	8010	8990	10900	8790	6670	4950	3200
31	5250	---	6390	6840	---	8030	---	10900	---	6640	4850	---
MAX	5250	5850	6390	6840	7280	8030	8990	10900	11000	8640	6640	4770
MIN	4570	5270	5870	6410	6850	7290	8060	9050	8790	6640	4850	3200
(+)	72.87	75.49	77.73	79.45	81.12	83.83	87.11	93.19	86.42	78.69	71.05	62.67
(++)	+710	+600	+540	+450	+440	+750	+960	+1910	-2110	-2150	-1790	-1650

CAL YR 1997 MAX 11500 MIN 2500 (++) +3900

WTR YR 1998 MAX 11000 MIN 3200 (++) -1340

(+) GAGE HEIGHT, IN FEET, AT END OF MONTH

(++) CHANGE IN CONTENTS, IN ACRE-FEET

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 right bank approximately 1,000 ft downstream from Costilla Dam, 16 mi southeast of Costilla, and at mile 34.5.

DRAINAGE AREA.--54.6 mi².

PERIOD OF RECORD.--April 1937 to current year (seasonal records 1937-44, 1947-49, 1988-97). 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. Prior to Nov. 7, 1989, at site 500 ft upstream at different datum.

REMARKS.--Records good. Flow regulated by Costilla Reservoir (station 08253900). Diversions for irrigation of about 1,300 acres upstream from reservoir. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--41 years (water years 1945-47, 1950-87), 18.6 ft³/s, 13,480 acre-ft/yr.

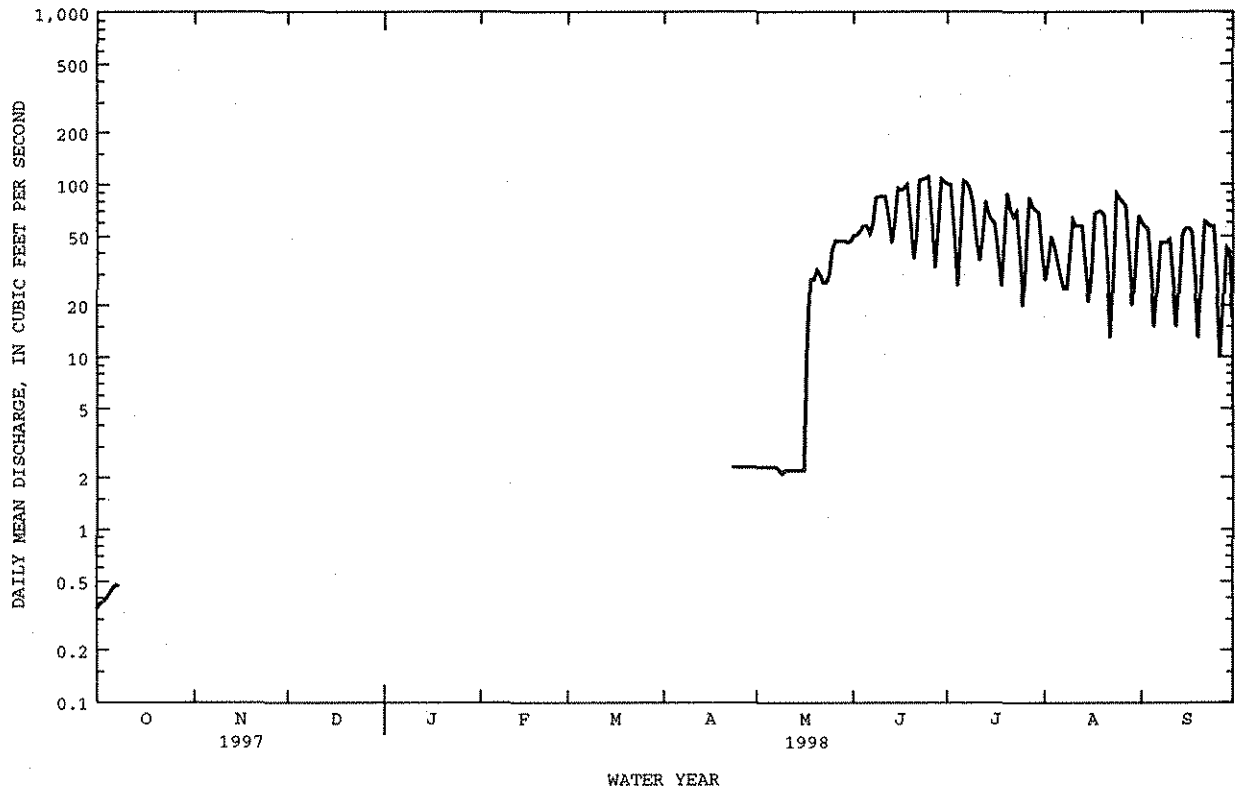
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 366 ft³/s, July 29, 1994, gage height, 3.57 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge during period of seasonal operation, 111 ft³/s, June 25; minimum daily, 0.35 ft³/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	---	---	---	---	---	---	2.3	51	100	28	60
2	.37	---	---	---	---	---	---	2.3	51	100	35	57
3	.38	---	---	---	---	---	---	2.3	54	52	50	55
4	.40	---	---	---	---	---	---	2.3	58	26	44	31
5	.43	---	---	---	---	---	---	2.3	58	50	36	15
6	.46	---	---	---	---	---	---	2.3	52	105	29	26
7	.48	---	---	---	---	---	---	2.3	59	102	25	46
8	.47	---	---	---	---	---	---	2.2	84	95	25	46
9	---	---	---	---	---	---	---	2.1	85	78	39	46
10	---	---	---	---	---	---	---	2.2	85	48	63	48
11	---	---	---	---	---	---	---	2.2	85	36	58	28
12	---	---	---	---	---	---	---	2.2	65	49	58	15
13	---	---	---	---	---	---	---	2.2	46	80	58	27
14	---	---	---	---	---	---	---	2.2	60	68	34	52
15	---	---	---	---	---	---	---	2.2	95	62	21	56
16	---	---	---	---	---	---	---	2.2	93	60	33	56
17	---	---	---	---	---	---	---	11	95	40	68	53
18	---	---	---	---	---	---	---	28	100	26	70	28
19	---	---	---	---	---	---	---	28	61	46	70	13
20	---	---	---	---	---	---	---	32	37	89	67	30
21	---	---	---	---	---	---	---	30	50	72	34	61
22	---	---	---	---	---	---	---	27	106	65	13	59
23	---	---	---	---	---	---	2.3	27	107	70	32	57
24	---	---	---	---	---	---	2.3	30	109	39	89	57
25	---	---	---	---	---	---	2.3	42	111	20	83	29
26	---	---	---	---	---	---	2.3	47	61	42	79	10
27	---	---	---	---	---	---	2.3	47	33	84	75	20
28	---	---	---	---	---	---	2.3	47	56	74	38	43
29	---	---	---	---	---	---	2.3	47	108	71	20	41
30	---	---	---	---	---	---	2.3	46	104	69	34	17
31	---	---	---	---	---	---	---	47	---	41	66	---
TOTAL	---	---	---	---	---	---	---	571.8	2219	1959	1474	1182
MEAN	---	---	---	---	---	---	---	18.4	74.0	63.2	47.5	39.4
MAX	---	---	---	---	---	---	---	47	111	105	89	61
MIN	---	---	---	---	---	---	---	2.1	33	20	13	10
AC-FT	---	---	---	---	---	---	---	1130	4400	3890	2920	2340

08254000 COSTILLA CREEK BELOW COSTILLA DAM, NM--Continued

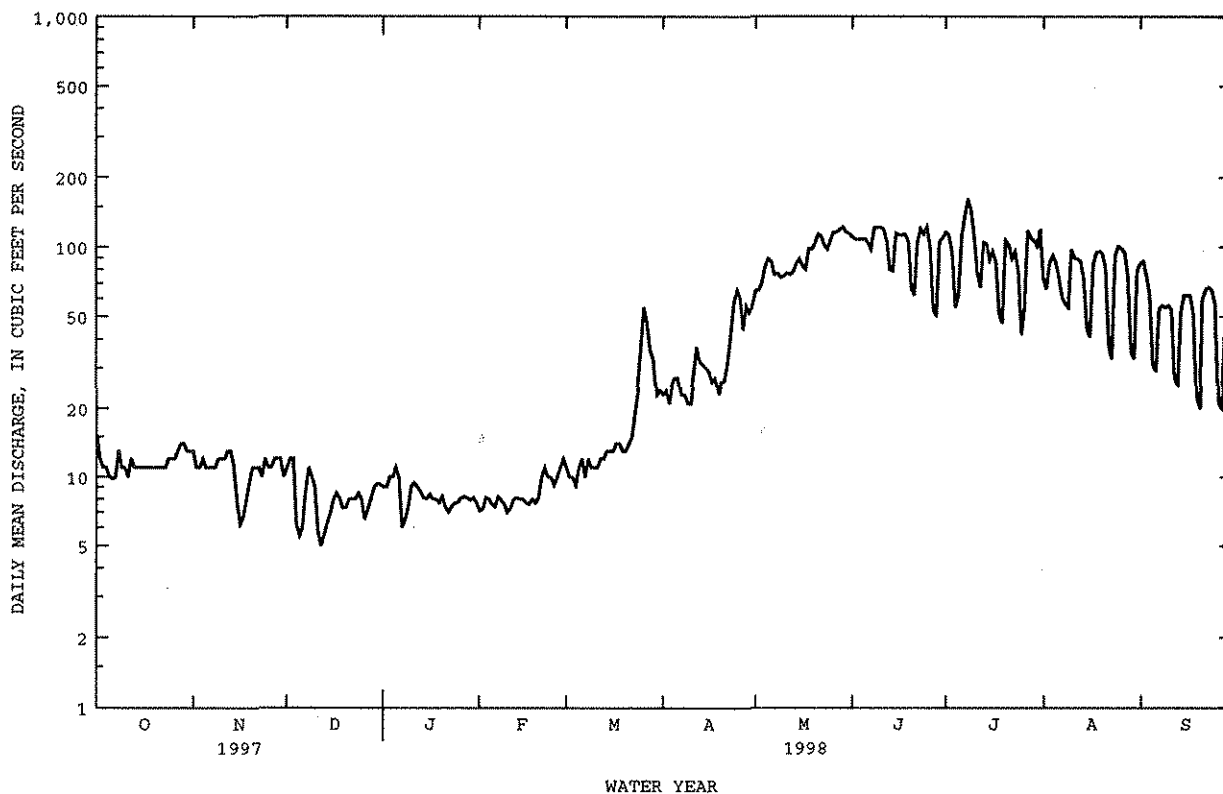


08255500 COSTILLA CREEK NEAR COSTILLA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1942 - 1998	
ANNUAL TOTAL	15483.0		15737.4		46.3	
ANNUAL MEAN	42.4		43.1		134	
HIGHEST ANNUAL MEAN					16.5	
LOWEST ANNUAL MEAN					1000	
HIGHEST DAILY MEAN	193	May 22	161	Jul 8	1.0	May 11 1942
LOWEST DAILY MEAN	4.0	Jan 17	5.0	Dec 12	2.5	Dec 1 1958
ANNUAL SEVEN-DAY MINIMUM	5.1	Jan 12	6.6	Dec 11	1150	Dec 5 1964
INSTANTANEOUS PEAK FLOW			252	Jul 8	5.37	May 11 1942
INSTANTANEOUS PEAK STAGE			3.44	Jul 8	.34	Mar 15 1969
INSTANTANEOUS LOW FLOW			2.1	Mar 10		
ANNUAL RUNOFF (AC-FT)	30710		31220		33550	
10 PERCENT EXCEEDS	106		107		118	
50 PERCENT EXCEEDS	22		23		19	
90 PERCENT EXCEEDS	8.0		7.9		6.4	

e Estimated

a Site and datum then in use.



08261000 COSTILLA CREEK AT GARCIA, CO

LOCATION.--Lat 36°59'21", long 105°31'54", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on left bank 0.4 mi downstream from old State Highway 3, 0.5 mi upstream from New Mexico-Colorado State line, 0.9 mi south of Garcia, and at mile 13.3.

DRAINAGE AREA.--200 mi², approximately.

PERIOD OF RECORD.--June 1944 to current year (seasonal records).

GAGE.--Water-stage recorder. Concrete control since Oct. 9, 1956. Elevation of gage is 7,760 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 20, 1950, at site 0.4 mi downstream at different datum.

REMARKS.--Records good. Flow partly regulated by Costilla Reservoir (station 08253900) 22 mi upstream. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 444 ft³/s, June 1, 1983, gage height, 4.91 ft; no flow for many days most years.

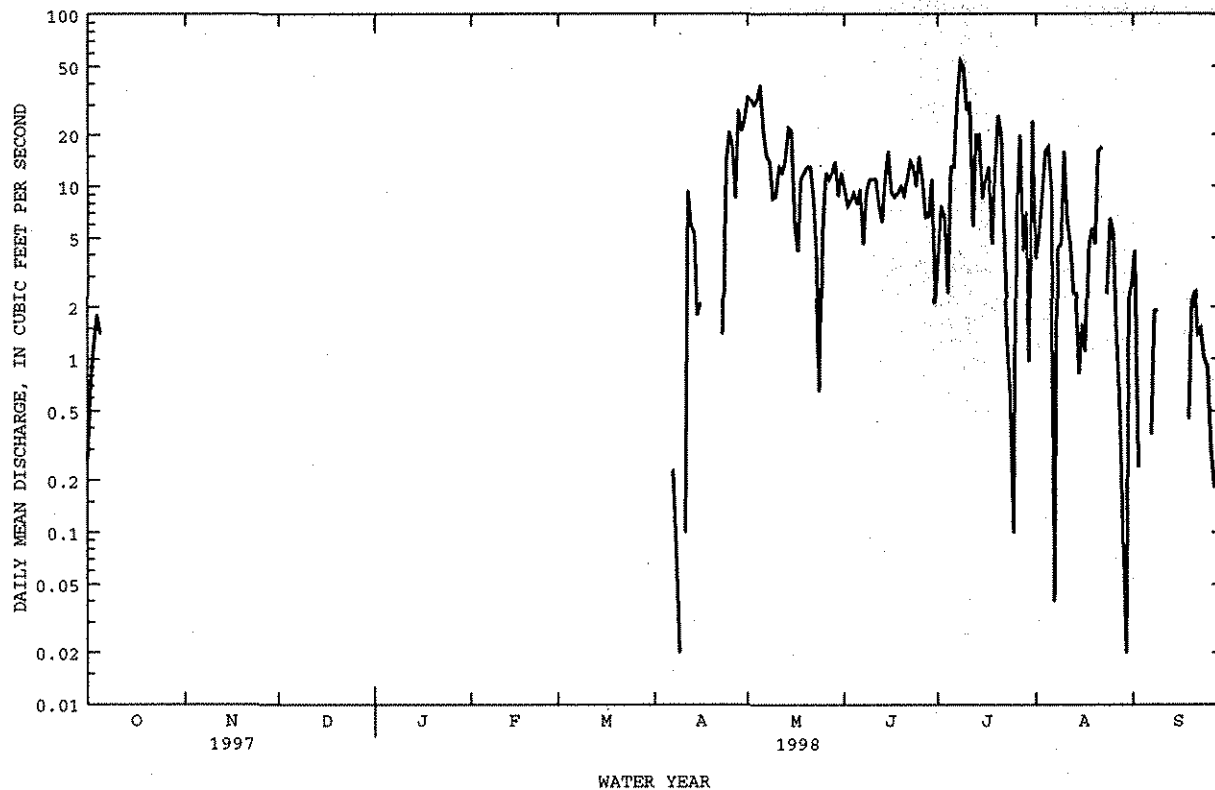
EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in 1886, from information by local residents. Flood of May 11, 1942, probably reached a discharge of 1,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 92 ft³/s, at 1015 hours July 9, gage height, 3.61 ft; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	---	---	---	---	---	---	33	9.8	4.0	3.8	2.9
2	.73	---	---	---	---	---	---	32	7.7	7.7	5.1	4.2
3	1.2	---	---	---	---	---	---	30	8.3	6.7	8.9	.24
4	1.8	---	---	---	---	---	---	32	9.2	2.4	16	.00
5	1.4	---	---	---	---	---	---	39	7.9	13	17	.00
6	---	---	---	---	---	---	---	21	9.6	13	9.8	.00
7	---	---	---	---	---	---	.23	15	4.6	31	.04	.37
8	---	---	---	---	---	---	.08	14	9.1	54	4.4	1.9
9	---	---	---	---	---	---	.02	8.5	11	50	4.6	1.9
10	---	---	---	---	---	---	.00	8.8	11	28	16	.00
11	---	---	---	---	---	---	.10	13	11	31	6.3	.00
12	---	---	---	---	---	---	9.4	12	7.8	5.9	4.6	.00
13	---	---	---	---	---	---	5.9	14	6.2	20	2.4	.00
14	---	---	---	---	---	---	5.4	22	11	20	2.4	.00
15	---	---	---	---	---	---	1.8	21	16	8.5	.82	.64
16	---	---	---	---	---	---	2.1	5.9	9.3	11	1.6	.00
17	---	---	---	---	---	---	.00	4.2	8.7	13	1.1	.00
18	---	---	---	---	---	---	.00	11	9.1	4.6	4.6	.00
19	---	---	---	---	---	---	.00	12	10	13	5.7	.45
20	---	---	---	---	---	---	.00	13	8.9	26	4.6	2.3
21	---	---	---	---	---	---	.00	13	11	20	16	2.5
22	---	---	---	---	---	---	.00	8.5	14	4.6	17	1.4
23	---	---	---	---	---	---	1.4	3.7	13	1.4	.00	1.5
24	---	---	---	---	---	---	14	.65	10	.63	2.4	1.0
25	---	---	---	---	---	---	21	5.5	15	.10	6.5	.91
26	---	---	---	---	---	---	17	12	11	7.3	5.4	.30
27	---	---	---	---	---	---	8.6	11	6.6	20	1.6	.18
28	---	---	---	---	---	---	28	12	6.7	4.2	.61	.00
29	---	---	---	---	---	---	21	14	11	7.2	.10	.05
30	---	---	---	---	---	---	25	8.8	2.1	.97	.02	.33
31	---	---	---	---	---	---	---	12	---	24	2.2	---
TOTAL	---	---	---	---	---	---	---	462.55	286.6	453.20	171.59	23.07
MEAN	---	---	---	---	---	---	---	14.9	9.55	14.6	5.54	.77
MAX	---	---	---	---	---	---	---	39	16	54	17	4.2
MIN	---	---	---	---	---	---	---	.65	2.1	.10	.00	.00
AC-FT	---	---	---	---	---	---	---	917	568	899	340	46

08261000 COSTILLA CREEK AT GARCIA, CO--Continued



RIO GRANDE BASIN

08263500 RIO GRANDE NEAR CERRO, NM

LOCATION.--Lat 36°44'24", long 105°40'59", in NW¹/₄NE¹/₄ sec.20, T.29 N., R.12 E., Tacos 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 September 1994, October 1995 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.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 7,000 acres in New Mexico. Several observations of water temperature were made during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	1250	748	448	455	437	719	514	1050	165	199	86
2	1110	1190	785	466	459	469	648	521	971	e150	171	91
3	1090	1180	784	506	456	485	575	580	763	e145	157	92
4	1060	1120	e715	506	465	508	564	686	635	e155	161	91
5	1050	1070	e630	516	472	559	496	854	623	183	188	93
6	1010	1050	e450	535	479	615	477	1050	766	208	158	91
7	937	1010	e315	534	487	633	468	1170	587	234	146	106
8	873	985	e370	520	495	567	477	990	e566	262	146	89
9	833	976	490	483	491	607	464	812	545	360	124	86
10	955	970	567	471	503	569	430	772	584	349	123	84
11	1070	969	578	452	499	570	410	706	510	385	115	88
12	1060	971	568	436	492	587	373	757	432	401	109	84
13	1120	972	e555	446	487	618	365	895	402	374	103	83
14	1460	967	e542	468	484	654	384	894	396	361	99	81
15	1930	942	e510	467	495	670	395	855	427	289	e98	82
16	2010	850	e509	473	499	694	391	831	458	244	e96	83
17	1810	755	e515	467	505	727	362	673	506	221	e95	81
18	1740	658	e510	450	516	747	343	596	494	249	e94	79
19	1660	662	e493	447	523	760	367	592	469	239	89	74
20	1540	788	e478	459	514	750	347	664	405	218	91	69
21	1470	818	e450	465	515	720	334	818	359	208	82	67
22	1430	815	453	460	518	704	324	1020	318	213	78	80
23	1430	792	470	458	519	716	313	1230	289	201	85	79
24	1420	767	460	440	536	747	298	1440	290	194	83	81
25	1390	741	452	431	561	798	300	1150	273	214	78	94
26	1360	756	e405	432	537	858	413	988	276	249	89	91
27	1360	844	e415	435	496	1030	615	872	255	222	80	91
28	1320	851	e415	442	418	1130	680	797	224	213	85	86
29	1270	839	e410	444	---	1030	621	802	204	204	87	86
30	1290	828	423	445	---	893	549	819	176	212	88	97
31	1290	---	438	444	---	807	---	961	---	210	88	---
TOTAL	40598	27386	15903	14446	13876	21659	13502	26309	14253	7532	3485	2565
MEAN	1310	913	513	466	496	699	450	849	475	243	112	85.5
MAX	2010	1250	785	535	561	1130	719	1440	1050	401	199	106
MIN	833	658	315	431	418	437	298	514	176	145	78	67
AC-FT	80530	54320	31540	28650	27520	42960	26780	52180	28270	14940	6910	5090

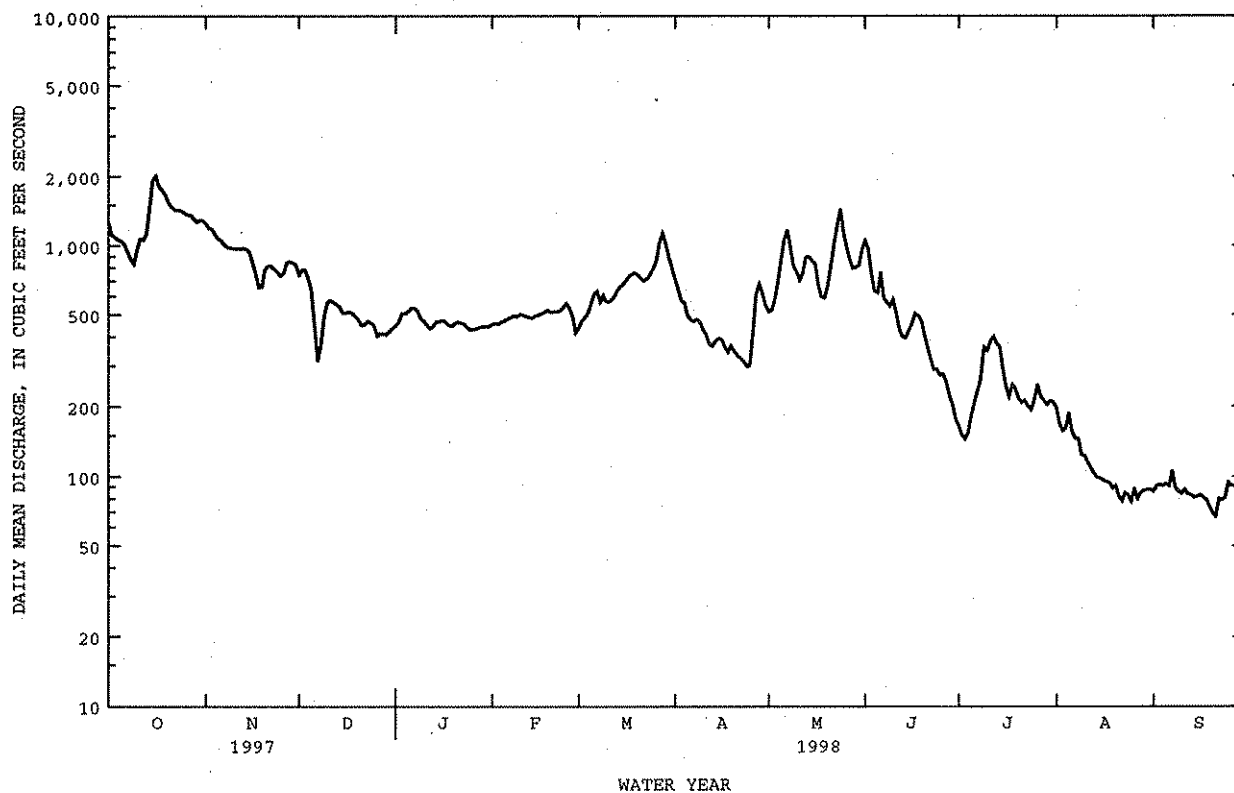
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1998, BY WATER YEAR (WY)

	MEAN	219	362	304	297	357	480	551	961	1135	462	236	184
MAX	1310	1073	774	566	657	1010	2335	4577	4400	2181	957	804	
(WY)	1998	1987	1987	1987	1987	1987	1987	1987	1987	1949	1986	1957	1982
MIN	52.7	88.1	100	116	140	110	107	84.1	58.1	51.5	48.1	44.8	
(WY)	1957	1957	1964	1957	1957	1957	1955	1963	1977	1951	1956	1956	

08263500 RIO GRANDE NEAR CERRO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1949 - 1998	
ANNUAL TOTAL	308469		201514		462	
ANNUAL MEAN	845		552		1275	1987
HIGHEST ANNUAL MEAN					112	1964
LOWEST ANNUAL MEAN					9440	Jun 22 1949
HIGHEST DAILY MEAN	3220	Jun 6	2010	Oct 16	40	Sep 10 1977
LOWEST DAILY MEAN	243	Jan 7	67	Sep 21	42	Sep 5 1977
ANNUAL SEVEN-DAY MINIMUM	279	Apr 14	76	Sep 17	9740	Jun 22 1949
INSTANTANEOUS PEAK FLOW			2080	Oct 15	15.78	Jun 22 1949
INSTANTANEOUS PEAK STAGE			8.59	Oct 15	40	Sep 10 1977
INSTANTANEOUS LOW FLOW			63	Sep 21	334800	
ANNUAL RUNOFF (AC-FT)	611800		399700		985	
10 PERCENT EXCEEDS	1690		1050		278	
50 PERCENT EXCEEDS	582		487		82	
90 PERCENT EXCEEDS	371		91			

e Estimated



08265000 RED RIVER NEAR OUESTA, NM

LOCATION.--Lat 36°42'12", long 105°34'04", in NE¹/₄ SE¹/₄ 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 with Satellite telemetry. 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.--Records good except for estimated daily discharges, which are fair. Diversions 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. January 1966 to December 1991 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). Several observations of water temperature were made during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	20	e9.2	13	17	13	22	65	130	60	59	39
2	22	21	e9.0	15	17	13	23	73	138	60	53	47
3	22	21	e9.3	e14	18	13	22	84	139	62	49	39
4	23	21	9.9	e13	17	14	24	95	137	62	54	37
5	22	21	8.9	e15	16	13	25	102	124	65	58	35
6	22	21	9.5	17	14	13	25	102	112	62	50	34
7	23	21	e9.6	10	13	15	25	92	107	71	46	32
8	31	22	e9.3	12	13	15	24	89	105	92	44	30
9	26	23	e9.0	16	11	15	24	82	102	78	44	29
10	24	e20	e8.9	e15	11	14	24	88	98	78	42	29
11	23	e17	e8.0	e16	11	15	25	97	96	70	43	30
12	26	e15	6.6	e14	12	17	29	99	87	65	43	29
13	23	e13	7.6	e17	14	15	29	99	84	62	44	29
14	23	e12	8.3	e17	13	14	29	100	85	61	e39	28
15	23	e10	9.4	15	12	14	29	95	82	57	e36	27
16	22	9.8	e9.2	20	12	15	29	90	80	57	e35	29
17	22	e9.6	e9.0	18	12	14	27	88	81	60	e34	28
18	23	e9.4	e9.0	18	13	16	24	93	75	53	e36	e26
19	24	e9.2	e8.9	17	12	16	21	102	70	50	34	e24
20	24	e9.0	e9.0	18	12	17	22	111	68	52	37	e22
21	23	e8.8	e9.3	15	14	18	22	132	67	50	38	e20
22	20	e9.0	e9.0	14	15	18	24	139	66	48	46	e18
23	19	e9.2	e8.9	15	13	19	34	130	65	55	43	e16
24	21	e9.4	e9.2	16	12	22	56	121	68	47	39	e15
25	19	e9.5	e8.8	17	12	22	67	118	67	43	38	e16
26	18	e9.3	8.3	18	11	23	68	115	64	52	36	17
27	19	e9.4	9.0	18	14	24	60	116	63	64	34	15
28	19	e9.2	9.5	17	15	21	55	121	62	58	32	14
29	19	e9.0	11	17	---	21	50	123	61	56	31	18
30	18	e9.3	12	18	---	22	54	129	61	55	32	27
31	18	---	12	18	---	23	---	130	---	59	33	---
TOTAL	683	417.1	284.6	493	376	524	992	3220	2644	1864	1282	799
MEAN	22.0	13.9	9.18	15.9	13.4	16.9	33.1	104	88.1	60.1	41.4	26.6
MAX	31	23	12	20	18	24	68	139	139	92	59	47
MIN	18	8.8	6.6	10	11	13	21	65	61	43	31	14
AC-FT	1350	827	565	978	746	1040	1970	6390	5240	3700	2540	1580

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1998, BY WATER YEAR (WY)

MEAN	23.0	17.0	12.2	12.3	12.7	16.0	37.1	117	140	64.3	39.9	29.1
MAX	38.1	32.8	25.3	25.2	22.8	40.0	84.1	267	405	172	70.6	62.2
(WY)	1986	1987	1994	1994	1988	1989	1985	1979	1979	1979	1966	1991
MIN	7.93	8.09	3.88	3.91	4.81	5.11	9.73	17.5	22.7	14.6	11.8	8.81
(WY)	1973	1977	1975	1973	1977	1977	1971	1971	1977	1971	1972	1978

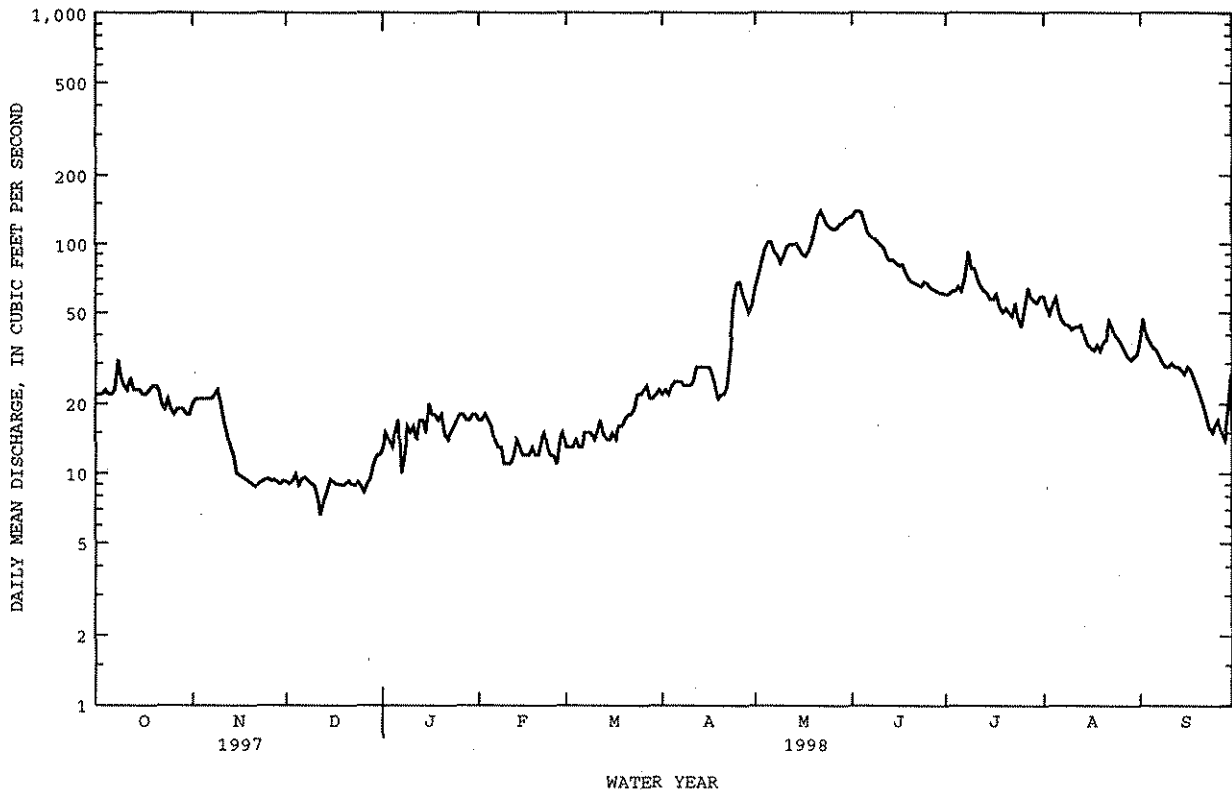
08265000 RED RIVER NEAR QUESTA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1966 - 1998
ANNUAL TOTAL	19827.5	13578.7	^a 43.5
ANNUAL MEAN	54.3	37.2	87.6
HIGHEST ANNUAL MEAN			11.8
LOWEST ANNUAL MEAN			557
HIGHEST DAILY MEAN	347 Jun 5	139 May 22	2.5 Jun 9 1979
LOWEST DAILY MEAN	6.6 Dec 12	6.6 Dec 12	3.1 Jan 6 1971
ANNUAL SEVEN-DAY MINIMUM	8.2 Dec 8	8.2 Dec 8	3.1 Jan 2 1973
INSTANTANEOUS PEAK FLOW		149 May 22	^b 886 May 25 1942
INSTANTANEOUS PEAK STAGE		3.13 May 22	5.80 Jun 8 1979
INSTANTANEOUS LOW FLOW		4.1 Jan 7	.60 Jan 21 1981
ANNUAL RUNOFF (AC-FT)	39330	26930	31520
10 PERCENT EXCEEDS	176	89	108
50 PERCENT EXCEEDS	24	23	22
90 PERCENT EXCEEDS	9.3	9.5	8.0

e Estimated

^a Average discharge for 52 years (water years 1913-25, 1927-65), 55.9 ft³/s, 40,500 acre-ft/yr, prior to extensive upstream diversions by MolyCorp.

^b From rating curve extended above 450 ft³/s.



08266820 RED RIVER BELOW FISH HATCHERY, NEAR OUESTA, NM

LOCATION.--Lat 36°40'54", long 105°39'21", in NW¹/₄NW¹/₄ sec.10, T.28 N., R.12 E., Taos County, Hydrologic Unit 13020101, on right bank 0.3 mi downstream from State Fish Hatchery, 3.5 mi upstream from mouth, and 3.7 mi southwest of Questa.

DRAINAGE AREA.--185 mi².

PERIOD OF RECORD.--August 1969 to July 1978 (discharge measurements only), August 1978 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,070 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 16, 1979, at site about 250 ft upstream at datum 5.55 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 3,000 acres upstream from station. Several observations of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	47	52	39	44	35	47	98	154	85	85	67
2	47	48	52	41	43	38	50	108	161	86	81	73
3	46	48	51	44	45	43	47	119	160	89	81	63
4	48	51	38	46	45	44	50	140	158	93	87	59
5	47	50	35	46	44	43	51	144	146	98	90	59
6	47	50	36	44	42	44	51	143	137	90	83	58
7	48	50	42	37	42	46	51	130	130	99	77	56
8	56	50	51	37	42	41	49	122	127	128	71	54
9	53	50	48	42	41	43	50	115	121	113	64	53
10	50	50	46	46	39	43	48	118	116	114	63	52
11	50	52	42	48	40	45	47	127	118	104	68	51
12	55	53	34	47	40	47	51	130	113	96	70	53
13	53	53	34	46	39	45	52	131	111	92	65	53
14	52	54	36	46	42	43	52	133	113	88	65	51
15	52	47	37	42	41	42	52	128	114	81	63	51
16	51	41	39	48	41	43	54	122	109	80	61	52
17	51	42	40	47	40	43	53	118	109	87	62	52
18	52	45	40	46	42	43	50	121	101	79	66	51
19	53	49	39	46	40	43	46	133	97	77	64	49
20	53	54	40	46	40	44	47	143	96	79	69	49
21	52	53	40	43	43	44	47	159	96	79	70	47
22	49	53	39	40	44	44	49	167	95	75	70	46
23	47	51	39	41	43	45	57	160	93	83	67	44
24	51	52	40	43	42	47	82	154	e92	73	62	40
25	49	51	39	44	42	49	104	152	e90	69	61	38
26	47	52	32	44	40	51	107	146	86	80	60	38
27	48	53	34	45	37	53	95	143	86	94	57	36
28	49	53	36	44	35	49	88	146	85	85	56	36
29	48	52	36	44	---	48	79	147	84	82	57	41
30	48	49	38	45	---	48	83	153	85	80	56	53
31	47	---	40	44	---	48	---	155	---	85	58	---
TOTAL	1546	1503	1245	1361	1158	1384	1789	4205	3383	2743	2109	1525
MEAN	49.9	50.1	40.2	43.9	41.4	44.6	59.6	136	113	88.5	68.0	50.8
MAX	56	54	52	48	45	53	107	167	161	128	90	73
MIN	46	41	32	37	35	35	46	98	84	69	56	36
AC-FT	3070	2980	2470	2700	2300	2750	3550	8340	6710	5440	4180	3020

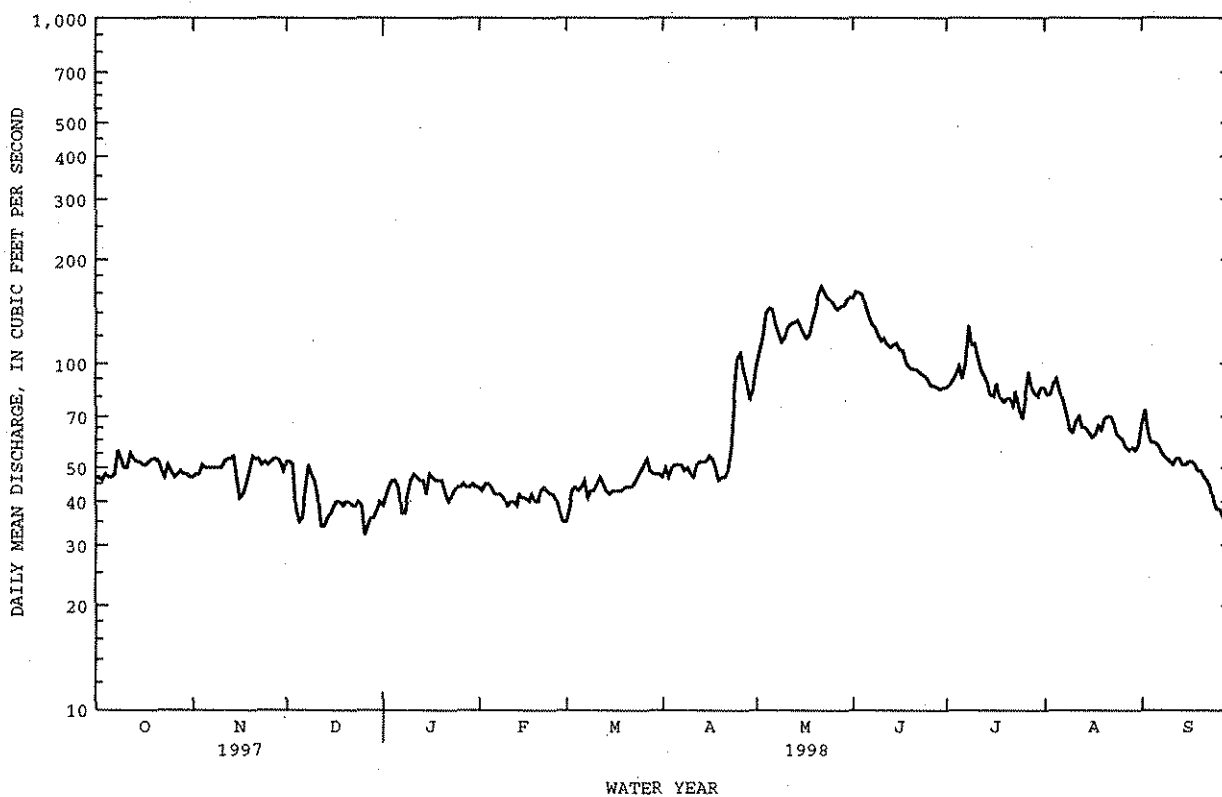
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1998, BY WATER YEAR (WY)

MEAN	53.7	48.1	43.4	44.1	44.3	48.5	79.2	199	221	107	71.1	61.1
MAX	71.0	59.2	51.0	55.3	57.9	72.0	144	374	520	227	95.3	86.9
(WY)	1986	1992	1987	1992	1992	1989	1985	1994	1979	1995	1993	1986
MIN	29.0	33.0	28.2	31.4	31.5	35.1	39.7	50.5	51.2	43.1	42.1	31.2
(WY)	1979	1979	1979	1979	1981	1981	1981	1981	1996	1981	1981	1978

08266820 RED RIVER BELOW FISH HATCHERY, NEAR QUESTA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1978 - 1998	
ANNUAL TOTAL	28295		23951		85.3	
ANNUAL MEAN	77.5		65.6		129	
HIGHEST ANNUAL MEAN					41.9	
LOWEST ANNUAL MEAN					1981	
HIGHEST DAILY MEAN	378	Jun 6	167	May 22	676	May 27 1979
LOWEST DAILY MEAN	32	Dec 26	32	Dec 26	26	Oct 10 1978
ANNUAL SEVEN-DAY MINIMUM	35	Jan 6	36	Dec 24	26	Dec 9 1978
INSTANTANEOUS PEAK FLOW			173	May 22	755	Jun 8 1979
INSTANTANEOUS PEAK STAGE			2.77	May 22	^a 5.30	Jun 8 1979
INSTANTANEOUS LOW FLOW			22	Dec 26	21	Dec 14 1986
ANNUAL RUNOFF (AC-FT)	56120		47510		61820	
10 PERCENT EXCEEDS	179		118		167	
50 PERCENT EXCEEDS	51		51		55	
90 PERCENT EXCEEDS	38		40		38	

e Estimated

^a Site and datum then in use.

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.

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	17	13	e9.8	e9.4	e9.6	15	50	109	50	33	24
2	19	15	13	e10	e9.6	e9.4	15	54	115	48	31	25
3	19	15	12	e9.8	9.5	e9.8	16	64	114	47	31	22
4	19	15	e11	e9.6	9.5	10	18	74	116	47	34	21
5	18	15	e11	e9.8	9.5	9.5	20	78	117	46	33	20
6	18	15	e12	e10	9.3	9.3	21	76	112	45	31	20
7	18	15	13	e9.6	9.1	9.3	19	69	108	52	30	19
8	24	14	13	e9.8	9.0	e9.2	16	64	104	54	30	19
9	20	15	12	e9.6	9.0	e9.4	15	61	100	51	30	19
10	19	14	12	e9.8	e8.8	e9.6	15	65	96	52	29	19
11	19	14	e11	e9.8	9.8	9.7	17	74	93	48	30	19
12	21	15	e10	e9.6	e9.6	9.9	22	77	87	46	29	18
13	20	14	e11	9.6	e9.4	11	21	80	86	46	28	19
14	20	13	e11	9.6	9.5	11	20	88	86	46	27	18
15	20	13	e12	e9.4	9.6	11	19	86	82	46	26	17
16	20	e12	e12	9.5	9.7	11	18	82	79	46	26	17
17	19	e11	12	9.5	9.4	11	17	81	76	44	25	17
18	19	e12	12	9.4	9.3	11	16	85	72	42	25	17
19	18	14	11	9.4	9.1	11	15	89	69	40	24	16
20	18	14	12	9.6	e9.3	11	15	101	67	40	24	16
21	18	13	12	9.4	9.4	12	16	116	66	38	25	16
22	17	13	11	e9.3	9.5	13	20	108	64	39	26	16
23	17	13	11	e9.2	9.6	16	27	103	62	38	24	16
24	19	13	e10	e9.4	9.8	20	40	103	60	35	23	16
25	17	13	e10	e9.3	9.0	26	50	99	58	34	22	15
26	16	14	e9.8	e9.2	e9.2	28	47	100	56	37	22	15
27	16	14	e10	9.3	e9.2	25	41	109	55	35	22	15
28	17	14	e9.8	e9.2	e9.4	21	36	115	54	34	21	14
29	17	13	e9.6	9.3	---	19	35	110	52	33	23	18
30	17	13	e9.8	9.4	---	16	42	107	51	31	23	20
31	17	---	e9.6	9.6	---	15	---	110	---	31	24	---
TOTAL	575	415	348.6	295.8	262.5	413.7	704	2678	2466	1321	831	543
MEAN	18.5	13.8	11.2	9.54	9.38	13.3	23.5	86.4	82.2	42.6	26.8	18.1
MAX	24	17	13	10	9.8	28	50	116	117	54	34	25
MIN	16	11	9.6	9.2	8.8	9.2	15	50	51	31	21	14
AC-FT	1140	823	691	587	521	821	1400	5310	4890	2620	1650	1080

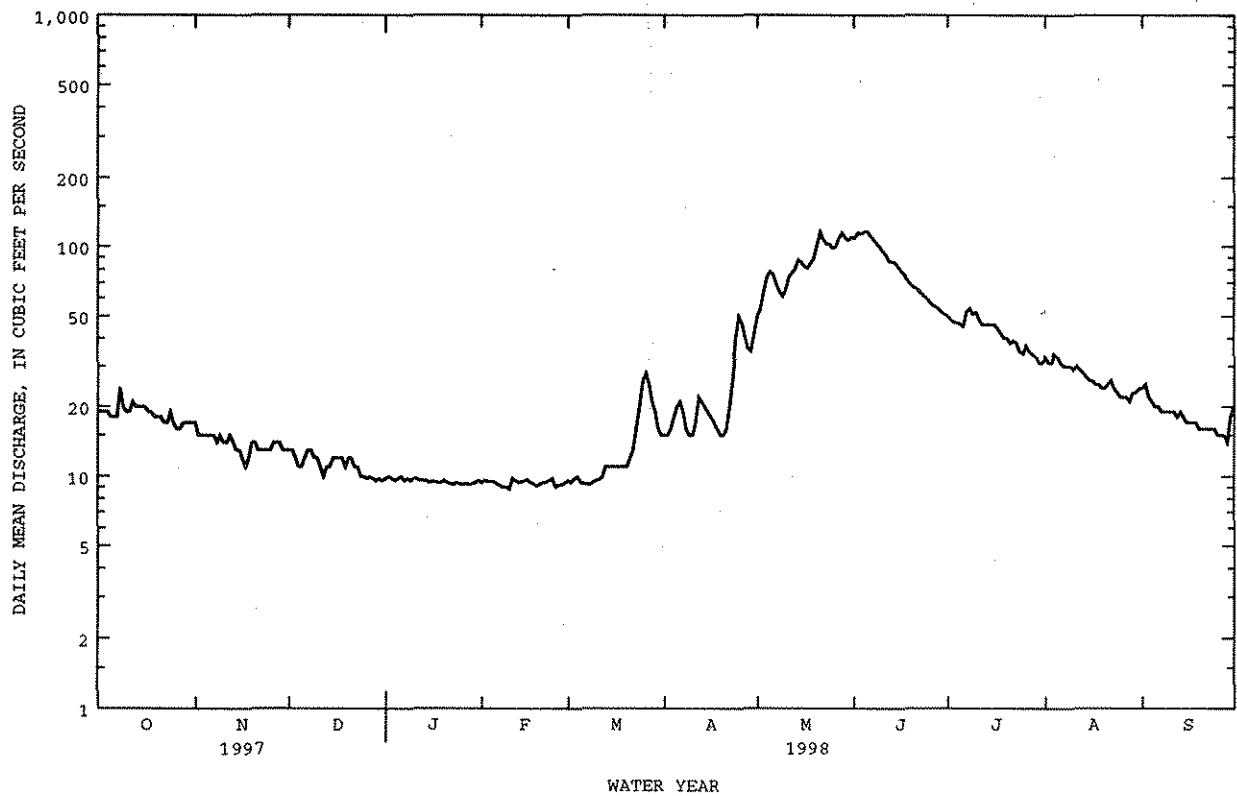
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1998, BY WATER YEAR (WY)

MEAN	18.6	14.9	12.2	10.8	10.8	14.4	34.4	96.8	115	49.2	29.2	22.5
MAX	43.5	35.8	23.1	20.1	16.6	36.4	92.4	246	299	156	60.3	53.2
(WY)	1942	1942	1942	1942	1942	1989	1937	1941	1979	1995	1957	1993
MIN	10.8	8.28	7.52	6.03	6.08	7.60	11.1	20.6	21.0	14.6	10.9	9.87
(WY)	1957	1952	1964	1935	1935	1964	1977	1971	1996	1972	1972	1956

08267500 RIO HONDO NEAR VALDEZ, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1935 - 1998	
ANNUAL TOTAL	14405.5		10853.6		35.8	
ANNUAL MEAN	39.5		29.7		69.9	
HIGHEST ANNUAL MEAN					15.6	
LOWEST ANNUAL MEAN					416	
HIGHEST DAILY MEAN	231	May 23	117	Jun 5	416	May 13 1941
LOWEST DAILY MEAN	7.8	Jan 12	8.8	Feb 10	3.0	Jan 21 1935
ANNUAL SEVEN-DAY MINIMUM	8.4	Jan 7	9.2	Feb 4	4.2	Jan 18 1935
INSTANTANEOUS PEAK FLOW			125	May 29	541	May 13 1941
INSTANTANEOUS PEAK STAGE			2.39	May 29	^a 4.89	Feb 2 1994
INSTANTANEOUS LOW FLOW			8.8	Feb 10	^b 1.0	Jan 27 1942
ANNUAL RUNOFF (AC-FT)	28570		21530		25940	
10 PERCENT EXCEEDS	107		77		86	
50 PERCENT EXCEEDS	19		18		18	
90 PERCENT EXCEEDS	9.6		9.5		10	

e Estimated

^a Maximum gage height on Dec. 24, 1996, due to backwater from ice.^b Result of freeze-up.

RIO GRANDE BASIN

08267500 RIO HONDO NEAR VALDEZ, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963, 1986 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
DEC 18...	0715	11	145	7.8	4.5	.000	575	11.3	103
JUN 04...	0735	114	103	7.4	8.5	5.0	570	10.0	105

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
DEC 18...	<.01	.38	<.02	<.1	<.1	<.01	<.01	<.01
JUN 04...	<.01	.20	<.01	<.20	.22	<.02	<.02	<.01

LOCATION.--Lat 36°26'22", long 105°30'11", in SW¹/₄SE¹/₄ 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.

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.

GAGE.--Water-stage recorder with satellite telemetry. 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.--Records good except for estimated daily discharges, which are poor. No diversions upstream from station. Several observations of water temperature were made during the year.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	10	8.8	e4.4	e3.4	17	17	62	78	19	17	12
2	9.0	9.1	8.4	e4.2	e4.0	23	17	77	77	18	15	15
3	9.2	9.1	8.1	e4.0	e3.4	15	18	93	74	19	14	14
4	8.9	9.6	7.2	e3.8	e3.1	13	20	110	71	20	19	12
5	8.7	9.5	e7.0	e3.6	e3.1	7.7	23	117	65	20	21	11
6	8.5	9.3	e7.2	e3.5	e3.0	8.0	25	116	57	17	19	9.9
7	8.8	9.3	e7.0	e3.9	e3.0	7.8	24	97	53	26	17	9.4
8	12	9.3	e6.6	e4.1	e3.0	7.6	21	87	50	33	15	9.1
9	10	9.1	e6.8	e4.0	e3.0	7.8	19	79	47	30	16	8.9
10	9.6	9.1	e6.6	e3.9	e3.2	8.2	18	81	45	30	15	9.1
11	9.3	9.4	e6.0	e3.6	e3.4	8.3	21	94	45	25	14	8.9
12	10	10	e5.7	e3.2	e3.3	8.3	30	97	40	22	15	8.7
13	11	10	e5.8	e3.1	e3.6	8.8	31	98	38	21	14	8.7
14	11	9.4	e6.0	e3.1	e3.2	9.7	31	106	37	20	13	8.2
15	11	6.6	e5.8	e3.3	e3.1	10	29	99	36	19	13	8.3
16	11	e8.2	e5.7	e3.2	e3.1	11	28	87	34	19	12	9.0
17	10	e9.4	e5.2	e3.1	e3.1	11	25	84	32	22	12	9.7
18	10	10	e5.2	e3.1	e3.1	10	23	89	31	19	12	9.0
19	9.7	9.8	e4.8	e3.1	e3.1	9.5	21	105	29	17	11	8.2
20	9.5	9.8	e4.6	e3.0	e3.0	9.9	21	112	27	16	12	7.9
21	9.4	9.4	e4.4	e3.4	e3.6	11	21	122	26	16	14	7.6
22	9.3	8.7	e4.2	e4.0	e4.2	13	25	116	25	16	15	7.4
23	9.2	8.7	e4.0	e3.8	e5.5	16	37	103	25	19	13	7.5
24	10	8.8	e4.2	e4.1	e5.8	24	60	92	24	17	12	7.4
25	10	8.5	e4.0	e3.8	6.1	33	81	85	23	16	12	7.2
26	9.8	9.0	e4.4	e3.7	6.8	39	79	81	22	20	11	7.0
27	9.8	8.9	e4.8	e3.5	7.5	36	63	80	20	24	10	7.0
28	10	9.0	e5.0	e3.6	9.9	28	55	80	19	20	9.7	6.8
29	10	8.6	e5.2	e3.7	---	25	49	84	19	19	9.6	7.5
30	9.9	8.1	e4.9	e3.2	---	21	51	85	19	17	9.5	12
31	9.8	---	e4.5	e3.3	---	18	---	83	---	16	11	---
TOTAL	303.4	273.7	178.1	111.3	113.6	475.6	983	2901	1188	632	422.8	274.4
MEAN	9.79	9.12	5.75	3.59	4.06	15.3	32.8	93.6	39.6	20.4	13.6	9.15
MAX	12	10	8.8	4.4	9.9	39	81	122	78	33	21	15
MIN	8.5	6.6	4.0	3.0	3.0	7.6	17	62	19	16	9.5	6.8
AC-FT	602	543	353	221	225	943	1950	5750	2360	1250	839	544

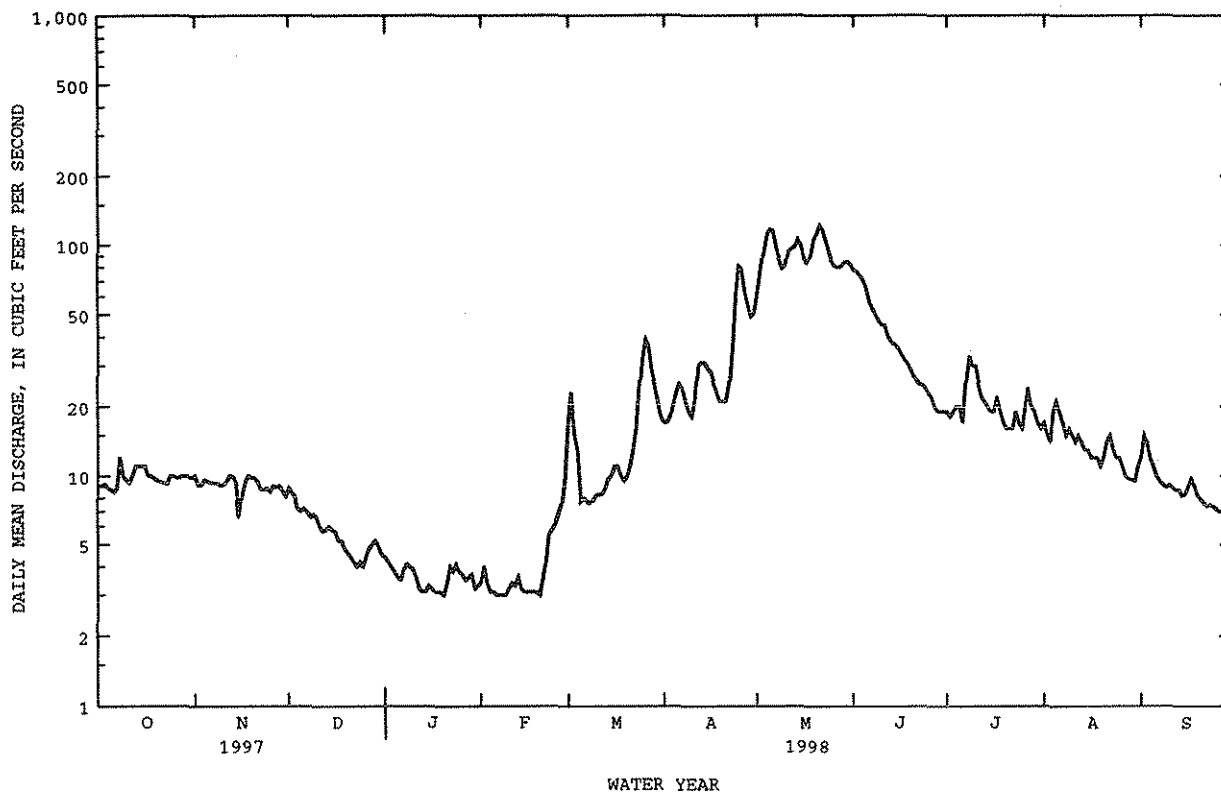
MEAN	9.86	9.10	7.91	6.90	7.50	13.8	50.7	121	75.7	23.6	15.5	11.6
MAX	19.1	17.5	12.5	11.1	13.3	39.7	155	356	268	75.4	32.2	32.4
(WY)	1942	1942	1992	1984	1995	1989	1942	1941	1979	1995	1991	1982
MIN	4.84	4.80	4.05	3.39	3.64	5.58	13.1	11.3	8.64	4.60	4.45	4.17
(WY)	1965	1982	1964	1964	1964	1964	1971	1972	1972	1972	1972	1972

RIO GRANDE BASIN

08269000 RIO PUEBLO DE TAOS NEAR TAOS, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1913 - 1998	
ANNUAL TOTAL	11816.1		7856.9		30.4	
ANNUAL MEAN	32.4		21.5		72.3	1979
HIGHEST ANNUAL MEAN					7.74	1972
LOWEST ANNUAL MEAN					926	May 26 1979
HIGHEST DAILY MEAN	226	May 23	122	May 21	2.0	Dec 3 1950
LOWEST DAILY MEAN	4.0	Dec 23	3.0	Jan 20	2.8	Jan 29 1990
ANNUAL SEVEN-DAY MINIMUM	4.3	Dec 20	3.1	Feb 4	^a 1050	May 26 1979
INSTANTANEOUS PEAK FLOW			127	May 22	^b 3.90	May 14 1941
INSTANTANEOUS PEAK STAGE			1.76	May 22	.69	Feb 27 1991
INSTANTANEOUS LOW FLOW			3.0	Jan 20		
ANNUAL RUNOFF (AC-FT)	23440		15580		22000	
10 PERCENT EXCEEDS	107		67		73	
50 PERCENT EXCEEDS	11		10		11	
90 PERCENT EXCEEDS	6.0		3.6		5.8	

e Estimated

^a From rating curve extended above 370 ft³/s.^b From floodmarks, site and datum then in use.

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.--Records good except for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	9.4	7.5	e5.9	5.4	6.4	12	34	89	32	21	14
2	9.8	9.0	7.5	e6.0	5.3	7.2	11	41	92	31	20	17
3	9.8	8.9	7.2	e6.1	5.4	6.5	11	47	92	30	20	14
4	9.6	8.9	e7.0	e6.1	5.4	5.8	12	54	86	30	22	14
5	9.5	8.8	e6.6	6.2	5.6	5.7	13	56	74	29	21	13
6	9.3	8.6	e6.4	e5.8	5.5	5.8	14	55	67	28	20	13
7	9.8	8.6	e6.4	e5.4	5.4	5.7	13	47	64	35	19	13
8	12	8.5	e6.7	e5.1	5.4	5.7	12	44	62	40	19	13
9	9.9	8.6	6.9	e5.1	5.5	6.1	11	41	59	40	18	12
10	9.6	8.5	6.9	e5.3	5.5	7.0	11	44	57	40	18	12
11	9.4	8.4	6.9	e5.5	5.4	6.1	12	51	56	39	18	12
12	9.6	8.5	e6.7	e5.6	5.4	6.1	15	53	51	37	18	12
13	9.1	8.5	e6.4	5.8	6.2	6.7	15	55	50	35	17	12
14	10	7.7	e6.0	5.8	5.4	7.2	14	60	52	33	17	11
15	10	7.6	e6.0	5.7	5.4	7.2	13	55	51	31	16	11
16	10	6.9	e6.1	5.8	5.4	7.1	12	50	50	30	15	11
17	10	e6.7	e6.3	5.6	5.4	7.2	11	50	49	28	15	11
18	10	e6.4	e6.4	5.6	5.4	7.1	10	53	47	27	14	11
19	9.9	e6.8	e6.5	5.6	5.3	7.0	9.7	64	45	26	14	11
20	9.8	e7.4	6.7	5.6	5.3	7.1	9.6	76	44	24	14	11
21	9.6	e7.8	6.7	5.6	5.4	7.8	10	81	43	23	16	11
22	9.4	8.2	6.5	5.5	5.3	9.0	12	80	42	25	16	10
23	9.6	e7.8	6.6	5.5	5.3	12	17	78	41	24	15	10
24	9.9	e7.4	6.7	5.5	5.4	17	25	77	40	22	15	10
25	9.0	e7.0	6.5	5.7	5.2	22	34	78	38	21	14	10
26	9.4	e7.3	6.3	5.7	5.7	25	33	77	37	23	14	9.8
27	9.8	7.7	e6.2	5.7	5.8	22	27	78	36	22	14	9.7
28	9.9	7.7	e5.9	5.7	5.9	18	24	81	34	22	13	9.5
29	9.7	7.5	e5.7	5.7	---	16	23	91	33	21	13	11
30	9.5	7.4	e5.7	5.8	---	13	27	98	33	20	13	11
31	9.6	---	e5.8	5.6	---	12	---	94	---	20	13	---
TOTAL	302.3	238.5	201.7	175.6	153.0	304.5	473.3	1943	1614	888	512	350.0
MEAN	9.75	7.95	6.51	5.66	5.46	9.82	15.8	62.7	53.8	28.6	16.5	11.7
MAX	12	9.4	7.5	6.2	6.2	25	34	98	92	40	22	17
MIN	9.0	6.4	5.7	5.1	5.2	5.7	9.6	34	33	20	13	9.5
AC-FT	600	473	400	348	303	604	939	3850	3200	1760	1020	694

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1998, BY WATER YEAR (WY)

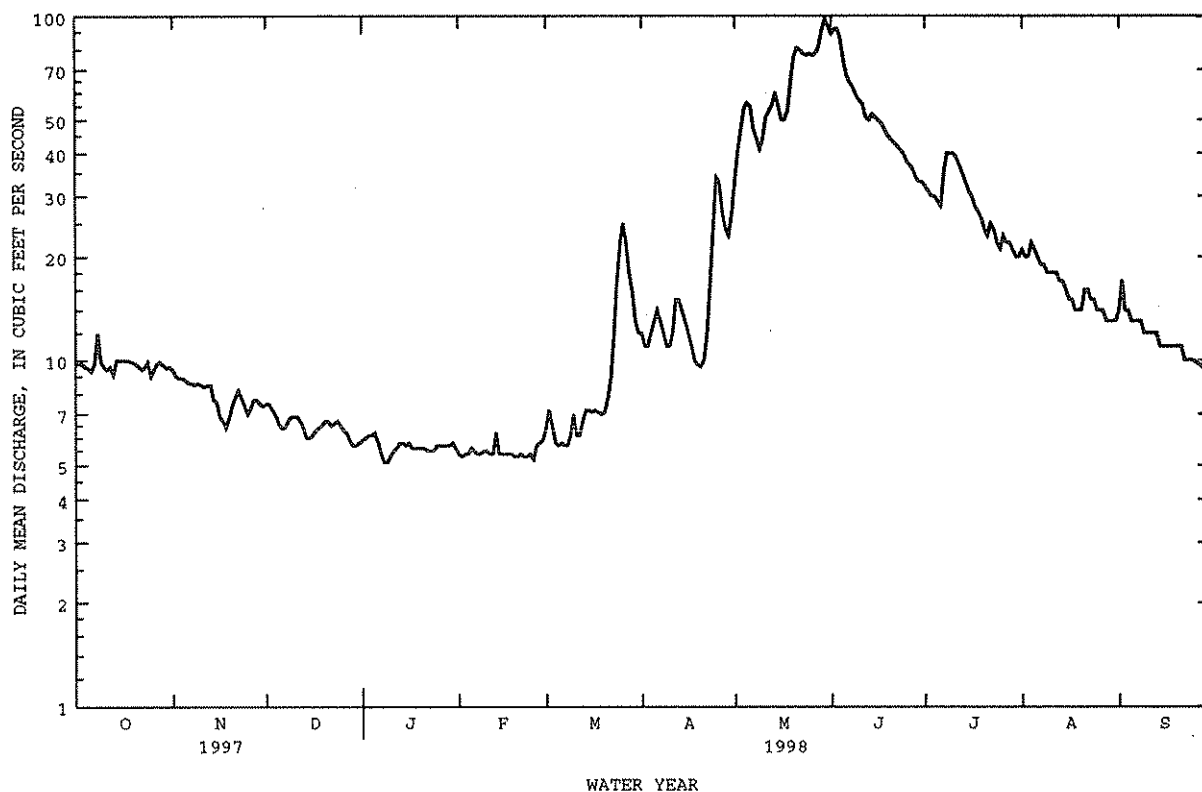
	MEAN	11.6	9.08	7.26	6.07	6.06	9.30	22.3	59.3	71.9	30.8	18.4	13.8
MAX	27.8	22.0	14.8	10.0	9.92	21.2	47.5	156	178	101	37.5	34.5	
(WY)	1942	1942	1991	1942	1991	1989	1937	1941	1941	1995	1967	1982	
MIN	6.29	5.37	4.26	3.51	3.47	4.11	8.77	14.5	12.4	7.86	6.55	6.74	
(WY)	1979	1977	1951	1951	1964	1977	1977	1972	1996	1972	1972	1972	

RIO GRANDE BASIN

08271000 RIO LUCERO NEAR ARROYO SECO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1913 - 1998	
ANNUAL TOTAL	7981.2		7155.9		22.5	
ANNUAL MEAN	21.9		19.6		46.7	1941
HIGHEST ANNUAL MEAN					9.91	1972
LOWEST ANNUAL MEAN					246	Jun 4 1942
HIGHEST DAILY MEAN	124	Jun 5	98	May 30	2.0	Jan 28 1981
LOWEST DAILY MEAN	5.2	Feb 8	5.1	Jan 8	2.7	Jan 22 1981
ANNUAL SEVEN-DAY MINIMUM	5.4	Feb 7	5.3	Feb 19	310	Jun 8 1979
INSTANTANEOUS PEAK FLOW			103	May 29	3.17	Jun 20 1995
INSTANTANEOUS PEAK STAGE			2.69	May 29	1.4	Nov 2 1951
INSTANTANEOUS LOW FLOW			4.0	Feb 25	16280	
ANNUAL RUNOFF (AC-FT)	15830		14190		54	
10 PERCENT EXCEEDS	64		50		11	
50 PERCENT EXCEEDS	11		10		5.5	
90 PERCENT EXCEEDS	5.7		5.6			

e Estimated



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, October 1983 to September 1985 (annual maximum only), October 1985 to current year. Prior to October 1955, published as "Rio Grande del Rancho nr Taos" and October 1955 to September 1960 as Rio Grande de Ranchos nr Talpa."

GAGE.--Water-stage recorder. Elevation of gage is 7,240 ft above National Geodetic Vertical Datum of 1929, 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.--Records good. Minor diversions for irrigation above station. Several observations of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.2	6.2	5.3	4.3	3.8	9.6	35	79	11	12	6.9
2	5.7	6.1	6.2	5.4	4.2	4.8	11	40	75	11	11	6.6
3	5.8	6.0	6.2	5.1	4.7	5.9	9.3	48	71	13	9.6	6.1
4	5.6	6.0	4.8	4.9	4.5	6.0	9.9	57	68	14	12	5.8
5	5.4	6.0	4.5	4.9	4.4	6.0	11	64	61	14	11	5.1
6	5.3	6.1	5.2	4.7	4.2	6.2	13	69	53	11	9.9	4.8
7	5.4	6.1	6.2	4.3	4.3	6.1	13	66	46	13	8.9	4.8
8	6.7	6.1	6.2	4.6	4.3	5.1	11	66	41	19	8.2	6.0
9	6.6	6.4	6.0	5.6	4.5	5.2	9.4	59	37	27	8.1	7.7
10	6.2	6.4	5.8	5.7	4.1	5.1	9.1	59	34	26	8.2	10
11	5.9	6.3	5.0	5.1	4.3	5.9	10	66	35	23	8.5	9.8
12	6.1	6.9	3.6	4.9	4.6	6.4	18	71	30	22	8.9	9.5
13	6.6	7.0	4.6	4.9	4.1	6.6	22	74	27	21	8.0	10
14	6.5	7.0	6.3	4.9	4.9	6.6	23	82	26	19	7.5	11
15	6.3	6.0	6.2	4.7	4.7	6.8	23	83	25	18	7.2	12
16	6.3	4.3	5.8	5.0	4.7	7.2	22	76	24	16	6.9	13
17	6.2	4.8	5.7	4.9	4.7	6.7	22	73	23	15	6.9	14
18	6.2	5.6	5.8	4.8	4.7	6.8	20	84	22	14	6.8	14
19	6.0	6.5	5.6	4.8	4.7	5.8	18	101	20	13	6.4	15
20	6.3	6.8	5.6	4.9	4.4	5.8	19	112	19	12	6.8	17
21	6.2	6.5	5.3	4.6	4.8	6.0	18	125	17	11	11	18
22	6.2	6.2	5.3	4.3	4.7	6.4	20	129	16	10	9.5	18
23	6.1	5.7	5.2	4.8	4.8	6.7	24	115	15	11	7.9	17
24	6.7	6.2	5.4	4.8	4.9	7.8	30	98	15	10	6.9	19
25	7.0	6.2	5.1	4.9	4.8	10	39	90	14	15	7.3	21
26	6.4	5.9	4.3	4.7	4.2	17	38	87	13	16	9.7	22
27	6.2	6.1	4.8	4.8	4.0	24	31	83	12	17	7.6	22
28	6.3	6.2	5.4	4.7	3.7	19	28	80	11	18	6.7	21
29	6.3	6.2	5.5	4.6	---	16	26	82	11	14	6.4	24
30	6.3	5.9	5.7	4.7	---	12	28	84	10	12	6.3	28
31	6.2	---	5.4	4.4	---	9.9	---	83	---	11	6.2	---
TOTAL	190.8	183.7	168.9	150.7	125.2	253.6	585.3	2441	950	477	258.3	399.1
MEAN	6.15	6.12	5.45	4.86	4.47	8.18	19.5	78.7	31.7	15.4	8.33	13.3
MAX	7.0	7.0	6.3	5.7	4.9	24	39	129	79	27	12	28
MIN	5.3	4.3	3.6	4.3	3.7	3.8	9.1	35	10	10	6.2	4.8
AC-FT	378	364	335	299	248	503	1160	4840	1880	946	512	792

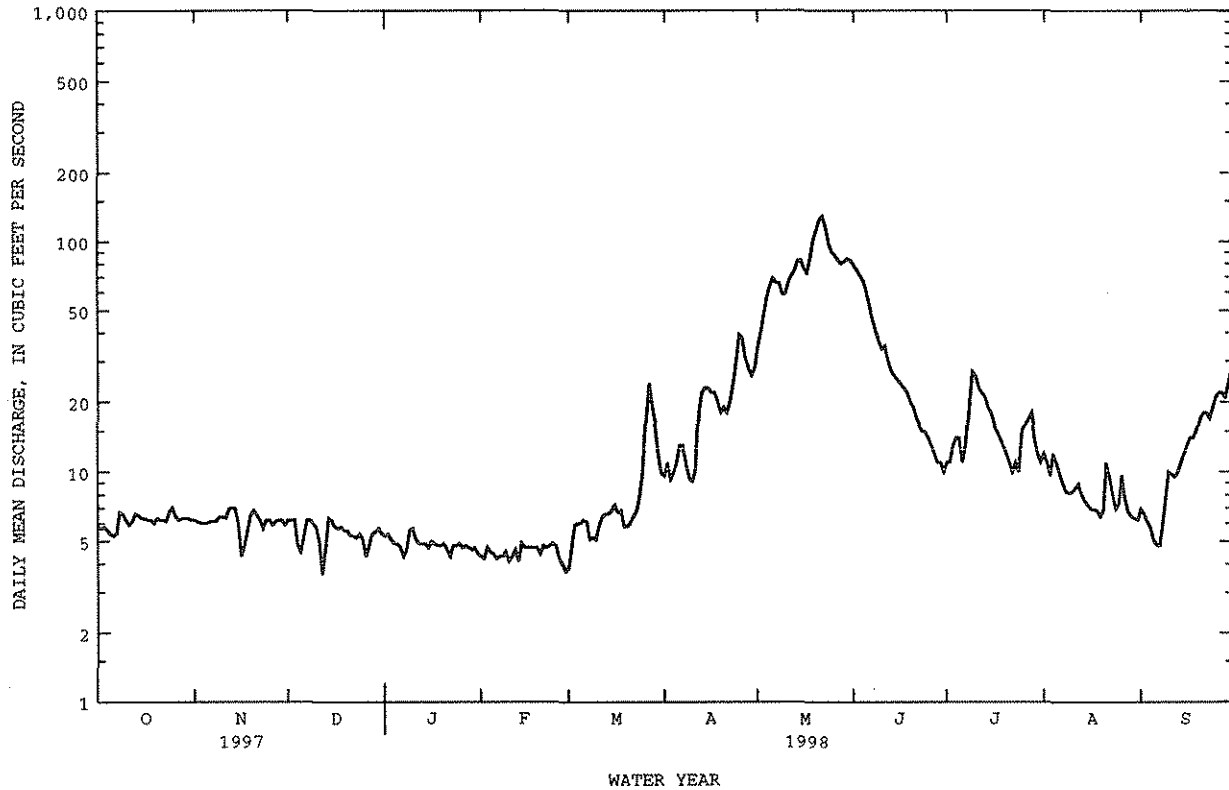
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998, BY WATER YEAR (WY)

	MEAN	7.29	6.66	5.78	5.28	5.58	9.47	31.5	92.7	52.8	14.5	12.3	9.02
MAX	14.2	13.9	10.4	9.19	9.31	22.9	91.9	264	174	41.9	35.7	24.9	
(WY)	1958	1995	1958	1958	1989	1994	1962	1994	1995	1986	1957	1957	
MIN	2.12	2.95	2.97	2.06	2.65	4.65	9.61	12.9	5.94	3.14	2.33	1.56	
(WY)	1957	1957	1957	1955	1955	1955	1981	1981	1996	1956	1972	1956	

RIO GRANDE BASIN

08275500 RIO GRANDE DEL RANCHO NEAR TALPA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1953 - 1998
ANNUAL TOTAL	8409.0	6183.6	
ANNUAL MEAN	23.0	16.9	21.2
HIGHEST ANNUAL MEAN			44.0
LOWEST ANNUAL MEAN			5.96
HIGHEST DAILY MEAN	196 May 22	129 May 22	590 May 22 1991
LOWEST DAILY MEAN	3.6 Dec 12	3.6 Dec 12	.60 Jan 5 1955
ANNUAL SEVEN-DAY MINIMUM	4.4 Jan 8	4.3 Feb 5	1.2 Jan 4 1955
INSTANTANEOUS PEAK FLOW		134 May 22	644 May 22 1991
INSTANTANEOUS PEAK STAGE		2.06 May 22	4.16 May 22 1991
INSTANTANEOUS LOW FLOW		2.2 Mar 1	.20 Jan 5 1955
ANNUAL RUNOFF (AC-FT)	16680	12270	15330
10 PERCENT EXCEEDS	74	43	50
50 PERCENT EXCEEDS	7.7	6.8	8.0
90 PERCENT EXCEEDS	4.8	4.7	4.0



RIO GRANDE BASIN

61

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.

WATER-DISCHARGE RECORDS

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 with satellite telemetry. Elevation of gage is 6,650 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.--Water-discharge records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 12,000 acres upstream from station, of which about 1,700 acres are irrigated by water from Rio Hondo.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	26	35	e33	31	31	62	89	111	13	35	19
2	18	26	34	e32	30	33	66	98	108	13	32	26
3	18	25	33	34	35	41	61	113	108	15	27	22
4	18	25	30	33	31	40	63	135	106	15	35	19
5	19	25	32	31	32	37	64	140	99	17	33	17
6	20	26	34	31	32	37	69	147	89	15	28	17
7	20	26	31	e32	31	38	70	132	72	19	25	16
8	26	27	34	e33	31	37	66	123	62	39	23	16
9	25	28	32	e32	32	36	60	108	53	60	22	15
10	25	30	33	31	31	34	56	105	43	64	23	16
11	25	31	31	32	31	35	58	111	54	36	23	18
12	26	40	e28	32	31	35	74	122	42	28	23	18
13	29	40	e29	32	30	35	81	125	38	26	22	17
14	27	35	e32	32	33	37	79	132	39	28	21	17
15	27	32	e32	31	33	38	73	138	34	24	19	17
16	26	e29	e33	33	33	41	74	118	32	22	17	16
17	26	e30	e34	32	33	42	83	110	28	22	16	16
18	25	e29	e33	e28	35	43	85	115	25	21	16	16
19	25	31	34	e30	35	39	76	139	24	23	17	16
20	25	33	33	e29	34	38	76	157	21	27	16	15
21	25	32	31	e30	37	38	70	179	20	23	17	15
22	25	30	30	e29	36	40	68	188	19	25	20	14
23	26	29	30	e31	35	44	77	169	17	26	17	14
24	29	29	31	e32	35	51	102	147	16	27	17	14
25	31	29	e31	34	37	69	130	140	17	33	16	14
26	29	30	e30	32	33	87	130	131	14	36	17	14
27	28	32	e28	32	32	97	115	126	13	38	16	14
28	28	33	e29	31	31	83	101	119	12	41	15	13
29	28	33	e30	32	---	83	87	120	12	37	15	23
30	27	32	e31	33	---	79	80	119	11	30	15	22
31	27	---	e32	31	---	70	---	121	---	28	16	---
TOTAL	771	903	980	980	920	1488	2356	4016	1339	871	654	506
MEAN	24.9	30.1	31.6	31.6	32.9	48.0	78.5	130	44.6	28.1	21.1	16.9
MAX	31	40	35	34	37	97	130	188	111	64	35	26
MIN	18	25	28	28	30	31	56	89	11	13	15	13
AC-FT	1530	1790	1940	1940	1820	2950	4670	7970	2660	1730	1300	1000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1998, BY WATER YEAR (WY)

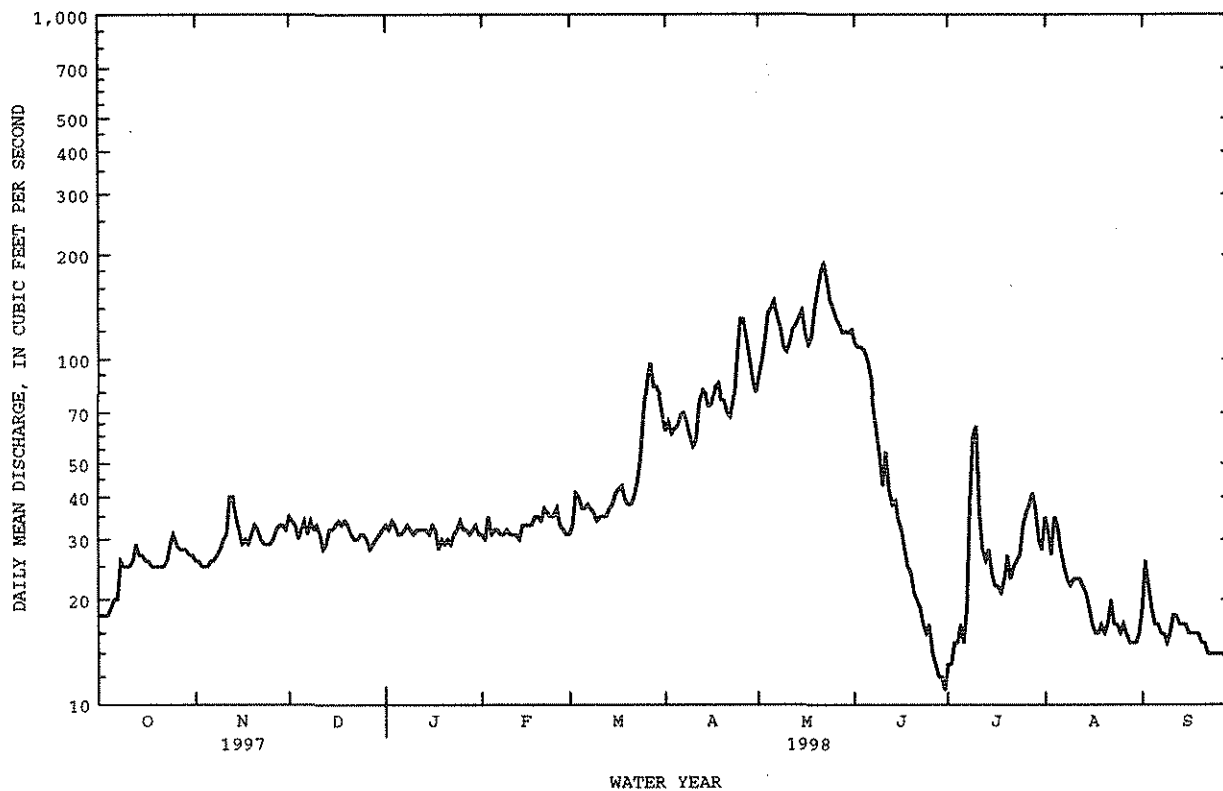
	MEAN	26.7	33.1	34.0	32.8	38.1	49.9	115	255	143	30.9	24.9	23.5
MAX	74.9	71.9	56.8	48.4	60.3	113	440	1063	708	169	97.9	67.5	
(WY)	1958	1958	1987	1995	1987	1995	1994	1994	1979	1995	1957	1993	
MIN	7.88	14.3	13.5	14.0	21.5	23.9	8.32	5.71	4.69	3.89	4.28	4.26	
(WY)	1964	1973	1973	1973	1973	1971	1972	1972	1971	1972	1972	1972	

RIO GRANDE BASIN

08276300 RIO PUEBLO DE TAOS BELOW LOS CORDOVAS, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1957 - 1998	
ANNUAL TOTAL	25335		15784		66.8	
ANNUAL MEAN	69.4		43.2		193	
HIGHEST ANNUAL MEAN					14.5	
LOWEST ANNUAL MEAN					1940	
HIGHEST DAILY MEAN	592	May 24	188	May 22	2.6	May 20 1994
LOWEST DAILY MEAN	10	Jul 18	11	Jun 30	3.0	Aug 16 1972
ANNUAL SEVEN-DAY MINIMUM	11	Jul 14	13	Jun 26	2380	Aug 10 1972
INSTANTANEOUS PEAK FLOW			251	Sep 29	8.93	Aug 24 1957
INSTANTANEOUS PEAK STAGE			7.04	Sep 29	1.9	May 22 1991
INSTANTANEOUS LOW FLOW					48390	
ANNUAL RUNOFF (AC-FT)	50250		31310		133	
10 PERCENT EXCEEDS	195		103		32	
50 PERCENT EXCEEDS	31		32		10	
90 PERCENT EXCEEDS	18		16			

e Estimated

a From rating curve extended above 900 ft³/s.

08276300 RIO PUEBLO DE TAOS BELOW LOS CORDOVAS, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981, 1986 to September 1998 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	
DEC 18...	0845	E37	460	8.0	6.0	.5	598	11.2	99	50	
MAR 04...	1100	37	469	8.4	7.0	6.0	592	10.5	109	K11	
JUN 03...	1155	110	246	8.3	23.0	14.5	598	8.5	107	93	
AUG 26...	1115	18	493	8.5	22.0	20.0	603	9.4	132	300	
DATE	TIME	STREP-TOCOCOCCI, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)
DEC 18...	88	210	65	13	18	.5	1.3	--	--	--	--
MAR 04...	200	210	61	13	17	.5	1.8	--	--	--	--
JUN 03...	300	100	32	5.6	6.1	.3	1	--	--	--	--
AUG 26...	260	200	59	13	19	.6	1.5	234	7	204	204
DATE	TIME	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
DEC 18...	194	52	8.9	.5	13	290	<.01	.65	<.02	.1	.1
MAR 04...	191	50	8.7	.6	12	281	<.01	.27	<.02	.2	.2
JUN 03...	106	17	2.4	.2	9.4	138	<.01	.12	<.01	.34	.34
AUG 26...	206	47	7.2	.6	20	290	<.01	.07	<.01	.26	.26
DATE	TIME	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	
DEC 18...		<.1	.03	.04	.04	1.7	46.0	<10	<.1	<1	
MAR 04...		.2	.04	.04	.03	4.1	45.9	29	<.1	<1	
JUN 03...		<.20	<.02	<.02	<.01	3.1	27.1	41	<.1	<1	
AUG 26...		.22	.02	<.02	.01	2.8	56.5	20	<.1	<1	

RIO GRANDE BASIN

08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM

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 567, 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.

WATER-DISCHARGE RECORDS

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 with satellite telemetry. 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.--Water-discharge records good. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 30,000 acres in New Mexico.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

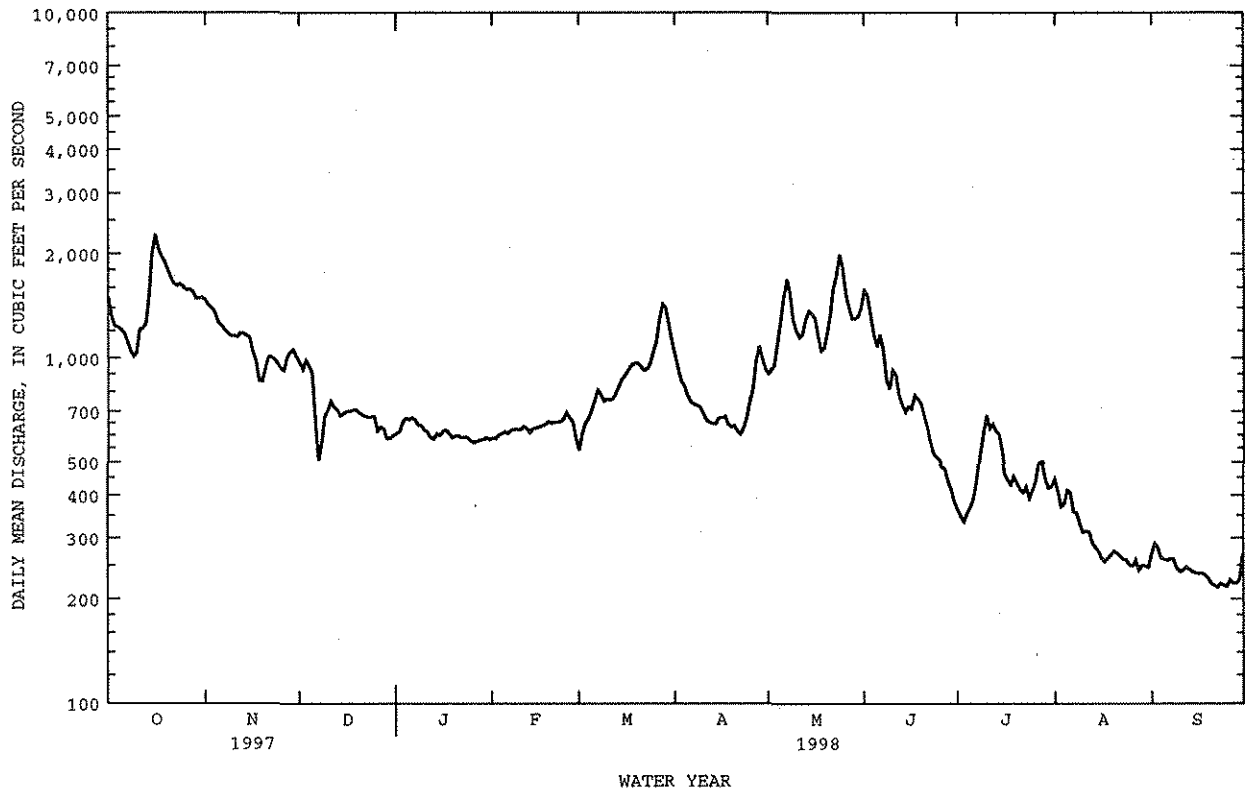
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1490	1470	974	605	587	542	1020	899	1570	366	446	270
2	1320	1420	927	612	585	603	931	925	1520	349	413	289
3	1240	1400	987	652	600	648	853	960	1340	335	371	281
4	1230	1350	951	670	604	668	828	1110	1180	355	378	263
5	1210	1270	913	663	613	706	777	1280	1080	370	414	261
6	1180	1240	657	671	605	753	746	1500	1170	390	408	259
7	1120	1210	506	664	618	806	734	1690	1060	435	358	262
8	1050	1180	571	640	623	785	730	1540	863	524	356	261
9	1010	1160	680	638	623	749	721	1290	813	599	329	245
10	1030	1160	707	620	621	760	693	1200	922	684	312	240
11	1210	1150	750	612	633	755	661	1150	894	625	315	242
12	1220	1180	723	588	626	763	652	1170	777	645	313	248
13	1260	1180	709	583	608	796	646	1290	730	616	291	244
14	1510	1160	680	605	624	834	645	1370	698	603	282	240
15	2030	1150	691	597	627	873	672	1340	724	542	275	238
16	2270	1050	700	616	631	892	671	1310	714	463	263	237
17	2070	984	702	619	636	925	678	1160	780	444	257	238
18	1970	858	706	605	641	957	641	1050	762	430	263	235
19	1900	856	710	588	655	966	632	1070	738	455	268	231
20	1800	930	693	596	647	965	637	1180	678	435	275	222
21	1710	1010	686	597	652	945	615	1340	636	416	271	219
22	1640	1010	678	588	652	921	603	1600	575	407	267	216
23	1620	990	674	591	654	930	630	1730	534	425	260	222
24	1640	965	677	590	665	966	676	1990	516	393	260	219
25	1610	933	677	574	696	1050	754	1830	510	415	250	217
26	1570	922	616	569	670	1120	812	1540	483	441	249	227
27	1580	1010	632	575	653	1300	981	1410	479	500	260	222
28	1560	1040	626	579	585	1430	1080	1300	441	501	242	222
29	1490	1060	585	581	---	1400	1000	1300	417	446	251	228
30	1490	1010	586	588	---	1250	930	1320	383	420	249	269
31	1500	---	597	582	---	1120	---	1400	---	424	247	---
TOTAL	46530	33308	21971	18858	17634	28178	22649	41244	23987	14453	9393	7267
MEAN	1501	1110	709	608	630	909	755	1330	800	466	303	242
MAX	2270	1470	987	671	696	1430	1080	1990	1570	684	446	289
MIN	1010	856	506	569	585	542	603	899	383	335	242	216
AC-FT	92290	66070	43580	37400	34980	55890	44920	81810	47580	28670	18630	14410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1998, BY WATER YEAR (WY)

	MEAN	424	534	497	482	551	675	876	1792	1803	741	411	381
MAX	1675	1532	1018	764	865	1195	3020	6055	6007	3445	1539	2087	
(WY)	1942	1942	1942	1986	1987	1987	1942	1987	1941	1995	1929	1927	
MIN	171	224	243	263	290	259	250	233	188	185	184	161	
(WY)	1957	1957	1957	1957	1957	1957	1981	1977	1977	1959	1956	1956	

08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1926 - 1998	
ANNUAL TOTAL	404891		285472		764	
ANNUAL MEAN	1109		782		1840	
HIGHEST ANNUAL MEAN					271	
LOWEST ANNUAL MEAN					1942	
HIGHEST DAILY MEAN	4110	Jun 6	2270	Oct 16	9730	Jun 7 1948
LOWEST DAILY MEAN	313	Jan 8	216	Sep 22	159	Sep 2 1956
ANNUAL SEVEN-DAY MINIMUM	460	Jan 7	220	Sep 20	159	Sep 19 1956
INSTANTANEOUS PEAK FLOW			2310	Oct 16	9730	Jun 7 1948
INSTANTANEOUS PEAK STAGE			5.81	Oct 16	9.23	Jun 22 1949
INSTANTANEOUS LOW FLOW			210	Sep 22	155	Sep 21 1956
ANNUAL RUNOFF (AC-FT)	803100		566200		553600	
10 PERCENT EXCEEDS	2160		1380		1490	
50 PERCENT EXCEEDS	785		671		477	
90 PERCENT EXCEEDS	550		263		242	



RIO GRANDE BASIN

08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
DEC 17...	1150	727	241	8.2	5.0	2.5	1.4	614	11.2	102	89	--
MAR 04...	0810	679	247	7.8	1.0	4.5	2.3	606	9.9	96	83	--
JUN 03...	0810	1410	200	8.0	10.0	15.0	13	611	8.6	107	66	4
AUG 26...	0820	245	330	8.5	20.0	18.0	2.9	615	7.9	104	99	--
DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
DEC 17...	27	5.5	16	.7	3.0	--	--	--	94	30	5.6	.5
MAR 04...	25	5.2	15	.7	2.9	--	--	--	92	27	5.0	.4
JUN 03...	20	4.0	12	.7	2.6	76	0	62	68	24	3.1	.3
AUG 26...	28	6.9	25	1	3.3	125	2	106	110	41	8.3	.8
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)
DEC 17...	34	179	<.01	.45	<.02	.1	<.1	.03	<.01	.04	1.8	<.01
MAR 04...	27	163	<.01	.23	<.02	<.1	<.1	<.05	.02	.03	2.6	<.01
JUN 03...	20	124	<.01	.11	<.01	.53	.38	.06	<.02	.03	4.5	<.01
AUG 26...	26	204	<.01	.14	<.01	.23	<.20	.02	.02	.01	2.8	<.01
DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
DEC 17...	--	--	--	--	--	38.4	--	--	--	--	32	--
MAR 04...	--	--	--	--	--	38.2	--	--	--	--	19	--
JUN 03...	88	<1	1	26	<1	32.7	<1	1	<1	2	100	<1
AUG 26...	--	--	--	--	--	54.2	--	--	--	--	11	--

RIO GRANDE BASIN

08277470 RIO PUEBLO NEAR PENASCO, NM

LOCATION.--Lat 36°10'14", long 105°36'36", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1, T.22 N., R.12 E., Taos County, Hydrologic Unit 13020101, on left bank 10 ft downstream from bridge on private road, 0.5 mi upstream from junction of State Highways 518 and 75, 1.0 mi downstream from Osha Canyon and 6.0 mi east of Penasco.

DRAINAGE AREA. --101 mi².

PERIOD OF RECORD.--December 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7,760 ft above National Geodetic Vertical Datum of 1929 from, topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Several observations of water temperature where made during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	16	14	11	e11	45	138	181	34	53	44
2	14	13	15	14	10	e12	37	165	182	30	49	46
3	14	14	15	15	11	13	39	206	181	29	39	39
4	14	14	e14	14	11	12	46	228	169	49	59	35
5	13	13	e13	12	11	13	53	246	147	68	71	32
6	13	12	e13	e11	9.9	14	56	253	130	47	70	29
7	13	13	e15	e10	9.6	13	51	236	124	80	61	27
8	15	13	e14	e10	9.5	13	46	225	118	96	52	26
9	14	14	13	e11	11	12	42	197	107	91	47	25
10	12	13	e12	13	12	13	43	202	98	95	43	25
11	11	14	e11	12	11	14	54	225	92	81	41	25
12	11	14	e12	11	11	13	74	226	83	70	48	23
13	11	14	e13	11	13	16	74	229	79	68	43	21
14	12	11	e13	11	11	16	75	246	75	64	39	20
15	12	e10	e14	12	11	17	72	236	72	54	38	20
16	11	e9.8	e14	11	10	18	66	210	68	55	45	20
17	11	e10	e15	11	10	18	60	210	67	56	38	19
18	11	e11	e15	11	10	16	54	248	62	46	38	19
19	11	e13	e15	11	10	14	50	286	56	42	42	17
20	12	e14	e14	10	11	18	52	304	53	39	40	16
21	12	e13	e13	e9.8	10	19	55	327	52	37	78	15
22	11	e14	13	e9.6	9.9	24	67	301	50	36	82	14
23	12	e15	14	e9.2	10	35	91	260	48	45	67	14
24	15	e16	14	e9.6	11	54	128	232	47	63	57	13
25	14	e17	e12	e9.8	e10	71	160	219	42	64	58	11
26	15	15	e11	10	e9.6	78	154	200	34	65	77	11
27	15	17	e12	11	e9.5	74	128	195	33	67	59	10
28	16	14	e12	10	e10	59	113	198	33	85	51	9.4
29	15	16	e13	9.5	---	54	104	202	31	78	49	7.5
30	14	16	e14	11	---	44	112	201	28	63	47	24
31	14	---	e14	9.8	---	37	---	189	---	55	44	---
TOTAL	402	406.8	418	344.3	294.0	835	2201	7040	2542	1852	1625	656.9
MEAN	13.0	13.6	13.5	11.1	10.5	26.9	73.4	227	84.7	59.7	52.4	21.9
MAX	16	17	16	15	13	78	160	327	182	96	82	46
MIN	11	9.8	11	9.2	9.5	11	37	138	28	29	38	7.5
AC-FT	797	807	829	683	583	1660	4370	13960	5040	3670	3220	1300

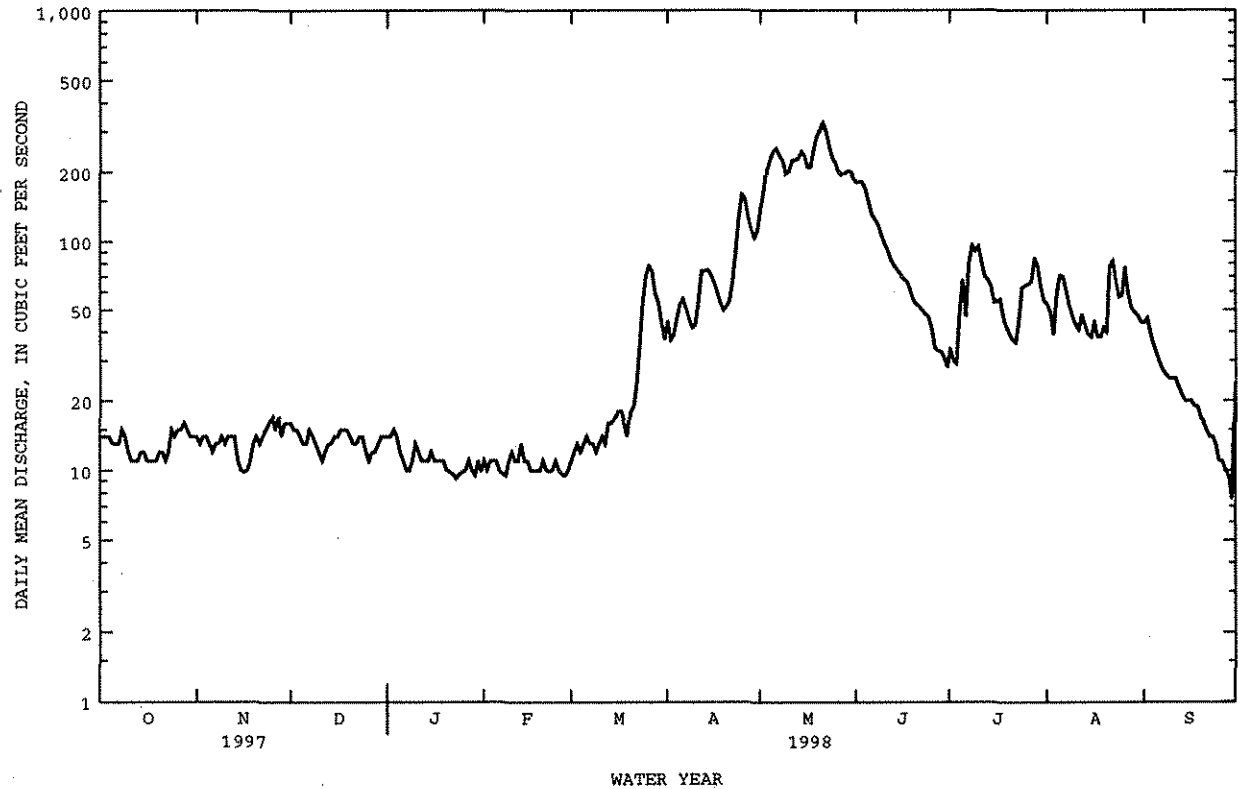
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1998, BY WATER YEAR (WY)

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08277470 RIO PUEBLO NEAR PENASCO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1992 - 1998	
ANNUAL TOTAL	23879.0		18617.0		70.2	
ANNUAL MEAN	65.4		51.0		124	
HIGHEST ANNUAL MEAN					14.5	
LOWEST ANNUAL MEAN					1720	
HIGHEST DAILY MEAN	628	May 19	327	May 21	3.3	May 20 1994
LOWEST DAILY MEAN	9.2	Feb 12	7.5	Sep 29	3.7	Jun 21 1996
ANNUAL SEVEN-DAY MINIMUM	9.4	Feb 11	9.7	Jan 20	3.7	Jun 18 1996
INSTANTANEOUS PEAK FLOW			348	May 20	2200	May 19 1994
INSTANTANEOUS PEAK STAGE			4.70	May 20	6.00	May 19 1994
INSTANTANEOUS LOW FLOW			2.9	Nov 30	2.9	Nov 30 1997
ANNUAL RUNOFF (AC-FT)	47360		36930		50860	
10 PERCENT EXCEEDS	222		150		203	
50 PERCENT EXCEEDS	19		19		17	
90 PERCENT EXCEEDS	10		11		9.7	

e Estimated



RIO GRANDE BASIN

08278500 RIO SANTA BARBARA NR PENASCO, NM

LOCATION.--Lat 36°06'13", long 105°37'14", Taos County, Hydrologic Unit 13020101, in Santa Barbara Grant, on right bank at bridge on U.S. Forest Service Road 116, 1.4 mi below Santa Barbara Campground and 6.5 mi southeast of Penasco

DRAINAGE AREA.--38 mi² (approximately).

PERIOD OF RECORD.--November 1991 to current year. October 1952 to December 1957 published as Rio Santa Barbara nr Llano, NM (08278500).

GAGE.--Water-stage recorder. Elevation of gage is 8,640 ft above National Geodetic Vertical Datum, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Several observations of water temperature were made during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	14	10	8.4	6.9	e6.7	14	45	209	64	55	47
2	18	13	9.8	8.6	6.9	e7.0	11	56	217	62	59	43
3	20	13	9.9	8.5	7.0	e7.1	12	74	221	56	50	38
4	18	13	e9.3	8.4	7.0	e7.2	12	86	213	69	65	35
5	17	12	e9.0	8.1	7.0	e7.2	14	97	185	71	63	33
6	17	12	e9.0	8.1	6.8	7.1	15	96	169	63	58	31
7	18	12	e10	e8.0	6.8	7.2	14	88	153	88	54	30
8	24	12	e11	e8.0	6.8	7.3	12	86	142	86	51	29
9	19	12	11	e8.8	6.7	8.2	12	79	131	81	49	27
10	18	12	10	e9.0	7.2	8.4	12	91	122	81	47	27
11	18	12	9.8	8.3	7.0	8.2	16	104	117	73	47	26
12	18	12	10	8.0	6.8	8.0	21	110	107	68	46	25
13	17	12	11	7.6	7.1	8.6	19	120	106	63	41	24
14	18	e11	11	7.1	6.8	8.1	20	132	104	59	38	23
15	17	e10	11	7.1	6.7	7.6	19	123	100	54	38	22
16	17	e9.3	9.9	7.0	6.7	7.7	18	113	97	55	43	22
17	16	e9.6	9.8	7.0	6.6	7.4	16	121	96	52	40	21
18	16	e9.8	9.4	7.0	6.6	7.1	13	150	89	47	38	21
19	15	e10	9.2	7.0	6.5	7.6	14	170	84	43	49	19
20	15	e11	9.0	7.0	6.7	8.5	13	196	80	41	43	19
21	15	11	9.0	6.9	6.5	8.9	14	215	79	39	48	18
22	15	11	8.7	6.9	6.5	8.9	20	205	77	37	41	17
23	15	e12	8.7	7.0	6.4	11	29	190	74	37	38	17
24	16	e12	8.7	7.0	6.4	16	44	183	72	36	37	16
25	14	e11	8.6	7.0	6.4	21	54	176	68	37	53	16
26	15	11	8.4	7.0	e6.2	22	50	169	64	44	69	15
27	15	10	9.0	7.0	e6.0	18	39	169	60	45	55	15
28	15	10	9.2	7.0	e6.2	14	34	180	56	47	51	14
29	14	9.9	9.5	7.0	---	13	32	195	53	43	49	16
30	14	e10	9.3	7.0	---	14	37	205	59	40	47	24
31	14	---	8.7	6.9	---	14	---	208	---	40	44	---
TOTAL	516	339.6	296.9	233.7	187.2	313.0	650	4232	3404	1721	1506	730
MEAN	16.6	11.3	9.58	7.54	6.69	10.1	21.7	137	113	55.5	48.6	24.3
MAX	24	14	11	9.0	7.2	22	54	215	221	88	69	47
MIN	14	9.3	8.4	6.9	6.0	6.7	11	45	53	36	37	14
AC-FT	1020	674	589	464	371	621	1290	8390	6750	3410	2990	1450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998, BY WATER YEAR (WY)

MEAN	13.8	11.3	8.44	6.99	6.90	11.4	36.1	109	121	38.3	39.3	24.9
MAX	17.9	17.1	13.6	9.24	9.11	17.6	75.3	199	211	62.1	129	66.5
(WY)	1996	1992	1992	1953	1992	1997	1992	1994	1995	1957	1957	1957
MIN	4.95	5.13	4.18	4.10	3.93	6.46	18.6	35.6	17.0	8.13	8.11	4.50
(WY)	1957	1957	1957	1954	1957	1957	1956	1956	1956	1956	1956	1956

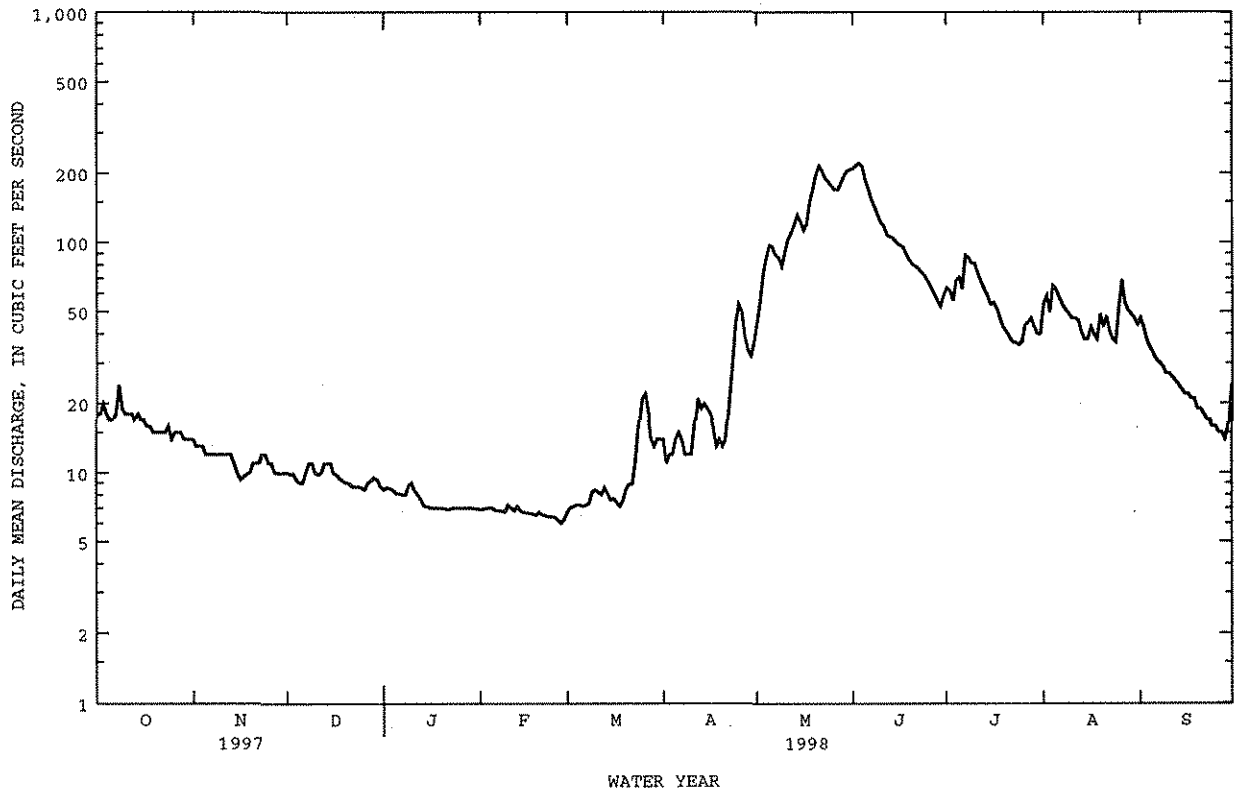
RIO GRANDE BASIN

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08278500 RIO SANTA BARBARA NR PENASCO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1953 - 1998	
ANNUAL TOTAL	15294.9		14129.4		34.7	
ANNUAL MEAN	41.9		38.7		50.5	
HIGHEST ANNUAL MEAN					12.0	
LOWEST ANNUAL MEAN					3.0	
HIGHEST DAILY MEAN	308	Jun 9	221	Jun 3	499	Jun 2 1994
LOWEST DAILY MEAN	6.7	Mar 1	6.0	Feb 27	3.0	Jan 31 1957
ANNUAL SEVEN-DAY MINIMUM	6.9	Feb 23	6.3	Feb 22	3.1	Jan 30 1957
INSTANTANEOUS PEAK FLOW			236	May 21	838	Jun 18 1995
INSTANTANEOUS PEAK STAGE			4.69	May 21	6.21	Jun 18 1995
INSTANTANEOUS LOW FLOW			4.1	Mar 19	2.4	Mar 2 1996
ANNUAL RUNOFF (AC-FT)	30340		28030		25140	
10 PERCENT EXCEEDS	134		98		96	
50 PERCENT EXCEEDS	20		16		15	
90 PERCENT EXCEEDS	7.6		7.0		6.2	

e Estimated



RIO GRANDE BASIN

08279000 EMBUDO CREEK AT DIXON, NM

LOCATION.--Lat 36°12'39", long 105°54'47", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.23 N., R.10 E., Rio Arriba County, Hydrologic Unit 13020101, on right bank 750 ft upstream from State Highway 68, 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). Also see PERIOD OF RECORD.

GAGE.--Water-stage recorder with satellite telemetry. 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.--Water-discharge records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 6,600 acres, a small part of which are downstream from gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	39	e41	36	30	30	84	208	392	48	126	92
2	31	37	e33	39	28	33	94	238	410	56	126	97
3	32	37	47	e45	35	35	79	284	420	64	102	82
4	32	38	31	43	35	37	91	336	405	71	128	73
5	30	37	33	38	34	40	99	362	355	141	150	67
6	29	36	34	32	32	42	106	382	304	110	144	65
7	30	36	e43	28	31	41	104	348	275	169	123	58
8	33	36	e37	28	e26	32	95	341	260	345	111	51
9	39	37	e37	33	32	32	82	305	227	263	101	48
10	38	39	42	38	29	33	79	299	210	258	96	46
11	37	40	36	40	30	35	88	329	213	198	91	49
12	36	43	31	37	32	37	116	339	184	166	95	48
13	37	46	35	34	29	39	129	352	172	147	93	46
14	37	44	37	37	e29	43	135	385	164	140	86	44
15	37	37	39	29	e28	46	133	388	155	111	73	43
16	36	32	36	39	e28	52	130	353	143	101	e73	41
17	36	37	36	35	e29	55	126	321	139	117	e72	39
18	36	41	38	34	e28	54	114	370	130	103	e72	40
19	34	46	39	e29	31	42	95	443	115	96	74	39
20	35	53	41	34	e27	48	96	473	102	86	78	39
21	35	50	e39	30	33	52	95	534	93	78	110	39
22	34	46	e37	26	e29	55	107	530	86	84	129	38
23	33	40	e35	31	32	65	144	476	77	96	107	38
24	38	46	41	31	35	89	223	428	75	122	93	37
25	45	45	36	33	36	120	282	406	75	143	88	37
26	41	47	29	32	30	143	290	376	61	152	168	37
27	43	47	28	31	27	152	238	363	52	154	121	37
28	45	46	31	32	29	121	197	367	50	184	104	36
29	42	46	31	32	---	113	167	391	46	154	109	79
30	41	41	36	33	---	98	172	413	41	122	103	e65
31	40	---	37	33	---	84	---	403	---	114	105	---
TOTAL	1124	1245	1126	1052	854	1898	3990	11543	5431	4193	3251	1650
MEAN	36.3	41.5	36.3	33.9	30.5	61.2	133	372	181	135	105	51.7
MAX	45	53	47	45	36	152	290	534	420	345	168	97
MIN	29	32	28	26	26	30	79	208	41	48	72	36
AC-FT	2230	2470	2230	2090	1690	3760	7910	22900	10770	8320	6450	3070

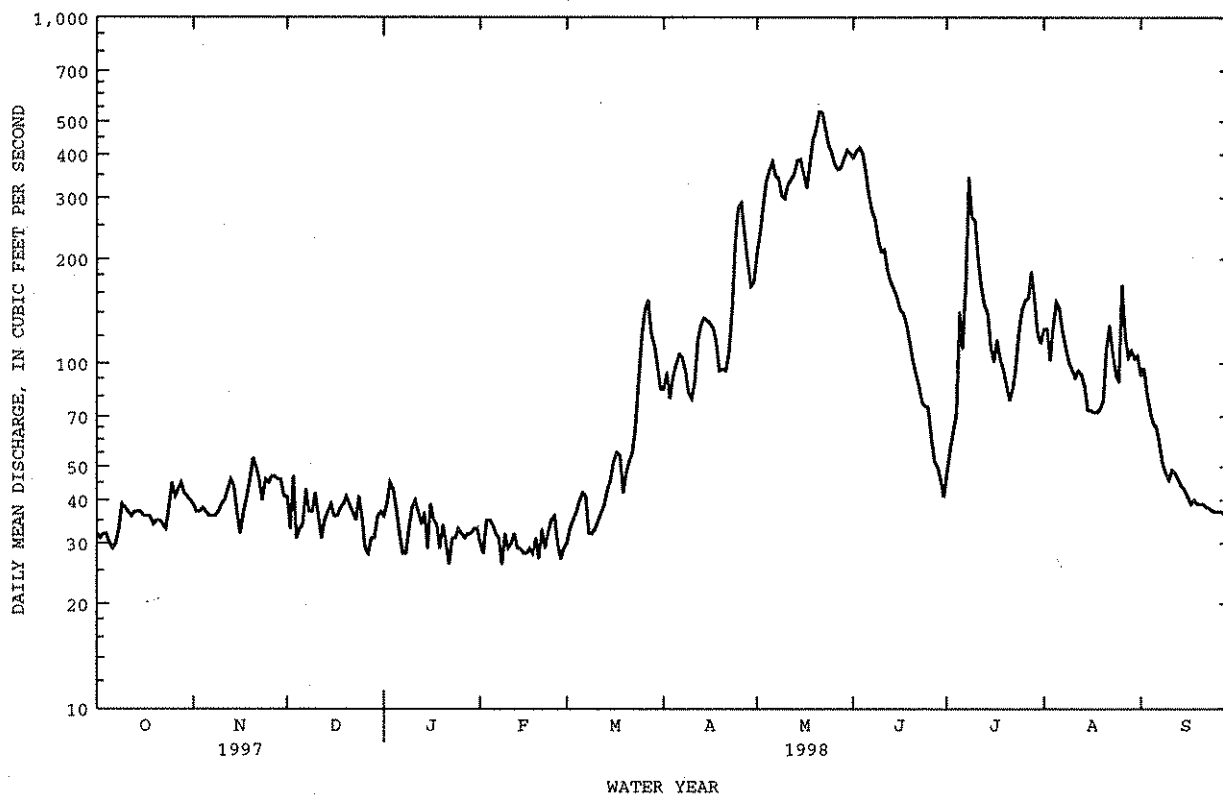
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1998, BY WATER YEAR (WY)

	MEAN	37.9	36.0	31.5	29.0	30.8	47.4	145	315	204	51.6	42.1
MAX	116	95.5	54.3	42.2	72.7	129	505	1231	813	204	222	190
(WY)	1942	1942	1942	1985	1932	1989	1942	1941	1941	1937	1991	1929
MIN	3.09	4.18	9.75	12.0	15.0	15.5	13.3	8.94	5.49	.86	2.71	2.79
(WY)	1951	1951	1951	1951	1951	1951	1972	1972	1950	1951	1950	1950

08279000 EMBUDO CREEK AT DIXON, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1924 - 1998	
ANNUAL TOTAL	43708		37342		85.4	
ANNUAL MEAN	120		102		235	
HIGHEST ANNUAL MEAN					12.8	
LOWEST ANNUAL MEAN					2590	
HIGHEST DAILY MEAN	868	Jun 8	534	May 21		May 14 1941
LOWEST DAILY MEAN	20	Jan 7	26	Jan 22	.20	Jun 27 1950
ANNUAL SEVEN-DAY MINIMUM	22	Jul 13	29	Feb 14	.60	Jul 16 1951
INSTANTANEOUS PEAK FLOW			977	Jul 8	^a 4200	Aug 29 1977
INSTANTANEOUS PEAK STAGE			4.54	Jul 8	^b 7.10	Aug 29 1977
INSTANTANEOUS LOW FLOW			10	Aug 17	.06	Jun 26 1950
ANNUAL RUNOFF (AC-FT)	86690		73900		61900	
10 PERCENT EXCEEDS	383		286		214	
50 PERCENT EXCEEDS	44		47		35	
90 PERCENT EXCEEDS	31		31		14	

e Estimated

^a From rating curve extended above 1,600 ft³/s.^b Maximum gage height, 7.60 ft, Aug. 4, 1967.

RIO GRANDE BASIN

08279500 RIO GRANDE AT EMBUDO, NM

LOCATION.--Lat 36°12'20", long 105°57'49", in SW¹/₄SW¹/₄ 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.

WATER-DISCHARGE RECORD

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 with satellite telemetry. 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.--Records good. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 40,000 acres in New Mexico. Several observations of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1550	1510	1000	619	619	558	1100	1070	2000	377	573	368
2	1380	1460	934	638	612	618	1020	1130	2010	372	536	392
3	1270	1430	1010	680	640	672	915	1200	1860	366	442	375
4	1260	1390	954	707	648	698	882	1390	1670	386	490	350
5	1230	1310	920	695	657	731	853	1600	1510	469	542	338
6	1200	1270	687	695	649	783	817	1840	1510	459	541	333
7	1150	1240	528	689	662	848	802	2040	1420	573	458	322
8	1090	1200	546	668	665	821	790	1920	1190	896	428	320
9	1040	1190	684	676	668	770	764	1640	1050	894	401	302
10	1040	1190	695	656	659	794	733	1510	1160	1020	376	295
11	1220	1170	749	652	672	772	707	1490	1150	850	366	298
12	1250	1200	716	627	667	778	728	1500	998	822	375	303
13	1280	1210	709	617	647	812	731	1630	916	779	364	294
14	1470	1200	669	644	665	858	728	1760	867	750	344	292
15	2000	1180	698	627	668	893	751	1750	877	663	355	288
16	2310	1110	706	662	672	924	747	1680	860	551	343	284
17	2150	1020	709	661	676	961	756	1520	920	542	322	284
18	2010	874	721	645	680	993	713	1440	906	498	316	282
19	1950	868	727	624	697	994	668	1520	861	515	327	279
20	1850	930	711	634	685	1000	684	1660	792	486	335	272
21	1750	1030	703	628	697	979	650	1880	725	455	374	266
22	1680	1030	700	622	702	953	646	2140	656	449	389	261
23	1650	1010	696	622	700	970	696	2220	595	484	362	265
24	1680	985	701	622	709	1030	820	2420	561	489	348	263
25	1670	953	693	610	747	1140	986	2320	563	519	335	260
26	1620	933	628	600	719	1230	1050	1990	508	590	420	264
27	1620	1010	629	605	694	1420	1170	1840	487	651	380	260
28	1620	1070	646	610	626	1540	1230	1730	449	694	353	260
29	1540	1070	590	613	---	1540	1150	1740	417	625	359	330
30	1530	1030	604	623	---	1360	1080	1780	389	524	371	354
31	1540	---	611	620	---	1210	---	1830	---	514	367	---
TOTAL	47600	34073	22274	19891	18802	29650	25367	53180	29877	18262	12292	9054
MEAN	1535	1136	719	642	672	956	846	1715	996	589	397	302
MAX	2310	1510	1010	707	747	1540	1230	2420	2010	1020	573	392
MIN	1040	868	528	600	612	558	646	1070	389	366	316	260
AC-FT	94410	67580	44180	39450	37290	58810	50320	105500	59260	36220	24380	17960

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1998, BY WATER YEAR (WY)

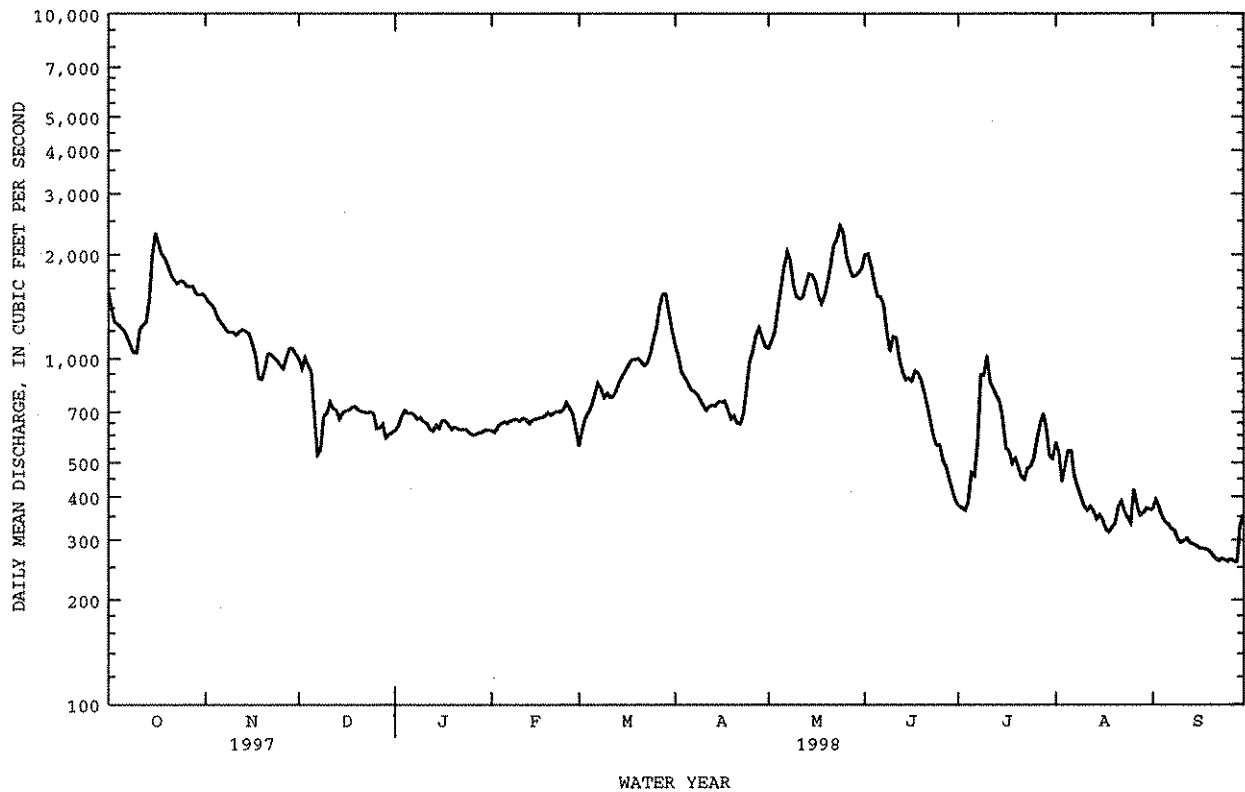
	433	560	525	511	581	720	1019	2072	1991	785	448	385
MEAN												
MAX	1795	1611	1052	799	888	1290	3544	7228	6837	3540	1699	1132
(WY)	1942	1942	1942	1942	1987	1989	1942	1941	1941	1995	1957	1982
MIN	182	243	269	300	323	286	274	249	199	188	186	171
(WY)	1957	1957	1957	1957	1957	1957	1981	1972	1977	1963	1956	1956

08279500 RIO GRANDE AT EMBUDO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1931 - 1998	
ANNUAL TOTAL	450860		320322		^a 836	
ANNUAL MEAN	1235		878		2077	
HIGHEST ANNUAL MEAN					308	
LOWEST ANNUAL MEAN					11700	
HIGHEST DAILY MEAN	4850	Jun 7	2420	May 24	165	May 16 1941
LOWEST DAILY MEAN	345	Jan 8	260	Sep 25	166	Sep 2 1956
ANNUAL SEVEN-DAY MINIMUM	496	Jan 7	262	Sep 22	166	Sep 1 1956
INSTANTANEOUS PEAK FLOW			2530	May 25	^b 16200	Jun 19 1903
INSTANTANEOUS PEAK STAGE			6.06	May 25	15.90	Jun 19 1903
INSTANTANEOUS LOW FLOW			254	Sep 25	130	Jun 30 1902
ANNUAL RUNOFF (AC-FT)	894300		635400		605600	
10 PERCENT EXCEEDS	2430		1620		1640	
50 PERCENT EXCEEDS	930		711		515	
90 PERCENT EXCEEDS	591		355		262	

^a Average discharge for 41 years (water years 1890-1930), 1,238 ft³/s, 896,900 acre-ft/yr.

^b 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.



RIO GRANDE BASIN

08279500 RIO GRANDE AT EMBUDO, NM---Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED OF (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT SATUR- ATION) (00301)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT												
15...	1700	2100	153	8.0	19.5	10.0	23	--	--	--	285	1620
NOV												
26...	1115	919	255	7.9	6.0	4.0	3.0	621	11.8	111	22	55
FEB												
03...	1400	641	359	8.5	14.0	3.5	1.2	615	14.2	133	--	--
MAR												
05...	0700	660	361	8.4	4.5	4.0	1.3	612	9.6	91	--	--
APR												
27...	1236	1190	292	8.1	20.5	10.5	18	619	9.9	110	--	--
MAY												
14...	1045	1820	232	8.0	21.0	12.0	15	615	9.0	104	--	--
JUN												
16...	1055	853	288	8.4	25.0	15.5	3.0	615	9.4	117	--	--
JUL												
16...	1005	554	357	8.1	25.5	19.5	5.5	627	8.5	113	--	--
AUG												
27...	0735	369	312	8.3	18.5	18.5	3.6	622	7.0	92	--	--
SEP												
28...	1215	262	343	8.7	28.5	18.0	3.1	622	9.3	121	--	--

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.

WATER-DISCHARGE RECORDS

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

EXTREMES OUTSIDE PERIOD OF RECORDS.--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.

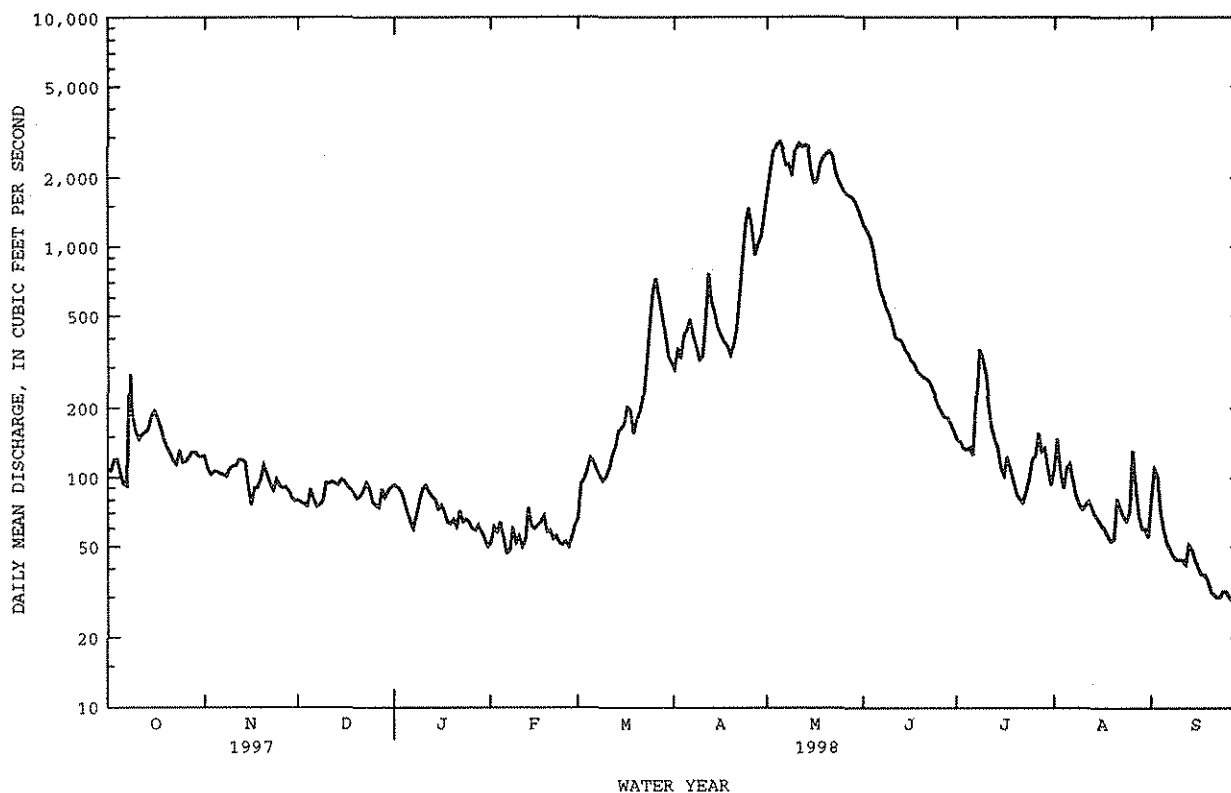
MEAN	93.1	84.7	60.5	55.7	70.0	189	843	1856	782	137	98.5	80.1
MAX	562	422	131	103	174	523	1846	4195	3200	571	352	320
(WY)	1987	1987	1987	1987	1962	1995	1962	1985	1995	1957	1957	1982
MIN	9.82	24.8	25.9	15.8	26.3	49.9	244	123	19.1	9.23	9.00	7.96
(WY)	1957	1957	1964	1963	1964	1964	1964	1977	1977	1956	1972	1956

RIO GRANDE BASIN

08284100 RIO CHAMA NEAR LA PUENTE, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1956 - 1998	
ANNUAL TOTAL	165423		130824		364	
ANNUAL MEAN	453		358		723	1985
HIGHEST ANNUAL MEAN					63.0	1977
LOWEST ANNUAL MEAN					7720	May 10 1985
HIGHEST DAILY MEAN	3430	May 14	2870	May 5	4.4	Sep 19 1956
LOWEST DAILY MEAN	31	Mar 5	28	Sep 28	5.6	Sep 18 1956
ANNUAL SEVEN-DAY MINIMUM	45	Feb 28	30	Sep 22	^a 11200	May 28 1979
INSTANTANEOUS PEAK FLOW			3450	May 13	6.46	May 14 1984
INSTANTANEOUS PEAK STAGE			5.30	May 13	4.0	Sep 19 1956
INSTANTANEOUS LOW FLOW			28	Sep 28		
ANNUAL RUNOFF (AC-FT)	328100		259500		263500	
10 PERCENT EXCEEDS	1400		1200		1060	
50 PERCENT EXCEEDS	125		106		81	
90 PERCENT EXCEEDS	56		54		30	

e Estimated

^a From rating curve extended above 5,400 ft³/s.

08284100 RIO CHAMA NEAR LA PUENTE, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974, 1986 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	
DEC 08...	1110	E68	150	.5	.5	576	10.8	99	55	17	3.2	
MAY 04...	1150	2590	46	16.0	6.0	584	9.8	103	19	5.9	1.1	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC 08...	4.7	.3	1.3	62	11	1.5	<.1	20	96	<16.0	29	
MAY 04...	1.6	.2	.7	20	2.3	.6	<.1	11	36	21.7	160	

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.

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

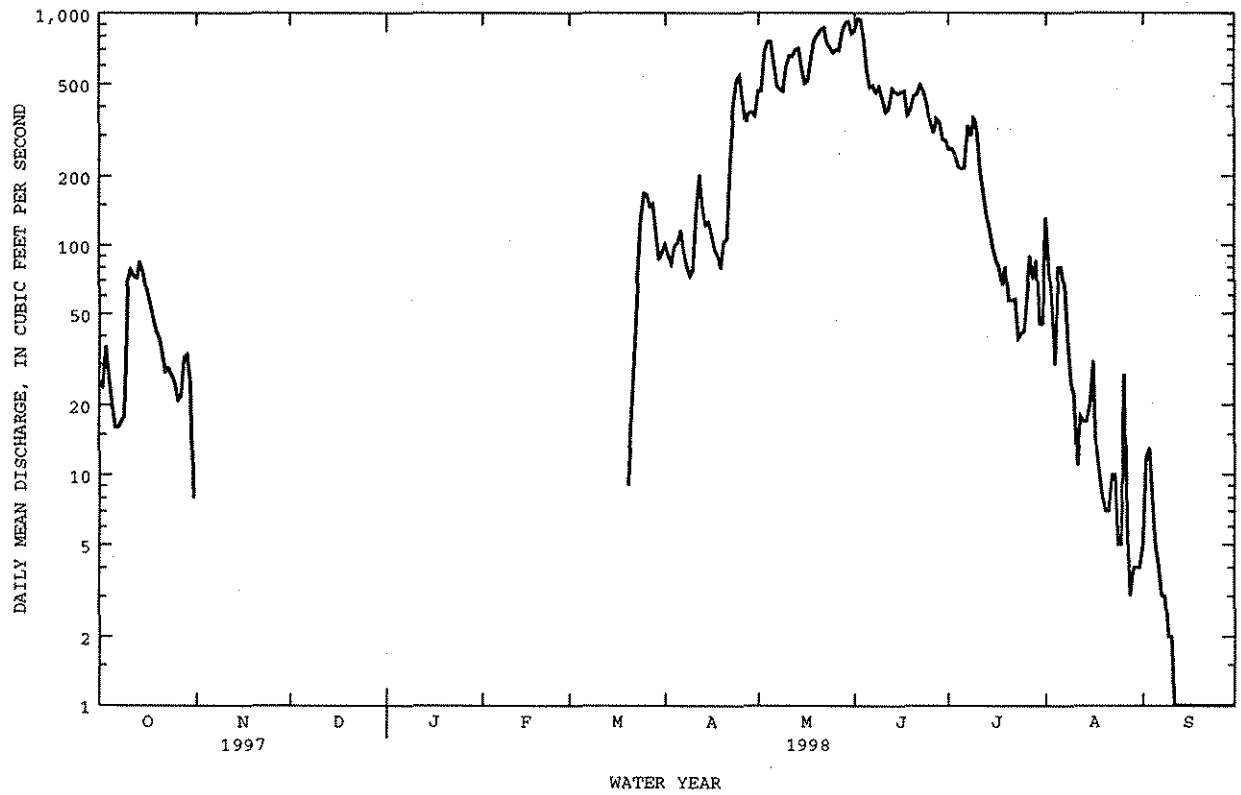
COOPERATION.--Records provided by Bureau of Reclamation.

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.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 950 ft³/s, June 2; no flow many days.

[illegible]

08284160 AZOTEA TUNNEL AT OUTLET, NEAR CHAMA, NM--Continued



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 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 Bureau of Reclamation.

AVERAGE DISCHARGE.--8 years (water years 1963-70), 10.5 ft³/s, 7,610 acre-ft/yr, prior to completion of Azotea tunnel. 26 years (water years 1971-98), 143 ft³/s, 103,600 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.

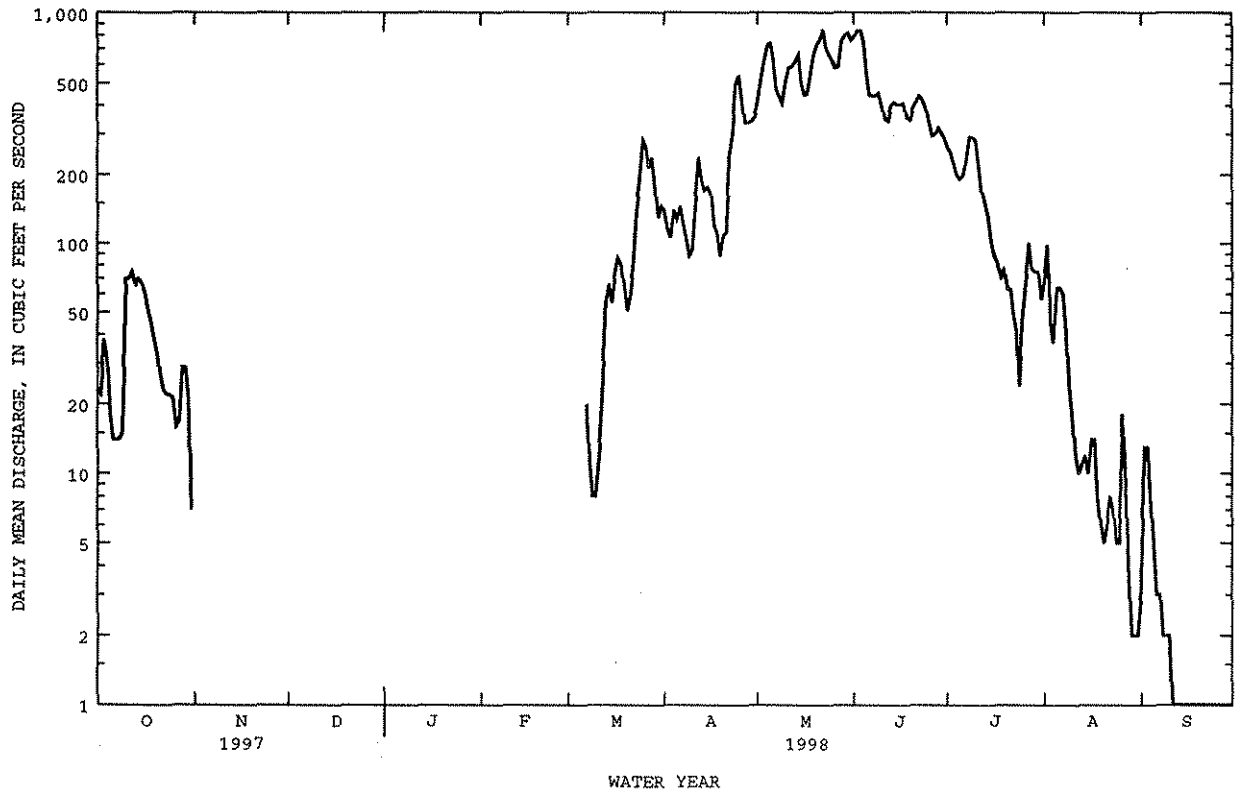
EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 851 ft³/s, May 22; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	.00	.00	.00	.00	.00	139	409	796	262	70	3.0
2	22	.00	.00	.00	.00	.00	115	509	840	249	98	13
3	38	.00	.00	.00	.00	.00	106	623	840	222	45	13
4	32	.00	.00	.00	.00	.00	140	728	753	199	37	8.0
5	18	.00	.00	.00	.00	.00	127	740	553	191	64	5.0
6	14	.00	.00	.00	.00	.00	145	628	443	197	64	3.0
7	14	.00	.00	.00	.00	20	123	466	438	226	60	3.0
8	14	.00	.00	.00	.00	11	106	438	438	290	42	2.0
9	15	.00	.00	.00	.00	8.0	88	407	452	290	24	2.0
10	70	.00	.00	.00	.00	8.0	93	504	398	281	18	2.0
11	70	.00	.00	.00	.00	12	149	583	349	222	12	1.0
12	75	.00	.00	.00	.00	22	237	588	340	169	10	1.0
13	66	.00	.00	.00	.00	55	191	618	398	150	11	1.0
14	70	.00	.00	.00	.00	66	170	659	411	131	12	1.0
15	68	.00	.00	.00	.00	55	176	504	402	103	10	1.0
16	60	.00	.00	.00	.00	73	165	443	402	89	14	1.0
17	51	.00	.00	.00	.00	86	120	448	407	83	14	1.0
18	45	.00	.00	.00	.00	81	111	533	353	71	8.0	1.0
19	38	.00	.00	.00	.00	64	88	664	345	76	6.0	1.0
20	33	.00	.00	.00	.00	51	108	732	389	63	5.0	1.0
21	27	.00	.00	.00	.00	59	112	775	411	63	6.0	1.0
22	23	.00	.00	.00	.00	79	241	851	438	49	8.0	1.0
23	22	.00	.00	.00	.00	137	302	705	425	42	7.0	1.0
24	22	.00	.00	.00	.00	184	495	659	392	24	5.0	1.0
25	21	.00	.00	.00	.00	281	538	628	336	49	5.0	1.0
26	16	.00	.00	.00	.00	265	429	580	294	70	18	1.0
27	17	.00	.00	.00	.00	214	336	587	298	100	10	1.0
28	29	.00	.00	.00	.00	237	336	764	319	77	4.0	1.0
29	29	.00	.00	.00	---	180	340	807	302	75	2.0	1.0
30	21	.00	.00	.00	---	130	353	818	286	75	2.0	1.0
31	7.0	---	.00	.00	---	146	---	764	---	57	2.0	---
TOTAL	1070.0	0.00	0.00	0.00	0.00	2524.00	6179	19162	13248	4245	693.0	74.0
MEAN	34.5	.000	.000	.000	.000	81.4	206	618	442	137	22.4	2.47
MAX	75	.00	.00	.00	.00	281	538	851	840	290	98	13
MIN	7.0	.00	.00	.00	.00	.00	88	407	286	24	2.0	1.0
AC-FT	2120	.00	.00	.00	.00	5010	12260	38010	26280	8420	1370	147

CAL YR 1997 TOTAL 73923.90 MEAN 203 MAX 958 MIN .00 AC-FT 146600
WTR YR 1998 TOTAL 47195.00 MEAN 129 MAX 851 MIN .00 AC-FT 93610

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



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, Hydrologic Unit 13020102, 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. No winter records subsequent to 1973. Published as "near Park View" prior to 1976.

GAGE.--Water-stage recorder. Concrete control since June 10, 1963. Datum of gage is 7,188.85 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to July 1, 1971, at site 1,100 ft upstream at higher datums.

REMARKS.--Diversion upstream from station for irrigation of meadows and for off-channel stock tanks.

COOPERATION.--Records provided by Bureau of Reclamation.

AVERAGE DISCHARGE--11 years (water years 1963-73), 1.10 ft³/s, 797 acre-ft/yr.

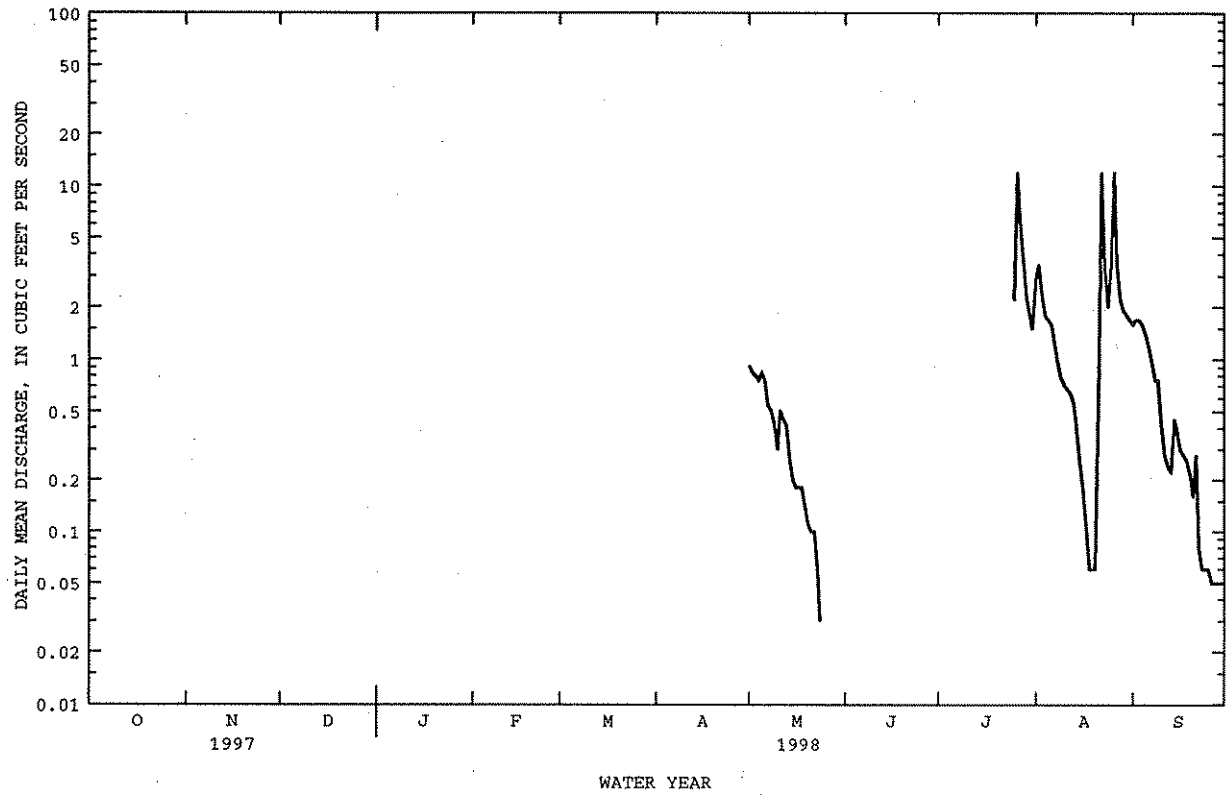
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft³/s, July 30, 1968, gage height, 4.9 ft, site and datum then in use, from rating curve extended above 37 ft³/s on basis of slope-area measurements at gage heights 3.20 ft and 4.9 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 12 ft³/s, July 26, Aug. 22, 26, no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	.92	.00	.00	3.0	1.6
2	---	---	---	---	---	---	---	.84	.00	.00	3.5	1.7
3	---	---	---	---	---	---	---	.80	.00	.00	2.4	1.7
4	---	---	---	---	---	---	---	.76	.00	.00	1.8	1.6
5	---	---	---	---	---	---	---	.84	.00	.00	1.7	1.4
6	---	---	---	---	---	---	---	.76	.00	.00	1.6	1.2
7	---	---	---	---	---	---	---	.54	.00	.00	1.3	.96
8	---	---	---	---	---	---	---	.51	.00	.00	1.0	.76
9	---	---	---	---	---	---	---	.42	.00	.00	.80	.76
10	---	---	---	---	---	---	---	.30	.00	.00	.72	.42
11	---	---	---	---	---	---	---	.51	.00	.00	.68	.28
12	---	---	---	---	---	---	---	.45	.00	.00	.64	.24
13	---	---	---	---	---	---	---	.42	.00	.00	.57	.22
14	---	---	---	---	---	---	---	.26	.00	.00	.42	.45
15	---	---	---	---	---	---	---	.20	.00	.00	.26	.39
16	---	---	---	---	---	---	---	.18	.00	.00	.18	.30
17	---	---	---	---	---	---	---	.18	.00	.00	.11	.28
18	---	---	---	---	---	---	---	.18	.00	.00	.06	.26
19	---	---	---	---	---	---	---	.14	.00	.00	.06	.22
20	---	---	---	---	---	---	---	.11	.00	.00	.06	.16
21	---	---	---	---	---	---	---	.10	.00	.00	.54	.28
22	---	---	---	---	---	---	---	.10	.00	.00	12	.08
23	---	---	---	---	---	---	---	.06	.00	.00	3.3	.06
24	---	---	---	---	---	---	---	.03	.00	.00	2.0	.06
25	---	---	---	---	---	---	---	.00	.00	2.2	3.5	.06
26	---	---	---	---	---	---	---	.00	.00	12	12	.05
27	---	---	---	---	---	---	---	.00	.00	6.4	3.5	.05
28	---	---	---	---	---	---	---	.00	.00	3.8	2.2	.05
29	---	---	---	---	---	---	---	.00	.00	2.3	1.9	.05
30	---	---	---	---	---	---	---	.00	.00	1.8	1.8	.05
31	---	---	---	---	---	---	---	.00	---	1.5	1.7	---
TOTAL	---	---	---	---	---	---	---	9.61	0.00	30.00	65.30	15.69
MEAN	---	---	---	---	---	---	---	.31	.000	.97	2.11	.52
MAX	---	---	---	---	---	---	---	.92	.00	12	12	1.7
MIN	---	---	---	---	---	---	---	.00	.00	.00	.06	.05
AC-FT	---	---	---	---	---	---	---	19	.00	60	130	31

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



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

PERIOD OF RECORD.--October 1970 to current year. Published as "near Park View" prior to 1976.

REMARKS.--Reservoir is formed by earthfill dam; storage began Oct. 21, 1970. Total capacity 401,300 acre-ft at elevation 7,186.1 ft, low point on crest of uncontrolled spillway, including 1,340 acre-ft of dead storage at elevation 7,003.0 ft, invert of gate sill of outlet tunnel. Reservoir is used for storage of transmountain water from San Juan River basin and for recreation. Figures given herein represent total storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 401,800 acre-ft, July 28, 1982, elevation, 7,186.19 ft; no storage prior to Oct. 21, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 376,510 acre-ft, July 10, elevation, 7,181.82 ft; minimum, 304,350 acre-ft, Apr. 21-22, elevation, 7,168.36 ft.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	356280	356940	352980	349210	345350	342320	325750	311340	346810	372080	373160	369380
2	356330	356670	352920	349100	345130	342220	324340	312420	348550	372420	373050	369260
3	356280	356500	352760	349040	345020	342160	322880	313740	350300	372760	372590	368760
4	356280	356330	352600	348990	344970	342050	321480	315130	351770	373220	372080	368250
5	356220	356170	352490	348880	344860	342050	320030	316720	352810	373560	371860	367860
6	356220	356060	352320	348660	344750	342270	318680	317960	353750	373950	371580	367350
7	356280	355840	352270	348550	344700	342220	317290	318370	354630	374630	371350	366960
8	356330	355730	352320	348330	344700	342110	315900	318110	355340	375490	370950	366340
9	356390	355890	352160	348280	344750	342110	314310	317800	356220	376170	370450	366170
10	356500	355780	351990	348230	344480	341950	312670	317750	357000	376510	370110	365950
11	356550	355840	351880	348170	344320	341890	311500	317800	357660	376060	370110	365500
12	356500	355670	351770	348010	344160	341780	310330	318270	358430	375490	370050	365050
13	356550	355620	351660	347950	344050	341780	309060	319510	359150	375030	370160	364550
14	356610	355400	351550	347840	344000	341840	307580	321060	360040	375260	370160	363990
15	356830	355230	351440	347680	343940	341890	306270	322410	360820	375320	369880	363430
16	356940	355070	351280	347570	343780	341950	305260	323400	361650	375490	369770	362880
17	357050	354790	351120	347410	343730	342110	305110	324340	362380	375540	369380	362380
18	357110	354680	351010	347250	343620	342270	304910	326010	362930	375600	369260	361760
19	357110	354570	350900	347080	343510	342320	304660	327120	363710	375660	369210	361100
20	357050	354460	350730	347030	343400	341460	304560	328690	364550	375490	369430	360320
21	357050	354350	350620	346810	343290	339900	304350	330380	365330	375090	369830	359710
22	357050	354130	350460	346650	343190	338460	304350	331910	366290	373100	369830	358990
23	357050	354020	350460	346490	343130	337070	304760	333390	367130	374460	369770	358490
24	357220	353910	350410	346380	343130	335840	305660	334770	367910	374350	369830	357770
25	357220	353800	350300	346270	343020	334830	306830	336160	368480	374410	369830	357050
26	357160	353750	350130	346110	342810	333660	307580	337490	368980	374410	369830	356390
27	357220	353640	349970	345940	342650	332490	308290	338940	369660	374410	369830	355780
28	357220	353420	349750	345840	342480	331280	309000	340490	370330	374410	369770	355120
29	3571											

CAL YR 1997	MAX 366680	MIN 263320	(++)	+43340
WTR YR 1998	MAX 376510	MIN 304350	(++)	-1930

(+) ELEVATION, IN FEET, AT END OF MONTH
(++) CHANGE IN CONTENTS, IN ACRE-Feet

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.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 900 ft³/s, Mar. 21 to Apr. 15; no flow many days.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	60	60	60	60	60	900	.00	66	.00	225	165
2	.00	60	60	60	60	60	900	.00	.00	.00	225	165
3	.00	60	60	60	60	60	900	.00	.00	.00	225	197
4	.00	60	60	60	60	60	900	.00	.00	.00	225	225
5	.00	60	60	60	60	60	900	.00	.00	.00	225	225
6	.00	60	60	60	60	60	900	.00	.00	.00	225	225
7	.00	60	60	60	60	60	900	332	.00	.00	225	225
8	.00	60	60	60	60	60	900	650	.00	.00	225	120
9	.00	60	60	60	60	60	900	650	.00	.00	91	.00
10	.00	60	60	60	60	60	900	650	.00	276	.00	.00
11	.00	60	60	60	60	60	900	650	.00	500	.00	78
12	.00	60	60	60	60	60	900	413	.00	500	.00	170
13	.00	60	60	60	60	60	900	.00	.00	198	.00	170
14	.00	60	60	60	60	60	900	.00	.00	.00	53	170
15	.00	60	60	60	60	60	900	.00	.00	.00	125	170
16	.00	60	60	60	60	60	589	.00	.00	.00	125	170
17	.00	60	60	60	60	60	265	.00	.00	130	63	170
18	.00	60	60	60	60	60	265	.00	.00	250	.00	244
19	.00	60	60	60	60	60	265	.00	.00	250	.00	244
20	.00	60	60	60	60	568	265	.00	.00	235	.00	244
21	.00	60	60	60	60	900	265	.00	.00	225	.00	244
22	.00	60	60	60	60	900	265	.00	.00	225	.00	244
23	.00	60	60	60	60	900	265	.00	.00	225	.00	244
24	.00	60	60	60	60	900	105	.00	.00	225	.00	244
25	.00	60	60	60	60	900	.00	.00	.00	225	.00	244
26	.00	60	60	60	60	900	.00	.00	.00	225	.00	244
27	.00	60	60	60	60	900	.00	.00	.00	225	.00	244
28	.00	60	60	60	60	900	.00	.00	.00	225	.00	244
29	.00	60	60	60	---	900	.00	66	.00	225	.00	244
30	.00	60	60	60	---	900	.00	125	.00	225	.00	142
31	36	--	60	60	---	900	---	125	---	225	98	---
TOTAL	36.00	1800	1860	1860	1680	11608	16049.00	3661.00	66.00	4814.00	2355.00	5715.00
MEAN	1.16	60.0	60.0	60.0	60.0	374	535	118	2.20	155	76.0	191
MAX	36	60	60	60	60	900	900	650	66	500	225	244
MIN	.00	60	60	60	60	60	.00	.00	.00	.00	.00	.00
AC-FT	71	3570	3690	3690	3330	23020	31830	7260	131	9550	4670	11340
CAL YR 1997	TOTAL 57900.00	MEAN 159	MAX 1400	MIN .00	AC-FT 114800							
WTR YR 1998	TOTAL 51504.00	MEAN 141	MAX 900	MIN .00	AC-FT 102200							

RIO GRANDE BASIN

08285000 EL VADO RESERVOIR NEAR TIERRA AMARILLA, NM

LOCATION.--Lat 36°35'39", long 106°44'00", Rio Arriba County, Hydrologic Unit 13020102, Tierra Amarilla Grant, at outlet tower of dam on Rio Chama, at village of El Vado, 12.4 mi southwest of Tierra Amarilla, and at mile 77.7.

DRAINAGE AREA.--873 mi², of which about 100 mi² probably is noncontributing.

PERIOD OF RECORD.--January 1935 to September 1965 (monthend contents only), October 1965 to current year. Prior to October 1967, contents at about 0730 hours.

GAGE.--Water-stage recorder. Prior to October 1967, nonrecording gage only below gage height 6,879.3 ft. Datum of gage is 8.21 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by rockfill dam, steel faced. Storage began in January 1935. Capacity 186,250 acre-ft between gage heights 6,759.0 ft and 6,902.0 ft, top of spillway gate. Dead storage, 1,480 acre-ft below 6,775.0 ft, sill of outlet works. Figures given herein represent total contents. Reservoir is used to impound water for irrigation by Middle Rio Grande Conservancy District and, since December 1972, for storage of contract water from San Juan-Chama Project. Rehabilitation of outlet works, completed in December 1966, increased valve-controlled release from about 1,750 ft³/s to about 6,000 ft³/s.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 204,900 acre-ft, of which 7,400 acre-ft was uncontrolled storage, June 4, 1948, gage height, 6,904.2 ft; no storage at times prior to December 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 179,690 acre-ft, June 4, elevation, 1,899.95ft; minimum, 79,250 acre-ft, Sept. 30, elevation 6,859.30 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146290	115290	112990	109720	106110	102460	123140	150770	178900	173440	156140	121060
2	144750	115150	112940	109650	106110	102290	125550	151550	179090	172420	155550	120010
3	143310	115080	112820	109610	105880	102160	128200	153280	179500	171300	155110	118930
4	141740	114980	112710	109560	105770	102090	130000	155200	179690	170250	154680	117820
5	140270	114910	112550	109420	105640	102050	131680	157340	179530	169240	154270	116720
6	138700	114840	112410	109330	105510	102050	133300	159290	179250	168620	153920	115450
7	137970	114750	112360	109130	105400	102050	135070	160480	179090	168620	153310	113920
8	136580	114650	112430	108990	105290	101920	136500	161950	179120	168990	152380	112170
9	134510	114670	112340	108880	105130	101750	137700	162580	179090	169240	151490	110060
10	133200	114700	112240	108790	104980	101660	138970	164360	178960	169360	150340	108000
11	131470	114700	112060	108680	104830	101560	140570	166420	178770	169080	148970	105970
12	129820	114670	111870	108470	104670	101530	142480	167740	178580	169270	147700	103910
13	127760	114630	111800	108360	104520	101530	144200	168100	178210	169450	146770	101810
14	126060	114580	111600	108250	104430	101600	145760	168590	178210	169330	145370	99980
15	124390	114420	111600	108110	104320	101680	147160	168350	178430	169080	143980	98390
16	122890	114300	111570	107960	104190	101680	148040	168530	178620	168810	142870	96750
17	121210	114200	111300	107820	103970	101790	148380	169080	178770	168100	141110	94570
18	119540	114060	111180	107730	103890	101960	148520	170220	178870	166540	139130	93620
19	117820	113990	111040	107600	103730	101980	148580	171770	178990	165020	137170	92120
20	116910	113920	110950	107400	103600	103450	148660	173410	179060	163970	134510	90640
21	116760	113830	110880	107280	103470	104960	148920	174810	179120	163240	135440	89170
22	116720	113710	110820	107110	103320	106440	149460	175530	179180	162280	134510	87800
23	116450	113520	110770	106950	103260	107960	150030	175530	179150	160480	133410	86530
24	116360	113500	110680	106790	103150	109510	150400	175720	178810	160480	132180	85240
25	116220	113360	110590	106660	103080	111040	150920	176160	177950	160130	130900	84010
26	116050	113310	110490	106500	102930	112660	151090	176630	177200	159320	129760	82890
27	115910	113270	110360	106350	102800	114230	150800	177200	176660	158790	128550	81750
28	115830	113170	110240	106190	102610	115830	150630	177800	175940	158400	127150	80610
29	115600	113100	110040	106110	---	117530	150750	178330	175190	157990	125980	79740
30	115450	112990	109920	106130	---	119130	150520	178620	174380	157520	125050	79250
31	115360	---	109810	106130	---	120790	---	178770	---	157080	123520	---
MAX	146290	115290	112990	109720	106110	120790	151090	178770	179690	173440	156140	121060
MIN	115360	112990	109810	106110	102610	101530	123140	150770	174380	157080	123520	79250
(+)	6876.85	6875.84	6874.46	6872.82	6871.21	6879.10	6890.30	6899.66	6898.26	6892.56	6880.20	6859.30
(++)	-32450	-2370	-3180	-3680	-3520	+18180	+29730	+28250	-4390	-17300	-33560	-44270

CAL YR 1997 MAX 179880 MIN 44440 (++) +65430
WTR YR 1998 MAX 179690 MIN 79250 (++) -68560

(+) ELEVATION, IN FEET, AT END OF MONTH

(++) CHANGE IN CONTENTS, IN ACRE-FEET

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. WDR-NM-90: 1989.

GAGE.--Water-stage recorder with satellite telemetry. 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.--Records good. 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. Several observations of water temperature were made during the year.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	822	207	200	196	200	197	332	1300	1120	586	809	811
2	822	209	200	196	200	197	331	1300	950	655	642	809
3	821	208	200	197	201	198	332	1310	804	653	476	853
4	820	207	200	197	201	198	332	1310	804	640	477	828
5	819	207	200	197	201	199	333	1320	805	643	477	797
6	815	207	199	203	201	198	334	1330	806	443	477	920
7	817	206	199	207	201	197	335	1590	658	197	588	1010
8	817	205	199	206	202	197	381	1920	503	197	709	1080
9	817	206	199	206	201	197	457	2040	504	197	707	1120
10	912	206	198	205	201	198	457	2040	504	452	735	1220
11	1010	206	198	204	200	197	458	2040	504	774	751	1350
12	999	205	198	205	200	198	458	2270	505	491	750	1390
13	994	204	197	205	200	197	459	2500	505	197	745	1380
14	989	203	197	205	200	198	460	2510	337	198	739	1220
15	967	203	197	205	200	199	463	2250	205	198	737	1100
16	962	203	194	204	200	200	464	1690	206	198	737	1100
17	964	203	190	204	200	200	463	1460	205	479	981	1090
18	958	202	190	204	200	200	464	1460	205	889	1090	1090
19	957	202	190	204	200	200	463	1460	207	843	1040	1090
20	525	201	190	204	200	200	463	1470	207	754	918	1080
21	199	200	190	204	199	200	464	1660	208	721	781	1070
22	200	200	190	204	199	200	465	2030	208	721	706	1000
23	201	200	190	203	200	200	612	2020	209	722	704	961
24	203	201	190	203	201	201	860	1690	344	726	703	958
25	203	200	190	202	199	202	956	1450	519	721	704	916
26	204	200	190	201	198	265	964	1280	514	722	703	879
27	206	200	190	201	198	326	963	1220	514	589	740	878
28	207	200	189	201	197	328	964	1220	512	489	720	878
29	207	200	189	201	---	329	966	1220	511	488	617	895
30	207	200	189	200	---	330	1140	1320	512	487	735	513
31	207	---	189	200	---	331	---	1280	---	629	811	---
TOTAL	19851	6101	6021	6274	5600	6877	16593	50960	14595	16699	22509	30286
MEAN	640	203	194	202	200	222	553	1644	487	539	726	1010
MAX	1010	209	200	207	202	331	1140	2510	1120	889	1090	1390
MIN	199	200	189	196	197	197	331	1220	205	197	476	513
AC-FT	39370	12100	11940	12440	11110	13640	32910	101100	28950	33120	44650	60070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
MEAN	212	188	295	161	173	302	881	1692	891	400	367	322
MAX	640	646	1272	435	522	962	1887	3412	2342	707	726	1010
(WY)	1998	1987	1976	1987	1986	1985	1986	1985	1992	1998	1998	1998
MIN	36.7	43.9	63.2	23.9	17.1	27.8	33.2	262	186	126	54.4	50.6
(WY)	1979	1977	1971	1978	1976	1973	1973	1972	1976	1985	1971	1972

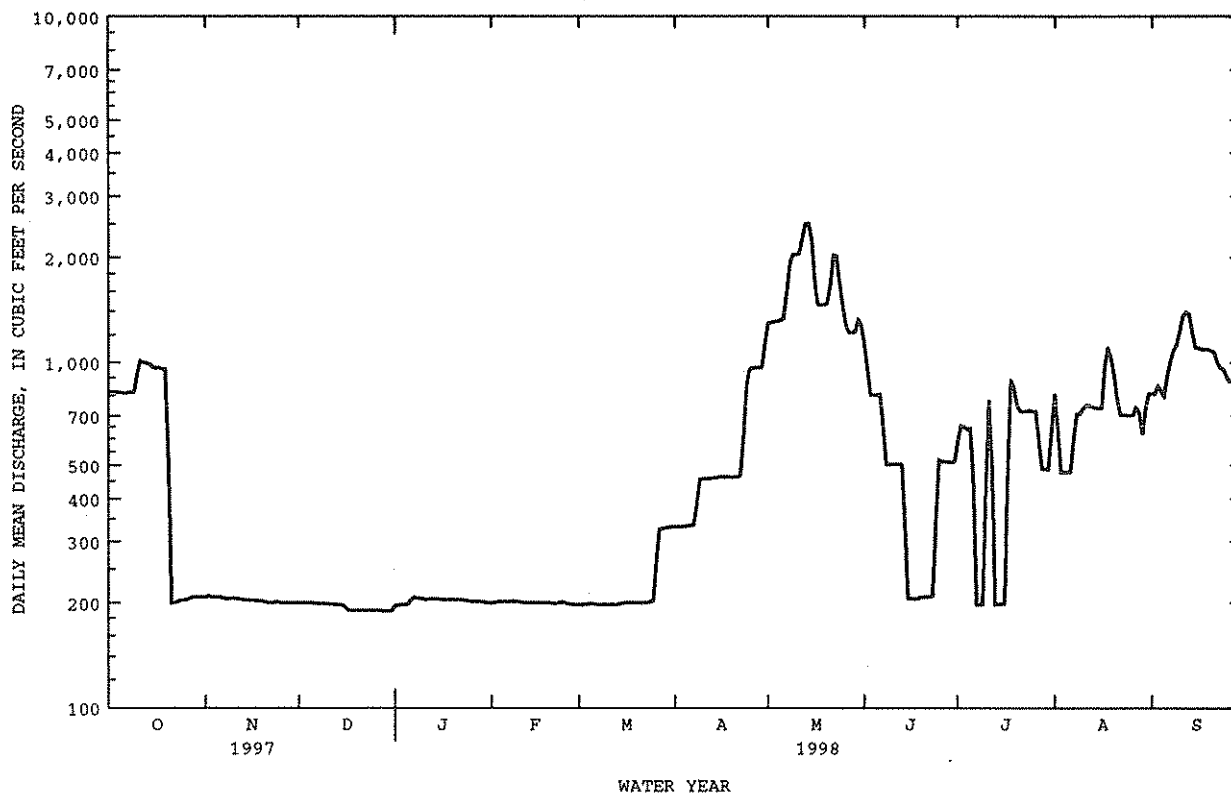
RIO GRANDE BASIN

08285500 RIO CHAMA BELOW EL VADO DAM, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1971 - 1998	
ANNUAL TOTAL	173666			202366			^a 492	
ANNUAL MEAN	476			554			754	1985
HIGHEST ANNUAL MEAN							194	1972
LOWEST ANNUAL MEAN							^b 5790	May 21 1973
HIGHEST DAILY MEAN	2540	May	7	2510	May	14	11	Oct 1 1972
LOWEST DAILY MEAN	164	Apr	9	189	Dec	28	16	Oct 14 1974
ANNUAL SEVEN-DAY MINIMUM	166	Mar	4	189	Dec	25		
ANNUAL RUNOFF (AC-FT)	344500			401400			356300	
10 PERCENT EXCEEDS	1080			1170			1180	
50 PERCENT EXCEEDS	217			333			228	
90 PERCENT EXCEEDS	169			198			47	

^a Average discharge for 5 years (water years 1914-15, 1921-23), 448 ft³/s, 324,600 acre-ft/yr, prior to completion of El Vado Dam. 35 years (water years 1936-70), 373 ft³/s, 270,200 acre-ft/yr, prior to release of transmountain water.

^b 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, 6,610 ft³/s, May 7, 1985, gage height, 7.08 ft.



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.

PERIOD OF RECORD.--August 1961 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,280 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by El Vado Reservoir (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. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred on Sept. 29, 1904, Oct. 4 or 5, 1911, and May 22, 1920.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	941	202	208	e180	210	213	355	1310	1130	536	990	835
2	946	208	214	e183	209	214	353	1320	1000	671	929	828
3	946	201	211	e185	210	216	356	1330	798	678	526	847
4	941	204	205	e187	213	244	353	1350	804	703	519	865
5	941	204	204	e190	216	313	359	1360	823	670	519	805
6	938	204	203	e207	215	344	362	1370	848	643	517	864
7	939	204	206	e206	223	285	365	1520	817	226	539	1030
8	956	204	215	e203	219	231	354	1910	528	218	758	1060
9	939	214	208	e208	220	218	478	2100	525	220	765	1160
10	977	214	207	212	212	215	480	2090	520	219	781	1200
11	1150	213	207	210	212	219	481	2110	514	817	828	1380
12	1150	223	200	209	214	234	495	2240	508	768	817	1460
13	1140	220	207	209	212	240	511	2550	502	208	806	1440
14	1140	216	213	210	214	238	503	2570	467	195	820	1340
15	1130	209	212	209	219	238	501	2440	214	192	794	1140
16	1100	204	211	209	213	242	503	1900	205	193	792	1130
17	1110	202	201	210	213	235	503	1490	200	199	916	1100
18	1110	202	198	210	213	230	500	1480	198	955	1200	1090
19	1100	203	199	210	214	220	496	1500	197	958	1130	1090
20	934	205	197	211	214	214	493	e1520	196	850	1060	1080
21	223	203	198	209	217	213	496	e1660	197	788	864	1060
22	211	203	196	209	215	212	501	e2030	195	786	782	1020
23	209	202	197	211	217	213	564	e2040	195	788	741	950
24	217	203	197	210	226	217	812	e1700	196	806	738	940
25	213	204	197	209	256	224	958	e1460	491	924	744	914
26	215	205	196	208	219	235	974	e1290	507	858	748	859
27	209	209	194	208	217	380	968	e1220	506	746	738	857
28	207	206	e190	208	215	383	961	1190	504	549	794	853
29	205	205	e188	208	---	373	960	1190	505	536	647	891
30	205	204	e172	209	---	364	1030	1250	509	529	684	991
31	204	---	e177	209	---	357	---	1300	---	561	833	---
TOTAL	22846	6200	6228	6356	6067	7974	17025	51790	14799	17990	24319	31079
MEAN	737	207	201	205	217	257	568	1671	493	580	784	1036
MAX	1150	223	215	212	256	383	1030	2570	1130	958	1200	1460
MIN	204	201	172	180	209	212	353	1190	195	192	517	805
AC-FT	45320	12300	12350	12610	12030	15820	33770	102700	29350	35680	48240	61650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

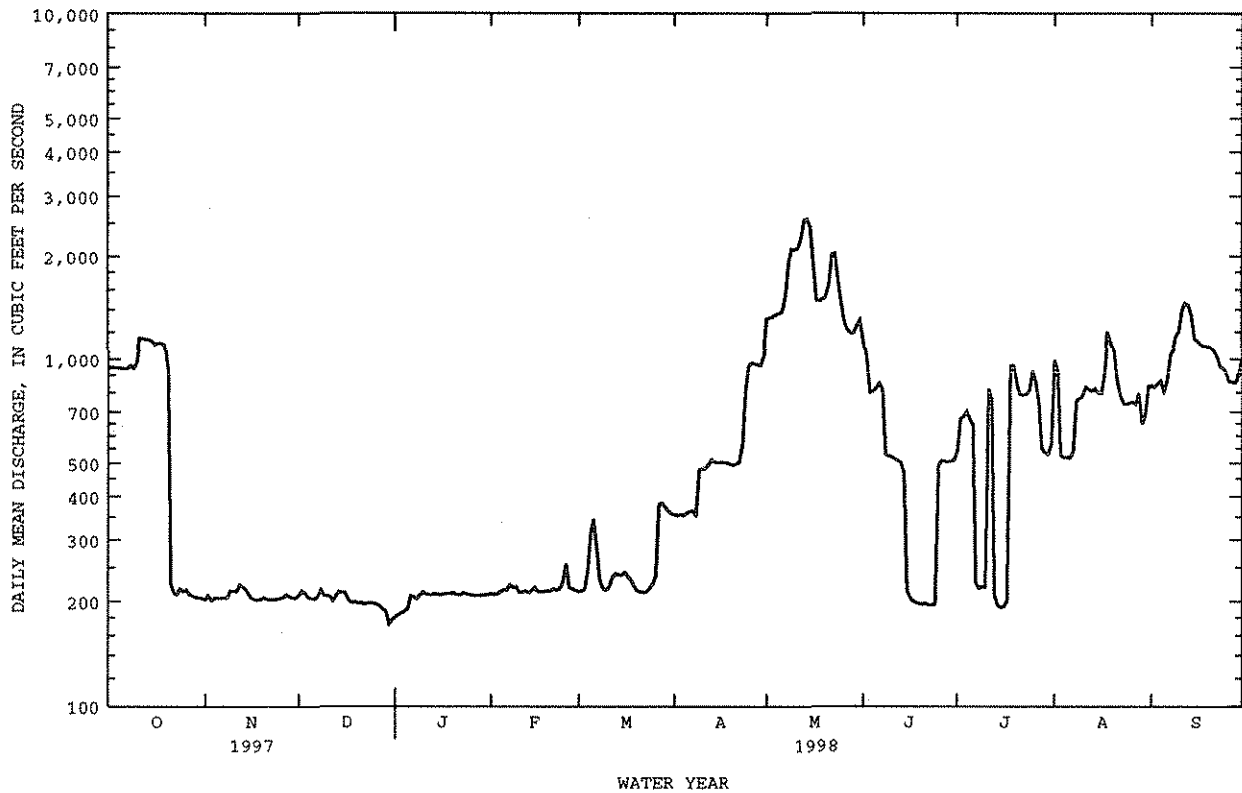
MEAN	224	194	301	168	197	349	940	1807	940	414	387	330
MAX	737	676	1273	431	495	1050	1985	3741	2619	707	784	1036
(WY)	1998	1987	1976	1987	1987	1985	1985	1984	1995	1992	1998	1998
MIN	40.1	48.4	74.0	29.1	29.7	44.1	106	259	185	132	86.1	77.9
(WY)	1979	1977	1971	1978	1976	1977	1977	1972	1976	1985	1979	1972

RIO GRANDE BASIN

08286500 RIO CHAMA ABOVE ABIQUITU RESERVOIR, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1971 - 1998	
ANNUAL TOTAL	191484		212673		^a 523	
ANNUAL MEAN	525		583		823	1980
HIGHEST ANNUAL MEAN					204	1972
LOWEST ANNUAL MEAN					6480	May 18 1984
HIGHEST DAILY MEAN	2740	May 24	2570	May 14	11	Oct 3 1972
LOWEST DAILY MEAN	168	Jan 7	172	Dec 30	20	Oct 15 1974
ANNUAL SEVEN-DAY MINIMUM	172	Jan 6	182	Dec 29	6680	May 8 1985
INSTANTANEOUS PEAK FLOW			2690	May 14	^b 7.67	May 8 1985
INSTANTANEOUS PEAK STAGE			5.92	May 14	^c 7.5	Oct 17 1963
INSTANTANEOUS LOW FLOW			135	Jan 23		
ANNUAL RUNOFF (AC-FT)	379800		421800		378500	
10 PERCENT EXCEEDS	1150		1190		1250	
50 PERCENT EXCEEDS	236		359		241	
90 PERCENT EXCEEDS	183		202		60	

e Estimated

^a Average discharge for 9 years (water years 1962-70), 358 ft³/s, 259,400 acre-ft/yr, prior to release of transmountain water.^b Maximum gage height, 8.70 ft, May 20, 1973.^c Also occurred Oct. 18.

08286900 ABIQUIU RESERVOIR NEAR ABIQUIU, NM

LOCATION.--Lat 36°14'24", long 106°25'44", Rio Arriba County, Hydrologic Unit 13020102, in Piedra Lumbre Grant, in operations building at Abiquiu Dam on Rio Chama, 6.6 mi northwest of Abiquiu, and at mile 32.1.

DRAINAGE AREA.--2,146 mi², of which about 100 mi² is probably noncontributing.

PERIOD OF RECORD.--February 1963 to September 1965 (monthend contents only), October 1965 to current year. October 1969 to December 1975, contents at 0800 hours.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam, completed Feb. 5, 1963. Capacity, 1,198,500 acre-ft between elevations 6,060 ft, invert of outlet tunnel, and 6,350 ft, crest of spillway, based on capacity table from survey 1990. No dead storage. Reservoir is used for flood control and, since March 1976, for recreation. A desilting pool of about 2,000 acre-ft was maintained from May 1968 to 1974, when it was increased to 4,000 acre-ft and continued until December 1975. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 382,720 acre-ft, June 11, 1985, elevation, 6,256.22 ft; no storage at times prior to May 1968 and Jan. 11 to Mar. 25, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 185,670 acre-ft, May 24, elevation, 6,219.11 ft; minimum, 150,000 acre-ft, July 23, elevation, 6,209.91 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171740	171310	173670	175560	177350	179540	180220	180100	179180	154960	155820	153600
2	171740	171270	173910	175680	177430	179580	179660	179940	178030	153750	156800	153490
3	171740	171270	174020	175760	177470	179740	179140	179780	177030	152630	157450	153340
4	171740	171390	174060	175840	177590	179860	178700	179460	176240	151700	158020	153120
5	171740	171470	174140	175920	177710	180060	178300	179060	175840	150880	158620	152890
6	171740	171550	174260	175920	177830	180260	177910	178580	175600	151290	158960	152710
7	171740	171670	174340	175960	177910	180420	177550	178380	175410	152150	158930	152520
8	171740	171740	174420	176000	177990	180580	177150	178620	175290	152040	158740	152260
9	171740	171860	174650	176080	178070	180660	177150	179220	175210	151630	158590	152190
10	171740	171980	174730	176120	178150	180620	177550	179820	175130	151030	158130	152300
11	171740	172100	174770	176160	178220	180620	177990	180460	175130	151930	157600	152520
12	171740	172170	174810	176200	178270	180580	178500	181470	175250	152820	157030	152740
13	171740	172330	174850	176320	178350	180580	178700	182760	175090	153720	156620	152930
14	171740	172410	174930	176400	178380	180580	178660	184170	174850	153150	156120	153270
15	171740	172410	175010	176480	178460	180620	178540	185310	174180	152220	156050	153490
16	171740	172450	175090	176520	178500	180620	178580	185630	172550	151220	155630	153490
17	171630	172490	175170	176600	178620	180620	178500	185340	172840	150590	155070	153420
18	171470	172570	175290	176630	178700	180620	178500	185020	172170	150510	154840	153380
19	171310	172760	175370	176710	178780	180580	178460	184740	171310	150590	154810	153380
20	170920	172840	175410	176790	178860	180500	178430	184570	170300	150480	154770	153420
21	170610	172880	175450	176790	178940	180420	178430	184490	169090	150250	155450	153450
22	170570	172960	175450	176830	179020	180380	178540	184900	167690	150030	154990	153490
23	170770	173040	175530	176870	179100	180300	178860	185510	166300	150000	154920	153570
24	170920	173040	175560	176950	179180	180300	179380	185670	164770	150290	154690	153570
25	171000	173120	175600	176990	179260	180380	179940	185390	163540	151290	154320	153530
26	171040	173270	175640	177030	179420	180460	180420	184820	162280	151780	154090	153420
27	171160	173390	175720	177070	179500	180620	180620	183930	160790	152370	154090	153300
28	171240	173470	175760	177150	179500	180780	180660	182960	159420	153040	154130	153120
29	171270	173510	175600	177190	---	180940	180380	181990	157940	153680	153940	153450
30	171310	173590	175480	177270	---	180910	180220	181070	156430	154050	153680	154050
31	171310	---	175480	177310	---	180500	---	180220	---	154810	153600	---
MAX	171740	173590	175760	177310	179500	180940	180660	185670	179180	154960	158960	154050
MIN	170570	171270	173670	175560	177350	179540	177150	178380	156430	150000	153600	152190
(+)	6215.51	6216.09	6216.57	6217.03	6217.58	6217.83	6217.76	6217.96	6211.63	6211.20	6210.88	6211.00
(++)	-390	+2280	+1890	+1830	+2190	+1000	-280	0	-23790	-1620	-1210	+450
CAL YR 1997	MAX 193630	MIN 157860	(++)	+17770								
WTR YR 1998	MAX 185670	MIN 150000	(++)	-17650								

(+) ELEVATION, IN FEET, AT END OF MONTH
(++) CHANGE IN CONTENTS, IN ACRE-FEET

LOCATION.--Lat 36°14'12", long 106°24'59", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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.

PERIOD OF RECORD.--October 1961 to current year (monthly discharge only, October 1961).

REVISSED RECORDS.--WDR-NM-90: 1989.

GAGE.--Water-stage recorder with satellite telemetry. 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.--Records good except for estimated daily discharges, which are poor. Flow controlled by El Vado Reservoir (station 08285000) 46.4 mi upstream and Abiquiu Reservoir (station 08286900) 0.8 mi upstream since February 1963. 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. Several observations of water temperature taken during year.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	828	163	169	181	190	194	618	1510	1780	1310	351	795
2	818	161	170	183	187	193	624	1600	1680	1240	250	828
3	825	161	170	195	188	193	619	1590	1330	1200	198	879
4	819	148	170	191	187	194	e600	1650	1170	1200	201	843
5	824	144	170	192	187	194	e520	1790	961	985	198	816
6	825	165	168	189	187	194	e460	1780	809	455	284	930
7	838	166	167	189	185	195	e435	1780	812	193	488	1050
8	821	164	171	191	184	196	e380	1810	623	239	629	1140
9	826	167	177	190	184	197	e270	1810	488	397	835	1150
10	878	173	180	190	184	214	364	1790	508	444	948	1140
11	991	171	180	193	180	234	364	1770	477	318	1020	1180
12	989	177	172	196	177	246	365	1770	440	317	1020	1170
13	1030	168	168	197	176	271	434	1780	443	317	942	1150
14	1050	165	375	200	172	264	629	1780	494	445	836	1040
15	1080	164	167	199	171	267	694	1790	550	642	799	974
16	1070	164	167	199	172	265	570	1790	517	687	911	1040
17	1030	163	166	200	172	264	538	1790	475	489	1190	1080
18	1020	169	164	200	168	260	588	1790	310	556	1140	1040
19	1040	173	175	202	168	257	594	1800	404	853	1030	1010
20	932	174	188	204	151	259	593	1790	691	824	911	1010
21	482	174	191	202	174	259	588	1790	822	797	801	981
22	156	172	191	195	180	259	597	1780	842	786	694	923
23	160	169	189	193	194	263	648	1790	838	708	721	902
24	155	170	186	194	194	261	842	1800	916	577	828	902
25	155	170	187	194	194	259	995	1800	997	544	901	877
26	157	171	182	195	194	256	983	1800	1090	524	807	849
27	160	171	179	200	194	315	1050	1790	1210	343	686	896
28	146	172	191	203	194	366	1150	1800	1250	190	648	927
29	178	172	191	207	---	370	1280	1820	1240	189	729	927
30	208	172	187	190	---	425	1370	1770	1270	250	796	615
31	189	---	182	189	---	555	---	1780	---	350	794	---
TOTAL	20680	5013	5690	6043	5088	8139	19762	54680	25437	18369	22586	29064
MEAN	667	167	184	195	182	263	659	1764	848	593	729	969
MAX	1080	177	375	207	194	555	1370	1820	1780	1310	1190	1180
MIN	146	144	164	181	151	193	270	1510	310	189	198	615
AC-FT	41020	9940	11290	11990	10090	16140	39200	108500	50450	36430	44800	57650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

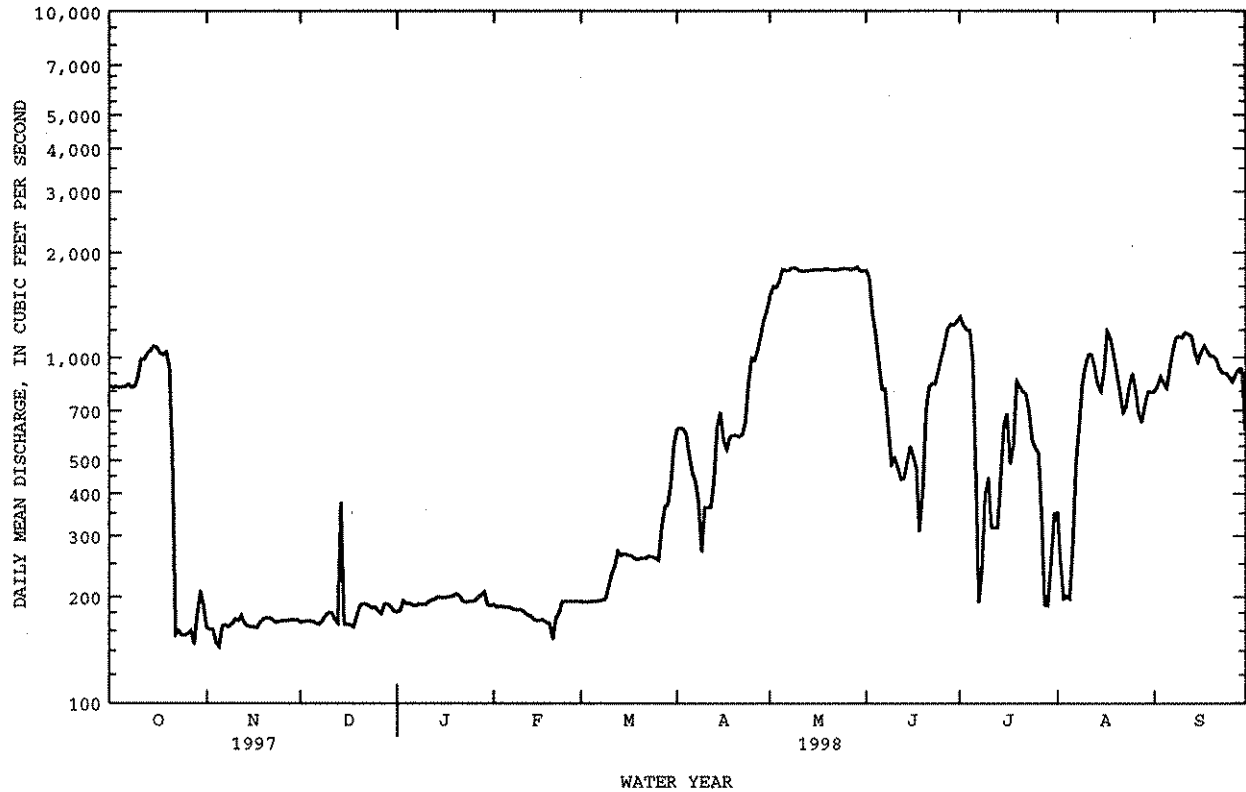
MEAN	301	305	313	191	250	427	894	1238	1099	649	474	431
MAX	1261	1181	1308	860	1708	1668	1894	2055	2418	1488	1084	1199
(WY)	1988	1980	1976	1986	1987	1987	1985	1983	1984	1973	1973	1987
MIN	44.9	45.8	43.9	35.7	38.0	52.4	111	242	184	201	98.4	64.4
(WY)	1979	1990	1975	1978	1978	1977	1977	1972	1976	1972	1979	1972

08287000 RIO CHAMA BELOW ABIQUITO DAM, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1971 - 1998	
ANNUAL TOTAL	191259		220551		^a 548	
ANNUAL MEAN	524		604		872	
HIGHEST ANNUAL MEAN					213	
LOWEST ANNUAL MEAN					2660	
HIGHEST DAILY MEAN	1810	May 31	1820	May 29	2660	May 15 1985
LOWEST DAILY MEAN	73	Jan 2	144	Nov 5	10	Sep 19 1972
ANNUAL SEVEN-DAY MINIMUM	74	Jan 1	156	Oct 22	21	Sep 30 1972
ANNUAL RUNOFF (AC-FT)	379400		437500		397300	
10 PERCENT EXCEEDS	1630		1290		1620	
50 PERCENT EXCEEDS	313		404		319	
90 PERCENT EXCEEDS	90		170		54	

e Estimated

^a Average discharge for 9 years (water years 1962-70), 384 ft³/s, 278,200 acre-ft/yr, prior to release of transmountain water.



RIO GRANDE BASIN

08289000 RIO OJO CALIENTE AT LA MADERA, NM

LOCATION.--Lat 36°20'59", long 106°02'37", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ 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 554, 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 with satellite telemetry. 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.--Records good. Diversions upstream from station for irrigation of about 3,500 acres (1962 determination). Several observations of water temperature were made during the year.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

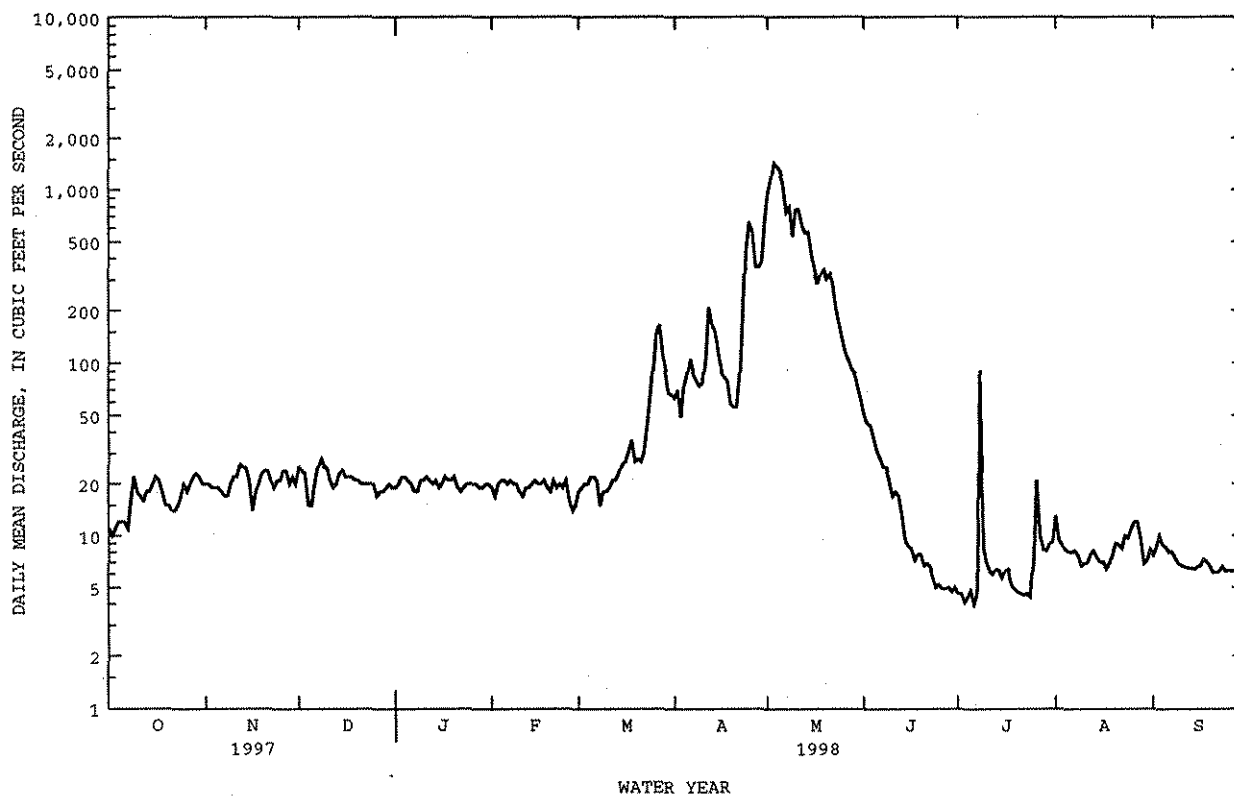
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	20	25	19	19	18	63	946	51	4.6	13	7.7
2	10	20	24	20	17	19	70	1130	45	4.6	9.5	8.6
3	11	19	23	22	20	20	49	1430	44	4.1	8.8	10
4	12	19	15	22	21	20	73	1370	37	4.4	8.3	8.9
5	12	19	15	21	21	22	85	1290	31	4.8	8.1	8.6
6	12	18	20	20	20	22	105	1100	28	4.0	8.0	8.0
7	11	17	25	18	21	21	88	742	25	4.5	8.2	8.1
8	16	17	28	18	20	15	80	796	25	9.1	7.7	7.4
9	22	20	25	21	20	18	74	539	21	8.3	6.7	6.9
10	18	22	25	21	18	18	77	773	17	6.8	6.9	6.7
11	17	22	21	22	17	19	109	770	18	6.2	7.0	6.6
12	16	26	19	21	19	21	210	628	17	6.0	7.8	6.5
13	18	25	20	20	19	21	166	564	13	6.4	8.2	6.5
14	18	25	23	21	20	23	152	570	9.4	6.3	7.6	6.4
15	20	21	24	19	21	26	113	426	8.7	5.7	7.0	6.6
16	22	14	22	20	20	27	89	347	8.4	6.3	7.1	6.7
17	21	18	22	22	20	31	83	285	7.2	6.4	6.4	7.3
18	18	20	22	21	21	36	80	324	7.8	5.2	6.9	7.1
19	15	23	21	21	19	27	58	345	7.8	4.9	7.7	6.7
20	15	24	21	22	18	28	56	305	6.7	4.7	9.0	6.1
21	14	24	20	19	21	27	56	327	6.9	4.6	8.9	6.1
22	14	21	20	18	19	31	84	288	6.6	4.5	8.4	6.2
23	15	19	20	19	20	43	199	205	5.7	4.6	10	6.6
24	17	21	20	20	19	62	452	166	5.0	4.4	9.7	6.2
25	20	21	20	20	21	95	651	136	5.2	7.5	11	6.3
26	18	24	17	20	16	150	572	113	4.9	21	12	6.2
27	20	24	18	20	14	165	357	104	4.9	10	12	6.3
28	22	20	18	19	15	112	357	92	5.0	8.3	9.7	6.3
29	23	22	19	19	---	91	384	88	4.7	8.2	6.9	7.5
30	22	20	20	20	---	67	640	74	5.0	9.0	7.2	9.5
31	20	---	19	20	---	66	---	62	---	9.2	8.3	---
TOTAL	520	625	651	625	536	1361	5632	16335	481.9	286.5	264.0	214.6
MEAN	16.8	20.8	21.0	20.2	19.1	43.9	188	527	16.1	9.24	8.52	7.15
MAX	23	26	28	22	21	165	651	1430	51	9.1	13	10
MIN	10	14	15	18	14	15	49	62	4.7	4.0	6.4	6.1
AC-FT	1030	1240	1290	1240	1060	2700	11170	32400	956	568	524	426

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1998, BY WATER YEAR (WY)

	MEAN	14.7	17.8	17.8	18.6	23.2	59.3	284	329	52.5	10.1	14.2	10.9
MAX	57.5	49.2	36.0	33.5	55.5	211	979	1256	298	33.1	68.1	29.8	
(WY)	1987	1987	1987	1952	1941	1995	1937	1941	1995	1949	1967	1936	
MIN	3.98	8.82	11.2	10.0	12.0	15.5	44.5	9.32	5.09	2.64	3.13	2.30	
(WY)	1957	1957	1957	1964	1955	1981	1955	1977	1954	1951	1956	1956	

08289000 RIO OJO CALIENTE AT LA MADERA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1933 - 1998	
ANNUAL TOTAL	29043.0		27532.0		71.1	
ANNUAL MEAN	79.6		75.4		205	
HIGHEST ANNUAL MEAN					13.4	
LOWEST ANNUAL MEAN					2180	
HIGHEST DAILY MEAN	680	May 10	1430	May 3	Apr 23 1942	
LOWEST DAILY MEAN	5.2	Jul 19	4.0	Jul 6	Aug 18 1956	
ANNUAL SEVEN-DAY MINIMUM	5.9	Jul 13	4.4	Jul 1	1.1	
INSTANTANEOUS PEAK FLOW			3990	Jul 8	3990	
INSTANTANEOUS PEAK STAGE			6.00	Jul 8	8.27	
INSTANTANEOUS LOW FLOW			2.3	Jul 6	.20	
ANNUAL RUNOFF (AC-FT)	57610		54610		51530	
10 PERCENT EXCEEDS	254		151		173	
50 PERCENT EXCEEDS	24		20		18	
90 PERCENT EXCEEDS	10		6.4		5.5	



RIO GRANDE BASIN

08290000 RIO CHAMA NEAR CHAMITA, NM

LOCATION.--Lat 36°04'26", long 106°06'40", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.8, T.21 N., R.8 E., Rio Arriba County, Hydrologic Unit 13020102, in San Juan Pueblo Grant, near left downstream corner 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.

WATER-DISCHARGE RECORDS

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 with satellite telemetry. 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.--Records good except for estimated daily discharges, which are fair. 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) 74.9 mi upstream since January 1935 and Abiquiu Reservoir (station 08286900), 29.3 mi upstream since February 1963. Since May 1971 flow affected by release of transmountain water from Hemon Reservoir (station 08284510) 83.0 mi upstream. No flow at times some years.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	835	211	225	234	234	232	715	1890	1740	1240	500	781
2	866	207	235	234	234	235	725	2140	1720	1210	376	778
3	884	202	234	239	238	240	691	2250	1410	1140	186	e837
4	876	204	221	238	243	241	703	2270	1150	1170	191	e849
5	875	170	211	237	242	245	703	2430	1030	1100	184	840
6	874	192	208	232	241	246	716	2410	787	710	173	841
7	867	203	216	232	250	250	710	2250	782	408	411	973
8	948	205	220	231	251	248	691	2240	708	382	547	1030
9	962	207	215	238	251	244	636	2130	481	387	749	1090
10	979	213	213	238	239	246	428	2190	471	597	876	1050
11	1040	211	206	239	238	290	410	2200	489	359	998	1080
12	1080	215	216	235	238	275	429	2130	413	347	1090	1090
13	1120	215	225	233	240	292	443	2080	399	332	1060	1110
14	1110	220	224	234	240	291	620	2080	408	345	860	1040
15	1150	224	218	228	246	306	738	2000	502	595	783	936
16	1120	216	218	230	242	324	701	2000	497	811	778	967
17	1220	207	217	231	242	324	519	1920	446	724	1110	1030
18	1140	206	215	234	243	329	599	1910	406	435	1130	1020
19	1120	208	211	232	242	328	576	1920	410	1200	997	981
20	1110	213	243	235	235	323	564	1890	532	869	916	989
21	777	216	243	231	214	306	566	1900	740	768	842	956
22	243	217	241	228	240	301	592	1900	807	750	732	903
23	188	215	247	232	241	313	680	1830	808	732	676	874
24	190	219	244	236	240	336	918	1800	838	570	737	873
25	185	220	246	238	241	357	1350	1770.	949	560	e875	860
26	182	217	236	238	235	390	1340	1740	995	594	e862	827
27	179	223	239	234	231	439	1240	1710	1110	518	675	845
28	178	217	243	238	230	522	1330	1720	1170	269	618	885
29	167	211	250	237	---	511	1390	1770	1170	218	643	1280
30	242	221	247	237	---	498	1660	1740	1180	156	749	1230
31	253	---	239	236	---	627	---	1750	---	315	753	---
TOTAL	22960	6325	7066	7269	6701	10109	23383	61960	24548	19811	22077	28845
MEAN	741	211	228	234	239	326	779	1999	818	639	712	962
MAX	1220	224	250	239	251	627	1660	2430	1740	1240	1130	1280
MIN	167	170	206	228	214	232	410	1710	399	156	173	778
AC-FT	45540	12550	14020	14420	13290	20050	46380	122900	48690	39300	43790	57210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

	MEAN	314	331	345	232	291	497	1149	1591	1095	613	455	422
MAX	1273	1224	1291	876	1677	1705	2534	2741	2346	1477	1020	1164	
(WY)	1988	1980	1976	1986	1987	1987	1985	1983	1984	1983	1973	1987	
MIN	37.3	60.6	77.3	63.5	66.6	85.1	120	204	117	170	95.5	83.1	
(WY)	1979	1990	1975	1975	1978	1977	1977	1972	1976	1972	1979	1974	

08290000 RIO CHAMA NEAR CHAMITA, NM--Continued

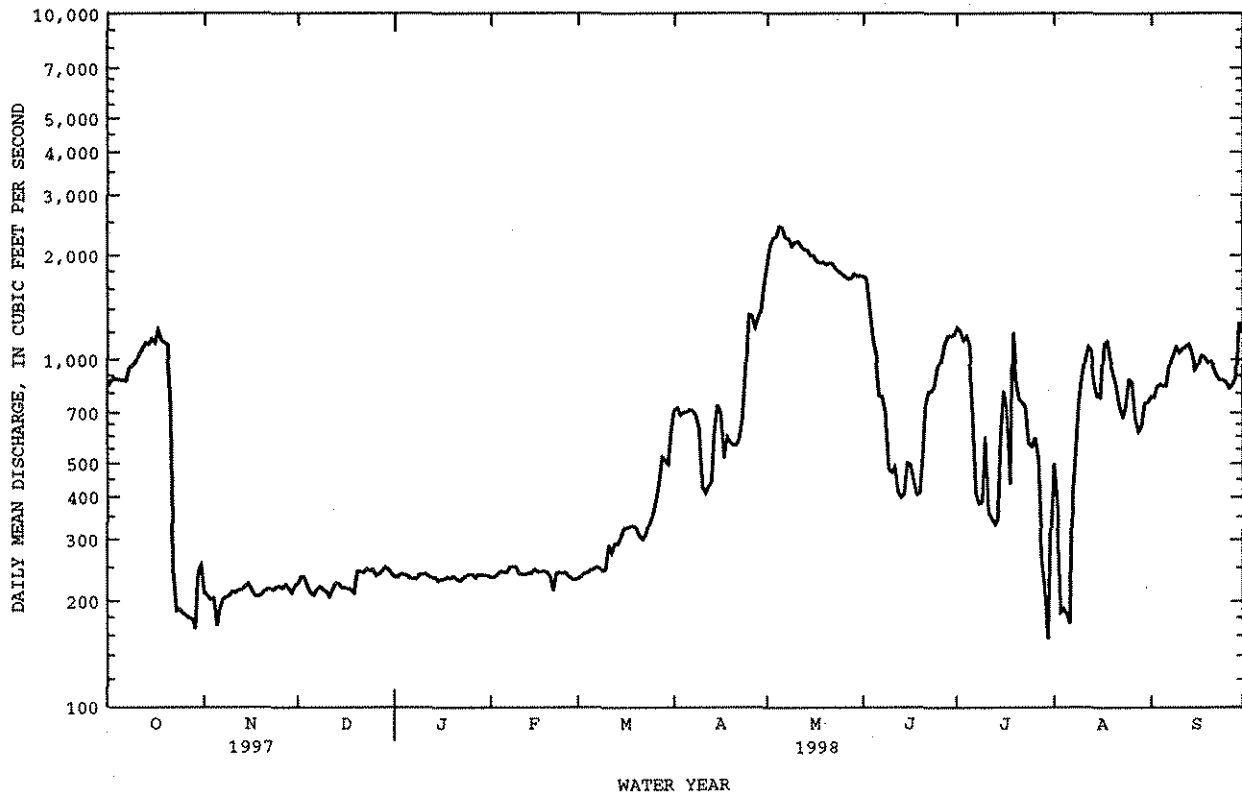
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1971 - 1998	
ANNUAL TOTAL	226308		241054		^a 612	
ANNUAL MEAN	620		660		923	
HIGHEST ANNUAL MEAN					234	
LOWEST ANNUAL MEAN					1.2	
HIGHEST DAILY MEAN	2370	May 13	2430	May 5	3570	May 5 1985
LOWEST DAILY MEAN	121	Jul 3	156	Jul 30	1.7	Sep 16 1971
ANNUAL SEVEN-DAY MINIMUM	141	Jan 1	181	Oct 23	1.7	Sep 10 1971
INSTANTANEOUS PEAK FLOW			4190	Sep 29	^b 15000	May 22 1920
INSTANTANEOUS PEAK STAGE			7.29	Sep 29	^c 11.68	Sep 1 1994
INSTANTANEOUS LOW FLOW			49	Jul 29		
ANNUAL RUNOFF (AC-FT)	448900		478100		443400	
10 PERCENT EXCEEDS	1670		1370		1720	
50 PERCENT EXCEEDS	353		439		347	
90 PERCENT EXCEEDS	158		215		79	

e Estimated

^a Average discharge for 58 years (water years 1913-70), 541 ft³/s, 392,000 acre-ft/yr, prior to release of transmountain water.

^b From rating survey extended above 2300 ft³/s.

^c From floodmarks of slope-area measurement of peak flow.



08290000 RIO CHAMA NEAR CHAMITA, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 23...	1045	190	365	7.6	13.0	10.0	30	--	--	--	--	--
NOV 26...	1345	224	361	8.1	10.0	5.5	6.0	625	10.7	104	--	--
DEC 17...	0755	207	316	7.7	3.0	0	.3	624	13.8	116	97	80
FEB 03...	1400	248	485	8.5	14.0	4.0	1.5	615	10.4	99	--	--
MAR 05...	1030	248	268	8.1	12.0	5.5	.8	622	10.8	105	--	--
APR 28...	1020	1390	279	7.8	14.5	8.0	25	623	10.0	104	--	--
MAY 15...	1040	2040	272	7.8	23.3	8.5	15	623	10.0	105	--	--
JUN 02...	1215	1750	270	7.9	25.5	15.0	15	623	9.2	112	60	84
JUL 16...	1110	701	293	8.0	34.5	18.0	67	630	7.9	101	--	--
AUG 27...	0820	683	300	8.1	18.0	18.0	37	624	7.5	97	--	--
SEP 28...	1300	901	266	8.4	28.5	21.0	44	624	8.1	112	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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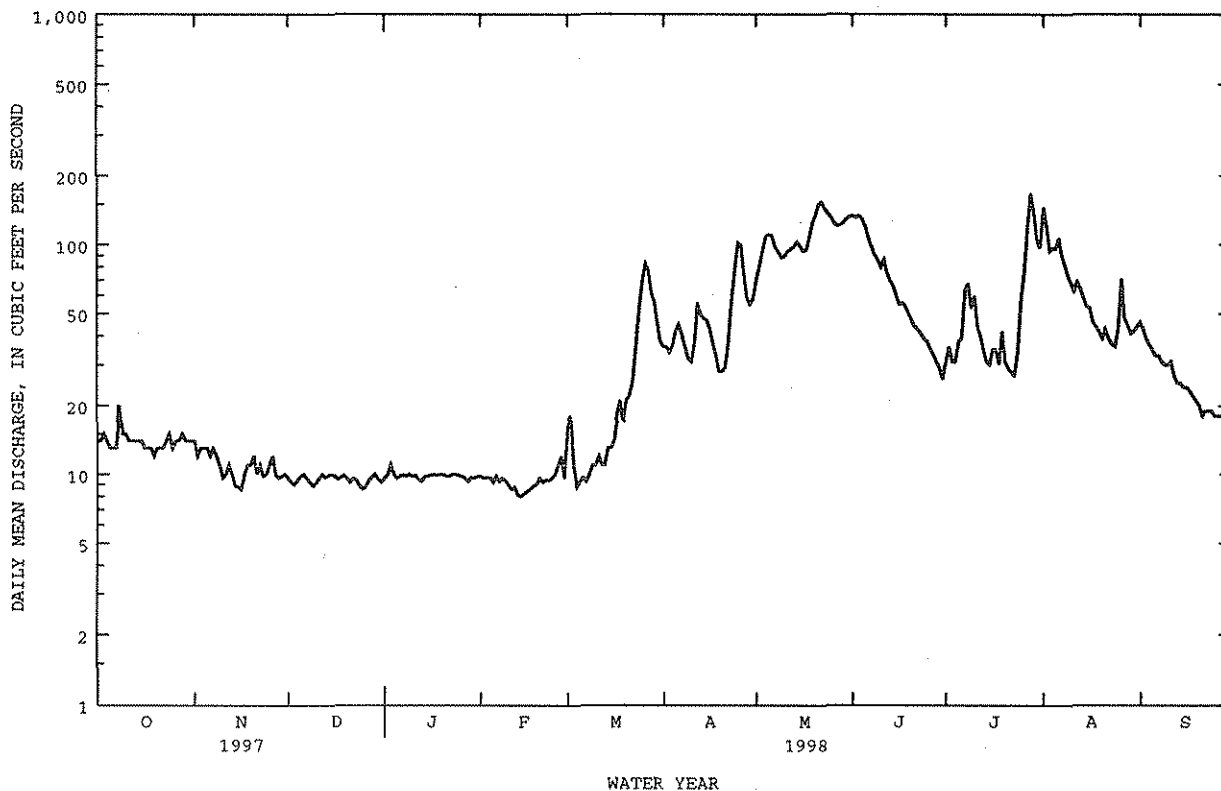
MEAN	15.4	12.1	10.4	9.43	10.2	20.2	51.2	99.1	78.0	28.8	26.2	19.5
MAX	61.3	43.4	25.2	19.5	23.9	51.1	205	329	294	115	109	78.6
(WY)	1942	1942	1987	1987	1995	1985	1942	1941	1979	1986	1991	1988
MIN	3.88	4.69	3.82	4.75	5.44	6.97	13.2	15.9	7.05	5.64	4.57	2.47
(WY)	1957	1957	1951	1951	1981	1981	1951	1950	1956	1956	1956	1956

RIO GRANDE BASIN

08291000 SANTA CRUZ RIVER AT CUNDIYO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1933 - 1998
ANNUAL TOTAL	15680.2	13905.4	
ANNUAL MEAN	43.0	38.1	31.8
HIGHEST ANNUAL MEAN			75.2 1941
LOWEST ANNUAL MEAN			8.93 1950
HIGHEST DAILY MEAN	368 Jun 8	168 Jul 28	623 Jun 9 1979
LOWEST DAILY MEAN	7.5 Jan 23	8.0 Feb 14	1.1 Dec 3 1950
ANNUAL SEVEN-DAY MINIMUM	8.0 Jan 23	8.4 Feb 11	2.2 Sep 11 1956
INSTANTANEOUS PEAK FLOW		524 Jul 25	2420 Sep 24 1931
INSTANTANEOUS PEAK STAGE		3.77 Jul 25	7.80 Sep 24 1931
INSTANTANEOUS LOW FLOW		^a .31 Feb 11	.19 Mar 13 1954
ANNUAL RUNOFF (AC-FT)	31100	27580	23030
10 PERCENT EXCEEDS	119	98	78
50 PERCENT EXCEEDS	18	22	15
90 PERCENT EXCEEDS	8.9	9.5	7.5

e Estimated

^a Estimated discharge during ice period.

08294200 NAMBE FALLS RESERVOIR NEAR NAMBE, NM

LOCATION.--Lat 35°50'46", long 105°54'17", in NE $\frac{1}{4}$ SW $\frac{1}{4}$, sec.29, T.19 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, on Nambé Indian Reservation, 300 ft upstream from Nambé Falls, 2.6 mi upstream from Rio En Medio, 4.4 mi southeast of Nambé Pueblo, and 5.4 mi southeast of Nambé.

DRAINAGE AREA.--34.1 mi².

PERIOD OF RECORD.--February 1976 to current year.

REVISED RECORDS.--WDR NM-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to July 22, 1976, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by a concrete arch and earthfill dam, storage began Feb. 23, 1976. Total capacity, 2,020 acre-ft at elevation 6,826.6 ft, crest of ogee weir spillway, including 237 acre-ft of storage in a permanent pool between elevation 6,760.9 ft, invert of outlet conduits, and 6,780.0 ft. Dead storage 121 acre-ft below elevation 6,760.9 ft. Outlet conduits are one 6-in. and two 12-in. diameter pipes. Reservoir is used for storage of irrigation water and for recreation. Figures given herein represent total storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,060 acre-ft June 9, 1979, elevation, 6,827.24 ft; no storage prior to Feb. 23, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,040 acre-ft, June 3, elevation 6,826.82 ft; minimum, 1,060 acre-ft, Sept. 29-30, elevation 6,806.45 ft.

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	1200	1340	1550	1720	1850	1780	1700	2030	1910	2030	1770
2	1300	1210	1350	1560	1720	1850	1780	1700	2030	1920	2030	1750
3	1300	1210	1360	1560	1730	1860	1780	1710	2040	1920	2030	1740
4	1300	1210	1370	1570	1730	1860	1780	1720	2030	1920	2030	1720
5	1300	1210	1370	1580	1740	1870	1780	1740	2030	1910	2030	1700
6	1300	1220	1380	1580	1740	1870	1790	1760	2030	1900	2030	1680
7	1300	1220	1390	1590	1750	1870	1790	1780	2030	1900	2030	1660
8	1310	1220	1400	1590	1750	1860	1790	1790	2030	1910	2030	1630
9	1320	1220	1400	1600	1760	1860	1790	1800	2030	1930	2030	1580
10	1320	1230	1410	1600	1760	1840	1790	1820	2030	1950	2030	1540
11	1320	1230	1420	1610	1770	1830	1790	1840	2030	1960	2020	1500
12	1320	1230	1420	1620	1770	1820	1800	1850	2030	1970	2020	1470
13	1320	1240	1420	1620	1770	1810	1810	1870	2030	1970	2010	1460
14	1330	1240	1430	1630	1780	1800	1810	1870	2030	1980	2000	1440
15	1330	1240	1440	1630	1780	1790	1820	1880	2030	1980	1990	1430
16	1330	1240	1450	1640	1790	1780	1820	1880	2030	1980	1980	1410
17	1320	1250	1450	1640	1790	1780	1820	1880	2030	1980	1970	1390
18	1310	1250	1460	1650	1800	1770	1830	1890	2030	1990	1950	1370
19	1290	1260	1470	1650	1800	1760	1830	1920	2030	2000	1940	1350
20	1280	1270	1480	1660	1810	1750	1820	1940	2030	2000	1920	1330
21	1260	1280	1480	1660	1810	1740	1820	1980	2030	2010	1910	1300
22	1250	1290	1490	1670	1820	1740	1820	2010	2030	2010	1890	1260
23	1230	1300	1500	1670	1820	1730	1810	2020	2030	2000	1870	1220
24	1220	1300	1500	1680	1830	1730	1790	2020	2030	1980	1850	1180
25	1210	1310	1510	1680	1830	1740	1780	2020	2030	1970	1850	1140
26	1190	1310	1510	1690	1830	1750	1760	2030	2010	1970	1850	1110
27	1190	1320	1520	1690	1840	1770	1750	2030	1990	1980	1840	1070
28	1190	1320	1530	1700	1840	1770	1740	2030	1970	2010	1820	1060
29	1190	1330	1530	1700	---	1780	1720	2030	1950	2030	1810	1060
30	1200	1340	1540	1710	---	1780	1710	2030	1920	2030	1800	1070
31	1200	---	1550	1710	---	1780	---	2030	---	2030	1780	---
MAX	1330	1340	1550	1710	1840	1870	1830	2030	2040	2030	2030	1770
MIN	1190	1200	1340	1550	1720	1730	1710	1700	1920	1900	1780	1060
(+)	6810.00	6813.13	6817.70	6821.01	6823.41	6822.33	6820.92	6826.80	6824.90	6826.70	6822.32	6806.80
(++)	-100	+140	+210	+160	+130	-60	-70	+320	-110	+110	-250	-710
CAL YR 1997	MAX 2040	MIN 1190	(++)	+216								
WTR YR 1998	MAX 2040	MIN 1060	(++)	-230								

(+) ELEVATION, IN FEET, AT END OF MONTH

(++) CHANGE IN CONTENTS, IN ACRE-Feet

RIO GRANDE BASIN

08294210 RIO NAMBE BELOW NAMBE FALLS DAM, NEAR NAMBE, NM

LOCATION.--Lat 35°50'46", long 105°54'17", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.29, T.19 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, on Nambe Indian Reservation, in outlet conduits of Nambe Falls Dam, 300 ft upstream from Nambe Falls, 2.6 mi upstream from Rio En Medio, 4.4 mi southeast of Nambe Pueblo and 5.4 mi southeast of Nambe.

DRAINAGE AREA.--34.1 mi².

PERIOD OF RECORD.--January 1979 to current year.

GAGE.--Water-stage recorder with Satellite telemetry and concrete control. Datum of gage is 6,840 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Flow regulated by Nambe Falls Reservoir (station 08294200). Outlet conduits are one 6-in. and two 12-in. diameter pipes. During periods of spill at Nambe Falls Dam, record computed at site 1,100 ft downstream, site of discontinued station 08294300, Rio Nambe at Nambe Falls.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	3.9	1.3	1.4	1.4	1.4	12	26	46	26	23	22
2	6.6	3.8	1.3	1.4	1.5	1.5	12	25	47	13	22	22
3	6.8	3.8	1.3	1.5	1.5	1.5	12	25	46	16	19	22
4	6.7	3.9	1.4	1.4	1.5	1.5	12	26	45	20	20	22
5	6.7	3.9	1.3	1.4	1.5	1.5	12	26	42	20	21	22
6	6.7	3.9	1.3	1.4	1.5	2.8	12	26	39	20	22	22
7	5.6	3.9	1.3	1.4	1.5	6.2	12	26	36	18	19	21
8	2.9	3.9	1.4	1.4	1.5	6.1	12	26	35	13	17	26
9	2.9	4.0	1.3	1.4	1.5	8.8	12	26	33	10	18	29
10	4.9	4.2	1.3	1.4	1.5	12	12	27	33	10	16	30
11	6.9	4.2	1.3	1.4	1.5	12	12	26	36	10	17	30
12	6.8	4.2	1.3	1.4	1.5	12	12	27	31	9.9	23	26
13	4.8	4.2	1.3	1.4	1.5	12	12	30	30	9.8	24	15
14	2.9	4.2	1.3	1.4	1.5	12	12	33	29	10	23	15
15	3.0	4.1	1.3	1.4	1.5	12	11	33	29	10	23	15
16	5.4	4.0	1.3	1.4	1.5	12	11	33	27	15	23	17
17	11	2.6	1.3	1.5	1.5	12	11	33	27	16	23	19
18	13	1.1	1.3	1.5	1.5	12	11	33	25	10	23	19
19	13	1.1	1.3	1.5	1.5	12	11	33	24	10	22	19
20	13	1.1	1.3	1.4	1.5	12	11	33	23	10	23	19
21	13	1.1	1.3	1.4	1.5	12	12	33	22	10	22	22
22	13	1.1	1.3	1.4	1.5	12	15	33	21	10	22	25
23	13	1.1	1.3	1.4	1.5	12	24	41	20	16	22	25
24	14	1.1	1.3	1.4	1.5	12	29	45	20	21	22	25
25	13	2.1	1.3	1.5	1.5	12	34	45	19	21	22	25
26	13	3.0	1.3	1.4	1.5	12	32	43	25	21	23	24
27	9.1	3.0	1.3	1.5	1.5	12	27	45	26	16	22	24
28	3.8	3.0	1.3	1.5	1.5	12	26	46	26	12	22	13
29	3.9	2.2	1.4	1.4	---	12	27	47	26	12	22	3.9
30	3.8	1.2	1.4	1.5	---	12	26	47	28	20	22	4.0
31	3.9	---	1.4	1.5	---	12	---	47	---	23	22	---
TOTAL	239.8	88.9	40.8	44.3	41.9	295.3	486	1045	916	458.7	664	622.9
MEAN	7.74	2.96	1.32	1.43	1.50	9.53	16.2	33.7	30.5	14.8	21.4	20.8
MAX	14	4.2	1.4	1.5	1.5	12	34	47	47	26	24	30
MIN	2.9	1.1	1.3	1.4	1.4	1.4	11	25	19	9.8	16	3.9
AC-FT	476	176	81	88	83	586	964	2070	1820	910	1320	1240

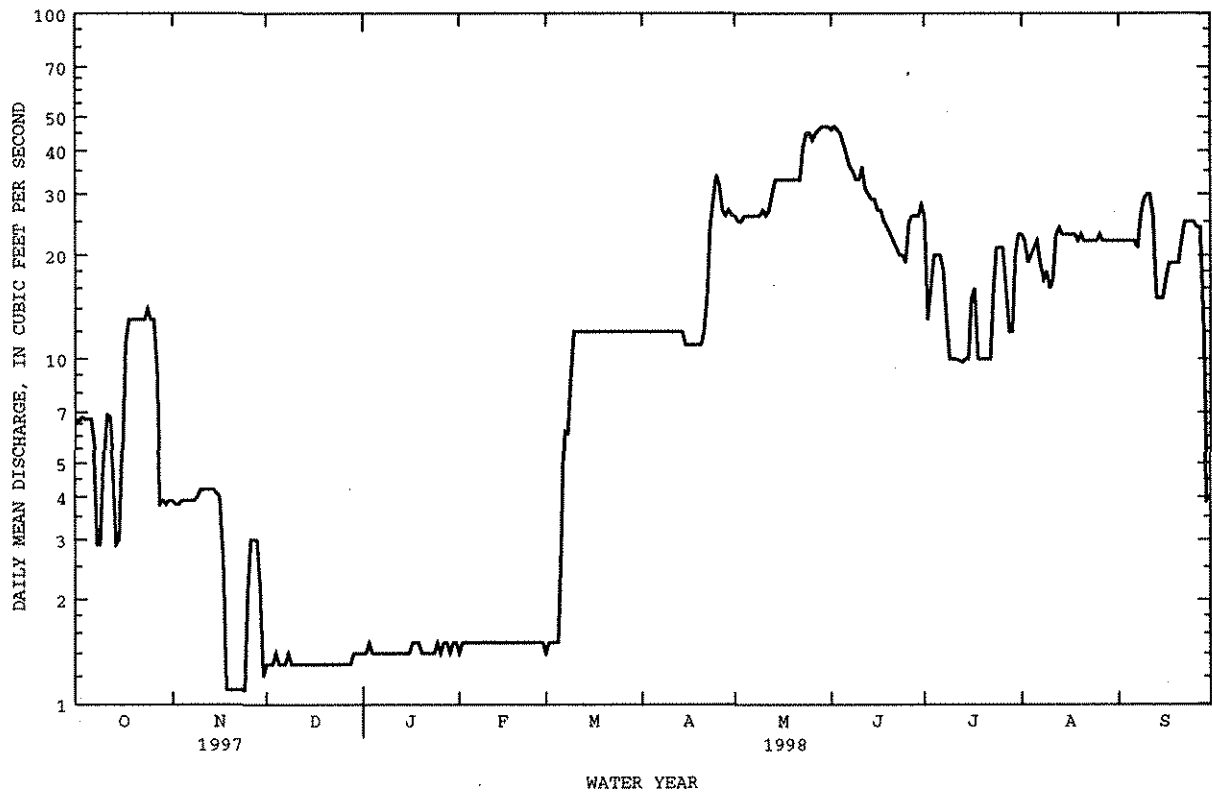
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1998, BY WATER YEAR (WY)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
MEAN	7.27	4.48	2.48	2.21	2.90	6.08	17.0	40.5	49.9	23.0	17.0	12.4
MAX	19.5	11.9	8.70	5.29	7.68	17.4	42.3	85.4	125	48.4	51.9	45.4
(WY)	1989	1987	1987	1992	1995	1985	1985	1985	1979	1983	1983	1988
MIN	2.83	1.10	.45	.45	.45	.49	1.60	9.89	8.76	5.42	2.86	1.47
(WY)	1991	1997	1980	1980	1980	1979	1981	1981	1996	1996	1989	1994

08294210 RIO NAMBE BELOW NAMBE FALLS DAM, NEAR NAMBE, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1979 - 1998
ANNUAL TOTAL	5390.48	4943.6	
ANNUAL MEAN	14.8	13.5	14.9
HIGHEST ANNUAL MEAN			25.7
LOWEST ANNUAL MEAN			5.42
HIGHEST DAILY MEAN	78 Jun 9	47 May 29	236 Jun 9 1979
LOWEST DAILY MEAN	.84 Jan 13	1.1 Nov 18	.00 Dec 31 1993
ANNUAL SEVEN-DAY MINIMUM	.86 Jan 12	1.1 Nov 18	.21 Nov 12 1980
INSTANTANEOUS PEAK FLOW			^a 312 Jun 9 1979
INSTANTANEOUS PEAK STAGE			1.96 Jun 9 1979
INSTANTANEOUS LOW FLOW			.13 May 3 1981
ANNUAL RUNOFF (AC-FT)	10690	9810	10830
10 PERCENT EXCEEDS	42	29	42
50 PERCENT EXCEEDS	9.6	12	8.1
90 PERCENT EXCEEDS	.90	1.4	.53

^a At site 1,100 ft downstream (maximum release and spill computed at Nambé Falls Dam, 250 ft³/s, June 9, 1979).



08302500 TESUQUE CREEK ABOVE DIVERSIONS NEAR SANTA FE, NM

LOCATION---Lat 30°44'25", long 105°53'51", in SW¹/₄SE¹/₄ sec.32, T.18 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, in Santa Fe National Forest, on left bank 0.30 mi from boundary, 1.0 mi southwest of Bishops Lodge, 1.1 mi to State Highway 22, 10 miles northeast of Santa Fe.

DRAINAGE AREA---12 mi²,

PERIOD OF RECORD--- March 1936 to January 1952, May to October 1919 in report of State Engineer. October 1997 to current year.

GAGE--- Water-stage recorder with satellite telemetry. Elevation of gage is 7,220 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS---Water-discharge record fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD---Maximum discharge 425 ft³/s, July 19, 1938, gage height, 4.30 ft, from flood- marks, from rating curve extended above 10 ft³/s, on basis of slope-area measurement at gage height 4.0 ft, at different datum.

EXTREMES FOR CURRENT YEAR---Maximum discharge 15 ft³/s, May 25; minimum daily discharge, 0.74 ft³/s, Feb. 4.

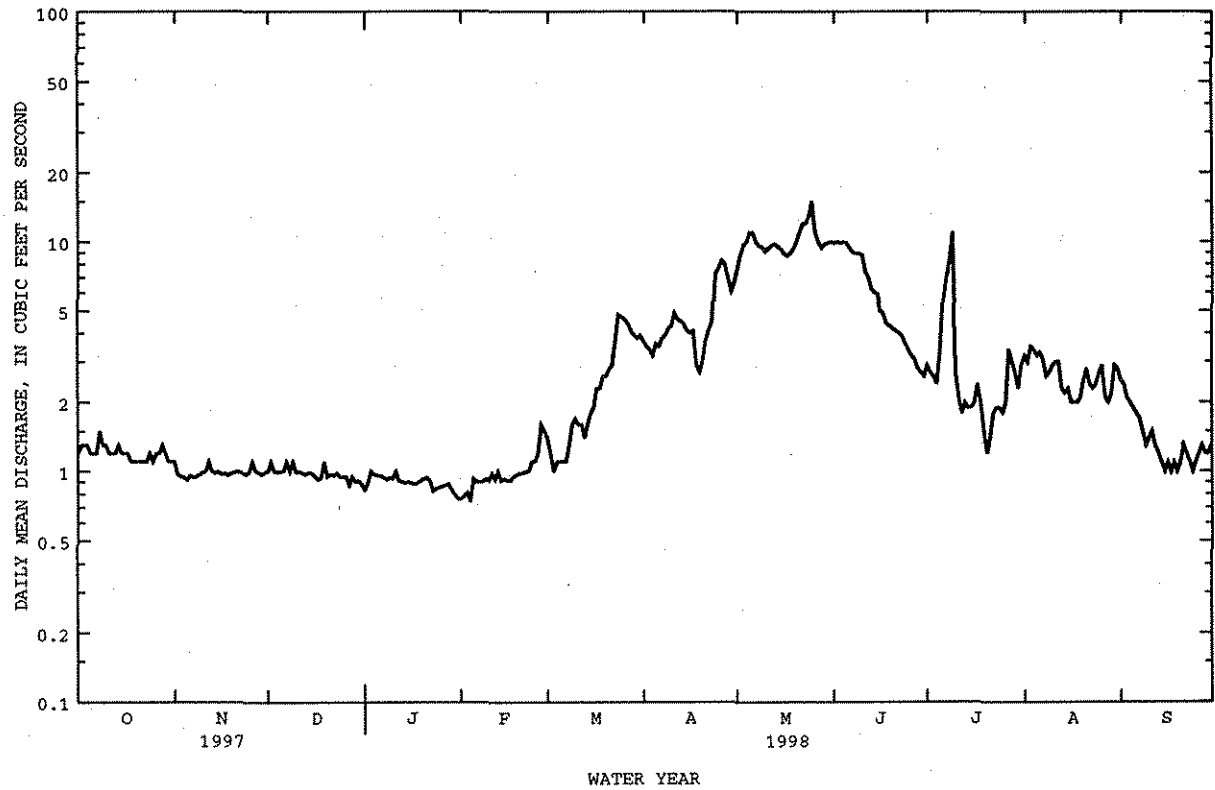
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	e1.1	e1.0	e.83	e.76	e1.4	e3.7	7.7	e9.9	2.9	3.2	e2.5
2	1.3	e.97	e1.1	e.89	e.78	e1.2	e3.5	8.8	e10	2.7	3.0	e2.4
3	1.3	e.95	e1.0	1.0	e.81	e1.0	e3.4	e9.7	e9.9	2.6	3.5	e2.1
4	1.3	e.94	e.99	.97	e.74	1.1	e3.2	e10	e10	2.4	3.4	e2.0
5	1.2	e.92	e1.0	.96	.93	1.1	e3.6	e11	e9.9	3.3	3.2	e1.9
6	1.2	e.96	e1.0	.96	.90	1.1	e3.5	e11	e9.4	5.6	3.3	e1.8
7	1.2	e.94	e1.1	e.94	.90	1.1	e3.8	e10	e9.0	7.0	3.1	e1.7
8	1.5	e.95	e1.0	e.92	.90	1.3	e3.9	e9.6	e8.9	8.3	e2.6	e1.5
9	1.3	e.97	e1.1	e.94	.92	1.6	4.2	e9.5	e8.9	11	e2.7	e1.3
10	1.3	e.99	e.99	e.93	.91	1.7	4.3	e9.1	e8.8	2.7	2.9	e1.4
11	1.2	e1.0	e1.0	1.0	.98	1.6	e4.9	e9.4	e7.4	2.1	3.0	e1.5
12	1.2	e1.1	e.98	.91	.92	1.6	e4.6	e9.6	e7.0	1.8	3.0	e1.3
13	1.2	e1.0	e.97	.90	1.0	1.4	e4.5	e9.8	e6.2	2.0	2.3	e1.2
14	1.3	e.98	e.99	.89	.91	1.6	e4.4	e9.6	e6.0	1.9	2.2	e1.1
15	1.2	e1.0	e.98	e.90	.93	1.8	e4.1	e9.3	e5.9	1.9	2.3	e1.0
16	1.2	e.97	e.95	e.89	.91	1.9	e4.0	e8.9	e5.0	2.0	2.0	e1.1
17	1.2	e.98	e.92	e.88	.91	2.3	4.1	e8.7	e4.9	2.4	2.0	e1.0
18	1.1	e.96	e.94	.89	.95	2.3	2.9	e8.9	e4.4	2.0	2.0	e1.1
19	1.1	e.98	e1.1	.91	.97	2.6	2.7	e9.3	e4.3	1.5	2.1	e1.0
20	1.1	e.99	.95	.93	.98	2.6	3.0	e10	e4.2	1.2	e2.5	e1.1
21	1.1	e1.0	.97	.94	.98	2.8	3.7	e11	e4.1	e1.4	e2.8	e1.3
22	1.1	e.99	.96	e.91	1.0	2.9	4.1	e12	e4.0	e1.8	e2.4	e1.2
23	1.1	e.98	.98	e.82	1.0	3.7	4.5	e12	e3.9	e1.9	e2.3	e1.1
24	1.2	e.97	.95	e.84	1.1	4.8	7.3	e13	e3.6	1.9	e2.4	e1.0
25	e1.1	e1.0	.95	e.85	1.1	e4.7	7.7	e15	3.4	1.8	e2.7	e1.1
26	e1.2	e1.1	.95	e.86	e1.2	e4.6	8.3	e11	3.2	2.0	e2.9	e1.2
27	e1.2	e1.0	e.87	e.87	e1.6	e4.4	e8.0	e10	3.1	e3.4	e2.1	e1.3
28	e1.3	e.99	e.95	e.88	e1.5	e4.1	e7.0	e9.4	2.8	e3.0	2.0	e1.2
29	e1.2	e.97	e.90	e.83	---	e3.9	e6.1	e9.8	2.7	e2.7	e2.2	e1.2
30	e1.1	e.99	e.91	e.79	---	e3.8	e6.7	e9.9	2.6	2.3	e2.9	e1.3
31	e1.1	---	e.88	e.76	---	e3.9	---	e10	---	e2.9	e2.8	---
TOTAL	37.3	29.64	30.33	27.79	27.49	75.9	139.7	313.0	183.4	92.4	81.8	41.9
MEAN	1.20	.99	.98	.90	.98	2.45	4.66	10.1	6.11	2.98	2.64	1.40
MAX	1.5	1.1	1.1	1.0	1.6	4.8	8.3	15	10	11	3.5	2.5
MIN	1.1	.92	.87	.76	.74	1.0	2.7	7.7	2.6	1.2	2.0	1.0
AC-FT	74	59	60	55	55	151	277	621	364	183	162	83

WTR YR 1998 TOTAL 1080.65 MEAN 2.96 MAX 15 MIN .74 AC-FT 2140

e Estimated

08302500 TESUQUE CREEK ABOVE DIVERSIONS NEAR SANTA FE, NM--Continued



RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM

LOCATION.--Lat 35°52'29", long 106°08'30", in SW¹/₄SW¹/₄ sec.18, T.19 N., R.8 E., Santa Fe County, Hydrologic Unit 13020101, on San Ildefonso Pueblo Grant, near right bank on downstream end of pier of former railway bridge, 400 ft downstream from bridge on State Highway 502, 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.

WATER-DISCHARGE RECORDS

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). WDR-NM-90: 1989.

GAGE.--Water-stage recorder with satellite telemetry. 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.--Water-discharge records good. 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.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2290	1720	1280	932	917	863	1910	2830	3640	1660	1290	1240
2	2180	1670	1240	946	919	886	1850	3120	3670	1680	1250	1230
3	2080	1620	1290	979	931	947	1760	3250	3330	1560	872	1280
4	2050	1600	1240	1020	955	983	1670	3420	2880	1670	893	1240
5	2000	1520	1180	1010	967	1010	1670	3710	2690	1770	874	1130
6	1990	1480	1070	999	957	1060	1650	3900	2360	1340	856	1110
7	1960	1470	892	992	958	1140	1650	3960	2310	928	951	1300
8	1960	1440	821	969	961	1130	1630	3960	2060	1390	1040	1370
9	1940	1420	920	971	972	1060	1580	3690	1580	1430	1210	1430
10	1930	1440	968	969	955	1100	1290	3520	1620	1720	1300	1380
11	2220	1430	1020	975	958	1100	1210	3520	1720	1370	1410	1430
12	2310	1440	978	951	961	1120	1230	3420	1540	1250	1420	1440
13	2330	1470	969	927	948	1170	1300	3470	1400	1180	1610	1450
14	2430	1460	940	946	951	1220	1380	3630	1310	1120	1360	1390
15	2920	1440	975	937	965	1270	1570	3610	1370	1290	1190	1250
16	3330	1360	972	957	972	1320	1600	3520	1360	1440	1240	1260
17	3260	1290	978	968	972	1360	1360	3360	1350	1440	1490	1360
18	3080	1160	992	959	973	1390	1430	3270	1330	917	1520	1340
19	3000	1140	998	936	988	1380	1370	3300	1240	1390	1410	1270
20	2920	1170	1020	938	987	1390	1330	3380	1300	1420	1320	1250
21	2570	1270	1020	934	961	1370	1300	3590	1460	1310	1250	1230
22	1970	1280	1020	927	989	1340	1300	3870	1490	1280	1200	1190
23	1820	1270	1010	921	992	1360	1400	3940	1410	1300	1050	1150
24	1860	1240	1020	925	991	1440	1680	4110	1370	1260	1060	1160
25	1870	1230	1010	922	1030	1580	2250	4130	1480	1190	1260	1150
26	1830	1210	966	912	1030	1710	2380	3800	1500	1330	1420	1080
27	1810	1250	920	910	990	1910	2430	3590	1580	1430	1170	1080
28	1800	1330	938	913	937	2120	2580	3440	1660	1220	1050	1120
29	1730	1330	903	915	---	2150	2560	3430	1600	1200	1020	1190
30	1740	1300	912	923	---	2000	2730	3460	1580	966	1160	2030
31	1780	---	924	929	---	1930	---	3470	---	971	1140	---
TOTAL	68960	41450	31386	29412	27087	41809	51050	110670	55190	41422	37286	38530
MEAN	2225	1382	1012	949	967	1349	1702	3570	1840	1336	1203	1284
MAX	3330	1720	1290	1020	1030	2150	2730	4130	3670	1770	1610	2030
MIN	1730	1140	821	910	917	863	1210	2830	1240	917	856	1080
AC-FT	136800	82220	62250	58340	53730	82930	101300	219500	109500	82160	73960	76420

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

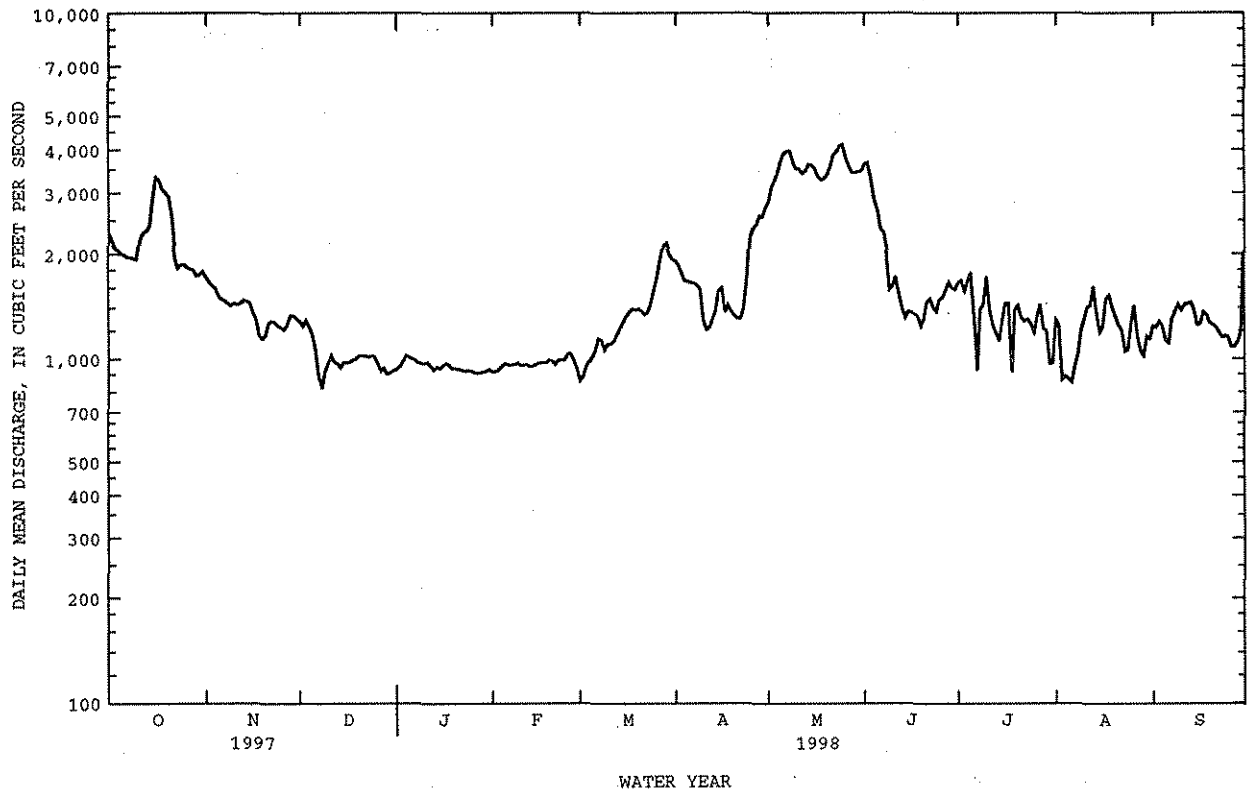
	MEAN	827	1012	960	825	954	1426	2345	3784	3363	1600	962	883
MAX	2225	2034	1959	1757	2641	3127	6412	8390	7914	4548	1612	1547	
(WY)	1998	1987	1976	1986	1987	1987	1985	1979	1995	1973	1982		
MIN	361	401	450	436	500	612	489	433	470	394	391	263	
(WY)	1975	1978	1975	1977	1978	1977	1977	1972	1972	1972	1972	1974	

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1971 - 1998		
ANNUAL TOTAL	667680			574252			^a 1580		
ANNUAL MEAN	1829			1573			2764		
HIGHEST ANNUAL MEAN							602		
LOWEST ANNUAL MEAN									
HIGHEST DAILY MEAN	6940	Jun	8	4130	May	25	12000	May	11 1985
LOWEST DAILY MEAN	444	Jan	9	821	Dec	8	195	Aug	4 1977
ANNUAL SEVEN-DAY MINIMUM	609	Jan	8	917	Jan	23	229	Sep	11 1971
INSTANTANEOUS PEAK FLOW				4310	May	25	24400	May	23 1920
INSTANTANEOUS PEAK STAGE				6.29	May	25	^b 14.50	Sep	29 1904
INSTANTANEOUS LOW FLOW				728	Jul	7	195	Aug	4 1977
ANNUAL RUNOFF (AC-FT)	1324000			1139000			1144000		
10 PERCENT EXCEEDS	4140			3030			3700		
50 PERCENT EXCEEDS	1340			1310			1010		
90 PERCENT EXCEEDS	780			939			491		

^a Average discharge for 71 years (water years 1895-1914, 1916, 1920-70), 1,530 ft³/s, 1,108,000 acre-ft/yr, prior to release of transmountain water.

^b Present site and datum.



08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1947 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 43,500 mg/L, Aug. 21, 1955; minimum daily mean, 11 mg/L, July 27, 1963 and Feb. 7, 1974.

SEDIMENT LOAD: Maximum daily, 386,000 tons, July 6, 1995; minimum daily, 3 tons, July 27, 1963.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 7,540 mg/L, July 8; minimum daily mean, 60 mg/L, Dec. 9, 10.

SEDIMENT LOAD: Maximum daily, 36,400 tons, Oct. 6; minimum daily, 149 tons, Dec. 9.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	
NOV													
05...	1045	1520	236	8.0	11.5	7.0	4.0	635	10.4	103	--	--	
18...	1330	1110	270	7.3	7.5	5.0	4.1	630	11.4	108	K20	K4	
DEC													
16...	1145	992	279	7.8	4.5	2.5	3.0	630	12.4	110	--	24	
21...	0935	923	286	7.8	3.5	3.0	1.1	622	10.9	99	K11	K7	
FEB													
05...	1000	971	281	8.1	4.0	4.0	1.8	621	11.1	104	K6	K14	
MAR													
03...	1030	930	292	7.9	8.0	4.5	2.1	622	9.6	91	--	K5	
APR													
07...	1030	1650	315	8.1	9.5	8.5	12	619	10.2	108	45	40	
MAY													
12...	1035	3500	265	7.6	19.0	10.5	13	621	9.9	109	40	56	
27...	1055	3650	243	7.4	21.5	12.5	18	625	8.8	101	85	56	
JUN													
02...	0745	3730	258	7.8	12.5	13.0	20	626	8.7	101	--	58	
JUL													
21...	1015	1350	335	8.1	26.5	20.0	42	628	7.7	103	25	610	
AUG													
25...	1115	1200	315	8.1	28.5	21.0	36	627	7.3	100	180	130	
SEP													
09...	1145	1450	301	8.2	25.5	18.0	43	628	8.1	104	160	100	
DATE		STREP- TOCOCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)
NOV													
05...	--	--	--	--	--	--	--	--	--	--	--	--	
18...	K21	--	--	--	--	--	--	--	--	--	--	--	
DEC													
16...	20	110	--	32	6.2	16	.7	2.6	--	--	--	106	
21...	150	--	--	--	--	--	--	--	--	--	--	--	
FEB													
05...	23	--	--	--	--	--	--	--	--	--	--	--	
MAR													
03...	K5	100	--	32	6.0	18	.8	2.7	--	--	--	106	
APR													
07...	51	--	--	--	--	--	--	--	--	--	--	--	
MAY													
12...	200	--	--	--	--	--	--	--	--	--	--	--	
27...	100	--	--	--	--	--	--	--	--	--	--	--	
JUN													
02...	170	90	--	27	5.3	13	.6	2.2	--	--	--	80	
JUL													
21...	80	120	--	36	6.9	17	.7	2.6	--	--	--	108	
AUG													
25...	110	120	26	36	6.6	16	.6	2.3	112	0	92	98	
SEP													
09...	120	110	--	35	6.3	15	.6	2.2	--	--	--	92	

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
16...	35	5.6	.5	28	190	<.01	.12	<.02	.2	<.1	.03	<.01
JAN												
21...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
05...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
03...	36	5.8	.4	24	190	<.01	.17	<.02	<.1	.1	<.05	.02
APR												
07...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
12...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
02...	36	2.9	.2	16	151	<.01	.03	<.01	.38	<.20	.07	<.02
JUL												
21...	54	4.2	.3	18	204	--	--	--	--	--	--	--
AUG												
25...	51	3.4	.3	16	186	<.01	<.02	<.01	.42	.20	.16	<.02
SEP												
09...	51	3.4	.2	17	186	--	--	--	--	--	--	--

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CYANIDE TOTAL (MG/L AS CN) (00720)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	2.2	9	<1	1	37	<1	--	<1
DEC											
16...	.03	3.8	2.1	<.01	8	<1	2	44	<1	41.9	<1
JAN											
21...	--	--	1.8	--	16	<1	2	46	<1	--	<1
FEB											
05...	--	--	1.9	--	10	<1	2	44	<1	--	<1
MAR											
03...	.02	2.6	2.4	<.01	9	<1	2	45	<1	42.7	<1
APR											
07...	--	--	3.6	--	69	<1	2	48	<1	--	<1
MAY											
12...	--	--	4.1	--	15	<1	1	44	<1	--	<1
27...	--	--	4.8	--	101	<1	1	40	<1	--	<1
JUN											
02...	<.01	3.8	--	<.01	90	<1	1	44	<1	27.7	<1
JUL											
21...	--	7.3	3.6	--	43	<1	2	75	<1	44.8	<1
AUG											
25...	.02	5.3	3.4	<.01	8	<1	2	72	<1	41.0	<1
SEP											
09...	--	5.5	3.9	--	9	<1	2	71	<1	39.6	<1

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)
NOV 05...	--	--	--	--	--	--	--	--	--	--	--
NOV 18...	2	<1	1	--	<1	14	--	3	<1	--	<1
DEC 16...	1	<1	1	19	<1	13	<.1	4	<1	<1	<1
JAN 21...	2	<1	<1	--	<1	14	--	4	<1	--	<1
FEB 05...	2	<1	<1	--	<1	15	--	4	<1	--	<1
MAR 03...	3	<1	<1	<10	<1	15	<.1	4	<1	<1	<1
APR 07...	1	<1	2	--	<1	5	--	3	1	--	<1
MAY 12...	1	<1	2	--	<1	3	--	2	1	--	<1
MAY 27...	1	<1	2	--	<1	5	--	2	1	--	<1
JUN 02...	1	<1	2	61	<1	3	<.1	2	<1	<1	<1
JUL 21...	2	<1	2	30	<1	2	--	3	1	--	<1
AUG 25...	<1	<1	1	<10	<1	2	<.1	3	<1	<1	<1
SEP 09...	<1	<1	1	<10	<1	3	--	3	<1	--	<1

[illegible]

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS, (UG/L) (75990)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV											
05...	--	--	--	--	--	--	--	--	--	201	825
18...	--	--	--	--	--	--	--	2	--	--	--
DEC											
16...	11000	<10	140	<.01	15	--	--	2	--	--	--
JAN											
21...	--	--	--	--	--	--	--	3	--	--	--
FEB											
05...	--	--	--	--	--	--	--	3	--	--	--
MAR											
03...	--	--	--	--	--	--	--	3	--	--	--
APR											
07...	--	--	--	--	--	--	--	2	--	--	--
MAY											
12...	--	--	--	--	--	--	--	1	--	--	--
27...	--	--	--	--	--	--	--	1	--	--	--
JUN											
02...	--	--	--	--	--	.06	.02	1	.02	--	--
JUL											
21...	--	--	--	--	--	--	--	2	--	--	--
AUG											
25...	--	--	--	--	--	.08	.02	1	.04	--	--
SEP											
09...	--	--	--	--	--	--	--	1	--	--	--

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	462	2820	126	583	76	263	150	378	237	588	231	534
2	607	3580	116	520	79	266	182	464	380	943	566	1360
3	508	2840	94	414	81	282	294	778	360	904	507	1300
4	1060	5890	125	541	76	256	255	701	189	489	476	1260
5	1120	6020	73	301	85	271	261	712	410	1070	196	533
6	6760	36400	77	307	99	290	277	747	319	827	235	672
7	2240	11900	90	356	91	218	137	366	171	443	628	1940
8	778	4110	135	524	94	209	170	445	125	325	908	2780
9	3140	16500	133	509	60	149	144	378	285	746	564	1620
10	5720	29700	124	479	60	156	131	343	729	1880	642	1900
11	986	5790	104	400	74	201	130	341	686	1770	347	1030
12	868	5400	94	366	139	364	247	631	119	310	378	1140
13	1190	7470	97	384	130	341	287	718	340	869	431	1370
14	1000	6580	78	307	129	327	202	516	679	1750	1210	4010
15	1110	8800	101	395	141	372	236	596	622	1620	699	2400
16	2000	18100	83	303	80	212	193	497	841	2200	641	2290
17	1120	9910	81	283	64	170	133	349	1020	2690	902	3310
18	700	5830	93	292	83	222	262	676	704	1850	616	2320
19	424	3440	120	368	278	743	254	642	412	1100	1160	4320
20	307	2420	140	440	481	1320	148	375	299	797	1160	4330
21	244	1700	135	460	531	1460	167	422	408	1060	845	3120
22	153	819	84	291	330	909	172	430	701	1870	1020	3690
23	96	471	79	273	526	1430	89	221	757	2030	1630	5990
24	179	902	81	271	719	1980	81	202	614	1640	2010	7800
25	148	745	88	293	441	1200	122	304	620	1720	693	2940
26	154	761	106	346	136	358	113	278	830	2310	452	2090
27	174	849	83	281	131	330	158	388	239	639	322	1650
28	263	1280	86	308	566	1450	195	481	180	455	400	2320
29	188	878	89	320	606	1480	221	547	---	---	252	1470
30	209	981	91	321	181	444	264	658	---	---	256	1390
31	114	548	---	---	244	606	294	738	---	---	249	1300
TOTAL	---	203434	---	11236	---	18279	---	15322	---	34895	---	74179

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN CONCENTRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCENTRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCENTRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCENTRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCENTRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCENTRATION (MG/L)	LOAD (TONS/ DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	252	1300	1240	9470	479	4760	109	488	1250	4940	805	2700
2	244	1220	1430	12000	325	3210	638	2880	1870	6190	572	1900
3	225	1070	1520	13400	223	1970	189	794	1080	2600	517	1790
4	246	1110	1170	10800	798	6220	220	1120	2030	5020	372	1250
5	260	1170	2130	21700	799	5830	816	3960	1790	4280	308	935
6	228	1020	2610	27400	354	2250	191	694	659	1530	365	1090
7	232	1030	2510	26900	254	1580	553	1480	2300	6120	370	1300
8	315	1380	699	7520	386	2150	7540	29300	873	2460	489	1820
9	186	799	1070	10600	344	1460	3880	14900	905	2960	523	2020
10	218	751	1030	9870	305	1330	1450	6660	766	2680	529	1970
11	245	800	1430	13600	142	660	555	2080	614	2340	495	1910
12	302	1010	1650	15300	216	896	399	1350	467	1790	467	1820
13	513	1800	1150	10800	310	1170	298	949	2310	10200	653	2580
14	342	1270	1050	10400	225	806	300	912	2610	9650	537	2040
15	325	1380	1320	12900	295	1100	489	1710	1470	4740	486	1640
16	256	1110	702	6680	270	994	779	3490	1410	4760	562	1910
17	107	393	735	6660	227	829	1030	4040	1420	5750	433	1590
18	160	617	950	8390	381	1370	933	2280	675	2770	420	1520
19	196	722	783	6980	186	628	1560	5780	542	2070	294	1010
20	250	896	711	6500	182	640	557	2110	532	1890	278	937
21	280	981	930	9040	297	1170	461	1630	532	1810	291	967
22	443	1560	1120	11800	239	960	527	1830	628	2020	241	773
23	643	2420	1780	18900	235	894	334	1170	796	2270	271	840
24	302	1350	1610	17900	234	865	4670	16100	342	978	293	918
25	1140	7120	2360	26300	180	723	2600	8400	444	1640	265	825
26	895	5730	1540	15900	130	525	1310	4830	742	2850	308	903
27	746	4890	1220	11800	139	591	3940	15700	546	1730	299	869
28	1100	7650	1140	10600	225	1010	1250	4250	331	937	310	939
29	779	5380	363	3350	185	802	5320	18300	407	1120	303	979
30	1140	8420	228	2130	101	430	1710	4400	349	1100	1990	14900
31	---	---	364	3410	---	---	947	2510	685	2110	---	---
TOTAL	---	66349	---	379000	---	47823	---	166097	---	103305	---	56645
YEAR	1176564											

08315500 MCCLURE RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'18", long 105°50'06", in NE $\frac{1}{4}$ SW $\frac{1}{4}$, sec.24, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, at McClure Dam on Santa Fe River, 2.1 mi upstream from Nichols Reservoir, 5.8 mi east of Santa Fe, and at mile 37.1.

DRAINAGE AREA.--17.4 mi².

PERIOD OF RECORD.--September 1929, July to October 1930, April 1931 to June 1946, September 1947 to current year. Prior to October 1947, published in WSP 1312. Prior to October 1965, monthend contents only. Prior to January 1980 at site on outlet tower.

GAGE.--Water-stage recorder. Elevation of gage is 7,790 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1947, nonrecording gages at same site and various datums all referred to the Public Service Co. of New Mexico assumed datum, 165.9 ft lower.

REMARKS.--Reservoir is formed by earthfill dam, completed in 1926, capacity, 561 acre-ft, raised 3 ft in 1935, capacity, 650 acre-ft, and raised 36.5 ft more in 1947, capacity, 2,615 acre-ft at gage height 96.6 ft, crest of concrete spillway. Between October 1947 and May 1953 varying amounts of sandbag bulkheads were placed on crest of spillway to increase capacity. Between May 1953 and December 1971 spillway was equipped with radial gates that opened automatically thereby increasing capacity to over 3,000 acre-ft. Radial gates were removed during 1972, capacity, 2,615 acre-ft. In 1995, modifications to the dam and spillway increased capacity to 3,257 acre-ft. Only the storage of Rio Grande water in excess of 1,061 acre-ft is subject to terms of the Rio Grande Compact. No dead storage. Water is for municipal use of City of Santa Fe.

COOPERATION.--Capacity table and supplementary gage readings, provided by Public Service Co. of New Mexico.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,280 acre-ft, June 8, 1997, gage height, 86.03 ft; no contents Jan. 25 to May 8, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,190 acre-ft; June 11-12, elevation, 7,884.93 ft; minimum, 1,680 acre-ft, Oct. 23 to Nov. 10, elevation, 7863.01 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2170	1680	1710	1750	1760	1780	2330	1930	3020	2980	2580	2470
2	e2140	1680	1710	1750	1760	1780	2300	1950	3060	2970	2590	2460
3	e2110	1680	1710	1750	1760	1790	2270	1970	3090	2960	2590	2450
4	e2080	1680	1710	1750	1760	1790	2240	2000	3120	2940	2590	2430
5	e2050	1680	1710	1750	1760	1790	2210	2020	3140	2920	2600	2420
6	e2010	1680	1710	1750	1760	1790	2180	2040	3150	2910	2610	2400
7	1980	1680	1710	1760	1760	1790	2150	2060	3160	2890	2620	2390
8	1950	1680	1720	1760	1770	1800	2120	2080	3170	2880	2630	2380
9	1930	1680	1720	1760	1770	1800	2090	2100	3170	2870	2640	2360
10	1900	1680	1720	1760	1770	1800	2050	2120	3180	2860	2640	2340
11	1880	1690	1720	1760	1770	1800	2020	2150	3190	2840	2640	2330
12	1850	1690	1720	1760	1770	1800	2000	2170	3190	2820	2650	2310
13	1830	1690	1720	1760	1770	1810	1980	2210	3180	2800	2650	2300
14	1800	1690	1720	1760	1770	1810	1980	2250	3180	2780	2650	2280
15	1780	1690	1730	1760	1770	1820	1990	2280	3180	2760	2640	2270
16	1770	1690	1730	1760	1770	1840	2000	2300	3170	2740	2630	2250
17	1750	1700	1730	1760	1770	1860	2000	2330	3160	2730	2630	2230
18	1740	1700	1730	1760	1770	1880	1970	2360	3160	2710	2610	2200
19	1730	1700	1730	1760	1770	1900	1940	2400	3150	2690	2600	2160
20	1710	1700	1730	1760	1770	1920	1910	2440	3140	2670	2590	2130
21	1700	1700	1730	1760	1770	1940	1880	2500	3130	2650	2580	2100
22	1690	1700	1740	1760	1770	1970	1860	2550	3110	2630	2570	2070
23	1680	1700	1740	1760	1770	2010	1840	2600	3100	2620	2560	2040
24	1680	1700	1740	1760	1780	2060	1840	2650	3090	2600	2540	2010
25	1680	1700	1740	1760	1780	2120	1870	2710	3080	2580	2540	1990
26	1680	1700	1740	1760	1780	2180	1890	2760	3060	2570	2530	1980
27	1680	1700	1740	1760	1780	2240	1910	2820	3050	2570	2520	1950
28	1680	1700	1740	1760	1780	2280	1920	2880	3030	2570	2510	1950
29	1680	1700	1740	1760	---	2320	1920	2910	3010	2560	2500	1940
30	1680	1700	1750	1760	---	2340	1920	2950	3000	2570	2490	1920
31	1680	---	1750	1760	---	2330	---	2990	---	2570	2480	---
MAX	2170	1700	1750	1760	1780	2340	2330	2990	3190	2980	2650	2470
MIN	1680	1680	1710	1750	1760	1780	1840	1930	3000	2560	2480	1920
(+)	7863.01	7863.25	7864.08	7864.34	7864.67	7873.20	7866.94	7882.34	7882.47	7876.66	7875.38	7866.94
(++)	-320	+20	+50	+10	+20	+550	-410	+1070	+10	-430	-90	-560

CAL YR 1997 MAX 3280 MIN 1190 (++) +570
WTR YR 1998 MAX 3190 MIN 1680 (++) -80

e Estimated

(+) ELEVATION, IN FEET, AT END OF MONTH
(++) CHANGE IN CONTENTS, IN ACRE-FEET

LOCATION.--Lat 35°41'12", long 105°50'35", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 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.

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."

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,720 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1312 for history of changes prior to Oct. 1, 1947.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by McClure Reservoir (station 08315500), completed in 1926, raised in 1935 1947, and again in 1989. Several observations of water temperature were made during year.

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.

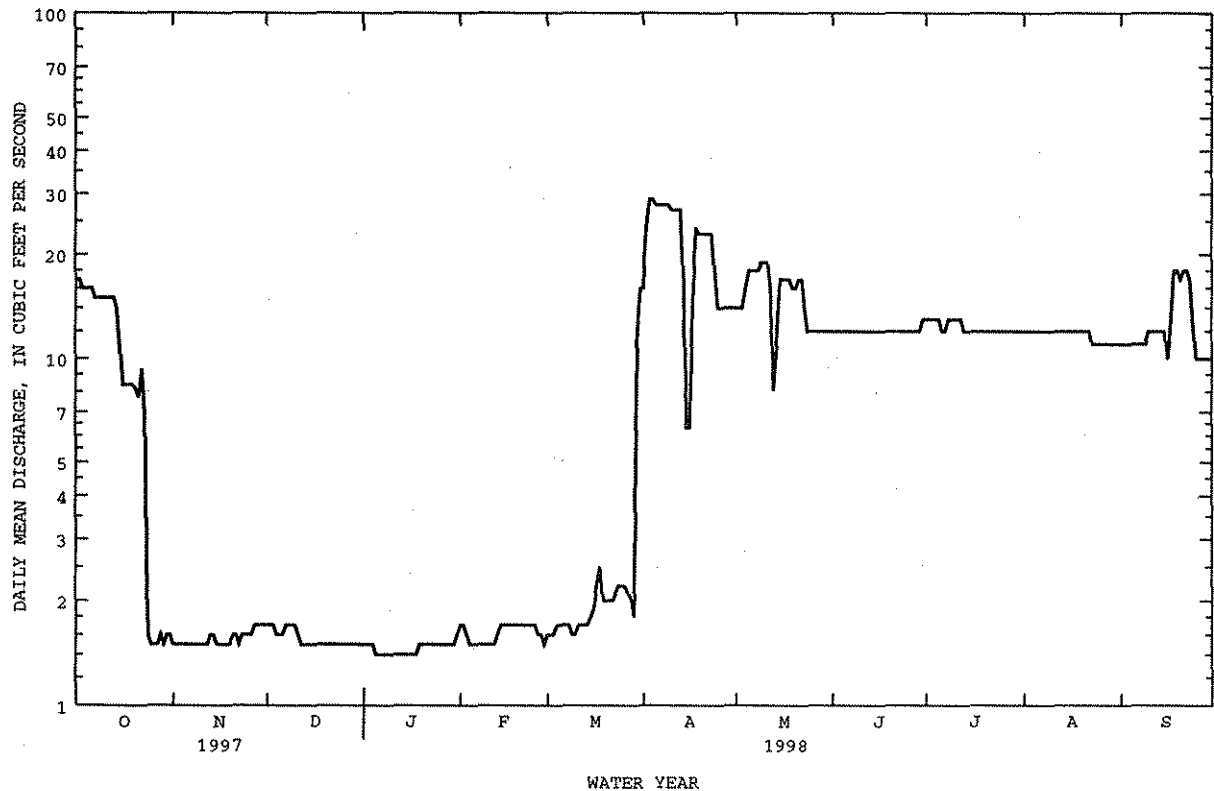
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e17	1.5	1.7	1.5	1.7	1.6	16	14	12	13	12	11
2	e17	1.5	1.7	1.5	1.7	1.6	24	14	12	13	12	11
3	e16	1.5	1.7	1.5	1.6	1.6	29	14	12	13	12	11
4	e16	1.5	1.6	1.5	1.5	1.7	29	16	12	13	12	11
5	e16	1.5	1.6	1.4	1.5	1.7	28	18	12	13	12	11
6	16	1.5	1.6	1.4	1.5	1.7	28	18	12	12	12	11
7	15	1.5	1.7	1.4	1.5	1.7	28	18	12	12	12	11
8	15	1.5	1.7	1.4	1.5	1.7	28	18	12	13	12	11
9	15	1.5	1.7	1.4	1.5	1.6	28	19	12	13	12	11
10	15	1.5	1.7	1.4	1.5	1.6	27	19	12	13	12	12
11	15	1.5	1.6	1.4	1.5	1.7	27	19	12	13	12	12
12	15	1.5	1.5	1.4	1.5	1.7	27	16	12	13	12	12
13	15	1.6	1.5	1.4	1.6	1.7	27	8.1	12	12	12	12
14	14	1.6	1.5	1.4	1.7	1.7	17	11	12	12	12	12
15	11	1.5	1.5	1.4	1.7	1.8	6.3	17	12	12	12	12
16	8.4	1.5	1.5	1.4	1.7	1.9	6.3	17	12	12	12	10
17	8.4	1.5	1.5	1.4	1.7	2.2	15	17	12	12	12	12
18	8.4	1.5	1.5	1.4	1.7	2.5	24	17	12	12	12	18
19	8.4	1.5	1.5	1.5	1.7	2.0	23	16	12	12	12	18
20	8.2	1.6	1.5	1.5	1.7	2.0	23	16	12	12	12	17
21	7.7	1.6	1.5	1.5	1.7	2.0	23	17	12	12	12	18
22	9.3	1.5	1.5	1.5	1.7	2.0	23	17	12	12	12	18
23	7.0	1.6	1.5	1.5	1.7	2.1	23	14	12	12	11	17
24	1.6	1.6	1.5	1.5	1.7	2.2	18	12	12	12	11	13
25	1.5	1.6	1.5	1.5	1.7	2.2	14	12	12	12	11	10
26	1.5	1.6	1.5	1.5	1.6	2.2	14	12	12	12	11	10
27	1.5	1.7	1.5	1.5	1.6	2.1	14	12	12	12	11	10
28	1.6	1.7	1.5	1.5	1.5	2.0	14	12	12	12	11	10
29	1.5	1.7	1.5	1.5	---	1.8	14	12	12	12	11	10
30	1.6	1.7	1.5	1.5	---	11	14	12	13	12	11	10
31	1.6	---	1.5	1.6	---	16	---	12	---	12	11	---
TOTAL	306.2	46.6	48.3	45.2	45.2	81.3	631.6	466.1	361	382	363	372
MEAN	9.88	1.55	1.56	1.46	1.61	2.62	21.1	15.0	12.0	12.3	11.7	12.4
MAX	17	1.7	1.7	1.6	1.7	16	29	19	13	13	12	18
MIN	1.5	1.5	1.5	1.4	1.5	1.6	6.3	8.1	12	12	11	10
AC-FT	607	92	96	90	90	161	1250	925	716	758	720	738

MEAN	4.71	2.97	2.54	2.36	2.67	4.84	12.7	23.4	17.7	9.46	8.49	6.89
MAX	22.6	13.5	7.19	6.87	14.2	30.0	68.5	92.9	75.2	56.2	74.0	36.0
(WY)	1942	1942	1959	1970	1916	1916	1915	1941	1921	1919	1921	1929
MIN	.58	.20	.22	.20	.25	.34	.23	.53	.70	1.06	.81	.90
(WY)	1957	1997	1997	1997	1997	1972	1981	1955	1955	1981	1951	1959

08316000 SANTA FE RIVER NEAR SANTA FE, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1913 - 1998
ANNUAL TOTAL	3918.63	3148.5	
ANNUAL MEAN	10.7	8.63	8.23
HIGHEST ANNUAL MEAN			26.2
LOWEST ANNUAL MEAN			1.88
HIGHEST DAILY MEAN	76 Jun 8	29 Apr 3	378 Sep 23 1929
LOWEST DAILY MEAN	.16 Aug 14	1.4 Jan 5	.10 Feb 7 1927
ANNUAL SEVEN-DAY MINIMUM	.18 Jan 5	1.4 Jan 5	.16 Nov 16 1996
INSTANTANEOUS PEAK FLOW		30 Apr 2	^a 1500 Aug 14 1921
INSTANTANEOUS PEAK STAGE		2.26 Apr 2	^b 5.17 Aug 14 1921
INSTANTANEOUS LOW FLOW		1.4 Jan 5	.05 Apr 7 1981
ANNUAL RUNOFF (AC-FT)	7770	6250	5970
10 PERCENT EXCEEDS	21	17	19
50 PERCENT EXCEEDS	4.6	11	4.2
90 PERCENT EXCEEDS	.20	1.5	1.0

e Estimated

^a From rating curve extended above 150 ft³/s.^b Site and datum then in use.

RIO GRANDE BASIN

08316500 NICHOLS RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'24", long 105°52'46", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, at Nichols Dam on Santa Fe River, 0.6 mi east of Twomile Reservoir, 3.3 mi east of Santa Fe, and at mile 34.4.

DRAINAGE AREA.--22.8 mi².

PERIOD OF RECORD.--March 1943 to September 1965 (monthend contents only), October 1965 to current year. Prior to January 1980 at site on outlet tower.

GAGE.--Water-stage recorder. Datum of gage is 7,313.2 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam. No contents prior to Mar. 16, 1943. Capacity, 685 acre-ft between gage heights 121.2 ft, bottom of lower operational gate and 167.0 ft, crest of spillway. Dead storage, 14 acre-ft. Water is for municipal use of City of Santa Fe.

COOPERATION.--Survey to compute capacity table and supplementary gage readings, provided by Public Service Co. of New Mexico.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 836 acre-ft, June 8, 1952, gage height, 171.8 ft; minimum, 16 acre-ft, Feb. 11 to Mar. 10, 1944, Feb. 1-19, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 692 acre-ft, Apr. 2-8; maximum gage height, 167.23 ft; minimum, 338 acre-ft, July 22, gage height, 153.06 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	532	566	500	588	e668	e688	690	685	557	362	393	372
2	533	557	503	590	671	688	692	684	548	358	398	374
3	534	546	506	593	673	688	692	683	539	358	401	375
4	544	536	e508	596	676	688	692	686	525	354	403	376
5	556	526	e510	598	679	688	692	688	505	349	404	372
6	568	518	515	601	681	688	692	686	485	348	405	372
7	580	510	518	603	684	688	692	684	470	348	404	373
8	588	502	521	606	686	e688	692	683	466	352	394	377
9	600	494	524	608	688	e688	691	682	463	357	391	377
10	610	487	527	611	688	688	691	679	463	362	383	376
11	619	480	e528	613	688	688	691	676	463	361	379	374
12	629	474	e531	616	e688	688	691	674	468	357	381	368
13	639	467	535	618	688	687	691	665	464	355	381	364
14	651	461	538	620	688	688	686	659	461	353	384	363
15	657	459	541	623	688	688	685	657	458	351	387	364
16	652	461	544	626	688	689	685	650	456	349	388	360
17	634	463	546	628	688	689	690	643	454	351	387	357
18	630	e466	549	631	688	689	691	639	452	350	385	366
19	624	469	552	634	e688	689	691	640	448	340	382	372
20	619	471	555	636	688	689	690	640	443	339	379	380
21	613	474	557	639	688	689	691	641	437	339	376	386
22	612	e476	560	642	688	689	690	643	428	338	373	397
23	612	478	564	644	688	689	689	638	419	340	372	415
24	608	481	566	647	688	689	687	627	414	347	372	419
25	603	483	e568	650	688	688	687	618	411	348	373	414
26	598	486	e570	652	e688	688	687	609	406	355	374	405
27	593	489	e573	655	e688	688	686	601	395	362	378	398
28	588	491	e575	658	e688	687	687	593	386	369	381	393
29	583	494	e578	660	---	687	686	585	374	377	375	391
30	577	497	583	663	---	690	686	575	367	385	374	390
31	572	---	585	666	---	690	---	566	---	391	371	---
MAX	657	566	585	666	688	690	692	688	557	391	405	419
MIN	532	459	500	588	668	687	685	566	367	338	371	357
(+)	160.01	160.22	163.52	166.35	167.07	167.16	167.03	162.81	154.57	155.67	154.79	155.69
(++)	+38	-75	+88	+81	+22	+2	-4	-120	-199	+24	-20	+19

CAL YR 1997 MAX 698 MIN 254 (++) +125
WTR YR 1998 MAX 692 MIN 338 (++) -144

e Estimated

(+) GAGE HEIGHT, IN FEET, AT END OF MONTH
(++) CHANGE IN CONTENTS, IN ACRE-FEET

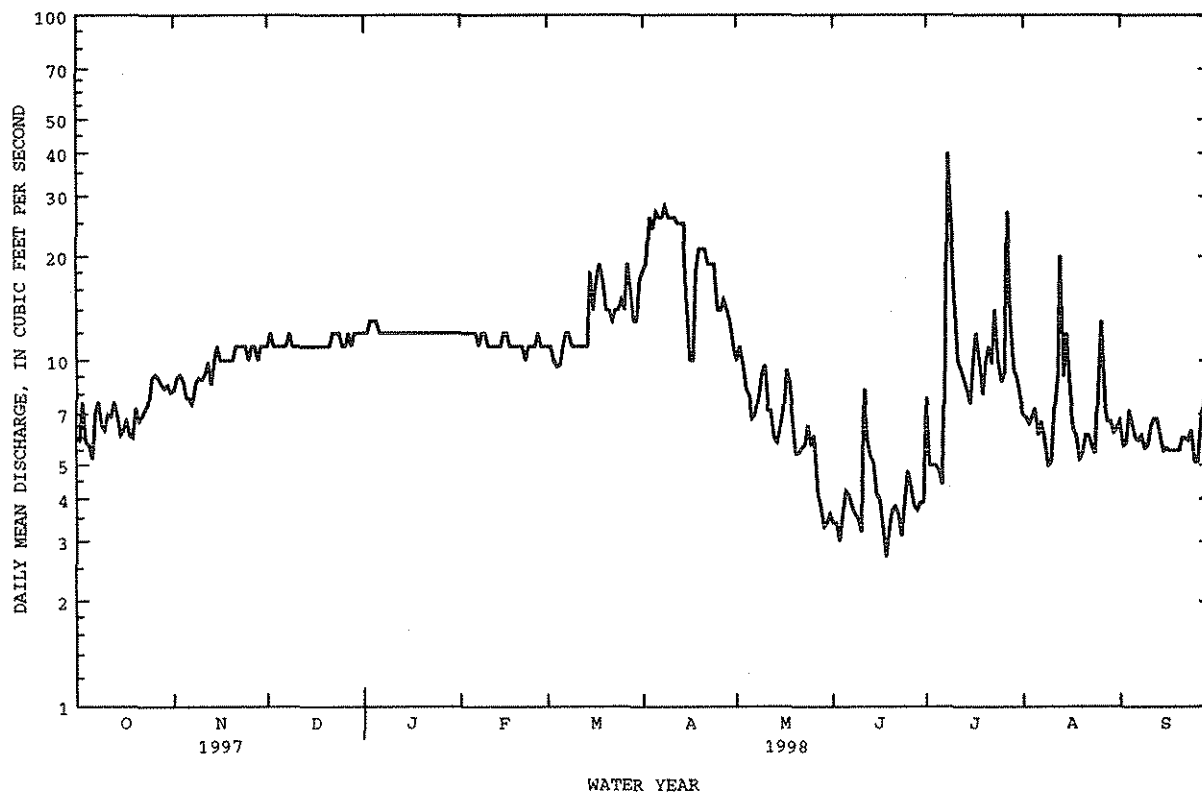
MEAN	7.71	9.24	10.4	10.3	10.3	11.1	20.7	18.1	14.8	8.95	7.93	7.69
MAX	16.4	15.5	15.4	14.6	16.6	28.6	306	69.3	75.3	28.0	32.8	19.2
(WY)	1986	1995	1997	1997	1992	1992	1992	1973	1979	1971	1991	1990
MIN	3.98	5.53	6.84	6.51	7.18	6.15	3.64	1.60	1.19	2.29	2.14	2.61
(WY)	1980	1980	1971	1971	1971	1971	1971	1970	1971	1980	1971	1970

RIO GRANDE BASIN

08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1970 - 1998	
ANNUAL TOTAL	4545.6		3658.4		11.6	
ANNUAL MEAN	12.5		10.0		40.1	
HIGHEST ANNUAL MEAN					6.09	
LOWEST ANNUAL MEAN					1000	
HIGHEST DAILY MEAN	140	Jul 31	40	Jul 8	Apr 17 1992	
LOWEST DAILY MEAN	2.8	Jul 18	2.7	Jun 18	Jul 16 1971	
ANNUAL SEVEN-DAY MINIMUM	3.6	Jul 3	3.4	Jun 17	Jul 12 1971	
INSTANTANEOUS PEAK FLOW			350	Jul 8	Jul 26 1971	
INSTANTANEOUS PEAK STAGE			2.66	Jul 8	Jul 26 1971	
INSTANTANEOUS LOW FLOW			1.1	Jun 28	Jul 16 1971	
ANNUAL RUNOFF (AC-FT)	9020		7260		8410	
10 PERCENT EXCEEDS	18		14		16	
50 PERCENT EXCEEDS	10		10		8.2	
90 PERCENT EXCEEDS	4.6		5.0		3.0	

^a From rating curve extended above 160 ft³/s on basis of slope-area measurements at gage heights 5.69 ft and 9.58 ft.



08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-75, 1979, 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	
DEC 01...	1000	11	730	8.2	12.0	7.0	620	10.7	109	140	44	7.2	
MAR 12...	1025	11	752	7.5	8.0	6.5	628	10.1	100	160	50	8.2	
JUN 01...	1215	3.4	625	8.3	29.0	23.0	626	8.6	123	120	38	6.8	
AUG 27...	1030	6.0	617	8.4	22.6	21.0	629	7.5	103	130	41	6.0	
DATE		SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
DEC 01...	97	4	10	--	--	--	272	44	46	.6	26	443	
MAR 12...	98	3	10	--	--	--	283	44	49	.6	25	460	
JUN 01...	82	3	10	--	--	--	218	42	51	.7	24	388	
AUG 27...	80	3	9.6	210	7	175	188	34	52	.6	24	378	
DATE		NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
DEC 01...	.699	.04	.74	<.02	--	.7	.5	.75	.71	.80	6.7	11	
MAR 12...	.354	.04	.40	.07	.73	.9	.8	1.4	1.3	1.2	6.7	12	
JUN 01...	--	<.01	.09	.01	.43	.60	.44	.83	.79	.78	5.9	17	
AUG 27...	3.38	.22	3.6	.34	.76	1.6	1.1	1.4	1.2	1.1	7.6	10	
DATE		ANTI-MONY, DIS-SOLVED (UG/L AS Sb) (01095)	ARSENIC DIS-SOLVED (UG/L AS As) (01000)	BARIUM, DIS-SOLVED (UG/L AS Ba) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS Be) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS Cd) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS Cr) (01030)	COBALT, DIS-SOLVED (UG/L AS Co) (01035)	COPPER, DIS-SOLVED (UG/L AS Cu) (01040)	IRON, DIS-SOLVED (UG/L AS Fe) (01046)	LEAD, DIS-SOLVED (UG/L AS Pb) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS Mn) (01056)
DEC 01...	<1	4	77	<1	245	<1	3	<1	5	15	1	10	
MAR 12...	<1	4	100	<1	239	<1	4	<1	4	16	1	20	
JUN 01...	<1	4	67	<1	225	<1	3	1	3	13	1	13	
AUG 27...	<1	4	90	<1	253	<1	2	1	4	21	1	7	

RIO GRANDE BASIN

08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS, (UG/L) (75990)
DEC 01...	<.1	9	3	<1	<1	<1	36	.07	.02	20	1.2
MAR 12...	<.1	7	3	<1	<1	<1	41	.10	.02	17	.95
JUN 01...	<.1	8	4	<1	<1	<1	32	.07	.02	6	.14
AUG 27...	<.1	10	4	<1	<1	<1	38	.08	.02	3	.07

08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM

LOCATION.--Lat 35°37'01", long 106°18'58", in NW¹/₄SW¹/₄ sec.16, T.16 N., R.6 E., Sandoval County, Hydrologic Unit 13020201, in Pueblo de Cochiti Grant, in control tower at Cochiti Dam, 1.7 mi northeast of Cochiti Pueblo, and at mile 1,588.1.

DRAINAGE AREA.--14,900 mi² approximately, including 2,940 mi², in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1973 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S.Army Corps of Engineers). Prior to Apr. 15, 1975, at site 1.3 mi upstream at same datum.

REMARKS.--Lake is formed by an earthfill dam on Rio Grande and Santa Fe River. Storage began on Nov. 12, 1973. Capacity, based on capacity table effective Jan. 1, 1992, 502,330 acre-ft between elevations 5,247.0 ft and 5,450.0 ft, crest of service spillway. Dead storage 560 acre-ft below elevation 5,255.0 ft, invert of outlet structure. Lake was created primarily for flood and sediment control. A 50,000 acre-ft permanent pool is authorized for recreational purposes.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 301,000 acre-ft, July 3, 1986, elevation, 5,417.32 ft; no storage prior to Nov. 12, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 61,780 acre-ft, May 25, elevation, 5,343.86 ft; minimum, 56,340 acre-ft, Dec. 28, elevation, 5,340.06 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56630	57010	56950	57370	59200	60340	60150	59890	60990	58350	58760	57820
2	56710	56880	56840	57440	59260	60110	60020	59760	60530	58560	59400	57970
3	56870	57480	56800	57570	59300	60140	60250	59950	59780	58750	59220	57970
4	57190	57200	56730	57760	59400	60340	60340	60270	59330	59120	59030	57820
5	57430	57100	56770	57640	59470	60460	60430	60660	59620	60740	58820	57520
6	57190	57160	56910	57310	59500	60560	60460	61180	59500	61370	58490	57190
7	56840	57090	56630	57130	59520	60810	60500	61640	59460	60760	58310	57150
8	56710	56870	56610	57190	59570	61090	60490	61370	59420	60540	58180	57310
9	56800	56660	56920	57520	59630	61090	60510	60310	59070	60020	58210	57620
10	56730	56680	56990	57900	59660	60750	60350	60210	58950	59800	58240	57680
11	56770	56810	56920	58240	59680	60370	60170	60380	59290	59720	58130	57610
12	57240	56960	56920	58350	59700	60050	59890	59930	59470	59300	58130	57650
13	57680	56980	57010	58300	59730	59880	59950	59760	59430	58790	58480	57690
14	57380	56950	57200	58240	59730	59920	60050	60170	59360	58400	58560	57780
15	57090	56820	57170	58370	59830	60120	60540	60310	59330	58280	58250	57680
16	57440	56590	57060	58580	59890	60060	60940	59930	59400	58350	57900	57540
17	58140	56520	56950	58810	59950	59910	60630	59260	59360	58880	57970	57480
18	58760	56840	56950	59020	60010	59910	60410	59270	59400	58370	58400	57500
19	59170	57090	57010	59200	60060	59990	60150	59680	59220	58030	58650	57500
20	59450	57120	57100	59300	60170	60010	59980	60050	59000	58310	58710	57500
21	59120	57090	57220	59370	60190	59920	60140	60540	59020	58320	58620	57410
22	58100	57060	57190	59370	60270	59780	60140	60850	59190	58250	58580	57440
23	57220	56990	57050	59260	60340	59780	60120	61000	59190	58270	58230	57410
24	57050	56950	56990	59200	60430	59980	60120	61310	58900	58240	57860	57470
25	57400	56870	57010	59130	60530	60050	60560	61780	58780	58450	57830	57440
26	57660	56750	56940	59060	60620	60050	61640	61220	58590	58720	58400	57330
27	57570	56670	56660	59000	60720	60250	61670	60170	58440	59350	58440	57190
28	57270	56820	56340	58990	60590	60630	60930	59720	58470	59520	58160	57130
29	56960	56960	56430	59030	---	61180	60400	59920	58440	58950	57820	57260
30	56880	57120	56940	59090	---	61180	60350	60430	58340	58320	57750	58790
31	57020	---	57330	59160	---	60660	---	60880	---	58340	57730	---
MAX	59450	57480	57330	59370	60720	61180	61670	61780	60990	61370	59400	58790
MIN	56630	56520	56340	57130	59200	59780	59890	59260	58340	58030	57730	57130
(+)	5340.55	5340.62	5340.77	5342.07	5343.06	5343.11	5342.90	5343.26	5341.49	5341.49	5341.06	5341.81
(++)	+380	+100	+210	+1830	+1430	+70	-310	+530	-2540	0	-610	+1060
CAL YR 1997	MAX 79790	MIN 56100	(++)	+300								
WTR YR 1998	MAX 61780	MIN 56340	(++)	+2150								

(+) ELEVATION, IN FEET, AT END OF MONTH
(++) CHANGE IN CONTENTS, IN ACRE-FEET

08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected in Cochiti Lake impounded by Cochiti Dam on the Rio Grande.

PERIOD OF RECORD.--Water years 1981 to August 1998 (discontinued).

REMARKS.--Samples for chemical analyses are collected annually at Site A which is located 500 ft upstream from the Outlet Tower (Riser). Samples are collected 5 feet above the bottom of the lake.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
AUG											
26...	1000	--	315	7.9	29.0	23.5	630	6.9	99	--	--
26...	1001	--	--	--	29.0	23.5	630	7.0	--	--	--
26...	1002	--	--	--	29.0	23.0	630	6.9	--	--	--
26...	1003	--	--	--	29.0	23.0	630	6.8	--	--	--
26...	1004	--	--	--	29.0	23.0	630	6.7	--	--	--
26...	1005	--	--	--	29.0	22.5	630	6.1	--	--	--
26...	1006	--	--	--	29.0	22.5	630	5.2	--	--	--
26...	1007	--	--	--	29.0	22.0	630	4.7	--	--	--
26...	1008	--	--	--	29.0	21.5	630	4.3	--	--	--
26...	1009	--	317	8.1	29.0	21.5	630	4.1	57	--	--
26...	1010	--	--	--	29.0	21.0	630	3.9	--	--	--
26...	1011	--	--	--	29.0	21.0	630	3.6	--	--	--
26...	1012	--	--	--	29.0	21.0	630	3.0	--	--	--
26...	1013	--	--	--	29.0	21.0	630	2.6	--	--	--
26...	1014	--	--	--	29.0	21.0	630	2.2	--	--	--
26...	1015	--	--	--	29.0	20.5	630	1.1	--	--	--
26...	1016	--	--	--	29.0	20.5	630	.6	--	--	--
26...	1115	85.0	319	7.8	29.0	20.5	630	.1	1	<1	<1
26...	1116	--	--	--	29.0	20.5	630	0	--	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
AUG											
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	46	4.7	.3	17	191	<.01	.08	.08	.07	.2	.1
26...	--	--	--	--	--	--	--	--	--	--	--
DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
AUG											
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	.03	.01	.02	3.6	4	<1	2	89	<1	35.5	<1
26...	--	--	--	--	--	--	--	--	--	--	--
DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
AUG											
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	1	<1	1	<10	<1	<1	<.1	4	<1	<1	<1
26...	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

08317400 RIO GRANDE BELOW COCHITI DAM, NM

LOCATION.--Lat 35°37'05", long 106°19'24", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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 with satellite telemetry. 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.--Records good. 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; see tabulation below for monthly and yearly diversion.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2030	1630	1350	949	994	1070	1920	2680	3250	1360	e810	939
2	2000	1620	1350	951	996	976	1670	2820	3600	1320	e780	945
3	1850	1310	1280	957	1010	880	1440	2820	3480	1250	e774	1040
4	1740	1730	1280	956	1010	845	1410	2940	2840	1120	765	1110
5	1750	1580	1170	1120	1040	900	1410	3170	2330	780	831	1070
6	1930	1450	1090	1180	1060	892	1410	3350	2180	887	839	1040
7	1960	1510	1100	1110	1050	851	1410	3480	2140	1040	831	1030
8	1840	1540	864	994	1050	845	1400	3890	1920	1200	855	1030
9	1710	1540	784	848	1050	937	1340	4070	1660	1440	914	1060
10	1770	1420	954	850	1040	1080	1220	3260	1490	1430	1080	1160
11	1880	1400	1030	855	1030	1120	1110	3130	1390	1280	1230	1220
12	1870	1410	984	949	1030	1120	1100	3320	1350	1210	1250	1220
13	1870	1470	932	1010	1040	1080	1070	3190	1260	1170	1250	1240
14	2280	1500	936	1010	1040	1040	1040	3090	1190	1070	1220	1180
15	2680	1500	1010	927	1030	1050	1040	3280	1170	1040	1210	1090
16	2920	1500	1050	891	1030	1210	1150	3410	1160	1100	1200	1090
17	2870	1350	1050	915	1030	1290	1310	3400	1180	1140	1150	1140
18	2710	1090	1010	918	1030	1210	1250	2950	1180	1100	1130	1140
19	2720	1060	989	921	1020	1180	1260	2800	1180	1090	1140	1080
20	2710	1180	988	949	1020	1200	1150	2870	1210	1100	1170	1050
21	2700	1290	998	968	1020	1240	969	2990	1210	1090	1090	1050
22	2450	1320	1080	1010	1020	1240	1020	3370	1200	1090	1080	988
23	2070	1320	1120	1040	1010	1180	1100	3580	1220	1070	1060	946
24	1770	1280	1080	1040	1020	1140	1290	3580	1260	983	1020	940
25	1550	1280	1040	1040	1010	1320	1540	3590	1280	945	1020	952
26	1550	1260	1030	1040	1040	1440	1560	3800	1320	943	1100	944
27	1670	1250	1040	1020	984	1540	2140	3800	1350	963	1040	934
28	1730	1250	1040	1000	1060	1640	2540	3310	1350	1050	996	926
29	1700	1240	871	978	---	1630	2470	2970	1350	1320	960	932
30	1560	1240	766	992	---	1800	2380	2890	1350	1060	939	1050
31	1540	---	850	992	---	1940	---	2900	---	e840	938	---
TOTAL	63380	41520	32116	30380	28764	36886	43119	100700	50050	34481	31672	31536
MEAN	2045	1384	1036	980	1027	1190	1437	3248	1668	1112	1022	1051
MAX	2920	1730	1350	1180	1060	1940	2540	4070	3600	1440	1250	1240
MIN	1540	1060	766	848	984	845	969	2680	1160	780	765	926
AC-FT	125700	82350	63700	60260	57050	73160	85530	199700	99270	68390	62820	62550
(+)	8050	250	0	0	0	4660	7420	8510	7910	7820	8440	8420
(++)	5100	202	0	0	0	4670	4710	5320	5160	4990	4700	4670

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

	599	909	932	848	999	1277	2080	3269	3090	1720	884	709
MEAN	599	909	932	848	999	1277	2080	3269	3090	1720	884	709
MAX	2045	1878	1787	2245	3639	2868	6320	6101	6205	5643	3683	1635
(WY)	1998	1987	1987	1986	1986	1986	1985	1984	1983	1979	1986	1986
MIN	214	331	461	428	493	438	281	353	392	293	254	121
(WY)	1975	1990	1978	1977	1978	1977	1977	1972	1972	1972	1972	1974

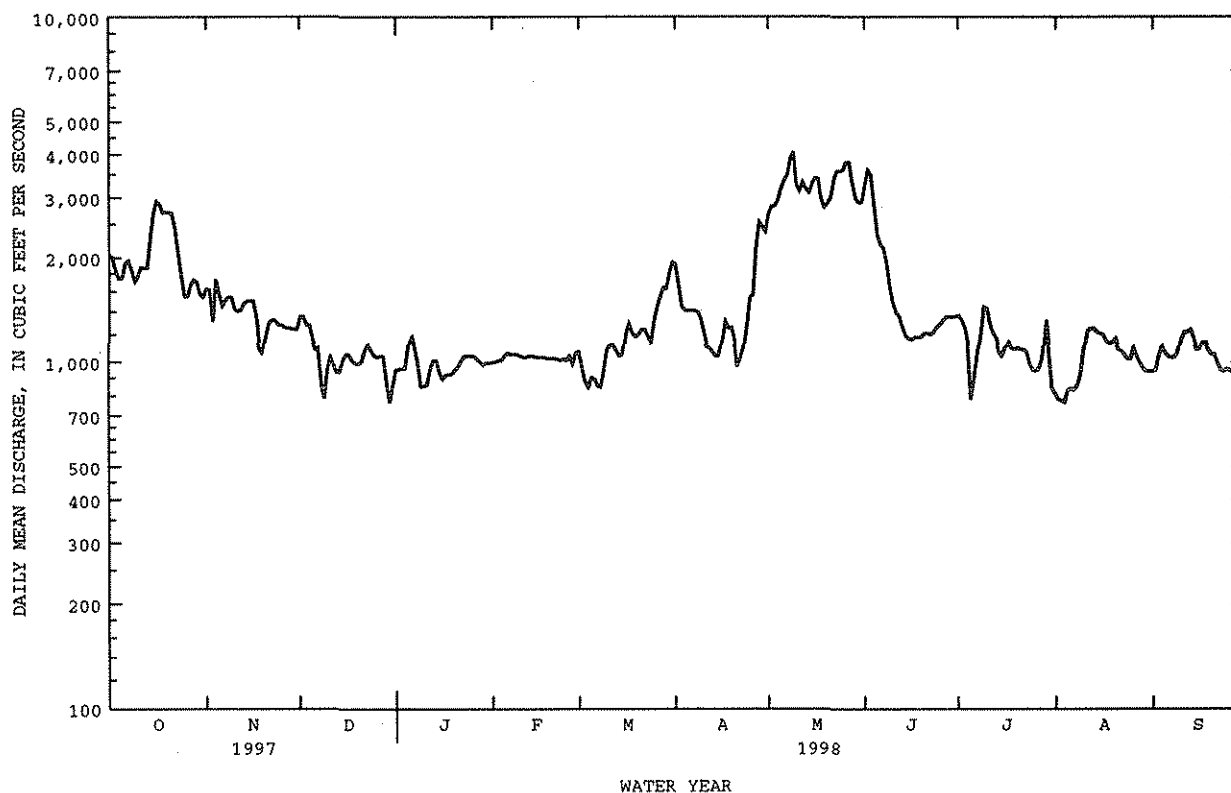
(+) DIVERSION, IN ACRE-FEET, BY COCHITI EASTSIDE MAIN CANAL AT HEAD
(++) DIVERSION, IN ACRE-FEET, BY SILI MAIN CANAL AT HEAD

RIO GRANDE BASIN

08317400 RIO GRANDE BELOW COCHITI DAM, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1971 - 1998	
ANNUAL TOTAL	634861		524604		1444	
ANNUAL MEAN	1739		1437		2355	1986
HIGHEST ANNUAL MEAN					452	1977
LOWEST ANNUAL MEAN					8290	May 7 1985
HIGHEST DAILY MEAN	6610	Jun 10	4070	May 9		
LOWEST DAILY MEAN	429	Jan 9	765	Aug 4	.51	Aug 4 1977
ANNUAL SEVEN-DAY MINIMUM	524	Jan 9	804	Aug 1	39	Sep 16 1977
INSTANTANEOUS PEAK FLOW					^a 10300	Jul 26 1971
INSTANTANEOUS PEAK STAGE					^b 7.90	Jul 26 1971
INSTANTANEOUS LOW FLOW					^c .51	Aug 5 1977
ANNUAL RUNOFF (AC-FT)	1259000		1041000		1046000	
10 PERCENT EXCEEDS	3820		2750		3680	
50 PERCENT EXCEEDS	1250		1160		885	
90 PERCENT EXCEEDS	727		937		373	

e Estimated

^a From rating curve extended above 2,600 ft³/s.^b Site and datum then in use.^c Aug. 3-5, 1997, Aug. 27,28, 1978, result of regulation.

08317900 GALISTEO RESERVOIR NEAR CERRILLOS, NM

LOCATION.--Lat 35°27'44", long 106°12'30", in NW¹/₄ sec.9 T.14 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, at Galisteo Dam on Galisteo Creek, 5.0 mi northwest of Cerrillos, and at mile 11.8.

DRAINAGE AREA.--596 mi².

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

GAGE.--Water-stage recorder above elevation 5,500.3 ft, nonrecording below. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by an earthfill dam, completed Oct. 11, 1970. Capacity, based on capacity table effective January 1972, 88,990 acre-ft between elevations 5,496.0 ft, sill of ungated outlet conduit, and 5,608.0 ft, crest of uncontrolled spillway. No dead storage. Reservoir is used for flood control. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,510 acre-ft, July 26, 1971, elevation, 5,517.00; no storage most of time.

EXTREMES FOR CURRENT YEAR.--No storage all year.

Capacity table (elevation, in feet, and contents, in acre-feet)

(Based on survey by U.S. Army Corps of Engineers in 1972)

5,500	0	5,504	41
5,501	2	5,505	69
5,502	9	5,506	109
5,503	21	5,508	244

RIO GRANDE BASIN

08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM

LOCATION.--Lat 35°27'53", long 106°12'49", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ 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 north-west of Cerrillos, and at mile 11.4.

DRAINAGE AREA.--597 mi².

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

GAGE.--Water-stage recorder with satellite telemetry. 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.--Records fair except for estimated daily discharges, which are poor. Flow regulated by Galisteo Reservoir 0.4 mi upstream. Diversions for irrigation of about 50 acres upstream from station. Several observations of water temperature were made during the year. No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	e.35	e.35	e.27	7.4	e.10	.00	15	25	.00
2	.00	.00	e.76	e.34	e.33	e.27	3.3	e.07	.00	34	e10	.00
3	.00	.00	e.72	e.32	e.34	e.28	1.2	e.05	.00	.00	.00	.00
4	.00	.00	e.51	e.30	e.45	e.32	1.0	.00	.00	11	.00	.00
5	.00	.00	e.48	e.28	e.41	e.33	1.3	.00	.00	30	.00	.00
6	.00	.00	e.46	e.27	e.41	e.33	e.60	.00	.00	41	.00	.00
7	.00	.00	e.50	e.29	e.41	e.36	e.55	.00	.00	5.6	.00	.00
8	.00	.00	e.52	e.30	e.40	e.35	e.45	.00	.00	1.5	.00	.00
9	.00	.00	e.70	e.38	e.50	e.30	e.60	.00	.00	2.5	.00	.00
10	.00	.00	e1.0	e.35	e.43	e.28	.80	.00	.00	22	.00	.00
11	.00	.00	e.76	e.25	e.47	e.27	e.50	.00	.00	33	e12	.00
12	.00	.00	e.70	e.29	e.45	e.28	e.09	.00	.00	e4.2	e45	.00
13	.00	.00	e.64	e.29	e.43	e.34	e.07	.00	.00	.00	e4.0	.00
14	.00	.00	e.62	e.25	e.41	e.33	e.08	.00	.00	.00	e1.0	.00
15	.00	e.42	e2.0	e.27	e.43	e8.5	e.10	.00	.00	.00	.00	.00
16	.00	e4.6	e6.4	e.29	e.43	38	.65	.00	.00	.00	.00	e1.5
17	.00	e59	e4.4	e.27	e.43	42	.54	.00	.00	e10	.00	.00
18	.00	e3.2	e3.2	e.30	e.43	47	.60	.00	.00	e5.0	.00	.00
19	.00	e2.1	e2.5	e.42	e.42	30	e.25	.00	.00	.00	.05	.00
20	.00	e1.1	e1.2	e.41	e.42	25	e.05	.00	.00	.00	.04	.00
21	.00	e.59	e.92	e.44	e.42	24	e.05	.00	.00	e5.0	.03	.00
22	.00	e.32	e.82	e.45	e.35	19	e.05	.00	.00	e.10	.01	.00
23	.00	e.28	e.68	e.41	e.32	13	e.05	.00	.00	e5.5	.00	.00
24	.00	.00	e.64	e.41	e.30	14	e.05	.00	.00	e4.5	.00	.00
25	.00	.00	e.62	e.38	e.35	15	.00	.00	.00	e6.0	e8.0	.00
26	.00	.00	e.55	e.35	e.36	15	e7.0	.00	.00	e6.0	35	.00
27	.00	.00	e.50	e.38	e.38	13	2.9	.00	.00	e5.5	e.10	.00
28	.00	.00	e.47	e.35	e.26	10	.52	.00	.00	e7.5	.00	.00
29	.00	.00	e.44	e.34	---	8.1	.18	.00	.00	e12	.00	.00
30	.00	.00	e.42	e.34	---	7.0	.12	.00	.00	e.50	.00	e1.0
31	.00	---	e.36	e.34	---	5.4	---	.00	---	e4.5	.00	---
TOTAL	0.00	71.61	34.49	10.41	11.09	338.31	31.05	0.22	0.00	271.90	140.23	2.50
MEAN	.000	2.39	1.11	.34	.40	10.9	1.04	.007	.000	8.77	4.52	.083
MAX	.00	59	6.4	.45	.50	47	7.4	.10	.00	41	45	1.5
MIN	.00	.00	.00	.25	.26	.27	.00	.00	.00	.00	.00	.00
AC-FT	.00	142	68	21	22	671	62	.4	.00	539	278	5.0

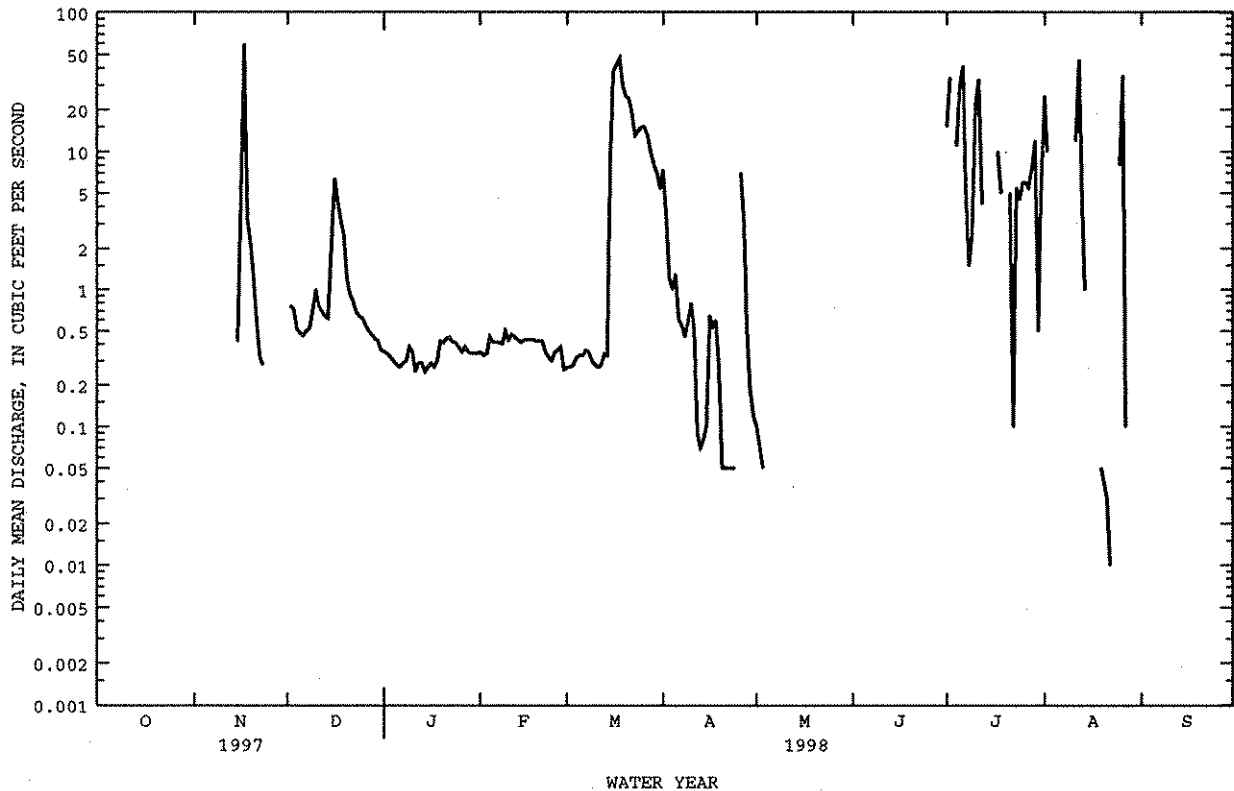
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1998, BY WATER YEAR (WY)

	MEAN	4.18	1.61	1.52	1.45	2.07	3.00	2.87	3.08	6.18	20.9	16.4	9.71
MAX	28.9	7.70	6.55	6.25	11.6	19.8	23.8	31.7	33.8	110	55.7	52.4	
(WY)	1982	1995	1987	1993	1993	1993	1973	1985	1996	1971	1991	1972	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.15	.000	
(WY)	1980	1980	1980	1981	1981	1981	1981	1971	1971	1987	1987	1979	

08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1970 - 1998
ANNUAL TOTAL	1932.60	911.81	
ANNUAL MEAN	5.29	2.50	6.00
HIGHEST ANNUAL MEAN			12.8
LOWEST ANNUAL MEAN			1.28
HIGHEST DAILY MEAN	639 Aug 24	59 Nov 17	1170 Jul 27 1971
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 May 15 1970
ANNUAL SEVEN-DAY MINIMUM	.00 May 8	.00 Oct 1	.00 May 30 1970
INSTANTANEOUS PEAK FLOW		1440 Nov 17	^a 3460 Aug 24 1997
INSTANTANEOUS PEAK STAGE		4.51 Nov 17	5.57 Aug 24 1997
INSTANTANEOUS LOW FLOW		.00 Oct 1	^c .00 Oct 1 1997
ANNUAL RUNOFF (AC-FT)	3830	1810	4340
10 PERCENT EXCEEDS	3.7	6.2	7.5
50 PERCENT EXCEEDS	.12	.10	.45
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

^a From rating curve extended above 1,400 ft³/s.^b Maximum gage height for period of record 7.33 ft, July 20, 1971.^c No flow for many days each year.

RIO GRANDE BASIN

08319000 RIO GRANDE AT SAN FELIPE, NM

LOCATION.--Lat 35°26'39", long 106°26'23", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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.

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except for estimated daily discharges, which are poor. 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Other major floods occurred in 1874, 1884, and 1904.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2090	e1590	e1350	e960	e1040	e1110	1940	2550	3410	e1400	870	1030
2	2140	e1580	e1360	e960	e1010	e1100	1810	2720	3790	1580	731	1020
3	2040	e1300	e1290	e956	e940	e1050	1510	2750	3790	1340	780	1060
4	1890	e1670	e1290	e970	e1040	e1010	1450	2810	3250	1270	715	1140
5	e1870	e1550	e1190	e1130	e1080	e1100	1450	3000	2540	1000	753	1120
6	e1980	e1400	e1100	e1190	e1100	e1010	1460	3160	2350	879	784	1090
7	e2020	e1460	e1110	e1120	e1090	e1060	1460	3310	2260	1140	745	1090
8	e1930	e1490	e940	e1050	e1090	e1040	1460	3650	2080	1280	798	1090
9	e1840	e1490	e910	e1080	e1090	e1080	1430	4130	1760	1570	844	1100
10	e1860	e1380	e960	e1070	e1080	e1110	1330	3630	1530	1570	939	1150
11	e1980	e1370	e1040	e1080	e1070	e1190	1180	3250	1450	1420	1040	1200
12	e1980	e1380	e990	e1010	e1070	1150	1190	3530	1370	1340	1100	1200
13	e1990	e1440	e950	e1040	e1080	1130	1170	3440	1310	1290	1120	1210
14	e2280	e1470	e940	e1040	e1080	1090	1150	3310	1220	1230	1110	1190
15	e2400	e1470	e1020	e1000	e1070	1130	1150	3470	1210	1130	1080	1130
16	e3000	e1480	e1060	e930	e1070	1210	1200	3640	1180	1140	1100	1130
17	e2950	e1330	e1060	e950	e1070	1330	1410	3640	1180	1210	1090	1150
18	e2900	e1090	e1020	e960	e1080	1310	1330	3310	1190	1170	1070	1170
19	e2840	e1050	e1000	e970	e1090	e1280	1320	2960	1210	1180	1070	1130
20	e2820	e1180	e1000	e980	e1090	1240	1280	3090	1210	1180	1100	1110
21	e2800	e1290	e1000	e990	e1080	1290	1080	3200	1250	1190	1070	1110
22	e2580	e1320	e1090	e1060	e1080	1280	1080	3530	1250	1180	1050	1080
23	e2100	e1320	e1130	e1100	e1060	1240	1170	3820	1230	1200	1070	1020
24	2140	e1290	e1080	e1110	e1050	1200	1250	3840	1280	1140	1050	1020
25	1860	e1290	e1050	e1100	e1060	1290	1600	3840	1330	1140	1050	1030
26	1850	e1270	e1040	e1110	e1080	1480	1660	3960	1340	1100	1120	1030
27	1920	e1260	e1050	e1090	e1040	1540	2000	4040	1420	1090	1060	1030
28	2020	e1260	e1050	e1060	e1100	1670	2480	3670	1430	1110	1050	1020
29	1870	e1250	e880	e1000	---	1680	2500	3250	1420	1270	1040	1020
30	e1600	e1250	e780	e1010	---	1780	2330	3130	1400	1230	1020	970
31	e1550	---	e870	e1010	---	1960	---	3150	---	918	1030	---
TOTAL	67090	40970	32600	32086	29880	39140	44830	104780	52640	37887	30449	32840
MEAN	2164	1366	1052	1035	1067	1263	1494	3380	1755	1222	982	1095
MAX	3000	1670	1360	1190	1100	1960	2500	4130	3790	1580	1120	1210
MIN	1550	1050	780	930	940	1010	1080	2550	1180	879	715	970
AC-FT	133100	81260	64660	63640	59270	77630	88920	207800	104400	75150	60400	65140
(+)	3700	159	0	0	0	2450	3780	4120	3760	3440	3470	3300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1998, BY WATER YEAR (WY)

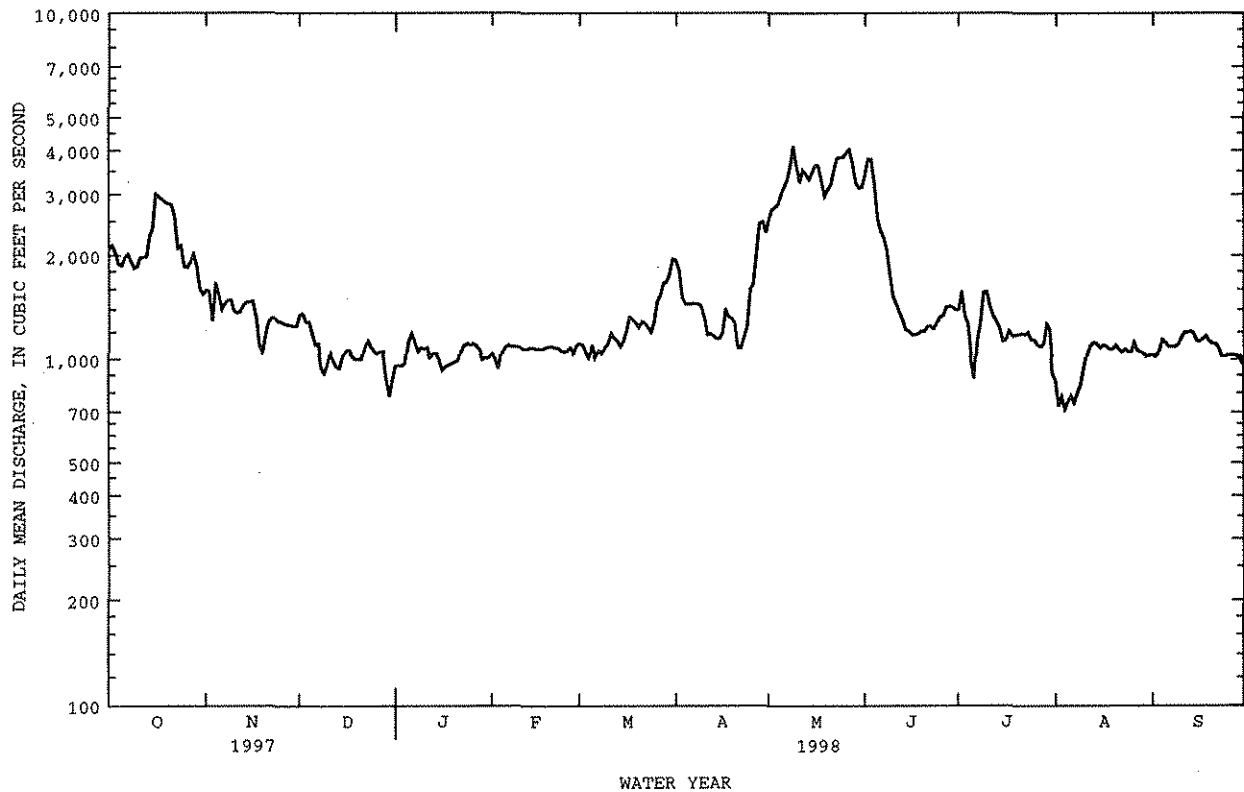
	729	948	1006	919	1072	1399	2266	3451	3343	1946	1052	853
MEAN	729	948	1006	919	1072	1399	2266	3451	3343	1946	1052	853
MAX	2164	2072	1969	2163	3695	3054	6126	6160	6534	5979	3667	1781
(WY)	1998	1987	1987	1986	1986	1986	1985	1985	1983	1979	1986	1986
MIN	289	389	500	462	552	546	378	521	746	565	596	206
(WY)	1975	1990	1978	1977	1977	1977	1977	1977	1989	1974	1978	1974

(+) MONTHLY DIVERSIONS, IN ACRE-FEET, OF COCHITI EASTSIDE CANAL, RECORDS OF THE FLOW FURNISHED BY MIDDLE RIO GRANDE CONSERVANCY DISTRICT.

08319000 RIO GRANDE AT SAN FELIPE, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1974 - 1998	
ANNUAL TOTAL	658310		545192		^a 1583	
ANNUAL MEAN	1804		1494		2493	
HIGHEST ANNUAL MEAN					547	
LOWEST ANNUAL MEAN					8100	
HIGHEST DAILY MEAN	7000	Jun 11	4130	May 9	67	May 7 1985
LOWEST DAILY MEAN	474	Jan 14	715	Aug 4	135	Aug 28 1978
ANNUAL SEVEN-DAY MINIMUM	585	Jan 8	758	Aug 2	^b 273000	Aug 23 1978
INSTANTANEOUS PEAK FLOW			4310	May 9	^c 11.13	May 26 1937
INSTANTANEOUS PEAK STAGE			6.21	May 9	32	Jun 26 1937
INSTANTANEOUS LOW FLOW			714	Aug 4	1147000	Jul 7 1934
ANNUAL RUNOFF (AC-FT)	1306000		1081000		3850	
10 PERCENT EXCEEDS	3750		2810		1020	
50 PERCENT EXCEEDS	1270		1190		475	
90 PERCENT EXCEEDS	803		1000			

e Estimated

^a Average discharge for 48 years (water years 1926-1973), 1,374 ft³/s, 995,500 acre-ft/yr, prior to closure of Cochiti.^b From rating curve extended above 15,000 ft³/s.^c Site and datum then in use.

08319000 RIO GRANDE AT SAN FELIPE, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV											
04...	1005	1860	237	7.9	11.0	9.0	14	639	9.8	101	--
20...	1100	1230	262	--	10.0	7.0	4.4	633	11.2	111	94
JAN											
14...	1035	1500	301	7.5	5.5	3.5	1.2	635	11.4	103	110
APR											
09...	0945	1130	297	7.9	11.5	8.0	4.9	636	9.9	100	100
MAY											
18...	1055	3870	271	8.0	24.5	15.5	12	636	9.4	113	--
JUN											
16...	1255	1210	268	8.4	30.0	19.0	9.0	629	9.1	120	--
JUL											
15...	0915	1170	314	7.9	25.0	20.0	20	638	7.4	98	110
AUG											
20...	1000	1100	332	8.1	26.0	21.0	12	641	6.5	87	--
SEP											
30...	1100	895	324	8.2	28.0	19.0	12	635	7.5	98	--

[illegible][illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

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.

WATER-DISCHARGE RECORDS

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.

GAGE.--Water-stage recorder with satellite telemetry. 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.--Water-discharge records good. Diversion for irrigation of about 300 acres upstream from station. Several observations of water temperature were made during the year.

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.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	30	33	28	31	33	171	247	118	24	48	36
2	30	29	34	28	31	36	192	273	111	23	51	41
3	29	27	33	31	35	36	159	337	103	22	40	55
4	28	28	22	31	35	38	214	362	95	32	32	38
5	27	29	25	31	35	40	266	384	83	31	52	32
6	29	28	27	27	35	40	269	406	73	32	64	28
7	27	28	34	25	35	40	218	371	65	33	50	27
8	32	27	38	28	35	37	193	367	58	48	37	26
9	41	30	31	29	36	34	174	333	53	49	31	32
10	34	32	25	31	32	35	172	327	51	43	34	30
11	30	33	25	33	31	39	210	354	62	35	42	32
12	30	39	21	32	37	41	319	346	56	30	33	31
13	30	39	33	29	32	45	244	339	46	27	40	30
14	30	46	29	32	38	52	248	347	41	27	36	28
15	33	41	29	26	40	80	217	265	39	24	31	32
16	31	31	27	34	37	92	196	239	37	22	30	25
17	28	33	27	32	36	100	173	223	32	23	31	27
18	25	34	28	31	35	114	179	245	31	23	30	26
19	26	34	28	29	34	88	153	285	31	22	28	24
20	27	35	28	32	32	91	152	286	29	24	27	21
21	26	31	29	28	38	101	164	266	27	24	49	21
22	27	27	29	28	35	125	197	250	26	19	41	20
23	29	23	30	32	36	188	249	206	26	23	36	20
24	31	27	29	31	34	321	285	180	23	34	32	20
25	35	29	29	32	39	647	347	163	25	36	37	20
26	32	32	25	32	32	833	359	152	25	42	40	18
27	32	32	33	31	26	536	321	149	22	50	37	17
28	32	32	36	31	30	423	318	145	20	81	29	17
29	32	29	34	31	---	321	258	142	20	47	29	19
30	32	28	27	34	---	217	231	138	18	38	29	34
31	30	---	27	32	---	173	---	129	---	32	47	---
TOTAL	935	943	905	941	962	4996	6848	8256	1446	1020	1173	827
MEAN	30.2	31.4	29.2	30.4	34.4	161	228	266	48.2	32.9	37.8	27.6
MAX	41	46	38	34	40	833	359	406	118	81	64	55
MIN	25	23	21	25	26	33	152	129	18	19	27	17
AC-FT	1850	1870	1800	1870	1910	9910	13580	16380	2870	2020	2330	1640

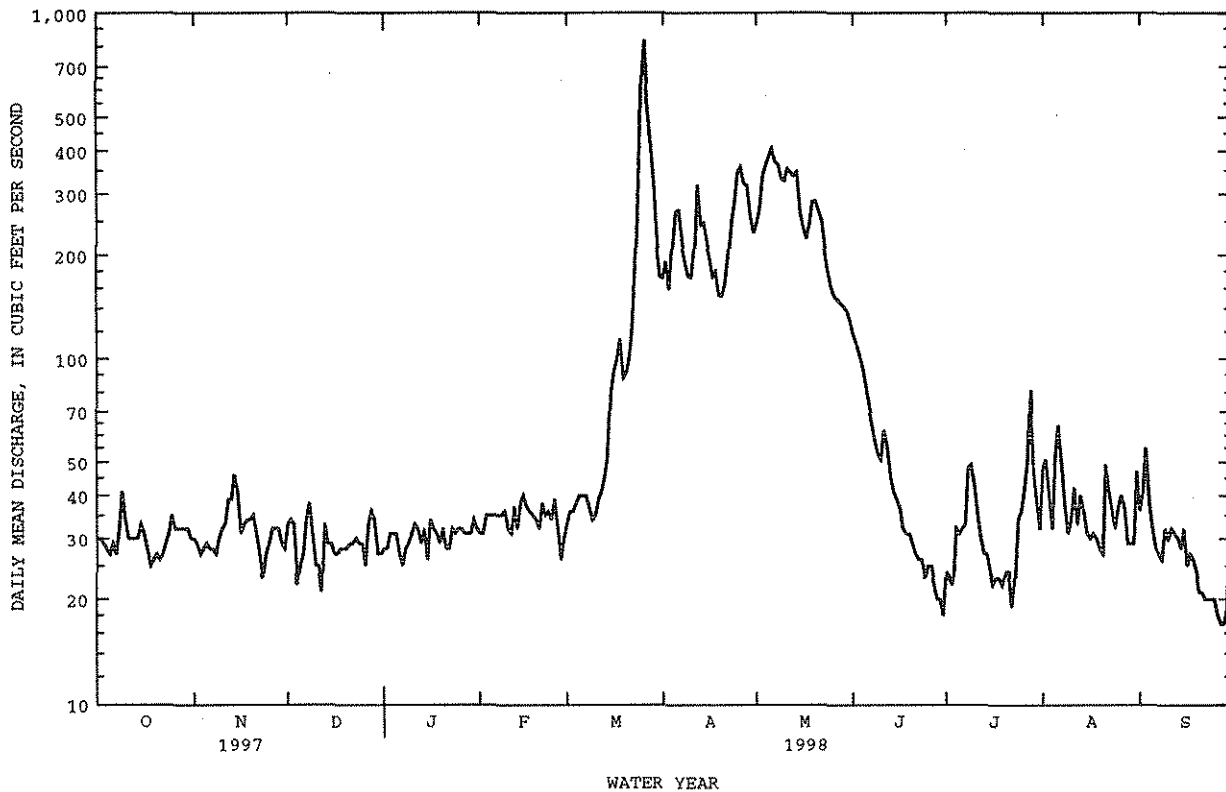
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1998, BY WATER YEAR (WY)

MEAN	35.7	38.0	29.3	28.9	36.1	92.1	270	243	69.1	33.0	45.8	34.5
MAX	109	128	58.2	50.6	77.1	301	961	1118	274	78.5	121	95.8
(WY)	1987	1987	1987	1995	1995	1995	1958	1973	1979	1986	1957	1991
MIN	14.5	18.4	17.0	16.6	19.9	26.0	30.9	13.5	10.5	14.5	15.8	11.1
(WY)	1957	1957	1957	1977	1955	1996	1996	1996	1996	1972	1956	1956

RIO GRANDE BASIN

08324000 JEMEZ RIVER NEAR JEMEZ, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1954 - 1998	
ANNUAL TOTAL	35068		29252		79.6	
ANNUAL MEAN	96.1		80.1		189	
HIGHEST ANNUAL MEAN					22.9	
LOWEST ANNUAL MEAN					3160	
HIGHEST DAILY MEAN	547	Mar 22	833	Mar 26	6.0	Apr 21 1958
LOWEST DAILY MEAN	21	Dec 12	17	Sep 27	2.1	Jul 25 1981
ANNUAL SEVEN-DAY MINIMUM	25	Jul 12	19	Sep 23	6.0	Jul 23 1981
INSTANTANEOUS PEAK FLOW			1270	Mar 26	^a 5900	Apr 21 1958
INSTANTANEOUS PEAK STAGE			5.98	Mar 26	^b 10.10	Jul 15 1985
INSTANTANEOUS LOW FLOW			14	Sep 27	1.2	Jul 25 1981
ANNUAL RUNOFF (AC-FT)	69560		58020		57690	
10 PERCENT EXCEEDS	284		246		181	
50 PERCENT EXCEEDS	40		33		34	
90 PERCENT EXCEEDS	27		25		18	

^a From rating curve extended above 2,200 ft³/s on basis of contracted-opening measurement of peak flow.^b Present datum.

08324000 JEMEZ RIVER NEAR JEMEZ, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD---Water years 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
DEC 01...	1348	37	460	7.9	11.0	8.0	615	9.6	101	110	36
MAY 13...	1005	353	148	7.7	23.0	8.0	619	9.9	103	54	19

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLT RD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
DEC 01...	4.0	46	.2	7.2	148	9.6	51	.9	43	287
MAY 13...	1.7	8.8	.5	1.7	61	4.8	8.4	.2	15	96

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHURUS TOTAL (MG/L AS P) (00665)	PHOS-PHURUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHURUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
DEC 01...	<.01	<.05	<.02	.1	<.1	.04	.02	.04	12	<1
MAY 13...	<.010	<.020	<.010	.42	.20	.040	<.020	<.010	40	<1

DATE	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
DEC 01...	50	67	<1	443	<1	2	<1	<1	23	<1
MAY 13...	7	46	<1	78.0	<1	<1	<1	<1	46	<1

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	RA-226 2 SIGMA WATER, DISS. (PCI/L) (76001)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS. (UG/L) (75990)
DEC 01...	13	4	<1	<1	<1	<1	--	--	1	--
MAY 13...	5	<1	<1	<1	<1	14	.20	.04	<1	.01

RIO GRANDE BASIN

08328500 JEMEZ CANYON RESERVOIR NEAR BERNALILLO, NM

LOCATION.--Lat 35°23'40", long 106°32'50", in SW¹/₄SW¹/₄ sec.32, T.14 N., R.4 E., Sandoval County, Hydrologic Unit 13020202, at corner of outlet works control tower of Jemez Canyon Dam on Jemez River, 2.8 mi upstream from mouth, and 6 mi north of Bernalillo.

DRAINAGE AREA.--1,034 mi².

PERIOD OF RECORD.--October 1953 to September 1965 (monthend contents only), October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam, completed October 19, 1953. Capacity, 172,800 acre-ft, from capacity table adapted January 1, 1992, between elevations 5,125.0 ft, sill of outlet gates, and 5,252.3 ft, operating deck of spillway. Maximum controlled capacity, 102,700 acre-ft at elevation 5,232.0 ft (floor of spillway, which is located about 0.8 mi south of dam). Capacity by original survey was 189,100 acre-ft. Original plan for reservoir operation was to desilt all flow above 30 ft³/s by storage for one day before releasing to Rio Grande, and for possible detention during flood stage on Rio Grande. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 72,110 acre-ft, June 1, 1987, elevation, 5,220.24 ft; no storage most of time prior to March 1979.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 28,330 acre-ft, April 27, elevation, 5,197.33 ft; minimum contents, 22,050 acre-ft, Nov. 6-8, elevation, 5,192.61 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22900	22150	23170	23110	22690	22100	26280	27260	27240	26130	26410	25130
2	22880	22100	23310	23170	22660	22100	26320	27170	27210	26100	26360	25100
3	22940	22070	23390	23260	22680	22170	26400	27150	27180	26050	26260	25070
4	22880	22110	23420	23370	22680	22370	26440	27190	27110	26020	26130	25050
5	22800	22070	23420	23370	22690	22420	26620	27280	27080	25990	26060	24990
6	22740	22050	23420	23240	22690	22500	26820	27360	27030	25960	26110	24950
7	22750	22050	23460	23060	22680	22610	27030	27480	26950	25920	26130	24900
8	22700	22050	23440	22880	22740	22660	27130	27460	26910	26620	26100	24850
9	22560	22110	23330	22830	22710	22620	27190	27330	26910	26770	26060	24790
10	22550	22150	23190	22880	22660	22520	27240	27190	26970	26930	26020	24740
11	22500	22220	23020	22940	22610	22410	27300	27070	27070	26950	25960	24690
12	22430	22320	22880	22960	22560	22360	27500	26970	27100	26920	25990	24650
13	22380	22400	22800	22900	22550	22300	27640	27040	27100	26890	25980	24590
14	22360	22540	22760	22830	22540	22270	27640	27240	27070	26860	25980	24530
15	22350	22620	22780	22710	22620	22680	27610	27280	27040	26780	25950	24510
16	22350	22730	22830	22700	22650	22880	27470	27240	27000	26730	25900	24530
17	22350	22800	22870	22740	22650	22660	27290	27190	26950	26700	25850	24500
18	22330	22850	22930	22760	22610	22400	27110	27250	26890	26650	25800	24490
19	22330	22920	22930	22800	22570	22210	26950	27350	26850	26590	25730	24440
20	22320	22980	22960	22840	22540	22150	26910	27410	26780	26550	25640	24380
21	22330	23040	22980	22880	22500	22100	27000	27460	26730	26510	25640	24340
22	22350	23080	22990	22850	22460	22060	27100	27390	26670	26430	25620	24300
23	22320	23120	23020	22800	22420	22170	27210	27290	26600	26390	25580	24250
24	22280	23150	23040	22760	22370	22510	27350	27210	26540	26340	25560	24210
25	22310	23130	23030	22710	22330	23220	27550	27110	26480	26370	25500	24170
26	22310	23100	23010	22730	22280	24170	28010	27110	26430	26410	25480	24120
27	22300	23150	22980	22780	22230	24970	28330	27140	26370	26410	25420	24080
28	22270	23160	22920	22800	22170	25480	28230	27150	26320	26580	25330	24040
29	22250	23170	22880	22780	---	25870	27820	27170	26260	26690	25290	23990
30	22210	23170	22930	22740	---	26100	27440	27190	26150	26580	25220	23920
31	22180	---	23020	22710	---	26210	---	27220	---	26490	25150	---
MAX	22940	23170	23460	23370	22740	26210	28330	27480	27240	26950	26410	25130
MIN	22180	22050	22760	22700	22170	22060	26280	26970	26150	25920	25150	23920
(+)	5192.72	5193.50	5193.38	5193.14	5192.71	5195.79	5196.69	5196.53	5195.75	5196.00	5195.01	5194.08
(++)	-750	-990	-150	-310	-540	+4040	+1230	-220	-1070	+340	-1340	-1230
CAL YR 1997	MAX 27290	MIN 20960	(++)	+1820								
WTR YR 1998	MAX 28330	MIN 22050	(++)	+990								

(+) ELEVATION, IN FEET, AT END OF MONTH

(++) CHANGE IN CONTENTS, IN ACRE-FEET

LOCATION.--Lat 35°23'24", long 106°32'03", in NE $\frac{1}{4}$ 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.

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.

GAGE.--Water-stage recorder with satellite telemetry. 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.--Records good. 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. Divisions for irrigation of about 3,000 acres upstream from station. No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1998, BY WATER YEAR (WY)

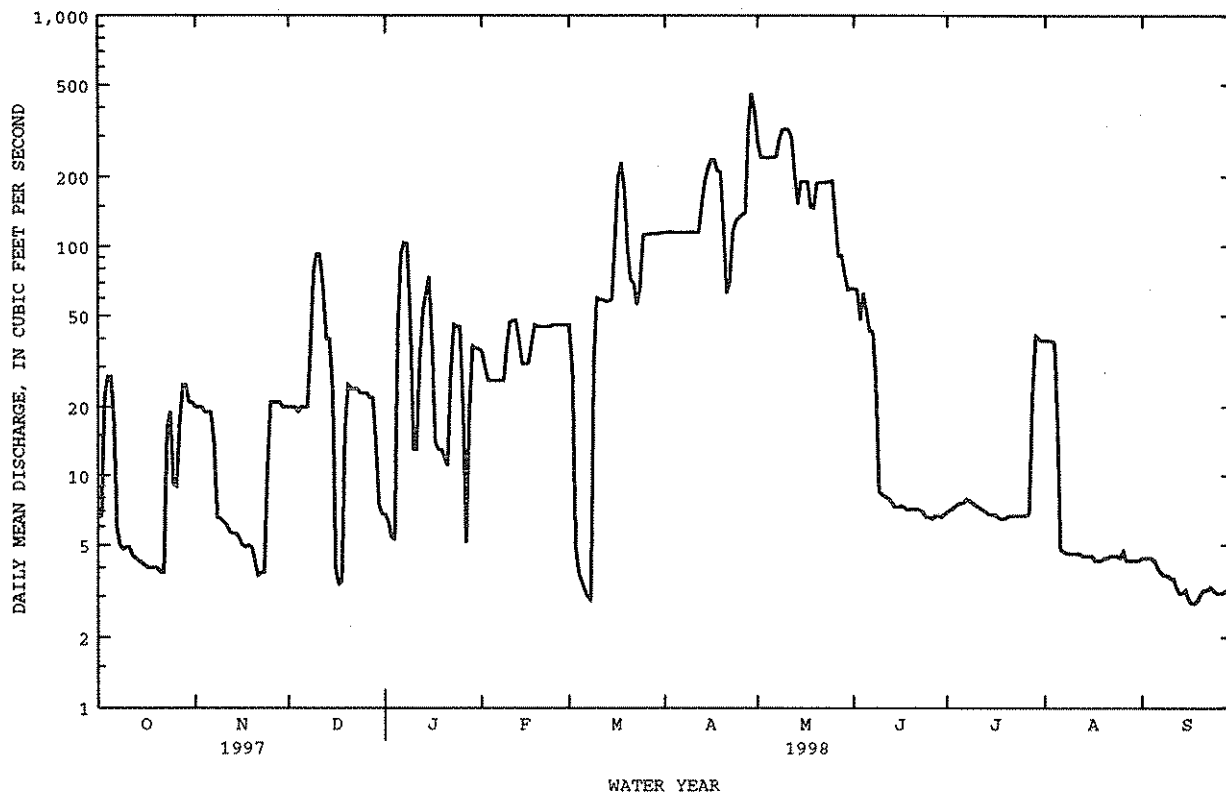
MEAN	26.5	29.3	21.4	23.4	28.2	66.6	188	193	77.2	26.1	43.5	22.0
MAX	193	179	74.4	56.1	75.1	288	772	968	988	358	247	157
(WY)	1987	1958	1987	1993	1987	1995	1985	1973	1958	1987	1991	1988
MIN	.000	2.22	.20	.25	.34	13.7	.96	.000	.000	.000	.13	.000
(WY)	1956	1997	1985	1985	1985	1981	1996	1972	1946	1947	1950	1945

RIO GRANDE BASIN

08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1943 - 1998	
ANNUAL TOTAL	28258.6		18475.7		62.6	
ANNUAL MEAN	77.4		50.6		178	1973
HIGHEST ANNUAL MEAN					10.6	1953
LOWEST ANNUAL MEAN					3640	Jun 19 1958
HIGHEST DAILY MEAN	433	Apr 29	457	Apr 29	.00	May 24 1943
LOWEST DAILY MEAN	1.2	Jan 1	2.8	Sep 17	.00	May 24 1943
ANNUAL SEVEN-DAY MINIMUM	1.3	Jan 4	3.0	Sep 13	.00	May 24 1943
INSTANTANEOUS PEAK FLOW					^a 16300	Aug 29 1943
INSTANTANEOUS PEAK STAGE					^b 6.63	Apr 28 1998
ANNUAL RUNOFF (AC-FT)	56050		36650		45360	
10 PERCENT EXCEEDS	239		150		156	
50 PERCENT EXCEEDS	20		20		18	
90 PERCENT EXCEEDS	3.8		3.9		.00	

e Estimated

^a From rating curve extended above 3,000 ft³/s.^b Site and datum then in use.

08329700 CAMPUS WASH AT ALBUQUERQUE, NM

LOCATION.--Lat 35°05'40", long 106°37'22", in SE 1/4 sec.16, T.10 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on right bank 100 ft west of southwest corner of University of New Mexico North Golf Course, 200 ft downstream from Barelás Stormwater Pumping Station outfall, 600 ft downstream from Tucker Road bridge, and 1,500 ft northeast of intersection of Lomas and University Boulevards. in Albuquerque.

DRAINAGE AREA.--3.80 mi².

PERIOD OF RECORD.--April 1982 to current year. Prior to wy 97 only seasonal records provided.

GAGE.--Water-stage and rainfall recorder and concrete-lined channel. Elevation of gage is 5,140 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Water-discharge records good except for estimated daily discharge, which are poor. Recording rain gage at station. Some minor streamflow may exist on days where daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow monitoring equipment. See tabulation below for monthly precipitation in inches.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,230 ft³/s, July 14, 1990, gage height, 4.50 ft, from rating curve developed by step-backwater analysis of channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 599 ft³/s, at 1815 hours Aug. 25, gage height, 2.92 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.32	.12	e.10	e.10	.09	.34	.34	1.4	.99	.73	.61
2	1.3	.28	4.7	e.20	e.10	e.10	.41	.24	.50	.58	.71	.61
3	.51	.29	1.1	.21	.14	.15	.37	.19	.49	8.4	.82	.59
4	.48	.29	.28	.16	.87	.20	.32	2.2	.47	13	.72	.62
5	.45	.20	e.20	.14	.39	.22	.37	.23	.43	.62	.71	.61
6	.49	.20	e.30	e.10	.17	.18	.25	.70	.41	.65	.79	.57
7	3.8	.27	.40	e.10	.16	.80	.21	.87	.46	.63	.70	.56
8	.45	.26	.13	e.10	2.1	.15	.22	.53	.45	5.0	.66	.64
9	.51	.28	.27	e.10	.50	.15	.17	.58	.40	7.8	.70	.61
10	.47	.23	.49	.16	.15	.22	.27	.45	1.3	1.1	.64	.60
11	.54	2.4	1.0	e.20	e.20	.22	.43	.57	.49	.61	.63	.60
12	.64	4.4	e.20	.21	.22	.31	.38	.58	.44	.61	.66	.59
13	.39	1.4	e.10	e.20	e.20	.29	.38	.52	.40	1.2	.63	.62
14	.36	.44	.12	e.20	.13	1.8	.44	.59	.42	.63	.66	.62
15	.40	1.5	.14	e.20	9.0	39	.53	.62	.47	.83	.61	.56
16	.37	.27	.24	.21	.22	7.4	.36	.58	.43	6.5	.61	.55
17	.35	.27	.28	.08	.32	2.2	.38	.62	.40	.90	1.2	.59
18	.32	.18	.32	.10	.29	1.8	.41	.65	.40	.64	.75	.57
19	.30	.12	.31	.06	.30	.18	.65	.73	.57	.64	7.7	.40
20	.32	.19	.87	.13	.29	.25	.74	.67	.35	.75	.74	.54
21	.34	.22	2.3	.14	.20	.40	.51	.66	.42	.73	.89	.51
22	.48	.23	.39	e.10	.16	.41	.43	1.3	.57	2.3	.74	.49
23	.35	.23	.91	e.10	.18	.31	.45	1.8	.58	2.3	1.2	.52
24	.37	.24	1.3	e.10	.17	.40	.52	2.0	.54	.98	.75	.61
25	.32	.31	.20	.05	.21	.47	.58	2.0	.59	9.8	26	.66
26	.33	.23	e.10	.26	e.20	1.5	14	2.1	.69	1.0	.71	.58
27	.36	.67	e.10	.16	.22	.37	.36	2.1	.63	.73	.70	.54
28	.35	.07	.06	.34	e.10	.29	.39	2.1	.58	1.0	.67	.63
29	.34	.06	.15	e.10	---	.47	.41	2.1	.58	.80	.63	1.6
30	.39	.06	e.10	.13	---	.39	.41	2.0	.51	.76	.62	1.8
31	.31	---	e.10	.11	---	.26	---	2.2	---	.70	.58	---
TOTAL	16.86	16.11	17.28	4.55	17.29	60.98	25.69	32.82	16.37	73.18	54.86	19.60
MEAN	.54	.54	.56	.15	.62	1.97	.86	1.06	.55	2.36	1.77	.65
MAX	3.8	4.4	4.7	.34	9.0	39	14	2.2	1.4	13	26	1.8
MIN	.30	.06	.06	.05	.10	.09	.17	.19	.35	.58	.58	.40
AC-FT	33	32	34	9.0	34	121	51	65	32	145	109	39
(+)	0.45	0.50	0.44	0.12	0.71	1.87	0.73	0.00	0.13	2.44	1.18	0.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1998, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1982	.81	2.99	1985	.023	1996
1983	.23	.58	1986	.000	1986
1984	.33	.56	1987	.096	1987
1985	.23	.32	1988	.15	1988
1986	.38	.62	1989	.15	1989
1987	.78	1.97	1990	.11	1990
1988	.76	4.50	1991	.000	1991
1989	2.64	34.5	1992	.000	1992
1990	.68	2.20	1993	.000	1993
1991	1.65	4.70	1994	.24	1994
1992	1.79	4.03	1995	.055	1995
1993	.99	2.44	1996	.077	1996
1994			1997		1997
1995			1998		1998

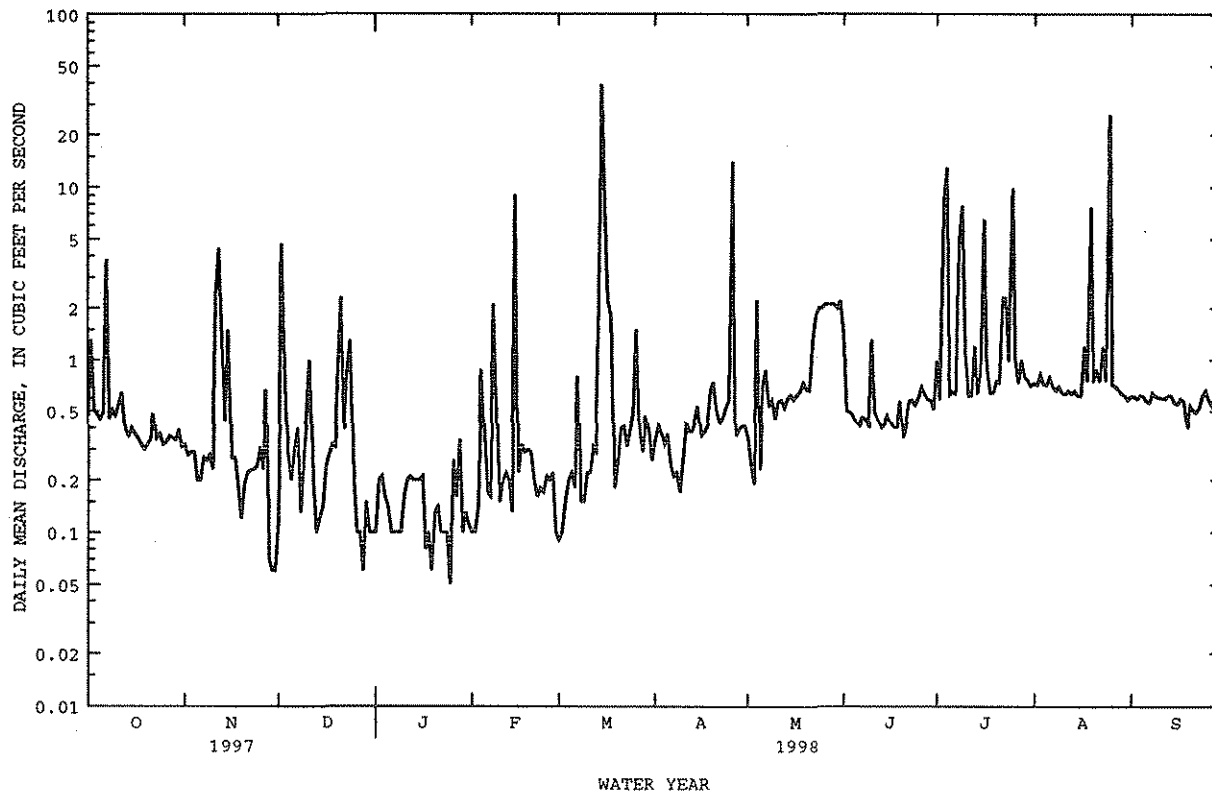
(+) Total rainfall accumulation in inches.

RIO GRANDE BASIN

08329700 CAMPUS WASH AT ALBUQUERQUE, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1982 - 1998
ANNUAL TOTAL	372.80	355.59	
ANNUAL MEAN	1.02	.97	1.03
HIGHEST ANNUAL MEAN			1.09
LOWEST ANNUAL MEAN			.97
HIGHEST DAILY MEAN	33 Sep 21	39 Mar 15	222 May 13 1987
LOWEST DAILY MEAN	.01 Feb 24	.05 Jan 25	.00 Apr 20 1982
ANNUAL SEVEN-DAY MINIMUM	.05 Jan 6	.10 Jan 19	.00 Apr 20 1982
INSTANTANEOUS PEAK FLOW		599 Aug 25	1230 Jul 14 1990
INSTANTANEOUS PEAK STAGE		2.92 Aug 25	4.50 Jul 14 1990
ANNUAL RUNOFF (AC-FT)	739	705	749
10 PERCENT EXCEEDS	1.7	1.5	1.5
50 PERCENT EXCEEDS	.33	.45	.00
90 PERCENT EXCEEDS	.07	.14	.00

e Estimated



08329835 NORTH FLOODWAY CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'03", long 106°36'42", in SE¹/₄ sec.3, T.10 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on right bank of concrete-lined drainage channel, 300 ft downstream (north) of bridge on Candelaria Boulevard. NE, and 3,000 ft downstream from confluence of Campus Wash and Embudo Arroyo in Albuquerque.

DRAINAGE AREA.--40.0 mi².

PERIOD OF RECORD.--May 1982 to current year (seasonal records).

GAGE.--Water-stage recorder and concrete-lined channel. Elevation of gage is 5,110 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Some minor streamflow may exist on days where daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow monitoring equipment.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,250 ft³/s, July 9, 1988, gage height, 12.10 ft, from floodmarks from step-backwater analysis of channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 5,290 ft³/s, at 1713 hours July 25, gage height, 10.3 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	.00	.00	.00	12	62	.00
2	12	.00	---	---	---	---	.00	.00	.00	14	.00	.00
3	2.4	.00	---	---	---	---	.00	.00	.00	13	.00	.00
4	.00	.00	---	---	---	---	.00	3.2	.00	98	.00	.00
5	.00	.00	---	---	---	---	.00	.02	.76	.00	.00	.00
6	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
7	29	.00	---	---	---	---	.16	.38	.00	3.5	.00	.00
8	.19	.00	---	---	---	---	.00	.00	.00	28	.00	.00
9	.00	1.7	---	---	---	---	.00	.26	.00	49	.00	.00
10	1.4	.13	---	---	---	---	.00	.00	11	5.3	.00	.00
11	.00	34	---	---	---	.00	.00	.00	2.2	.00	.00	.00
12	2.2	7.7	---	---	---	.00	.00	.00	.00	.00	.43	.00
13	.00	---	---	---	---	.00	.00	.00	.00	.63	.00	.00
14	.00	---	---	---	---	13	.00	.00	.00	.00	.00	.00
15	.00	---	---	---	---	357	.00	.00	.00	.00	3.4	.21
16	.00	---	---	---	---	81	.48	.00	.00	100	.00	.31
17	.00	---	---	---	---	43	.00	.00	.00	8.2	.00	.00
18	.00	---	---	---	---	27	.00	.00	.00	.00	.00	.00
19	.00	---	---	---	---	.44	.00	.00	.00	.00	35	.00
20	.00	---	---	---	---	.62	.00	.00	.00	.00	2.8	.00
21	.00	---	---	---	---	.00	.00	.00	.00	.00	18	.00
22	.80	---	---	---	---	.00	.00	.00	.00	7.2	.00	.00
23	.00	---	---	---	---	.00	.00	.00	.00	13	4.8	.00
24	7.1	---	---	---	---	.00	.00	.00	.00	3.2	3.3	.00
25	.00	---	---	---	---	.00	.00	.00	.00	196	114	.00
26	.00	---	---	---	---	17	149	.00	.00	1.9	3.5	.00
27	.95	---	---	---	---	1.4	.00	.00	1.9	2.0	.00	.00
28	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
29	.00	---	---	---	---	.00	.00	.00	.00	5.7	.00	3.2
30	.00	---	---	---	---	2.4	.00	.00	.00	.20	.00	25
31	.00	---	---	---	---	2.6	---	.00	---	.61	1.2	---
TOTAL	56.04	---	---	---	---	---	149.64	3.86	15.86	561.44	248.43	28.72
MEAN	1.81	---	---	---	---	---	4.99	.12	.53	18.1	8.01	.96
MAX	29	---	---	---	---	---	149	3.2	11	196	114	25
MIN	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
AC-FT	111	---	---	---	---	---	297	7.7	31	1110	493	57

08329838 SOUTH FORK HAHN ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'16", long 106°34'04", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T.10 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on left bank 300 ft above Louisiana Boulevard, 900 ft south of Comanche Rd, and 1,700 ft north of Candelaria Rd, in Albuquerque.

DRAINAGE AREA.--2.03 mi².

PERIOD OF RECORD.--June 1978 to December 1983, June 1992 to September 1996 (seasonal records). October 1996 to current year.

GAGE.--Water-stage and rainfall recorder and concrete lined channel. Elevation of gage is 5,300 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to 1983 at site 300 ft downstream on Louisiana Boulevard bridge, at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Some minor streamflow may exist on days where daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow monitoring equipment. Recording rain gage at station. See tabulation below for monthly precipitation in inches.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,150 ft³/s, May 11, 1994, gage height, 4.42 ft, from step-backwater analysis of concrete lined stream channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 476 ft³/s, at 1727 hours, Aug. 1, gage height, 3.40 ft; no flow most of time.

REVISIONS.--The maximum discharge reported for water year 1994 has been revised to 1,150 ft³/s, May 11, 1994, gage height 4.42 ft, supersedes figures published in the 1994 report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.00	.08	.10	.05	.01	.16	.10	.10	.97	8.1	.07
2	3.7	.00	2.5	.16	.14	.14	.26	.14	.09	.08	.19	.08
3	.09	.05	.77	.03	.17	.15	.26	.15	.10	.10	.13	.10
4	.00	.05	.12	.04	.90	.15	.04	.19	.07	1.6	.08	.09
5	.00	.03	.09	.12	.49	.16	.09	.17	.08	.01	.12	.00
6	.06	.10	.00	.23	.13	.07	.17	.14	.01	.09	.11	.01
7	.62	.09	.43	.30	.04	1.4	.23	.16	.00	.05	.16	.09
8	.06	.03	.15	.12	1.1	.03	.14	.11	.11	.15	.00	.10
9	.05	.01	.19	.26	.29	.18	.19	.00	.10	.62	.02	.08
10	.05	.04	.12	.03	.08	.14	.10	.00	.43	.22	.13	.08
11	.00	1.0	.66	.94	.03	.14	.00	.10	.17	.02	.08	.08
12	.00	1.4	.60	.09	.03	.16	.11	.08	.10	.01	.17	.03
13	.06	.71	.01	.13	.03	.14	.24	.10	.01	.12	.12	.02
14	.07	.47	.01	.19	.02	.76	.10	.10	.01	.12	.08	.10
15	.07	1.4	.09	.19	3.2	8.5	.13	.10	.10	.09	.36	.23
16	.04	.16	.83	.03	.15	3.9	.22	.00	.10	2.3	.05	.11
17	.05	.14	.06	.01	.07	.91	.08	.00	.07	.33	.12	.07
18	.00	.16	.84	.01	.03	1.3	.02	.12	.08	.01	.11	.11
19	.00	.09	.05	.16	.05	.42	.15	.15	.07	.08	.35	.00
20	.07	.13	.62	.08	.10	.09	.19	.13	.01	.07	.17	.01
21	.03	.06	.71	.09	.01	.06	.11	.11	.01	.08	1.1	.08
22	.13	.01	.12	.18	.01	.06	.13	.11	.12	5.9	.02	.07
23	.07	.14	1.6	.18	.12	.10	.22	.00	.07	.31	.01	.07
24	.31	.10	.05	.16	.16	.15	.12	.11	.07	.19	1.4	.07
25	.01	.08	.03	.01	.15	.14	.03	.11	.07	.15	1.6	.10
26	.01	.04	.05	.20	.16	.80	6.3	.08	.04	.01	.23	.00
27	.04	.53	e.05	.12	.13	.20	.51	.08	.00	.20	.12	.00
28	.05	.06	e.05	.15	.05	.07	.29	.08	.01	.19	.10	.09
29	.07	.01	e.20	.20	---	.16	.21	.07	.10	.63	.03	.34
30	.05	.01	.65	.11	---	.38	.28	.00	.08	.21	.01	.57
31	.06	---	.13	.01	---	.16	---	.04	---	.10	.10	---
TOTAL	5.88	7.10	11.86	4.63	7.89	21.03	11.08	2.83	2.38	15.01	15.37	2.85
MEAN	.19	.24	.38	.15	.28	.68	.37	.091	.079	.48	.50	.095
MAX	3.7	1.4	2.5	.94	3.2	8.5	6.3	.19	.43	5.9	8.1	.57
MIN	.00	.00	.00	.01	.01	.01	.00	.00	.00	.01	.00	.00
AC-FT	12	14	24	9.2	16	42	22	5.6	4.7	30	30	5.7
(+)	0.65	0.77	0.96	0.14	1.01	1.72	0.95	0.04	0.14	1.64	1.33	0.17

CAL YR 1997 TOTAL 204.59 MEAN .56 MAX 22 MIN .00 AC-FT 406
WTR YR 1998 TOTAL 107.91 MEAN .30 MAX 8.5 MIN .00 AC-FT 214

e Estimated

(+) Total rainfall accumulation in inches.

08329839 NORTH FORK HAHN ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'37", long 106°34'04", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T.10 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on right bank 200 ft above Louisiana Boulevard, 1,150 ft north of Comanche Rd, and 1,450 ft south of Montgomery Boulevard, in Albuquerque.

DRAINAGE AREA.--1.51 mi².

PERIOD OF RECORD.--May 1979 to December 1983, June 1992 to September 1996 (seasonal records). October 1996 to current year.

GAGE.--Water-stage and rainfall recorder and concrete lined channel. Elevation of gage is 5,290 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to 1983 at site 200 ft downstream on Louisiana Boulevard bridge, at different datum.

REMARKS.--Records good. Some minor streamflow may exist on days where daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow monitoring equipment. Recording rain gage at station. See tabulation below for monthly precipitation in inches.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 439 ft³/s, Aug. 14, 1980, gage height, 1.94 ft, from step-backwater analysis of concrete lined stream channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 29.0 ft³/s, at 1442 hours, July 22, gage height, 1.28 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.71	.00	.00	.00	.00	.00	.00	.20	.00
2	.17	.00	.09	.70	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.70	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.38	.03	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.29	.00	.00	.00	.00	.00	.00	.00	.00
7	.14	.00	.00	.70	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.13	.15	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.07	.41	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.70	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.01	.71	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.15	.00	.70	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.40	.00	.22	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	1.0	.01	.00	.85	.88	.00	.00	.00	.00	.04	.00
16	.00	.70	.00	.00	.29	.49	.00	.00	.00	.00	.00	.00
17	.00	.70	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00
18	.00	.53	.02	.00	.00	.03	.00	.00	.00	.00	.00	.00
19	.00	.04	.44	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.38	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.17	.00	.00	.00	.00	.00	.00	.00	.04	.00
22	.00	.00	.05	.00	.00	.00	.00	.00	.00	.26	.00	.00
23	.00	.00	.38	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.70	.00	.00	.00	.00	.00	.00	.00	.22	.00
25	.00	.00	.70	.00	.00	.00	.00	.00	.00	.00	.14	.00
26	.00	.00	.51	.00	.00	.00	.31	.00	.00	.00	.00	.00
27	.00	.00	.25	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.29	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.29	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.70	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.31	3.67	4.99	6.04	1.73	1.47	0.31	0.00	0.00	0.26	0.64	0.00
MEAN	.010	.12	.16	.19	.062	.047	.010	.000	.000	.008	.021	.000
MAX	.17	1.0	.70	.71	.85	.88	.31	.00	.00	.26	.22	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.6	7.3	9.9	12	3.4	2.9	.6	.00	.00	.5	1.3	.00
(+)	0.36	0.98	1.13	0.14	1.05	1.71	0.97	0.00	0.15	1.59	1.16	0.21

CAL YR 1997 TOTAL 10.81 MEAN .030 MAX 1.0 MIN .00 AC-FT 21
WTR YR 1998 TOTAL 19.42 MEAN .053 MAX 1.0 MIN .00 AC-FT 39

(+) Total rainfall accumulation in inches.

08329840 HAHN ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'33", long 106°35'23", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.2, T.10 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, 860 ft below San Mateo Boulevard Bridge on right bank, 750 ft north of Comanche Road, and 2,050 ft south of Montgomery Boulevard in Albuquerque.

DRAINAGE AREA.--4.23 mi².

PERIOD OF RECORD.--June 1978 to September 1996 (seasonal records). October 1996 to current year.

GAGE.--Water-stage and rainfall recorder and concrete-lined channel. Elevation of gage is 5,190 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to 1992 at site on downstream side of San Mateo Boulevard Bridge, at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Some minor streamflow may exist on days where daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow monitoring equipment. Recording rain gage at station. Development within basin is predominantly residential, but there are some commercial areas. See tabulation below for monthly precipitation in inches.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080 ft³/s, Aug. 14, 1980, gage height, 2.54 ft, from rating curve extended above 10 ft³/s on basis of step-forward analysis of channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 538 ft³/s, at 1450 hours, July 22, gage height, 2.25, from rating curve developed by step-backwater analysis (theoretical); no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	.04	.59	1.4	.10	.00	1.1	.27	2.3	4.4	13	.42
2	9.0	.01	14	1.1	.59	.95	1.9	.17	1.0	1.9	1.1	.44
3	.13	.10	3.4	.46	.74	.95	2.0	.11	.54	2.5	.75	.48
4	.00	.05	.52	.46	5.2	1.1	.18	.27	.50	14	.26	.34
5	.00	.00	.22	.91	2.7	1.2	.55	.59	.69	.39	.58	.00
6	.10	.17	.00	4.0	.49	.64	1.1	.26	.34	.81	.67	.09
7	4.8	.05	2.1	1.1	.16	14	1.3	.35	.06	.27	.81	.52
8	.12	.08	.84	2.4	5.5	.34	.95	.35	.77	2.4	.08	.65
9	.07	.00	1.1	4.6	2.8	.34	1.2	.03	.81	5.0	.55	.44
10	.15	.15	1.4	4.6	1.7	.49	.55	.05	2.9	1.0	1.7	.50
11	.00	5.2	4.3	6.6	.53	.58	.00	.39	.64	.10	1.1	.43
12	.01	7.6	5.7	.19	.52	.88	.23	.37	.45	.01	.87	.35
13	.15	3.5	.67	.31	.47	.57	1.4	.56	.09	.45	.70	.38
14	.25	1.3	.59	.71	.82	3.1	.72	.41	.06	.52	.24	.70
15	.25	6.3	1.3	.83	20	39	.84	.34	.47	.56	1.9	1.2
16	.15	.09	6.9	.17	.07	15	1.5	.08	.60	8.5	.48	.77
17	.24	.33	.95	.00	.05	3.0	.54	.09	.25	1.1	.75	.50
18	.00	.74	7.1	.00	.04	5.4	.07	.68	.28	.00	.72	.59
19	.00	.37	.84	.25	.00	1.2	.77	.69	.28	.19	2.3	.17
20	.35	.54	4.0	.26	.39	.26	1.0	.91	.06	.34	2.4	.05
21	.18	.28	2.9	.17	.02	.06	.32	.65	.14	.24	6.9	.61
22	1.2	.02	1.2	.32	.00	.03	.30	.75	1.1	10	.28	.43
23	.50	.46	9.6	.03	.19	.30	.72	.42	.40	1.9	.19	.91
24	2.2	1.1	.35	.00	.64	.38	.22	1.4	.58	.86	8.1	.83
25	.02	1.1	.00	.00	.64	.50	.00	1.9	.57	.81	12	1.1
26	.06	.19	e.00	.49	.73	4.5	24	1.4	.55	.36	1.5	.11
27	.91	3.5	e.1	.36	.46	.58	.75	1.8	.20	1.1	.85	.06
28	.92	.24	.12	.32	.09	.30	.40	1.9	.87	.74	.67	1.1
29	.75	.01	e.1	.41	---	1.5	.42	2.0	2.0	5.8	.07	2.7
30	.79	.00	7.2	.25	---	2.5	.47	1.6	.82	3.8	.26	1.9
31	1.3	---	2.3	.00	---	1.1	---	1.8	---	3.1	.65	---
TOTAL	25.48	33.52	80.39	32.70	45.64	100.75	45.50	22.59	20.32	73.15	62.43	18.77
MEAN	.82	1.12	2.59	1.05	1.63	3.25	1.52	.73	.68	2.36	2.01	.63
MAX	9.0	7.6	14	6.6	20	39	24	2.0	2.9	14	13	2.7
MIN	.00	.00	.00	.00	.00	.00	.00	.03	.06	.00	.07	.00
AC-FT	51	66	159	65	91	200	90	45	40	145	124	37
(+)	0.42	1.01	0.75	0.00	0.74	1.62	0.67	0.00	0.03	1.58	1.16	0.20

CAL YR 1997 TOTAL 487.03 MEAN 1.33 MAX 25 MIN .00 AC-FT 966
WTR YR 1998 TOTAL 561.24 MEAN 1.54 MAX 39 MIN .00 AC-FT 1110

e Estimated

(+) Total rainfall accumulation in inches.

08329860 GRANT LINE ARROYO AT VILLA DEL OSO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°08'04", long 106°34'16", in SE¹/₄SE¹/₄ sec.36, T.11 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on left bank of rock-lined channel, and 60 ft west of northwest corner of apartment parking lot at 4215 Louisiana Boulevard NE in Albuquerque.

DRAINAGE AREA.--0.052 mi².

PERIOD OF RECORD.--June 1976 to July 1998 (discontinued) seasonal record.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5,300 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Recording rain gage at station. Development within basin is predominantly residential. See tabulation below for monthly precipitation in inches. No flow most of time.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34 ft³/s, Aug. 1, 1982, gage height, 2.14 ft, from rating curve extended above 5.0 ft³/s on basis of slope-area measurements at gage height 2.08; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 2.6 ft³/s, at 1835 hours Oct. 7, gage height, 1.40 ft. No flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	.00	.00	.00	.00	---	---
2	.01	.00	---	---	---	---	.00	.00	.00	.00	---	---
3	.00	.00	---	---	---	---	.00	.00	.00	.00	---	---
4	.00	.00	---	---	---	---	.00	.00	.00	.11	---	---
5	.00	.00	---	---	---	---	.00	.00	.00	.00	---	---
6	.00	---	---	---	---	---	.00	.00	.00	.00	---	---
7	.04	---	---	---	---	---	.00	.00	.00	---	---	---
8	.00	---	---	---	---	---	.00	.00	.00	---	---	---
9	.00	---	---	---	---	---	.00	.00	.00	---	---	---
10	.00	---	---	---	---	---	.00	.00	.01	---	---	---
11	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
12	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
13	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
14	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
15	.00	---	---	---	---	.18	.00	.00	.00	---	---	---
16	.00	---	---	---	---	.05	.00	.00	.00	---	---	---
17	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
18	.00	---	---	---	---	.01	.00	.00	.00	---	---	---
19	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
20	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
21	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
22	.00	---	---	---	---	.00	.00	.01	.00	---	---	---
23	.00	---	---	---	---	.00	.00	.04	.00	---	---	---
24	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
25	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
26	.00	---	---	---	---	.00	.11	.00	.00	---	---	---
27	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
28	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
29	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
30	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
31	.00	---	---	---	---	.00	---	.00	---	---	---	---
TOTAL	0.05	---	---	---	---	---	0.11	0.05	0.01	---	---	---
MEAN	.002	---	---	---	---	---	.004	.002	.000	---	---	---
MAX	.04	---	---	---	---	---	.11	.04	.01	---	---	---
MIN	.00	---	---	---	---	---	.00	.00	.00	---	---	---
AC-FT	.1	---	---	---	---	---	.2	.1	.02	---	---	---
(+)	0.48	1.10	1.32	0.18	0.97	2.06	0.98	0.00	0.21	1.75	1.24	0.27

(+) Total rainfall accumulation in inches.

08329872 PINO ARROYO AT VENTURA BOULEVARD AT ALBUQUERQUE, NM.

LOCATION.--Lat 35°09'16", long 106°32'22", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on left bank in Tancan Country Club, and 30 ft upstream from Ventura Boulevard in Albuquerque.

DRAINAGE AREA.--5.40 mi².

PERIOD OF RECORD.--August 1990 to September 1996 (seasonal records). October 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,490 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. See tabulation below for monthly precipitation in inches.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 126 ft³/s, July 23, 1992, gage height, 1.98 ft, from rating curve extended above 12 ft³/s on basis of slope-area measurement of peak flow; no flow part of many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48 ft³/s, at 2215 hours March 15, gage height, 1.52 ft, from rating curve extended above 12 ft³/s, on basis of slope-area measurement of peak flow; no flow of many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.04	.04	.04	e.05	e.05	.12	.09	.13	.17	.34	.12
2	1.7	.05	.44	.05	e.03	e.05	.10	.11	.11	.17	.14	.12
3	.12	.08	.20	.03	.01	e.05	.06	.11	.11	.13	.18	.11
4	.07	.10	.10	.02	.07	e.05	.10	.10	.11	.46	.24	.12
5	.14	.13	.11	.05	.05	e.05	.11	.13	.14	.11	.19	.10
6	.17	.09	.06	.03	.02	e.10	.12	.08	.11	.17	.17	.11
7	.51	.23	.13	.03	.01	e.15	.12	.07	.12	.15	.12	.13
8	.12	.07	.09	.03	.12	e.10	.09	.07	.14	.17	.10	.10
9	.08	.06	.05	.02	.08	e.10	.07	.07	.11	.24	.08	.11
10	.09	.11	.04	.03	.08	e.10	.11	.06	.28	.13	.10	.11
11	.12	1.0	.12	.11	.09	e.10	.04	.10	.13	.12	.13	.13
12	.16	1.5	.06	.04	.08	e.15	.08	.08	.16	.12	.15	.10
13	.12	.59	.05	.05	.07	.15	.09	.12	.15	.15	.12	.11
14	.09	.17	.05	e.05	.07	.25	.07	.10	.14	.16	.13	.14
15	.03	.26	.06	e.05	.49	3.0	.04	.14	.17	.19	.10	.30
16	.06	.14	.04	e.05	.10	2.4	.16	.11	.18	.52	.11	.12
17	.08	.15	.04	e.05	.03	e.25	.04	.12	.16	.30	.12	.13
18	.05	.30	.04	e.05	.06	e.25	.03	.14	.20	.23	.12	.15
19	.05	.07	.03	e.05	e.03	e.10	.02	.17	.23	.18	.15	.17
20	.10	.08	.15	e.05	e.05	e.10	.13	.12	.15	.21	.13	.20
21	.18	.05	.19	e.05	e.05	e.05	.11	.12	.13	.24	.14	.23
22	.14	.06	.11	e.05	e.05	.03	.14	.13	.12	.63	.11	.19
23	.06	.02	.35	e.05	e.05	.04	.14	.11	.10	.22	.12	.16
24	.06	.05	.19	e.05	e.05	.05	.14	.13	.13	.24	.25	e.15
25	.10	.13	.09	e.05	e.05	.07	.15	.09	.12	.19	.69	.17
26	.04	.08	e.05	e.05	e.05	.17	1.5	.13	.11	.20	.20	.10
27	.06	.11	e.05	e.05	e.05	.04	.06	e.13	.11	.37	.16	.11
28	.10	.02	e.05	e.05	e.05	.02	.05	e.13	.10	.14	.16	.10
29	.17	.02	e.05	e.05	---	.06	.12	e.13	.14	.13	.13	.15
30	.09	.03	.06	e.05	---	.07	.08	e.13	.15	.17	.18	.17
31	.07	---	.04	e.05	---	.09	---	e.13	---	.18	.15	---
TOTAL	5.13	5.79	3.13	1.43	1.99	8.24	4.19	3.45	4.24	6.79	5.21	4.21
MEAN	.17	.19	.10	.046	.071	.27	.14	.11	.14	.22	.17	.14
MAX	1.7	1.5	.44	.11	.49	3.0	1.5	.17	.28	.63	.69	.30
MIN	.03	.02	.03	.02	.01	.02	.02	.06	.10	.11	.08	.10
AC-FT	10	11	6.2	2.8	3.9	16	8.3	6.8	8.4	13	10	8.4
(+)	0.69	1.14	0.93	0.13	0.66	1.68	0.59	0.00	0.19	0.93	0.67	0.24

CAL YR 1997 TOTAL 85.12 MEAN .23 MAX 6.4 MIN .00 AC-FT 169
WTR YR 1998 TOTAL 53.80 MEAN .15 MAX 3.0 MIN .01 AC-FT 107

e Estimated

(+) Total rainfall accumulation in inches.

08329880 ACADEMY ACRES DRAIN AT ALBUQUERQUE, NM

LOCATION.--Lat 35°09'02", long 106°34'18", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.25, T.11 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on left bank of concrete-lined channel, 250 ft north of intersection of Esther Avenue and Burlison Drive, and 0.4 mi north of Academy Road in Albuquerque.

DRAINAGE AREA.--0.124 mi².

PERIOD OF RECORD.--June 1976 to current year (seasonal records).

GAGE.--Water-stage recorder and V-notch weir. Elevation of gage is 5,310 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Recording rain gage at station. The basin is primarily urban residential. Some minor streamflow may exist on days where daily mean discharges have been recorded as zero due to the short duration of peak flows. See tabulation below for monthly precipitation in inches. No flow most of time.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103 ft³/s, Aug. 3, 1978, gage height, 4.09 ft, from rating curve extended above 10 ft³/s on basis of slope-area measurement of peak flow; no flow most time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 21 ft³/s, at 1825 hours Aug. 25, gage height, 2.91 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
2	.13	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
3	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
4	.00	.00	---	---	---	---	.00	.00	.00	.44	.00	.00
5	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
6	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
7	.16	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
8	.00	.00	---	---	---	---	.00	.00	.00	.11	.00	.00
9	.00	.00	---	---	---	---	.00	.00	.00	.09	.00	.00
10	.00	.00	---	---	---	---	.00	.00	.03	.00	.00	.00
11	.00	.08	---	---	---	---	.00	.00	.00	.00	.00	.00
12	.00	.12	---	---	---	---	.00	.00	.00	.00	.01	.00
13	.00	.01	---	---	---	.00	.00	.00	.00	.00	.00	.00
14	.00	---	---	---	---	.01	.00	.00	.00	.00	.00	.00
15	.00	---	---	---	---	.70	.00	.00	.00	.00	.00	e.08
16	.00	---	---	---	---	.25	.00	.00	.00	.06	.00	.00
17	.00	---	---	---	---	.00	.00	.00	.00	.04	.00	.00
18	.00	---	---	---	---	.05	.00	.00	.00	.00	.00	.00
19	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
20	.00	---	---	---	---	.00	.00	.00	.00	.01	.00	.00
21	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
22	.01	---	---	---	---	.00	.00	.00	.00	.05	.00	.00
23	.00	---	---	---	---	.00	.00	.00	.00	.01	.00	.00
24	.00	---	---	---	---	.00	.00	.00	.00	.00	.06	.00
25	.00	---	---	---	---	.00	.00	.00	.00	.00	.28	.00
26	.00	---	---	---	---	.01	.41	.00	.00	.00	.00	.00
27	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
28	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
29	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
30	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.01
31	.00	---	---	---	---	.00	---	.00	---	.00	.00	---
TOTAL	0.30	---	---	---	---	---	0.41	0.00	0.03	0.81	0.35	0.09
MEAN	.010	---	---	---	---	---	.014	.000	.001	.026	.011	.003
MAX	.16	---	---	---	---	---	.41	.00	.03	.44	.28	.08
MIN	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
AC-FT	.6	---	---	---	---	---	.8	.00	.06	1.6	.7	.2
(+)	0.68	1.18	0.96	0.17	0.81	2.03	0.80	0.00	0.16	1.99	0.91	0.17

e Estimated

(+) Total rainfall accumulation in inches.

RIO GRANDE BASIN

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM

LOCATION.--Lat 35°11'58", long 106°35'53", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on left bank 0.5 mi upstream from Edith Boulevard, 1.1 mi upstream from mouth, and 1.2 mi northeast of Alameda.

DRAINAGE AREA.--87.9 mi²

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1968 to current year (no winter records in water years 1969-89).

GAGE.--Water-stage recorder with Isco flow meter and concrete-lined channel. Elevation of gage is 5,015 ft above National Geodetic Vertical Datum of 1929, from U.S. Army Corps of Engineers plan and profile map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Low flow values of 2.0 ft³/s or less are obtained from gaging station (08329914), 500 ft downstream. Floodway channel intercepts flow of numerous arroyos in northeast Albuquerque and discharges into the Rio Grande at a point 1.6 mi north of Alameda.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.74	.46	e.48	.96	.68	e1.0	e.70	.57	.61	18	e62	1.5
2	68	.37	37	.87	.46	e.75	e.40	.58	.61	5.1	.83	1.5
3	4.6	.41	.88	.50	e.45	e.65	.22	.58	.62	16	.83	1.5
4	e1.2	.53	e1.0	.34	8.9	e.60	e.20	e3.2	.62	105	.83	1.5
5	e1.0	.45	e.75	.34	4.6	e.62	e.25	.59	.61	e.70	.83	1.5
6	e.75	.84	28	.34	e1.0	e.58	e.30	.59	.61	e.60	.83	1.5
7	75	.85	e.75	.56	e.75	18	e.35	.59	.61	e3.5	.83	1.5
8	5.9	.33	e.60	.32	11	e1.0	.37	.59	.61	3.1	.83	1.5
9	1.2	.83	e.58	.25	26	e.70	.40	.59	.61	92	.83	1.5
10	1.6	.45	e.57	.20	e1.0	e.60	.36	.59	1.9	25	.83	1.5
11	1.2	e34	.56	2.7	e.75	e.45	.37	.59	22	.75	.83	1.5
12	5.1	e7.7	e.55	.57	e.50	e.40	.40	.59	e.70	e.60	.83	1.5
13	2.8	e5.0	e.52	.40	e.48	e.40	.57	.59	e.60	e.60	2.3	1.5
14	.48	1.8	e.50	.43	e.45	10	1.6	.59	2.2	e.61	.83	1.5
15	.51	e3.3	e.48	.26	27	342	1.2	6.6	e.70	.37	e3.4	1.8
16	.54	e8.8	e.50	.45	e1.0	78	.82	2.1	e.60	e100	3.0	1.5
17	.57	.87	e.47	.56	e.75	94	.54	.59	e.60	e8.2	.83	1.5
18	.65	.45	e.45	.40	e.60	32	.46	.60	e.61	e.83	.83	1.5
19	.62	e.44	e.48	.38	e.55	.50	.39	.60	e.61	.83	.67	1.5
20	.54	e.44	e.45	.32	e.52	.14	.47	.60	e.60	.83	39	1.5
21	.63	e.42	e.46	.38	e.50	.09	.43	.60	e.60	.82	35	1.5
22	.99	e.43	e.50	.31	e.48	.85	.43	.60	e.60	e7.2	.83	1.5
23	1.6	e.44	e.55	.39	e.45	35	.43	.60	e.61	e13	4.9	1.0
24	10	e.42	e.60	.21	e.45	e.08	.39	.60	e.60	e3.2	16	.76
25	.90	e.43	.82	.10	e.46	e.08	.53	.60	e.61	e200	253	.76
26	.49	e.42	1.4	.10	e.44	9.6	159	.60	e.60	e1.9	21	.76
27	.66	12	2.2	.80	e.43	12	13	.60	e.60	e2.0	.83	.76
28	.83	e1.0	2.2	1.2	9.7	e.70	1.1	.61	e.60	.83	1.3	.76
29	.52	e.75	1.7	1.2	---	e.50	.55	.61	e.61	e5.7	1.5	4.0
30	.52	e.50	.75	1.2	---	e2.4	.56	.61	e.59	.83	1.5	50
31	.52	---	1.5	1.6	---	e2.6	---	.61	---	.83	1.5	---
TOTAL	190.66	85.13	88.25	18.64	100.35	646.29	186.79	28.56	42.65	618.93	459.35	92.10
MEAN	6.15	2.84	2.85	.60	3.58	20.8	6.23	.92	1.42	20.0	14.8	3.07
MAX	75	34	37	2.7	27	342	159	6.6	22	200	253	50
MIN	.48	.33	.45	.10	.43	.08	.20	.57	.59	.37	.67	.76
AC-FT	378	169	175	37	199	1280	370	57	85	1230	911	183

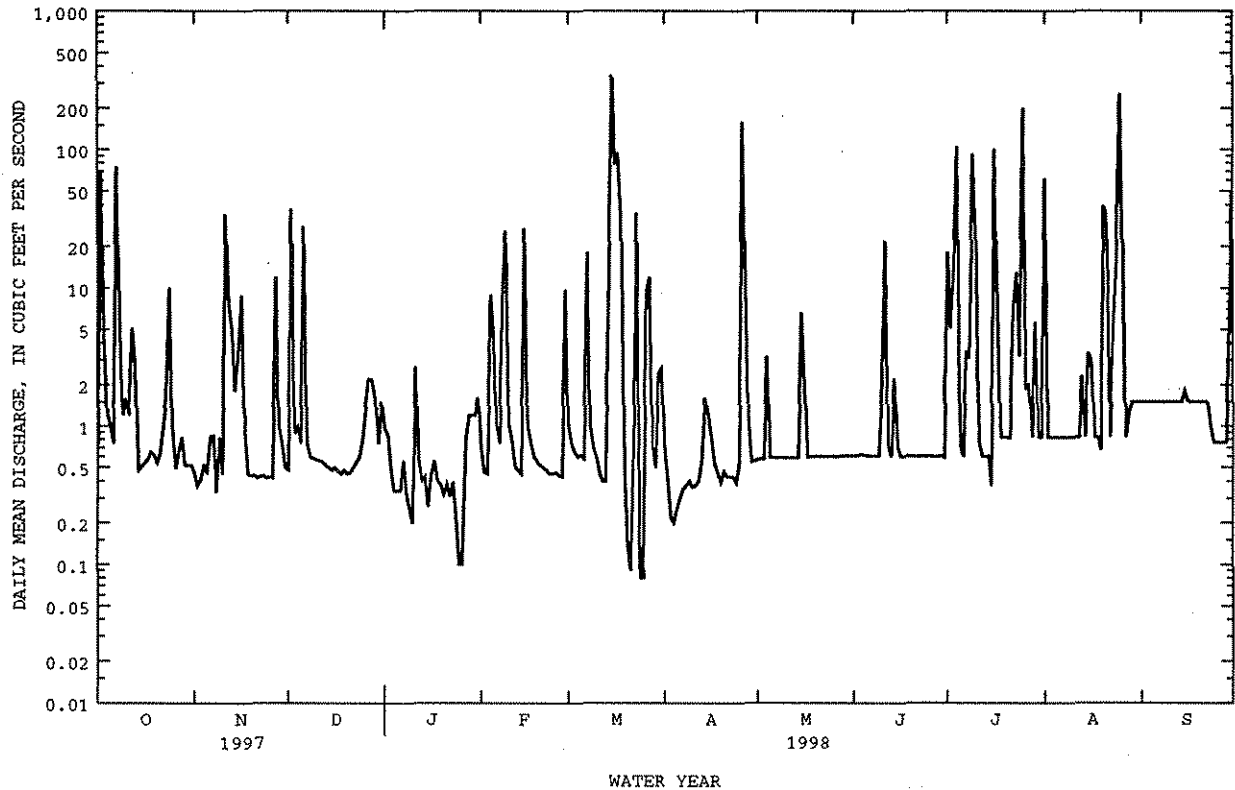
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1998, BY WATER YEAR (WY)

	MEAN	10.6	5.94	4.17	6.42	3.15	5.26	6.70	7.87	7.53	21.2	24.7	13.5
MAX	38.2	24.5	28.5	39.9	19.7	20.8	42.9	41.2	36.2	75.0	53.4	40.1	
(WY)	1985	1995	1994	1995	1993	1998	1997	1994	1988	1991	1994	1991	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	2.78	.82	.73
(WY)	1976	1970	1973	1969	1969	1969	1978	1974	1975	1980	1989	1968	

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1968 - 1998	
ANNUAL TOTAL	6990.28		2557.70		10.8	
ANNUAL MEAN	19.2		7.01		21.6	1994
HIGHEST ANNUAL MEAN					3.12	1969
LOWEST ANNUAL MEAN					1060	Aug 14 1980
HIGHEST DAILY MEAN	926	Jul 28	342	Mar 15		
LOWEST DAILY MEAN	.25	Jan 26	.08	Mar 24	.00	Jul 1 1968
ANNUAL SEVEN-DAY MINIMUM	.27	Jan 24	.26	Jan 20	.00	Jul 1 1968
INSTANTANEOUS PEAK FLOW			5600	Jul 25	^a 11000	Aug 14 1980
INSTANTANEOUS PEAK STAGE			6.80	Jul 25	10.40	Aug 14 1980
ANNUAL RUNOFF (AC-FT)	13870		5070		7850	
10 PERCENT EXCEEDS	36		9.8		20	
50 PERCENT EXCEEDS	.81		.68		.00	
90 PERCENT EXCEEDS	.41		.40		.00	

e Estimated

^a From rating curve extended above 2,900 ft³/s.

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982-83, 1991 to current year.

REMARKS.--Selected composite samples were collected with an automatic peristaltic pump sampler that was activated whenever the flow stage exceeded 1.5 feet. Samples were pumped into a refrigerated chamber, manually retrieved within 12 hours, and expeditiously processed for delivery to the analytical laboratories. Sediment samples were collected with a automatic pump sampler at fixed times during an event.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	ENDING TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
JUL	16...	1831	--	860	135	8.6	--	--	--	--	--
JUL	16-16	1831	2111	--	105	8.6	--	60	39	14	.99
	16...	1840	--	860	203	--	--	--	--	--	--
	16...	1855	--	830	232	--	--	--	--	--	--
	16...	1910	--	740	209	--	--	--	--	--	--
	16...	1925	--	516	180	--	--	--	--	--	--
	16...	1940	--	400	183	--	--	--	--	--	--
	16...	2000	--	300	187	--	--	--	--	--	--
	16...	2020	--	252	211	--	--	--	--	--	--
AUG	25...	1853	--	1750	94	9.0	19.0	--	--	--	--
	25...	1905	--	2000	171	--	--	--	--	--	--
AUG	25-25	1907	2131	--	84	8.8	--	--	--	--	--
	25...	1920	--	2950	169	--	--	--	--	--	--
	25...	1935	--	2500	184	--	--	--	--	--	--
	25...	1950	--	1860	146	--	--	--	--	--	--
	25...	2005	--	1530	160	--	--	--	--	--	--
	25...	2020	--	1210	155	--	--	--	--	--	--
	25...	2035	--	1070	171	--	--	--	--	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
JUL											
16...		--	--	--	--	--	--	--	--	--	--
JUL											
16-16		<1	36	8	48	<1	8	<.1	3	9	1
16...		--	--	--	--	--	--	--	--	--	--
16...		--	--	--	--	--	--	--	--	--	--
16...		--	--	--	--	--	--	--	--	--	--
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16...		--	--	--	--	--	--	--	--	--	--
16...		--	--	--	--	--	--	--	--	--	--
AUG											
25...		--	--	--	--	--	--	--	--	--	--
25...		--	--	--	--	--	--	--	--	--	--
AUG											
25-25		--	--	--	--	--	--	--	--	--	--
25...		--	--	--	--	--	--	--	--	--	--
25...		--	--	--	--	--	--	--	--	--	--
25...		--	--	--	--	--	--	--	--	--	--
25...		--	--	--	--	--	--	--	--	--	--
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25...		--	--	--	--	--	--	--	--	--	--
25...		--	--	--	--	--	--	--	--	--	--
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08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	ACE- NAPHTH- ENE TOTAL (UG/L) (34205)	ACRYLO- NITRILE TOTAL (UG/L) (34215)	ANTHRA- CENE TOTAL (UG/L) (34220)	BENZO B FLUOR- AN- THENE TOTAL (UG/L) (34230)	BENZO K FLUOR- AN- THENE TOTAL (UG/L) (34242)	BENZO- A- PYRENE TOTAL (UG/L) (34247)	DELTA BENZENE HEXA- CHLOR- IDE TOTAL (UG/L) (34259)	BIS(2- CHLORO- ETHYL) ETHER UNFLTRD RECOVER (UG/L) (34273)	BIS(2- CHLORO- ETHOXY) METHANE TOTAL (UG/L) (34278)	BIS(2- CHLORO- ISO- PROPYL) ETHER TOTAL (UG/L) (34283)	N-BUTYL BENZYL PHTHAL- ATE TOTAL (UG/L) (34292)	CHLORO- BENZENE TOTAL (UG/L) (34301)
JUL 16...	--	<5	--	--	--	--	--	--	--	--	--	<.4
JUL 16-16	<5	--	<5	E1	<10	E.6	<.09	<5	<5	<5	<5	--
AUG 25...	--	<5	--	--	--	--	--	--	--	--	--	<.4
AUG 25-25	<5	--	E.1	E1	E.6	E.9	<.090	<5	<5	<5	<5	--
DATE	CHLORO- ETHANE TOTAL (UG/L) (34311)	CHRY- SENE TOTAL (UG/L) (34320)	DIETHYL PHTHAL- ATE TOTAL (UG/L) (34336)	DI- METHYL PHTHAL- ATE TOTAL (UG/L) (34341)	ENDO- SULFAN SULFATE TOTAL (UG/L) (34351)	ENDO- SULFAN II TOTAL (UG/L) (34356)	ENDO- SULFAN- I WATER WHOLE REC (UG/L) (34361)	ENDRIN ALDE- HYDE TOTAL (UG/L) (34366)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FLUOR- ANTHENE TOTAL (UG/L) (34376)	FLUOR- ENE TOTAL (UG/L) (34381)	CYCLOPE NTADIEN HEXA- CHLORO- UNFLTRD RECOVER (UG/L) (34386)
JUL 16...	<.4	--	--	--	--	--	--	--	<.4	--	--	--
JUL 16-16	--	E.8	<5	<5	<.6	<.04	<.1	<.2	--	E1	<5	<20
AUG 25...	<.4	--	--	--	--	--	--	--	<.4	--	--	--
AUG 25-25	--	E1	<5	<5	<.6	<.040	<.1	<.2	--	E2	<5	<20
DATE	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (UG/L) (34396)	INDENO (1,2,3- CD) PYRENE TOTAL (UG/L) (34403)	ISO- PHORONE TOTAL (UG/L) (34408)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLOR- RIDE TOTAL (UG/L) (34418)	METHYL ENE CHLOR- RIDE TOTAL (UG/L) (34423)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (UG/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (UG/L) (34433)	N-NITRO -SODI- METHYL- AMINE TOTAL (UG/L) (34438)	BENZENE NITRO- WATER UNFLTRD RECOVER (UG/L) (34447)	PARA- CHLORO- META CRESOL TOTAL (UG/L) (34452)	PHENAN- THRENE TOTAL (UG/L) (34461)
JUL 16...	--	--	--	<.4	<.4	<.4	--	--	--	--	--	--
JUL 16-16	<5	E.5	<5	--	--	--	<5	<5	<5	<5	<30	E.7
AUG 25...	--	--	--	<.4	<.4	<.4	--	--	--	--	--	--
AUG 25-25	<5	E.5	<5	--	--	--	<5	<5	<5	<5	<30	E.7
DATE	PYRENE TOTAL (UG/L) (34469)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	BENZO- [GHI]- PERY- LENE TOTAL (UG/L) (34521)	BENZ(A) ANTHRA- CENE WATER UNFLTRD REC (UG/L) (34526)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)
JUL 16...	--	<.4	<.4	<.4	<.4	<.4	<.4	<.4	--	--	<.4	<.4
JUL 16-16	E1	--	--	--	--	--	--	--	E.4	E.5	--	--
AUG 25...	--	<.4	<.4	<.4	<.4	<.4	<.4	<.4	--	--	<.4	<.4
AUG 25-25	E1	--	--	--	--	--	--	--	E.6	E.6	<5	--
DATE	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (UG/L) (34551)	1,2,5,6 -DIBENZ -ANTHRA- CENE TOTAL (UG/L) (34556)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	2- CHLORO- NAPH- THALENE TOTAL (UG/L) (34581)	2- CHLORO- PHENOL TOTAL (UG/L) (34586)	2- NITRO- PHENOL TOTAL (UG/L) (34591)	DI-N- OCTYL PHTHAL- ATE TOTAL (UG/L) (34596)	2,4-DI- CHLORO- PHENOL TOTAL (UG/L) (34601)	2,4-DI- METHYL- PHENOL TOTAL (UG/L) (34606)	2,4-DI- NITRO- TOLUENE TOTAL (UG/L) (34611)
JUL 16...	<.4	<.4	--	<.4	<.4	--	--	--	--	--	--	--
JUL 16-16	--	--	<10	--	--	<5	<5	<5	<10	<5	<5	<5
AUG 25...	<.4	<.4	--	<.4	<.4	--	--	--	--	--	--	--
AUG 25-25	--	<5	<10	<5	<5	<5	<5	<5	<10	<5	<5	<5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34699)	CIS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34704)	PENTA-CHLORO-PHENOL TOTAL (UG/L) (39032)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L) (39062)	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L) (39065)	CHLOR-DANE, TECH- NICAL TOTAL (UG/L) (39350)	BIS(2-ETHYL HEXYL) PHTHAL- ATE TOTAL (UG/L) (39100)	DI-N-BUTYL PHTHAL- ATE TOTAL (UG/L) (39110)	BENZI- DINE TOTAL (UG/L) (39120)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	P, P' DDT, TOTAL (UG/L) (39300)
JUL 16...	<.4	<.4	--	--	--	--	--	--	--	<.4	<.4	--
JUL 16-16	--	--	<30	<.1	<.1	.1	E2	<5	<40	--	--	<.1
AUG 25...	<.4	<.4	--	--	--	--	--	--	--	<.4	<.4	--
AUG 25-25	--	--	<30	<.1	<.1	.2	E5	<5	<40	--	--	<.1

DATE	AROCLOR	AROCLOR	AROCLOR	AROCLOR	AROCLOR	HEXA-	HEXA-	CIS-1,2	1,1-DI	2,2-DI
	1232	1242	1248	1254	1260	CHLORO-	CHLORO-	-DI-	CHLORO-	CHLORO-
	PCB	PCB	PCB	PCB	PCB	BENZENE	BUT-	ETHENE	PRO-	PRO-
	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	STYRENE	WAT, WH
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
	(39492)	(39496)	(39500)	(39504)	(39508)	(39700)	(39702)	(77093)	(77128)	(77168)
JUL										
16...	--	--	--	--	--	--	<.4	<.4	<.4	<.4
JUL										
16-16	<.1	.2	<.1	.1	<.1	<5	--	--	--	--
AUG										
25...	--	--	--	--	--	--	<.4	<.4	<.4	<.4
AUG										
25-25	<.1	<.1	<.1	<.1	<.1	<5	<5	--	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

08329911 NORTH CAMINO ARROYO AT SUNSET HILLS IN ALBUQUERQUE, NM

LOCATION.--Lat 35°11'41", long 106°32'02", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on right bank of concrete-lined arroyo, 10 feet above Holbrook Ave. Bridge over North Camino Arroyo. This is located approximately 100 feet north of intersection of Holbrook Ave. and Elena Drive, and 1.3 miles north of Paseo del Norte, on the northern edge of Albuquerque, NM.

DRAINAGE AREA.-- 2.064 mi².

PERIOD OF RECORD.--August 1997 to current year (seasonal records).

GAGE.--Water-stage recorder. Elevation of gage is 5,645 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6.6 ft³/s, August 25, 1998, gage height, 1.16 ft, no flow most of time.

EXTREMES FOR AUGUST TO SEPTEMBER 1997.--Maximum discharge during period, 2.0 ft³/s, Sept. 20, gage height, 1.09 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 6.6 ft³/s, Aug. 25, gage height, 1.16 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	.00	.00	.00	.00	.03	.00
2	.00	.00	---	---	---	---	.01	.00	.00	.00	.00	.00
3	.00	.00	---	---	---	---	.00	.00	.00	.01	.00	.00
4	.00	.00	---	---	---	---	.00	.00	.00	.03	.00	.00
5	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
6	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
7	.02	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
8	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
9	.00	.00	---	---	---	---	.00	.00	.00	.02	.00	.00
10	.00	.00	---	---	---	---	.00	.00	.02	.01	.00	.00
11	.00	.07	---	---	---	---	.00	.00	.00	.00	.00	.00
12	.00	.09	---	---	---	---	.00	.00	.00	.00	.00	.00
13	.00	.07	---	---	---	.00	.00	.00	.00	.00	.00	.00
14	.00	---	---	---	---	.03	.00	.00	.00	.00	.00	.00
15	.00	---	---	---	---	.50	.00	.00	.00	.00	.00	.00
16	.00	---	---	---	---	.23	.00	.00	.00	.01	.00	.00
17	.00	---	---	---	---	.09	.00	.00	.00	.01	.00	.00
18	.00	---	---	---	---	.13	.00	.00	.00	.00	.00	.00
19	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
20	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
21	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
22	.01	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
23	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
24	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
25	.03	---	---	---	---	.00	.00	.00	.00	.00	.21	.00
26	.00	---	---	---	---	.04	.15	.00	.00	.00	.00	.00
27	.00	---	---	---	---	.00	.00	.00	.00	.04	.00	.00
28	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
29	.00	---	---	---	---	.02	.00	.00	.00	.00	.00	.00
30	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	---	---	---	.00	---	.00	---	.00	.00	---
TOTAL	0.06	---	---	---	---	---	0.16	0.00	0.02	0.13	0.24	0.00
MEAN	.002	---	---	---	---	---	.005	.000	.001	.004	.008	.000
MAX	.03	---	---	---	---	---	.15	.00	.02	.04	.21	.00
MIN	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
AC-FT	.1	---	---	---	---	---	.3	.00	.04	.3	.5	.00

08329930 CORRALES RIVERSIDE DRAIN NEAR CORRALES, NM

LOCATION.--Lat. 35°12'19", long 106°38'30", T.11 N., R. 106 W., Town of Alameda Grant, Bernalillo County, Hydrologic Unit 13020203, located on the right bank of dredged drain, 1/4 mile above Alameda Blvd. Bridge on right bank of Rio Grande. Site is approximately 0.2 miles north of intersection of Coors Blvd. (State Hwy 448) and Alameda Blvd. (State Hwy 46).

PERIOD OF RECORD.--June 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,995 feet above National Geodetic Vertical datum of 1929, from topographic map.

REMARKS.--Records are fair prior to permanently opening culvert gates, which act as a control, till Mar. 3, 1998, after Mar. 3, records good.

EXTREMES FOR PERIOD OF RECORD.-- Maximum discharge, 207 ft³/s, July 28, 1997, gage height, 8.15 ft; base flows of approximately 20 ft³/s, from November to March.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 101 ft³/s, Aug. 25, gage height, 7.51 ft; base flows of approximately 20 ft³/s, from November to March.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	30	24	22	24	24	42	59	50	45	48	40
2	57	29	27	28	25	18	49	53	49	47	53	37
3	57	29	26	15	19	18	57	50	58	43	43	33
4	56	28	25	15	24	18	53	70	56	48	42	42
5	56	29	25	17	26	39	53	68	51	43	47	43
6	50	27	25	22	25	65	57	57	50	32	45	37
7	56	27	25	27	24	55	59	55	46	49	46	39
8	66	27	29	22	24	47	60	66	e50	51	45	40
9	68	27	26	24	24	44	58	70	e50	63	39	42
10	57	27	25	22	20	45	58	63	57	66	40	43
11	53	27	26	23	19	45	57	56	61	64	44	46
12	78	27	28	22	20	43	60	56	68	59	42	45
13	79	27	28	22	20	44	55	60	51	51	48	42
14	76	26	28	21	21	45	49	65	54	42	44	41
15	66	27	27	21	24	52	49	55	54	39	38	40
16	60	26	27	21	21	49	53	57	53	41	40	47
17	63	26	27	20	21	50	49	57	36	45	39	44
18	57	25	25	20	21	52	46	54	49	46	40	40
19	58	24	24	20	21	48	44	51	57	39	39	43
20	61	24	24	20	22	47	43	55	57	43	41	41
21	61	24	25	19	24	46	40	56	50	39	46	46
22	61	24	25	19	22	41	44	49	53	38	43	46
23	59	25	26	18	21	41	42	53	48	47	38	45
24	57	24	25	18	21	43	42	56	54	45	42	47
25	65	24	24	19	23	46	41	54	46	51	55	46
26	70	24	23	21	23	47	58	57	49	47	52	43
27	63	24	23	21	22	52	57	56	43	46	52	42
28	53	24	22	21	23	52	58	56	45	55	50	48
29	48	24	23	22	---	62	59	53	43	53	45	47
30	39	24	23	22	---	60	55	51	42	48	42	55
31	35	---	23	23	---	57	---	49	---	47	42	---
TOTAL	1839	780	783	647	624	1395	1547	1767	1530	1472	1370	1290
MEAN	59.3	26.0	25.3	20.9	22.3	45.0	51.6	57.0	51.0	47.5	44.2	43.0
MAX	79	30	29	28	26	65	60	70	68	66	55	55
MIN	35	24	22	15	19	18	40	49	36	32	38	33
AC-FT	3650	1550	1550	1280	1240	2770	3070	3500	3030	2920	2720	2560

CAL YR 1997 TOTAL 16794 MEAN 46.0 MAX 160 MIN 18 AC-FT 33310
WTR YR 1998 TOTAL 15044 MEAN 41.2 MAX 79 MIN 15 AC-FT 29840

e Estimated

08329931 CORRALES MAIN CANAL OUTFLOW AT ALBUQUERQUE, NM

LOCATION.--Lat 35°09'41", long 106°40'27", in SW $\frac{1}{4}$ of the SW $\frac{1}{4}$, Sec. 19, T. 11 N., R. 2 E., Bernalillo County, Hydrologic Unit 13020203, located on the right bank of the concrete-lined Main Canal and in the concrete box culvert which passes directly over the Corrales Riverside Drain. This is approximately $\frac{1}{4}$ mi east and 1000 feet north of the intersection of Coors Blvd. and La Orilla Road on the west side of Albuquerque.

PERIOD OF RECORD.--June 1996 to current year (seasonal records).

GAGE.--Water-stage recorder in concrete-lined box culvert. Elevation of gage is 4,990 feet above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Periods of missing record cannot be estimated, due to lack of upstream gages and the variable return flows received from irrigation run-off.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 111 ft³/s, Mar. 5, 1997, gage height 1.23 ft; no flow from approximately Nov. 15 to Mar. 1.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 69 ft³/s, at 1230 hours, Sept. 4, gage height, 1.00 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	2.6	---	---	---	---	---	e25	3.3	12	14	9.5
2	10	.06	---	---	---	---	---	24	14	6.9	10	7.7
3	15	.00	---	---	---	---	---	24	16	17	6.9	22
4	12	.00	---	---	---	---	---	13	e15	21	3.3	27
5	7.2	.00	---	---	---	---	---	7.2	e14	19	4.9	30
6	8.6	.00	---	---	---	---	---	8.2	e13	8.9	15	27
7	7.4	.00	---	---	---	---	---	15	e7.1	11	18	16
8	9.5	.00	---	---	---	---	---	14	e6.3	15	11	18
9	8.5	.00	---	---	---	---	---	21	e3.9	13	10	12
10	8.2	.00	---	---	---	---	---	14	3.3	20	16	24
11	8.4	1.9	---	---	---	---	---	14	14	15	33	38
12	7.9	4.4	---	---	---	---	---	12	19	12	5.6	18
13	5.0	5.3	---	---	---	---	---	14	12	9.5	31	21
14	3.0	.02	---	---	---	---	---	18	12	7.9	31	25
15	2.7	2.6	---	---	---	---	---	18	12	4.8	18	29
16	7.1	.10	---	---	---	---	---	21	14	13	11	36
17	14	.00	---	---	---	---	---	20	3.1	15	8.6	31
18	13	.00	---	---	---	---	---	20	16	12	1.9	31
19	15	.00	---	---	---	---	---	16	19	17	2.6	29
20	18	.00	---	---	---	---	---	14	14	16	11	26
21	13	.00	---	---	---	---	---	24	6.3	18	20	21
22	11	.00	---	---	---	---	---	18	7.1	17	23	18
23	12	.00	---	---	---	---	---	17	1.8	20	13	13
24	13	.00	---	---	---	---	---	25	9.5	18	15	24
25	9.4	.00	---	---	---	---	---	21	14	22	12	22
26	6.2	e.00	---	---	---	---	---	14	13	21	15	13
27	5.2	e.00	---	---	---	---	---	15	19	21	24	25
28	4.4	e.00	---	---	---	---	---	14	17	20	25	23
29	8.6	e.00	---	---	---	---	---	16	9.1	14	22	14
30	12	e.00	---	---	---	---	---	8.9	2.8	17	15	18
31	4.4	---	---	---	---	---	---	2.6	---	8.6	13	---
TOTAL	289.0	16.98	---	---	---	---	---	507.9	330.6	462.6	459.8	668.2
MEAN	9.32	.57	---	---	---	---	---	16.4	11.0	14.9	14.8	22.3
MAX	18	5.3	---	---	---	---	---	25	19	22	33	38
MIN	2.7	.00	---	---	---	---	---	2.6	1.8	4.8	1.9	7.7
AC-FT	573	34	---	---	---	---	---	1010	656	918	912	1330

e Estimated

08329935 ARROYO 19A AT ALBUQUERQUE, NM

LOCATION.--Lat 35°09'24", long 106°43'27", in NE¹/₄NE¹/₄ sec.28, T.11 N., R.2 E., Bernalillo County, Hydrologic Unit 13020203, on right bank 900 ft upstream from culvert under 81st Street, 1,200 ft south of city water tank, and 0.6 mi south of intersection of 81st Street and Atrisco Drive at Albuquerque.

DRAINAGE AREA.--1.50 mi².

PERIOD OF RECORD.--June 1977 to current year (seasonal records).

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 5,330 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 19, 1986 at site 450 ft downstream at different datum.

REMARKS.--Records good. Recording rain gage at station. The basin drains undeveloped semidesert terrain above the escarpment west of Albuquerque. See tabulation below for monthly precipitation in inches. No flow most of time.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100 ft³/s, Oct. 2, 1981, gage height, 4.03 ft, site and datum then in use, from slope-area measurement of peak flow; no flow most time.

EXTREMES FOR CURRENT YEAR.--No flow during water year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
2	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
3	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
4	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
5	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
6	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
7	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
8	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
9	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
10	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
11	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
12	.00	.00	---	---	---	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	---	---	---	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	---	---	---	.00	.00	.00	.00	.00	.00	.00
15	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
16	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
17	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
18	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
19	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
20	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
21	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
22	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
23	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
24	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
25	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
26	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
27	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
28	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
29	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
30	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	---	---	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	---	---	---	---	---	.000	.000	.000	.000	.000	.000
MAX	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
MIN	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
AC-FT	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
(+)	0.72	0.22	0.60	0.08	0.57	2.03	0.71	0.00	0.07	0.00	0.48	0.07

(+) Total rainfall accumulation in inches.

RIO GRANDE BASIN

08329936 TAYLOR RANCH DRAIN AT ALBUQUERQUE, NM

LOCATION.--Lat 35°08'56", long 106°42'03", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.11 N., R.2 E., Bernalillo County, Hydrologic Unit 13020203, on left bank of drainage outlet for Taylor Ranch subdivision, 120 ft west of intersection of Calle Nuestra and Cabrillo Circle, and 1,850 ft southwest of intersection of Montano Road and Valle Vista Drive in Albuquerque.

DRAINAGE AREA.--0.132 mi².

PERIOD OF RECORD.--August 1978 to July 1998 (discontinued) seasonal records.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 5,120 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Recording rain gage at station. The basin is primarily urban residential. See tabulation below for monthly precipitation in inches.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43 ft³/s, Sept. 8, 1980, gage height, 3.26 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 11 ft³/s, July 3, at 2200 hours, gage height, 1.92 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	.00	.00	.00	.00	---	---
2	.13	.00	---	---	---	---	.00	.00	.00	.00	---	---
3	.00	.00	---	---	---	---	.00	.00	.00	.19	---	---
4	.00	.00	---	---	---	---	.00	.00	.00	.06	---	---
5	.00	.00	---	---	---	---	.00	.00	.00	.03	---	---
6	.00	.00	---	---	---	---	.00	.00	.00	.00	---	---
7	.09	.00	---	---	---	---	.00	.00	.00	---	---	---
8	.01	.00	---	---	---	---	.00	.00	.00	---	---	---
9	.00	.00	---	---	---	---	.00	.00	.00	---	---	---
10	.00	.00	---	---	---	---	.00	.00	.00	---	---	---
11	.00	.02	---	---	---	---	.00	.00	.00	---	---	---
12	.00	.03	---	---	---	.00	.00	.00	.00	---	---	---
13	.00	.00	---	---	---	.00	.00	.00	.00	---	---	---
14	.00	.00	---	---	---	.03	.00	.00	.00	---	---	---
15	.00	---	---	---	---	.57	.00	.00	.00	---	---	---
16	.00	---	---	---	---	.11	.00	.00	.00	---	---	---
17	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
18	.00	---	---	---	---	.01	.00	.00	.00	---	---	---
19	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
20	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
21	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
22	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
23	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
24	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
25	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
26	.00	---	---	---	---	.03	.28	.00	.00	---	---	---
27	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
28	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
29	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
30	.00	---	---	---	---	.00	.00	.00	.00	---	---	---
31	.00	---	---	---	---	.00	---	.00	---	---	---	---
TOTAL	0.23	---	---	---	---	---	0.28	0.00	0.00	---	---	---
MEAN	.007	---	---	---	---	---	.009	.000	.000	---	---	---
MAX	.13	---	---	---	---	---	.28	.00	.00	---	---	---
MIN	.00	---	---	---	---	---	.00	.00	.00	---	---	---
AC-FT	.5	---	---	---	---	---	.6	.00	.00	---	---	---
(+)	0.86	0.89	1.10	0.11	0.79	2.97	0.95	0.00	0.08	3.18	0.54	0.02

(+) Total rainfall accumulation in inches.

08329938 LADERA ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°06'59", long 106°43'59", in Town of Atrisco Land Grant, Bernalillo County, Hydrologic Unit 13020203, on left bank, 0.25 mi northwest of City of Albuquerque water storage tank, on dirt road extension of Ouray Road, and 2.3 mi west of North Coors Road in Albuquerque.

DRAINAGE AREA.--0.34 mi².

PERIOD OF RECORD.--May 1981 to current year (seasonal records).

GAGE.--Water-stage recorder. Elevation of gage is 5,220 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 5, 1986 at site 0.2 mi downstream at different datum.

REMARKS.--Records fair. Recording rain gage at station. The basin is undeveloped semidesert terrain, part of which, is above the escarpment west of Albuquerque. See tabulation below for monthly precipitation in inches.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 182 ft³/s, Aug. 27, 1993, gage height, 4.11 ft, from step-backwater analysis of channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 4.0 ft³/s, Aug. 4, at 1627 hours, gage height, 2.45 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
2	.03	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
3	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
4	.00	.00	---	---	---	---	.00	.00	.00	.00	.04	.00
5	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
6	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
7	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
8	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
9	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
10	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
11	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
12	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
13	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
14	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
15	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
16	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
17	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
18	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
19	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
20	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
21	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
22	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
23	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
24	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
25	.00	---	---	---	---	.00	.00	.00	.00	.10	.00	.00
26	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
27	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
28	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
29	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
30	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	---	---	---	.00	---	.00	---	.00	.00	---
TOTAL	0.03	---	---	---	---	---	0.00	0.00	0.00	0.10	0.04	0.00
MEAN	.001	---	---	---	---	---	.000	.000	.000	.003	.001	.000
MAX	.03	---	---	---	---	---	.00	.00	.00	.10	.04	.00
MIN	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
AC-FT	.06	---	---	---	---	---	.00	.00	.00	.2	.08	.00
(+)	0.54	0.58	0.57	0.09	0.56	1.68	0.00	0.00	0.00	0.00	0.00	0.00

(+) Total rainfall accumulation in inches.

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.

WATER-DISCHARGE RECORDS

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 with satellite telemetry. 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. 15, 1982, to Sept. 20, 1983, at site 1.0 mi upstream at different datum.

REMARKS.--Water-discharge records good except for estimated daily discharges, which are poor. 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

COOPERATION.--Records for Albuquerque Riverside drain and Arenal, Armijo, and Atrisco canals provided by Middle Rio Grande Conservancy District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	1690	e1200	924	985	1040	1930	2540	2830	855	689	621
2	1880	1670	e1400	990	992	1040	1920	2790	3260	945	823	602
3	1810	1650	e1360	995	995	952	1660	2810	3450	956	707	592
4	1670	1440	1230	1000	1020	902	1480	2840	3160	1010	619	661
5	1600	1700	1260	1010	1020	857	1460	2990	2410	803	559	718
6	1570	1510	1150	1200	1030	929	1420	3110	2100	531	569	684
7	1720	1430	1110	1240	1030	980	1450	3360	1960	559	561	678
8	1710	1470	1100	1200	1030	988	1450	3460	1940	733	515	667
9	1580	1480	936	1070	1070	946	1440	3940	1590	1110	521	649
10	1460	1480	925	911	1040	e960	1350	3870	1330	1290	578	677
11	1530	1350	1090	945	1040	e1040	1210	2960	1250	1150	746	758
12	1550	1440	1130	895	1040	e1220	1120	3370	1130	1020	834	804
13	1530	1490	1040	1010	1040	e1370	1140	3330	1040	904	905	805
14	1530	1470	e1000	e1070	1030	e1360	1150	3010	943	825	887	792
15	1940	1560	1020	e1050	1210	e1410	1160	3050	866	734	844	734
16	2200	1470	1050	e970	1050	e2090	1150	3340	794	658	817	736
17	2330	1470	1080	e940	1030	e1570	1300	3310	710	854	821	761
18	2250	1290	1080	e920	1040	1520	1340	3290	740	791	755	806
19	2290	1080	1060	e900	1020	1420	1310	2620	752	752	722	801
20	2320	1060	1060	913	1020	1320	1320	2820	734	717	784	727
21	2330	1140	1070	945	1030	1290	1050	2830	747	712	723	736
22	2320	1240	1060	958	1030	1320	900	3040	762	700	748	750
23	2050	1250	1160	1030	1030	1250	959	3470	725	761	721	697
24	1750	1240	1180	1070	1030	1110	1040	3520	730	793	710	685
25	e1600	1200	1120	1080	1030	1150	1270	3570	775	838	e823	664
26	e1650	1230	1090	1080	1020	1400	1830	3500	794	1000	e917	635
27	e1590	1230	1090	1020	1050	1570	1720	3650	842	848	882	632
28	e1600	1220	1090	998	999	1640	2280	3490	877	848	793	618
29	e1650	1210	1080	1000	---	1720	2810	3010	893	930	756	600
30	e1630	1190	907	1010	---	1700	2520	2800	855	1120	693	708
31	1480	---	836	993	---	1870	---	2790	---	860	664	---
TOTAL	55850	41350	33964	31337	28951	39934	44139	98480	40989	26607	22686	20998
MEAN	1802	1378	1096	1011	1034	1288	1471	3177	1366	858	732	700
MAX	2330	1700	1400	1240	1210	2090	2810	3940	3450	1290	917	806
MIN	1460	1060	836	895	985	857	900	2540	710	531	515	592
AC-FT	110800	82020	67370	62160	57420	79210	87550	195300	81300	52770	45000	41650
(+)	14440	1030	756	765	716	8240	15060	19020	18900	19580	18760	19350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1998, BY WATER YEAR (WY)

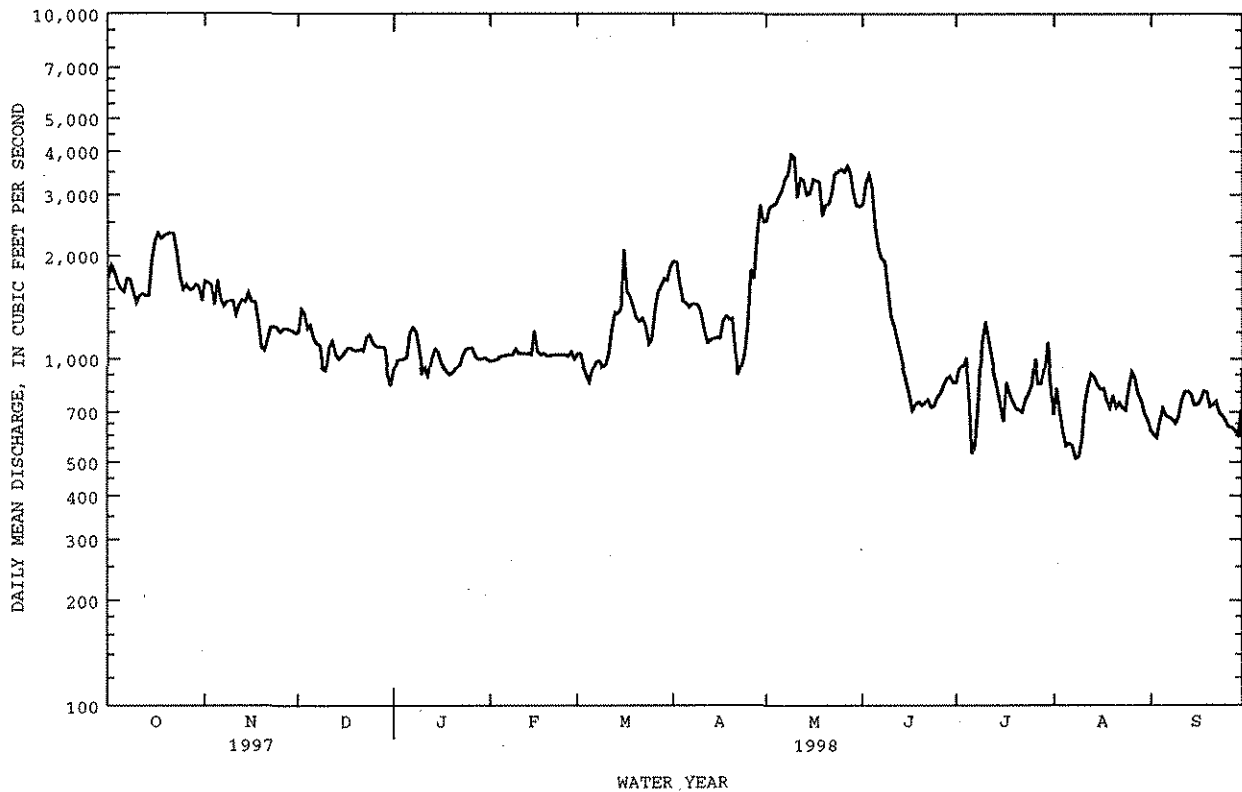
	476	978	1055	966	1090	1343	2165	3340	3012	1597	789	598
MEAN	476	978	1055	966	1090	1343	2165	3340	3012	1597	789	598
MAX	1802	2302	2276	2159	3562	2790	6343	6203	6113	5439	3452	1554
(WY)	1998	1987	1987	1986	1986	1986	1985	1980	1983	1979	1986	1986
MIN	38.4	145	480	486	590	480	137	148	336	287	278	51.4
(WY)	1978	1990	1975	1977	1978	1977	1977	1977	1989	1974	1978	1974

(+) COMBINED FLOW, IN ACRE-FEET, OF ALBUQUERQUE RIVERSIDE DRAIN, AND ARENAL, ARMIJO AND ATRISCO CANALS. THIS FLOW WHICH BY PASSES RIVER GAGE, CAN BE ADDED TO RIVER RECORDS TO GET THE ENTIRE FLOW IN VALLEY CROSS SECTION.

08330000 RIO GRANDE AT ALBUQUERQUE, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1974 - 1998	
ANNUAL TOTAL	603572		485285		^a 1451	
ANNUAL MEAN	1654		1330		2486	
HIGHEST ANNUAL MEAN					356	
LOWEST ANNUAL MEAN					8650	
HIGHEST DAILY MEAN	5980	Jun 11	3940	May 9	.00	Apr 24 1985
LOWEST DAILY MEAN	531	Aug 28	515	Aug 8	.00	May 30 1977
ANNUAL SEVEN-DAY MINIMUM	619	Jan 10	560	Aug 4	.00	May 30 1977
INSTANTANEOUS PEAK FLOW			4060	May 9	^b 25000	Apr 24 1942
INSTANTANEOUS PEAK STAGE			5.32	May 9	7.82	Aug 10 1967
INSTANTANEOUS LOW FLOW			515	Aug 8	147	Jul 6 1996
ANNUAL RUNOFF (AC-FT)	1197000		962600		1051000	
10 PERCENT EXCEEDS	3410		2530		3660	
50 PERCENT EXCEEDS	1190		1070		879	
90 PERCENT EXCEEDS	760		718		297	

e Estimated

^a Average discharge for 33 years (water years 1942-74), 1,440 ft³/s, 1,043,000 acre-ft, prior to closure of Cochiti Dam.^b From rating curve extended above 13,900 ft³/s.

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: May 1969 to September 1969 (partial-record station), October 1969 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 45,500 mg/L, July 21, 1971; minimum daily mean, no flow on many days in 1971, 1972, and 1977.

SEDIMENT LOAD: Maximum daily, 275,000 tons, July 27, 1971; minimum daily, 0 ton on many days in 1971, 1972, and 1977.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 3,040 mg/L, Aug. 27; minimum daily mean, 71 mg/L, July 1.

SEDIMENT LOAD: Maximum daily, 7,210 tons, Aug. 27; minimum daily, 137 tons, Sept. 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT										
30...	1107	E1630	257	7.8	--	--	23	--	--	--
NOV										
21...	1200	1160	284	8.1	9.5	7.5	16	640	9.9	99
JAN										
21...	1215	943	347	8.1	11.5	6.5	2.2	634	--	--
MAY										
21...	1005	2860	308	7.9	23.0	15.0	17	637	8.1	96
JUN										
17...	0955	722	288	8.2	22.0	17.0	9.4	635	7.7	96
JUL										
24...	1230	860	351	7.9	24.0	23.5	72	644	6.9	97
AUG										
10...	1015	606	344	8.5	26.0	22.5	59	643	7.4	102
SEP										
29...	0945	619	345	8.3	22.5	19.5	18	639	7.8	102

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (F/S) (00055)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM (70336)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)
OCT										
01...	1030	1810	--	--	--	17.5	1480	7230	--	--
NOV										
04...	1215	1370	--	--	--	9.2	1840	6810	98	--
DEC										
04...	1130	1330	--	--	--	2.7	179	643	--	--
JAN										
06...	1135	1230	--	--	--	1.3	2150	7140	100	--
FEB										
03...	1100	974	--	--	--	4.5	76	200	--	--
MAR										
03...	1020	894	280	1.6	2.02	3.8	99	239	--	--
APR										
08...	1008	1460	--	--	--	9.0	275	1080	--	--
MAY										
05...	1001	3180	330	3.0	3.25	13.5	534	4580	100	--
JUN										
03...	0919	3540	329	3.4	3.13	18.0	2180	20800	100	--
JUL										
06...	1150	533	234	1.4	1.62	--	191	275	--	--
AUG										
03...	0950	757	228	1.7	1.99	--	3890	7950	--	7

08330000 RIO GRANDE AT ALBUQUERQUE, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)
OCT 01...	--	--	--	18	21	37	82	100	--
NOV 04...	--	--	--	4	6	14	64	85	0
DEC 04...	--	--	--	28	39	70	99	100	0
JAN 06...	--	--	--	3	4	8	74	94	0
FEB 03...	--	--	--	33	48	84	98	100	--
MAR 03...	--	--	--	42	53	65	89	94	--
APR 08...	--	--	--	15	25	47	97	100	1
MAY 05...	--	--	--	31	45	68	97	98	1
JUN 03...	--	--	--	5	15	48	82	97	0
JUL 06...	--	--	--	73	75	84	100	--	--
AUG 03...	8	9	17	98	98	98	100	--	0
DATE	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
OCT 01...	0	4	63	97	100	--	--	--	--
NOV 04...	1	6	50	81	90	100	96	100	--
DEC 04...	1	11	56	84	91	93	95	96	100
JAN 06...	2	15	61	91	98	100	--	--	--
FEB 03...	0	6	64	91	97	99	100	--	--
MAR 03...	0	7	58	89	96	98	100	--	--
APR 08...	3	12	71	93	97	99	100	--	--
MAY 05...	3	13	66	92	97	98	99	100	--
JUN 03...	1	10	58	89	95	98	100	--	--
JUL 06...	0	7	58	89	96	99	99	100	--
AUG 03...	1	6	45	75	83	87	93	100	--

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	327	1580	214	976	159	502	381	e934	202	536	103	290
2	631	3210	214	967	154	553	330	882	217	580	100	282
3	675	3290	208	927	93	311	252	677	138	369	88	226
4	384	1740	220	856	149	498	144	390	101	277	92	223
5	311	1350	208	953	316	1070	178	484	96	267	129	297
6	328	1390	197	804	331	1040	184	598	86	239	108	268
7	360	1670	147	568	136	408	152	510	77	214	104	275
8	311	1440	156	618	143	426	171	555	93	260	150	401
9	256	1090	128	510	165	414	165	478	82	237	130	332
10	232	915	128	513	486	1210	141	346	81	228	106	e357
11	249	1030	122	446	490	1460	150	382	113	317	144	e562
12	270	1130	139	545	419	1290	150	362	92	261	151	e473
13	224	925	170	674	291	812	190	523	82	231	118	e334
14	188	776	113	448	356	e968	158	e443	77	214	108	e284
15	446	2390	358	1510	320	880	141	e389	82	272	209	e527
16	608	3610	609	2430	360	1020	153	e401	119	340	182	e455
17	670	4230	242	960	318	924	149	e353	94	261	358	e1290
18	492	2990	300	1030	283	827	137	e325	107	300	472	1940
19	361	2230	262	e768	256	730	140	e317	136	375	751	2880
20	352	2200	140	401	163	467	140	345	112	308	701	2510
21	333	2100	145	449	142	412	120	306	101	279	364	1270
22	338	2120	160	535	160	456	159	410	115	319	252	899
23	257	1430	233	784	132	413	162	453	97	270	191	647
24	219	1040	229	769	188	597	189	545	99	275	167	503
25	182	e653	168	547	150	456	198	579	111	307	169	526
26	200	e647	159	530	156	458	169	494	178	491	201	763
27	230	e773	164	545	113	332	165	453	121	343	215	910
28	229	e847	139	457	179	525	171	461	127	347	227	1010
29	213	e790	172	560	218	637	169	457	---	---	217	1010
30	187	e709	203	653	301	731	164	445	---	---	198	908
31	200	797	---	---	961	2170	168	449	---	---	246	1250
TOTAL	---	51092	---	22733	---	22997	---	14746	---	8717	---	23902

DAY	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	231	1210	314	2160	208	1590	71	164	1410	2670	198	330
2	218	1130	322	2430	223	1970	175	438	1950	4520	246	401
3	186	833	297	2250	248	2310	2530	6280	2700	5190	177	283
4	154	613	307	2350	257	2190	842	2450	1690	2700	202	364
5	152	598	341	2750	240	1560	725	1550	1200	1830	221	430
6	141	539	421	3540	232	1310	449	700	504	771	177	327
7	127	494	474	4310	257	1350	335	540	421	638	180	330
8	128	501	426	3980	253	1330	216	427	341	475	146	263
9	123	479	560	5950	215	917	596	1820	274	385	142	249
10	118	431	622	6500	216	777	1560	5500	245	380	148	270
11	112	367	515	4130	197	666	477	1490	262	532	179	367
12	112	337	400	3640	192	583	342	948	396	891	200	435
13	114	348	359	3230	189	528	325	e797	443	1080	178	388
14	122	377	339	2750	174	445	189	422	1110	2650	173	369
15	120	374	290	2390	352	806	396	756	1300	2970	181	359
16	125	390	329	2960	580	1230	442	e787	458	1010	171	339
17	132	464	332	2970	225	435	540	e1320	314	696	191	393
18	152	552	333	2960	74	149	387	e827	241	492	159	346
19	170	604	300	2120	111	225	315	e639	243	474	150	324
20	165	588	309	2350	171	332	281	543	507	1110	129	254
21	218	624	355	2720	443	e894	352	e679	196	383	114	227
22	163	397	314	2580	385	e792	304	e575	250	513	110	222
23	188	487	357	3350	369	e723	353	e731	140	272	101	190
24	153	428	362	3440	353	e697	239	e516	125	239	105	194
25	160	551	354	3410	346	e725	229	e587	124	e227	107	192
26	181	905	315	2980	294	e632	482	1670	251	e588	80	137
27	182	842	326	3210	294	e671	424	975	3040	7210	90	154
28	267	1680	315	2970	266	e630	652	1500	867	1880	93	156
29	412	3130	276	2240	159	387	217	540	309	632	90	145
30	352	2420	234	1770	79	183	2300	7040	213	400	177	339
31	---	---	218	1640	---	---	2360	5590	172	308	---	---
TOTAL	---	22693	---	96030	---	27037	---	48801	---	44' 16	---	8777

YEAR 391641

e Estimated

08330540 TRAMWAY FLOODWAY CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°04'43", long 106°29'51", Bernalillo County, Hydrologic Unit 13020203, on right bank 300 ft downstream from Copper Boulevard Bridge, near corner of Tramway and Copper Boulevards NE in Albuquerque.

DRAINAGE AREA.--1.60 mi².

PERIOD OF RECORD.--July 1987 to current year (seasonal record).

GAGE.--Water-stage recorder and concrete-lined channel. Elevation of gage is 5,760 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Some minor streamflow may exist on days where daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow monitoring equipment.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,250 ft³/s, July 9, 1988, gage height, 7.62 ft, from floodmarks, from step-backwater analysis of channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 452 ft³/s, at 1735 hours, Aug. 1, gage height, 3.35 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	.18	.28	1.2	1.0	6.8	.07
2	.17	.00	---	---	---	---	.27	.36	1.4	1.1	.08	.02
3	.03	.00	---	---	---	---	.05	.54	.56	.25	.05	.09
4	.04	.00	---	---	---	---	.14	.20	.33	1.0	.02	.01
5	.00	.00	---	---	---	---	.18	.49	.34	.31	.04	.13
6	.00	.00	---	---	---	---	.11	.30	.35	.24	.02	.00
7	.32	.00	---	---	---	---	.05	.36	.28	1.9	.05	.13
8	.07	.00	---	---	---	---	.09	.28	.29	.70	.02	.06
9	.00	.08	---	---	---	---	.14	.33	.34	.96	.06	.14
10	.00	.00	---	---	---	---	.18	.37	1.0	.90	.03	.03
11	.02	.81	---	---	---	---	.08	.21	.48	1.1	.01	.10
12	.00	1.1	---	---	---	---	.00	.15	.47	.39	.26	.07
13	.00	.00	---	---	---	---	.01	.28	.29	.39	.02	.03
14	.00	---	---	---	---	---	.05	.20	.26	.26	.09	.09
15	.00	---	---	---	---	---	.21	.29	.35	.22	2.0	.10
16	.00	---	---	---	---	---	.13	.37	.26	3.1	.17	.08
17	.00	---	---	---	---	.00	.12	.36	.18	.62	.10	.09
18	.00	---	---	---	---	2.1	.06	.37	.22	.48	.14	.01
19	.00	---	---	---	---	.31	.09	.49	.26	.49	.38	.13
20	.00	---	---	---	---	.01	.10	.52	.31	.48	.16	.01
21	.00	---	---	---	---	.09	.13	.41	.32	.33	.71	.08
22	.00	---	---	---	---	.09	.21	.38	.28	1.1	.18	.12
23	.00	---	---	---	---	.13	.43	.26	.13	.43	.77	.15
24	.03	---	---	---	---	.19	.20	.07	.07	.75	.11	.05
25	.00	---	---	---	---	.15	.08	.07	.36	9.7	2.1	.04
26	.00	---	---	---	---	1.2	3.4	.40	.26	.46	.23	.07
27	.00	---	---	---	---	.08	.43	.33	.23	.26	.01	.03
28	.00	---	---	---	---	.25	.33	.22	.24	.16	.07	.05
29	.00	---	---	---	---	.77	.26	.30	.27	.20	.03	.08
30	.00	---	---	---	---	.61	.32	1.2	.21	.17	.00	.41
31	.00	---	---	---	---	.25	---	1.4	---	.06	.35	---
TOTAL	0.68	---	---	---	---	---	8.03	11.79	11.54	29.51	15.06	2.47
MEAN	.022	---	---	---	---	---	.27	.38	.38	.95	.49	.082
MAX	.32	---	---	---	---	---	3.4	1.4	1.4	9.7	6.8	.41
MIN	.00	---	---	---	---	---	.00	.07	.07	.06	.00	.00
AC-FT	1.3	---	---	---	---	---	16	23	23	59	30	4.9

RIO GRANDE BASIN

08330600 TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'09", long 106°38'57", in SW¹/₄SW¹/₄ sec.17, T.9 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on left bank 800 ft upstream from bridge on Broadway Boulevard SE, 0.2 mi downstream from bridge on Interstate Highway 25, and 3.0 mi south of Albuquerque.

DRAINAGE AREA.--128 mi².

PERIOD OF RECORD.--October 1951 to September 1968 (annual maximum only), August 1974 to current year (seasonal records).

GAGE.--Water-stage recorder. Elevation of gage is 5,000 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 10, 1988, at site 1,700 ft downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,930 ft³/s, July 9, 1988, gage height, 9.6 ft, from floodmarks, from slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 359 ft³/s, at 2357 hours, July 26, gage height, 4.51 ft, from rating curve extended above 10 ft³/s, on basis of step-backwater analysis of channel; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	.00	.00	.00	.00	26	.00
2	.00	.00	---	---	---	---	.00	.00	.00	.00	e6.0	.00
3	.00	.00	---	---	---	---	.00	.00	.00	3.1	.00	.00
4	.00	.00	---	---	---	---	.00	.00	.00	4.7	.00	.00
5	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
6	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
7	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
8	.00	.00	---	---	---	---	.00	.00	.00	.06	.00	.00
9	.00	.00	---	---	---	---	.00	.00	.00	.66	.00	.00
10	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
11	.00	.00	---	---	---	---	.00	.00	.00	.00	.00	.00
12	.00	.08	---	---	---	---	.00	.00	.00	.00	.00	.00
13	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
14	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
15	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
16	.00	---	---	---	---	---	.00	.00	.00	1.5	.00	.00
17	.00	---	---	---	---	e26	.00	.00	.00	1.5	.00	.00
18	.00	---	---	---	---	e32	.00	.00	.00	.00	.00	.00
19	.00	---	---	---	---	e1.7	.00	.00	.00	.00	.00	.00
20	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
21	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
22	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
23	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
24	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
25	.00	---	---	---	---	.00	.00	.00	.00	6.0	.85	.00
26	.00	---	---	---	---	.00	15	.00	.00	e4.5	1.7	.00
27	.00	---	---	---	---	.00	1.3	.00	.00	e21	.00	.00
28	.00	---	---	---	---	.00	.00	.00	.00	1.4	.00	.00
29	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
30	.00	---	---	---	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	---	---	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	---	---	---	---	---	16.30	0.00	0.00	44.42	34.55	0.00
MEAN	.000	---	---	---	---	---	.54	.000	.000	1.43	1.11	.000
MAX	.00	---	---	---	---	---	15	.00	.00	21	26	.00
MIN	.00	---	---	---	---	---	.00	.00	.00	.00	.00	.00
AC-FT	.00	---	---	---	---	---	32	.00	.00	88	69	.00

e Estimated

08330775 SOUTH DIVERSION CHANNEL ABOVE TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'09", long 106°39'02", Bernalillo County, Hydrologic Unit 13020203, on right bank 600 ft upstream from confluence with Tijeras Arroyo, and 2.5 mi south of Albuquerque.

DRAINAGE AREA.--11.0 mi².

PERIOD OF RECORD.--June 1988 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,930 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,960 ft³/s, July 14, 1990, gage height, 6.30 ft from floodmarks, from rating curve extended above 30 ft³/s, on basis of step-backwater analysis of channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 251 ft³/s, at 2105 hours, Aug. 25, gage height, 2.36 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
2	.00	e.00	.88	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
3	.00	e.00	.45	.00	.00	.00	e.00	e.00	.00	6.9	.00	.00
4	.00	e.00	.00	.00	.00	.00	e.00	e.00	.00	15	.00	.00
5	.00	e.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
6	.00	e.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00
8	.53	.00	.00	.00	.00	.00	e.00	e.00	.00	6.9	.00	.00
9	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	20	.00	.00
10	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	.00	.00	.00
12	.00	.00	.00	.00	.17	.00	e.00	e.00	e.00	.00	.00	.00
13	.00	4.3	.00	.00	.28	e.00	e.00	.00	e.00	.00	.00	.00
14	.00	.45	.00	.00	.00	e.00	e.00	.00	e.00	.00	.00	.00
15	.00	.18	.00	.00	4.8	e.00	e.00	.00	e.00	.00	.00	.00
16	.00	.31	.00	.00	.57	e.00	e.00	.00	e.00	.00	.00	.00
17	.00	.00	.00	.00	.00	e.00	e.00	.00	e.00	2.0	.00	.00
18	.00	.00	e.00	.00	.00	e.00	e.00	.00	e.00	.00	.00	.00
19	.00	.00	e.00	.00	.00	e.00	e.00	.00	e.00	.00	.00	.00
20	.00	.00	e.00	.00	.00	e.00	e.00	.00	.00	.00	2.9	.00
21	.00	.00	e.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
22	.00	.00	e.00	.00	.00	e.00	e.00	.00	.00	1.7	.00	.00
23	.00	.00	e.00	.00	.00	e.00	e.00	.00	.00	2.1	.00	.00
24	.00	.00	e.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	3.0	28	.00
26	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	1.9	13	.00
27	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.52	.00	.00
29	.00	.00	.00	.00	---	e.00	e.00	.00	.00	.72	.00	.00
30	e.00	.00	.00	.00	---	e.00	e.00	.00	.00	.00	.00	.00
31	e.00	---	.00	.00	---	e.00	---	.00	---	.00	.00	---
TOTAL	0.53	5.24	1.33	0.00	5.82	0.00	0.00	0.00	0.00	60.74	43.90	0.00
MEAN	.017	.17	.043	.000	.21	.000	.000	.000	.000	1.96	1.42	.000
MAX	.53	4.3	.88	.00	4.8	.00	.00	.00	.00	20	28	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.1	10	2.6	.00	12	.00	.00	.00	.00	120	87	.00

CAL YR 1997 TOTAL 237.13 MEAN .65 MAX 48 MIN .00 AC-FT 470
WTR YR 1998 TOTAL 117.56 MEAN .32 MAX 28 MIN .00 AC-FT 233

e Estimated

RIO GRANDE BASIN

08330915 ALBUQUERQUE RIVERSIDE DRAIN NEAR ISLETA, NM

LOCATION.--Lat 34°56'09", long 106°40'44", in SE¹/₄SE¹/₄ sec.12, T.8 N., R.2 E., Valencia County, Hydrologic Unit 13020203, in Isleta Pueblo Grant, on left bank 0.2 mi east of the Rio Grande River, 0.4 mi west of Railroad crossing, and 0.9 mile west of Highway 47.

PERIOD OF RECORD.--October 1997 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,900 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 295 ft³/s, Aug. 26, 1998, gage height, 7.14 ft; minimum daily discharge, 42 ft³/s, Jan. 13-15, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 295 ft³/s, Aug. 26, gage height, 7.14 ft; minimum daily discharge, 42 ft³/s, Jan. 13-15.

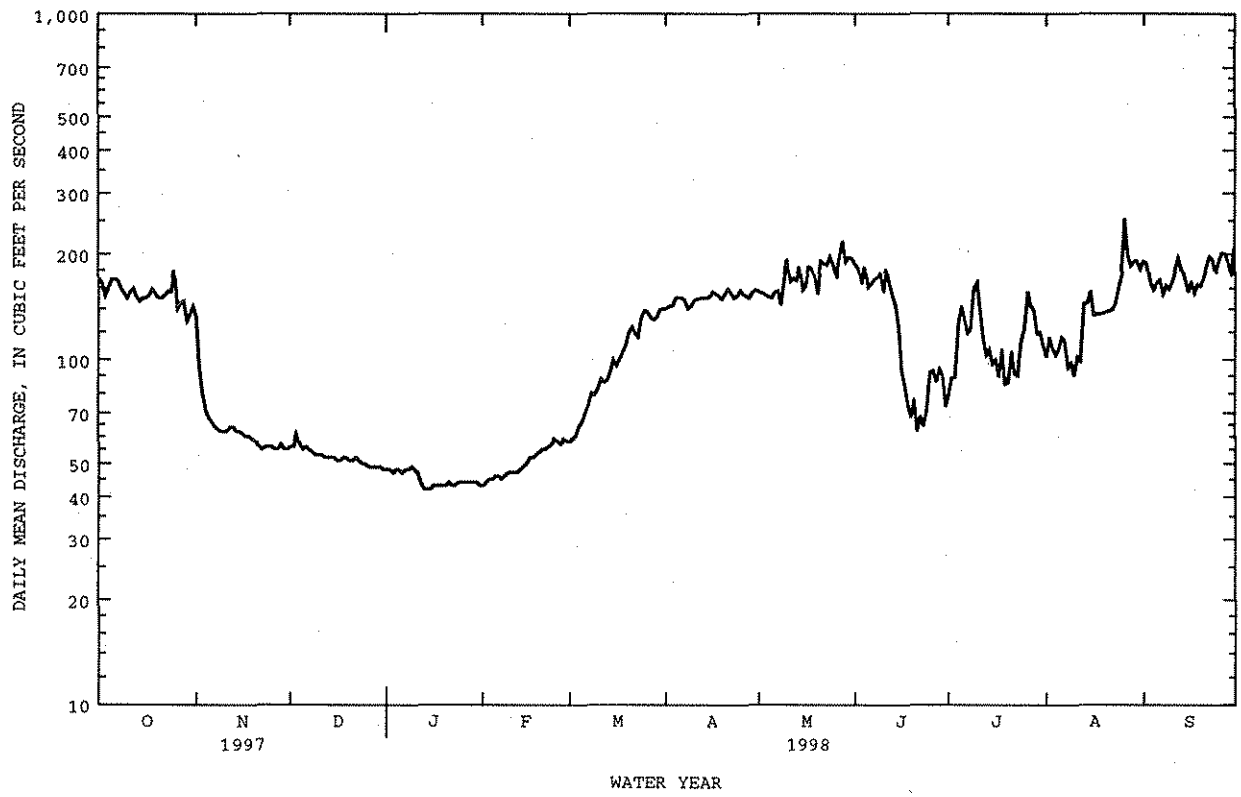
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e170	132	56	48	43	e58	e140	e156	187	79	102	191
2	e165	95	56	48	44	e59	e142	e155	183	89	116	189
3	e152	80	61	47	45	e60	e142	e153	165	89	108	167
4	e160	72	57	48	e45	e64	e150	e151	184	128	103	158
5	e170	68	55	48	e46	e66	e150	e150	161	142	107	166
6	e170	66	56	47	e46	e70	e150	156	165	130	116	169
7	e168	64	55	48	e45	e74	e148	157	170	119	113	154
8	e160	63	54	48	e46	e80	e140	143	172	122	95	163
9	e155	62	53	49	e47	e79	e142	170	176	160	98	159
10	e150	62	53	48	e47	e82	e148	193	156	166	90	168
11	e156	62	53	47	e47	e88	e149	167	181	138	102	180
12	e160	64	52	44	e47	e86	e150	171	163	115	99	195
13	e151	64	52	42	e48	e87	e150	168	152	103	145	181
14	e147	62	52	42	e49	e92	e150	184	142	107	145	170
15	e150	62	52	42	e50	e100	e151	158	123	97	157	156
16	e150	61	51	43	e52	e96	e156	163	93	100	134	168
17	e153	60	51	43	e52	e100	e154	184	84	89	135	155
18	e159	60	52	43	e53	e105	e152	183	74	107	135	164
19	e154	59	52	43	e54	e110	e149	172	68	85	e136	162
20	e150	58	51	43	e55	e120	e154	154	77	86	e137	173
21	e150	56	51	44	e55	124	e159	191	62	106	138	184
22	e153	55	52	43	e56	119	e155	188	69	91	139	197
23	157	56	51	43	e57	116	e150	186	64	90	146	194
24	156	56	50	44	e59	132	e152	197	71	112	162	177
25	180	56	50	44	e58	138	e158	187	92	123	175	190
26	140	55	49	44	e57	137	e154	171	93	156	252	202
27	146	55	49	44	e59	e132	e152	196	86	142	200	201
28	147	57	49	44	e58	e130	e150	218	94	139	185	191
29	129	55	49	44	---	e132	e156	190	90	119	191	174
30	135	55	49	44	---	e139	e158	196	73	120	192	209
31	142	---	48	43	---	e140	---	195	---	110	181	---
TOTAL	4785	1932	1621	1392	1420	3115	4511	5403	3670	3559	4334	5307
MEAN	154	64.4	52.3	44.9	50.7	100	150	174	122	115	140	177
MAX	180	132	61	49	59	140	159	218	187	166	252	209
MIN	129	55	48	42	43	58	140	143	62	79	90	154
AC-FT	9490	3830	3220	2760	2820	6180	8950	10720	7280	7060	8600	10530

WTR YR 1998 TOTAL 41049 MEAN 112 MAX 252 MIN 42 AC-FT 81420

e Estimated

08330915 ALBUQUERQUE RIVERSIDE DRAIN NEAR ISLETA, NM--Continued



RIO GRANDE BASIN

08330940 ATRISCO RIVERSIDE DRAIN AT ISLETA, NM

LOCATION.--Lat 34°56'06", long 106°41'07", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.12, T.8 N., R.2 E., Valencia County, Hydrologic Unit 13020203, in Isleta Pueblo Grant, on left bank 0.4 mi upstream of Railroad cross over Rio Grande, 0.8 mi east of Isleta Blvd. 1.1 mi downstream from Interstate 25,

PERIOD OF RECORD.--October 1997 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,900 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 101 ft³/s, Mar. 15, 1998, gage height, 4.66 ft; maximum gage height, 5.42 ft, due to backwater at gage; minimum daily discharge, 34 ft³/s, Apr. 23, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 101 ft³/s, Mar. 15, gage height, 4.66 ft; maximum gage height, 5.42 ft, due to backwater at gage; minimum daily discharge, 34 ft³/s, Apr. 23.

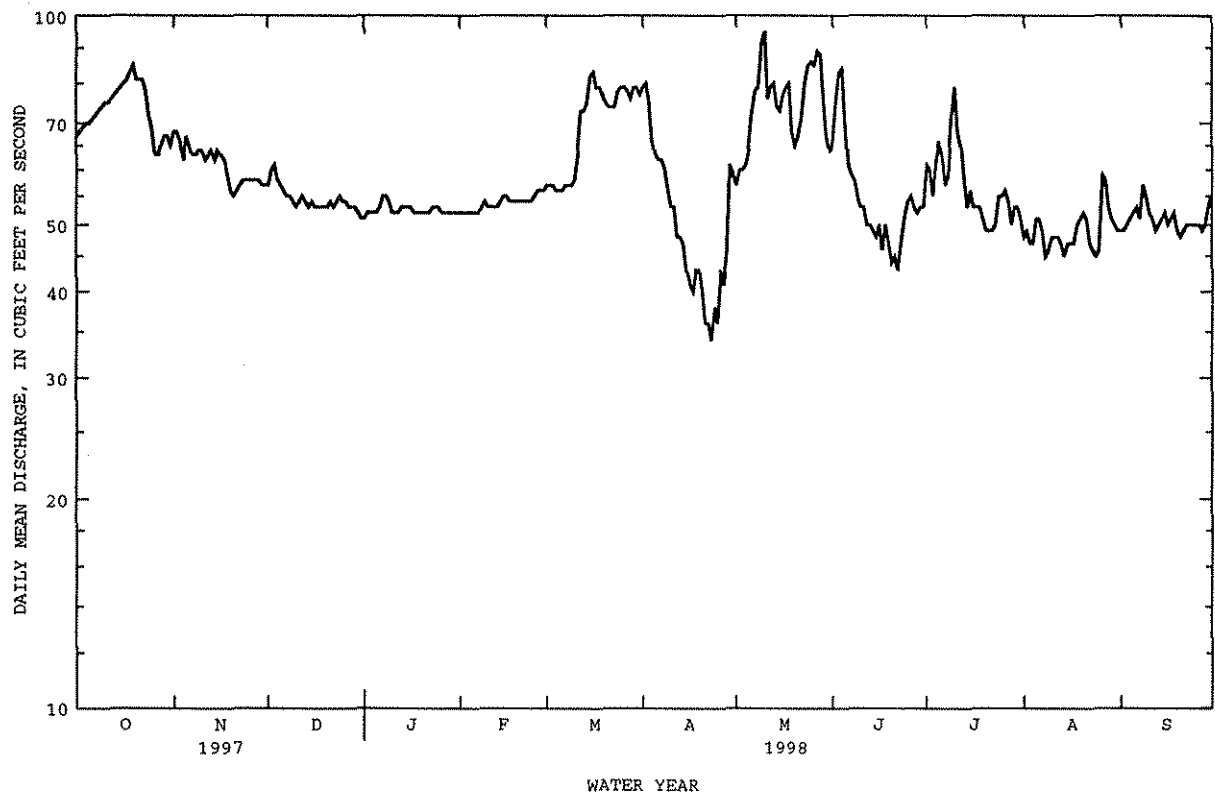
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e67	68	57	51	52	57	79	57	65	61	48	49
2	e68	68	60	52	52	57	80	60	75	60	49	49
3	e69	66	61	52	52	57	75	60	83	55	47	50
4	e70	62	58	52	52	56	66	61	84	62	47	51
5	e70	67	57	52	52	56	63	64	70	66	51	52
6	e71	65	56	53	52	56	62	72	61	62	51	53
7	e72	63	55	55	52	57	62	78	59	57	49	51
8	e73	63	55	55	53	57	60	79	58	59	45	57
9	e74	64	54	54	54	57	56	92	55	71	46	55
10	e75	64	53	52	53	58	53	95	53	79	48	52
11	e75	62	54	52	53	63	53	76	53	68	48	51
12	e76	63	55	52	53	73	48	79	50	65	48	49
13	e77	64	e54	53	53	73	48	80	50	58	47	50
14	e78	62	e53	53	54	75	47	74	49	53	45	51
15	e79	64	54	53	55	82	43	73	48	56	47	52
16	e80	63	53	53	55	83	41	77	50	53	47	50
17	e81	62	53	52	54	79	40	79	46	53	47	51
18	e83	59	53	52	54	79	43	80	50	53	e50	52
19	85	56	53	52	54	77	43	68	47	51	e51	49
20	81	55	53	52	54	75	40	65	44	49	e52	48
21	81	56	54	52	54	74	36	67	45	49	51	49
22	81	57	53	52	54	74	36	71	43	49	47	50
23	78	58	54	53	54	74	34	80	47	e50	46	50
24	72	58	55	53	54	78	38	85	51	55	45	50
25	69	58	54	53	55	79	36	86	54	55	46	50
26	63	58	54	52	56	79	43	85	55	56	59	50
27	63	58	53	52	56	78	41	89	53	54	58	49
28	65	58	53	52	56	76	45	88	52	50	53	50
29	67	57	53	52	---	79	61	76	53	53	51	53
30	67	57	52	52	---	79	59	67	53	53	50	55
31	65	---	51	52	---	77	---	64	---	51	49	---
TOTAL	2275	1835	1687	1627	1502	2174	1531	2327	1656	1766	1518	1528
MEAN	73.4	61.2	54.4	52.5	53.6	70.1	51.0	75.1	55.2	57.0	49.0	50.9
MAX	85	68	61	55	56	83	80	95	84	79	59	57
MIN	63	55	51	51	52	56	34	57	43	49	45	48
AC-FT	4510	3640	3350	3230	2980	4310	3040	4620	3280	3500	3010	3030

WTR YR 1998 TOTAL 21426 MEAN 58.7 MAX 95 MIN 34 AC-FT 42500

e Estimated

08330940 ATRISCO RIVERSIDE DRAIN AT ISLETA, NM--Continued



RIO GRANDE BASIN

08331000 RIO GRANDE AT ISLETA, NM

WATER-QUALITY RECORDS

LOCATION.--Lat 34°55'14", long 106°40'44", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T.8 N., R.2 E., Bernalillo County, Hydrologic Unit 13020203, in Isleta Pueblo Grant, on right bank 0.5 mi upstream from Isleta Diversion Dam, 1.0 mi west from State Highway 47, 1.2 mi from Isleta Pueblo, and at mile 1527.7.

DRAINAGE AREA.--18,100 mi² (estimated), including 2,940 mi² in closed basin in San Luis valley, Co.

PERIOD OF RECORD.--Water year 1972 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (000061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (000095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 31...	1315	1650	291	7.8	23.0	13.5	30	--	--	--	--	--
NOV 24...	0930	1310	318	7.4	10.0	7.5	7.0	644	9.6	95	K230	530
JAN 22...	0935	E958	360	8.0	1.5	4.0	3.7	640	9.8	89	460	390
APR 08...	1045	E1450	386	7.8	14.0	9.5	20	640	9.4	98	25	93
MAY 19...	0855	E2620	314	7.8	21.5	12.5	15	643	9.3	104	--	--
JUN 17...	1105	E740	352	8.1	22.0	19.5	11	637	7.8	102	--	--
JUL 22...	1010	E700	383	8.0	28.5	23.5	75	643	6.5	91	240	79
AUG 10...	1245	E626	415	8.3	26.0	23.5	50	645	7.1	99	--	--
SEP 29...	1045	E632	410	8.1	24.5	20.0	16	640	7.2	95	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

08331105 BARR/CHICAL DIVERSION AT ISLETA, NM

LOCATION.--Lat 34°54'39", long 106°40'44", in NE $\frac{1}{4}$ SW $\frac{1}{4}$, sec.24, T.8 N., R.2 E., Valencia County, Hydrologic Unit 13020203, in Isleta Pueblo Grant, on right bank 0.1 mi upstream from Highway 147, 0.20 northeast of bridge over the Rio Grande, and 0.8 mi east of Isleta Pueblo.

PERIOD OF RECORD.--October 1997 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,900 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 91 ft³/s, June 26, 1998, gage height, 7.13 ft; minimum daily discharge, 85 ft³/s, June 25, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 91 ft³/s, June 26, gage height, 7.13 ft; minimum daily discharge, 85 ft³/s, June 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

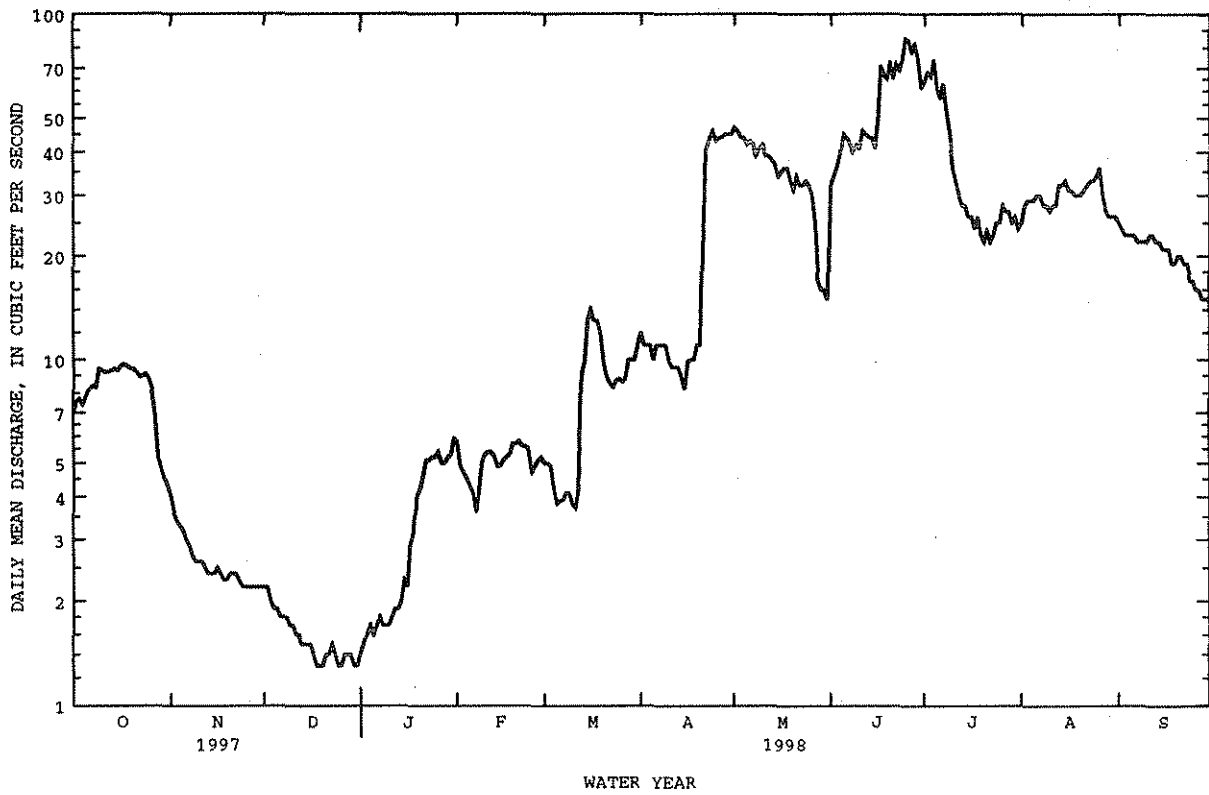
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e7.0	e4.0	e2.2	e1.4	5.8	5.0	12	47	32	64	25	25
2	e7.6	e3.6	e2.2	e1.5	4.9	5.0	11	46	34	68	28	24
3	e7.7	e3.4	e2.0	e1.6	4.7	4.9	11	44	36	66	29	23
4	e7.4	e3.3	e1.9	e1.7	4.5	4.2	11	44	39	74	29	23
5	e7.8	e3.2	e1.9	e1.6	4.3	3.8	10	42	45	61	29	23
6	e8.2	e3.0	e1.8	e1.7	4.1	3.9	11	43	44	57	30	23
7	e8.4	e2.9	e1.8	e1.8	3.6	3.9	11	42	42	63	30	22
8	e8.3	e2.7	e1.8	e1.7	4.2	4.1	11	39	40	52	28	22
9	e9.4	e2.6	e1.7	e1.7	5.0	4.1	11	41	42	45	28	22
10	e9.3	e2.6	e1.7	e1.7	5.3	3.8	9.9	42	41	36	27	22
11	e9.2	e2.6	e1.6	e1.8	5.4	3.7	9.5	39	46	33	28	23
12	e9.2	e2.5	e1.6	e1.9	5.4	4.2	9.5	39	45	30	28	23
13	e9.3	e2.4	e1.5	e1.9	5.2	9.1	9.5	38	44	28	32	22
14	e9.4	e2.4	e1.5	e2.0	4.9	9.8	8.9	37	44	28	32	22
15	e9.3	e2.4	e1.5	e2.3	4.9	13	8.2	34	41	26	33	21
16	e9.6	e2.5	e1.5	e2.2	5.1	14	9.9	35	50	26	31	21
17	e9.7	e2.4	e1.4	e2.9	5.2	13	10	36	71	24	31	21
18	e9.6	e2.3	e1.3	e3.1	5.3	13	10	36	67	26	30	19
19	e9.4	e2.3	e1.3	e4.0	5.7	12	11	33	65	23	30	19
20	e9.4	e2.4	e1.3	e4.2	5.7	9.8	11	31	73	22	30	20
21	e9.2	e2.4	e1.4	e4.6	5.8	8.9	22	34	65	24	31	20
22	e8.9	e2.4	e1.4	e5.1	5.6	8.5	41	32	72	22	32	19
23	e9.0	e2.3	e1.5	5.1	5.6	8.3	44	32	69	23	33	19
24	e9.1	e2.2	e1.4	5.2	5.5	8.7	46	33	74	25	33	17
25	e8.8	e2.2	e1.3	5.2	4.7	8.8	43	32	85	25	34	17
26	e8.2	e2.2	e1.3	5.4	4.9	8.6	44	30	84	28	36	16
27	e7.0	e2.2	e1.4	5.0	5.1	8.8	44	25	77	27	30	16
28	e5.2	e2.2	e1.4	5.0	5.2	10	45	17	83	27	27	15
29	e4.8	e2.2	e1.4	5.2	---	10	45	16	74	25	26	15
30	e4.5	e2.2	e1.3	5.3	---	10	45	16	61	26	26	15
31	e4.3	---	e1.3	5.9	---	11	---	15	---	24	26	---
TOTAL	254.2	78.0	48.6	99.7	141.6	245.9	625.4	1070	1685	1128	922	609
MEAN	8.20	2.60	1.57	3.22	5.06	7.93	20.8	34.5	56.2	36.4	29.7	20.3
MAX	9.7	4.0	2.2	5.9	5.8	14	46	47	85	74	36	25
MIN	4.3	2.2	1.3	1.4	3.6	3.7	8.2	15	32	22	25	15
AC-FT	504	155	96	198	281	488	1240	2120	3340	2240	1830	1210

WTR YR 1998 TOTAL 6907.4 MEAN 18.9 MAX 85 MIN 1.3 AC-FT 13700

e Estimated

RIO GRANDE BASIN

08331105 BARR/CHICAL DIVERSION AT ISLETA, NM--Continued



RIO GRANDE BASIN

185

08331660 ABO ARROYO NEAR BLUE SPRINGS, NM

LOCATION.--Lat 34°26'47", long 106°29'46", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 35, T.3N., R 4 E., Socorro County, Hydrologic Unit 13020203, 2.5 mi northeast to U.S. Highway 60 at Blue Springs and 20 mi east of Bernardo, NM.

DRAINAGE AREA.--242 mi².

PERIOD OF RECORD.--August 14, 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,520 ft above National Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 13,100 ft³/s, July 31, 1997, gage height, 6.30 ft, from rating curve extended above 6.0 ft³/s, on basis of slope-area measurements at 4.31 gage height and 6.30 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	.66	.83	.87	.82	.96	1.5	1.1	.57	1.7	.89	.87
2	.41	.64	1.1	.86	.80	.96	1.5	1.1	.50	.45	1.5	.68
3	.45	.64	1.0	.95	.77	.95	1.4	1.1	.49	.27	.56	.67
4	.41	.72	.93	.95	.89	.97	1.3	1.2	.49	459	268	.73
5	.40	.70	.87	.92	.94	1.0	1.3	1.2	.49	2.2	11	.76
6	.39	.71	.86	.90	.84	1.0	1.3	1.1	.44	.37	.72	.77
7	.37	.69	.89	.89	.82	1.1	1.3	1.2	.47	14	.58	.80
8	.36	.72	.94	.88	.80	1.1	1.2	1.2	.50	50	.53	.82
9	.34	.71	.92	.86	.96	1.1	1.1	1.3	.49	49	.51	.84
10	.35	.81	.88	.88	.88	1.1	1.1	1.2	.56	.70	.51	.88
11	.33	.83	.86	.87	.83	1.0	1.1	1.2	.65	.48	.57	.94
12	.31	.83	e.85	.83	.82	1.1	1.1	1.3	.54	.42	.58	.99
13	e.28	.83	.84	.83	.81	1.1	1.0	1.2	.48	.37	2.1	1.0
14	e.30	.79	.84	.83	.82	1.3	1.0	1.2	.51	.36	.61	1.0
15	e.31	.81	.86	.79	.94	1.9	1.0	1.2	.49	.36	.58	1.8
16	e.33	.83	.87	.76	.93	1.6	1.0	1.2	.46	92	.56	1.4
17	e.39	.83	.86	.76	.85	1.9	.96	1.2	.45	9.3	.57	2.5
18	.62	.83	.86	.76	.99	14	.96	1.3	.43	1.5	.59	.93
19	.64	.83	.84	.76	.89	5.1	.96	1.1	.42	.52	.59	.90
20	.66	.84	.91	.72	.88	3.6	.98	1.2	.43	.47	5.2	.91
21	.67	.82	.94	.72	.97	3.3	.98	1.3	.41	9.7	1.1	.96
22	10	.82	.82	.73	.94	2.6	1.0	1.2	.38	3.8	.66	1.0
23	1.5	.82	.94	.70	.91	1.8	1.0	1.0	.36	5.7	.61	1.2
24	.62	.81	.91	.70	.90	1.6	1.0	.94	.34	.75	.59	1.2
25	.63	.81	e.95	.72	.92	1.4	1.1	.68	.32	.68	.61	1.1
26	.61	.77	e.92	.70	.91	2.6	1.2	.78	.29	.74	.91	.96
27	.59	.91	e.90	.69	.91	3.4	1.1	.75	.31	54	.65	.91
28	.59	.92	e.92	.75	.92	2.7	1.1	.72	.29	1.1	.58	.87
29	.60	.87	e.90	.76	---	2.1	1.2	.68	.27	.70	.60	.94
30	.64	.83	.86	.80	---	2.1	1.1	.63	.25	13	.61	24
31	.64	---	e.92	.86	---	1.7	---	.60	---	.97	.61	---
TOTAL	25.16	23.63	27.79	25.00	24.66	68.14	33.84	33.08	13.08	774.61	304.28	53.33
MEAN	.81	.79	.90	.81	.88	2.20	1.13	1.07	.44	25.0	9.82	1.78
MAX	10	.92	1.1	.95	.99	14	1.5	1.3	.65	459	268	24
MIN	.28	.64	.82	.69	.77	.95	.96	.60	.25	.27	.51	.67
AC-FT	50	47	55	50	49	135	67	66	26	1540	604	106

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

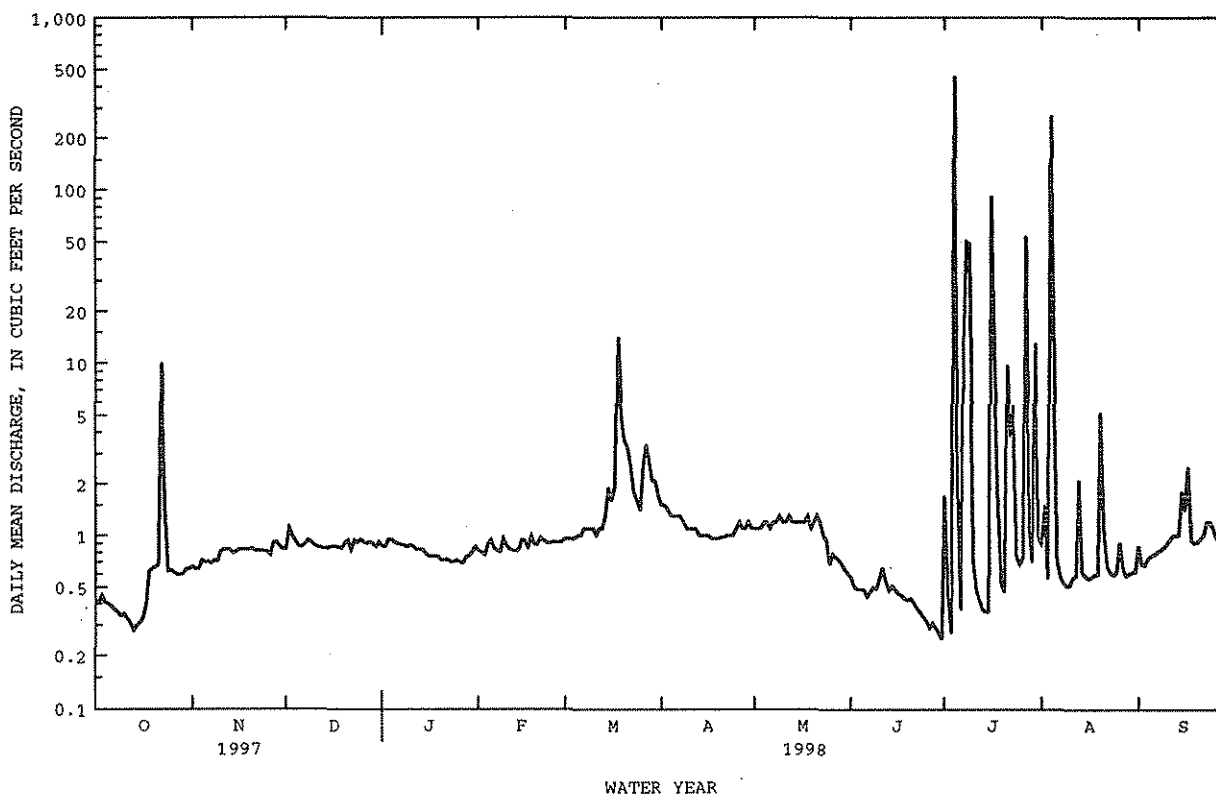
	1996	1997	1998	1997	1997	1997	1997	1997	1998	1998	1998	1998
MEAN	2.90	.59	.66	.61	.65	1.35	.85	.78	22.5	41.4	16.5	34.8
MAX	4.98	.79	.90	.81	.88	2.20	1.13	1.07	44.6	57.7	23.2	71.6
(WY)	1997	1998	1998	1998	1998	1998	1998	1998	1997	1997	1997	1997
MIN	.81	.39	.41	.40	.41	.50	.57	.50	.44	25.0	9.82	1.78
(WY)	1998	1997	1997	1997	1997	1997	1997	1997	1998	1998	1998	1998

RIO GRANDE BASIN

08331660 ABO ARROYO NEAR BLUE SPRINGS, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1996 - 1998	
ANNUAL TOTAL	6142.47		1406.60		10.5	
ANNUAL MEAN	16.8		3.85		17.1	
HIGHEST ANNUAL MEAN					3.85	
LOWEST ANNUAL MEAN					1330	
HIGHEST DAILY MEAN	1330	Jun 7	459	Jul 4	1330	Jun 7 1997
LOWEST DAILY MEAN	.09	Jun 24	.25	Jun 30	.09	Jun 24 1997
ANNUAL SEVEN-DAY MINIMUM	.10	Jul 15	.30	Jun 24	.10	Jul 15 1997
INSTANTANEOUS PEAK FLOW			7210	Jul 4	13100	Jul 31 1997
INSTANTANEOUS PEAK STAGE			4.42	Jul 4	6.30	Jul 31 1997
INSTANTANEOUS LOW FLOW			.13	Oct 12	.13	Oct 12 1997
ANNUAL RUNOFF (AC-FT)	12180		2790		7590	
10 PERCENT EXCEEDS	.94		1.6		1.3	
50 PERCENT EXCEEDS	.41		.86		.52	
90 PERCENT EXCEEDS	.17		.45		.20	

e Estimated



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-ft 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.--Records good except for estimated daily discharges, which are poor. Conveyance channel is 1 of 4 channels (stations 08332010, 08332030, and 08332050) carrying flow in valley cross section. Original design and plan were for conveyance channel to carry flows 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, see tabulation below daily table for station 08332010. Several observations of water temperature were made during the year. No flow many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	26	19	12	12	11	16	21	15	e45	e40	37
2	24	21	20	12	12	11	15	20	15	e42	e37	45
3	22	20	22	11	e11	11	16	18	18	e45	e39	45
4	20	20	16	11	e11	12	18	18	16	e40	e41	46
5	19	18	15	11	e11	12	15	17	16	e43	e42	40
6	20	18	15	11	e11	11	16	16	14	e40	e40	44
7	20	17	15	11	e12	11	17	15	15	e35	e38	50
8	22	17	15	11	e12	11	15	16	14	e39	37	38
9	26	20	15	11	e12	11	14	18	15	e42	40	47
10	27	26	12	11	e12	11	14	18	13	e43	28	51
11	27	27	11	12	12	11	15	21	14	e40	23	47
12	27	26	13	11	12	20	14	20	15	e38	19	52
13	26	26	13	11	12	15	12	19	14	e38	30	48
14	28	27	14	11	12	13	12	22	13	e41	38	53
15	28	28	13	11	12	16	17	20	13	e40	32	61
16	23	29	13	11	12	22	14	19	14	e44	32	48
17	26	29	14	11	12	15	14	18	12	e41	25	37
18	28	30	14	11	12	14	15	19	11	e40	31	46
19	30	30	13	12	12	14	15	15	11	e35	37	39
20	33	29	13	12	12	14	15	15	10	e38	34	42
21	30	29	12	12	12	14	14	16	7.6	e41	31	36
22	31	28	12	12	12	13	13	16	8.0	e39	44	39
23	34	29	12	12	12	14	13	15	e10	e38	37	43
24	34	29	12	12	12	14	12	17	e15	e40	32	45
25	31	29	12	12	12	15	13	17	e20	e42	41	32
26	30	16	12	12	11	15	15	15	e30	e41	40	41
27	27	15	11	12	11	14	17	14	e40	e37	40	40
28	27	17	12	12	11	14	18	14	e42	e36	21	41
29	30	18	12	12	---	15	17	14	e44	e38	34	36
30	31	18	12	12	---	15	17	15	e43	e41	37	43
31	32	---	12	12	---	16	---	14	---	e42	44	---
TOTAL	838	712	426	357	329	425	448	532	537.6	1244	1084	1312
MEAN	27.0	23.7	13.7	11.5	11.8	13.7	14.9	17.2	17.9	40.1	35.0	43.7
MAX	34	30	22	12	12	22	18	22	44	45	44	61
MIN	19	15	11	11	11	11	12	14	7.6	35	19	32
AC-FT	1660	1410	845	708	653	843	889	1060	1070	2470	2150	2600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

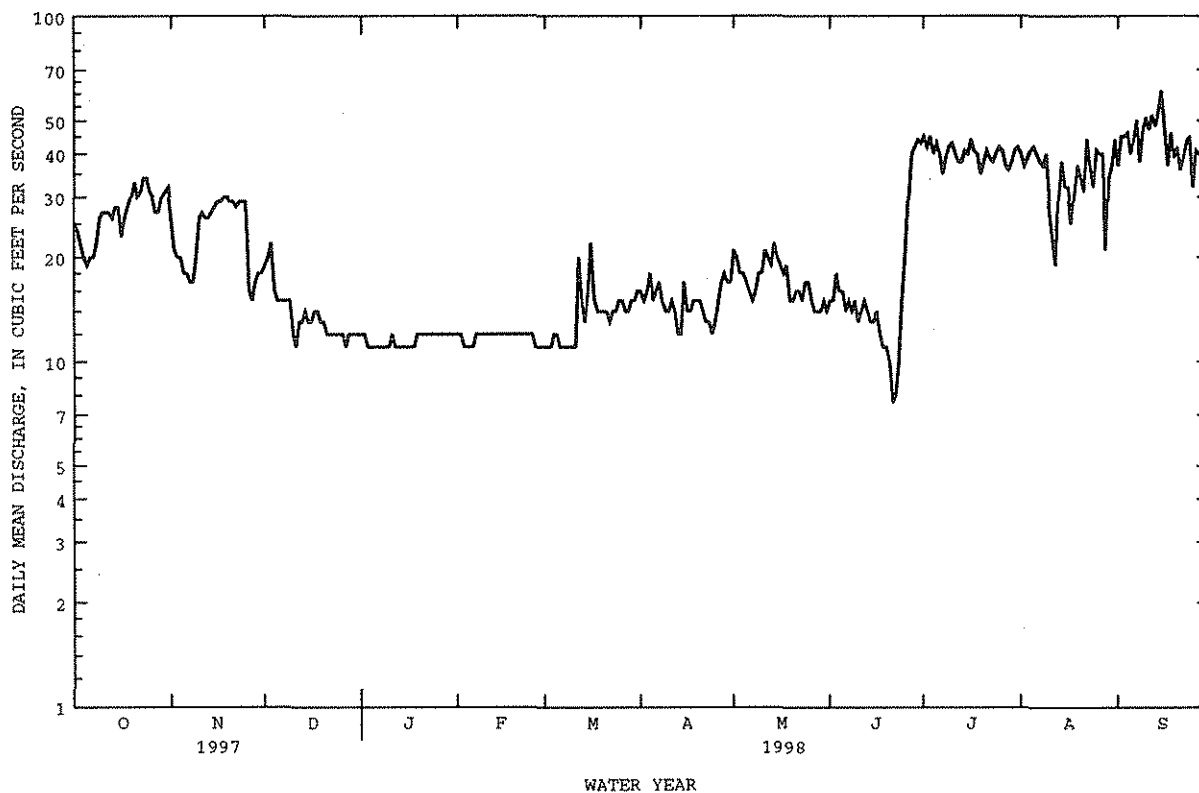
	MEAN	84.3	299	268	246	245	204	210	210	180	97.2	86.7	66.9
MAX	682	1395	1579	1417	1006	1028	1354	1259	1665	1690	890	570	
(WY)	1970	1971	1974	1974	1970	1966	1966	1973	1973	1973	1973	1973	1973
MIN	.000	1.54	2.62	2.42	2.55	3.93	2.92	.64	.000	.000	.013	.000	
(WY)	1964	1978	1995	1995	1995	1977	1977	1977	1972	1964	1977	1964	

RIO GRANDE BASIN

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998	
ANNUAL TOTAL	9170.7		8244.6		183	
ANNUAL MEAN	25.1		22.6		1017	
HIGHEST ANNUAL MEAN					2.25	
LOWEST ANNUAL MEAN					2050	
HIGHEST DAILY MEAN	70	Jun 16	61	Sep 15	.00	Aug 2 1973
LOWEST DAILY MEAN	9.7	Mar 7	7.6	Jun 21	.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	10	Mar 2	9.9	Jun 17	.00	Oct 1 1963
INSTANTANEOUS PEAK FLOW					2220	
ANNUAL RUNOFF (AC-FT)	18190		16350		132200	
10 PERCENT EXCEEDS	46		41		785	
50 PERCENT EXCEEDS	18		17		7.2	
90 PERCENT EXCEEDS	11		11		.51	

e Estimated



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, 2.0 mi east of Bernardo, and at mile 1,487.2, and 5.0 mi downstream from heading of conveyance channel.

DRAINAGE AREA.--19,230 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

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 records prior to October 1964.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,722.55 ft above National Geodetic Vertical Datum of 1929. Prior to May 7, 1996, gage at a datum 3.00 ft lower.

REMARKS.--Water-discharge records good except for estimated daily discharges, which are poor. 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. For combined monthly flow in acre-ft of floodway, conveyance channel, Bernardo interior drain and Lower San Juan Riverside drain see tabulation below. Diversions for irrigation of about 740,000 acres upstream from station. No flow for many days most years.

AVERAGE DISCHARGE.--19 years (water years 1937-38, 1942-58), 1,125 ft³/s, 815,100 acre-ft/yr. Includes flow of floodway, conveyance channel, and Bernardo interior drain. 15 years (water years 1959-73), 898 ft³/s, Riverside drain, prior to closure of Cochiti Dam. 25 years (water years 1974-98), 1,480 ft³/s, 1,072,000 acre-ft/yr, includes flow of floodway, conveyance channel, Bernardo interior drain, and lower San Juan Riverside drain, since closure of Cochiti Dam.

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 most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,610 ft³/s, May 10; minimum daily, 44 ft³/s, Aug. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	1840	1530	963	1090	1070	1710	2530	2380	350	674	285
2	1630	1970	1520	983	1070	1110	1750	2320	2250	364	505	262
3	1790	1960	1650	1070	1060	1040	1820	2570	2620	449	579	175
4	1710	e1970	1640	1060	1040	993	1560	2630	2850	788	499	133
5	1550	e1680	1540	1070	1070	862	1310	2570	2650	1100	622	132
6	1480	e1920	1520	1090	1070	802	e1230	2640	2020	948	360	187
7	1420	1790	1450	1190	1030	828	e1220	2830	1700	612	273	237
8	1600	1680	1390	1290	1060	888	e1200	2960	1560	388	207	146
9	1830	1690	1380	1290	1090	907	1170	3140	1400	635	132	129
10	1670	1710	1260	1220	1120	869	1110	3610	1170	e1000	55	141
11	1650	1740	1180	1040	1090	857	995	3510	1040	e1290	e44	170
12	1680	1650	1260	1010	1070	923	e880	2860	916	1090	e80	189
13	1740	1730	1320	998	1080	1040	e870	3240	778	861	204	233
14	1730	1730	1250	1040	1100	1030	e860	3120	677	612	299	274
15	1710	1640	1190	1120	1140	1150	e840	2640	615	477	374	284
16	2060	1710	1170	1130	1250	1780	e840	2590	e490	356	315	264
17	2540	1650	1180	1110	1220	1640	e850	2980	e400	308	e328	243
18	2620	1680	1210	1010	1120	1550	e880	2980	e240	389	e330	301
19	2460	1510	1200	999	1090	1590	1070	2920	e250	382	328	315
20	2420	1370	1190	992	1080	1450	1050	2180	e250	333	266	332
21	2290	1290	1210	988	1070	1300	1000	2330	e240	266	315	296
22	2300	1350	1220	949	1070	1230	e780	2460	e250	266	348	276
23	2370	1440	1220	957	1060	1270	e600	2630	273	321	284	258
24	2060	1500	1260	1020	1060	1190	626	3160	245	e496	295	269
25	1820	1530	1300	1060	1050	1040	740	3240	250	e600	226	232
26	1670	1510	1260	1070	1060	1020	851	3290	257	750	215	209
27	1530	1530	e1220	1090	1070	1270	1810	3210	220	943	681	205
28	1430	1540	e1230	1070	1080	1510	1690	e3300	217	815	630	236
29	1490	1540	1220	1060	---	1480	2130	e3200	345	735	445	227
30	1540	1530	1190	1110	---	1630	2760	2580	351	649	357	294
31	1630	---	1100	1120	---	1690	---	2350	---	726	337	---
TOTAL	57150	49380	40460	33169	30460	37009	36202	88570	28904	19299	10607	6934
MEAN	1844	1646	1305	1070	1088	1194	1207	2857	963	623	342	231
MAX	2620	1970	1650	1290	1250	1780	2760	3610	2850	1290	681	332
MIN	1420	1290	1100	949	1030	802	600	2180	217	266	44	129
AC-FT	113400	97950	80250	65790	60420	73410	71810	175700	57330	38280	21040	13750
(+)	129600	103900	86620	71950	65050	83130	83990	190200	68650	56720	35800	31980

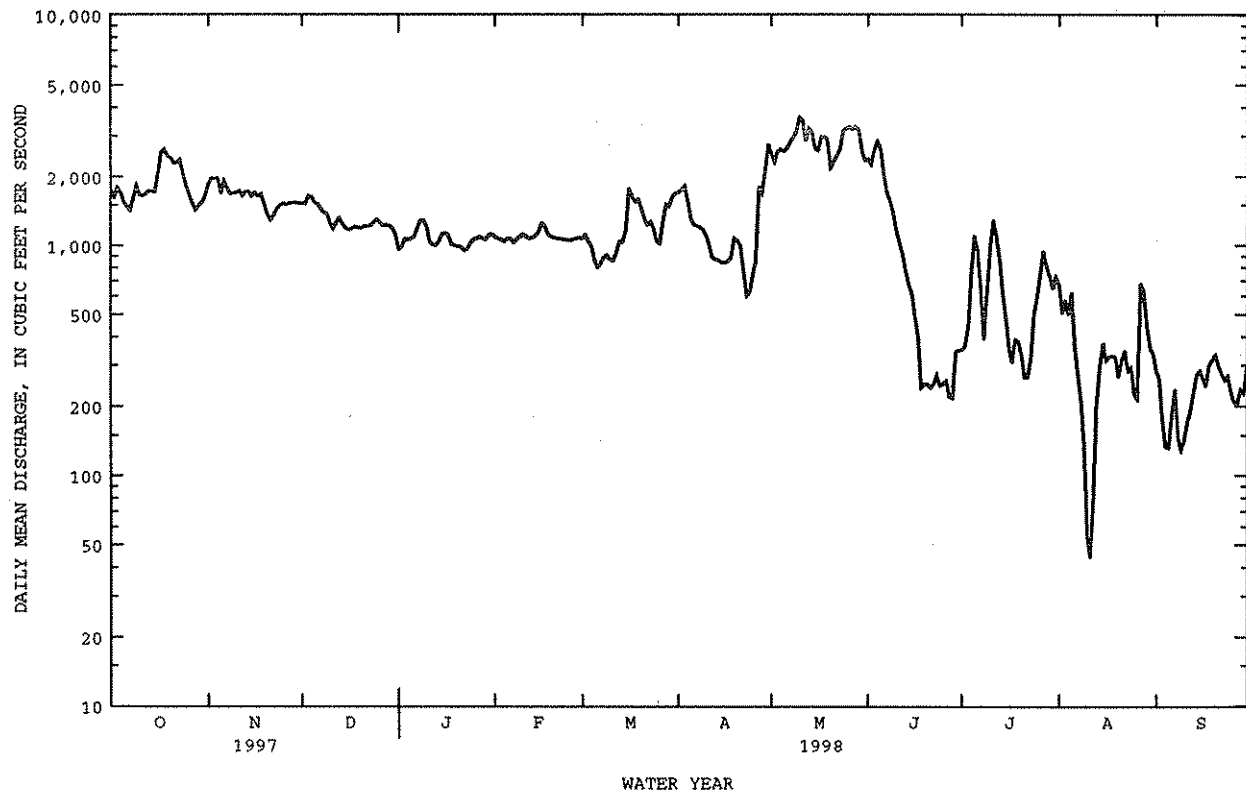
CAL YR 1997 TOTAL 592425 MEAN 1623 MAX 6470 MIN 213 AC-FT 1175000 (+) MEAN 1831 AC-FT 1326000
WTR YR 1998 TOTAL 438144 MEAN 1200 MAX 3610 MIN 44 AC-FT 869100 (+) MEAN 1734 AC-FT 1255000

e Estimated

(+) COMBINED FLOW, IN ACRE-FT. AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY, CONVEYANCE CHANNEL, BERNARDO INTERIOR DRAIN AND LOWER SAN JUAN RIVERSIDE DRAIN.

RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM--Continued



WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE: October 1964 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT LOAD: Maximum daily, 356,000 tons, Aug. 11, 1967; minimum daily, 0 ton on many days each year.

EXTREMES FOR CURRENT YEAR. --

SEDIMENT CONCENTRATION: Maximum daily mean, 6,980 mg/L, Oct. 5; minimum daily mean, 59 mg/L, Sept. 29.

SEDIMENT LOAD: Maximum daily, 29,600 tons, Oct. 4; minimum daily, 17 ton, Aug. 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
NOV 07...	1330	1710	363	7.9	21.0	13.5	41	647	9.0	102	--	--
DEC 15...	1245	1160	410	7.7	7.5	6.0	21	644	10.6	101	130	--
JAN 29...	0920	1050	418	7.9	2.5	5.5	12	644	10.3	97	130	--
APR 23...	0850	E600	490	8.0	16.0	15.5	13	645	8.4	100	140	--
MAY 20...	1020	2150	350	8.0	31.0	19.0	30	646	7.4	95	--	--
JUN 18...	1055	E240	489	8.5	26.5	20.0	12	648	8.7	113	--	--
JUL 29...	0935	746	430	8.3	28.0	25.0	290	647	6.7	96	130	12
AUG 04...	1250	404	439	8.5	30.5	29.0	250	650	7.1	109	--	--
SEP 24...	1015	297	491	8.5	29.0	20.5	65	645	8.1	107	--	--

[illegible]

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible][illegible]

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (F/S) (00055)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM (70336)	
OCT 22...	1210	2150	356	2.2	2.72	14.7	998	5790	--	
NOV 18...	1200	1610	340	2.5	1.89	7.3	418	1820	--	
DEC 16...	1145	1170	341	1.7	2.06	5.4	537	1700	--	
JAN 20...	1220	940	383	1.7	1.48	6.0	833	2110	100	
FEB 23...	1200	1050	343	1.6	1.92	8.3	232	658	--	
MAR 24...	1216	1220	--	--	--	--	326	1070	--	
APR 21...	1220	974	320	1.4	2.13	--	313	823	--	
MAY 18...	1220	3040	347	3.7	2.38	17.5	676	5550	--	
JUN 23...	1150	301	197	.93	1.64	--	71	58	--	
JUL 21...	1210	257	172	.99	1.51	--	215	149	--	
AUG 18...	1200	335	--	--	--	--	295	267	--	
SEP 15...	1135	306	--	--	--	20.0	1370	1130	100	
DATE		SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .031 MM (70341)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
OCT 22...	--	--	--	--	--	34	42	70	100	
NOV 18...	--	--	--	--	--	39	63	91	100	
DEC 16...	--	--	--	--	--	15	23	62	91	
JAN 20...	--	--	--	--	--	9	11	26	89	
FEB 23...	--	--	--	--	--	36	54	92	100	
MAR 24...	--	--	--	--	--	48	62	89	100	
APR 21...	--	--	--	--	--	30	41	72	100	
MAY 18...	--	--	--	--	--	38	59	87	100	
JUN 23...	--	--	--	--	--	41	48	93	100	
JUL 21...	--	--	--	--	--	87	89	100	--	
AUG 18...	59	79	90	93	95	95	96	100	--	
SEP 15...	--	--	--	--	--	8	9	18	81	

RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)
OCT 22...	--	1	3	28	90	99	100	--	--
NOV 18...	--	2	9	44	87	97	99	99	100
DEC 16...	100	0	2	33	88	99	100	--	--
JAN 20...	99	6	14	34	85	98	99	100	--
FEB 23...	--	0	2	23	82	98	99	100	--
MAR 24...	--	1	6	31	86	98	99	100	--
APR 21...	--	1	5	26	86	98	100	--	--
MAY 18...	--	0	3	39	93	99	100	--	--
JUN 23...	--	0	1	20	82	96	99	100	--
JUL 21...	--	0	2	27	82	97	99	100	--
AUG 18...	--	0	4	26	86	97	99	100	--
SEP 15...	93	0	1	27	85	97	99	99	100

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2400	e11100	1060	5310	177	728	128	333	202	592	147	425
2	2400	10600	1710	9100	162	665	98	261	148	427	171	513
3	5580	27200	1080	5720	226	1030	115	333	161	461	159	448
4	6410	29600	1990	e11200	268	1190	128	365	200	e560	151	405
5	6980	28900	1350	e6790	168	702	132	381	298	e861	140	326
6	5280	20900	1560	e8970	128	522	129	381	281	e810	145	314
7	2820	10700	711	3460	123	482	173	567	201	e562	116	258
8	2130	9160	479	2170	149	562	220	766	239	e686	117	281
9	2360	11500	307	1390	177	659	339	1180	296	e871	114	278
10	2170	9710	264	1220	232	789	216	716	303	911	101	237
11	2280	10000	330	1550	205	653	126	354	292	858	138	319
12	1920	8560	352	1580	315	1080	113	310	255	736	136	341
13	2080	9650	388	1840	475	1690	125	336	213	623	203	568
14	2030	9330	426	2010	559	1880	156	e441	293	871	171	476
15	2070	9390	381	1700	572	1830	135	e410	372	1150	168	524
16	2470	13700	365	1690	259	817	130	e397	226	772	783	4360
17	2380	16000	369	1630	368	1170	155	e466	252	847	1050	4850
18	1570	10800	381	1720	382	1250	178	e485	225	676	1010	4320
19	1090	7040	350	1430	415	1340	194	522	164	482	1070	4560
20	1270	8050	360	1330	213	685	136	364	197	574	686	2690
21	1000	6030	349	1210	205	672	218	580	168	483	608	2140
22	660	4040	376	1370	194	638	210	539	202	581	422	1410
23	658	4210	296	1150	169	556	215	556	214	616	356	1220
24	999	5530	256	1040	172	584	213	586	244	698	358	1150
25	1010	4930	216	891	147	516	240	686	211	601	222	627
26	1370	6170	244	997	134	453	207	598	180	512	199	550
27	702	2910	1040	4310	149	e492	229	674	198	572	256	892
28	579	2230	434	1800	189	e667	260	751	170	498	364	1480
29	935	3810	240	994	185	608	446	1270	---	---	343	1380
30	642	2650	202	836	129	415	280	840	---	---	423	1860
31	507	2240	---	---	174	513	314	947	---	---	443	2020
TOTAL	---	316640	---	86408	---	25838	---	17395	---	18891	---	41222

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

08332050 BERNARDO INTERIOR DRAIN NEAR BERNARDO, NM

LOCATION.--Lat 34°24'56", long 106°49'15", Socorro County, Hydrologic Unit 13020203, on right bank 110 ft upstream from culvert on U.S. Highway 60, and 1.0 mi east of Bernardo.

PERIOD OF RECORD.--June 1936 to May 1937, October 1943 to current year. Monthly discharge only June 1936 to May 1937, published in WSP 828. October 1943 to September 1960 included in composite records for station 08332000 "Rio Grande near Bernardo." October 1960 to September 1964, monthly acre-ft published in WSP 1923. Daily records available in district files beginning October 1943.

GAGE.--Water-stage recorder. Elevation of gage is 4,710 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 4, 1936, to May 17, 1937, nonrecording gage 300 ft downstream, and Oct. 1, 1943 to Jan. 12, 1978, water-stage recorder at site 150 ft downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. This drain is 1 of 4 channels (stations 08331990, 08332010, and 08332030) carrying flow in valley cross section. For combined monthly flow in acre-ft of this drain, conveyance channel, floodway, and Lower San Juan Riverside drain, see tabulation below daily table for station 08332010. Several observations of water temperature were made during the year. Prior to 1952, drain was subject to overflow from floodway.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

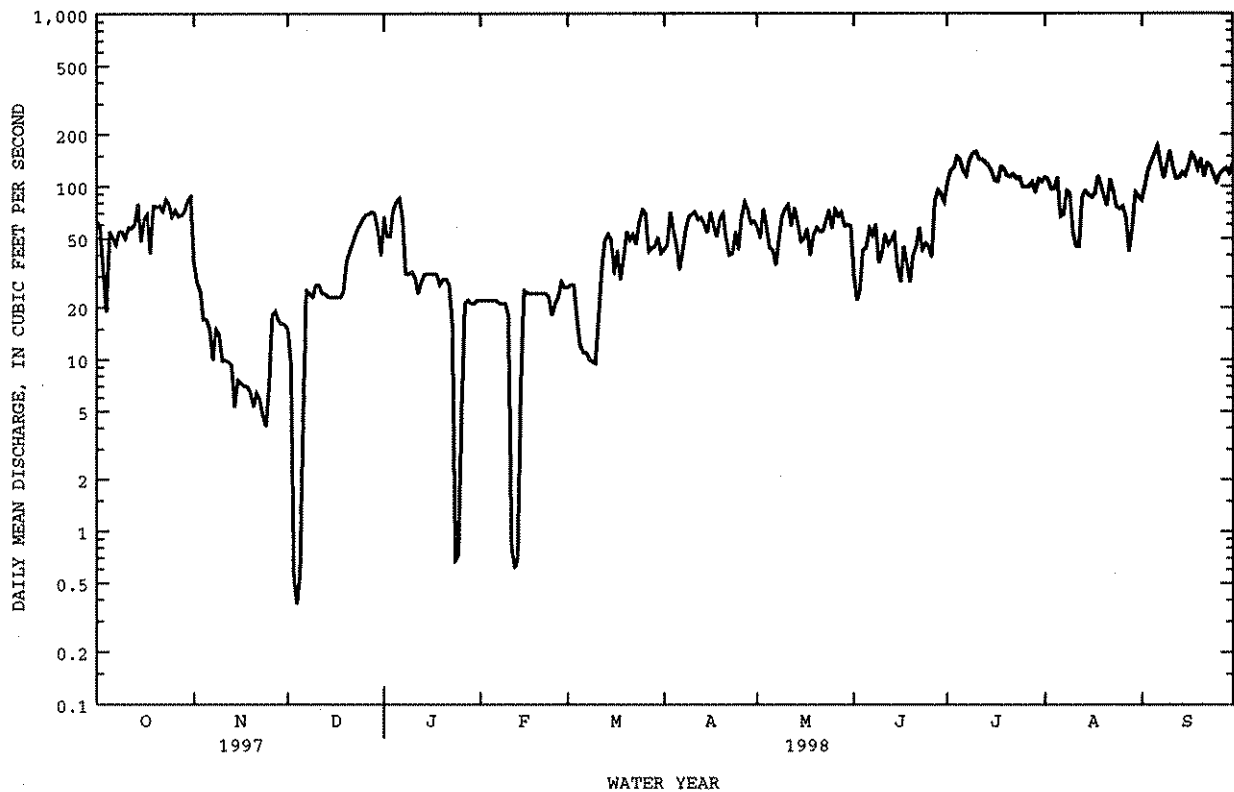
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	36	15	67	22	26	43	58	31	105	113	83
2	58	28	9.5	51	22	27	46	50	22	124	109	101
3	33	25	.52	51	22	27	71	74	25	128	96	124
4	19	17	.38	73	22	17	56	59	43	149	97	139
5	55	17	.56	81	22	12	46	44	44	142	113	153
6	50	15	4.6	85	22	11	33	43	57	124	67	171
7	46	10	25	65	21	11	42	35	52	116	69	136
8	55	15	24	31	21	10	56	49	60	143	94	112
9	55	14	23	31	21	9.7	67	67	36	156	90	133
10	50	9.8	27	32	18	9.5	69	74	41	159	54	161
11	58	9.9	27	30	.80	18	71	78	53	144	45	130
12	57	9.7	24	24	.61	34	64	59	46	143	45	111
13	61	9.3	24	28	.69	49	66	75	49	137	87	112
14	79	5.3	23	31	7.1	53	60	62	53	132	94	121
15	48	7.6	23	31	25	49	54	48	34	122	89	116
16	65	7.3	23	31	24	31	71	50	28	108	86	132
17	69	7.0	23	31	24	43	59	57	45	107	90	155
18	41	7.0	23	31	24	29	51	40	36	130	115	145
19	77	6.4	25	27	24	38	65	52	28	127	103	125
20	76	5.3	37	29	24	55	70	58	40	115	87	145
21	77	6.4	42	29	24	49	50	55	45	114	77	114
22	72	5.9	47	27	24	53	40	55	58	118	110	136
23	84	4.7	54	16	23	46	41	63	43	111	93	132
24	79	4.1	59	.68	18	62	55	73	47	113	76	118
25	67	6.9	64	.73	21	73	43	57	45	99	74	106
26	73	18	68	4.9	23	70	67	73	39	99	77	118
27	67	19	69	21	28	42	81	67	82	100	66	124
28	68	17	71	22	26	44	73	71	95	106	42	128
29	72	16	70	21	---	45	61	59	90	92	58	119
30	83	16	55	21	---	51	63	60	81	110	92	134
31	87	---	40	22	---	41	---	59	---	106	87	---
TOTAL	1944	375.6	1020.56	1045.31	554.20	1135.2	1734	1824	1448	3779	2595	3834
MEAN	62.7	12.5	32.9	33.7	19.8	36.6	57.8	58.8	48.3	122	83.7	128
MAX	87	36	71	85	28	73	81	78	95	159	115	171
MIN	19	4.1	.38	.68	.61	9.5	33	35	22	92	42	83
AC-FT	3860	745	2020	2070	1100	2250	3440	3620	2870	7500	5150	7600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1998, BY WATER YEAR (WY)

MEAN	75.5	30.8	27.3	25.9	25.9	48.4	59.1	63.0	57.9	60.4	70.0	74.1
MAX	168	87.9	74.2	87.7	74.5	96.9	118	137	134	146	146	164
(WY)	1996	1987	1987	1990	1990	1985	1969	1996	1992	1992	1992	1995
MIN	.11	1.37	3.50	3.30	3.90	5.61	4.81	4.84	1.64	.18	.006	.010
(WY)	1957	1957	1955	1957	1957	1954	1955	1954	1954	1956	1954	1956

08332050 BERNARDO INTERIOR DRAIN NEAR BERNARDO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1954 - 1998	
ANNUAL TOTAL	22133.06		21288.87		52.5	
ANNUAL MEAN	60.6		58.3		92.1	
HIGHEST ANNUAL MEAN					4.29	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	187	Sep 21	171	Sep 6	208	May 5 1983
LOWEST DAILY MEAN	.38	Dec 4	.38	Dec 4	.00	Jul 31 1954
ANNUAL SEVEN-DAY MINIMUM	4.9	Jan 21	5.7	Nov 19	.00	Jul 31 1954
INSTANTANEOUS PEAK FLOW					208	May 5 1983
ANNUAL RUNOFF (AC-FT)	43900		42230		38060	
10 PERCENT EXCEEDS	111		118		114	
50 PERCENT EXCEEDS	65		53		40	
90 PERCENT EXCEEDS	10		15		5.8	



LOCATION.--Lat 35°36'04", long 107°09'56", (revised) in SW $\frac{1}{4}$ 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.

REMARKS.--Water-discharge records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 3,700 acres upstream from station in past years, but present diversion negligible. Several observations of water temperature were made during the year. No flow for many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

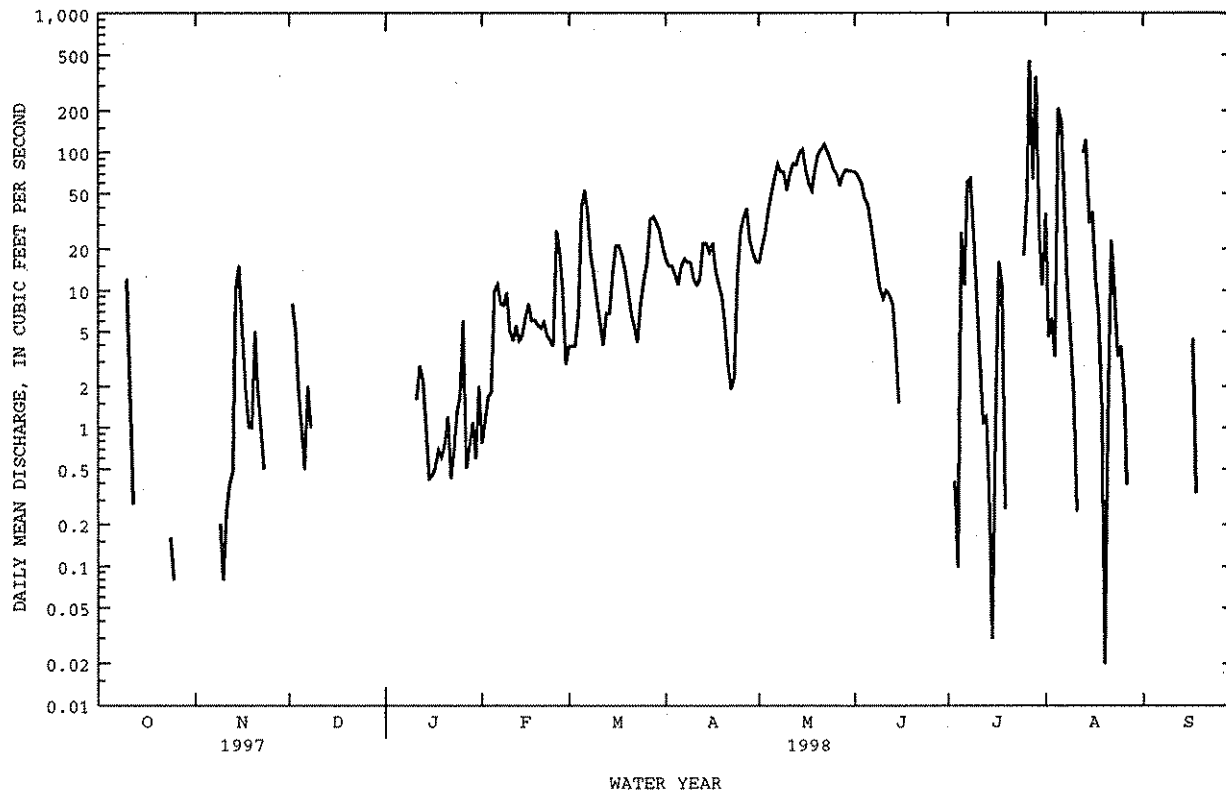
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1998, BY WATER YEAR (WY)

MEAN	7.43	2.99	1.41	2.92	12.3	17.1	19.4	40.9	16.7	16.5	23.8	12.0
MAX	129	28.2	15.9	48.2	79.2	161	99.3	236	113	83.0	101	90.3
(WY)	1958	1987	1987	1993	1979	1960	1958	1973	1995	1996	1957	1972
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1953	1953	1953	1953	1953	1953	1964	1964	1953	1959	1962	1952

08334000 RIO PUERCO ABOVE ARROYO CHICO, NEAR GUADALUPE, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1952 - 1998	
ANNUAL TOTAL	3906.57		6090.12		14.5	
ANNUAL MEAN	10.7		16.7		48.6	
HIGHEST ANNUAL MEAN					1.11	
LOWEST ANNUAL MEAN					2000	
HIGHEST DAILY MEAN	240	Aug 3	449	Jul 27		1973
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1		1974
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1		Oct 20 1957
INSTANTANEOUS PEAK FLOW			1980	Jul 27		Oct 1 1951
INSTANTANEOUS PEAK STAGE			7.03	Jul 27		Oct 1 1951
ANNUAL RUNOFF (AC-FT)	7750		12080		^a 6940	Jul 29 1967
10 PERCENT EXCEEDS	32		60		13.53	
50 PERCENT EXCEEDS	1.5		1.9		10500	
90 PERCENT EXCEEDS	.00		.00		40	

e Estimated

^a 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.

08334000 RIO PUERCO ABOVE ARROYO CHICO, NEAR GUADALUPE, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGES: July 1948 to June 1956, October 1981 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler.

REMARKS.--Daily suspended-sediment samples are collected when flow is observed on this ephemeral stream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 214,000 mg/L, Aug. 28, 1988; minimum daily mean, no flow on many days each year.

SEDIMENT LOADS: Maximum daily, 730,000 tons, July 27, 1955; minimum daily, 0 ton on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 82,200 mg/L, Aug. 22; minimum daily mean, no flow on many days.

SEDIMENT LOADS: Maximum daily, 113,000 tons, July 27; minimum daily, 0 ton on many days.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN CONCE TRATI (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN TRATIO (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	0	.00	0	.00	0	e.00	0	.00	5340	10	7310	88
2	0	.00	0	.00	19000	e462	0	.00	4190	12	6150	58
3	0	.00	0	.00	22000	e535	0	.00	485	2.4	4500	79
4	0	.00	0	.00	5510	e134	0	.00	1840	19	13800	591
5	0	.00	0	.00	1060	e26	0	.00	13300	386	55100	5970
6	0	.00	0	.00	219	e5.3	0	.00	22400	675	58800	8530
7	0	.00	0	.00	1370	e33	0	.00	16800	361	45400	4520
8	0	.00	0	.00	253	e6.1	0	.00	10700	210	14000	695
9	0	.00	982	e1.5	0	e.00	0	.00	11000	e306	35100	1150
10	38700	e1520	266	e.08	0	e.00	0	.00	3720	e57	37400	e864
11	10200	e63	365	e.37	0	e.00	1740	e38	5840	e80	11600	e192
12	622	e.94	779	e1.0	0	e.00	1470	e15	6550	e98	9950	e110
13	0	.00	491	e.82	0	e.00	406	e4.3	4980	60	15100	280
14	0	.00	5420	e578	0	.00	229	e1.1	7060	88	18500	349
15	0	.00	39100	e2430	0	.00	420	.49	8390	148	18900	698
16	0	.00	15500	e493	0	.00	859	1.1	10200	219	28200	1640
17	0	.00	8730	e279	0	.00	1170	2.6	9340	151	32900	1830
18	0	.00	1900	e58	0	.00	3040	5.2	6970	115	25900	1280
19	0	.00	2210	e63	0	.00	1420	2.6	6610	99	20500	751
20	0	.00	23800	e658	0	.00	2930	6.0	7540	108	16700	456
21	0	.00	10400	e291	0	.00	3790	12	9850	158	12700	233
22	0	.00	1640	e45	0	.00	2920	3.3	8740	110	7760	113
23	0	.00	113	e2.7	0	.00	2900	5.5	7580	88	6680	76
24	1500	e2.4	0	e.00	0	.00	2350	8.5	7540	80	10200	221
25	191	e.09	0	e.00	0	.00	4140	20	21400	3030	14600	484
26	0	.00	0	e.00	0	.00	5250	89	43900	2420	17600	752
27	0	.00	0	e.00	0	.00	2230	3.0	24900	e670	23800	e2150
28	0	.00	0	e.00	0	.00	230	.79	8070	65	26500	e2450
29	0	.00	0	e.00	0	.00	162	.40	---	---	25100	e2080
30	0	.00	0	e.00	0	.00	180	.67	---	---	23100	e1660
31	0	.00	---	---	0	.00	2130	13	---	---	21100	e1200
TOTAL	---	1586.43	---	4901.47	---	1201.40	---	232.55	---	9825.4	---	41550

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

e Estimated

RIO GRANDE BASIN

08341300 BLUEWATER CREEK ABOVE BLUEWATER DAM, NEAR BLUEWATER, NM

LOCATION.--Lat 35°16'04", long 108°06'50", SW¹/₄SW¹/₄, sec. 16, T.12 N., R.12 W., Cibola County, Hydrologic Unit 13020207, on left bank 2.0 mi south of Bluewater Dam, 7.0 mi west of Bluewater, and 11 mi east of Thoreau.

DRAINAGE AREA.--75.0 mi².

PERIOD OF RECORD.--October 1953 to September 1978 (annual maximum only), July 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,410 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.40	e.57	e.91	e1.4	4.0	82	31	2.0	.64	1.1	.26
2	.18	.35	e.58	e.92	e1.1	4.2	94	29	1.9	.62	1.1	.27
3	.20	.35	e.62	e.95	e1.2	4.8	83	26	1.8	.71	.71	.22
4	.19	.35	e.66	e.90	e1.3	6.1	112	23	1.7	1.0	.58	.21
5	.16	.34	e.72	e.81	e1.2	9.1	115	21	1.6	1.1	.47	.22
6	.15	.34	e.67	e.93	e1.2	13	105	19	1.7	1.6	.41	.19
7	.16	.33	e.74	e.97	e1.3	17	73	17	1.7	2.4	.36	.35
8	.22	.34	e.81	e.98	e1.2	18	65	16	1.6	5.5	.32	.20
9	.17	.36	e.80	e.94	e1.1	20	63	15	1.5	3.6	.32	.14
10	.17	.37	e.79	e.93	e1.2	18	74	13	1.7	3.1	.31	.16
11	.15	.38	e.77	e.96	e1.3	20	108	11	2.1	2.0	.36	.14
12	.16	.41	e.79	e.94	e1.2	27	123	9.7	2.0	1.5	.47	.17
13	.17	.40	e.85	e.93	e1.3	43	78	8.3	1.6	1.2	.46	.23
14	.17	.46	e.82	e.91	e1.4	69	69	7.2	1.4	1.0	.30	.18
15	.17	e.49	e.86	e.92	e1.3	145	57	7.3	1.3	.87	.35	.23
16	.19	e.48	e.83	e.94	e1.2	219	47	6.4	1.3	.73	.41	.20
17	.19	e.47	e.81	e.82	e1.2	262	39	5.5	1.3	.76	.42	.18
18	.19	e.48	e.82	e.79	e1.3	247	33	4.8	1.3	.69	.58	.17
19	.18	e.49	e.84	e.74	e1.3	138	29	4.1	1.3	.61	.90	.17
20	.18	e.50	e.81	e.73	e1.4	139	30	3.9	1.3	.66	.52	.15
21	.17	e.51	e.86	e.81	e1.4	185	36	3.9	1.3	.61	.39	.16
22	.22	e.52	e.91	e.87	e1.4	269	42	3.4	1.2	.52	.46	.13
23	.28	e.54	e.88	e.91	e1.5	472	49	2.9	1.2	.62	.43	.13
24	.31	.57	e.90	e.95	e1.6	710	51	2.8	1.1	1.1	.33	.11
25	.38	.55	e.92	e.94	e1.4	845	47	2.6	1.0	1.3	e.43	.10
26	.30	.55	e.91	e.98	e1.3	561	52	2.5	1.0	1.0	e.51	.10
27	.31	e.58	e.90	e1.1	e1.6	227	63	2.4	.94	1.2	e.32	.09
28	.31	e.54	e.92	e1.3	e2.5	148	53	2.3	.96	1.3	e.40	.09
29	.34	e.53	e.94	e1.4	---	124	42	2.3	.92	1.2	e.29	.13
30	.37	e.55	e.95	e1.6	---	85	35	2.3	.76	.88	e.25	.20
31	.38	---	e.93	e1.5	---	73	---	2.1	---	.87	.24	---
TOTAL	6.92	13.53	25.18	30.28	37.8	5122.2	1949	307.7	42.48	40.89	14.50	5.28
MEAN	.22	.45	.81	.98	1.35	165	65.0	9.93	1.42	1.32	.47	.18
MAX	.38	.58	.95	1.6	2.5	845	123	31	2.1	5.5	1.1	.35
MIN	.15	.33	.57	.73	1.1	4.0	29	2.1	.76	.52	.24	.09
AC-FT	14	27	50	60	75	10160	3870	610	84	81	29	10

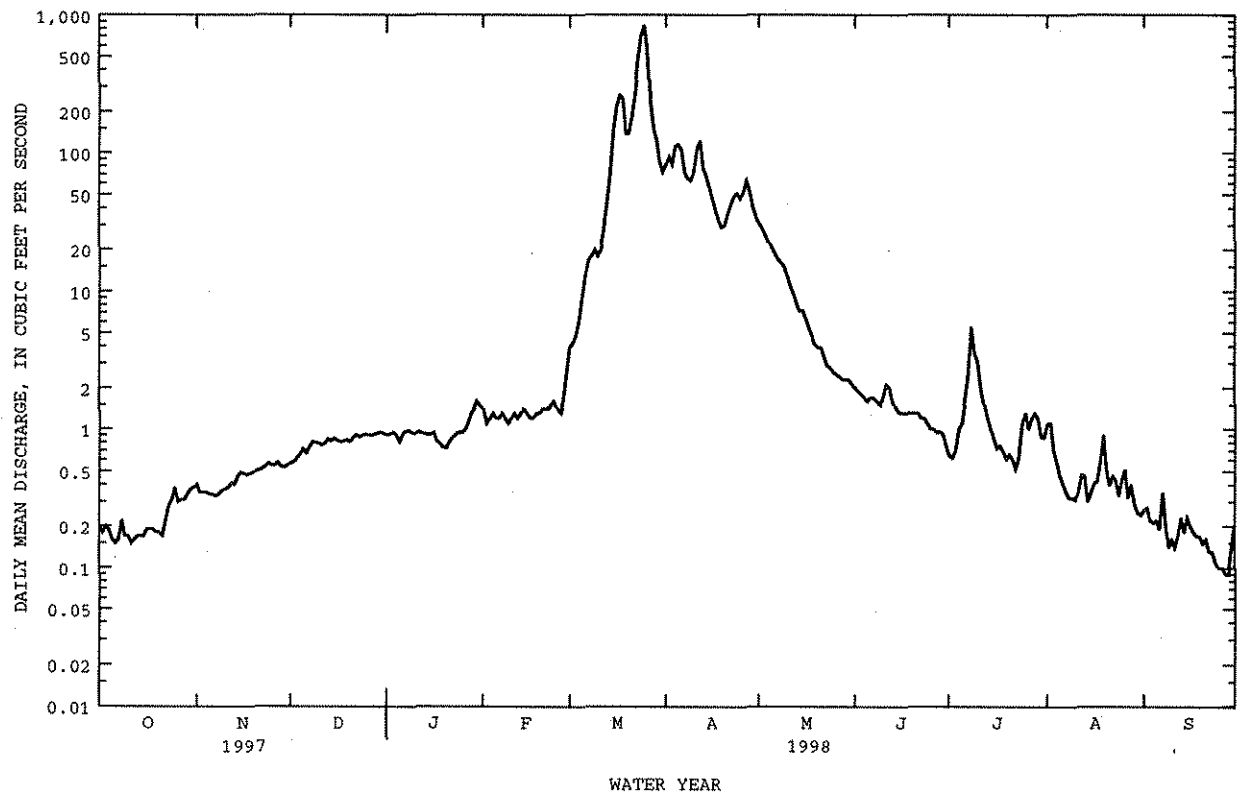
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	.43	.94	.86	2.61	9.62	69.4	44.5	4.88	1.04	.53	1.73	1.22
MAX	1.90	3.47	2.54	17.9	42.1	227	225	14.6	1.78	1.32	11.7	5.42
(WY)	1994	1994	1995	1993	1995	1993	1993	1993	1993	1998	1993	1997
MIN	.093	.055	.050	.091	.48	.55	.43	.37	.077	.052	.023	.059
(WY)	1991	1991	1991	1991	1990	1990	1990	1996	1990	1996	1990	1990

08341300 BLUEWATER CREEK ABOVE BLUEWATER DAM, NEAR BLUEWATER, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1989 - 1998
ANNUAL TOTAL	1363.05	7595.76	
ANNUAL MEAN	3.73	20.8	11.5
HIGHEST ANNUAL MEAN			44.6
LOWEST ANNUAL MEAN			.24
HIGHEST DAILY MEAN	100 Sep 21	845 Mar 25	845 Mar 25 1998
LOWEST DAILY MEAN	.04 Jul 24	.09 Sep 27	.00 Jun 24 1990
ANNUAL SEVEN-DAY MINIMUM	.06 Jul 22	.11 Sep 22	.00 Aug 3 1990
INSTANTANEOUS PEAK FLOW		1880 Mar 25	3570 Jul 16 1953
INSTANTANEOUS PEAK STAGE		4.62 Mar 25	8.99 Jul 16 1953
INSTANTANEOUS LOW FLOW		.08 Sep 27	.00 Apr 24 1990
ANNUAL RUNOFF (AC-FT)	2700	15070	8330
10 PERCENT EXCEEDS	9.0	51	20
50 PERCENT EXCEEDS	.50	.94	.72
90 PERCENT EXCEEDS	.10	.19	.10

e Estimated



RIO GRANDE BASIN

08341365 COTTONWOOD CREEK NEAR THOREAU, NM

LOCATION.--Lat 35°20'32", long 108°12'42", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.21, T.13 N., R. 13., McKinley County, Hydrologic Unit 13020207, on left bank 4.0 mi southeast of Thoreau, and 4.0 mi northwest of north end of Bluewater Lake.

DRAINAGE AREA.--77.0 mi.

PERIOD OF RECORD.--July 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,420 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. No flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	e.90	.00	e2.0	69	25	e.00	.00	.00	.00
2	.00	.00	.00	e2.2	.00	e3.5	72	e10	e.00	.00	.00	.00
3	.00	.00	.00	e1.6	.00	e4.0	63	e5.0	e.00	.00	.00	.00
4	.00	.00	.00	e.40	.00	e5.0	91	e2.0	e.00	.00	.00	.00
5	.00	.00	.00	.00	.00	10	108	e1.0	e.00	.00	.00	.00
6	.00	.00	.00	.00	.00	16	107	e.50	e.00	.00	.00	.00
7	.00	.00	.01	.00	.00	15	74	e.20	e.00	.94	.00	.00
8	.00	.00	.19	.00	.00	15	60	e.00	e.00	8.8	.00	.00
9	.00	.00	.00	.00	.00	12	53	e.00	e.00	8.9	.00	.00
10	.00	.00	.00	.00	.00	12	77	e.00	e.00	5.1	.00	.00
11	.00	.00	.00	.00	.00	13	131	e.00	e.00	.46	.00	.00
12	.00	.00	.00	.00	.00	23	133	e.00	e.00	.00	.00	.00
13	.00	.00	.00	.00	.00	33	82	e.00	e.00	.00	.00	.00
14	.00	.00	.00	.00	.00	56	76	e.00	e.00	.00	.00	.00
15	.00	.00	.00	.00	.00	121	61	e.00	e.00	.00	.00	.00
16	.00	.00	.00	.00	.00	178	48	e.00	e.00	.00	.00	.00
17	.00	.00	.00	e.70	.00	181	41	e.00	e.00	.00	.00	.00
18	.00	.00	.00	e.30	.00	156	36	e.00	e.00	.00	.00	.00
19	.00	.00	.00	.00	.00	84	31	e.00	e.00	.00	.00	.00
20	.00	.00	.00	.00	.00	90	33	e.00	e.00	.00	.00	.00
21	.00	.00	.00	.00	.00	119	38	e.00	e.00	.00	.00	.00
22	.00	.00	.00	.00	.00	166	41	e.00	e.00	.00	.61	.00
23	.00	.00	.00	.00	.00	258	41	e.00	e.00	.00	.00	.00
24	.00	.00	.00	.00	.00	312	38	e.00	e.00	.00	.00	.00
25	.00	.00	.00	.00	.00	344	33	e.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	308	35	e.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	165	58	e.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	108	59	e.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	93	41	e.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	77	30	e.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	66	---	e.00	---	.00	.00	---
TOTAL	0.00	0.00	0.20	6.10	0.00	3045.5	1860	43.70	0.00	24.20	0.61	0.00
MEAN	.000	.000	.006	.20	.000	98.2	62.0	1.41	.000	.78	.020	.000
MAX	.00	.00	.19	2.2	.00	344	133	25	.00	8.9	.61	.00
MIN	.00	.00	.00	.00	.00	2.0	30	.00	.00	.00	.00	.00
AC-FT	.00	.00	.4	12	.00	6040	3690	87	.00	48	1.2	.00

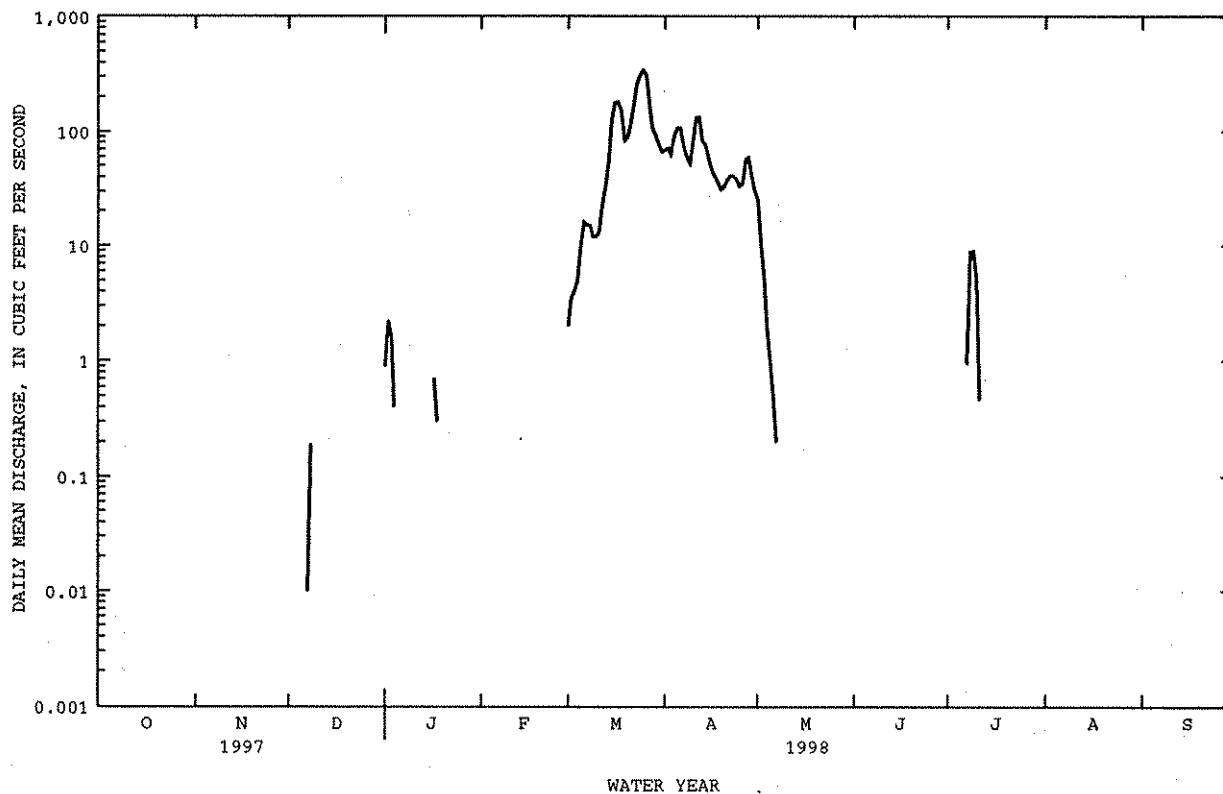
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	.012	.17	.19	3.82	7.19	44.7	23.5	2.63	.28	.14	.40
MAX	.10	1.22	1.19	34.2	33.4	143	62.8	8.32	.93	.78	1.17
(WY)	1994	1994	1993	1993	1993	1993	1991	1995	1995	1998	1997
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1990	1990	1990	1990	1990	1990	1990	1990	1994	1993	1994

08341365 COTTONWOOD CREEK NEAR THOREAU, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1989 - 1998
ANNUAL TOTAL	782.04	4980.31	
ANNUAL MEAN	2.14	13.6	7.03
HIGHEST ANNUAL MEAN			21.6
LOWEST ANNUAL MEAN			.006
HIGHEST DAILY MEAN	127 Sep 22	344 Mar 25	470 Mar 6 1995
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jul 20 1989
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Aug 7 1989
INSTANTANEOUS PEAK FLOW		502 Mar 25	^a 813 Mar 6 1995
INSTANTANEOUS PEAK STAGE		6.41 Mar 25	7.64 Mar 6 1995
ANNUAL RUNOFF (AC-FT)	1550	9880	5090
10 PERCENT EXCEEDS	5.2	44	12
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

^a From rating curve extended above 2,000 ft³/s.

08341400 BLUEWATER LAKE NEAR BLUEWATER, NM

LOCATION.--Lat 35°17'31", long 108°06'40", in SE 1/4 sec.9, T.12 N., R.12 W., Cibola County, Hydrologic Unit 13020207, at left end of Bluewater Dam on Bluewater Creek, and 9.5 mi west of Bluewater.

DRAINAGE AREA.--201 mi².

PERIOD OF RECORD.--June 1927 to December 1950 (monthend contents only, published in WSg 1732), April 1958 to current year (monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is 7,345.57 ft above National Geodetic Vertical Datum of 1929. July 1958 to January 1961, nonrecording gage at nearby site, same datum. Gage heights have been converted to sea-level elevations.

REMARKS.--Lake is formed by concrete arch dam. Storage began in 1927. Capacity, 38,500 acre-ft, survey of 1945 at elevation 7,402.6 ft, crest of uncontrolled siphon spillway, which is vented to avoid drawdown below crest, and 44,200 acre-ft, at elevation 7,405.6 ft, crest of ungated spillway over dam. Capacity table used through 1944 showed a capacity of 50,300 acre-ft at crest of ungated spillway over dam, and that used from 1945-50, 43,500 acre-ft. Tables used prior to 1958 are not available and no adjustments are made for changes in tables. Dead storage, 3.4 acre-ft at elevation 7,345.4 ft, sill of lower outlet tube. Lake not usually drawn below conservation-pool level elevation, 7,365.36 ft, below which ownership is by State Game and Fish Department. Above this level, water is owned and used by Bluewater-Toltec Irrigation Co. Figures given herein represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents determined, 47,100 acre-ft, Apr. 30, 1941. Contents may have been greater on Apr. 28, 1941, when peak discharge of 800 ft³/s occurred at station 8 mi downstream; no storage at times prior to 1947.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 27,490 acre-ft, May 3-4, elevation, 7,395.51 ft; minimum, 5,720 acre-ft, Nov. 25, 26, elevation, 7,371.65 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5760	5770	5730	5770	5870	5980	16660	27430	26410	e21730	e18760	e16460
2	5760	5760	5740	5770	5880	5980	17020	27460	26340	e21630	e18690	e16400
3	5760	5760	5740	5770	5880	6000	17370	27470	26280	e21540	e18660	e16340
4	5760	5760	5740	5780	5880	6010	17780	27490	26230	e21440	e18580	e16280
5	5770	5760	5740	5790	5880	6180	18190	27490	26160	e21340	e18450	e16220
6	5760	5750	5740	5790	5890	6320	18630	27470	26050	e21240	e18370	e16160
7	5770	5750	5740	5800	5890	6470	18990	27460	e25780	e21150	e18290	e16100
8	5770	5750	5750	5800	5900	6620	19370	27450	e25550	e21050	e18210	e16040
9	5760	5750	5740	5800	5900	6790	19750	27420	e25330	e20950	e18130	e15980
10	5770	5740	5750	5810	5900	6930	20140	27380	e25110	e20850	e18060	e15930
11	5770	5740	5750	5810	5900	7100	20610	27350	e24890	e20760	e17980	e15870
12	5760	5750	5750	5810	5910	7280	21110	27340	e24670	e20660	e17910	e15810
13	5760	5740	5750	5810	5910	7500	21520	27300	e24450	e20560	e17830	e15760
14	5760	5750	5750	5820	5910	7760	21920	27280	e24230	e20460	e17760	e15700
15	5760	5750	5750	5820	5910	8190	22300	27230	e24020	e20370	e17680	e15670
16	5760	5740	5750	5820	5920	8690	22680	27200	e23810	e20270	e17610	e15630
17	5770	5740	5750	5820	5920	9250	23020	27160	e23590	e20170	e17530	e15590
18	5770	5740	5750	5820	5920	9780	23380	27120	e23380	e20080	e17460	e15550
19	5760	5740	5750	5830	5930	10150	23720	27080	e23160	e19980	e17380	e15510
20	5760	5740	5750	5830	5930	10520	24040	27040	e22950	e19890	e17310	e15450
21	5760	5730	5750	5830	5940	10950	24400	27000	e22740	e19790	e17230	e15420
22	5770	5730	5760	5840	5940	11450	24780	26940	e22590	e19690	e17160	e15400
23	5770	5730	5760	5840	5950	12090	25150	26890	e22530	e19600	e17080	e15390
24	5770	5730	5760	5850	5960	12880	25530	26840	e22440	e19500	e17010	15400
25	5770	5720	5770	5850	5960	13670	25880	26780	e22330	e19410	e16940	15370
26	5770	5720	5770	5850	5970	14360	26290	26730	e22230	e19310	e16870	15320
27	5780	5730	5770	5850	5970	14830	26690	26690	e22130	e19220	e16800	15290
28	5770	5730	5770	5860	5970	15230	27120	26640	e22030	e19140	e16730	15260
29	5770	5730	5770	5860	---	15620	27340	26580	e21930	e19050	e16660	15280
30	5770	5730	5770	5870	---	15970	27390	26520	e21830	e18930	e16590	15270
31	5770	---	5770	5870	---	16290	---	26460	---	e18840	e16530	---
MAX	5780	5770	5770	5870	5970	16290	27390	27490	26410	21730	18760	16460
MIN	5760	5720	5730	5770	5870	5980	16660	26460	21830	18840	16530	15260
(+)	7371.76	7371.67	7371.76	7371.97	7372.18	7386.25	7395.45	7394.76	7391.13	7388.64	7386.49	7385.19
(++)	+20	+40	+40	+100	+100	+10320	+11100	-930	-4630	-2990	-2310	-1260

CAL YR 1997 MAX 6310 MIN 3140 (++) +3050
WTR YR 1998 MAX 27490 MIN 5720 (++) +9600

e Estimated

(+) ELEVATION, IN FEET, AT END OF MONTH
(++) CHANGE IN CONTENTS, IN ACRE-FEET

08341500 BLUEWATER CREEK BELOW BLUEWATER DAM, NM

LOCATION.--Lat 35°18'13", long 108°05'56", in NW¹/₄NW¹/₄ sec. 3, T.12 N., R. 12 W., Cibola County, Hydrologic Unit 13020207, on left bank 0.5 mi downstream from Bluewater Dam and 11 mi west of Bluewater.

DRAINAGE AREA.--201 mi².

PERIOD OF RECORD.--March 1951 to September 1960, July 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,290 ft above National Geodetic Vertical Datum of 1929, from topographic map. March 14, 1951 to September 30, 1960 at site 0.5 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Bluewater Lake (station 08341400) 0.5 mi upstream, since 1927. No flow at times in 1955, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known occurred Sept. 6, 1909, where Bluewater Dam washed out; stage and discharge not determined. Another major flood probably occurred July 12-19, 1919 when a stage of 13.5 was reached at station (08342000) 8.0 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	.84	1.1	.95	.74	.83	3.9	7.6	44	40	e37	23
2	.88	.84	1.2	.94	.75	.87	4.3	7.4	36	66	e36	23
3	1.0	.88	1.1	.93	.76	.88	4.4	7.3	29	77	e37	20
4	.89	.89	1.1	.91	.78	.89	4.7	8.8	28	76	e37	15
5	.88	.89	1.1	.89	.76	.89	5.2	21	27	75	e34	14
6	.85	.89	1.1	.89	.78	.91	5.3	35	27	75	e34	15
7	.89	.93	1.2	.86	.77	.97	5.4	34	26	78	e33	15
8	.91	.93	1.2	.84	.82	.98	5.5	34	25	66	e33	12
9	.87	.93	1.1	.83	.84	.93	5.9	34	26	37	e32	13
10	.84	.93	1.1	.80	.84	.95	6.0	33	39	13	e32	22
11	.86	1.0	1.0	.80	.82	.98	6.1	31	36	19	e31	29
12	.90	1.0	1.1	.81	.82	1.0	6.1	31	28	24	e31	31
13	.87	1.0	1.2	.79	.82	1.0	6.3	30	28	31	e32	33
14	.88	1.1	1.2	.79	.84	1.1	6.5	34	38	37	e29	32
15	.89	1.1	1.1	.77	.85	1.5	6.6	36	51	52	e29	32
16	.87	1.1	1.1	.79	.84	1.5	6.6	36	51	62	e29	27
17	.88	1.1	1.0	.81	.83	1.4	6.7	36	49	58	e30	27
18	.89	1.1	.99	.82	.85	1.5	7.0	37	53	42	e27	27
19	.91	1.1	.98	.81	.84	1.5	7.0	38	60	42	e27	28
20	.89	1.1	.98	.81	.84	1.6	7.2	38	47	42	e25	28
21	.88	1.1	.98	.80	.85	1.7	7.1	38	41	43	e26	28
22	.90	1.1	.98	.80	.84	1.7	7.1	37	40	43	e26	17
23	.86	1.1	.99	.79	.86	1.8	7.4	37	39	43	e25	5.5
24	.90	1.1	.98	.77	.88	2.0	7.4	35	39	42	e25	7.9
25	.88	1.1	.98	.76	.95	2.3	7.4	40	41	26	e24	7.8
26	.87	1.1	.98	.75	.86	2.7	7.7	42	42	27	e23	7.8
27	.84	1.2	1.0	.75	.82	3.0	7.9	41	45	27	e24	7.8
28	.80	1.1	.98	.76	.81	3.2	7.9	40	47	34	e23	7.3
29	.79	1.1	1.0	.75	---	3.4	8.0	44	50	e38	e22	2.3
30	.82	1.1	1.1	.76	---	3.6	7.7	46	46	e38	20	1.9
31	.83	---	1.0	.75	---	3.7	---	45	---	e37	23	---
TOTAL	27.11	30.75	32.92	25.28	23.06	51.28	192.3	1014.1	1178	1410	896	559.3
MEAN	.87	1.02	1.06	.82	.82	1.65	6.41	32.7	39.3	45.5	28.9	18.6
MAX	1.0	1.2	1.2	.95	.95	3.7	8.0	46	60	78	37	33
MIN	.79	.84	.98	.75	.74	.83	3.9	7.3	25	13	20	1.9
AC-FT	54	61	65	50	46	102	381	2010	2340	2800	1780	1110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

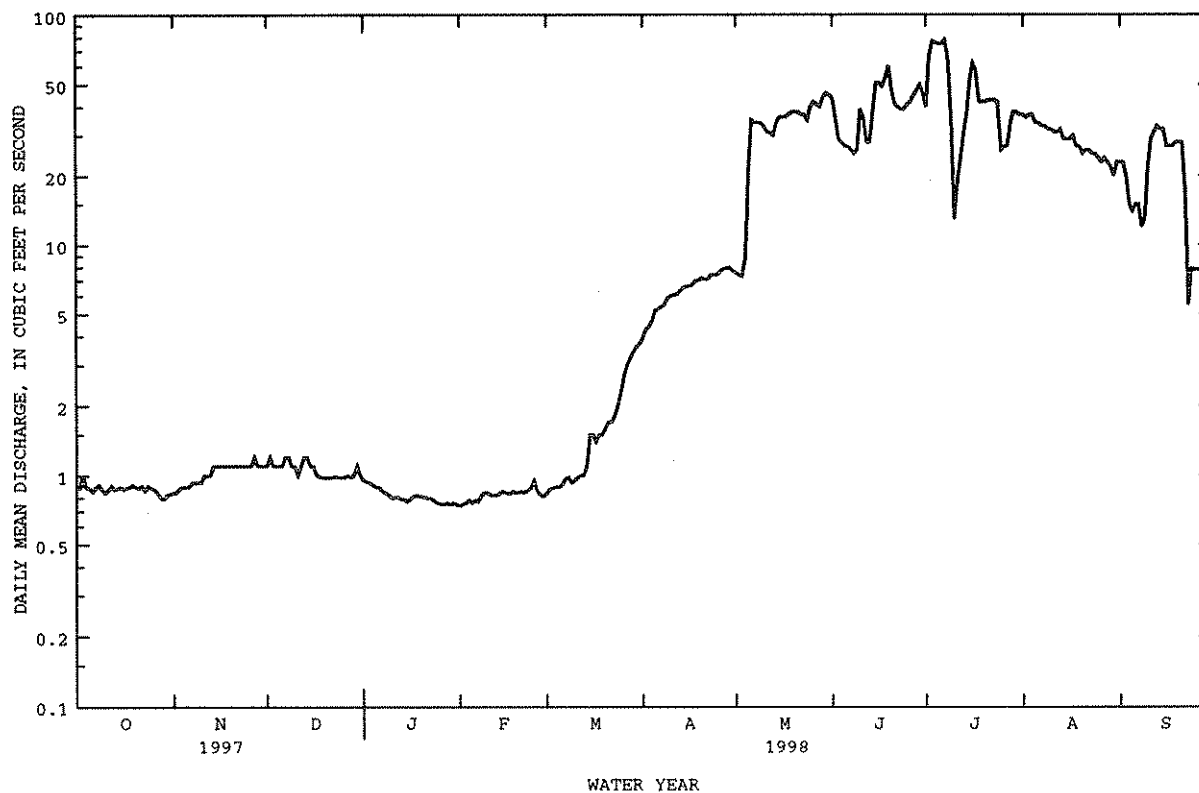
	MEAN	2.65	1.29	1.17	1.22	1.37	2.47	6.52	34.2	28.9	29.7	19.3	11.1
MAX	15.1	4.48	3.90	4.39	5.03	6.25	21.7	67.4	53.3	59.1	41.0	33.0	
(WY)	1994	1994	1994	1994	1994	1993	1994	1995	1995	1995	1995	1993	
MIN	.49	.44	.28	.39	.41	.51	.62	.65	.46	.48	.48	.39	
(WY)	1990	1997	1991	1991	1997	1997	1990	1990	1990	1990	1990	1989	

RIO GRANDE BASIN

08341500 BLUEWATER CREEK BELOW BLUEWATER DAM, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1989 - 1998
ANNUAL TOTAL	299.06	5440.10	
ANNUAL MEAN	.82	14.9	12.0
HIGHEST ANNUAL MEAN			22.1
LOWEST ANNUAL MEAN			.61
HIGHEST DAILY MEAN	3.3 Sep 22	78 Jul 7	98 May 5 1995
LOWEST DAILY MEAN	.36 Jan 6	.74 Feb 1	.14 Dec 9 1990
ANNUAL SEVEN-DAY MINIMUM	.38 Jan 11	.75 Jan 26	.17 Dec 5 1990
INSTANTANEOUS PEAK FLOW			^a 108 May 4 1995
INSTANTANEOUS PEAK STAGE			3.35 Jul 6 1994
ANNUAL RUNOFF (AC-FT)	593	10790	8690
10 PERCENT EXCEEDS	1.1	40	41
50 PERCENT EXCEEDS	.84	3.6	1.2
90 PERCENT EXCEEDS	.41	.82	.46

e Estimated

^a From rating curve extended above 50 ft³/s.

08343000 RIO SAN JOSE AT GRANTS, NM

LOCATION.--Lat 35°09'16", long 107°52'11", in SW¹/₄NW¹/₄ sec.26, T.11 N., R.10 W., Cibola County, Hydrologic Unit 13020207, on right bank upstream 1,500 ft from 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. Prior to 1992 at site on right bank at bridge at El Morro St., at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow slightly regulated by Bluewater Lake (station 08341400) 24 mi upstream. Diversions and ground-water withdrawals for irrigation of about 4,500 acres upstream from station. Several observations of water temperature were made during the year. No flow most of time.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e2.0
2	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.50
3	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.10
4	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
5	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
6	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
7	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
8	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
10	.00	.00	.00	8.9	.00	.00	.00	.00	.00	.00	e.00	.00
11	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.00	.00
12	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.00	.00
13	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.05	.00
14	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.20	.00
15	.00	.00	.00	e.00	.00	1.4	.00	.00	.00	.00	e.00	.00
16	.00	.00	.00	e.00	.00	3.1	.00	.00	.00	.00	e.00	.00
17	.00	.00	.00	e.00	.00	2.4	.00	.00	.00	.00	e.00	.00
18	.00	.00	.00	e.00	.00	1.4	.00	.00	.00	.00	e.00	.00
19	.00	.00	.00	e.00	.00	e.20	.00	.00	.00	.00	e.00	.00
20	.00	.00	.00	e.00	.00	e.05	.00	.00	.00	.00	e.00	.00
21	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.00	.00
22	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.00	.00
23	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.00	.00
24	.00	.01	.00	e.00	.00	.00	.00	.00	.00	.00	e.00	.00
25	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.05	.00
26	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.00	.00
27	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.00	.00
28	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	e.00	.00
29	.00	.00	.00	e.00	---	.00	.00	.00	.00	e.00	.00	e.10
30	.00	.00	.00	.00	---	.00	.00	.00	.00	e.00	.00	e.05
31	.00	---	.00	.00	---	.00	---	.00	---	e.00	16	---
TOTAL	0.00	0.01	0.00	8.90	0.00	8.55	0.00	0.00	0.00	0.00	16.30	2.75
MEAN	.000	.000	.000	.29	.000	.28	.000	.000	.000	.000	.53	.092
MAX	.00	.01	.00	8.9	.00	3.1	.00	.00	.00	.00	16	2.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.02	.00	18	.00	17	.00	.00	.00	.00	32	5.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1998, BY WATER YEAR (WY)

	MEAN	.19	.002	.000	.010	.000	.22	5.62	1.79	.005	.11	.48	.27
MAX	2.51	.061	.000	.29	.000	6.30	87.0	22.5	.11	1.20	7.79	5.49	
(WY)	1970	1980	1969	1998	1969	1985	1980	1983	1997	1981	1993	1972	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
(WY)	1969	1969	1969	1969	1969	1969	1969	1969	1968	1968	1969	1968	

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1968 - 1998
ANNUAL TOTAL	21.08	36.51	
ANNUAL MEAN	.058	.10	.72
HIGHEST ANNUAL MEAN			8.10
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	5.9 Jul 30	16 Aug 31	355 Apr 21 1980
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jun 1 1968
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Jun 1 1968
INSTANTANEOUS PEAK FLOW		131 Jan 10	^a 1760 Aug 28 1952
INSTANTANEOUS PEAK STAGE		3.06 Jan 10	5.35 Aug 28 1952
ANNUAL RUNOFF (AC-FT)	42	72	525
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

^a From rating curve extended above 300 ft³/s, on basis of velocity-area studies.

RIO GRANDE BASIN

08343500 RIO SAN JOSE NEAR GRANTS, NM

LOCATION.--Lat 35°04'27", long 107°45'01", in SE¹/₄SE¹/₄ 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.--Water-discharge records fair except for estimated daily discharges, which are poor. 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.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.2	e3.6	5.9	5.0	4.1	4.1	4.4	4.3	3.5	3.3	e4.1	e3.6
2	e5.8	e3.3	5.8	5.0	4.1	4.1	4.4	4.3	3.5	3.3	e4.3	e3.4
3	e5.1	e3.2	5.6	5.0	4.1	4.1	4.4	4.3	3.5	3.3	e3.2	e3.5
4	e5.2	e3.6	5.6	4.9	4.1	4.1	4.4	4.2	3.4	3.3	e3.0	e3.9
5	e4.3	e3.4	5.6	4.7	4.1	4.1	4.4	4.2	3.4	3.5	e2.7	e3.7
6	e4.1	e3.5	5.6	4.7	4.1	4.1	4.4	4.2	3.5	3.3	e3.0	e4.0
7	e4.0	e3.6	5.6	4.7	4.1	4.1	4.4	4.2	3.4	3.5	e3.2	e4.0
8	e3.9	e3.8	5.6	4.7	4.1	4.1	4.4	4.1	3.3	3.5	e3.1	e3.9
9	e4.0	e3.8	5.6	4.7	4.1	4.1	4.4	4.1	3.4	3.4	e3.5	e3.7
10	e4.2	e4.0	5.6	4.7	4.1	4.1	4.4	4.1	3.3	3.5	e4.0	e3.8
11	e4.2	e3.8	5.3	4.7	4.1	4.1	4.4	4.0	3.3	3.5	e4.2	e4.0
12	e4.1	e3.7	5.3	4.6	4.1	4.1	4.4	4.1	3.3	3.7	e3.5	e4.2
13	e4.2	e3.6	5.3	4.4	4.1	4.1	4.4	4.0	3.3	3.5	e3.6	e4.1
14	e4.3	e3.9	5.3	4.4	4.1	4.1	4.4	3.9	3.2	3.6	e3.5	e3.9
15	e4.1	e4.0	5.3	4.4	4.1	4.1	4.4	3.9	3.2	3.8	e3.8	e3.7
16	e4.3	e4.3	5.3	4.4	4.1	4.1	4.4	4.0	3.2	3.6	e3.9	e3.9
17	e4.2	e4.6	5.3	4.4	4.1	4.1	4.4	3.9	3.2	3.7	e3.5	e3.8
18	e4.5	e4.8	5.3	4.4	4.1	4.1	4.4	3.9	3.1	3.8	e3.9	e4.0
19	e4.3	e5.2	5.0	4.4	4.1	4.1	4.4	3.8	3.1	3.8	e4.0	e4.2
20	e3.8	e5.4	5.0	4.4	4.1	4.1	4.4	3.8	3.1	3.8	e4.2	e3.9
21	e3.7	e5.3	5.0	4.2	4.1	4.1	4.4	3.8	3.1	3.8	e3.8	e3.7
22	e3.6	e5.0	5.0	4.1	4.1	4.1	4.4	3.8	3.1	4.0	e3.8	e3.9
23	e3.7	e5.3	5.0	4.1	4.1	4.1	4.4	3.8	3.0	3.9	e4.0	e3.9
24	e3.9	e5.6	5.0	4.1	4.1	4.1	4.4	3.7	3.1	3.9	e3.8	e4.1
25	e3.4	5.9	5.0	4.1	4.1	4.1	4.4	3.7	3.1	4.1	e3.8	e4.2
26	e3.6	5.9	5.0	4.1	4.1	4.1	4.4	3.7	3.0	4.0	e3.9	e4.5
27	e3.4	5.9	5.0	4.1	4.1	4.1	4.4	3.7	3.2	4.0	e4.0	e4.2
28	e3.2	5.9	5.0	4.1	4.1	4.1	4.4	3.6	3.2	e3.7	e4.0	e3.9
29	e3.1	5.9	5.0	4.1	---	4.1	4.3	3.6	3.1	e3.4	e3.9	e4.0
30	e3.2	5.9	5.0	4.1	---	4.1	4.3	3.6	3.3	e4.0	e3.7	e4.1
31	e3.0	---	5.0	4.1	---	4.2	---	3.6	---	e3.8	e3.7	---
TOTAL	124.6	135.7	163.9	137.8	114.8	127.2	131.8	121.9	97.4	113.3	114.6	117.7
MEAN	4.02	4.52	5.29	4.45	4.10	4.10	4.39	3.93	3.25	3.65	3.70	3.92
MAX	5.8	5.9	5.9	5.0	4.1	4.2	4.4	4.3	3.5	4.1	4.3	4.5
MIN	3.0	3.2	5.0	4.1	4.1	4.1	4.3	3.6	3.0	3.3	2.7	3.4
AC-FT	247	269	325	273	228	252	261	242	193	225	227	233

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1998, BY WATER YEAR (WY)

	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
MEAN	5.58	5.31	5.18	5.51	5.66	5.56	8.13	7.98	5.43	6.72	9.09	6.53
MAX	16.6	9.76	7.82	10.5	11.6	11.4	91.3	128	10.2	24.0	53.2	24.6
(WY)	1973	1980	1978	1945	1944	1985	1980	1941	1941	1957	1957	1975
MIN	2.43	3.01	2.51	2.84	3.28	3.58	2.86	2.49	3.25	3.38	3.16	3.52
(WY)	1990	1994	1994	1994	1994	1994	1994	1996	1998	1994	1994	1990

08343500 RIO SAN JOSE NEAR GRANTS, NM--Continued

SUMMARY STATISTICS

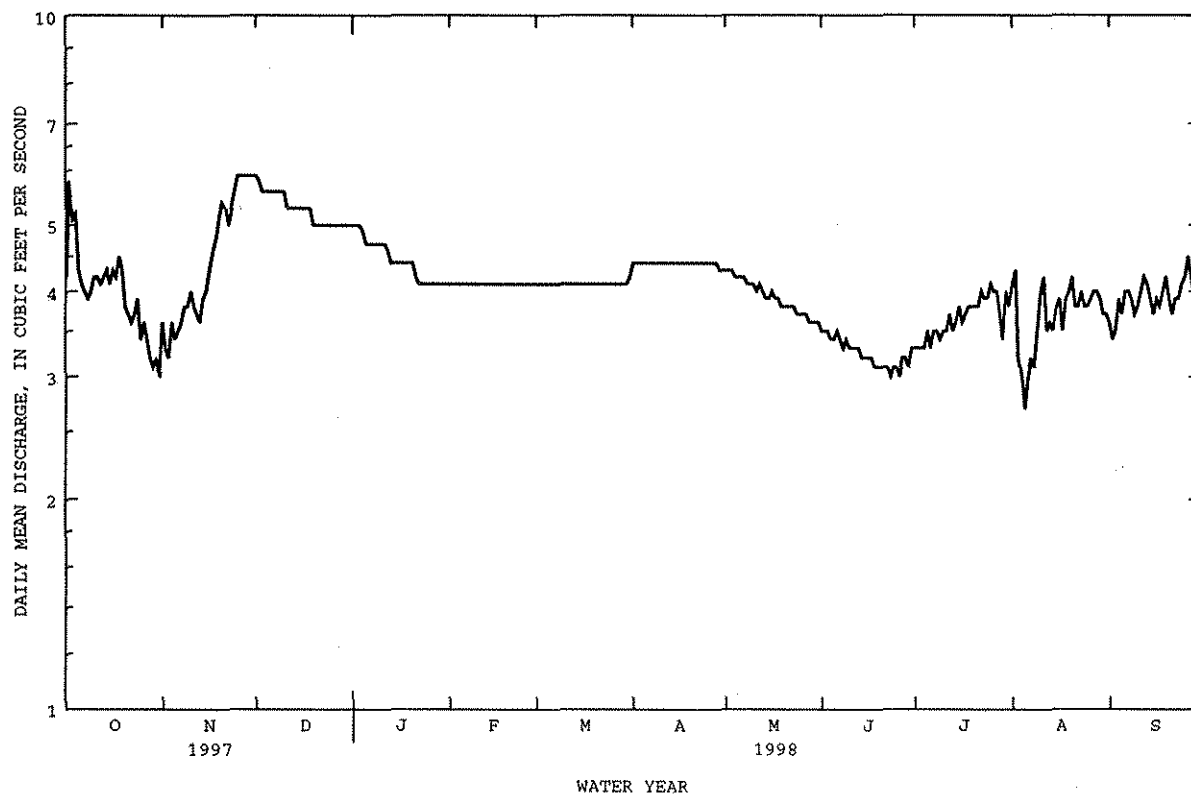
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1937 - 1998

ANNUAL TOTAL	1498.4	1500.7	
ANNUAL MEAN	4.11	4.11	6.40
HIGHEST ANNUAL MEAN			19.3
LOWEST ANNUAL MEAN			3.53
HIGHEST DAILY MEAN	9.1 Aug 31	5.9 Nov 25	538 Aug 30 1957
LOWEST DAILY MEAN	2.6 Aug 3	2.7 Aug 5	1.6 May 30 1996
ANNUAL SEVEN-DAY MINIMUM	2.9 Aug 2	3.1 Jun 20	1.7 May 30 1996
INSTANTANEOUS PEAK FLOW		5.9 Nov 24	^a 1400 Sep 20 1963
INSTANTANEOUS PEAK STAGE		1.38 Nov 24	4.87 Sep 20 1963
INSTANTANEOUS LOW FLOW			1.5 May 29 1996
ANNUAL RUNOFF (AC-FT)	2970	2980	4630
10 PERCENT EXCEEDS	5.4	5.0	7.1
50 PERCENT EXCEEDS	3.8	4.1	5.1
90 PERCENT EXCEEDS	3.4	3.3	4.0

e Estimated

^a From rating curve extended above 450 ft³/s, on basis of slope-area measurements at gage heights 3.19 ft and 4.87 ft.

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, NM

LOCATION.--Lat 34°24'33", long 106°51'09", in SE $\frac{1}{4}$ sec.8, T.2 N., R.1 E., Socorro County, Hydrologic Unit 13020204, on bridge on former U.S. Highway 85, 0.2 mi upstream from Interstate Highway 25, 1.2 mi southwest of Bernardo, 3.0 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.

WATER-DISCHARGE RECORDS

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 with satellite telemetry. 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.--Water-discharge records fair except for estimated daily discharges, which are poor. Diversions for irrigation of about 11,500 acres upstream from station (includes 3,700 acres irrigated wholly or partly from wells).

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 measurement, from reports of New Mexico State Engineer).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	e.00	.85	.13	1.3	e.00	28	.00	14	.00	92	.50
2	.70	e.00	2.6	.12	.97	e.00	26	.98	12	.00	81	.00
3	.38	e.00	3.4	.18	.89	e.00	19	.35	11	.00	239	.00
4	.34	e.00	2.0	.11	.91	e.00	14	.00	9.4	.00	98	.00
5	e.07	e.00	1.5	.08	1.8	e.00	10	.00	5.8	.00	50	.00
6	e.05	e.00	1.7	.00	2.0	e.00	6.3	.00	2.3	32	82	.00
7	.00	.00	.43	.00	2.2	.00	1.8	.00	2.3	12	106	.00
8	.08	.00	2.8	.00	1.5	.00	.70	6.1	.25	50	89	.00
9	.00	.00	4.4	.00	1.7	.00	.26	19	.00	e320	55	.00
10	.00	.00	.82	.51	1.4	.00	.08	31	e.01	310	19	.00
11	2.7	.00	1.3	2.3	1.7	.00	.08	30	.00	208	5.9	.00
12	8.5	.00	2.8	2.0	1.1	6.5	.00	27	.00	96	.35	.00
13	7.8	.00	1.1	2.4	.97	6.6	.00	16	.00	22	78	.00
14	4.2	.00	.75	5.0	.92	4.2	.00	21	.00	3.6	3.8	.00
15	1.4	.00	.18	4.8	1.1	10	.00	27	.00	.05	128	.00
16	e.00	.00	.04	2.4	1.7	37	.00	27	.00	.00	139	.00
17	.00	.78	.03	3.0	4.5	86	.00	38	.00	.04	45	.00
18	.00	1.1	.02	2.8	5.7	65	.00	33	.00	.00	19	.00
19	.00	.70	.03	1.9	4.1	57	.02	23	.00	.00	8.0	.00
20	.00	.94	.04	3.0	2.6	39	.03	17	.00	.00	5.7	.00
21	.00	.79	.16	3.4	2.2	27	.00	10	.00	.00	.30	.00
22	.00	.51	.12	2.3	2.0	18	.00	28	.00	.00	e.05	.00
23	e.05	.30	.09	1.5	3.5	11	.00	38	.00	.00	.00	.00
24	.00	.26	.02	.51	2.9	8.6	.00	41	.00	.00	.00	.00
25	.00	.45	.03	.40	1.2	7.5	.00	42	.00	6.7	.00	.00
26	.00	.45	.00	.50	e.15	4.5	.00	36	.00	6.2	.00	.00
27	.00	.54	.00	1.0	e.00	1.8	.00	27	.00	117	.00	.00
28	e.00	.67	5.3	.87	e.00	8.9	.00	19	.00	433	.00	.00
29	e.00	.84	2.7	1.2	---	16	.00	16	.00	228	16	.00
30	e.00	.56	.40	.86	---	11	.00	9.3	.00	271	14	.00
31	e.00	---	.21	1.2	---	12	---	9.4	---	366	4.1	---
TOTAL	28.77	8.89	35.82	44.47	51.01	437.60	106.27	592.13	57.06	2481.59	1378.20	0.50
MEAN	.93	.30	1.16	1.43	1.82	14.1	3.54	19.1	1.90	80.1	44.5	.017
MAX	8.5	1.1	5.3	5.0	5.7	86	28	42	14	433	239	.50
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	57	18	71	88	101	868	211	1170	113	4920	2730	1.0

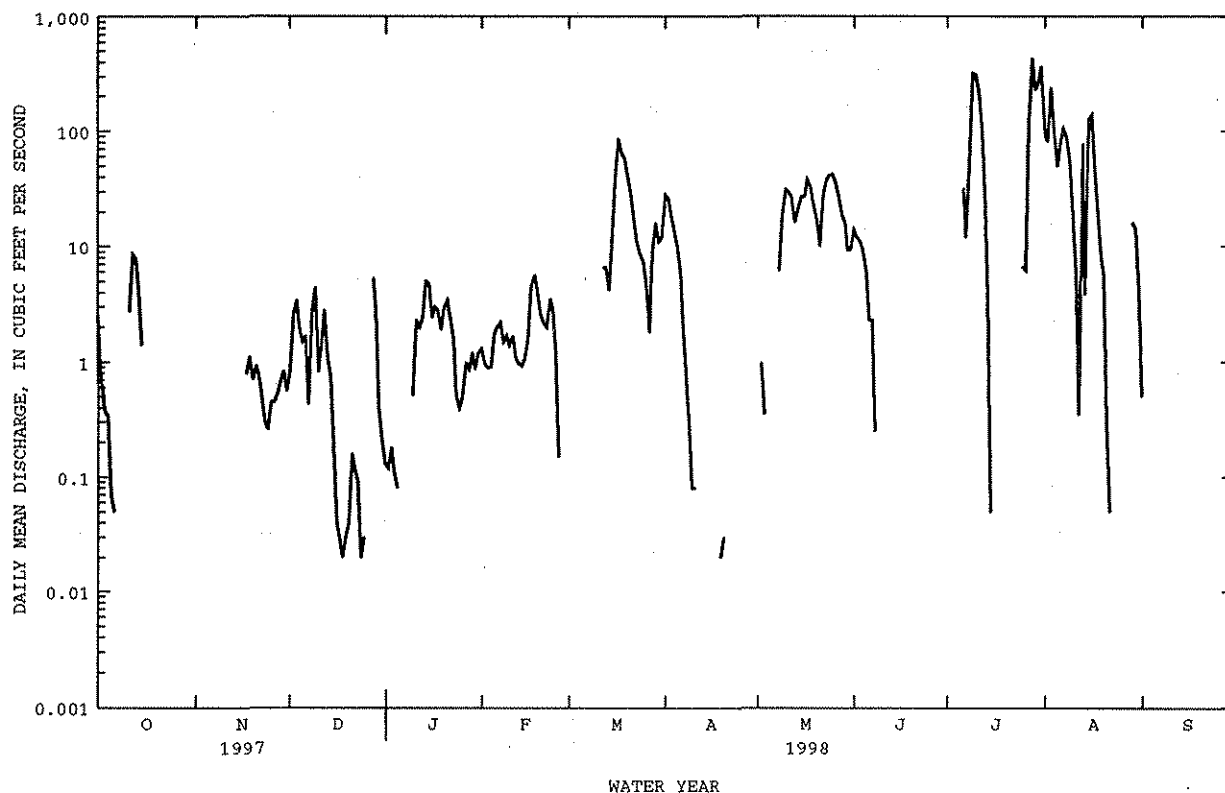
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

	MEAN	49.7	7.09	1.26	2.52	15.6	18.6	14.8	42.5	20.1	63.8	186	86.8
MAX	586	100	26.6	70.0	142	208	179	885	203	362	922	584	
(WY)	1942	1987	1985	1993	1979	1960	1973	1941	1941	1955	1957	1972	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.92	.000	
(WY)	1952	1940	1940	1940	1942	1942	1944	1950	1945	1942	1986	1956	

08353000 RIO PUERCO NEAR BERNARDO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1940 - 1998
ANNUAL TOTAL	9190.10	5222.31	42.5
ANNUAL MEAN	25.2	14.3	171
HIGHEST ANNUAL MEAN			5.47
LOWEST ANNUAL MEAN			1941
HIGHEST DAILY MEAN	912 Sep 24	433 Jul 28	5980 May 5 1941
LOWEST DAILY MEAN	.00 Jan 8	.00 Oct 7	.00 Nov 1 1939
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 8	.00 Oct 16	.00 Nov 1 1939
INSTANTANEOUS PEAK FLOW		640 Jul 29	^a 18800 Sep 23 1941
INSTANTANEOUS PEAK STAGE		7.79 Jul 29	^b 16.90 Aug 12 1955
ANNUAL RUNOFF (AC-FT)	18230	10360	30770
10 PERCENT EXCEEDS	50	30	66
50 PERCENT EXCEEDS	.08	.38	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

^a From rating curve extended above 7,800 ft³/s.^b Maximum gage height, 16.9 ft, present datum, Aug. 12, 1955.

08353000 RIO PUERCO NEAR BERNARDO, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1947 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1947 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler.

REMARKS.--Daily suspended-sediment samples are collected when flow is observed on this ephemeral stream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 267,000 mg/L, July 26, 1957; minimum daily mean, no flow on many days of each year.

SEDIMENT LOAD: Maximum daily, 2,240,000 tons, Aug. 7, 1957; minimum daily, 0 ton on many days of each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 156,000 mg/L, July 29; minimum daily mean, no flow on many days.

SEDIMENT LOAD: Maximum daily, 214,000 tons, July 29; minimum daily, 0 ton on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 26...	1142	.08	3480	8.2	17.0	4.5	9.7	643	10.7	99	750	170
JAN 30...	0930	.62	2740	8.4	4.0	1.5	33	640	12.2	105	650	140
MAY 20...	1100	19	1600	8.1	31.0	17.5	--	646	7.9	98	360	99
JUL 29...	1230	625	1670	7.8	35.5	24.5	34000	646	5.1	73	470	140
AUG 04...	1315	75	1660	8.0	38.0	25.0	24000	650	6.6	95	--	--

[illegible]

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)
NOV 26...	1	43	<2	735	<2	<2	<2	3	<9	<2	19	4
JAN 30...	2	40	<2	571	<2	3	<2	2	<30	<2	9	4
MAY 20...	<1	40	<1	138	<1	2	<1	6	<10	<1	<1	6
JUL 29...	<1	63	<1	141	<1	1	<1	4	<10	<1	<1	6
AUG 04...	--	--	--	--	--	--	--	--	--	--	--	--

08353000 RIO PUERCO NEAR BERNARDO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOS- PHORUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, REC OV. FM BOT- TOM MA- TERIAL (UG/G) (01029)
NOV 26...	<2	2	<2	<2	--	--	--	--	--	--	--
JAN 30...	<2	3	<2	7	<2	1.6	90	190	2	<1	5
MAY 20...	2	2	<1	3	--	--	--	--	--	--	--
JUL 29...	2	2	<1	2	--	--	--	--	--	--	--
AUG 04...	--	--	--	--	--	--	--	--	--	--	--
DATE	COBALT, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS MN) (01053)	MERCURY REC OV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	RADIUM 226, DIS- SOLVED, RADON WATER, METHOD (PCI/L) (09511)	RA-226 2 SIGMA DISS, WATER, (PCI/L) (76001)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA DISS, WATER, (UG/L) (75990)
NOV 26...	--	--	--	--	--	--	--	.10	.02	13	.8
JAN 30...	<5	3	4500	<10	77	<.1	12	.09	.02	11	.7
MAY 20...	--	--	--	--	--	--	--	.09	.02	6	.14
JUL 29...	--	--	--	--	--	--	--	.10	.02	4	.08
AUG 04...	--	--	--	--	--	--	--	--	--	--	--

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN CON TRA (MG DAY)	LOAD (TONS DAY)	MEAN CONCE TRATI (MG/L DAY)	LOAD (TONS DAY)	MEAN CONCE TRATI (MG/L DAY)	LOAD (TONS DAY)	MEAN CONCE TRATI (MG/L DAY)	LOAD (TONS DAY)	MEAN CONCE TRATI (MG/L DAY)	LOAD (TONS DAY)	MEAN CONCENTRATION (MG/L)	LOAD (TONS/ DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	262	1.5	0	e.00	246	.58	111	.06	37	.12	0	e.00
2	230	.46	0	e.00	232	1.6	230	.07	17	.08	0	e.00
3	227	.23	0	e.00	239	2.2	144	.07	33	.16	0	e.00
4	166	.24	0	e.00	517	2.7	89	.02	38	.20	0	e.00
5	75	e.02	0	e.00	829	3.9	75	.02	113	.73	0	e.00
6	50	e.01	0	e.00	696	3.8	0	.00	123	.81	0	e.00
7	0	e.00	0	.00	149	.20	0	.00	189	1.2	0	.00
8	27	.01	0	.00	205	1.6	0	.00	132	.52	0	.00
9	0	.00	0	.00	320	3.1	0	.00	115	.53	0	.00
10	0	.00	0	.00	488	1.2	125	.37	156	.59	0	.00
11	156	1.5	0	.00	178	.74	104	.82	120	.52	0	.00
12	288	e9.7	0	.00	335	3.6	143	.89	98	.29	297	7.3
13	279	e6.4	0	.00	563	1.9	241	1.7	95	.25	329	6.3
14	184	e2.1	0	.00	750	1.5	241	4.3	88	.22	345	3.8
15	117	e.56	0	.00	779	.38	248	e4.7	117	.35	13300	390
16	0	e.00	0	.00	585	.07	248	1.7	100	.47	22700	5160
17	0	.00	203	e.63	322	.02	109	1.4	133	1.6	62200	14900
18	0	.00	490	1.5	286	.02	138	1.0	178	2.8	28800	5160
19	0	.00	450	.70	272	.02	164	.87	151	1.7	40400	e6180
20	0	.00	610	1.8	100	.01	98	1.2	173	1.2	36500	3850
21	0	.00	712	1.5	58	.04	133	1.6	246	1.5	37500	2730
22	0	.00	657	.90	140	.04	101	.92	288	1.6	38600	1850
23	50	e.01	610	.50	82	.02	145	.98	222	2.1	31600	967
24	0	.00	542	.38	75	e.01	74	.19	152	1.2	27500	639
25	0	.00	465	.52	70	e.01	104	.16	48	e.18	24800	501
26	0	.00	211	.33	0	.00	30	.09	70	e.03	10000	126
27	0	.00	247	.37	0	.00	105	.21	0	e.00	6240	e34
28	---	e.00	368	.68	330	e8.6	125	.43	0	e.00	3690	121
29	---	e.00	416	.94	214	e2.2	86	.47	---	---	4000	173
30	---	e.00	355	.54	44	e.05	49	.19	---	---	2630	80
31	---	e.00	---	---	133	.10	29	.08	---	---	2440	106
TOTAL	---	22.74	---	11.29	---	40.21	---	24.51	---	20.95	---	42984.40

08353000 RIO PUERCO NEAR BERNARDO, NM--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

LOCATION.--Lat 34°15'17", long 106°53'43", in SE¹/₄NW¹/₄ 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.

REVISED RECORDS.--WSP 1242: 1951.

GAGE.--Water-stage recorder. Datum of gage is 4,660.16 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). Prior to Mar. 8, 1958, at site 300 ft upstream (in old channel) at datum 0.42 ft lower.

REMARKS.--Records good. This canal is 1 of 3 channels (stations 08354800, 08354900) carrying flow in valley cross section. For combined monthly flow in acre-ft of this canal, conveyance channel, and floodway, see tabulation below daily table for 08354900. 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% reaching the regular gaging station. Several observations of water temperature were made during the year. No flow at times.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	66	.00	.00	.00	.00	248	259	288	241	214	227
2	194	.00	.00	.00	.00	53	252	271	284	263	265	224
3	190	.00	.00	.00	.00	139	242	267	296	266	270	189
4	189	.00	.00	.00	.00	168	247	262	285	268	273	185
5	180	.00	.00	.00	.00	192	252	262	297	258	259	155
6	201	.00	.00	.00	.00	214	250	259	294	259	249	156
7	231	.00	.00	.00	.00	216	258	262	294	258	254	191
8	235	.00	.00	.00	.00	212	258	267	296	217	252	172
9	236	.00	.00	.00	.00	208	256	274	299	186	249	160
10	231	.00	.00	.00	.00	212	252	268	295	171	193	163
11	235	.00	.00	.00	.00	231	250	282	297	169	189	183
12	235	.00	.00	.00	.00	235	254	266	298	172	187	206
13	239	.00	.00	.00	.00	231	250	273	292	208	188	209
14	234	.00	.00	.00	.00	229	248	275	295	234	189	216
15	232	.00	.00	.00	.00	231	242	268	297	236	188	219
16	230	.00	.00	.00	.00	231	249	267	301	236	182	219
17	236	.00	.00	.00	.00	198	249	267	300	211	182	218
18	234	.00	.00	.00	.00	202	249	255	293	202	186	223
19	233	.00	.00	.00	.00	198	257	263	260	211	195	226
20	230	.00	.00	.00	.00	192	257	263	250	204	200	228
21	233	.00	.00	.00	.00	197	269	263	241	204	201	226
22	232	.00	.00	.00	.00	198	262	268	236	221	208	227
23	231	.00	.00	.00	.00	197	267	270	206	248	205	228
24	229	.00	.00	.00	.00	208	272	276	197	248	206	229
25	231	.00	.00	.00	.00	212	251	282	258	247	205	227
26	221	.00	.00	.00	.00	208	251	283	229	254	182	218
27	225	.00	.00	.00	.00	220	254	282	246	269	184	219
28	230	.00	.00	.00	.00	244	256	286	223	e99	186	231
29	229	.00	.00	.00	---	240	257	278	219	e.00	191	256
30	234	.00	.00	.00	---	248	246	281	246	e113	193	219
31	231	---	.00	.00	---	256	---	290	---	186	222	---
TOTAL	6940	66.00	0.00	0.00	0.00	6220.00	7605	8389	8112	6559.00	6547	6249
MEAN	224	2.20	.000	.000	.000	201	254	271	270	212	211	208
MAX	239	66	.00	.00	.00	256	272	290	301	269	273	256
MIN	180	.00	.00	.00	.00	.00	242	255	197	.00	182	155
AC-FT	13770	131	.00	.00	.00	12340	15080	16640	16090	13010	12990	12390

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

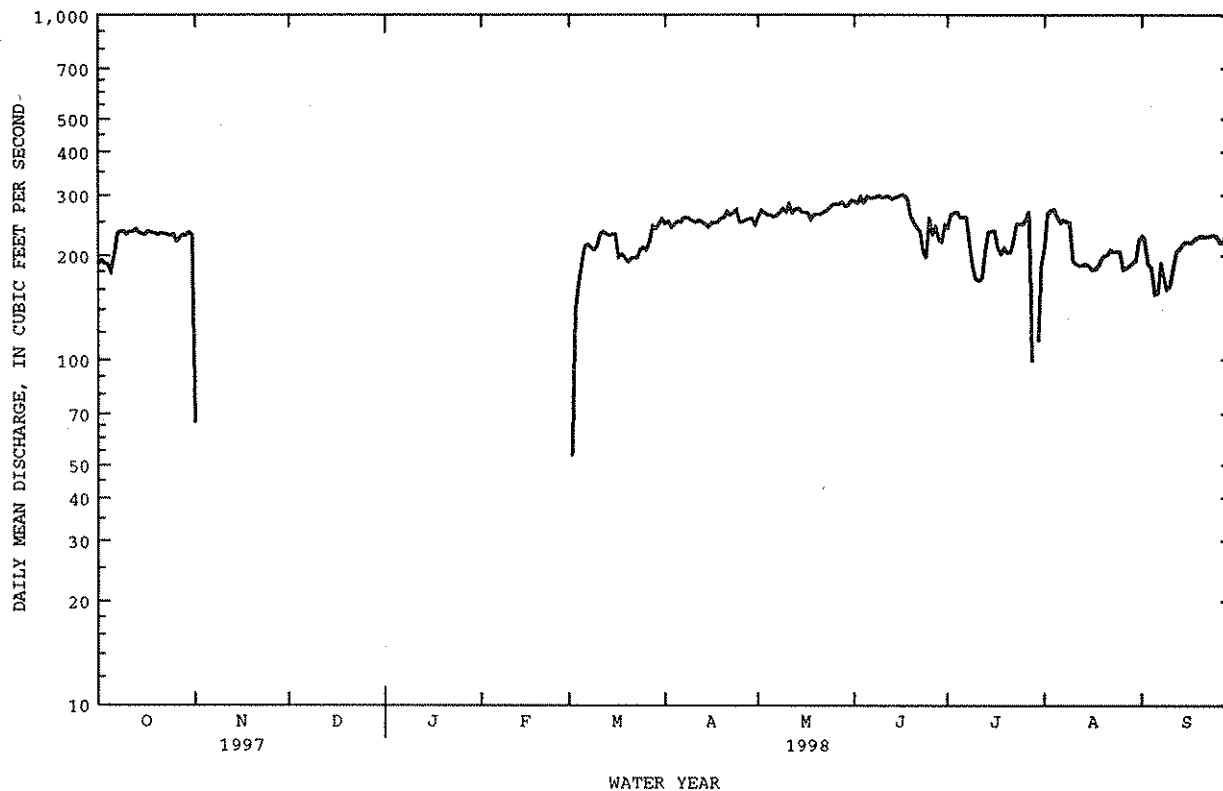
MEAN	130	8.90	7.34	6.72	4.96	152	201	201	196	177	151	132
MAX	257	86.0	79.0	56.7	52.4	234	254	279	298	291	277	223
(WY)	1994	1989	1976	1976	1979	1995	1998	1997	1994	1995	1995	1992
MIN	17.1	.000	.000	.000	.000	39.4	121	81.0	49.9	43.8	56.2	12.6
(WY)	1964	1967	1964	1964	1964	1983	1967	1977	1977	1964	1964	1975

RIO GRANDE BASIN

08354500 SOCORRO MAIN CANAL NORTH AT SAN ACACIA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998	
ANNUAL TOTAL	59108.01		56687.00			
ANNUAL MEAN	162		155		115	
HIGHEST ANNUAL MEAN					170	
LOWEST ANNUAL MEAN					63.7	
HIGHEST DAILY MEAN	325	Jun 6	301	Jun 16	325	Aug 5 1995
LOWEST DAILY MEAN	.00	Jan 1	.00	Nov 2	.00	Oct 18 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Nov 2	.00	Nov 2 1963
ANNUAL RUNOFF (AC-FT)	117200		112400		82960	
10 PERCENT EXCEEDS	291		269		241	
50 PERCENT EXCEEDS	230		208		122	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated



LOCATION.--Lat 34°14'54", long 106°54'04", in SW $\frac{1}{4}$ 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 January 1994, October 1994 to current year. Daily records 1958-64 are available in files at district office.

REMARKS.--Records good except for estimated daily discharges, which are poor. Conveyance channel, constructed in 1958, is 1 of 3 channels (stations 08354500, 08354900) carrying flow in valley cross section. Original design and plan were for conveyance channel to carry all flows up to about 2,000 ft³/s. For combined monthly flow in acre-ft of this channel, floodway, and Socorro main canal north, see tabulation below daily table for station 08354900. No flow at times.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	24	.00	.00	.00	.00	371	567	1540	2.9	e.00	.00
2	e.00	.21	.00	.00	.00	.00	372	575	e1500	3.2	e.00	.00
3	e.00	.01	.00	.00	.00	.00	265	581	e1400	3.4	e.00	.00
4	e.00	.00	.00	.00	.00	.00	370	569	1390	3.4	e.00	.00
5	e.00	.00	.00	.00	.00	42	368	585	1210	3.2	e.00	.00
6	e.00	.00	.00	.00	.00	172	370	623	315	3.2	e.00	.00
7	.00	.00	.00	.00	.00	173	366	608	201	2.2	e.00	.00
8	.00	.00	.00	.00	.00	170	363	608	202	.45	.00	.00
9	.00	.00	.00	.00	.00	186	362	578	e80	40	.00	.00
10	.00	.00	.00	.00	.00	274	422	521	e21	85	.00	.00
11	.00	.00	.00	.00	.00	228	504	e500	e22	89	.00	.00
12	.00	.00	.00	.00	.00	e210	503	e490	e23	91	.00	.00
13	.00	.00	.52	.00	.00	e210	535	e500	e25	58	.00	.00
14	.00	.00	.10	.00	.00	272	582	e500	e27	22	.00	.00
15	.00	.00	.00	.00	.00	275	581	495	e28	15	.00	.00
16	.00	.00	.00	.00	.00	292	e200	486	e16	14	.00	.00
17	.00	.00	.00	.00	.00	323	e20	480	e.50	e3.0	.00	.00
18	.00	.00	.00	.00	.00	341	e20	509	e.50	e3.0	.00	.00
19	.00	.00	.00	.00	.00	346	e18	1020	e.50	e1.2	.00	.00
20	.00	.00	.00	.00	.00	349	e18	1030	e.50	e1.2	.00	.00
21	.00	.00	.00	.00	.00	354	e16	984	e.50	e1.2	.00	.00
22	.00	.00	.00	.00	.00	358	e16	1040	e.50	e1.2	.00	.00
23	.00	.00	.00	.00	.00	362	e16	e1360	e1.5	1.1	.00	.00
24	.00	.00	.00	.00	.00	365	17	1420	e1.5	1.0	.00	.00
25	.00	.00	.00	.00	.00	360	18	1230	1.6	e1.0	.00	.00
26	12	.00	.00	.00	.00	348	19	1410	1.6	e1.0	.00	.00
27	41	.00	.00	.00	.00	362	19	1480	1.7	e1.0	.00	.00
28	40	.00	.00	.00	.00	373	413	1460	1.6	40	.00	.00
29	36	.00	.00	.00	---	371	690	1150	2.4	59	.00	.00
30	35	.00	.00	.00	---	369	654	1490	3.1	13	.00	.00
31	41	---	.00	.00	---	368	---	1520	---	e2.0	.00	---
TOTAL	205.43	24.22	0.62	0.00	0.00	7853.00	8488	26369	8018.00	565.85	0.00	0.00
MEAN	6.63	.81	.020	.000	.000	253	283	851	267	18.3	.000	.000
MAX	41	24	.52	.00	.00	373	690	1520	1540	91	.00	.00
MIN	.00	.00	.00	.00	.00	.00	16	480	.50	.45	.00	.00
AC-FT	407	48	1.2	.00	.00	15580	16840	52300	15900	1120	.00	.00

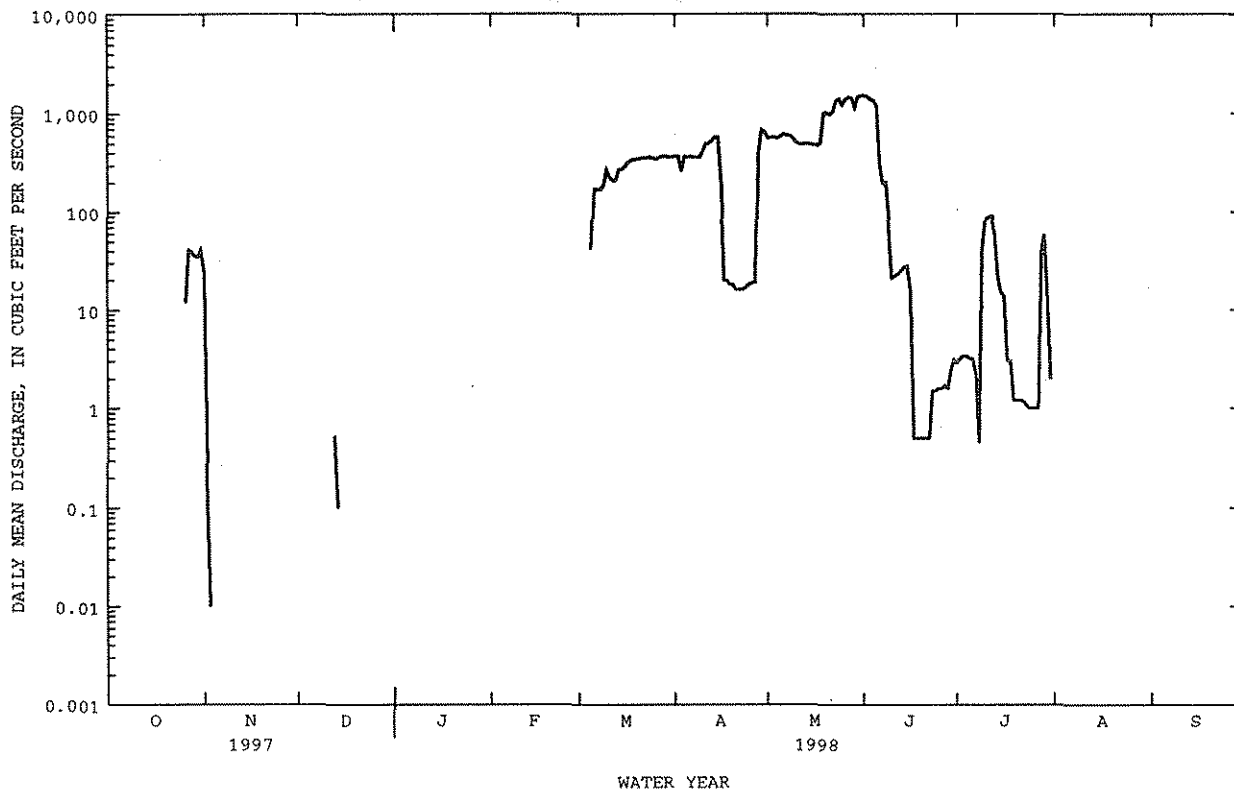
MEAN	124	578	588	477	484	389	363	497	378	189	168	122
MAX	765	1644	1823	1513	1255	1240	1506	1663	1580	1522	829	633
(WY)	1985	1966	1966	1974	1962	1966	1979	1979	1980	1979	1967	1972
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1988	1988	1986	1988	1987	1991	1991	1995	1986	1987	1987	1987

RIO GRANDE BASIN

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1959 - 1998	
ANNUAL TOTAL	53854.73		51524.12		362	
ANNUAL MEAN	148		141		1033	
HIGHEST ANNUAL MEAN						1973
LOWEST ANNUAL MEAN					.049	1988
HIGHEST DAILY MEAN	1350	Jun 13	1540	Jun 1	1950	May 12 1966
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 2	.00	Jul 22 1959
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 2	.00	Jul 20 1963
ANNUAL RUNOFF (AC-FT)	106800		102200		262500	
10 PERCENT EXCEEDS	875		501		1260	
50 PERCENT EXCEEDS	.00		.00		11	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated



08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: January 1959 to September 1985, October 1988 to September 1989, October 1996 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 141,000 mg/L, Aug. 10, 1959; minimum daily mean, no flow on many days of most years.

SEDIMENT LOAD: Maximum daily, 528,000 tons, Aug. 28, 1972; minimum daily, 0 ton on many days during most years.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 23,200 mg/L, July 9; minimum daily mean, no flow on many days.

SEDIMENT LOAD: Maximum daily, 11,000 tons, June 5; minimum daily, 0 ton on many days.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN CONC TRAT (MG/	LOAD (TONS/ DAY)	MEAN CONCEN TRATIO (MG/L)	LOAD (TONS/ DAY)	MEAN CONCE TRATI (MG/L)	LOAD (TON DAY)	MEAN CONCE TRATI (MG/L)	LOAD (TON DAY)	MEAN CONCE TRATI (MG/L)	LOAD (TON DAY)	MEAN CONCEN TRATIO (MG/L)	LOAD (TONS/ DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	50	e.06	1310	e228	0	.00	0	.00	0	.00	0	.00
2	0	e.00	500	e.28	0	.00	0	.00	0	.00	0	.00
3	0	e.00	200	e.01	0	.00	0	.00	0	.00	0	.00
4	0	e.00	0	.00	0	.00	0	.00	0	.00	0	.00
5	0	e.00	0	.00	0	.00	0	.00	0	.00	815	e380
6	0	e.00	0	.00	0	.00	0	.00	0	.00	835	e388
7	0	.00	0	.00	0	.00	0	.00	0	.00	413	e194
8	0	.00	0	.00	0	.00	0	.00	0	.00	398	e183
9	0	.00	0	.00	0	.00	0	.00	0	.00	646	e377
10	0	.00	0	.00	0	.00	0	.00	0	.00	1390	e1050
11	0	.00	0	.00	0	.00	0	.00	0	.00	375	230
12	0	.00	0	.00	0	.00	0	.00	0	.00	113	e67
13	0	.00	0	.00	300	e.42	0	.00	0	.00	124	e81
14	0	.00	0	.00	200	e.05	0	.00	0	.00	127	93
15	0	.00	0	.00	0	.00	0	.00	0	.00	109	81
16	0	.00	0	.00	0	.00	0	.00	0	.00	121	96
17	0	.00	0	.00	0	.00	0	.00	0	.00	1100	1000
18	0	.00	0	.00	0	.00	0	.00	0	.00	1170	1070
19	0	.00	0	.00	0	.00	0	.00	0	.00	1060	993
20	0	.00	0	.00	0	.00	0	.00	0	.00	745	703
21	0	.00	0	.00	0	.00	0	.00	0	.00	506	484
22	0	.00	0	.00	0	.00	0	.00	0	.00	661	639
23	0	.00	0	.00	0	.00	0	.00	0	.00	396	387
24	0	.00	0	.00	0	.00	0	.00	0	.00	240	236
25	0	.00	0	.00	0	.00	0	.00	0	.00	426	412
26	1450	e185	0	.00	0	.00	0	.00	0	.00	466	438
27	5210	e583	0	.00	0	.00	0	.00	0	.00	450	439
28	4540	e494	0	.00	0	.00	0	.00	0	.00	745	750
29	3980	e390	0	.00	0	.00	0	.00	---	---	530	531
30	3150	e297	0	.00	0	.00	0	.00	---	---	802	799
31	3580	e453	---	---	0	.00	0	.00	---	---	961	956
TOTAL	---	2402.06	---	228.29	---	0.47	---	0.00	---	0.00	---	13057.00

RIO GRANDE BASIN

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN CONC TRAT (MG/ DAY)	LOAD (TONS/ DAY)	MEAN CONCEN TRATIO (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN TRATIO (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCE TRATI (MG/L)	LOAD (TON DAY)	MEAN CONCE TRATI (MG/L)	LOAD (TON DAY)
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	1140	1140	1520	2320	1930	8020	42	.33	0	e.00	0	.00
2	1580	1580	1260	1950	1780	e6220	39	.34	0	e.00	0	.00
3	2570	1800	985	1550	1360	e2570	36	.33	0	e.00	0	.00
4	2200	2200	1370	2100	1440	5390	30	.28	0	e.00	0	.00
5	1550	1540	1510	2370	3190	11000	47	.40	0	e.00	0	.00
6	669	669	827	1390	429	e484	136	1.2	0	e.00	0	.00
7	487	481	893	1460	153	e83	212	1.3	0	e.00	0	.00
8	480	470	2280	3770	145	e79	150	.19	0	.00	0	.00
9	539	526	2720	4250	120	e62	23200	4560	0	.00	0	.00
10	540	629	1380	1940	74	e36	20800	4710	0	.00	0	.00
11	419	570	1840	e699	61	e30	5770	1390	0	.00	0	.00
12	115	156	1200	e680	50	e25	5510	1350	0	.00	0	.00
13	60	84	901	e511	43	e22	2490	545	0	.00	0	.00
14	43	68	931	e830	54	e29	293	17	0	.00	0	.00
15	208	327	1060	1420	46	e15	236	9.5	0	.00	0	.00
16	585	e1450	1230	1610	73	e20	196	8.8	0	.00	0	.00
17	781	e2100	1120	1450	81	e34	275	e11	0	.00	0	.00
18	675	e1810	1610	2550	65	e17	179	e5.8	0	.00	0	.00
19	399	e1070	1290	3730	74	e24	128	e4.0	0	.00	0	.00
20	163	e434	981	2870	82	e48	120	e3.8	0	.00	0	.00
21	76	e203	569	1580	73	e42	123	e3.8	0	.00	0	.00
22	99	e264	927	2610	76	e46	129	e1.8	0	.00	0	.00
23	227	e300	1780	e7150	52	e32	124	.37	0	.00	0	.00
24	84	3.9	2060	7920	41	e14	141	.38	0	.00	0	.00
25	309	15	2430	8140	38	.16	131	e.05	0	.00	0	.00
26	208	11	1310	4960	41	.17	125	e.34	0	.00	0	.00
27	124	6.5	1470	5950	30	.14	100	e.27	0	.00	0	.00
28	423	715	1120	4450	37	.16	12000	2660	0	.00	0	.00
29	449	839	1000	3170	43	.30	11600	2750	0	.00	0	.00
30	942	1640	1150	4620	57	.48	557	20	0	.00	0	.00
31	---	---	1380	5650	---	---	181	e2.9	0	.00	---	---
TOTAL	---	23101.4	---	95650	---	34343.41	---	18059.18	---	0.00	---	0.00

YEAR 186841.81

e Estimated

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM

LOCATION.--Lat 34°15'23", long 106°53'18", Socorro County, Hydrologic Unit 13020203, in Sevilleta Grant, on right bank 0.2 mi downstream from San Acacia diversion dam, 0.3 mi east of San Acacia, 2 mi downstream from Rio Salado, and at mile 1,472.6.

DRAINAGE AREA.--26,770 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, Co.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1936 to September 1958 (prior to construction of conveyance channel), October 1958 to September 1964 (flow in conveyance channel included), October 1964 to current year. Prior to October 1964 published as 08355000 "Rio Grande at San Acacia" and records are not equivalent.

REVISED RECORDS.--WSP 1242: 1951. WSP 1732: 1958(M). WRD 1969: 1967.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,654.50 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 19, 1953, at several sites 0.1 mi upstream at different datums. Mar. 19, 1953, to Aug. 19, 1965, at site 0.4 mi downstream at datum 3.60 ft higher. Aug. 19, 1965, to Aug. 15, 1967, at same site at datum 1.89 ft higher. Datum on Aug. 21, 1987, was lowered 2.00 ft, on April 26, 1996 10.00 ft was added to gage datum. Floodway is bypassed by Socorro main canal north and since Oct. 1958 by conveyance channel.

REMARKS.--Water-discharge records fair except for estimated daily discharges, which are poor. Floodway is 1 of 3 channels (stations 08354500, 08354800) carrying flow in valley cross section. For combined monthly flow in acre-ft of floodway, conveyance channel, and Socorro main canal north, see tabulation below. Normal plan is for floodway to carry flow when combined capacities of conveyance channel (about 2,000 ft³/s) and Socorro main canal north (about 200 ft³/s) is exceeded, during periods of silt sluicing, and when river silt load is excessive. Diversions upstream from station for irrigation of about 760,000 acres; this includes Socorro main canal north, which bypasses station and irrigates about 8,000 acres. No flow at times.

AVERAGE DISCHARGE.--22 years (water years 1937-58), 1,192 ft³/s, 863,000 acre-ft/yr, prior to construction of conveyance channel; does not include Socorro main canal north. 15 years (water years 1959-73), 911 ft³/s, 660,000 acre-ft/yr, combined flow of floodway, conveyance channel and Socorro main canal north, prior to closure of Cochiti Dam. 25 years (water years 1974-98), 1,480 ft³/s, 1,072,000 acre-ft/yr, combined flow of floodway, conveyance channel, and Socorro Main Canal North, since closure of Cochiti Dam.

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.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,290 ft³/s, May 10; minimum daily, 84 ft³/s, Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2140	1960	1590	1050	1120	1190	1410	1970	654	231	1120	199
2	1850	2260	1600	1030	1110	1000	1660	1470	701	263	970	195
3	1810	2230	1680	1150	1110	1010	1670	1820	821	326	843	e207
4	1780	2110	1780	1160	1090	1000	1440	1940	1120	567	717	e173
5	1600	1860	1540	1170	1120	704	1030	1770	1140	992	1030	174
6	1440	2080	1460	1170	1100	534	824	1830	1650	1110	478	200
7	1330	1930	1410	1210	1090	555	636	2170	1230	845	e296	214
8	1460	1740	1340	1400	1110	645	662	2390	1130	663	e250	150
9	1720	1770	1340	1330	1130	599	672	2630	1110	1690	e190	98
10	1470	1840	1240	1310	1160	485	700	3290	1060	1570	e165	89
11	1450	1840	1100	1110	1140	439	689	3270	926	1380	174	100
12	1430	1750	1150	1040	1120	501	590	2340	736	1390	170	105
13	1590	1770	1180	1080	1130	743	606	2430	678	1060	361	113
14	1540	1820	1170	e1130	1140	713	546	2610	500	835	323	171
15	1630	1750	1150	e1180	1190	919	424	2300	e410	624	481	209
16	1830	1830	1220	1180	1240	1440	511	2070	e360	446	615	173
17	2280	1790	1240	1200	1380	1840	683	2490	e355	407	401	162
18	2270	1760	1260	1090	1200	1310	728	2510	e320	391	404	212
19	2270	1650	1260	1070	1170	1410	947	1810	e280	530	347	247
20	2180	1490	1270	1070	1190	1340	966	1230	e250	411	271	316
21	2180	1420	1240	1090	1190	1090	850	1150	e230	295	247	310
22	2210	1550	1280	1100	1180	962	715	1270	e220	296	333	270
23	2370	1660	1270	1100	1170	960	406	1140	e210	261	247	249
24	2160	1760	1290	1100	1110	835	389	1420	e195	485	257	184
25	1980	1750	1330	1180	1120	667	395	1750	e195	677	242	136
26	1690	1660	1240	1190	1180	593	555	1660	e200	685	206	113
27	1470	1720	1180	1210	1220	739	1350	1590	e190	952	477	89
28	1390	1700	1160	1190	1190	1160	1240	1730	e180	2480	648	84
29	1330	1650	1190	1130	---	1150	868	1610	e210	1960	486	88
30	1440	1600	1200	1140	---	1430	1890	990	259	1470	349	812
31	1540	---	1200	1130	---	1490	---	710	---	1420	269	---
TOTAL	54830	53700	40560	35690	32400	29453	26052	59360	17520	26712	13367	5842
MEAN	1769	1790	1308	1151	1157	950	868	1915	584	862	431	195
MAX	2370	2260	1780	1400	1380	1840	1890	3290	1650	2480	1120	812
MIN	1330	1420	1100	1030	1090	439	389	710	180	231	165	84
AC-FT	108800	106500	80450	70790	64270	58420	51670	117700	34750	52980	26510	11590
(+)	123000	106700	80450	70790	64270	86340	83590	186600	66740	67110	39500	23980

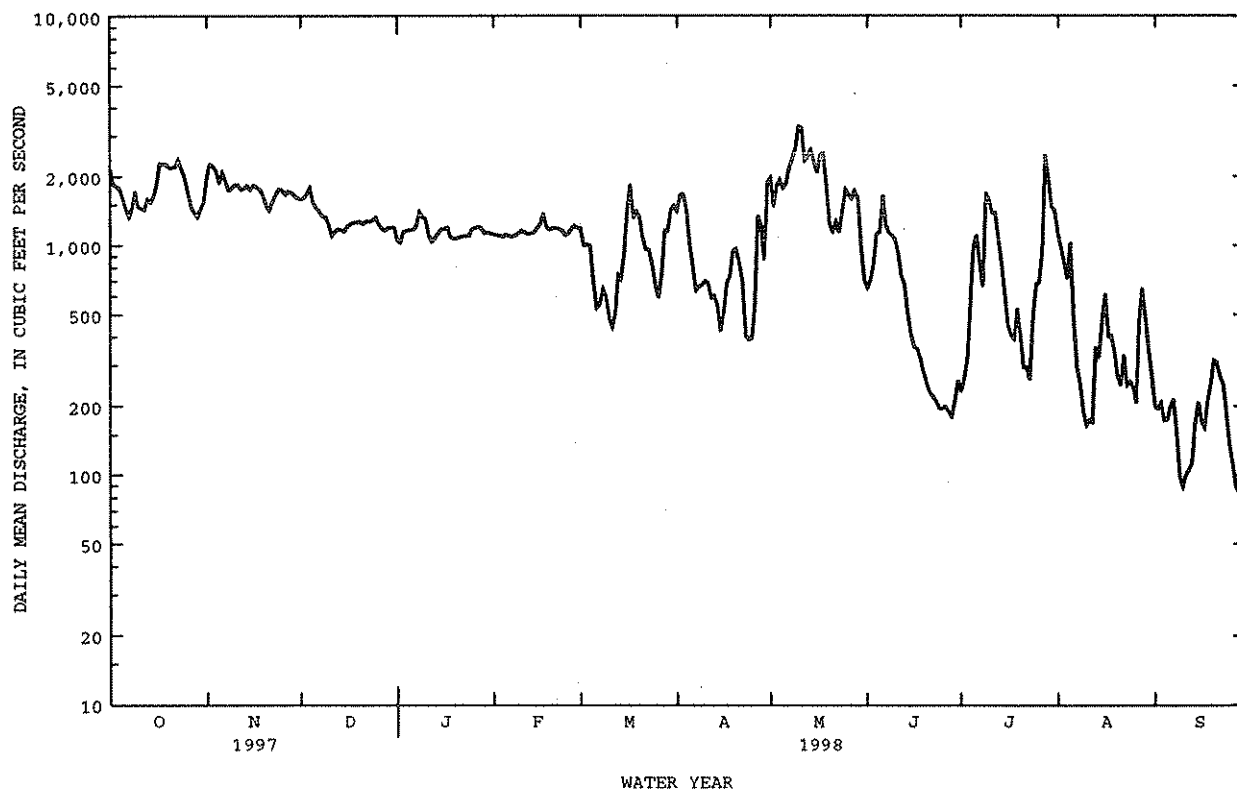
CAL YR 1997 TOTAL 527143 MEAN 1444 MAX 5090 MIN 118 AC-FT 1046000 (+) MEAN 1750 AC-FT 1270500
WTR YR 1998 TOTAL 395486 MEAN 1084 MAX 3290 MIN 84 AC-FT 784400 (+) MEAN 1380 AC-FT 999100

e Estimated

(+) COMBINED FLOW, IN ACRE-FEET, AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY, CONVEYANCE CHANNEL AND SOCORRO MAIN CANAL NORTH.

RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM--Continued



WATER-QUALITY RECORDS

SEDIMENT LOAD: Maximum daily, 255,000 tons, July 28; minimum daily, 42 tons June 24.

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITRO- GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOS- PHORUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
NOV 20...	--	--	--	--	--	--	--	--	--	--	--
NOV 26...	4	<2	7.8	130	400	3	<1	10	<5	8	15000
JAN 28...	4	--	--	--	--	--	--	--	--	--	--
APR 22...	4	--	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUN 24...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	2	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS, (UG/L) (75990)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 06...	--	--	--	--	--	--	--	--	1760	10300
NOV 20...	--	--	--	--	--	--	--	--	--	--
NOV 26...	10	350	.01	35	--	--	2	--	--	--
JAN 28...	--	--	--	--	.16	.03	3	.06	--	--
APR 22...	--	--	--	--	--	--	3	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--
JUN 24...	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	3	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (000061)	STREAM WIDTH (FT) (000004)	STREAM DEPTH, MEAN (FT) (000064)	STREAM VELOC- ITY, MEAN (F/S) (000055)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM (70336)
OCT 22...	1022	2210	158	4.2	3.35	13.5	1270	7580	--	--	--
NOV 18...	1036	1780	132	3.3	4.05	5.9	1070	5140	--	--	--
DEC 16...	1015	1250	152	3.1	2.65	2.9	560	1890	--	--	--
JAN 20...	0954	1080	154	2.8	2.50	4.8	1970	5740	--	--	99
FEB 23...	1015	1170	156	2.8	2.65	8.3	703	2220	--	--	100
MAR 24...	1000	835	148	2.9	1.92	14.2	241	543	--	--	--
APR 21...	0945	884	147	3.2	1.90	--	63	150	94	100	--
MAY 18...	1000	3460	160	4.8	4.49	16.0	1260	11800	--	--	--
JUN 23...	0945	219	98.0	1.3	1.78	--	34	20	92	100	--
JUL 21...	1035	311	81.0	1.6	2.36	--	240	202	--	--	--
JUL 21...	1036	--	--	--	--	--	--	--	--	--	--
AUG 18...	1010	429	105	2.6	1.58	23.0	3190	3690	--	--	--
SEP 15...	1002	208	--	--	--	21.0	512	288	--	--	--

RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .031 MM (70341)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
OCT 22...	--	--	--	--	--	45	83	92	100	--
NOV 18...	--	--	--	--	--	22	35	81	100	--
DEC 16...	--	--	--	--	--	26	41	72	100	--
JAN 20...	--	--	--	--	--	7	8	26	86	96
FEB 23...	--	--	--	--	--	19	26	53	98	99
MAR 24...	--	--	--	--	--	96	96	96	96	96
APR 21...	--	--	--	--	--	--	--	--	--	--
MAY 18...	41	47	50	55	--	71	89	99	100	--
JUN 23...	--	--	--	--	--	--	--	--	--	--
JUL 21...	60	76	88	90	94	96	98	100	--	--
AUG 18...	60	73	81	90	--	99	100	--	--	--
SEP 15...	--	--	--	--	--	64	91	100	--	--

DATE	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
OCT 22...	1	19	38	69	78	79	80	84	88	100
NOV 18...	1	9	43	89	96	98	99	100	--	--
DEC 16...	0	2	17	83	93	96	98	100	--	--
JAN 20...	--	--	--	--	--	--	100	--	--	--
FEB 23...	0	1	16	69	88	95	98	100	--	--
MAR 24...	2	3	15	56	74	82	89	96	100	--
APR 21...	7	13	24	51	62	68	75	84	92	100
MAY 18...	2	15	62	64	64	65	66	69	77	80
JUN 23...	1	5	10	13	14	14	16	18	25	74
JUL 21...	--	--	--	--	--	--	--	--	--	--
AUG 18...	23	37	51	80	82	83	84	87	96	100
SEP 15...	17	53	87	89	89	89	89	89	91	100

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2490	e13900	654	3450	357	1530	130	368	131	397	189	608
2	2180	e10900	718	4380	137	591	111	308	122	366	164	455
3	2090	10200	425	2560	189	870	132	408	121	362	92	251
4	1940	9390	489	2780	355	1730	130	408	120	352	96	261
5	1930	8430	649	3290	235	972	156	494	120	364	86	164
6	1740	6750	1060	5980	244	961	146	463	120	355	118	170
7	1370	4950	502	2660	274	1050	138	451	140	409	127	191
8	1360	e5400	1010	4770	199	723	124	470	142	425	110	192
9	1770	e8200	783	3740	184	668	172	614	127	386	92	151
10	1780	e7100	587	2920	154	515	181	636	78	246	105	138
11	1850	e7280	720	3570	155	461	194	581	146	445	110	130
12	1540	e5990	368	1750	201	624	157	443	199	603	108	152
13	2110	e9030	248	1190	161	513	132	390	191	583	225	468
14	1980	e8270	422	2090	173	549	134	e408	173	532	145	280
15	1970	e8660	352	1670	184	572	132	e415	149	481	1910	4980
16	2320	e11700	261	e1290	166	e547	133	423	161	539	1080	4960
17	2390	e14700	251	e1210	154	514	133	428	248	935	3000	15100
18	2240	e13800	402	e1910	207	706	127	374	189	614	1820	6630
19	2300	e14100	210	938	247	848	105	303	163	518	1750	6690
20	1920	e11300	213	e857	170	582	75	217	136	437	1410	5160
21	1770	e10400	217	836	164	553	88	259	154	495	1010	3010
22	1620	9730	315	1320	134	461	115	340	166	529	679	1800
23	1620	e10400	228	1030	139	475	133	395	97	308	600	1560
24	1010	e5960	261	1240	130	450	130	386	212	667	375	860
25	471	e2530	247	1160	146	525	155	493	172	518	307	551
26	294	1340	661	2980	136	e453	164	527	134	426	302	484
27	290	1160	286	1330	174	556	191	621	156	522	294	577
28	176	662	208	952	125	391	298	973	261	838	344	1090
29	243	891	229	1020	160	512	147	449	---	---	317	984
30	494	1920	326	1410	165	536	149	458	---	---	335	1300
31	272	1130	---	---	174	566	127	388	---	---	296	1200
TOTAL	---	236173	---	66283	---	21004	---	13891	---	13652	---	60547

DAY	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	544	2160	766	4070	503	897	75	e47	24700	76900	61300	33400
2	733	3290	608	2410	544	1040	95	68	29200	80000	75400	39800
3	635	2890	529	2620	326	783	140	127	18800	52100	65000	e30400
4	527	2090	591	3090	336	1020	573	e1050	19100	36600	20900	e9370
5	448	1250	530	2520	176	644	2160	e5930	31700	114000	2370	1080
6	336	752	487	2390	638	2970	2180	6770	10400	14100	1490	e810
7	260	452	500	2940	260	868	2700	e7540	9600	e7790	1430	e837
8	172	308	419	2700	259	795	1010	e1930	17500	e11800	448	184
9	152	278	676	4820	226	683	18500	97400	10000	e5130	568	148
10	173	343	1210	10800	252	729	19300	90000	16800	e7420	631	153
11	157	295	1430	12600	212	529	4600	e17600	8460	4000	571	154
12	148	236	1000	6370	198	394	7910	e29800	3930	1800	461	131
13	98	161	1180	7870	220	e407	5500	16000	17900	20700	499	156
14	91	134	1200	8470	103	e140	4630	10200	6190	5580	739	346
15	81	95	1260	7840	74	e93	2650	e4550	6040	8100	604	347
16	121	181	1230	6860	79	e99	1530	e1890	14900	23700	744	359
17	135	248	1260	8550	89	e111	635	e701	9260	10300	671	316
18	125	248	1790	12200	102	e126	600	e646	9250	10100	491	299
19	129	334	1940	9440	139	e172	705	e1040	15800	14700	576	400
20	110	287	1280	4470	136	e169	362	e406	10100	7420	834	713
21	121	278	786	2440	158	e194	330	263	4420	2980	783	657
22	117	224	749	2610	133	e162	366	296	7730	7560	592	435
23	91	101	1120	3430	124	e128	820	627	3540	e2400	575	374
24	96	101	1390	5380	75	e42	2160	e3150	3060	e2130	5820	2890
25	85	91	1500	7090	94	e55	36900	66400	3140	e2080	10200	3800
26	177	276	1500	6710	92	e53	20000	37600	2960	1640	5920	1810
27	269	1240	1090	4720	91	e54	22900	59800	4420	7210	2070	492
28	565	2400	1000	4800	103	e61	37400	255000	5970	10600	1640	373
29	292	767	888	3990	181	e119	34500	184000	2920	e4020	1460	357
30	625	3240	542	1490	211	e152	16800	e69900	1600	e1510	15400	51600
31	---	---	439	843	---	---	26500	104000	35500	25100	---	---
TOTAL	---	24750	---	166533	---	13689	---	1074731	---	579470	---	182191

YEAR 2452914

e Estimated

RIO GRANDE BASIN

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM

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 1964 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 Bureau of Reclamation). Prior to Apr. 29, 1958, at datum 4.19 ft higher.

REMARKS.--Records good. Original design and plan were 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. Bureau of Reclamation satellite telemeter at station. No flow from River since 1965.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	427	417	262	242	240	258	417	380	419	196	331	246
2	431	343	263	242	237	247	414	379	402	253	302	238
3	413	299	262	239	237	289	409	401	371	282	334	258
4	387	290	259	241	241	352	376	417	340	314	326	260
5	392	289	265	244	e237	373	375	395	338	377	324	232
6	411	281	269	244	e237	362	380	351	374	383	380	247
7	400	277	268	244	237	378	382	364	388	375	352	266
8	413	274	265	250	235	378	403	366	392	382	305	267
9	395	271	260	252	239	375	401	379	389	381	326	241
10	379	255	258	252	244	370	406	367	382	417	344	226
11	386	241	258	253	240	363	384	376	375	412	273	221
12	377	248	259	251	238	375	411	401	394	405	188	219
13	379	246	263	250	238	381	444	405	393	364	209	231
14	352	236	262	251	241	366	398	425	375	347	235	228
15	348	251	260	253	244	395	370	453	370	332	281	224
16	349	251	256	252	241	414	381	451	387	329	258	260
17	426	255	254	252	242	417	399	449	385	327	295	254
18	417	260	254	251	253	415	387	463	349	379	312	251
19	425	261	254	249	254	417	386	432	316	404	307	276
20	435	262	256	249	251	406	398	429	301	398	307	283
21	432	258	259	247	246	391	371	416	286	375	301	304
22	435	252	257	246	227	400	346	400	309	372	265	297
23	425	249	259	245	253	392	370	385	287	388	279	295
24	428	247	258	243	253	395	378	400	231	390	301	295
25	422	249	261	242	249	394	367	414	204	387	316	288
26	404	252	262	241	241	373	368	438	188	400	296	307
27	415	248	261	242	247	360	398	412	183	444	254	294
28	390	247	259	242	252	343	381	370	180	427	251	284
29	400	253	254	243	---	374	374	351	218	363	239	274
30	396	254	258	244	---	397	402	359	208	290	267	295
31	404	---	244	242	---	425	---	385	---	307	264	---
TOTAL	12493	8016	8039	7638	6794	11575	11676	12413	9734	11200	9022	7861
MEAN	403	267	259	246	243	373	389	400	324	361	291	262
MAX	435	417	269	253	254	425	444	463	419	444	380	307
MIN	348	236	244	239	227	247	346	351	180	196	188	219
AC-FT	24780	15900	15950	15150	13480	22960	23160	24620	19310	22220	17900	15590

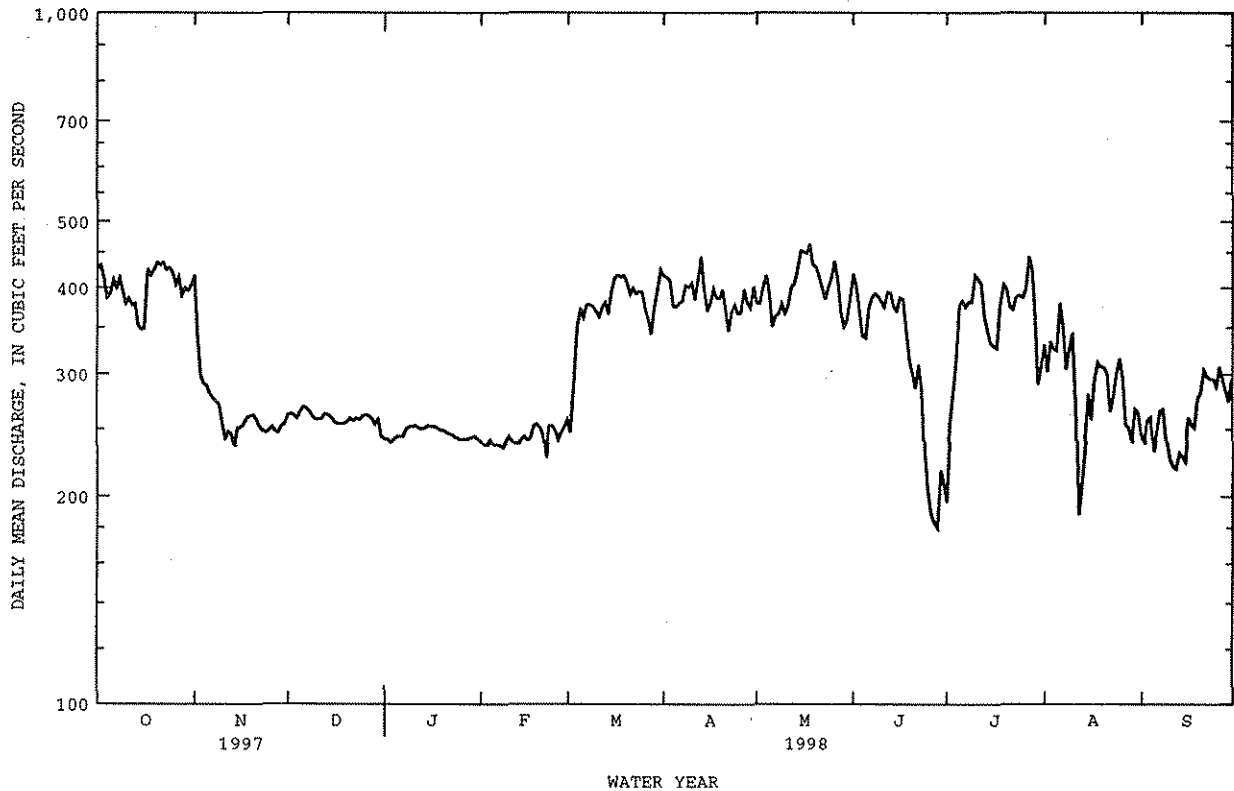
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1998, BY WATER YEAR (WY)

MEAN	263	516	506	423	417	429	462	539	471	337	283	254
MAX	759	1729	1880	1558	1112	1394	1679	1782	1652	1690	986	730
(WY)	1985	1970	1966	1974	1985	1966	1969	1973	1973	1973	1973	1972
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1969	1977	1975	1975	1975	1977	1976	1976	1976	1976	1976	1974

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1965 - 1998	
ANNUAL TOTAL	122354		116461		408	
ANNUAL MEAN	335		319		1137	
HIGHEST ANNUAL MEAN					.000	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	531	Jun 8	463	May 18	2200	May 14 1966
LOWEST DAILY MEAN	210	Jan 1	180	Jun 28	.00	Sep 7 1968
ANNUAL SEVEN-DAY MINIMUM	222	Jan 21	197	Jun 25	.00	Sep 7 1968
INSTANTANEOUS PEAK FLOW			476	May 18	476	May 18 1998
INSTANTANEOUS PEAK STAGE			11.47	May 18	11.47	May 18 1998
ANNUAL RUNOFF (AC-FT)	242700		231000		295700	
10 PERCENT EXCEEDS	432		413		1080	
50 PERCENT EXCEEDS	340		305		276	
90 PERCENT EXCEEDS	243		241		.00	

e Estimated



RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM

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.

WATER-DISCHARGE RECORDS

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 with satellite telemetry. Datum of gage is 4,455.19 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except for estimated daily discharges, which are fair. 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. Combined monthly discharge in acre-ft is given at end of each year table. Diversion 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 Bureau of Reclamation).

AVERAGE DISCHARGE.--34 years (water years 1965-98), 817 ft³/s, 591,900 acre-ft/yr. Total flow of river, 103 years (water years 1895-1998), 1,274 ft³/s, 923,000 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.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,720 ft³/s, May 12; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

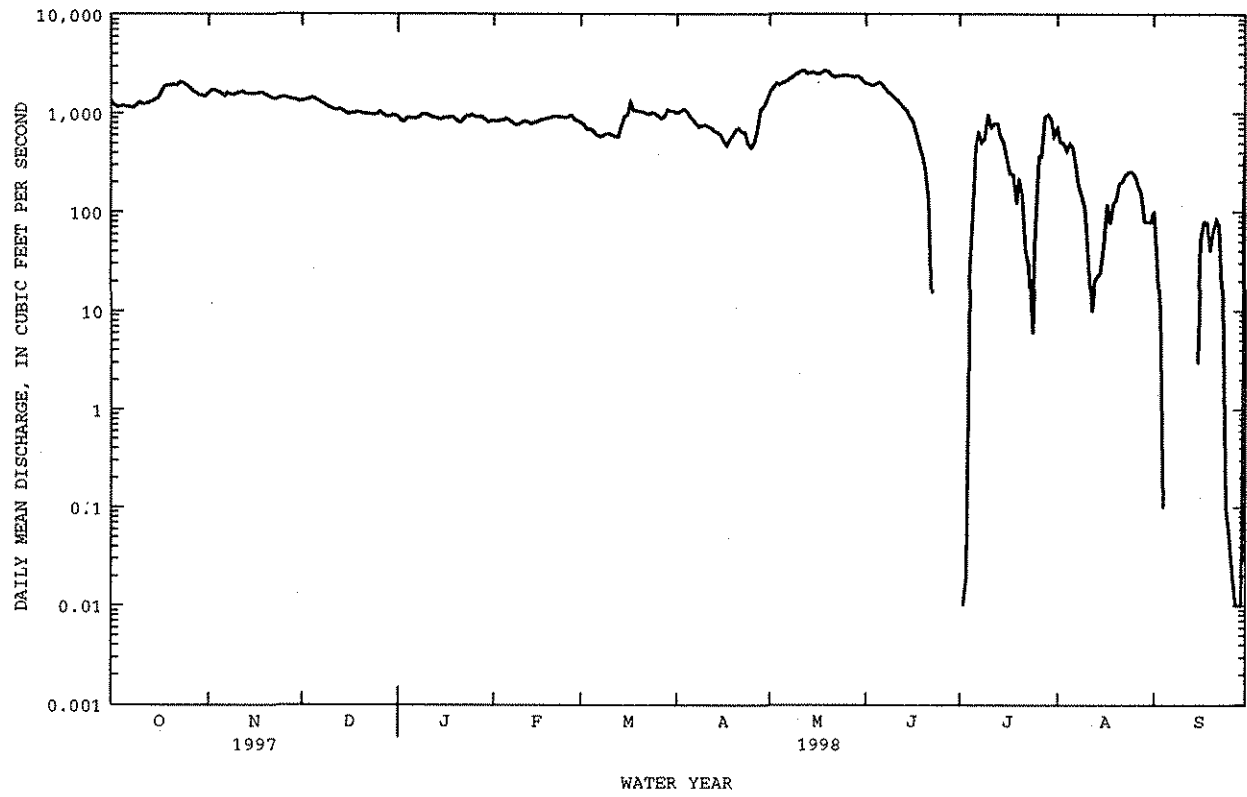
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1310	1600	1340	910	844	803	1000	e1650	1990	.00	706	101
2	1210	1720	1370	838	827	771	1030	e1800	1970	e.01	510	e40
3	1160	1720	1380	827	849	686	1090	e2000	1900	e.02	502	e10
4	1180	1650	1440	901	852	695	1050	e1930	1960	e20	418	e.10
5	1190	1600	1420	894	878	668	940	2040	2050	90	e500	.00
6	1160	1500	1350	884	e850	599	858	2080	1970	451	e450	.00
7	1150	1620	1290	890	797	578	786	2200	1760	656	315	.00
8	1130	1550	1240	914	765	585	725	2310	1620	506	183	.00
9	1210	1540	1180	983	770	619	744	2450	1550	548	146	.00
10	1300	1600	1140	969	803	624	757	e2540	1430	964	106	.00
11	1240	1630	1100	957	832	601	728	2690	1350	716	e35	.00
12	1250	1660	1070	906	808	582	709	2720	1250	787	e10	.00
13	1290	1580	1100	902	779	573	655	2510	1130	785	e20	.00
14	1320	1590	1080	874	805	732	642	2580	1070	592	e22	.00
15	1370	1570	1010	871	e820	923	606	2610	917	508	e24	e3.0
16	1430	1570	985	901	e850	956	523	2510	833	349	e45	51
17	1640	1610	999	892	e870	1280	473	2510	655	243	e120	79
18	1880	1630	1010	e920	e880	1050	547	2630	488	240	76	78
19	1920	1560	1020	901	894	1050	596	2700	363	122	126	e40
20	1920	1510	1010	832	923	1030	678	2630	252	218	130	65
21	1960	1440	976	e808	931	1030	702	2400	132	148	194	83
22	1920	1410	981	e850	906	977	e640	2330	e15	42	204	72
23	2070	1400	974	e940	913	971	643	2370	e.00	28	241	e12
24	2040	1440	963	e930	e900	1010	487	2390	.00	e6.0	255	e.10
25	1920	1470	969	e960	e920	986	449	2420	.00	e70	256	e.05
26	1830	1450	1030	912	951	928	503	2410	.00	363	229	e.02
27	1680	1400	980	913	848	878	e684	e2380	.00	364	187	e.01
28	1610	1390	923	918	834	922	1080	2320	.00	931	154	e.01
29	1530	1370	918	869	---	1080	1160	2380	.00	972	80	e.01
30	1520	1330	949	812	---	1040	1350	2320	.00	869	79	361
31	1490	---	955	832	---	1040	---	2130	---	580	79	---
TOTAL	46830	46110	34152	27710	23899	26267	22835	72940	26655.00	12168.03	6402	995.30
MEAN	1511	1537	1102	894	854	847	761	2353	889	393	207	33.2
MAX	2070	1720	1440	983	951	1280	1350	2720	2050	972	706	361
MIN	1130	1330	918	808	765	573	449	1650	.00	.00	10	.00
AC-FT	92890	91460	67740	54960	47400	52100	45290	144700	52870	24140	12700	1970
(+)	117670	107360	83690	70110	60880	75060	68450	169320	72180	43360	30600	17560

CAL YR 1997 TOTAL 454670.00 MEAN 1246 MAX 4320 MIN .00 AC-FT 901800 (+) MEAN 1580 AC-FT 114500
WTR YR 1998 TOTAL 346963.33 MEAN 951 MAX 2720 MIN .00 AC-FT 688200 (+) MEAN 1270 AC-FT 919200

e Estimated

(+) COMBINED FLOW, IN ACRE-FEET, AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY AND CONVEYANCE CHANNEL.

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued



08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1905-07, 1946 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: July 1946 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler.

REMARKS.--Records of chemical analyses and sediment discharge for years prior to 1946 have been published in Water Bulletins of International Boundary and Water Commission.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 135,000 mg/L, July 23, 1977; minimum daily mean, no flow on many days each year.

SEDIMENT LOAD: Maximum daily, 1,200,000 tons, Sept. 21, 1982; minimum daily, 0 ton on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 33,100 mg/L, Aug. 6; minimum daily mean, no flow on several days.

SEDIMENT LOAD: Maximum daily, 69,600 tons, Nov. 3; minimum daily, 0 ton on several days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)
NOV 19...	1045	1570	413	7.7	12.0	6.0	89	657	10.8	101	--	--
25...	0945	1480	444	7.4	10.5	6.0	90	655	9.9	93	130	25
JAN 27...	1025	911	466	7.8	13.5	7.5	64	652	10.6	104	140	--
APR 21...	1055	708	537	8.2	25.5	14.0	74	656	8.9	101	150	9
MAY 29...	1000	2380	362	7.7	26.0	19.0	220	652	6.1	77	--	--
JUL 28...	0945	447	480	7.9	25.5	23.5	1200	654	6.4	88	140	17
AUG 04...	1050	330	585	8.4	31.0	24.0	8200	655	6.6	92	--	--
SEP 23...	1115	E12	545	--	33.5	22.0	400	652	8.3	112	--	--
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA-LINITY TOT IT FIELD (MG/L AS CAC03 (39086)	ANC TIT 4.5 LAB (MG/L AS CAC03) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible][illegible]

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 19...	--	--	--	--	--	--	--	--	--	--	--
25...	3	<1	10	5	7	14000	<10	260	.01	33	2
JAN 27...	--	--	--	--	--	--	--	--	--	--	3
APR 21...	--	--	--	--	--	--	--	--	--	--	3
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	--	--	--	--	--	--	--	--	--	--	3
AUG 04...	--	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (F/S) (00055)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)
OCT 23...	1128	2060	192	2.2	4.86	12.0	3340	18600	--	--	--	--
NOV 19...	1110	1560	189	1.9	4.34	4.9	2030	8550	--	--	--	--
DEC 15...	1020	996	190	1.9	2.82	--	1360	3660	--	--	--	--
JAN 21...	1109	808	189	1.4	3.08	4.8	1290	2810	--	--	--	--
FEB 24...	1035	897	190	1.7	2.74	--	1220	2950	--	--	--	--
MAR 25...	1020	984	190	1.5	3.42	--	1190	3160	--	--	--	--
APR 22...	1020	629	--	--	--	--	1490	2530	--	--	--	--
MAY 19...	1021	2690	283	2.3	4.10	17.0	2330	16900	26	30	33	37
JUL 20...	1035	275	--	--	--	--	1920	1430	--	--	--	--
AUG 19...	1055	138	115	.87	1.38	22.5	15300	5700	9	9	11	13
SEP 17...	1020	71	68.0	.74	1.40	--	1030	197	68	86	96	98

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM (70341)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)
OCT 23...	--	52	80	100	--	2	32	91	100	--	--
NOV 19...	--	42	68	100	--	4	14	87	100	--	--
DEC 15...	--	40	66	100	--	1	11	79	100	--	--
JAN 21...	--	39	69	100	--	2	13	81	100	--	--
FEB 24...	--	31	59	92	100	2	16	75	100	--	--
MAR 25...	--	54	82	100	--	0	7	79	100	--	--
APR 22...	--	--	--	--	--	2	15	75	100	--	--
MAY 19...	--	53	79	100	--	3	36	89	99	99	100
JUL 20...	--	--	--	--	--	2	13	61	100	--	--
AUG 19...	--	99	100	--	--	10	24	91	99	100	--
SEP 17...	98	99	99	100	--	2	10	52	97	99	100

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	3670	12800	6130	26900	4640	16700	998	2470	5410	12300	2060	4470
2	3490	11600	10600	49300	2460	9090	590	1330	4320	9660	1710	3580
3	2950	9210	15000	69600	3170	11800	574	1280	4850	11100	1300	2420
4	4420	14100	12000	53600	4090	16000	1640	3990	4130	9490	937	1760
5	3530	11300	11600	50200	4560	17400	3450	8330	4820	11400	856	1550
6	5570	17500	11500	46500	3940	14300	3740	8910	4530	6110	614	995
7	3330	10300	10600	46400	5870	20500	2620	6290	3800	e8170	623	972
8	3450	10600	7660	32000	7280	24400	1450	3620	3230	6660	771	1220
9	4250	13900	6720	27900	6500	20700	5300	14100	5050	10500	1090	1840
10	3350	11700	7610	33000	8640	26700	7040	18400	5620	12200	1110	1860
11	3480	11700	7090	31100	7780	23200	6120	15800	1640	3670	797	1300
12	2880	9740	7300	32800	3510	10100	4910	12000	1860	4060	760	1200
13	3050	10600	2870	12300	3870	e11500	2660	6480	1920	4030	752	1160
14	2160	7680	7230	31000	4270	e12400	3050	7210	2060	4470	1260	2560
15	2900	10800	6570	27800	3300	9050	1620	3810	1440	e3810	1500	3730
16	3520	13600	6210	26300	1730	4600	5980	14500	2080	e5730	1590	4130
17	4730	21000	5890	25600	1780	4800	5950	14300	1970	e5660	2900	9930
18	12500	64500	4650	20500	2250	6120	6000	e16300	2740	e7250	3380	9690
19	11700	60900	3670	15500	3120	8640	5620	13700	2310	5560	2880	8230
20	12300	64100	3100	12600	5450	14900	2520	5680	1190	2950	4180	11600
21	9310	49200	4070	15800	7750	20400	3050	e6680	1210	3030	3160	8790
22	12000	62300	4880	18500	7530	19900	1170	e2780	2140	5220	1560	4120
23	4860	27000	5240	19800	8040	21100	1980	e5700	1870	4590	1640	4300
24	7010	38600	4440	17200	6800	17700	1930	e5640	786	e1930	1770	4840
25	6100	31600	4320	17100	5560	14500	2230	e6260	1520	e3950	1520	4060
26	6760	33400	7570	29600	7480	20800	2400	5900	2030	5250	888	2230
27	6800	30900	6400	24100	3430	9100	2250	5560	1700	3890	1600	3780
28	4960	21600	8630	32500	3860	9610	1840	4560	1670	3770	1020	2520
29	6060	25000	5920	21900	2390	5910	1930	4520	---	---	2710	7890
30	5770	23700	5140	18400	2190	5610	2750	6030	---	---	2330	6550
31	4720	19000	---	---	1580	4080	4960	11200	---	---	1670	4710
TOTAL	---	759930	---	885800	---	431610	---	243330	---	176410	---	127987

DAY	MEAN CONC TRAT (MG/ DAY)	LOAD (TONS/ DAY)	MEAN CONCEN TRATIO (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN TRATIO (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN TRATIO (MG/L)	LOAD (TONS/ DAY)
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	2110	5720	7880	e35300	4570	24500	0	.00	23400	45800	1030	e305
2	1940	5450	8340	e31600	5370	28500	200	e.01	28000	39900	596	e46
3	3120	9160	6380	e28300	1800	9340	150	e.01	11500	15600	252	e11
4	2820	8000	7010	e36600	2750	14700	13	e.70	19200	24900	150	e.04
5	2100	5370	8970	49500	2820	15600	468	103	33000	e47100	0	.00
6	1840	e4250	8110	45500	1190	6380	657	830	33100	e42600	0	.00
7	1800	e3830	5970	35400	977	4600	2160	3830	19900	17000	0	.00
8	1560	e3060	2980	18600	5960	25900	5840	8010	12300	6290	0	.00
9	1710	e3450	4970	32900	5650	23800	13300	28300	5910	2500	0	.00
10	2140	e4380	2840	e19400	1580	6140	27100	71600	12300	3730	0	.00
11	1860	e3650	1690	12300	1680	6140	22300	43300	19000	e2350	0	.00
12	1600	e3070	1470	10800	1080	3640	12400	26500	523	e4.0	0	.00
13	1330	e2350	1640	11100	896	2730	12200	26700	9590	e565	0	.00
14	1100	e1910	1510	10600	487	1420	5690	9030	6070	e579	0	.00
15	1460	e2400	1880	13300	307	762	3840	5440	10100	e989	85	e4.5
16	866	1230	2170	14700	176	398	1770	e1680	6340	e1390	1220	206
17	781	1010	2420	16500	141	250	1080	724	23400	e8680	1810	479
18	1020	1510	2560	18200	123	162	949	647	21800	4510	1060	228
19	1230	1980	2820	20500	98	96	1490	490	8160	3140	1160	e192
20	1490	2830	2380	16900	71	50	1420	861	5550	1980	1470	287
21	1490	2810	4160	26800	35	e13	907	365	3520	1900	1420	330
22	1450	e1940	3320	20900	15	e1.9	432	60	2620	1460	1740	359
23	923	1610	3370	21600	0	e.00	383	39	2560	1670	653	e33
24	687	915	4010	25800	0	.00	63	e4.8	2540	1810	300	e.08
25	405	495	4850	31700	0	.00	560	e288	1680	1180	250	e.03
26	346	461	4330	28200	0	.00	12900	13000	1240	763	200	e.01
27	343	e638	4930	e31600	0	.00	8400	8180	1250	636	250	e.01
28	3140	10500	5680	35600	0	.00	5350	16000	1060	453	250	e.01
29	6010	18900	4590	29600	0	.00	9810	24700	575	e124	250	e.01
30	5640	20900	6770	42400	0	.00	14500	34200	767	e170	1190	3120
31	---	---	7910	45600	---	---	13300	20100	889	e301	---	---
TOTAL	---	133779	---	817800	---	175122.90	---	344982.52	---	280074.0	---	5600.69

YEAR 4382426.11

e Estimated

08360500 ELEPHANT BUTTE RESERVOIR AT ELEPHANT BUTTE, NM

LOCATION.--Lat 33°09'15", long 107°11'28", in NW¼ sec.30, T.13 S., R.3 W., Sierra County, Hydrologic Unit 13020211, at dam on Rio Grande, 1 mi west of Elephant Butte, 4 mi northeast of Truth or Consequences (Hot Springs), and at mile 1,383.2.

DRAINAGE AREA.--29,445 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--March 1915 to December 1939 (monthend contents only published in WSP 1312), January 1940 to September 1965 (monthend contents only), October 1965 to current year.

REVISED RECORDS.--WSP 1442: 1954(m). WSP 1632: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.3 ft above National Geodetic Vertical Datum of 1929. Oct. 16, 1939, to May 2, 1940, and prior to September 1930, nonrecording gages.

REMARKS.--Reservoir is formed by concrete dam. Storage began Jan. 6, 1915. Dam completed May 13, 1916. Capacity, 2,065,000 acre-ft, survey of 1988 at gage height 4,407.0 ft crest of spillway. Capacity by original survey was 2,638,900 acre-ft. No adjustment made for decrease in capacity due to sedimentation between effective dates of capacity tables. No dead storage. No storage allocated to flood control. Water is used for power development and irrigation on Rio Grande Project of Bureau of Reclamation. A 50,000 acre-ft permanent pool is authorized for recreational purposes.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 2,303,000 acre-ft, June 16-18, 1942, gage height, 4,409.19 ft; minimum daily contents after initial filling, 9,900 acre-ft, Aug. 6, 1954, gage height, 4,258.03 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,985,900 acre-ft, Feb. 17-18, gage height, 4,404.81 ft; minimum contents, 1,598,800 acre-ft, Sept. 30, gage height, 4,393.05 ft.

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1714200	1780600	1863600	1928400	1975500	1975200	1926600	1887200	1934000	1841600	1742800	1647700
2	1716100	1783900	1865600	1930100	1977000	1973100	1925600	1888200	1933600	1833800	1741500	1644300
3	1718000	1787200	1867700	1931900	1978400	1971600	1924900	1889600	1933300	1828800	1740200	1641200
4	1721300	1790500	1870400	1933600	1978700	1970600	1924200	1891000	1929400	1824400	1738600	1638100
5	1724500	1794500	1872800	1935700	1980200	1969200	1923800	1892000	1927300	1820100	1735700	1636900
6	1727700	1797500	1875500	1936800	1981900	1967400	1923500	1892700	1926300	1815700	1733500	1635900
7	1729600	1800400	1878300	1938900	1982300	1964900	1921800	1893400	1925200	1811100	1731200	1635000
8	1729900	1803400	1880700	1940300	1982700	1963500	1920000	1894100	1924200	1809400	1729600	1634100
9	1729900	1806400	1882400	1942000	1983400	1961400	1919000	1895400	1921400	1806400	1727700	1633200
10	1732800	1809400	1884100	1944100	1983700	1960000	1918300	1897200	1917900	1803800	1725400	1632300
11	1731200	1812400	1887500	1946200	1984100	1957900	1916900	1898500	1914500	1802800	1722500	1630400
12	1731800	1815100	1887500	1948300	1985100	1955400	1915500	1901000	1914100	1800400	1718100	1629500
13	1732200	1818400	1889200	1950100	1984400	1953600	1913800	1903000	1912400	1798100	1713600	1628600
14	1732500	1820100	1891300	1951500	1985100	1952200	1911700	1905100	1910600	1796100	1709100	1627400
15	1732200	1823100	1893400	1952900	1985500	1950800	1910300	1906500	1909300	1793500	1706300	1626400
16	1731800	1826100	1894800	1954700	1985500	1949400	1908600	1909300	1907900	1789800	1703400	1623400
17	1732800	1828800	1896800	1956400	1985900	1948300	1906800	1912000	1902000	1787500	1700600	1623100
18	1735100	1832500	1898900	1958200	1985900	1948000	1905500	1914500	1897900	1783900	1697700	1621900
19	1737600	1834800	1901000	1960000	1985500	1947600	1904100	1917200	1894800	1780300	1693900	1620600
20	1740200	1837900	1903700	1962100	1984800	1946600	1902300	1919300	1890600	1776000	1691700	1619400
21	1744400	1840900	1906500	1963900	1984100	1945900	1902300	1921800	1886500	1771800	1689200	1618500
22	1748600	1842900	1908900	1964600	1983400	1945200	1900600	1922800	1882000	1768200	1686600	1617300
23	1752500	1844900	1911000	1964900	1981900	1944500	1898900	1932800	1876900	1763300	1684100	1617000
24	1756400	1847300	1912700	1966000	1981600	1943100	1896800	1924900	1872100	1758700	1681300	1615200
25	1760000	1849300	1914500	1967000	1980200	1940300	1894100	1925900	1867000	1755100	1679400	1614300
26	1763000	1851700	1916500	1967700	1978700	1937500	1891300	1927000	1863300	1751600	1673800	1611200
27	1766900	1853700	1918300	1968500	1977300	1933300	1889900	1928400	1859500	1748300	1669700	1608200
28	1769800	1855800	1920400	1970900	1976300	1931900	1897900	1930500	1854100	1744400	1666900	1604900
29	1772700	1858500	1922100	1972400	---	1930500	1887500	1931900	1851700	1744400	1661600	1601800
30	1775000	1861200	1923800	1973400	---	1929400	1886800	1932600	1847000	1744400	1656300	1598800
31	1777700	---	1926600	1974500	---	1925900	---	1933300	---	1744100	1650700	---
MAX	1777700	1861200	1926600	1974500	1985900	1975200	1926600	1933300	1934000	1841600	1742800	1647700
MIN	1714200	1780600	1863600	1928400	1975500	1925900	1886800	1887200	1847000	1744100	1650700	1598800
(+)	4398.73	4401.23	4403.13	4409.49	4404.54	4403.11	4401.98	4403.32	4400.81	4397.70	4394.75	4393.05
(++)	+67300	+83500	+65400	+47900	+1800	-50400	-39100	+46500	-86300	-102900	-93400	-51900

CAL YR 1997 MAX 1926600 MIN 1641000 (++) +208500

WTR YR 1998 MAX 1985900 MIN 1598800 (++) -111600

(+) GAGE HEIGHT, IN FEET, AT END OF MONTH

(++) CHANGE IN CONTENTS, IN ACRE-Feet

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 with satellite telemetry. 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.--Records good except for estimated daily discharges, which are fair. Flow regulated by Elephant Butte Reservoir (station 08360500). Diversion for irrigation of about 800,000 acres upstream from station. No flow at times prior to 1929, Mar. 2-4, 1979.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e234	15	10	19	369	1430	1860	1520	2250	2580	1710	1780
2	e233	14	10	24	372	1440	1860	1440	2200	2540	1730	1730
3	84	13	11	29	203	1450	1850	1430	2330	2300	1710	624
4	24	13	11	33	107	1530	1860	1450	2330	2310	1680	522
5	25	12	11	36	110	1580	1860	1480	2340	2300	1670	530
6	201	12	11	40	385	1590	1860	1480	2340	2320	1670	543
7	308	11	11	42	685	1590	1750	1570	2340	2310	1690	547
8	317	11	11	45	686	1580	1560	1610	2330	2330	1680	524
9	572	11	11	48	688	1580	1560	1620	2330	2320	1660	730
10	661	10	11	50	688	1690	1560	1630	2320	2320	1640	760
11	813	9.7	11	54	691	1780	1560	1620	1880	2310	1620	609
12	817	9.1	11	56	694	1780	1560	1600	1620	2320	2130	620
13	901	8.9	12	62	696	1780	1570	1590	1610	2340	2300	632
14	1260	8.4	12	62	699	1790	1580	1590	1600	2290	2080	634
15	1500	8.6	12	63	701	1790	1500	1590	1620	2330	1580	642
16	965	8.8	12	65	704	1770	1450	1590	1900	2330	1580	635
17	875	9.3	13	66	707	1780	1450	1590	2260	2040	1580	759
18	809	9.1	13	67	1170	1870	1450	1600	2290	2150	1590	639
19	806	9.4	13	69	1410	1940	1460	1600	2290	2140	1600	635
20	212	9.3	13	78	1420	1940	1450	1600	2250	2110	1610	637
21	36	9.6	13	245	1430	1940	1510	1600	2230	2040	1610	494
22	22	9.7	14	340	1350	1930	1630	1600	2250	2120	1620	864
23	21	9.8	14	340	1420	2110	1620	1600	2270	2280	1630	947
24	116	9.8	14	342	1430	2200	1600	1600	2280	2320	1620	905
25	21	9.8	15	344	1430	2190	1590	1610	2310	2360	1970	1390
26	18	10	15	347	1420	2190	1600	1610	2310	2330	2510	1670
27	18	9.8	15	237	1430	2010	1580	1840	2320	2380	2490	1670
28	18	10	15	93	1430	1860	1560	2180	2300	1970	2460	1660
29	17	9.9	16	96	---	1850	1560	2270	2460	1620	2420	1630
30	16	10	16	256	---	1860	1560	2260	2810	1690	2360	1530
31	15	---	16	367	---	1860	---	2250	---	1710	2020	---
TOTAL	11935	311.0	393	4015	24525	55680	48420	51620	65970	68810	57220	27492
MEAN	385	10.4	12.7	130	876	1796	1614	1665	2199	2220	1846	916
MAX	1500	15	16	367	1430	2200	1860	2270	2810	2580	2510	1780
MIN	15	8.4	10	19	107	1430	1450	1430	1600	1620	1580	494
AC-FT	23670	617	780	7960	48650	110400	96040	102400	130900	136500	113500	54530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 1998, BY WATER YEAR (WY)

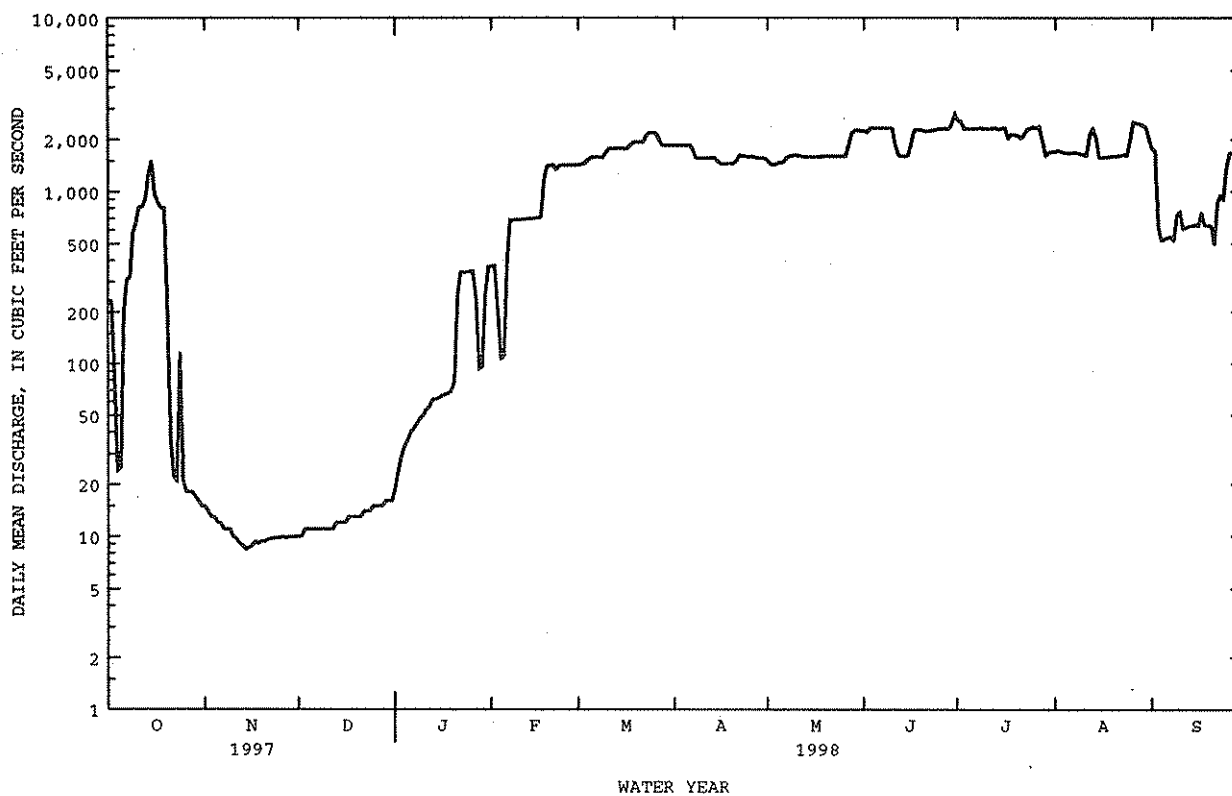
	MEAN	333	264	313	335	725	1179	1529	1606	1828	1736	1405	794
MAX	2040	2662	2110	1944	3026	2297	2717	7601	6098	4032	2623	2169	
(WY)	1987	1942	1987	1987	1986	1989	1942	1942	1942	1995	1924	1939	
MIN	2.41	1.25	1.38	.000	3.38	16.6	188	8.32	284	673	155	2.73	
(WY)	1986	1972	1994	1918	1955	1983	1977	1957	1964	1964	1954	1954	

RIO GRANDE BASIN

08361000 RIO GRANDE BELOW ELEPHANT BUTTE DAM, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1917 - 1998	
ANNUAL TOTAL	384948.0		416391.0		1005	
ANNUAL MEAN	1055		1141		2665	
HIGHEST ANNUAL MEAN					253	
LOWEST ANNUAL MEAN					8220	
HIGHEST DAILY MEAN	2330	Jul 5	2810	Jun 30	.00	May 22 1942
LOWEST DAILY MEAN	8.4	Nov 14	8.4	Nov 14	.00	Nov 2 1916
ANNUAL SEVEN-DAY MINIMUM	8.9	Nov 12	8.9	Nov 12	.00	Nov 2 1916
ANNUAL RUNOFF (AC-FT)	763500		825900		728000	
10 PERCENT EXCEEDS	2200		2300		2100	
50 PERCENT EXCEEDS	1240		1450		1010	
90 PERCENT EXCEEDS	11		12		5.5	

e Estimated



RIO GRANDE BASIN

241

08362000 CABALLO RESERVOIR NEAR ARREY, NM

LOCATION.--Lat 32°53'47", long 107°17'30", in SE¹/₄SW¹/₄ sec.19, T.16 S., R.4 W., Sierra County, Hydrologic Unit 13030101, in control tower of Caballo Dam on Rio Grande, 0.5 mi downstream from mouth of Apache Canyon, 0.9 mi upstream from Bojarquez Bridge, 2 mi upstream from Percha diversion dam, 3.5 mi northeast of Arrey, 5.2 mi south of Caballo, and at mile 1,356.6.

DRAINAGE AREA.--30,700 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--February 1938 to September 1965 (monthend contents only), October 1965 to current year.

REVISED RECORDS.--WSP 978: 1942. WSP 1632: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.3 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam, completed Sept. 19, 1938. Storage began Feb. 8, 1938. Capacity by 1983 survey, 331,500 acre-ft between gage heights 4,104 ft, bottom of tunnel entrance of gates and 4,182 ft, gage height above which spillway gates operate automatically. Capacity by original survey was 345,900 acre-ft. No dead storage. Storage held for flood control, 100,000 acre-ft. Water released from Elephant Butte Reservoir for power development is stored in Caballo Reservoir and released for irrigation on Rio Grande Project of Bureau of Reclamation.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 347,000 acre-ft, Mar. 4, 1942, gage height, 4,182.06 ft; minimum contents, 118 acre-ft, Oct. 14, 1938, gage height, 4,108.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 74,810 acre-ft, July 28, gage height, 4,150.61 ft; minimum contents, 25,910 acre-ft, Oct. 14, gage height, 4,137.01 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46210	37460	40470	43660	43390	60130	60570	67970	70930	64190	72880	64830
2	44110	37550	40540	43730	43460	60480	60910	68440	70930	64560	72480	65380
3	42250	37670	40700	43800	43530	60830	61610	68720	70930	64920	71990	64100
4	40310	37770	40930	43940	43530	61090	62490	69390	70930	65930	71800	62320
5	38570	37920	40990	44070	43530	61350	63470	69390	71020	66570	71510	60570
6	36880	37950	41020	44280	43250	61520	64460	68820	71220	67220	71650	58770
7	35030	38040	41060	44350	43730	61610	65100	68250	71410	68160	71750	57090
8	33270	38130	41120	44940	44210	61260	65010	68060	71510	69290	71900	55690
9	31620	38260	41420	45110	44910	61260	65010	68060	70930	70540	71990	54080
10	30280	38510	41450	45330	45680	61000	65280	68060	71260	71700	71600	52730
11	29280	38570	41580	45470	46240	60740	65280	68160	71700	72780	70010	51110
12	28140	38600	41650	45610	46740	60650	65740	67880	71800	73470	69480	49520
13	27020	38760	41680	45750	47180	60650	65930	67500	71800	74260	69770	47900
14	25910	38880	41710	45960	47900	60650	65930	67130	71700	74160	69910	46740
15	26770	38980	41710	46070	48560	60650	66020	66940	71410	73470	70060	45250
16	29250	39070	41810	45890	49150	60310	65600	67410	70440	73670	70150	43530
17	30970	39160	41950	45540	49370	59960	65380	67780	70150	72480	70010	41710
18	32280	39230	42010	45180	49670	59920	65830	68250	69870	71990	69340	40210
19	33490	39320	42150	44560	50730	59880	66020	68350	69680	71310	68540	39200
20	34740	39480	42280	44210	52110	59880	66390	68250	69580	70830	67830	38200
21	35520	39670	42410	44040	53200	59920	66480	68060	69680	69820	66850	37030
22	35610	39730	42580	44010	54320	59920	66290	68160	69820	69100	65880	36080
23	36020	39800	42850	44070	55610	59880	66200	68440	69390	69010	64960	35080
24	36080	39830	42850	44180	56510	59750	66110	68720	68820	69680	63970	34280
25	36380	39890	42950	44210	57340	59530	66110	69010	68350	70930	62850	33720
26	36670	39990	43090	44280	58260	59530	66660	69010	67500	72780	62850	34570
27	36790	40120	43190	44350	59110	59790	66480	68820	66390	73860	63030	35430
28	36910	40210	43320	44070	59700	59920	66760	69440	65280	74810	63120	36430
29	36970	40310	43420	43660	---	60050	66940	69960	64100	74210	63650	37100
30	37160	40410	43460	43320	---	60440	67320	70540	64010	73770	64280	37400
31	37280	---	43560	43320	---	60310	---	70590	---	73320	64560	---
MAX	46210	40410	43560	46070	59700	61610	67320	70590	71800	74810	72880	65380
MIN	25910	37460	40470	43320	43250	59530	60570	66940	64010	64190	62850	33720
(+)	4141.20	4142.20	4143.15	4143.08	4147.36	4149.50	4149.06	4149.75	4148.34	4150.31	4148.46	4141.24
(++)	-10910	+3130	+3150	-240	+16380	+610	+7010	+3270	-6580	+9310	-8760	-27160

CAL YR 1997 MAX 82290 MIN 25910 (++) +1750
WTR YR 1998 MAX 74810 MIN 25910 (++) -10790

(+) GAGE HEIGHT, IN FEET, AT END OF MONTH
(++) CHANGE IN CONTENTS, IN ACRE-FEET

RIO GRANDE BASIN

08362500 RIO GRANDE BELOW CABALLO DAM, NM

LOCATION.--Lat 32°53'05", long 107°17'31", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 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, 331,500 acre-ft, 1981 survey and Elephant Butte Reservoir (station 08360500), capacity, 2,065,000 acre-ft, 1988 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 downstream. See monthly table below for record of ditch. Bureau of Reclamation satellite telemeter at station.

COOPERATION.--Records provided by Bureau of Reclamation.

AVERAGE DISCHARGE.--60 years, 932 ft³/s, 675,200 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.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,890 ft³/s, June 27; minimum daily 1.0 ft³/s, Dec. 23 to Jan 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

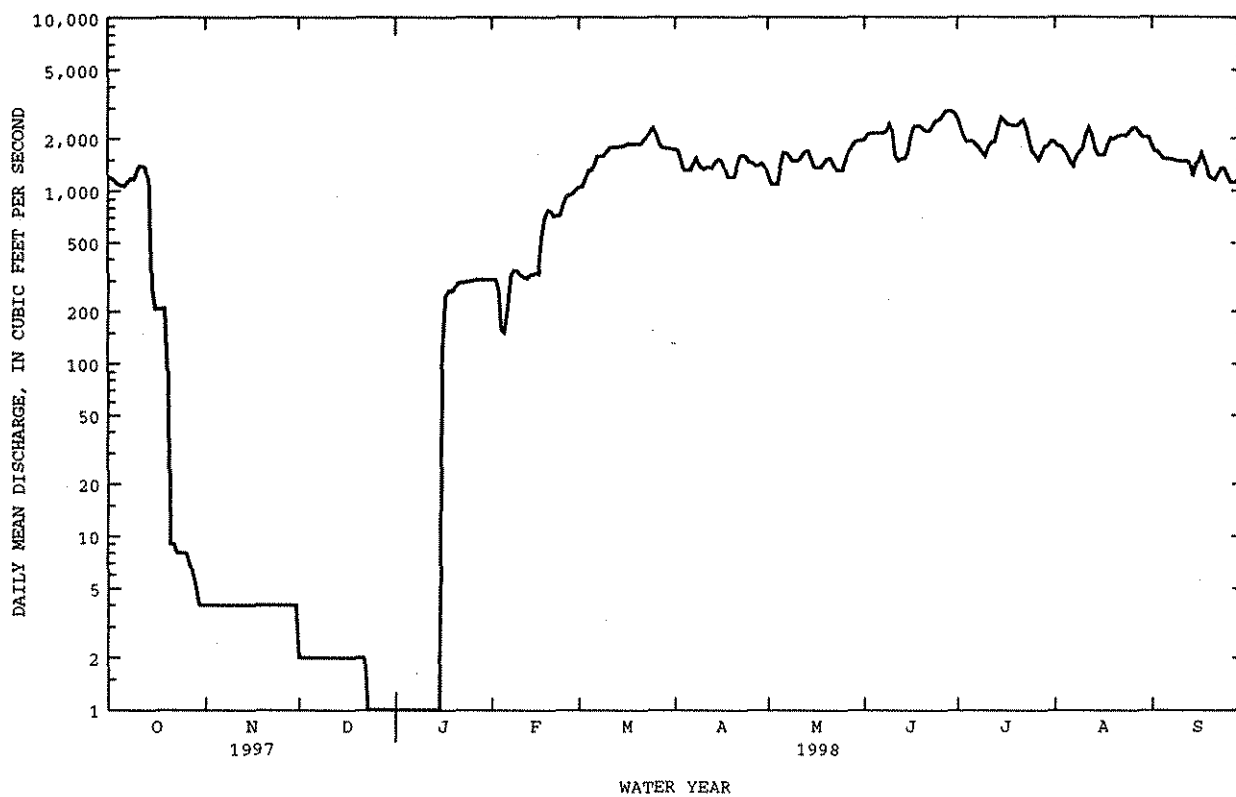
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	e4	e2	1.0	306	1050	1730	1210	1960	2620	1920	1860
2	1190	e4	e2	1.0	307	1050	1720	1090	2110	2310	1820	1700
3	1140	e4	e2	1.0	266	1170	1510	1090	2140	2050	1820	1690
4	1100	e4	e2	1.0	157	1310	1310	1090	2150	1920	1730	1600
5	1080	e4	e2	1.0	151	1310	1310	1380	2150	1930	1640	1530
6	1070	e4	e2	1.0	206	1390	1310	1660	2140	1930	1490	1530
7	1130	e4	e2	1.0	327	1590	1420	1650	2150	1850	1380	1520
8	1180	e4	e2	1.0	346	1590	1540	1570	2190	1780	1570	1510
9	1170	e4	e2	1.0	343	1590	1400	1480	2420	1670	1670	1490
10	1260	e4	e2	1.0	325	1680	1330	1490	2220	1580	1740	1480
11	1400	e4	e2	1.0	317	1780	1360	1500	1600	1800	2090	1480
12	1400	e4	e2	1.0	310	1780	1370	1600	1490	1910	2320	1480
13	1360	e4	e2	1.0	325	1790	1350	1690	1530	1910	2120	1470
14	1080	e4	e2	1.0	329	1800	1450	1690	1530	2300	1780	1220
15	271	e4	e2	1.0	334	1800	1510	1520	1660	2640	1610	1420
16	207	e4	e2	109	329	1830	1500	1360	2080	2550	1610	1470
17	207	e4	e2	248	533	1870	1350	1360	2360	2420	1610	1650
18	208	e4	e2	264	708	1860	1200	1360	2350	2400	1830	1480
19	209	e4	e2	263	774	1860	1200	1430	2360	2370	2010	1230
20	92	e4	e2	277	759	1870	1200	1520	2270	2380	1990	1180
21	9	e4	e2	293	716	1860	1380	1540	2210	2470	2050	1160
22	9	e4	e2	294	722	1970	1590	1440	2210	2560	2090	1260
23	8	e4	e1	296	723	2050	1610	1310	2360	2320	2090	1350
24	8	e4	e1	298	846	2190	1570	1310	2550	1930	2080	1340
25	8	e4	e1	299	940	2310	1460	1320	2550	1680	2210	1220
26	8	e4	e1	304	948	2130	1450	1500	2710	1600	2310	1120
27	7	e4	e1	307	965	1880	1390	1680	2890	1500	2310	1120
28	6	e4	e1	307	1020	1770	1400	1790	2880	1650	2170	1130
29	5	e4	e1	307	---	1770	1440	1920	2870	1820	2050	1260
30	4	e4	e1	307	---	1760	1370	1940	2800	1820	2050	1380
31	4	---	e1	307	---	1740	---	1940	---	1930	2050	---
TOTAL	18030	120	53	4495.0	14332	53400	42730	46430	66890	63600	59210	42330
MEAN	582	4.00	1.71	145	512	1723	1424	1498	2230	2052	1910	1411
MAX	1400	4.0	2.0	307	1020	2310	1730	1940	2890	2640	2320	1860
MIN	4.0	4.0	1.0	1.0	151	1050	1200	1090	1490	1500	1380	1120
AC-FT	35760	238	105	8920	28430	105900	84750	92090	132700	126200	117400	83960
(+)	0	0	0	0	0	159	157	183	230	111	86	196

CAL YR 1997 TOTAL 402735.0 MEAN 1103 MAX 2640 MIN 1.0 AC-FT 798800
WTR YR 1998 TOTAL 411620.0 MEAN 1128 MAX 2890 MIN 1.0 AC-FT 816400

e Estimated

(+) DIVERSION, IN ACRE-FEET, BY BONITA DITCH; DIVERTS DIRECTLY FROM CABALLO DAM AND THIS DIVERSION IS NOT INCLUDED IN THE RIVER RECORDS.

08362500 RIO GRANDE BELOW CABALLO DAM, NM--Continued



RIO GRANDE BASIN

08364000 RIO GRANDE AT EL PASO, TX

(National stream-quality accounting network
and National Water-Quality Assessment Program Station)

WATER-QUALITY RECORDS

LOCATION.--Lat 31°48'10", long 106°32'25", El Paso County, Hydrologic Unit 13030102, on downstream side of first pier from left abutment of Courchesne Bridge at El Paso, 1.7 mi upstream from American Dam, 5.6 mi upstream from Santa Fe Street-Juarez Avenue Bridge between El Paso and Cd. Juarez, Chihuahua, and at mile 1,249.

DRAINAGE AREA.--32,207 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--Water years 1930 to current year.

REMARKS.--Records of discharge are given in International Boundary and Water Commission Water Bulletins.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	
OCT													
27...	1000	287	1720	8.0	20.0	15.5	--	664	8.0	93	--	--	
29...	1315	265	1730	8.0	24.5	16.5	20	666	8.5	100	350	96	
NOV													
19...	0915	218	1990	8.5	4.5	9.0	8.1	665	9.2	92	380	150	
JAN													
28...	1315	339	1260	8.2	21.0	10.0	29	665	10.4	106	270	80	
28...	1330	339	1260	8.2	21.0	10.0	28	665	10.4	106	270	82	
MAR													
24...	1200	1020	861	8.3	19.0	15.0	76	666	7.9	90	200	53	
APR													
28...	0945	809	973	8.4	14.0	14.0	43	668	7.6	85	220	49	
MAY													
12...	0930	681	1020	8.6	17.0	17.5	22	662	7.5	91	230	55	
JUN													
23...	0930	978	902	8.3	25.0	22.5	45	665	6.6	88	210	48	
JUL													
15...	0845	1090	878	8.4	26.5	25.5	50	665	6.0	85	190	31	
AUG													
12...	0915	1030	966	8.3	28.5	26.0	47	670	5.8	82	210	52	
SEP													
03...	0930	999	938	8.3	24.5	22.5	41	663	6.2	83	210	45	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT													
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	100	23	200	5	9.2	316	0	259	--	360	180	.7	
NOV													
19...	110	25	270	6	10	276	6	237	--	440	260	.7	
JAN													
28...	78	17	150	4	7.6	229	0	188	199	230	150	.8	
28...	79	17	150	4	8.0	229	0	188	--	230	150	.8	
MAR													
24...	57	13	99	3	6.5	175	0	144	--	160	78	.6	
APR													
28...	65	14	110	3	6.9	201	5	173	--	190	85	.6	
MAY													
12...	66	15	110	3	7.3	203	5	175	--	200	92	.7	
JUN													
23...	60	14	97	3	6.9	195	0	160	--	170	72	.6	
JUL													
15...	57	13	91	3	6.8	151	24	164	--	160	68	.7	
AUG													
12...	62	14	110	3	6.5	193	2	162	--	190	84	.7	
SEP													
03...	60	14	110	3	6.5	200	0	164	--	170	76	.7	

08364000 RIO GRANDE AT EL PASO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SILICA, DIS- SOLVED (MG/L AS STO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
OCT 27...	--	--	--	--	--	--	--	--	--	--	--	--
29...	23	1130	1060	1.22	.02	1.2	.05	.15	.5	.2	.17	.09
NOV 19...	22	1300	1290	1.12	.12	1.2	.04	.25	.5	.3	.10	.05
JAN 28...	13	798	762	.704	.02	.72	.04	--	1.0	--	.26	.09
28...	13	802	760	.699	.02	.72	.04	.22	.7	.3	.25	.10
MAR 24...	10	531	511	--	<.01	.15	.04	.17	.9	.2	.28	<.01
APR 28...	13	609	587	.307	.01	.32	.03	.17	.7	.2	.22	.04
MAY 12...	13	642	612	--	<.01	.06	.05	.18	.4	.2	.03	<.01
JUN 23...	14	567	530	.247	.01	.26	.10	.12	.4	.2	.06	.03
JUL 15...	15	533	508	.063	.02	.08	.04	.21	.9	.3	.23	.02
AUG 12...	16	602	577	.179	.01	.19	.05	.17	.8	.2	.23	.02
SEP 03...	16	579	553	.265	.02	.28	.04	.14	1	.2	.24	.02
DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
OCT 27...	--	--	--	--	--	--	--	--	--	--	--	--
29...	.11	3.2	.7	2	<1	4	107	<1	273	<1	3	<1
NOV 19...	.09	3.2	.5	1	<1	4	92	<1	350	<1	3	<1
JAN 28...	.12	--	--	<10	--	3	66	--	--	<1	<1.0	<12
28...	.11	3.4	2.4	1	<1	3	71	<1	210	<1	4	<1
MAR 24...	.03	3.4	3.9	3	<1	3	62	<1	156	<1	<1	<1
APR 28...	.05	3.5	1.4	2	<1	3	69	<1	166	<1	3	<1
MAY 12...	.02	3.1	2.5	1	<1	3	69	<1	170	<1	2	<1
JUN 23...	.03	2.9	2.7	2	<1	4	67	<1	155	<1	1	<1
JUL 15...	.03	3.4	3.1	12	<1	4	65	<1	148	<1	2	<1
AUG 12...	.04	3.3	2.9	4	<1	4	72	<1	170	<1	1	<1
SEP 03...	.03	3.2	2.4	8	<1	4	71	<1	172	<1	<1	<1

RIO GRANDE BASIN

08364000 RIO GRANDE AT EL PASO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	ALUM- INUM BOT MAT <63U WS FIELD PERCENT (34790)	ANTI- MONY BOT MAT <63U WS FIELD (UG/G) (34795)	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UWS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	COBALT BOT MAT <63U WS FIELD (UG/G) (34845)
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OCT	27...	1000	5.8	.7	4.7	560	1	<10	.2	8.5	74	53	8
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DATE	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (34900)	MANGA- NESE BOT MAT <63U WS FIELD (UG/G) (34905)
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OCT	27...	33	<2	22	<8	<4	2.7	42	19	40	1.2	970
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DATE	MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)
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OCT	27...	.03	<2	34	19	17	.10	2.0	.8	.2	.2	1.0
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DATE	STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (UG/G) (34970)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	TITA- NIUM, SED, BM WS, <63U DRY WGT REC PERCENT (49274)	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)
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OCT	27...	480	.12	<40	11	<5	.37	3.5	72	25	2	71
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E estimated

(Hydrologic bench-mark station)

DRAINAGE AREA.--53.2 mi².

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

REMARKS.--Records good except for estimated daily discharges, which are poor. 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.

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).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	e8.8	e5.8	e4.4	e5.6	e5.4	19	59	218	44	97	82
2	19	8.5	e5.8	e4.5	e5.9	e5.4	18	72	209	34	92	81
3	19	e8.5	e6.0	e4.8	e6.5	e5.7	18	99	191	30	83	79
4	18	e8.4	e6.2	e4.3	e5.8	e5.8	20	118	167	29	109	69
5	17	e8.4	e6.3	e4.2	e6.0	e5.8	24	131	138	27	112	61
6	16	8.4	e6.6	e4.0	e6.6	e5.9	26	138	119	30	108	55
7	16	e8.4	e6.6	e4.3	e7.8	e6.0	22	130	106	77	94	48
8	e17	8.2	e6.4	e3.9	e7.5	e6.1	19	127	95	98	87	43
9	16	e8.3	e6.3	e3.8	e7.3	e6.2	17	109	84	80	84	39
10	15	8.3	e6.2	e4.2	e7.0	6.4	17	121	77	93	136	41
11	15	e8.3	e5.6	e4.0	e6.5	6.8	24	143	75	74	115	40
12	14	e8.3	e5.7	e4.2	e6.2	7.3	33	152	64	64	102	33
13	14	e8.2	e5.9	e4.1	e5.6	e7.6	30	164	59	62	89	31
14	14	e5.0	e6.2	e4.3	e5.3	e8.5	31	181	54	55	76	28
15	13	e5.7	e6.3	e4.4	e5.7	e9.0	29	161	50	50	69	27
16	13	e6.3	e6.1	e4.6	e6.0	9.4	25	152	46	58	72	27
17	12	e6.8	e5.9	e4.8	e6.0	e9.6	22	171	44	65	64	25
18	12	e7.3	e5.4	e4.7	e6.1	e10	19	236	41	54	56	25
19	11	e7.9	e5.6	e4.5	e6.2	10	17	299	37	50	65	22
20	11	e7.6	e5.3	e4.4	e6.1	12	18	326	35	46	77	20
21	11	e7.8	e5.3	e4.1	e6.2	14	18	340	32	44	141	19
22	11	e8.0	e5.2	e3.8	e6.2	17	23	333	30	41	122	19
23	11	e7.7	e5.3	e3.7	e6.1	26	37	302	28	43	127	19
24	e10	e8.0	e5.2	e3.3	e6.2	36	58	278	27	42	109	18
25	10	e7.5	e5.3	e4.2	e6.2	40	79	266	26	42	111	18
26	10	e7.8	e5.1	e4.0	e6.2	44	76	245	24	46	139	17
27	e10	e7.2	e4.9	e4.2	e5.9	38	57	241	23	59	112	16
28	e10	e6.5	e5.0	e4.5	e5.6	32	47	247	21	90	93	15
29	10	e6.0	e4.9	e5.0	---	28	43	254	21	86	83	17
30	e9.8	e5.8	e4.7	e5.5	---	23	46	255	25	88	85	26
31	e9.2	---	e4.6	e5.9	---	20	---	239	---	90	92	---
TOTAL	414.0	227.9	175.7	134.6	174.3	466.9	932	6089	2166	1791	3001	1060
MEAN	13.4	7.60	5.67	4.34	6.22	15.1	31.1	196	72.2	57.8	96.8	35.3
MAX	20	8.8	6.6	5.9	7.8	44	79	340	218	98	141	82
MIN	9.2	5.0	4.6	3.3	5.3	5.4	17	59	21	27	56	15
AC-FT	821	452	349	267	346	926	1850	12080	4300	3550	5950	2100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

MEAN	14.3	10.2	7.08	6.07	6.42	12.7	36.0	129	90.2	30.5	45.7	28.0
MAX	25.2	27.5	13.3	9.82	13.2	41.3	88.4	319	263	73.1	159	84.5
(WY)	1986	1995	1985	1986	1995	1989	1985	1973	1997	1988	1991	1988
MIN	5.73	3.72	2.90	1.72	2.43	3.40	11.2	14.2	8.25	8.43	9.23	6.93
(WY)	1965	1990	1990	1964	1964	1964	1971	1967	1967	1989	1989	1978

RIO GRANDE BASIN

08377900 RIO MORA NEAR TERRERO, NM--Continued

SUMMARY STATISTICS

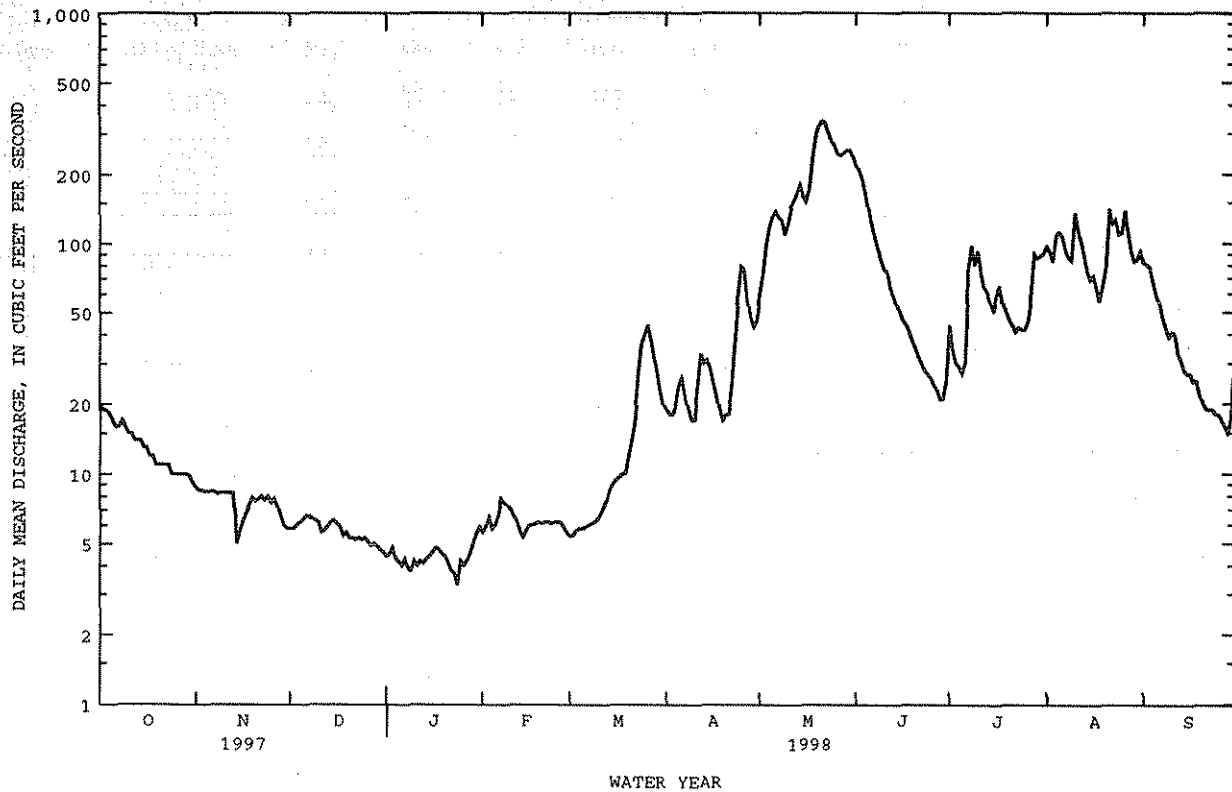
FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1964 - 1998

ANNUAL TOTAL	23553.3		16632.4			
ANNUAL MEAN	64.5		45.6			
HIGHEST ANNUAL MEAN					34.8	
LOWEST ANNUAL MEAN					65.3	1973
HIGHEST DAILY MEAN	755	Jun 8	340	May 21	11.6	1974
LOWEST DAILY MEAN	4.6	Dec 31	3.3	Jan 24	.90	Jan 12 1964
ANNUAL SEVEN-DAY MINIMUM	4.9	Dec 25	3.9	Jan 21	.97	Jan 10 1964
INSTANTANEOUS PEAK FLOW			373	May 20	937	May 22 1991
INSTANTANEOUS PEAK STAGE			3.05	May 20	4.15	Jun 8 1979
INSTANTANEOUS LOW-FLOW			2.9	Jan 26	.90	Jan 12 1964
ANNUAL RUNOFF (AC-FT)	46720		32990		25230	
10 PERCENT EXCEEDS	207		120		85	
50 PERCENT EXCEEDS	23		18		14	
90 PERCENT EXCEEDS	6.6		5.2		5.0	

e Estimated



08378500 PECOS RIVER NEAR PECOS, NM

LOCATION.--Lat 35°42'30", long 105°40'55", in NE¹/₄NE¹/₄ 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 with satellite telemete. 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.--Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of about 75 acres, 1959 determinations, upstream from station. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1904, was greatest since 1886, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	e45	41	e50	e38	e31	60	176	509	145	239	232
2	61	45	42	e49	e36	e32	62	213	505	136	247	212
3	64	e44	44	e47	e36	e32	59	275	487	121	202	181
4	61	e43	e44	e45	e35	e32	64	320	458	117	257	164
5	59	e43	e45	e44	e34	32	72	351	400	115	278	149
6	57	43	e46	e42	e34	33	77	366	354	111	274	139
7	58	e42	e46	e38	e35	e34	72	344	326	162	231	130
8	76	e42	e47	e32	e35	e36	65	337	301	204	212	121
9	63	e42	48	e32	34	e37	61	299	274	e220	208	115
10	60	e42	e49	e32	e34	e37	61	324	257	e350	257	113
11	59	e41	e50	e33	e34	e37	74	363	258	461	230	113
12	58	e40	e51	e33	e33	e36	95	374	226	625	226	102
13	56	e39	e51	e34	e33	e36	94	397	213	e750	205	95
14	e54	e38	e52	e35	e32	e33	94	421	203	820	184	90
15	e53	e36	e52	e35	32	e34	93	382	194	464	178	87
16	e52	e35	e52	e35	e32	41	83	359	183	e350	198	86
17	e50	34	e51	e35	e32	e42	81	386	177	e250	190	84
18	e50	e32	e51	36	e31	e43	74	489	166	122	175	83
19	e49	e31	e50	e37	e31	e44	69	579	156	113	188	76
20	e49	30	e50	e37	e31	43	72	628	149	106	190	72
21	49	e31	e49	e38	e31	50	73	678	144	106	277	70
22	e48	e33	e49	e37	e31	56	86	660	138	111	256	66
23	e48	e35	e48	e37	e30	69	117	601	132	118	264	68
24	e49	e36	e47	e37	30	88	161	562	127	117	232	64
25	e48	e37	e47	38	30	112	208	543	122	117	315	63
26	e48	e39	e47	e38	e31	120	206	509	115	137	428	59
27	e47	e40	e48	e38	e32	107	165	503	110	150	305	57
28	e47	e41	e49	e38	e33	90	147	514	105	s189	260	55
29	e46	41	e50	e38	---	81	138	532	101	177	253	59
30	e46	e41	e50	38	---	70	145	541	105	185	251	98
31	e46	---	e49	e38	---	64	---	528	---	202	248	---
TOTAL	1672	1161	1495	1176	920	1632	2928	13554	6995	7351	7458	3103
MEAN	53.9	38.7	48.2	37.9	32.9	52.6	97.6	437	233	237	241	103
MAX	76	45	52	50	38	120	208	678	509	820	428	232
MIN	46	30	41	32	30	31	59	176	101	106	175	55
AC-FT	3320	2300	2970	2330	1820	3240	5810	26880	13870	14580	14790	6150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1998, BY WATER YEAR (WY)

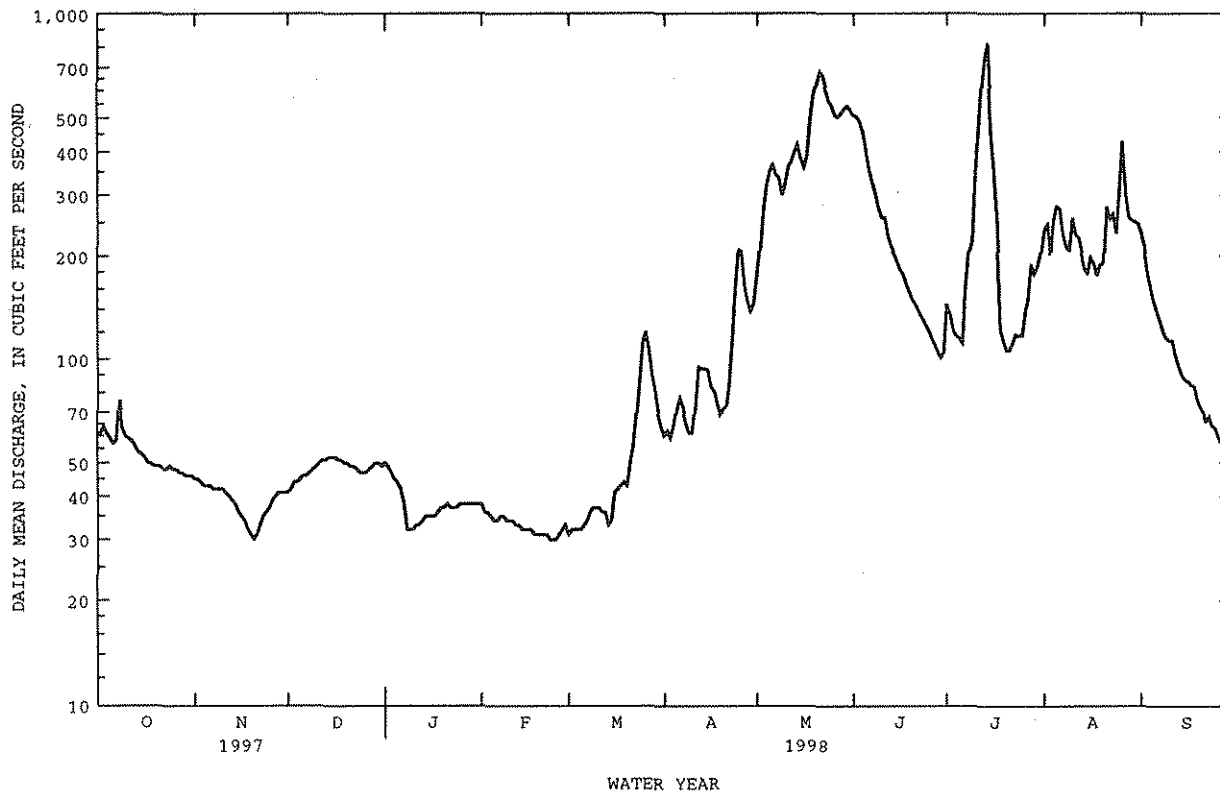
	MEAN	51.8	38.1	29.8	26.6	26.9	41.7	132	343	259	99.5	110	76.1
MAX	217	138	61.9	49.7	45.6	100	366	1158	950	299	402	284	
(WY)	1942	1942	1942	1942	1995	1997	1942	1941	1979	1941	1957	1931	
MIN	11.9	11.6	9.52	11.2	14.8	18.1	40.1	43.7	28.6	20.5	20.0	10.8	
(WY)	1957	1957	1957	1957	1951	1951	1951	1950	1956	1956	1956	1956	

RIO GRANDE BASIN

08378500 PECOS RIVER NEAR PECOS, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1920 - 1998	
ANNUAL TOTAL	69725		49445		103	
ANNUAL MEAN	191		135		267	1941
HIGHEST ANNUAL MEAN					30.7	1950
LOWEST ANNUAL MEAN					1980	May 22 1991
HIGHEST DAILY MEAN	1880	Jun 8	820	Jul 14	6.0	Dec 22 1956
LOWEST DAILY MEAN	30	Nov 20	30	Nov 20	6.7	Dec 19 1956
ANNUAL SEVEN-DAY MINIMUM	32	Nov 16	31	Feb 19	4500	Sep 21 1929
INSTANTANEOUS PEAK FLOW			985	Jul 14	6.20	Sep 21 1929
INSTANTANEOUS PEAK STAGE			3.77	Jul 14	2.0	Mar 19 1971
INSTANTANEOUS LOW FLOW			15	Jul 10	74930	
ANNUAL RUNOFF (AC-FT)	138300		98070		255	
10 PERCENT EXCEEDS	506		350		48	
50 PERCENT EXCEEDS	81		64		22	
90 PERCENT EXCEEDS	36		34			

e Estimated



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 with satellite telemetry. 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.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 4,900 acres, 1959 determinations, upstream and downstream from station. Acequia del Bodo Juan Paiz (no measurements made during the water year) diverts water 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. Several observations of water temperature were made during the year. No flow at times some years.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	19	42	54	34	23	200	174	508	12	246	193
2	52	19	43	48	31	21	164	205	486	84	296	182
3	47	21	43	e43	28	23	158	247	470	116	254	142
4	44	21	35	e42	30	31	138	336	437	75	194	131
5	42	19	27	e41	38	29	135	395	407	95	257	121
6	35	20	19	e38	38	29	138	442	359	66	327	95
7	34	20	21	e34	35	31	146	463	331	101	325	69
8	40	19	37	e24	32	34	145	446	290	87	236	50
9	42	19	37	e27	34	34	135	426	255	222	191	37
10	64	20	35	e32	32	25	96	364	214	231	158	36
11	132	20	32	e36	33	24	57	383	192	187	295	39
12	31	20	e18	e37	29	25	52	417	192	131	283	43
13	27	20	e6.0	e40	27	29	85	427	157	98	213	31
14	27	22	e6.0	e39	31	28	101	452	137	84	176	21
15	26	21	e9.5	37	30	340	94	479	120	78	135	19
16	27	27	e9.5	e35	35	607	94	431	110	63	116	29
17	24	37	e8.5	33	36	432	102	395	83	52	120	29
18	22	36	e16	e31	30	322	88	410	79	93	109	25
19	19	47	e18	e30	31	257	73	516	75	66	104	20
20	21	50	e20	e29	33	187	51	600	61	38	185	20
21	24	49	e21	e28	31	166	46	664	43	18	148	17
22	22	48	e23	28	29	168	42	706	33	13	229	15
23	22	46	27	26	32	193	41	670	24	11	185	15
24	22	43	56	22	28	255	66	609	18	9.8	199	58
25	21	40	45	e25	30	341	124	569	15	18	148	20
26	26	42	49	e27	28	402	239	548	12	34	562	18
27	27	42	54	e27	29	428	305	514	10	216	434	16
28	26	44	e58	29	24	398	251	495	7.6	237	329	16
29	23	44	e60	e31	---	328	221	504	6.0	200	239	22
30	20	43	e60	32	---	261	183	520	5.6	174	206	18
31	21	---	e59	32	---	234	---	525	---	390	197	---
TOTAL	1069	938	994.5	1037	878	5705	3770	14332	5137.2	3299.8	7096	1547
MEAN	34.5	31.3	32.1	33.5	31.4	184	126	462	171	106	229	51.6
MAX	132	50	60	54	38	607	305	706	508	390	562	193
MIN	19	19	6.0	22	24	21	41	174	5.6	9.8	104	15
AC-FT	2120	1860	1970	2060	1740	11320	7480	28430	10190	6550	14070	3070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1998, BY WATER YEAR (WY)

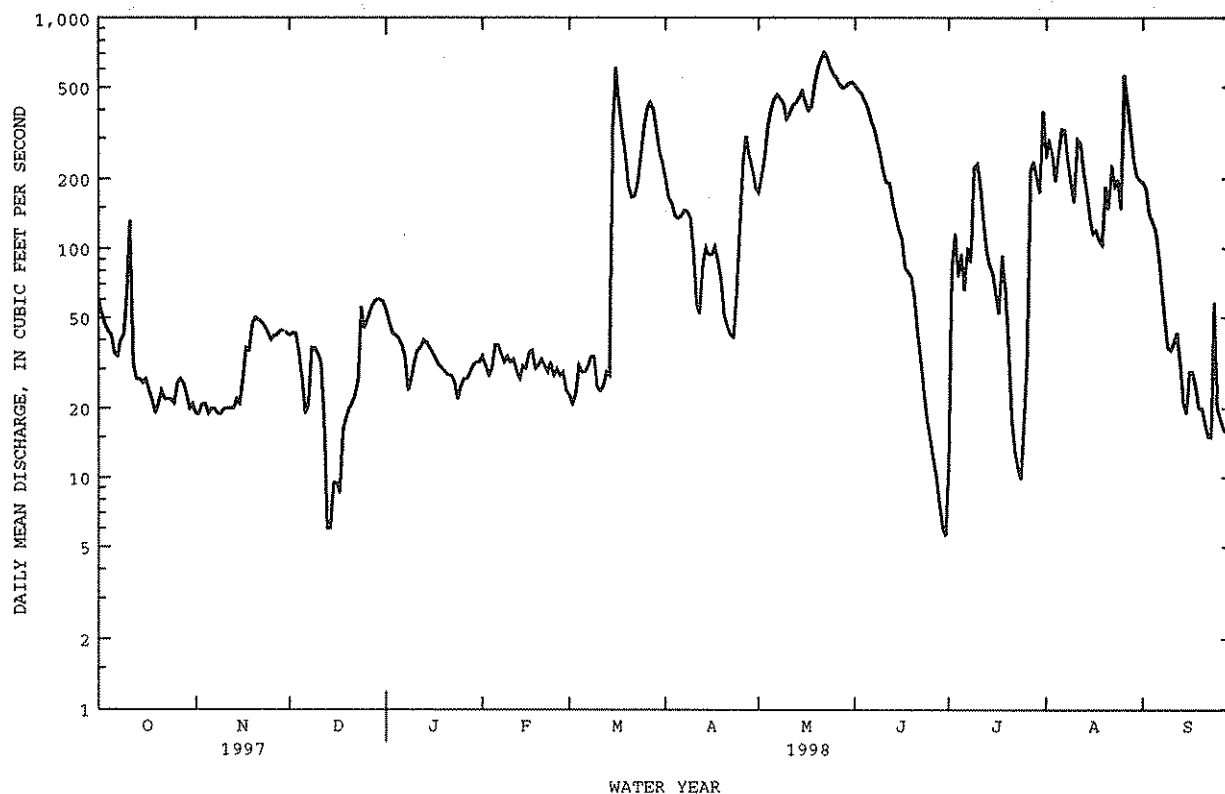
	MEAN	MAX	(WY)	MIN	(WY)
1929	61.5	500	1942	.000	1957
1930	38.9	279	1942	.000	1957
1931	27.6	103	1942	.000	1957
1932	24.9	78.3	1942	1.82	1957
1933	24.6	78.5	1987	.92	1957
1934	62.5	249	1985	.29	1971
1935	179	854	1942	1.54	1981
1936	374	2031	1941	2.86	1971
1937	269	1150	1941	4.17	1934
1938	133	507	1941	3.81	1934
1939	198	928	1991	13.0	1964
1940	121	679	1941	.000	1956

RIO GRANDE BASIN

08379500 PECOS RIVER NEAR ANTON CHICO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1929 - 1998	
ANNUAL TOTAL	88097.5		45803.5		127	
ANNUAL MEAN	241		125		489	1941
HIGHEST ANNUAL MEAN					23.4	1974
LOWEST ANNUAL MEAN					10000	Jun 2 1937
HIGHEST DAILY MEAN	2160	Jun 8	706	May 22	.00	Jun 16 1934
LOWEST DAILY MEAN	6.0	Dec 13	5.6	Jun 30	.00	Jun 16 1934
ANNUAL SEVEN-DAY MINIMUM	11	Dec 12	9.7	Jun 25	40300	Jun 1 1937
INSTANTANEOUS PEAK FLOW			1220	Mar 15	1997.00	Aug 4 1997
INSTANTANEOUS PEAK STAGE			5.77	Mar 15	.00	Apr 24 1996
INSTANTANEOUS LOW FLOW			2.2	Dec 12	91770	
ANNUAL RUNOFF (AC-FT)	174700		90850		347	
10 PERCENT EXCEEDS	804		395		39	
50 PERCENT EXCEEDS	64		43		5.0	
90 PERCENT EXCEEDS	22		20			

e Estimated



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.

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.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,880 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 21, 1934, at different datum.

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.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	13	e9.0	e12	7.2	7.4	42	94	56	11	42	38
2	25	13	e9.2	e11	7.4	7.6	38	108	53	11	38	37
3	24	12	e9.9	12	7.7	7.2	33	124	50	9.7	31	36
4	23	12	e9.6	e10	7.7	7.5	32	133	47	16	42	31
5	21	12	e9.2	e9.6	7.4	7.5	33	134	44	11	46	27
6	21	12	e9.0	9.3	7.0	7.5	33	129	39	10	45	24
7	21	12	e9.4	11	7.4	8.0	31	108	36	11	38	22
8	25	11	e9.0	e10	6.8	7.0	30	101	32	11	32	21
9	20	12	10	e21	7.1	7.3	27	88	29	13	30	19
10	19	12	e9.6	13	6.7	6.9	26	87	27	15	70	19
11	18	12	e10	9.5	6.2	7.5	29	96	30	11	72	19
12	18	13	e11	9.6	7.2	7.6	37	95	25	9.2	57	17
13	17	e11	9.3	9.3	6.5	8.5	38	94	22	10	46	15
14	17	e10	e12	8.8	7.2	9.9	36	96	19	12	38	14
15	16	e9.8	e12	9.6	7.1	18	35	90	19	9.6	33	14
16	16	e9.6	e11	9.0	6.4	33	32	79	18	9.9	31	15
17	16	e10	e10	8.5	6.4	44	32	78	17	11	33	18
18	15	e11	9.8	8.5	7.0	45	29	93	15	9.3	28	15
19	15	e11	9.5	8.1	6.5	37	28	106	14	8.1	35	14
20	15	12	9.3	8.2	6.4	40	30	109	13	7.5	169	12
21	15	12	9.4	7.7	6.8	50	29	113	13	7.2	145	11
22	14	11	9.2	7.6	6.4	61	31	106	12	7.2	94	11
23	14	10	e8.6	8.6	6.9	80	38	91	11	8.5	79	11
24	15	11	e8.2	8.4	6.8	100	57	80	11	8.3	65	11
25	16	11	e8.0	8.1	7.1	120	78	74	11	10	61	10
26	14	11	e8.4	7.9	e5.6	117	86	70	10	13	93	9.8
27	15	e10	e8.8	8.0	e5.3	104	78	67	9.3	21	73	9.6
28	15	e9.6	e9.6	8.3	e6.0	80	76	64	8.5	28	59	9.3
29	14	e9.5	e10	7.5	---	69	68	63	8.2	25	50	9.7
30	14	9.4	e11	7.7	---	59	75	62	7.9	32	45	13
31	13	---	e11	7.4	---	49	---	59	---	55	44	---
TOTAL	547	334.9	301.7	295.2	190.2	1213.4	1267	2891	706.9	431.5	1764	532.4
MEAN	17.6	11.2	9.73	9.52	6.79	39.1	42.2	93.3	23.6	13.9	56.9	17.7
MAX	26	13	12	21	7.7	120	86	134	56	55	169	38
MIN	13	9.4	8.0	7.4	5.3	6.9	26	59	7.9	7.2	28	9.3
AC-FT	1080	664	598	586	377	2410	2510	5730	1400	856	3500	1060

MEAN	12.6	9.79	6.71	5.60	5.93	12.9	35.8	55.9	23.2	16.4	33.0	21.5
MAX	108	57.5	21.3	13.7	20.5	64.7	184	380	119	105	225	185
{WY}	1942	1942	1958	1989	1987	1987	1958	1941	1979	1991	1991	1991
MIN	.38	.49	.80	1.83	1.49	2.36	3.11	1.96	.74	1.24	1.08	.40
{WY}	1957	1957	1957	1957	1957	1955	1967	1967	1956	1956	1934	1956

RIO GRANDE BASIN

08380500 GALLINAS CREEK NEAR MONTEZUMA, NM--Continued

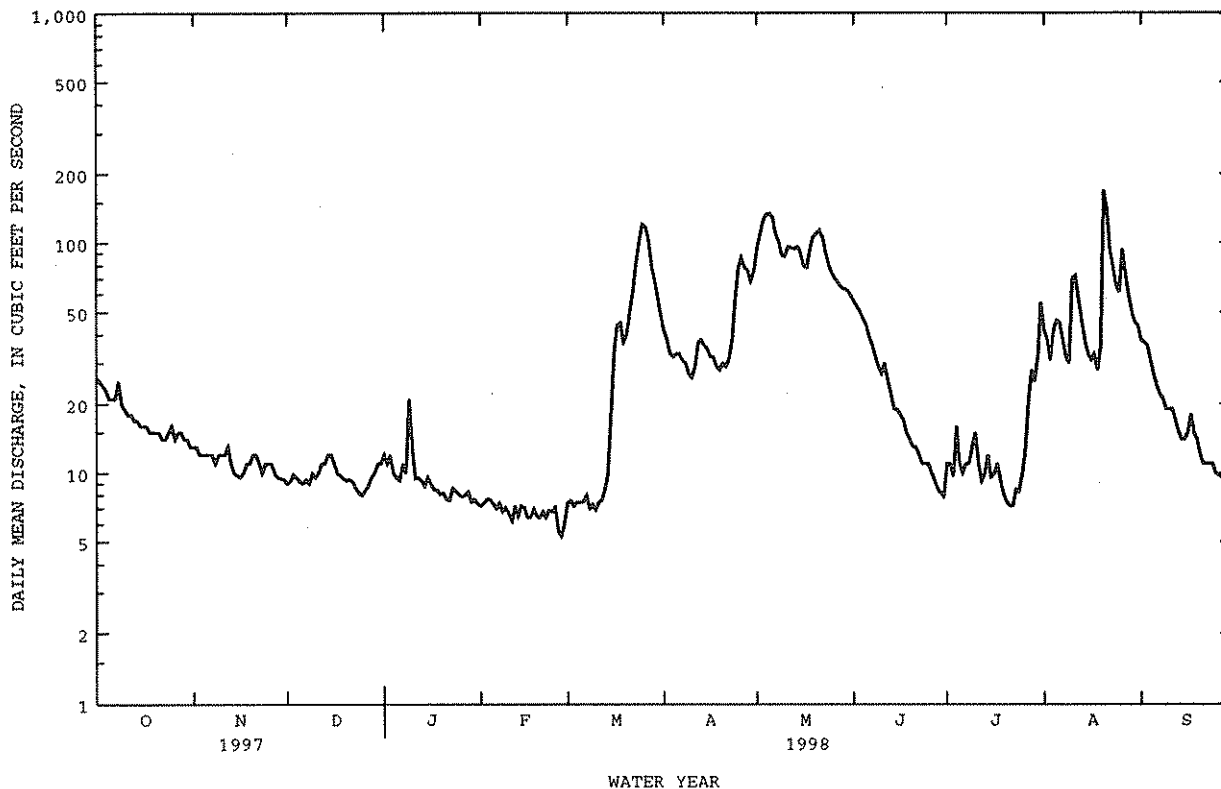
SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1926 - 1998	
ANNUAL TOTAL	17763.3		10475.2		20.0	
ANNUAL MEAN	48.7		28.7		80.7	
HIGHEST ANNUAL MEAN					2.53	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	595	Aug 7	169	Aug 20	1580	Sep 10 1991
LOWEST DAILY MEAN	8.0	Dec 25	5.3	Feb 27	.20	Sep 21 1956
ANNUAL SEVEN-DAY MINIMUM	8.6	Jan 28	6.3	Feb 22	.21	Oct 8 1956
INSTANTANEOUS PEAK FLOW			283	Aug 20	^a 7120	Aug 2 1966
INSTANTANEOUS PEAK STAGE			3.04	Aug 20	^b 9.70	Aug 2 1966
INSTANTANEOUS LOW FLOW			2.7	Feb 13	^c .20	Sep 21 1956
ANNUAL RUNOFF (AC-FT)	35230		20780		14510	
10 PERCENT EXCEEDS	126		78		46	
50 PERCENT EXCEEDS	23		14		7.9	
90 PERCENT EXCEEDS	9.2		7.5		2.8	

e Estimated

^a 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.

^b From floodmarks.

^c Also occurred, Oct. 6-9, 1922, Sept. 21, Oct. 9-14, 1956, Dec. 13, 1964.



LOCATION.--Lat 35°10'55", long 104°53'59", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, 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 Coloniales, and 9.0 mi east of Dilla. Mouth at Pecos River mile 789.2.

PERIOD OF RECORD.--January 1951 to current year.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 7,000 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year. No flow at times most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

MEAN	12.7	5.28	3.51	3.18	3.92	5.42	16.7	18.1	18.9	41.3	63.6	23.7
MAX	166	50.0	18.3	18.9	58.9	48.2	269	261	91.4	222	268	178
(WY)	1958	1987	1987	1992	1987	1958	1958	1973	1986	1988	1991	1972
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.09	.000
(WY)	1953	1952	1952	1951	1951	1951	1951	1952	1951	1964	1983	1951

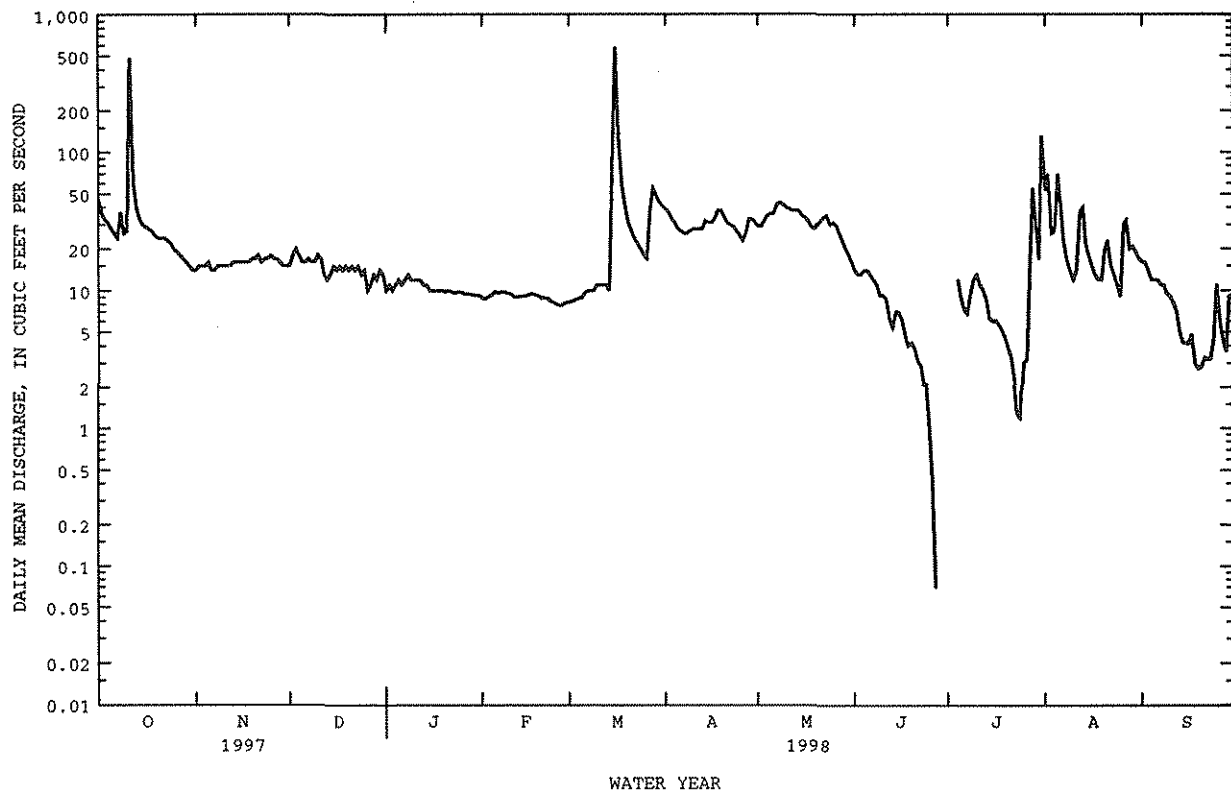
RIO GRANDE BASIN

08382500 GALLINAS RIVER NEAR COLONIAS, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1951 - 1998	
ANNUAL TOTAL	11328.5		7721.67		18.4	
ANNUAL MEAN	31.0		21.2		66.6	
HIGHEST ANNUAL MEAN					.85	
LOWEST ANNUAL MEAN					2640	
HIGHEST DAILY MEAN	481	Oct 11	578	Mar 16	Aug 11 1981	
LOWEST DAILY MEAN	1.9	Apr 22	.00	Jun 28	Jan 1 1951	
ANNUAL SEVEN-DAY MINIMUM	2.8	Apr 18	.01	Jun 27	Jan 1 1951	
INSTANTANEOUS PEAK FLOW			3000	Oct 11	Jul 11 1982	
INSTANTANEOUS PEAK STAGE			9.68	Oct 11	Jul 11 1982	
INSTANTANEOUS LOW FLOW			.00	Jun 28	Apr 7 1996	
ANNUAL RUNOFF (AC-FT)	22470		15320		13290	
10 PERCENT EXCEEDS	59		36		27	
50 PERCENT EXCEEDS	14		14		1.0	
90 PERCENT EXCEEDS	4.1		4.7		.00	

e Estimated

^a From rating curve extended above 1,900 ft³/s, by slope-area measurements at gage heights 8.64 ft, 12.74 ft, and 16.65 ft, and 27.20 ft.



LOCATION.--Lat 35°05'29", long 104°48'00", in T.10 N., R.20 E., Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 0.4 mi upstream from Canon del Uta, 2.9 mi southeast of Colonias, and at mile 775.8.

PERIOD OF RECORD.--January 1976 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,800 ft above National Geodetic Vertical Datum of 1929, from U.S. Army Corps of Engineers plan and profile map.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Diversions and ground-water withdrawals for irrigation for about 11,800 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year. No flow many days most years.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e30	9.3	9.3	15	6.0	5.6	189	168	379	6.3	286	138
2	e26	9.3	9.3	20	6.1	5.6	151	179	339	6.4	244	118
3	e22	9.3	8.8	28	6.4	5.6	130	171	e335	6.6	213	88
4	e20	9.3	8.9	32	6.4	5.6	117	201	e270	21	190	62
5	e19	9.3	8.1	43	6.4	5.6	97	260	262	18	193	46
6	e18	9.3	7.9	45	6.4	5.6	90	293	240	25	256	36
7	e18	9.3	7.9	28	6.4	5.8	89	339	225	11	244	19
8	e18	9.5	7.9	14	6.4	5.8	91	357	209	40	203	e10
9	e18	9.8	7.9	7.4	6.4	5.6	89	353	e171	64	165	e8.5
10	21	9.3	7.9	7.4	6.1	5.6	78	313	137	137	170	e7.1
11	183	9.3	8.3	7.4	6.0	5.6	55	288	135	103	171	e6.0
12	28	9.3	8.3	7.4	6.0	5.6	43	318	132	84	412	e5.3
13	7.3	9.3	8.3	7.4	6.0	5.6	40	328	110	45	285	e4.9
14	4.5	9.3	8.3	7.4	6.0	5.7	53	319	86	16	221	e4.6
15	8.6	9.3	8.1	7.1	6.0	19	67	365	70	8.7	178	e4.3
16	11	9.3	7.9	6.9	6.1	527	79	361	52	5.3	148	4.2
17	12	9.2	7.9	6.9	6.4	500	94	322	40	3.7	162	4.2
18	12	9.2	8.3	6.9	6.4	318	108	290	32	2.6	160	4.2
19	11	9.3	8.3	6.9	6.4	256	102	329	29	15	120	4.2
20	10	9.3	8.3	6.9	6.4	192	88	436	27	4.4	179	4.2
21	10	9.4	8.3	6.9	6.4	146	66	484	24	2.1	146	4.2
22	10	9.3	8.3	6.2	6.3	126	60	542	22	1.9	157	4.3
23	10	9.3	8.3	6.0	6.0	119	58	546	20	1.8	173	4.3
24	10	9.4	8.3	6.0	5.8	126	58	488	17	1.8	153	4.0
25	9.8	9.3	8.3	6.0	5.2	174	69	438	15	1.8	134	3.9
26	9.8	9.3	8.3	6.0	5.2	219	125	419	13	1.8	229	3.9
27	9.8	9.2	8.3	6.0	5.3	249	189	401	12	40	361	3.8
28	9.5	9.4	8.3	6.0	5.6	294	203	383	10	224	239	3.8
29	9.3	9.3	8.3	6.0	---	262	178	375	8.4	164	189	4.0
30	9.3	9.3	8.3	6.0	---	218	166	393	6.9	145	153	32
31	9.3	---	11	6.0	---	203	---	395	---	252	143	---
TOTAL	604.2	279.7	259.9	378.1	170.5	4026.9	3022	10854	3428.3	1459.2	6277	646.9
MEAN	19.5	9.32	8.38	12.2	6.09	130	101	350	114	47.1	202	21.6
MAX	183	9.8	11	45	6.4	527	203	546	379	252	412	138
MIN	4.5	9.2	7.9	6.0	5.2	5.6	40	168	6.9	1.8	120	3.8
AC-FT	1200	555	516	750	338	7990	5990	21530	6800	2890	12450	1280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1998, BY WATER YEAR (WY)

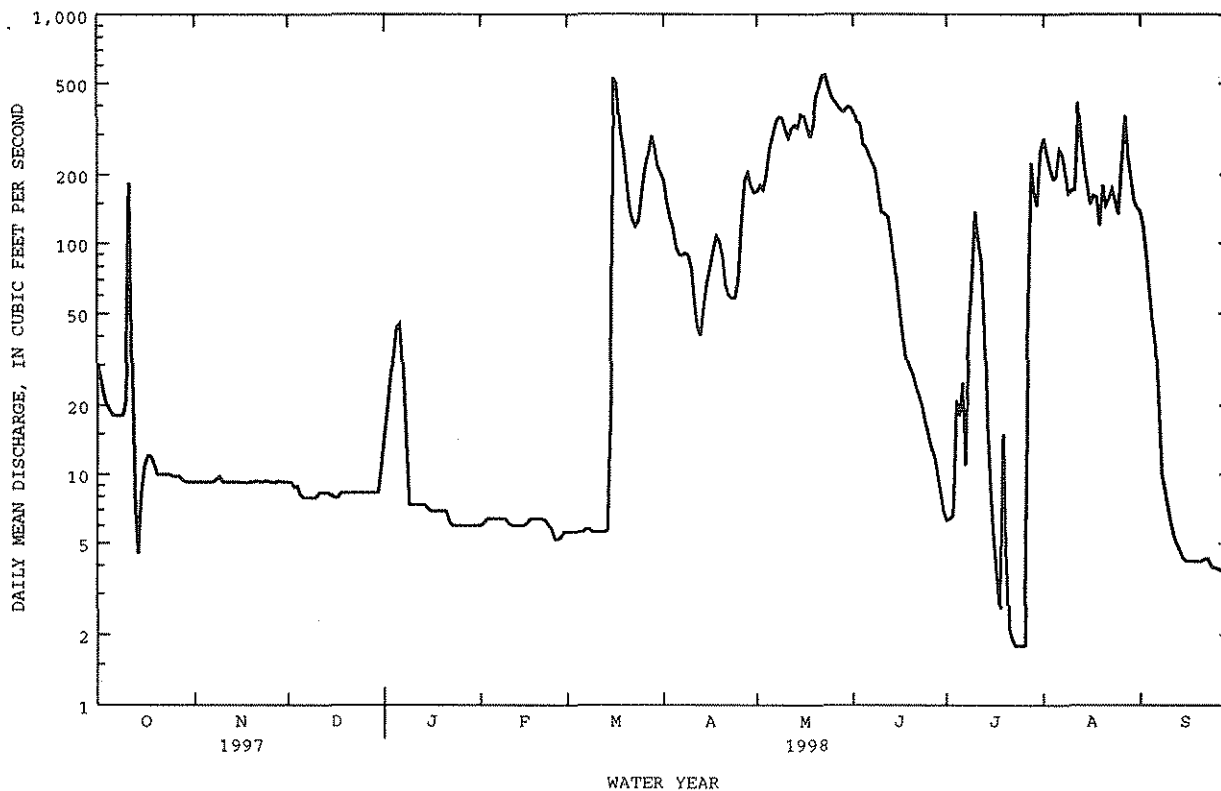
MEAN	21.9	21.3	7.49	4.36	6.01	38.3	108	334	293	111	177	91.4
MAX	139	148	42.0	19.0	73.4	192	382	736	1057	418	1062	660
(WY)	1986	1995	1987	1987	1987	1985	1987	1979	1995	1991	1991	1991
MIN	.000	.000	.000	.000	.000	.000	.000	.26	2.15	3.17	7.60	.000
(WY)	1978	1977	1977	1976	1976	1976	1976	1981	1977	1980	1978	1978

RIO GRANDE BASIN

08382600 PECOS RIVER ABOVE CANON DEL UTA NEAR COLONIAS, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1976 - 1998	
ANNUAL TOTAL	67283.30		31406.7		105	
ANNUAL MEAN	184		86.0		245	1991
HIGHEST ANNUAL MEAN					13.3	1978
LOWEST ANNUAL MEAN					2960	Aug 11 1981
HIGHEST DAILY MEAN	1930	Jun 9	546	May 23	.00	Jan 1 1976
LOWEST DAILY MEAN	.90	Jan 23	1.8	Jul 23	.00	Jan 1 1976
ANNUAL SEVEN-DAY MINIMUM	1.2	Jan 20	2.2	Jul 20	.00	Jan 1 1976
INSTANTANEOUS PEAK FLOW			816	Mar 16	*12400	Jun 20 1982
INSTANTANEOUS PEAK STAGE			7.13	Mar 16	11.53	Jul 11 1996
INSTANTANEOUS LOW FLOW			1.6	Jul 21	.00	Jan 1 1976
ANNUAL RUNOFF (AC-FT)	133500		62300		75930	
10 PERCENT EXCEEDS	676		285		330	
50 PERCENT EXCEEDS	15		11		7.8	
90 PERCENT EXCEEDS	1.6		5.6		.00	

e Estimated

a From rating curve extended above 1,200 ft³/s, on basis of step-backwater analysis of channel.

08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°03'35", long 104°45'41", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.25, T.10 N., R.20 E., Guadalupe County, Hydrologic Unit 13060001, at south boundary Preston Beck Grant, on left bank 1.6 mi upstream from River Ranch, 5.8 mi southeast of Colonias, 9.1 mi northwest of Santa Rosa, and at mile 770.8.

DRAINAGE AREA.--2,340 mi², approximately.

PERIOD OF RECORD.--February 1976 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder. Elevation of gage is 4,760 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Water-discharge records fair except for estimated daily discharges, which are poor. Diversions and ground-water withdrawals for irrigation of about 11,800 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e53	34	35	44	31	33	204	170	416	33	482	168
2	e51	33	36	46	31	33	174	164	368	33	376	e171
3	e49	33	35	64	31	33	152	187	346	32	360	e158
4	e49	33	37	61	32	33	146	226	326	54	291	e132
5	e50	33	36	68	32	34	125	294	309	55	272	e115
6	e49	33	33	62	30	34	118	346	279	69	430	e107
7	e50	31	32	57	31	34	113	389	256	56	411	e90
8	e50	31	32	46	31	33	120	396	220	80	335	e66
9	e50	33	32	41	31	32	133	389	180	87	240	e53
10	e53	34	33	40	31	32	125	367	163	194	297	e48
11	e215	36	35	40	31	32	99	324	e150	183	202	e46
12	e60	36	34	41	31	32	82	367	e140	167	432	e40
13	e51	35	34	41	32	32	74	389	e130	108	258	e36
14	e51	36	35	41	32	33	84	386	e100	69	219	e30
15	e52	36	36	41	33	38	102	427	e80	59	186	e28
16	53	37	37	39	33	692	111	422	e65	56	164	e29
17	59	37	38	37	32	586	122	389	e59	50	114	e30
18	61	37	38	37	33	384	131	357	44	43	112	e30
19	56	34	37	36	33	325	121	376	41	66	108	e29
20	53	35	39	36	33	253	103	501	39	57	176	e29
21	41	37	39	37	33	192	79	609	37	39	172	e30
22	37	38	39	36	32	168	72	714	38	40	185	e31
23	e38	40	42	36	32	165	68	751	37	41	208	e31
24	e39	39	40	34	32	180	64	673	40	43	165	e32
25	39	37	40	33	31	224	77	559	41	43	143	e32
26	37	36	41	33	32	242	136	524	35	42	275	e32
27	35	36	41	33	33	295	227	479	37	58	561	e31
28	35	35	41	32	34	437	246	434	34	298	320	e30
29	33	35	41	34	---	370	219	411	33	228	251	e30
30	34	36	42	33	---	272	200	424	31	194	200	e58
31	34	---	44	32	---	258	---	435	---	313	182	---
TOTAL	1617	1056	1154	1291	893	5541	3827	12879	4074	2890	8127	1772
MEAN	52.2	35.2	37.2	41.6	31.9	179	128	415	136	93.2	262	59.1
MAX	215	40	44	68	34	692	246	751	416	313	561	171
MIN	33	31	32	32	30	32	64	164	31	32	108	28
AC-FT	3210	2090	2290	2560	1770	10990	7590	25550	8080	5730	16120	3510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1998, BY WATER YEAR (WY)

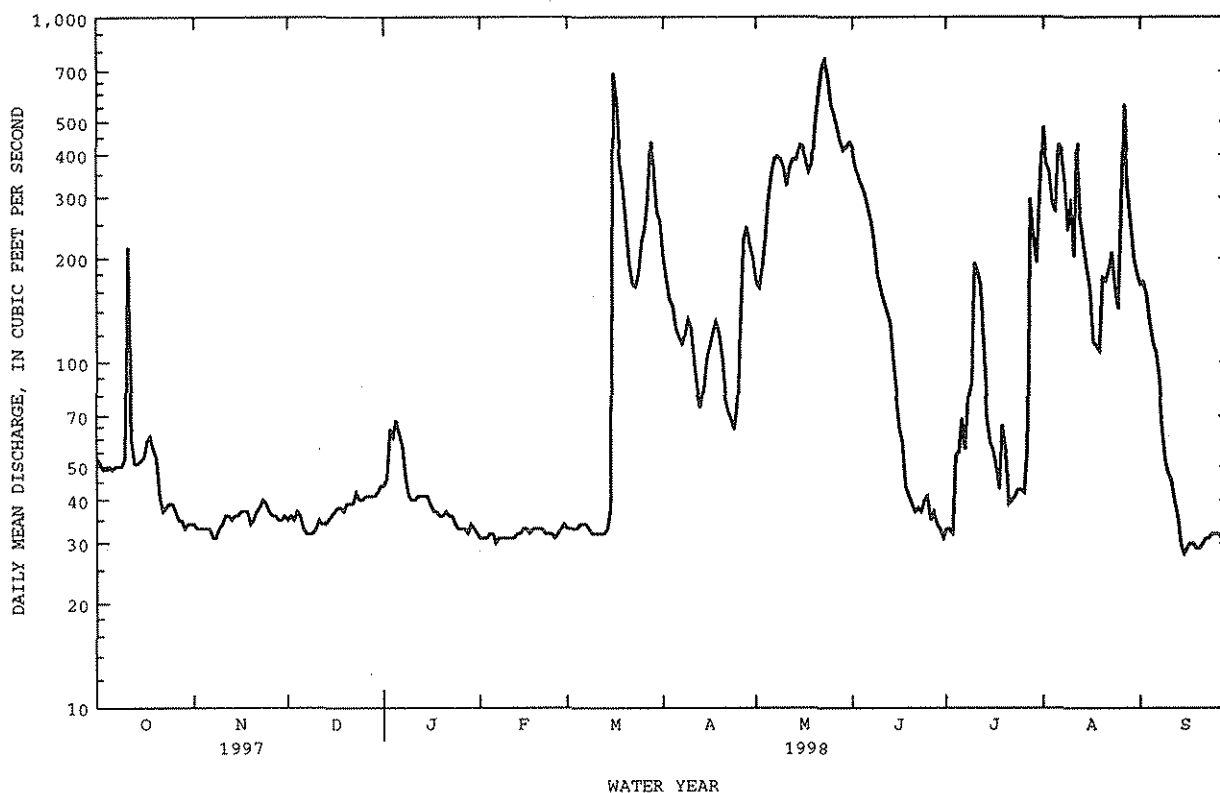
	MEAN	42.6	40.6	25.3	22.8	23.8	55.4	122	351	313	145	228	125
MAX	147	176	68.7	46.1	106	207	415	768	945	440	1077	683	
(WY)	1986	1995	1987	1987	1987	1985	1987	1985	1979	1991	1991	1991	
MIN	6.50	9.53	7.77	7.74	6.40	5.69	4.99	7.93	8.87	18.6	16.1	6.12	
(WY)	1979	1982	1978	1978	1978	1978	1978	1981	1977	1980	1978	1978	

RIO GRANDE BASIN

08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1976 - 1998	
ANNUAL TOTAL	77447		45121		129	
ANNUAL MEAN	212		124		265	
HIGHEST ANNUAL MEAN					26.1	
LOWEST ANNUAL MEAN					4.5	
HIGHEST DAILY MEAN	1910	Jun 8	751	May 23	4310	Jul 10 1996
LOWEST DAILY MEAN	16	Jan 24	28	Sep 15	4.7	Apr 27 1978
ANNUAL SEVEN-DAY MINIMUM	16	Jan 24	29	Sep 14	4.7	Apr 23 1978
INSTANTANEOUS PEAK FLOW			1200	Mar 16	^a 16000	Jul 11 1996
INSTANTANEOUS PEAK STAGE			9.41	Mar 16	19.06	Jul 11 1996
INSTANTANEOUS LOW FLOW			24	Dec 11	2.9	Aug 21 1984
ANNUAL RUNOFF (AC-FT)	153600		89500		93240	
10 PERCENT EXCEEDS	724		363		363	
50 PERCENT EXCEEDS	50		46		32	
90 PERCENT EXCEEDS	19		32		10	

e Estimated

^a From rating curve extended above 1,500 ft³/s, on basis of slope-area measurement of peak flow.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91380	92500	93460	95690	92010	88220	81450	87060	93930	63070	35980	49260
2	91450	92500	93780	95690	90050	88250	81650	87300	94530	63070	36630	49520
3	91480	92570	93850	95730	88050	88360	82070	87570	94210	63100	37250	49720
4	91480	92570	93930	95830	87360	88320	82340	87770	92610	63180	37840	49890
5	91480	92570	93960	95910	87400	88360	82500	88220	91130	63230	38310	50000
6	91480	92570	94000	95980	87430	88390	82500	88800	89490	63340	38970	50120
7	91480	92610	94030	96050	87500	88360	82600	89740	87940	63500	39660	50240
8	91450	92610	94070	96130	87600	88460	82800	90190	86170	63610	40220	50280
9	91450	92610	94140	96130	87570	87530	82960	90920	84490	63720	40620	50310
10	91480	92610	94180	96230	87640	85470	83230	91520	82730	64020	41020	50330
11	92120	92750	94180	96230	87670	83430	83390	92010	80930	64320	41370	50350
12	92330	92820	94250	96310	87670	81510	83330	92570	79110	64540	42250	50400
13	92360	92820	94390	96340	87710	79600	83430	92260	77190	64710	42760	50400
14	92360	92820	94390	96340	87710	77700	83460	90640	75330	64790	43200	49980
15	92400	92860	94460	96490	87740	76120	83490	89220	73420	64870	43520	48370
16	92470	92860	94460	96490	87770	76020	83590	88010	71710	63940	43750	46240
17	92540	92930	94460	96490	87810	75680	83860	86480	71560	62080	43960	43940
18	92570	92960	94460	96560	87910	75990	84020	85100	70250	60220	44130	41550
19	92500	92960	94460	96600	88010	76560	84290	83730	68310	58370	44430	39250
20	92500	93040	94570	96600	88010	76940	84430	83690	66330	56190	44690	36910
21	92500	93040	94680	96600	88120	77290	84560	84590	64410	53650	44950	34600
22	92500	93140	94970	96630	88080	77420	84660	85670	63150	51110	45190	32220
23	92500	93210	95110	96740	88120	77610	84760	86790	63130	48600	45510	29840
24	92500	93250	95290	96820	88120	77890	84760	87880	63130	46130	45820	27730
25	92400	93320	95290	96820	88120	78120	84800	88660	63070	43690	46080	26670
26	92400	93360	95330	96890	88150	78500	85030	89530	63070	41290	46410	26720
27	92400	93390	95400	96930	88120	78980	85470	90330	63040	38890	47320	26760
28	92430	93430	95470	96960	88150	79730	85900	91100	63040	37140	47900	26820
29	92430	93430	95510	96960	---	80240	86340	91800	63100	34960	48310	26870
30	92470	93430	95540	96160	---	80630	86750	92470	63040	34560	48650	26980
31	92470	---	95620	94110	---	81020	---	93210	---	35090	48990	---
MAX	92570	93430	95620	96960	92010	88460	86750	93210	94530	64870	48990	50400
MIN	91380	92500	93460	94110	87360	75680	81450	83690	63040	34560	35980	26670
(+)	4743.72	4743.99	4744.60	4744.18	4742.48	4740.35	4742.07	4743.93	4734.36	4721.96	4728.75	4717.07
(++)	-1160	+960	+2190	-1510	-5960	-7130	+5730	+6460	-30170	-27950	+13900	-22010
CAL YR 1997	MAX 99140	MIN 32280	(++)	+57130								
WTR YR 1998	MAX 96960	MIN 26670	(++)	-64330								
(+)	ELEVATION, IN FEET, AT END OF MONTH											
(++)	CHANGE IN CONTENTS, IN ACRE-FEET											

RIO GRANDE BASIN

08382830 PECOS RIVER BELOW SANTA ROSA DAM, NM

LOCATION.--Lat 35°01'27", long 104°41'20", Guadalupe County, Hydrologic Unit 13060001, in Jose Perea Grant, on right bank 0.2 mi downstream from Santa Rosa Dam, 5.7 mi north of Santa Rosa, and at mile 757.0.

DRAINAGE AREA.--2,430 mi², approximately.

PERIOD OF RECORD.--January 1980 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Prior to Oct. 31, 1980, at datum about 1.2 ft higher. Prior to Mar. 26, 1982, at site 195 ft upstream at datum 2.36 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow completely regulated by Santa Rosa Lake (08382810) 0.2 mi upstream since April 1980. Diversions and ground-water withdrawals for irrigation of about 12,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.06	.09	e.14	1030	.17	.08	.08	.14	.09	.09	.04
2	.04	.08	.16	e.14	1020	.16	.07	.08	.14	.08	.10	.02
3	.05	.10	.21	e.14	1020	.12	.08	.08	506	.04	.09	.02
4	.04	.13	.21	e.14	382	.07	.11	.08	966	.09	.18	e.01
5	.04	.12	.21	e.14	.33	.05	.17	.08	964	.13	.08	.01
6	.04	.11	.21	e.14	.28	.04	.17	.08	960	.13	.12	.02
7	.07	.12	.21	e.14	.25	.04	.11	.08	958	.13	.13	.02
8	.11	.15	.33	.11	.25	.04	.08	.08	959	.17	.13	.02
9	.15	.27	.16	.11	.22	513	.08	.08	955	.17	.13	.01
10	.16	.21	.16	.10	.22	1030	.08	.08	953	.17	.13	.01
11	.19	.18	.15	.11	.22	1020	.08	.08	950	.17	.16	.01
12	.14	.16	.15	.10	.22	1020	.08	.08	949	.17	.19	.02
13	.13	.25	.19	.10	.21	1020	.08	494	948	.17	.18	.04
14	.13	.39	.21	.11	.21	1010	.07	1050	944	.17	.19	235
15	.16	e.29	.21	.04	.22	1010	.04	1060	939	.17	.17	825
16	.20	e.22	.21	e.11	.19	1010	.04	1060	827	524	.18	1130
17	.15	e.22	.17	e.11	.21	735	.04	1060	52	965	.21	1190
18	.14	e.20	.17	e.11	.20	202	.04	1050	597	916	.16	1190
19	.23	e.20	.15	e.11	.19	.08	.04	1050	929	916	.16	1190
20	.28	e.18	.13	e.11	.24	.08	.01	436	927	1110	.20	1180
21	.21	e.18	.21	e.11	.17	.08	.01	.36	923	1260	.13	1190
22	.17	e.17	.16	e.11	.16	.08	.04	.26	637	1260	.13	1190
23	.17	e.19	.20	.10	.15	.08	.04	.26	.13	1240	.13	1180
24	.23	e.21	.15	.22	.14	.08	.04	.26	.09	1230	.11	1050
25	.26	.25	e.21	.49	.12	.08	.08	.26	.04	1230	.08	429
26	.29	.04	e.15	.70	.15	.08	.20	.26	.04	1220	.10	.07
27	.34	.11	e.15	.82	.12	.09	.12	.26	.04	1200	.04	.06
28	.18	.13	e.14	.95	.10	.17	.08	.26	.04	1080	.04	.04
29	.18	.21	e.14	.56	---	.10	.08	.26	.04	1190	.04	.04
30	.23	.25	e.14	432	---	.06	.08	.26	.06	481	.02	.06
31	.04	---	e.14	1030	---	.08	---	.20	---	.13	.04	---
TOTAL	4.80	5.38	5.48	1468.37	3456.77	8571.83	2.32	7263.86	16843.76	15824.18	3.84	11979.52
MEAN	.15	.18	.18	47.4	123	277	.077	234	561	510	.12	399
MAX	.34	.39	.33	1030	1030	1030	.20	1060	966	1260	.21	1190
MIN	.04	.04	.09	.04	.10	.04	.01	.08	.04	.04	.02	.01
AC-FT	9.5	11	11	2910	6860	17000	4.6	14410	33410	31390	7.6	23760

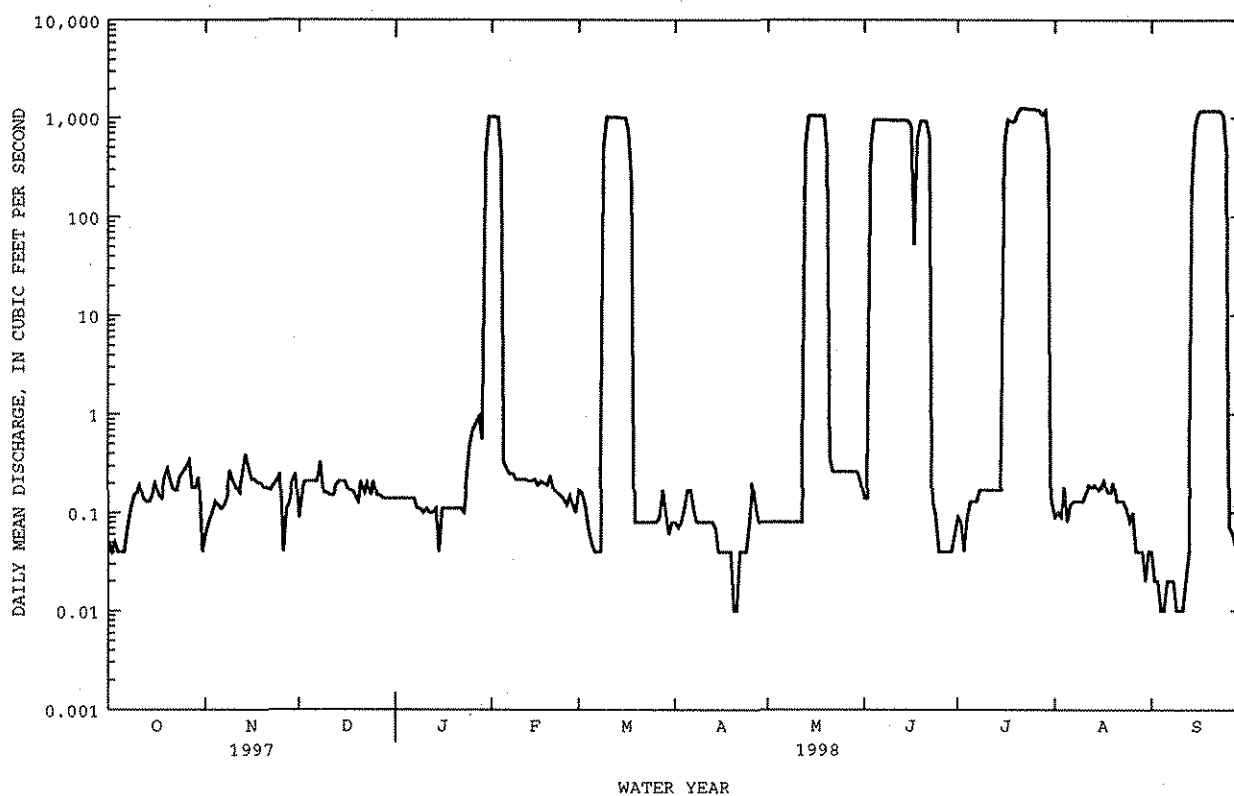
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1998, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	14.2	11.5	7.97	18.5	40.7	58.0	90.8	281	311	190	210	155
MAX	112	145	59.0	188	249	277	655	672	1026	561	619	649
(WY)	1993	1987	1987	1996	1995	1998	1989	1989	1995	1983	1994	1988
MIN	.018	.041	.081	.037	.059	.064	.072	.12	2.05	.047	.056	.040
(WY)	1990	1990	1990	1997	1990	1990	1983	1997	1984	1989	1996	1989

08382830 PECOS RIVER BELOW SANTA ROSA DAM, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1980 - 1998	
ANNUAL TOTAL	38986.04		65430.11		120	
ANNUAL MEAN	107		179		215	
HIGHEST ANNUAL MEAN					35.8	
LOWEST ANNUAL MEAN					1995	
HIGHEST DAILY MEAN	2100	Jun 12	1260	Jul 21	2100	Jun 12 1997
LOWEST DAILY MEAN	.00	Jan 1	.01	Apr 20	.00	Jul 31 1982
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.01	Sep 4	.00	Mar 5 1983
ANNUAL RUNOFF (AC-FT)	77330		129800		86900	
10 PERCENT EXCEEDS	390		984		520	
50 PERCENT EXCEEDS	.17		.16		.94	
90 PERCENT EXCEEDS	.00		.04		.04	

e Estimated



RIO GRANDE BASIN

08383000 PECOS RIVER AT SANTA ROSA, NM

WATER-QUALITY RECORDS

LOCATION.--Lat 34°56'36", long 104°41'55", in NW¹/₄SE¹/₄ sec.3, T.8 N., R.21 E., Guadalupe County, Hydrologic Unit 13060001, on left bank, 0.4 mi downstream from bridge on Interstate Highway 40, 0.6 mi upstream from bridge on Parker Street 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.--Water years 1905-07, 1959 to September 1998 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00301)	BICAR- BONATE WATER DIS IT MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT MG/L AS CO3 (00452)
DEC 09...	1515	10	3710	7.7	7.0	5.0	640	10.5	99	153	.0
MAR 11...	0930	1000	433	8.2	4.0	6.0	660	10.6	99	127	5
APR 24...	0900	5.4	2740	--	16.0	15.0	643	9.6	114	139	6
SEP 10...	0930	5.7	2890	8.2	26.0	19.5	651	--	--	150	1

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
DEC 09...	125	<.01	<.05	<.02	--	<.1	.1	<.01	<.01	<.01
MAR 11...	112	<.01	<.05	<.02	--	.2	.1	.04	.02	.01
APR 24...	124	<.010	<.020	.028	.17	<.20	.20	<.020	<.020	<.010
SEP 10...	124	<.01	<.05	.06	--	<.1	<.1	<.01	<.01	.01

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
DEC 09...	.7	12	<2	<1	18	<2	<2	<2	<2	5
MAR 11...	3.9	8	<1	<1	137	<1	<1	<1	<1	1
APR 24...	.30	8	<2	<1	24	<2	<2	<2	<2	3
SEP 10...	.4	18	<2	<1	32	<2	<2	<2	<2	6

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
DEC 09...	<2	43	<.1	2	5	<1	<1	<2	7	<2
MAR 11...	<1	4	<.1	1	1	<1	<1	<1	2	1
APR 24...	<2	75	<.1	2	5	<1	<1	<2	5	2
SEP 10...	<2	54	<.1	2	4	<1	<1	<2	8	<2

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM

LOCATION.--Lat 34°43'48", long 104°31'28", in NE 1/4 SE 1/4 NW 1/4 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).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to current year.

REVISED RECORDS.--WSP 1512: 1939.

GAGE.--Water-stage recorder with satellite telemetry 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.--Water-discharge records good. Flow regulated by Santa Rosa Lake (station 08382810) 37.7 mi upstream since April 1980. Diversions for irrigation of about 10,280 acres, 1970 determination, upstream from station. Spring discharge from Blue Hole and Agua Negro upstream from station contribute a substantial in flow. Discharge represents inflow to Lake Sumner. Several observations of water temperature were made during the year.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	74	82	92	1040	96	96	72	75	72	171	80
2	79	76	93	98	1070	96	95	84	70	81	140	77
3	81	78	95	101	1090	97	94	80	68	76	110	75
4	77	80	86	95	988	96	94	68	718	75	181	74
5	77	78	84	95	216	96	91	67	989	75	106	75
6	75	78	82	94	133	96	90	65	1010	75	100	75
7	79	78	85	93	118	96	89	68	1040	75	94	75
8	77	78	86	94	111	97	88	66	1060	83	89	72
9	74	79	85	92	108	96	90	67	1070	82	86	72
10	75	81	84	94	104	898	90	67	1090	79	83	72
11	77	84	84	95	102	1040	91	64	1100	77	92	71
12	76	93	89	94	102	1050	83	65	1060	74	443	71
13	75	88	87	93	102	1080	86	63	1090	69	316	71
14	75	87	85	94	100	1100	85	705	1080	72	122	70
15	74	88	86	94	102	1180	85	903	1100	72	107	350
16	74	85	86	93	103	1150	85	941	1100	71	99	1040
17	75	83	85	94	100	1090	85	974	603	754	96	1260
18	76	82	85	93	100	666	80	990	120	969	97	1300
19	73	81	86	94	98	209	79	1010	1130	997	95	1330
20	70	80	91	96	96	129	75	1000	1210	1050	132	1330
21	73	80	98	97	99	117	80	227	1220	1480	129	1340
22	74	80	96	98	96	111	75	118	1220	1490	93	1400
23	76	80	102	97	96	107	78	102	415	1500	92	1420
24	74	80	93	97	96	102	75	90	149	1500	89	1430
25	73	83	92	95	95	99	74	82	110	1510	92	1010
26	74	82	95	96	96	97	89	80	96	1520	112	273
27	75	83	97	97	95	95	123	81	89	1530	87	153
28	73	83	91	96	97	95	95	79	91	1380	94	127
29	72	81	92	98	---	95	90	78	81	1520	88	117
30	71	81	90	99	---	95	76	75	73	1730	84	143
31	73	---	90	843	---	95	---	74	---	358	81	---
TOTAL	2327	2444	2762	3701	6753	11566	2606	8505	20327	20496	3800	15053
MEAN	75.1	81.5	89.1	119	241	373	86.9	274	678	661	123	502
MAX	81	93	102	843	1090	1180	123	1010	1220	1730	443	1430
MIN	70	74	82	92	95	95	74	63	68	69	81	70
AC-FT	4620	4850	5480	7340	13390	22940	5170	16870	40320	40650	7540	29860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1998, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	103	95.7	94.5	102	121	140	163	348	409	301	325	287							
MAX	225	232	147	252	306	373	685	744	1211	725	706	948							
(WY)	1986	1987	1987	1986	1994	1998	1989	1989	1995	1983	1994	1988							
MIN	73.1	79.5	73.5	80.9	76.7	73.5	67.9	64.0	66.1	72.9	86.1	66.4							
(WY)	1988	1983	1991	1993	1984	1989	1984	1982	1991	1989	1996	1990							

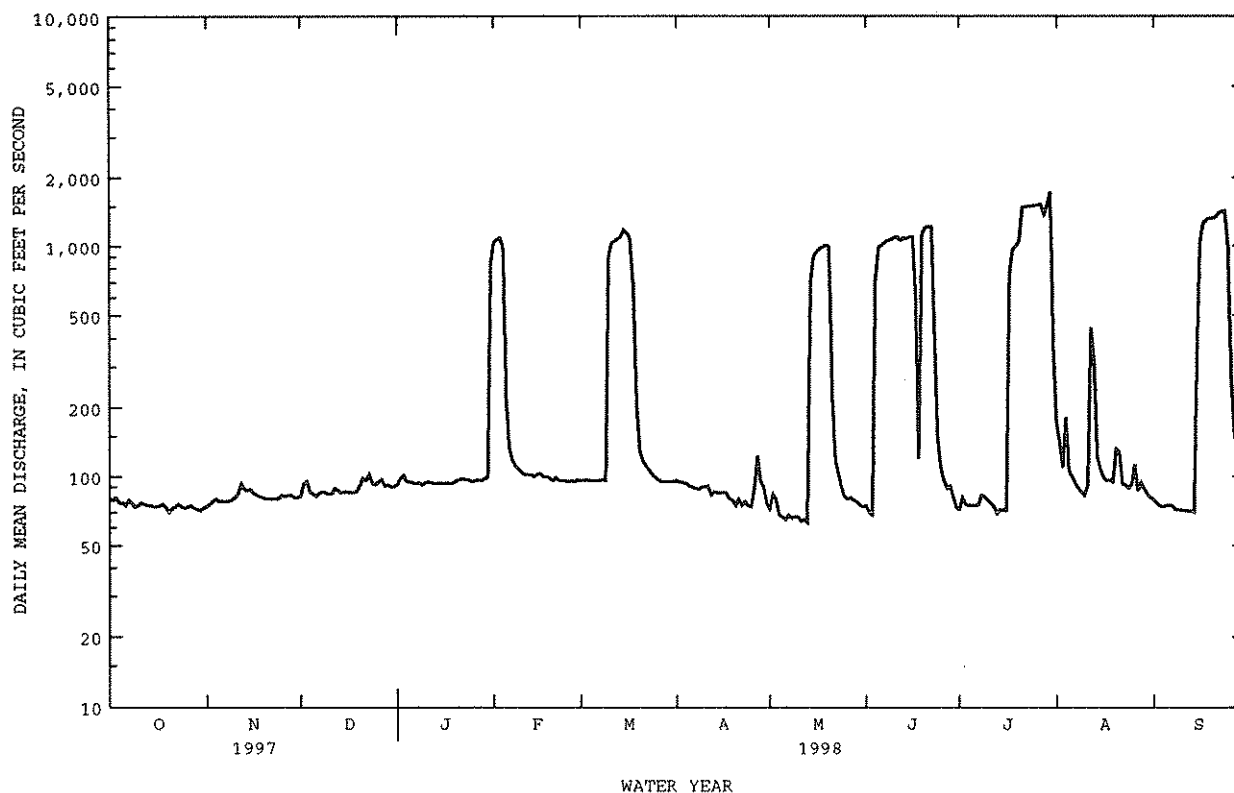
RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1980 - 1998	
ANNUAL TOTAL	83160		100340		^a 208	
ANNUAL MEAN	228		275		318	
HIGHEST ANNUAL MEAN					122	
LOWEST ANNUAL MEAN					3510	
HIGHEST DAILY MEAN	2110	Jun 12	1730	Jul 30	39	Oct 17 1985
LOWEST DAILY MEAN	65	Jun 4	63	May 13	43	Aug 4 1987
ANNUAL SEVEN-DAY MINIMUM	73	Oct 25	66	May 7	48600	Jul 29 1987
INSTANTANEOUS PEAK FLOW			4680	Jul 30	17.00	Sep 1 1942
INSTANTANEOUS PEAK STAGE			6.53	Jul 30	11	Sep 1 1942
INSTANTANEOUS LOW FLOW			61	May 11	150500	Jan 31 1951
ANNUAL RUNOFF (AC-FT)	164900		199000		638	
10 PERCENT EXCEEDS	640		1060		86	
50 PERCENT EXCEEDS	87		93		68	
90 PERCENT EXCEEDS	75		74			

^a Average discharge for 41 years (water years 1939-79), 209 ft³/s, 151,400 acre-ft/yr, prior to completion of Santa Rosa Dam.

^b From rating curve extended above 7,400 ft³/s, on basis of flow "at Santa Rosa".



08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937-66, 1972 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
DEC 09...	1330	88	2970	7.9	8.0	6.5	645	12.0	117	1800	--	580	
MAR 10...	1315	1000	700	8.3	12.0	7.0	660	10.2	97	350	240	120	
APR 23...	1530	87	2720	--	28.0	23.0	652	7.8	108	1700	1500	550	
SEP 09...	1630	75	2940	--	28.0	27.0	654	11.8	175	1700	1600	550	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB AS CACO3 (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
DEC 09...	83	120	1	2.6	--	--	--	119	1600	170	.7	17	
MAR 10...	15	19	.4	1.7	135	0	111	125	250	26	.4	6.5	
APR 23...	73	100	1	3.4	138	5	121	105	1600	150	.7	21	
SEP 09...	71	93	1	2.3	107	8	101	86	1500	150	.6	17	
DATE		SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
DEC 09...	2650	<.01	<.05	.03	.26	.1	.3	<.01	<.01	<.01	1.2	7	
MAR 10...	504	<.01	<.05	<.02	--	.4	.2	.11	.05	.01	8.5	7	
APR 23...	2550	<.010	.020	.014	--	<.20	<.20	<.020	<.020	<.010	.40	6	
SEP 09...	2460	<.01	<.05	.06	--	.1	<.1	<.01	<.01	.01	.7	6	
DATE		ANTI- MONY, DIS- SOLVED (UG/L AS SE) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
DEC 09...	<2	<1	20	<2	134	<2	<2	<2	4	<30	<2	6	
MAR 10...	<1	1	33	<1	39.7	<1	1	<1	1	<10	<1	5	
APR 23...	<2	<1	34	<2	116	<2	<2	<2	4	<30	<2	4	
SEP 09...	<2	<1	41	<2	110	<2	<2	<2	5	<30	<2	6	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

08384000 LAKE SUMNER NEAR FORT SUMNER, NM

LOCATION.--Lat 34°36'30", long 104°23'04", in SE¹/₄SW¹/₄ sec.34, T.5 N., R.24 E., DeBaca County, Hydrologic Unit 13060001, near center of dam on Pecos River, 5.0 mi northeast of Guadalupe, 12.2 mi northwest of Fort Sumner, and at mile 702.0.

DRAINAGE AREA.--4,390 mi², approximately (contributing area).

PERIOD OF RECORD.--December 1938 to September 1965 (monthend elevations and contents), October 1965 to current year. Monthend elevations September 1937 to November 1938 published in reports of Pecos River Commission. Elevations and contents May 27 1937, to June 10, 1937, in WSP 842. Prior to October 1974, published as "Alamogordo Reservoir."

REVISED RECORDS.--WSP 1732: 1939-54 (contents). WSP 1923: 1939-53(M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). April 1, 1946, to Sept. 30, 1957, water-stage recorder above elevation 4,234.25 ft, nonrecording gage below. Oct. 1, 1988 to current year, water-stage recorder above elevation 4,238.00 ft, nonrecording gage below.

REMARKS.--Lake is formed by earthfill dam; completed and storage began in August 1937. Capacity, 94,750 acre-ft, from capacity table dated August 1992, between elevation 4,200.0 ft, sill of outlet gate, and elevation 4,275.0 ft, normal operating level. Capacity by original survey was 132,200 acre-ft. Dead storage 2,500 acre-ft. Reservoir is used to store water for irrigation.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 138,300 acre-ft, May 23-30, June 1-10, July 21, Sept. 22, 23, 30, Oct. 12, Nov. 4, 5, 30, Dec. 23, 24, 1941, elevation, 4,275.00 ft; maximum elevation, 4,276.10 ft June 3, Sept. 8, 1958; no storage, July 28 to Aug. 2, 1951, elevation, 4,200.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 42,230 acre-ft, Mar. 2, elevation, 4,260.45 ft; minimum, 8,890 acre-ft, Sept. 30, elevation, 4,241.65 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36990	34090	18010	24120	31060	42120	31890	30560	39910	24080	18960	22400
2	37100	34190	18190	24290	33090	42230	31840	30540	38100	22970	19120	22310
3	36940	34290	18450	24530	35140	42200	31800	30520	35290	23880	19300	22200
4	36640	32170	18650	24740	37120	42200	31800	30560	33370	23690	19450	22110
5	36610	29840	18850	24890	38850	42150	31750	30580	32100	23580	19580	22010
6	36490	27570	19010	25110	39170	42040	31730	30610	31360	23360	19580	21920
7	36390	25300	19180	25300	39320	42010	31730	30650	30970	23290	19540	21820
8	36340	23200	19400	25460	39510	41930	31770	29690	30880	23220	19510	21680
9	36190	21000	19610	25650	39530	41870	30450	29490	30540	23200	19450	21550
10	36190	18810	19790	25830	39770	39670	30400	29440	30020	23070	19330	21500
11	36090	16760	20010	25990	39850	39170	30340	29380	29910	22970	19220	21350
12	35590	14820	20120	26250	40040	38670	30250	29290	29360	22820	19730	21240
13	35760	15050	20310	26330	40090	38360	30180	29030	29030	22950	21540	21190
14	35690	15260	20480	26510	40280	38100	30110	28890	28810	20410	21920	21090
15	35590	15460	20660	26680	40360	37860	30000	30360	28460	18160	21900	20970
16	35340	15650	20830	26820	40600	37890	29910	31840	27880	15770	21850	21570
17	35190	15870	21000	27050	40650	37630	29820	33710	27480	13320	21800	20970
18	35170	16070	21170	27210	40900	37200	29780	35460	26290	12090	21730	20660
19	35070	16300	21350	27340	41000	36060	29750	37270	24290	11450	21640	20380
20	35020	16480	21500	27530	41170	34000	29710	39060	23730	10780	21590	20120
21	34920	16650	21710	27650	41300	31840	29600	40760	23330	10220	21640	19840
22	34850	16770	22080	27860	41520	32050	29600	41220	23060	10130	21680	19540
23	34770	16940	22430	28050	41550	32150	29550	40920	24060	10210	21570	19310
24	34730	17120	22570	28200	41660	32140	29640	40920	24640	10260	21520	19140
25	34550	17310	22790	28370	41740	32150	29820	40730	24630	10290	21430	18880
26	34380	17160	23020	28510	41820	32120	30000	40820	24630	10330	21920	18010
27	34310	17370	23130	28680	41900	32170	30450	40760	24530	10380	22640	15970
28	34340	17500	23270	28850	42040	32050	30720	40650	24470	10510	22640	13550
29	34210	17840	23840	28940	---	32010	30880	40570	24340	12780	22590	11160
30	34190	17800	23640	29050	---	31960	31200	40310	24210	15050	22560	8890
31	34120	---	23860	29250	---	31960	---	40010	---	18070	22470	---
MAX	37100	34290	23860	29250	42040	42230	31890	41220	39910	24080	22640	22400
MIN	34120	14820	18010	24120	31060	31840	29550	28890	23060	10130	18960	8890
(+)	4257.31	4248.97	4252.54	4255.20	4260.38	4256.40	4250.07	4259.63	4252.73	4249.14	4251.77	4241.65
(++)	-2950	-16320	+6060	+5390	+12790	-10080	-760	+8810	-15800	-6140	+4400	-13580
CAL YR 1997	MAX 42790	MIN 14820	(++)	-4360								
WTR YR 1998	MAX 42230	MIN 8890	(++)	-28180								

(+) ELEVATION, IN FEET, AT END OF MONTH

(++) CHANGE IN CONTENTS, IN ACRE-FEET

RIO GRANDE BASIN

08384500 PECOS RIVER BELOW SUMNER DAM, NM

LOCATION.--Lat 34°36'15", long 104°23'14", 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 with satellite telemetry and Parshall flume, with concrete control above top of flume. Elevation of gage is 4,142.99 ft above National Geodetic Vertical Datum of 1929 (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.--Records good except for those below 10 ft³/s and estimated daily discharges, which are poor. Flow regulated by Lake Sumner (station 08384000) 0.3 mi upstream, since August 1937 and Santa Rosa Lake (station 08382810) 55.5 mi upstream, since April 1980. Diversions for irrigation of about 12,500 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	5.6	.33	.50	18	20	101	97	834	105	93	97
2	100	5.6	.50	.58	20	73	101	98	1170	114	100	96
3	100	788	.47	.58	20	101	101	98	1200	114	101	95
4	100	1140	.48	.58	22	98	102	98	1190	115	99	95
5	100	1150	.34	.58	27	97	102	e100	1200	115	101	95
6	98	1160	.23	.38	24	97	102	97	1210	115	96	96
7	97	1150	.23	.23	21	96	102	97	1200	115	93	95
8	96	1130	.29	.23	20	95	102	98	1190	114	93	95
9	96	1130	.23	.23	19	819	102	98	1190	120	107	96
10	96	1130	.23	.23	19	1180	102	98	1200	125	121	96
11	95	1100	.12	.23	20	1190	101	98	1190	124	109	96
12	96	360	.23	.23	19	1210	100	99	1180	123	103	96
13	95	.64	.23	.23	19	1210	99	97	1180	813	103	96
14	95	.65	.23	.23	19	1200	99	96	1170	1140	103	97
15	95	.70	.38	.23	19	1190	99	96	1170	1200	103	97
16	95	.62	.58	.23	19	1190	98	98	1180	1220	103	931
17	95	.58	.44	.42	19	1210	98	97	1170	1250	103	1350
18	95	.58	.28	.47	19	1190	98	96	1160	1280	103	1360
19	95	.60	.23	.50	19	1180	99	97	1150	1280	103	1370
20	94	.61	.22	.49	19	1190	98	99	1160	1280	102	1370
21	94	.54	.23	.47	19	381	98	98	1170	1300	103	1370
22	93	.58	.25	.59	19	41	98	96	774	1280	103	1360
23	93	.58	.44	.95	20	100	56	96	98	1300	102	1390
24	94	.58	.35	.93	20	100	2.4	96	98	1300	102	1380
25	93	.58	.27	1.0	20	101	2.5	95	98	1310	102	1400
26	93	.58	.23	1.1	20	101	2.6	95	98	1300	102	1400
27	93	.53	.27	1.1	20	100	2.5	95	98	1310	99	1370
28	93	.35	.35	13	20	100	41	95	98	485	98	1370
29	93	.35	.35	17	---	101	99	95	98	99	97	1350
30	93	.35	.35	17	---	101	98	97	98	98	97	487
31	54	---	.35	17	---	101	---	97	---	93	97	---
TOTAL	2918	10259.20	9.71	77.52	559	15963	2506.0	3007	26022	20737	3141	20696
MEAN	94.1	342	.31	2.50	20.0	515	83.5	97.0	867	669	101	690
MAX	100	1160	.58	17	27	1210	102	100	1210	1310	121	1400
MIN	54	.35	.12	.23	18	20	2.4	95	98	93	93	95
AC-FT	5790	20350	19	154	1110	31660	4970	5960	51610	41130	6230	41050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1998, BY WATER YEAR (WY)

	128	37.0	14.0	20.5	27.7	236	273	341	456	317	293	275
MEAN	1184	910	170	143	274	605	1317	1404	2905	970	967	2789
MAX (WY)	1942	1943	1942	1942	1995	1944	1942	1973	1937	1983	1994	1941
MIN (WY)	29.7	.21	.086	.18	.22	2.05	45.6	61.5	61.5	47.4	50.9	36.7
	1975	1989	1989	1994	1954	1948	1957	1956	1963	1991	1991	1972

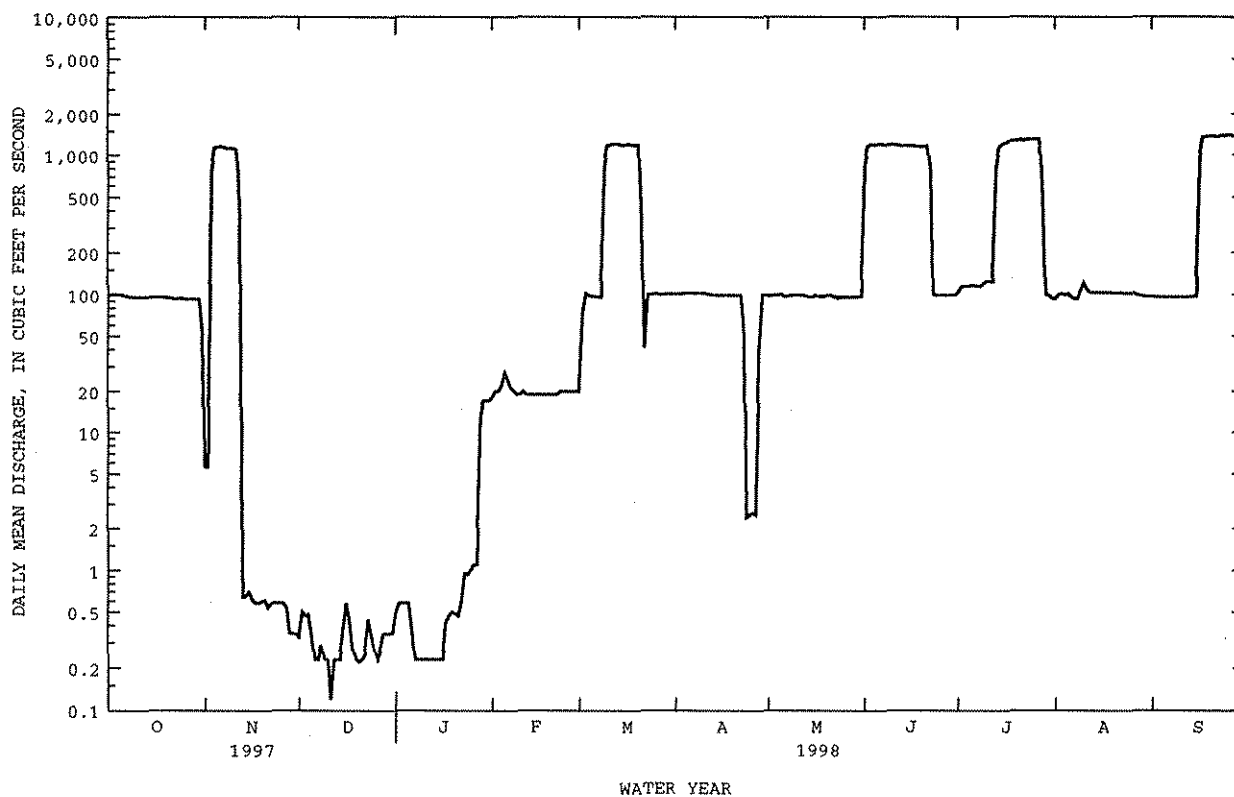
08384500 PECOS RIVER BELOW SUMNER DAM, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1937 - 1998
ANNUAL TOTAL	80685.40	105895.43	
ANNUAL MEAN	221	290	^a 202
HIGHEST ANNUAL MEAN			710
LOWEST ANNUAL MEAN			91.9
HIGHEST DAILY MEAN	1310 Mar 19	1400 Sep 25	^b 26400 Sep 1 1942
LOWEST DAILY MEAN	.12 Dec 11	.12 Dec 11	.00 Sep 1 1937
ANNUAL SEVEN-DAY MINIMUM	.22 Dec 6	.22 Dec 6	.00 Feb 18 1952
ANNUAL RUNOFF (AC-FT)	160000	210000	146500
10 PERCENT EXCEEDS	1200	1190	814
50 PERCENT EXCEEDS	97	97	84
90 PERCENT EXCEEDS	.42	.35	.50

e Estimated

^a Average discharge for 23 years (water years 1913-25, 1927-36), 236 ft³/s, 171,000 acre-ft/yr, prior to completion of Sumner Dam.

^b Maximum discharge for period of record, 42,800 ft³/s, Sept. 1, 1942, by computation of flow over spillway and through outlets gates of Sumner Dam by U.S. Bureau of Reclamation; maximum gage height, 13.58 ft, Sept. 22, 1941.



RIO GRANDE BASIN

08385000 FORT SUMNER MAIN CANAL NEAR FORT SUMNER, NM

LOCATION.--Lat 34°30'30", long 104°16'40", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.1, T.3 N., R.25 E., DeBaca County, Hydrologic Unit 13060003, on right bank of concrete canal, 200 ft downstream from diversion dam on Pecos River, 3.25 mi northwest of Fort Sumner, and at Pecos River mile 685.8.

PERIOD OF RECORD.--March 1939 to February 1943 (published in WSP 1732), April 1954 to current year (monthly discharge only prior to October 1965).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,034.7 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to March 1954, at site 2.4 mi downstream at different datum. April 1954 to March 1965, at site 1.1 mi downstream at datum 1.7 ft lower.

REMARKS.--Records good, except for estimated daily discharges, which are poor. Canal diverts water from Pecos River for irrigation of about 6,600 acres, 1961 determination, by the Fort Sumner Irrigation District. Several observations of water temperature were made during the year. No flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	.00	e.00	e.00	.00	.00	100	96	97	94	93	86
2	132	.00	e.00	.00	.00	.00	99	96	92	90	91	85
3	131	.00	e.00	.00	.00	72	99	97	101	88	91	83
4	131	.00	e.00	.00	.00	102	99	96	105	88	91	83
5	131	.00	e.00	.00	.00	101	98	96	101	89	91	83
6	130	.00	e.00	.00	.00	98	98	96	99	89	90	77
7	119	.00	e.00	.00	.00	97	97	96	100	85	90	88
8	87	.00	e.00	.00	.00	97	94	96	98	85	89	90
9	89	.00	e.00	.00	.00	95	98	96	96	82	90	90
10	88	.00	.00	.00	.00	89	99	96	103	85	90	90
11	87	.00	.00	.00	.00	86	98	95	105	89	92	89
12	85	.00	.00	.00	.00	84	98	95	101	89	95	89
13	84	.00	.00	.00	.00	89	98	89	99	99	89	89
14	84	.00	.00	.00	.00	95	97	86	105	109	80	89
15	86	.00	.00	.00	.00	95	97	92	109	108	75	89
16	85	.00	.00	.00	.00	95	97	93	107	107	71	90
17	89	.00	.00	.00	.00	44	98	94	105	e106	79	96
18	89	.00	.00	.00	.00	.00	98	94	103	e104	92	96
19	89	.00	.00	.00	.00	.00	97	93	101	e103	92	96
20	89	.00	.00	.00	.00	.00	101	95	99	e102	93	97
21	89	.00	.00	.00	.00	.00	100	95	98	102	94	99
22	89	.00	.00	.00	.00	.00	100	93	97	102	92	101
23	90	.00	.00	.00	.00	74	44	92	91	102	92	103
24	89	.00	.00	.00	.00	102	.00	92	99	103	92	105
25	89	e.00	.00	.00	.00	102	.00	93	97	99	92	106
26	89	e.00	.00	.00	.00	102	.00	93	96	98	98	108
27	90	e.00	.00	.00	.00	102	.00	93	95	96	91	109
28	89	e.00	.00	.00	.00	102	.00	92	94	86	89	109
29	89	e.00	.00	.00	---	101	53	90	93	84	88	110
30	90	e.00	.00	.00	---	100	93	90	91	93	87	100
31	63	---	e.00	.00	---	99	---	93	---	93	87	---
TOTAL	2993	0.00	0.00	0.00	0.00	2223.00	2350.00	2903	2977	2949	2766	2825
MEAN	96.5	.000	.000	.000	.000	71.7	78.3	93.6	99.2	95.1	89.2	94.2
MAX	132	.00	.00	.00	.00	102	101	97	109	109	98	110
MIN	63	.00	.00	.00	.00	.00	.00	86	91	82	71	77
AC-FT	5940	.00	.00	.00	.00	4410	4660	5760	5900	5850	5490	5600

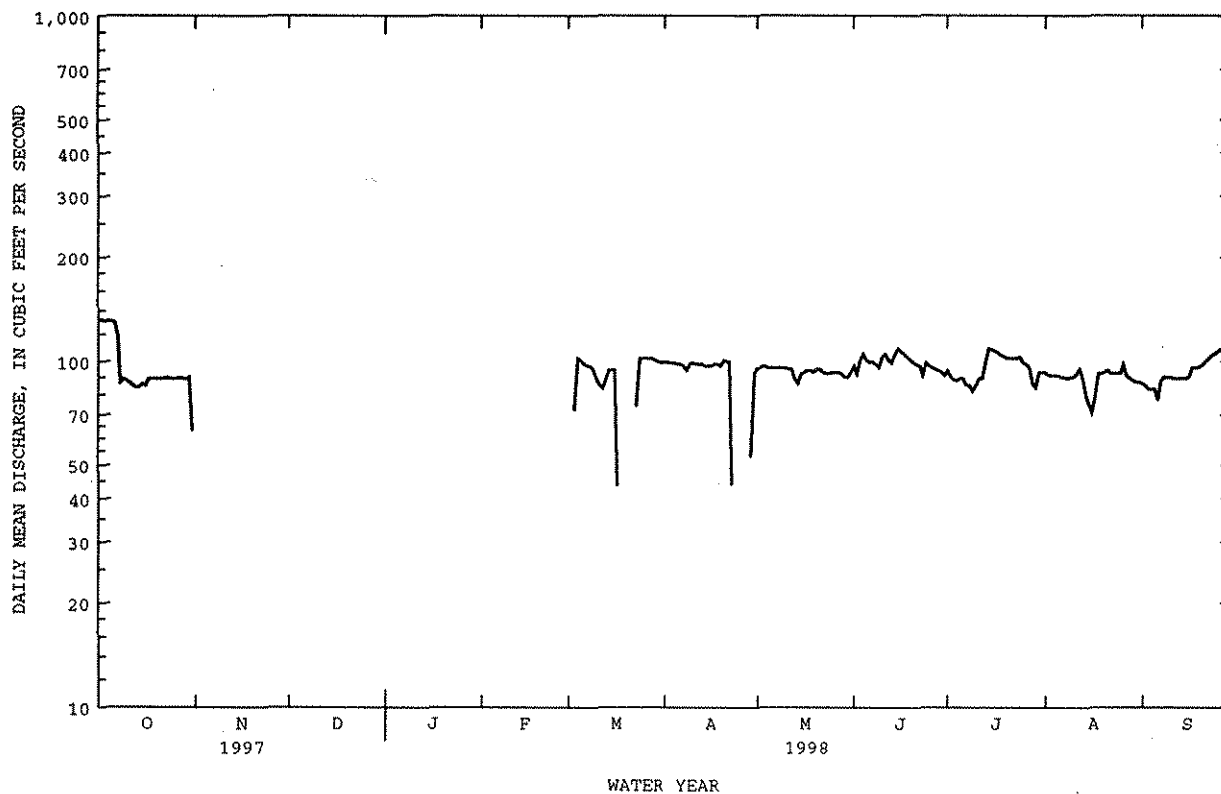
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998, BY WATER YEAR (WY)

	MEAN	68.5	.85	.41	7.44	5.93	56.1	75.1	78.4	84.8	81.2	78.6	73.9
MAX	98.0	3.57	19.6	43.5	46.2	95.8	98.6	105	108	108	99.9	101	
(WY)	1974	1983	1940	1967	1988	1988	1987	1989	1973	1942	1955	1955	
MIN	.000	.000	.000	.000	.000	.000	35.4	.000	46.8	29.6	31.3	1.33	
(WY)	1942	1942	1941	1940	1940	1942	1942	1942	1941	1972	1990	1942	

08385000 FORT SUMNER MAIN CANAL NEAR FORT SUMNER, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1939 - 1998
ANNUAL TOTAL	19171.03	21986.00	
ANNUAL MEAN	52.5	60.2	51.5
HIGHEST ANNUAL MEAN			61.8
LOWEST ANNUAL MEAN			25.3
HIGHEST DAILY MEAN	141 Sep 30	132 Oct 1	174 Jul 22 1941
LOWEST DAILY MEAN	.00 Jan 1	.00 Nov 1	.00 Apr 5 1939
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Nov 1	.00 Nov 5 1939
ANNUAL RUNOFF (AC-FT)	38030	43610	37340
10 PERCENT EXCEEDS	99	102	98
50 PERCENT EXCEEDS	84	89	72
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated



RIO GRANDE BASIN

08385500 PECOS RIVER NEAR FORT SUMNER, NM

LOCATION.--Lat 34°28'42", long 104°16'18", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.13 T. 3 N., R.25 E., DeBaca County, Hydrologic Unit 13060003 on right bank 100 ft upstream from Atchison, Topeka and Santa Fe Railway Bridge, 0.8 mi upstream from U.S. Highway 60 and 2.5 mi downstream from Fort Sumner Diversion dam.

DRAINAGE AREA.--5,300 mi², approximately.

PERIOD OF RECORD.--June to July 1904, July 1904 to June 1905 (gage heights and discharge measurements only). Daily discharges July 18 to August 11, 1904 are unreliable and should not be used, July 1905 to February 1910, September 1912 to December 1913, July 1994 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,020 above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 5, 1905, staff gage at site 2.5 mi upstream at different datum. July 5, 1905 to Dec. 31, 1913, staff gage at site 1.5 mi upstream at different datum.

REMARKS.--Records good. Diversion above gage for about 6,100 acres (1961 determination) part of which are below gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, probably exceeded 53,000 ft³/s, Sept. 30, 1904, gage height, 17.95 ft, from floodmarks, site and datum then in use; minimum daily 0.3 ft³/s, Aug. 17, 1922.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,160 ft³/s, June 14, Aug. 18; minimum daily, 0.21 ft³/s, Sept. 29.

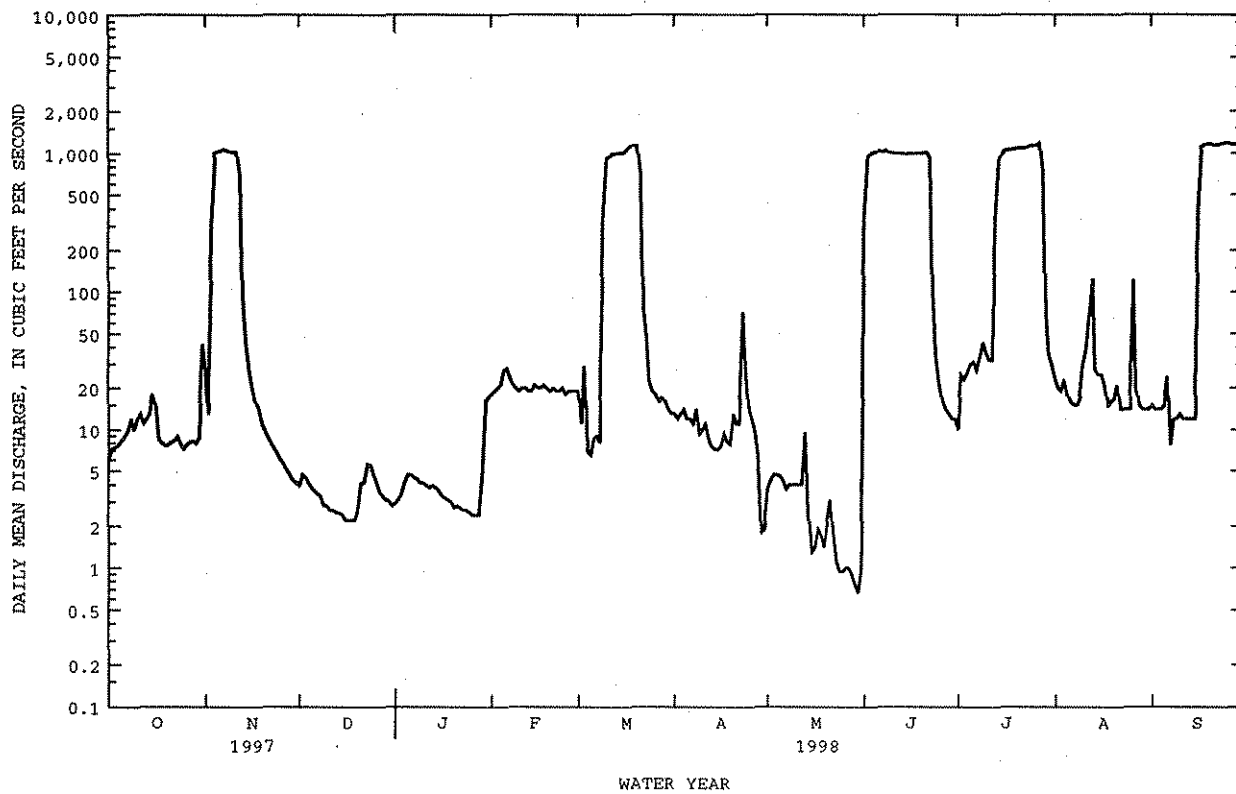
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	28	3.9	2.9	18	19	13	3.7	338	10	24	15
2	7.3	13	4.7	3.1	19	11	12	4.3	957	25	20	14
3	7.4	338	4.5	3.4	20	29	13	4.7	989	23	19	14
4	7.7	1010	4.1	4.1	21	6.8	14	4.7	1020	26	23	14
5	8.3	1030	3.8	4.7	27	6.5	12	4.6	1030	30	18	15
6	8.9	1050	3.6	4.7	28	8.7	12	4.3	1040	31	16	24
7	9.8	1070	3.4	4.5	24	9.0	11	3.7	1020	27	15	7.7
8	12	1050	3.3	4.4	21	8.0	14	e4.0	1050	34	15	12
9	9.9	1030	2.8	4.1	20	337	9.3	e4.0	1010	43	17	12
10	12	1020	2.8	4.1	19	917	10	e4.0	1010	36	30	13
11	13	1030	2.6	3.9	20	943	11	e4.0	995	32	38	12
12	11	675	2.6	3.8	20	989	8.6	4.0	994	32	69	12
13	12	78	2.5	3.9	19	1000	7.5	9.5	994	359	124	12
14	13	41	2.5	3.8	19	996	7.2	2.4	985	912	27	12
15	18	27	2.4	3.6	21	1010	7.1	1.3	995	986	25	12
16	15	20	2.2	3.3	20	1010	7.6	1.4	1000	1050	25	410
17	8.4	16	2.2	3.2	20	1080	9.3	1.9	996	1060	21	1110
18	8.0	14	2.2	3.1	21	1130	8.1	1.7	996	1060	15	e1140
19	7.6	11	2.2	3.0	20	1130	7.8	1.4	993	1070	16	e1160
20	7.7	9.8	2.6	2.7	19	1130	13	2.1	1000	1090	17	e1160
21	8.1	8.8	4.1	2.8	20	718	11	3.1	1020	1090	21	e1140
22	8.3	7.9	4.1	2.7	19	73	11	1.7	921	1090	14	e1140
23	8.9	7.2	5.6	2.6	19	47	71	1.1	86	1100	14	e1150
24	7.8	6.7	5.5	2.6	20	22	28	.94	34	1130	14	e1170
25	7.2	6.0	4.7	2.5	18	19	14	.94	22	1130	14	e1180
26	7.8	5.6	4.1	2.4	19	18	12	1.0	16	1140	122	e1180
27	8.1	5.1	3.5	2.4	19	16	9.6	1.0	14	1180	20	e1150
28	8.2	4.7	3.3	2.4	19	17	6.4	.89	13	731	15	e1160
29	7.9	4.3	3.1	4.7	---	16	1.8	.75	12	70	14	e1140
30	8.7	4.1	3.0	16	---	14	1.9	.66	12	35	14	e300
31	42	---	2.8	17	---	13	---	1.0	---	30	14	---
TOTAL	326.2	9621.2	104.7	132.4	569	12743.0	374.2	84.78	21562	16662	850	15890.7
MEAN	10.5	321	3.38	4.27	20.3	411	12.5	2.73	719	537	27.4	530
MAX	42	1070	5.6	17	28	1130	71	9.5	1050	1180	124	1180
MIN	6.2	4.1	2.2	2.4	18	6.5	1.8	.66	12	10	14	7.7
AC-FT	647	19080	208	263	1130	25280	742	168	42770	33050	1690	31520

CAL YR 1997 TOTAL 56762.24 MEAN 156 MAX 1160 MIN .21 AC-FT 112600
WTR YR 1998 TOTAL 78920.18 MEAN 216 MAX 1180 MIN .66 AC-FT 156500

e Estimated

08385500 PECOS RIVER NEAR FORT SUMNER, NM--Continued



RIO GRANDE BASIN

08385522 PECOS RIVER BELOW TAIBAN CREEK NEAR FORT SUMNER, NM

LOCATION.--Lat 34°19'56", long 104°10'48", NW 1/4 NE 1/4, sec.11, T.1 N., R.26 E., De Baca County, Hydrologic Unit 13060003, on left bank 0.6 mi downstream from Taiban Creek, 11.0 mi southeast of Fort Sumner, and at mile 665.7.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1992 to current year (operated as a low flow station only).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,910 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Water-discharge records good except for those above 1,000 ft³/s, and estimated daily discharges, which are poor. Flow partly regulated by Sumner Dam (station 08384000) 23 mi upstream. Diversion for irrigation of about 19,100 acres (1959 determination) above station. Discharge represents in general, return flow from irrigated areas in Fort Sumner Irrigation Project.

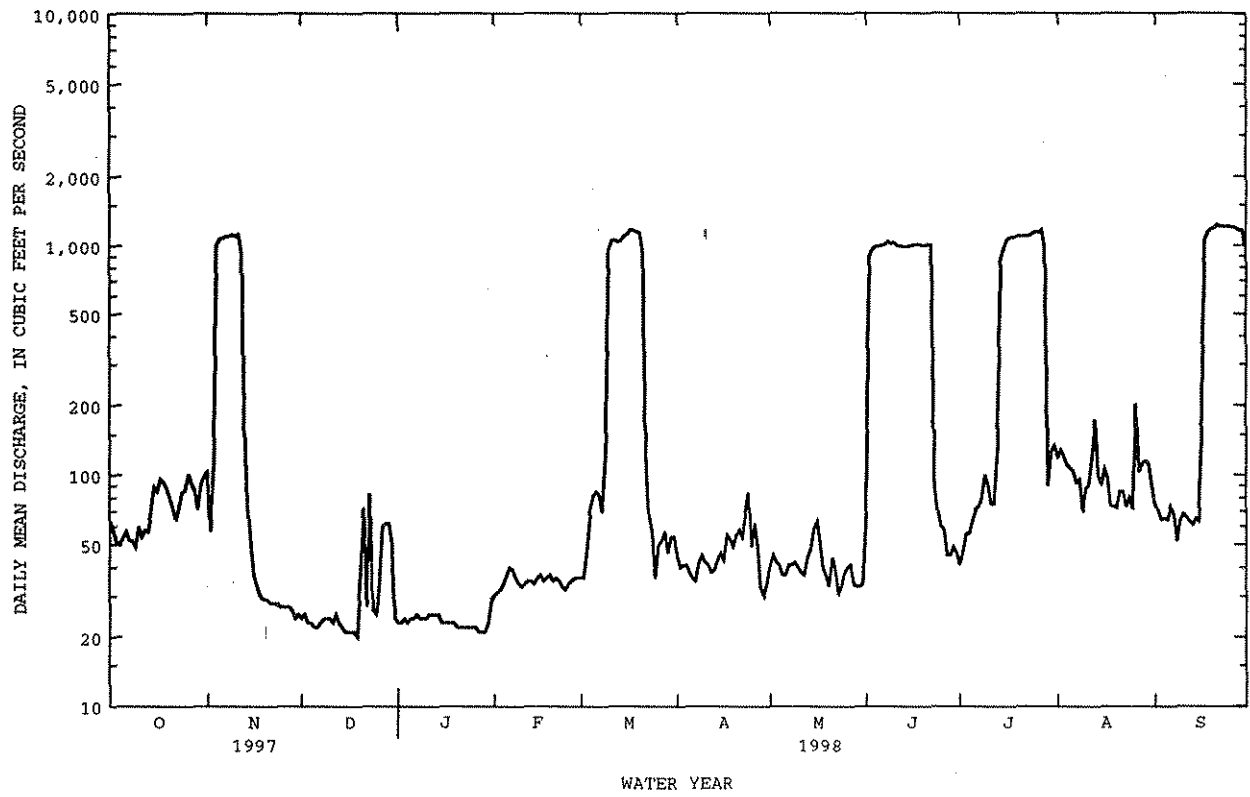
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	103	24	23	30	36	45	41	73	41	120	76
2	57	57	25	23	31	36	40	45	894	46	128	70
3	51	103	23	24	32	47	41	42	959	56	120	64
4	50	1010	23	23	34	70	41	41	990	56	111	65
5	54	1070	22	24	37	81	38	37	991	64	107	64
6	57	1080	22	24	40	85	36	37	1000	71	104	73
7	52	1100	23	25	39	82	35	41	1010	73	93	67
8	52	1100	24	24	36	69	42	41	1040	78	96	52
9	49	1120	24	24	34	125	45	42	1020	100	69	64
10	60	1100	24	24	33	953	42	40	1030	91	87	68
11	54	1120	23	25	34	1050	41	38	1000	75	91	66
12	58	937	25	25	35	1060	38	37	993	75	120	63
13	57	141	23	25	35	1040	39	44	989	129	173	61
14	69	72	22	25	34	1050	43	48	986	861	99	65
15	89	49	21	23	36	1100	46	59	995	962	92	63
16	85	37	21	23	37	1120	43	63	1000	1060	106	153
17	96	33	21	23	35	1170	55	51	1010	1080	97	1050
18	93	30	21	23	36	1170	53	40	1010	1090	74	1140
19	88	29	20	23	37	1150	49	37	996	1090	73	1180
20	80	29	37	22	35	1140	55	33	998	1100	72	1190
21	73	28	72	22	36	947	58	44	1010	1100	85	1230
22	64	28	27	22	35	117	54	39	1000	1100	85	1210
23	71	28	83	22	33	66	69	31	e90	1100	73	1210
24	84	27	26	22	32	56	84	33	e70	1120	80	1210
25	86	27	25	22	34	36	49	38	e60	1150	71	1210
26	101	27	31	22	35	50	62	40	58	1140	202	1200
27	92	27	60	21	36	52	49	41	45	1170	103	1190
28	86	26	62	21	36	57	33	34	45	978	112	1160
29	71	24	62	21	---	46	30	33	49	90	115	1160
30	92	25	51	23	---	54	34	33	46	126	112	995
31	99	---	24	29	---	54	---	34	---	134	92	---
TOTAL	2233	10587	991	722	977	14169	1389	1257	21457	17406	3162	17469
MEAN	72.0	353	32.0	23.3	34.9	457	46.3	40.5	715	561	102	582
MAX	101	1120	83	29	40	1170	84	63	1040	1170	202	1230
MIN	49	24	20	21	30	36	30	31	45	41	69	52
AC-FT	4430	21000	1970	1430	1940	28100	2760	2490	42560	34520	6270	34650

CAL YR 1997 TOTAL 75801 MEAN 208 MAX 1890 MIN 12 AC-FT 150400
WTR YR 1998 TOTAL 91819 MEAN 252 MAX 1230 MIN 20 AC-FT 182100

e Estimated

08385522 PECOS RIVER BELOW TAIBAN CREEK NEAR FORT SUMNER, NM--Continued



RIO GRANDE BASIN

08385522 PECOS RIVER BELOW TAIBAN CREEK NEAR FORT SUMNER, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1992 to September 1998 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
DEC 10...	0900	24	3280	7.9	1.0	3.5	2.1	665	11.8	103
MAR 11...	1330	1300	1990	8.2	1.0	6.0	37	645	10.4	100
APR 23...	1200	61	2170	--	25.0	18.0	.4	664	9.4	115
SEP 09...	1245	66	2030	--	31.0	26.5	11	667	6.8	98

DATE	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)
DEC 10...	1300	1100	390	86	130	1	2.5	232	.0	190
MAR 11...	1100	970	350	49	67	.9	1.3	126	5	111
APR 23...	1100	990	340	67	96	1	3.6	157	10	145
SEP 09...	1000	870	310	59	78	1	2.9	161	6	142

DATE	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CAC03) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
DEC 10...	174	1200	130	.6	.19	14	2100	202	<30
MAR 11...	119	970	92	.5	.06	9.6	1610	94.8	<30
APR 23...	156	1000	110	.7	.09	15	1760	150	<30
SEP 09...	127	870	90	.6	.11	15	1510	136	<30

08385630 PECOS RIVER NEAR DUNLAP, NM

LOCATION.--Lat 34°03'52", long 104°18'22", in SE $\frac{1}{4}$ NW $\frac{1}{4}$, sec. 10, T.3 S., R.25 E., DeBaca County, Hydrologic Unit 13060003, on left bank 1.2 mi south of Van Eaton Ranch, 2.5 mi upstream from Arroyo de la Mora, 2.7 mi downstream from Blanco Canyon, 15 mi east of Dunlap, NM, and at mile 638.1

PERIOD OF RECORD.--August 1993 to current year (operated as a low flow station only).

GAGE.--Water-stage recorder. Elevation of gage is 3,760 ft above National Geodetic Vertical Datum of 1929, from river profile map.

REMARKS.--Record good, except for those above 600 ft³/s, and estimated daily discharges, which are poor. Flow partly regulated by Lake Summer (station 08384000). Diversion for irrigation of about 19,100 acres (1959 determination) above station.

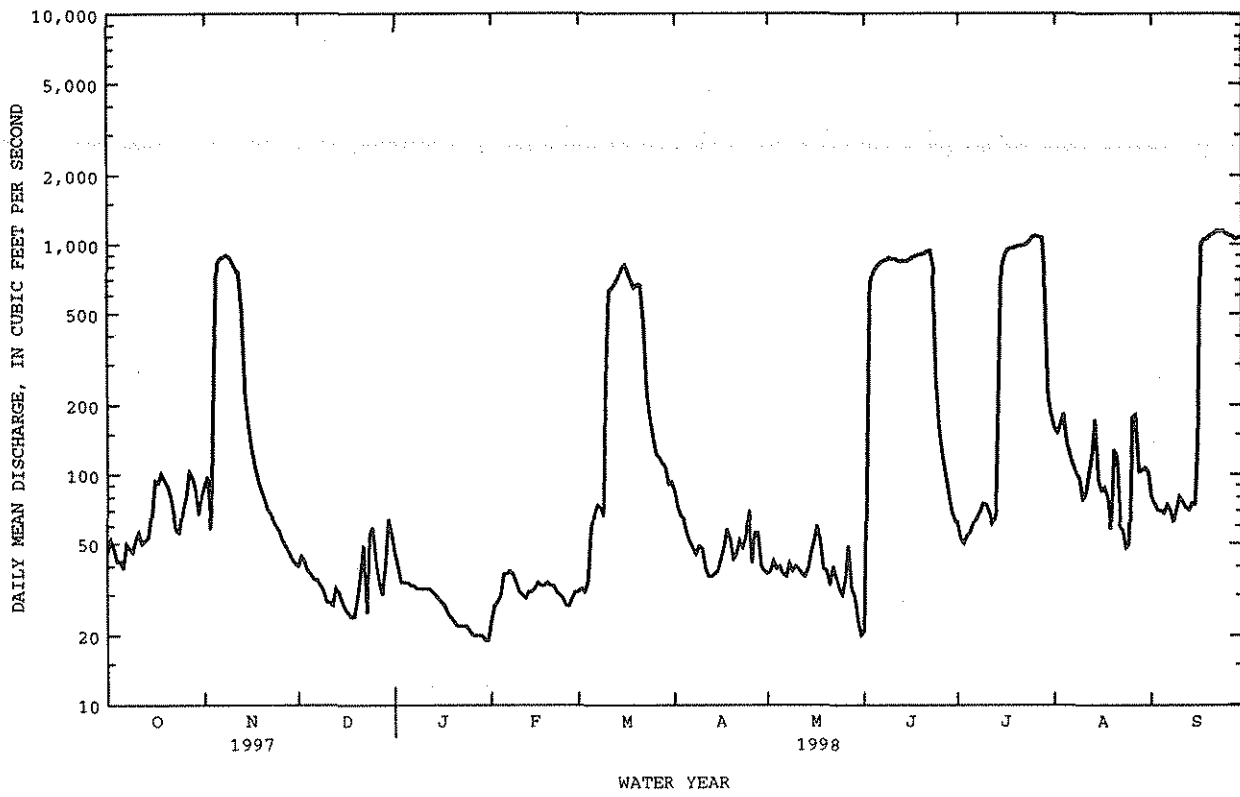
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	90	40	46	23	31	85	37	21	62	160	e80
2	52	98	44	40	27	32	72	38	126	53	152	e75
3	48	58	42	34	28	31	66	42	671	50	165	e70
4	42	261	38	34	30	34	64	39	761	54	184	e70
5	42	823	37	34	37	57	56	40	805	56	137	e68
6	39	867	35	33	37	68	51	37	832	61	122	e74
7	50	884	35	33	38	74	48	36	849	65	110	e70
8	48	895	33	32	37	72	45	41	855	69	101	e62
9	46	881	31	32	34	66	49	38	876	75	97	e70
10	52	822	28	32	31	260	48	40	863	74	78	e80
11	56	771	28	32	30	626	39	39	863	68	82	e76
12	50	752	27	32	29	641	36	37	841	61	101	e72
13	52	515	32	31	31	672	36	36	850	66	122	e70
14	53	224	31	30	31	711	37	39	843	221	172	e75
15	67	165	28	29	32	789	38	46	848	798	94	e74
16	94	131	26	28	34	812	43	52	873	892	85	e140
17	92	110	25	27	33	750	48	60	888	953	88	e1000
18	101	96	24	25	33	704	58	52	898	960	79	e1050
19	95	86	24	24	34	645	53	39	904	967	58	e1060
20	89	79	29	23	33	668	43	38	909	980	128	e1100
21	80	71	37	22	33	665	45	33	933	989	120	e1110
22	67	68	49	22	31	452	52	40	940	985	60	e1150
23	57	64	25	22	30	230	48	36	798	1000	57	e1140
24	56	60	55	22	29	175	53	32	261	1030	48	e1150
25	70	57	59	21	27	144	70	30	163	1080	50	e1120
26	80	52	42	20	27	122	41	35	121	1090	177	e1100
27	103	49	34	20	29	119	56	49	100	1080	181	e1090
28	98	46	30	20	31	112	56	32	81	1070	103	e1060
29	87	43	40	20	---	108	40	29	68	632	105	e1070
30	67	41	64	19	---	91	38	23	63	220	107	e1080
31	80	---	56	19	---	93	---	20	---	182	103	---
TOTAL	2059	9159	1128	858	879	10054	1514	1185	18904	15943	3426	16506
MEAN	66.4	305	36.4	27.7	31.4	324	50.5	38.2	630	514	111	550
MAX	103	895	64	46	38	812	85	60	940	1090	184	1150
MIN	39	41	24	19	23	31	36	20	21	50	48	62
AC-FT	4080	18170	2240	1700	1740	19940	3000	2350	37500	31620	6800	32740

CAL YR 1997 TOTAL 69314.9 MEAN 190 MAX 1390 MIN 5.5 AC-FT 137500
WTR YR 1998 TOTAL 81615 MEAN 224 MAX 1150 MIN 19 AC-FT 161900

e Estimated

RIO GRANDE BASIN
08385630 PECOS RIVER NEAR DUNLAP, NM--Continued



08385648 PECOS RIVER ABOVE ACME, NM

LOCATION.--Lat 33°41'09", long 104°18'59", in SW¹/₄NE¹/₄ sec. 31, T.7 S., R.26 E., Chaves County, Hydrologic Unit 13060007, on left bank 0.5 mi upstream from Eightmile Draw, 2.5 mi upstream from boundary for Bitter Lake National Wildlife Refuge, 4.6 miles downstream from Sand Creek and at mile 596.3.

PERIOD OF RECORD.--August 1992 to current year (operated as a low flow station only).

GAGE.--Water-stage recorder. Elevation of gage is 3,550 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow partly regulated by Lake Sumner (station 08384000). Diversion for irrigation of about 19,100 acres (1959 determination) above station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

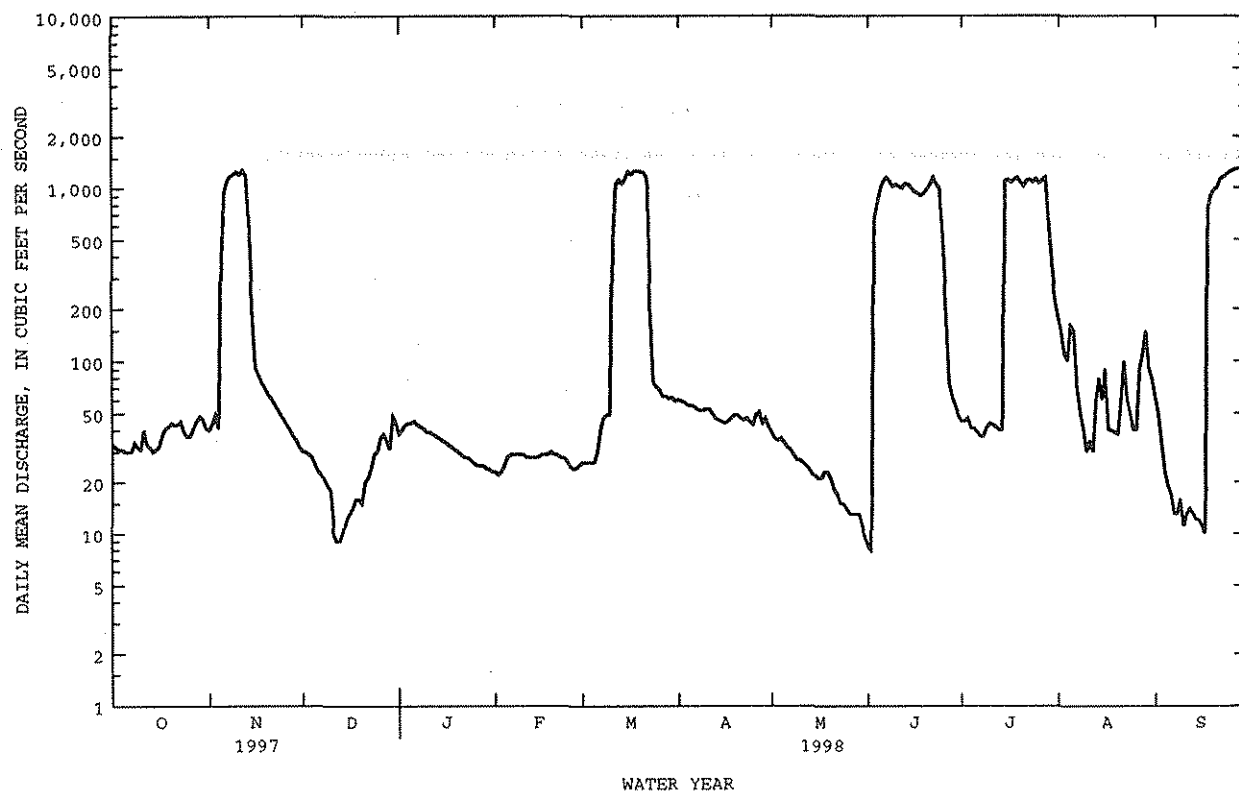
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	40	30	38	23	26	60	39	8.5	45	e180	e62
2	32	43	30	40	22	26	59	36	8.0	45	e150	e50
3	31	49	29	43	23	26	58	35	e650	47	e110	e34
4	31	41	28	44	25	26	56	36	e800	41	e100	e23
5	30	e400	25	44	28	26	56	34	e980	41	e160	e19
6	30	e950	23	45	29	30	55	32	e1100	39	e150	e17
7	30	e1100	22	43	29	40	53	31	e1150	37	e70	e13
8	34	e1180	21	42	29	47	52	29	e1100	37	e50	e13
9	32	e1200	19	41	29	49	52	27	e1020	41	e40	e16
10	31	e1250	18	39	29	49	53	27	e1050	44	e30	e11
11	40	e1200	e10	39	28	e500	53	26	e1020	43	e35	e13
12	33	e1280	e9.0	38	28	e1050	50	25	e1000	42	e30	e14
13	32	e1190	e9.0	37	28	e1120	47	24	e1060	40	e60	e13
14	30	e600	e10	36	28	e1060	46	22	e1050	40	e80	e12
15	31	e197	e12	35	28	e1130	45	22	e1000	e1100	e60	e12
16	32	91	e13	34	29	e1250	44	21	e950	e1120	e90	e11
17	37	83	e14	33	29	e1200	45	21	e940	e1080	e40	e10
18	41	75	e16	32	29	e1260	47	23	e900	e1120	e40	e750
19	42	70	e16	31	30	e1260	49	23	e930	e1150	e39	e900
20	44	64	e15	30	29	e1250	49	21	e980	e1080	e38	e980
21	43	61	e20	29	29	e1230	47	18	e1050	e1020	e60	e1000
22	43	57	e21	28	28	e1150	46	17	e1150	e1110	e100	e1130
23	45	53	e24	28	28	e210	47	15	e1050	e1120	e60	e1150
24	39	49	e29	27	27	76	45	15	e1000	e1080	e50	e1190
25	37	46	e30	26	25	71	43	14	e500	e1130	e40	e1240
26	37	43	e36	25	24	69	49	13	e200	e1070	e40	e1260
27	41	40	e38	25	24	63	51	13	74	e1110	e90	e1290
28	45	37	e35	25	25	63	44	13	62	e1150	e110	e1300
29	48	35	e31	24	---	61	47	13	55	e600	e150	e1300
30	46	32	e48	24	---	62	42	11	48	e350	e90	e1320
31	41	---	44	23	---	59	---	9.6	---	e230	e80	---
TOTAL	1141	11556	725.0	1048	762	14539	1490	705.6	22885.5	17202	2422	15153
MEAN	36.8	385	23.4	33.8	27.2	469	49.7	22.8	763	555	78.1	505
MAX	48	1280	48	45	30	1260	60	39	1150	1150	180	1320
MIN	30	32	9.0	23	22	26	42	9.6	8.0	37	30	10
AC-FT	2260	22920	1440	2080	1510	28840	2960	1400	45390	34120	4800	30060

CAL YR 1997 TOTAL 80687.2 MEAN 221 MAX 2220 MIN 6.0 AC-FT 160000
WTR YR 1998 TOTAL 89629.1 MEAN 246 MAX 1320 MIN 8.0 AC-FT 177800

e Estimated

RIO GRANDE BASIN

08385648 PECOS RIVER ABOVE ACME, NM--Continued



08386000 PECOS RIVER NEAR ACME, NM

LOCATION.--Lat 33°32'10", long 104°22'34", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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).

WATER-DISCHARGE RECORDS

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 with satellite telemetry. Elevation of gage is 3,510 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.--Water-discharge records fair except for estimated daily discharges, which are poor. Flow regulated by Lake Sumner (station 08384000) 117 mi upstream since August 1937 and Santa Rosa Lake (station 08382810) 172 mi upstream since April 1980. Diversions for irrigation of about 20,000 acres, 1959 determination, upstream from station. 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, from slope-area measurement, but may have been exceeded by the flood of Oct. 1, 1904.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	46	e50	61	20	21	105	44	4.7	49	180	60
2	36	55	e48	46	20	22	101	36	3.3	47	136	57
3	32	76	e47	48	20	23	100	32	1.9	60	108	47
4	32	67	e46	48	22	24	97	30	715	43	92	35
5	32	381	e45	44	27	22	97	32	840	36	151	27
6	31	922	e44	42	33	21	92	27	879	38	146	23
7	38	1090	e43	39	34	37	84	25	980	29	67	21
8	e56	1160	e40	37	36	69	76	21	1040	24	47	14
9	e47	1190	e35	35	35	75	60	18	936	26	36	14
10	e42	1220	e32	34	35	69	49	21	1030	32	28	22
11	49	1190	30	33	31	437	50	20	1020	36	26	12
12	53	1250	e28	32	31	985	46	20	925	32	21	10
13	36	1150	28	31	29	1060	e39	17	1020	24	47	12
14	36	524	e29	31	28	1020	e36	15	975	20	68	11
15	e29	441	29	30	29	1100	e34	15	893	24	57	12
16	e29	328	29	29	29	1220	e34	14	894	924	73	9.9
17	37	259	27	27	30	1180	e38	16	875	1160	36	8.5
18	64	213	26	27	33	1250	e43	22	834	1030	32	10
19	69	179	24	26	34	1260	51	35	837	1050	33	911
20	157	155	22	26	33	1180	58	33	875	1090	33	982
21	136	135	26	25	32	1230	53	20	921	1030	52	1010
22	80	118	40	25	29	1120	47	14	985	1020	86	1140
23	92	101	41	23	28	427	48	11	1010	1100	55	1150
24	68	90	60	23	26	325	51	9.2	809	1020	37	1180
25	46	82	54	21	23	241	47	9.3	384	1050	35	e1220
26	39	74	80	21	20	196	57	8.3	232	1210	34	e1250
27	51	67	117	21	18	150	100	7.9	159	1140	81	e1270
28	66	e60	113	21	19	136	62	7.3	116	1150	104	e1290
29	86	e58	106	21	---	126	66	11	88	1220	145	e1290
30	76	e52	85	20	---	128	60	9.0	62	563	69	e1300
31	62	---	39	20	---	113	---	5.9	---	315	63	---
TOTAL	1743	12733	1463	967	784	15267	1881	605.9	20343.9	16592	2178	14398.4
MEAN	56.2	424	47.2	31.2	28.0	492	62.7	19.5	678	535	70.3	480
MAX	157	1250	117	61	36	1260	105	44	1040	1220	180	1300
MIN	29	46	22	20	18	21	34	5.9	1.9	20	21	8.5
AC-FT	3460	25260	2900	1920	1560	30280	3730	1200	40350	32910	4320	28560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

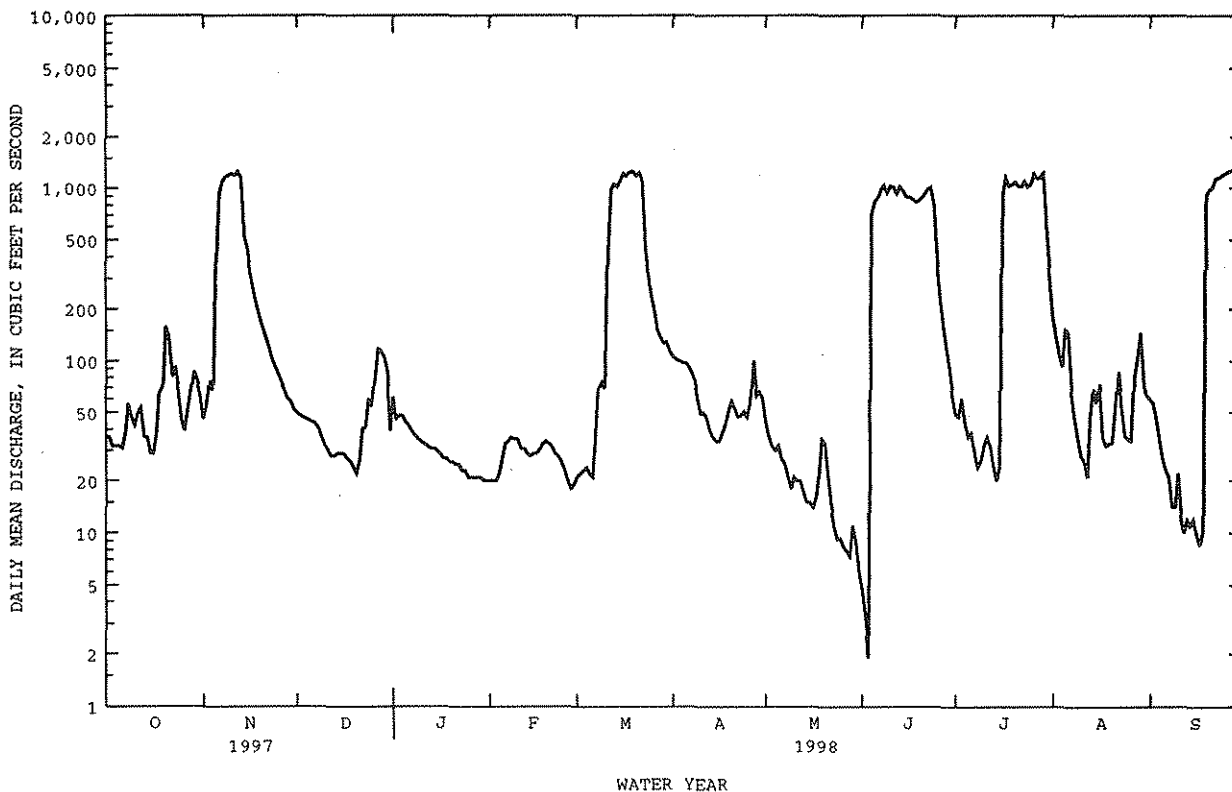
	MEAN	147	59.6	26.5	26.0	29.1	172	208	278	325	319	267	302
MAX	2200	858	236	190	234	595	1217	2680	2186	1611	813	3527	
(WY)	1942	1943	1942	1942	1987	1941	1942	1941	1941	1960	1997	1941	
MIN	.000	.000	.000	.000	.000	.16	3.58	1.81	.000	.19	.90	.000	
(WY)	1948	1948	1948	1948	1953	1954	1967	1946	1947	1954	1947	1947	

RIO GRANDE BASIN

08386000 PECOS RIVER NEAR ACME, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	81667.8		88956.2		181	
ANNUAL MEAN	224		244		964	1941
HIGHEST ANNUAL MEAN					56.8	1964
LOWEST ANNUAL MEAN					29500	Sep 23 1941
HIGHEST DAILY MEAN	2200	Aug 19	1300	Sep 30	.00	May 23 1938
LOWEST DAILY MEAN	5.2	Feb 5	1.9	Jun 3	.00	May 23 1938
ANNUAL SEVEN-DAY MINIMUM	5.9	Jan 31	6.2	May 28	.00	May 23 1941
INSTANTANEOUS PEAK FLOW			1500	Sep 30	45000	Sep 23 1941
INSTANTANEOUS PEAK STAGE			5.99	Sep 30	13.71	Sep 23 1941
INSTANTANEOUS LOW FLOW			1.3	Jun 3	1.3	Jun 3 1998
ANNUAL RUNOFF (AC-FT)	162000		176400		130800	
10 PERCENT EXCEEDS	1080		1030		690	
50 PERCENT EXCEEDS	52		47		23	
90 PERCENT EXCEEDS	11		20		1.0	

e Estimated

a From rating curve extended above 27,000 ft³/s.

08386000 PECOS RIVER NEAR ACME, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937 to September 1998 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCOCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL AS CACO3 (00900)
DEC 10...	1245	78	4530	7.5	3.0	4.0	675	10.2	89	<1	K5	1300
MAR 12...	0930	830	2290	8.1	3.5	3.0	644	11.2	99	<10	140	1100
APR 27...	1100	81	3670	--	7.0	12.5	676	9.9	106	K33	K29	1400
SEP 10...	1330	23	2370	--	32.0	28.5	675	--	--	--	--	1000
DATE	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
DEC 10...	1200	390	87	320	4	3.1	138	0	113	114	1200	480
MAR 12...	1000	350	57	99	1	2.3	126	0	103	161	1000	130
APR 27...	1300	410	92	270	3	4.3	98	4	86	93	1400	390
SEP 10...	950	300	66	150	2	3.6	81	5	74	68	960	200
DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
DEC 10...	.4	12	2600	<.01	.30	<.02	--	.1	.1	<.01	<.01	<.01
MAR 12...	.5	9.3	1720	<.01	.10	.03	.09	.4	.1	.11	.01	.01
APR 27...	.6	9.3	2630	<.010	<.020	.020	--	<.20	<.20	<.020	<.020	<.010
SEP 10...	.5	14	1740	<.01	.14	.06	.14	.2	.2	.01	.01	<.01
DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC 10...	1.6	6	<2	<1	38	<2	217	<2	<2	<2	4	<30
MAR 12...	8.3	8	<1	<1	24	<1	107	<1	<1	<1	2	<30
APR 27...	1.4	5	<2	<1	36	<2	215	<2	<2	<2	3	<30
SEP 10...	1.4	165	<1	1	66	<1	188	<1	1	<1	3	130

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

08387000 RIO RUIDOSO AT HOLLYWOOD, NM

LOCATION.--Lat 33°19'36", long 105°37'38", in SE¹/₄SE¹/₄NE¹/₄ sec.25, T.11 S., R.13 E., Lincoln County, Hydrologic Unit 13060008, on center pier on downstream side of bridge on Frieden Bloom Street in Hollywood, NM, 0.1 mi north of U.S. Highway 70, 0.7 mi downstream from Gavilan Canyon, 1.7 mi downstream from Carrizo Creek, and at mile 24.4.

DRAINAGE AREA.--120 mi², approximately.

PERIOD OF RECORD.--March 1953 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,420 ft above National Geodetic Vertical Datum of 1929, from topographic map. Mar. 14, 1953 to Mar. 28, 1985, at site 0.95 mi downstream at different datum.

REMARKS.--Water-discharge records good, except for estimated daily discharges which are poor. Village of Ruidoso diverts from right bank 7.0 mi upstream for municipal use and returns a portion of this water as effluent from sewage disposal plant downstream from the gage.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Sept. 29, 1941, is probably the highest since at least 1904 (discharge not determined).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	13	18	16	13	40	57	43	39	13	21	16
2	19	13	20	14	13	27	52	49	37	13	26	14
3	18	12	20	15	13	14	48	59	36	15	28	13
4	17	12	17	16	14	13	49	71	35	17	42	13
5	17	14	17	16	14	15	51	81	33	15	75	12
6	16	16	13	15	14	17	56	78	30	17	52	12
7	17	16	15	15	14	18	59	78	27	16	40	11
8	16	17	16	13	16	18	57	75	25	23	34	11
9	16	17	17	15	18	17	55	72	24	20	28	11
10	15	17	14	14	14	16	56	71	26	14	24	11
11	15	17	15	14	13	15	66	72	25	13	21	11
12	14	17	15	14	13	17	89	73	21	12	19	10
13	14	20	15	13	13	20	77	74	20	12	23	9.8
14	14	17	15	13	13	24	60	74	20	12	16	9.4
15	14	17	15	12	13	33	57	69	19	11	15	15
16	14	16	15	14	13	25	50	62	19	11	15	13
17	14	17	15	13	12	24	47	59	18	11	15	15
18	13	17	15	13	12	24	42	64	18	11	15	14
19	13	16	15	13	13	21	38	69	17	10	20	13
20	13	16	15	13	16	20	38	72	16	10	18	12
21	13	16	15	14	29	20	48	69	16	10	25	11
22	14	16	15	13	30	23	64	66	16	10	27	11
23	16	16	15	13	32	29	81	62	15	16	26	11
24	14	16	16	13	35	46	105	61	15	15	24	10
25	14	16	14	13	40	70	74	60	14	12	23	10
26	14	16	14	13	40	84	61	52	14	28	27	10
27	14	18	15	13	40	79	70	45	14	25	e21	10
28	14	18	15	12	40	64	53	44	13	26	e20	11
29	13	17	15	12	---	58	47	44	13	24	e19	10
30	13	17	16	13	---	60	40	43	13	24	e18	14
31	13	---	17	13	---	54	---	41	---	20	e18	---
TOTAL	462	483	484	423	560	1005	1747	1952	648	486	795	354.2
MEAN	14.9	16.1	15.6	13.6	20.0	32.4	58.2	63.0	21.6	15.7	25.6	11.8
MAX	21	20	20	16	40	84	105	81	39	28	75	16
MIN	13	12	13	12	12	13	38	41	13	10	15	9.4
AC-FT	916	958	960	839	1110	1990	3470	3870	1290	964	1580	703

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1998, BY WATER YEAR (WY)

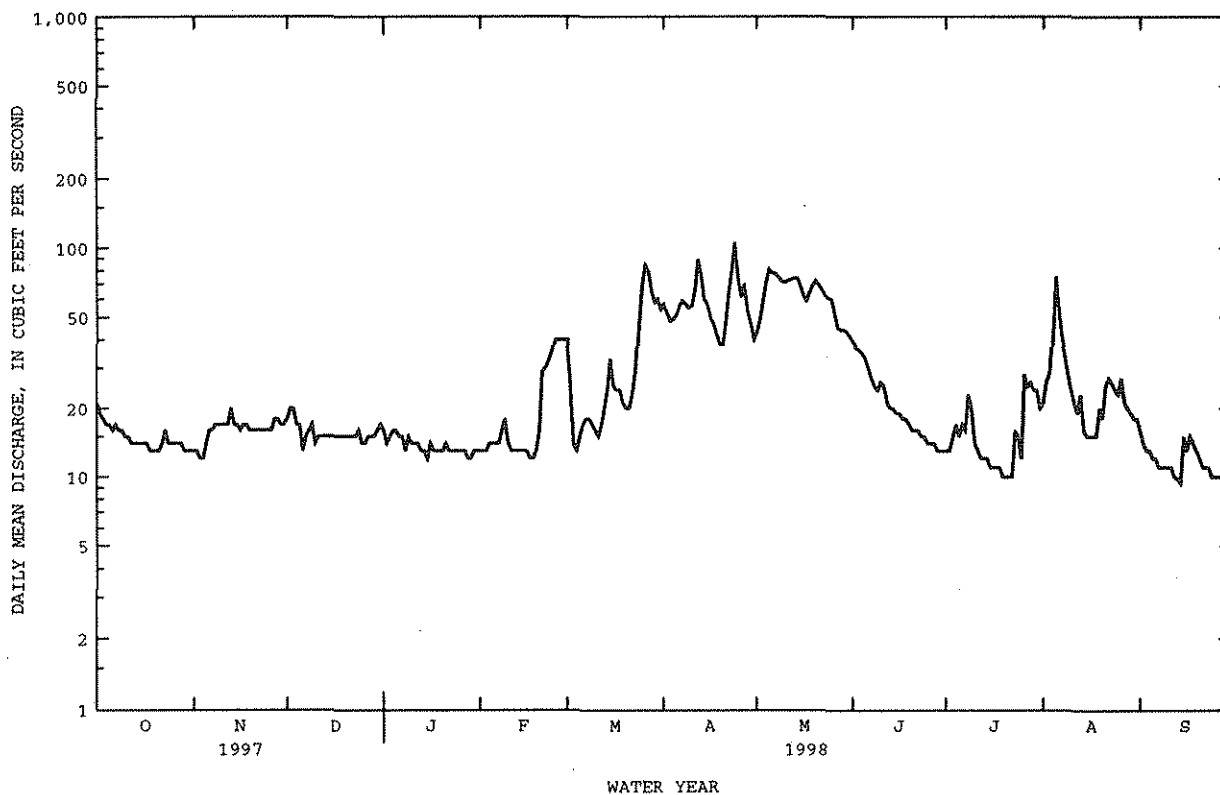
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	21.5	17.2	22.4	17.8	22.2	35.1	45.0	39.4	20.4	19.0	40.1	27.2					
MAX	80.8	69.0	130	61.5	58.6	91.2	104	101	52.3	49.9	162	63.4					
(WY)	1987	1987	1985	1985	1985	1985	1992	1992	1986	1986	1984	1988					
MIN	7.69	7.43	6.59	7.74	8.49	12.3	8.26	6.08	5.96	7.94	8.25	11.8					
(WY)	1995	1982	1982	1982	1990	1996	1996	1996	1982	1982	1983	1998					

RIO GRANDE BASIN

08387000 RIO RUIDOSO AT HOLLYWOOD, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1982 - 1998
ANNUAL TOTAL	8776.9	9399.2	^a 27.3
ANNUAL MEAN	24.0	25.8	49.7
HIGHEST ANNUAL MEAN			11.9
LOWEST ANNUAL MEAN			1987
HIGHEST DAILY MEAN	189 Aug 5	105 Apr 24	1130 Dec 20 1984
LOWEST DAILY MEAN	8.4 Jan 31	9.4 Sep 14	1.9 Aug 27 1994
ANNUAL SEVEN-DAY MINIMUM	8.8 Jan 28	10 Sep 23	2.4 Aug 24 1994
INSTANTANEOUS PEAK FLOW		143 Jul 26	^b 2120 Aug 11 1984
INSTANTANEOUS PEAK STAGE		2.62 Jul 26	^c 10.05 Jun 17 1965
INSTANTANEOUS LOW FLOW		9.4 Jan 15	.30 Jan 1 1962
ANNUAL RUNOFF (AC-FT)	17410	18640	19780
10 PERCENT EXCEEDS	43	60	56
50 PERCENT EXCEEDS	17	16	17
90 PERCENT EXCEEDS	9.9	12	8.4

e Estimated

^a Average discharge for 28 years (1954-81), 14.9 ft³/s, 10,800 acre-ft/yr, for period when sewage disposal plant effluent was discharged upstream from gage.^b From rating curve extended above 510 ft³/s, on basis of slope-area measurement of peak flow.^c Site and datum then in use.

08387600 EAGLE CREEK BELOW SOUTH FORK, NEAR ALTO, NM

LOCATION.--Lat 33°23'57", long 105°43'11", in SW¹/₄SW¹/₄ sec.31, T.10 S., R.13 E., Lincoln County, Hydrologic Unit 13060008, in Lincoln National Forest on right bank 300 ft upstream from culvert under State Road 532, 400 ft downstream from South Fork, and 2.5 mi west of Alto. Mouth at Rio Ruidoso mile 11.3.

DRAINAGE AREA.--8.14 mi².

PERIOD OF RECORD.--August 1969 to December 1980, April 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,600 ft above National Geodetic Vertical Datum of 1929, from topographic map. August 26, 1969 to December 31, 1980, at site 360 ft downstream at datum 6.0 ft higher.

REMARKS.--Records good. No diversions for irrigation upstream from station. Some water is stored in small unregulated recreational ponds on the Mescalero Apache Indian Reservation upstream. Several observations of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	1.0	.45	1.4	.79	1.5	9.3	6.5	2.3	.13	26	1.3
2	2.6	1.0	.56	1.9	.76	1.3	8.5	8.3	2.2	.17	20	1.3
3	2.1	1.0	.60	1.9	.72	1.4	7.7	10	2.0	.35	15	1.2
4	1.9	.96	.59	1.5	.80	1.5	7.8	11	1.8	.86	20	1.0
5	1.9	.92	.66	1.2	.85	1.7	8.5	10	1.5	.68	45	.84
6	1.9	.92	.66	.94	.80	2.0	9.2	9.7	1.4	.84	22	.73
7	1.9	.92	1.1	.80	.83	2.1	8.7	9.4	1.2	.76	12	.61
8	1.7	.94	1.0	.75	.87	2.1	8.0	8.9	1.0	.75	7.5	.53
9	1.6	.87	.84	.82	1.3	2.1	7.4	8.2	.94	.67	5.1	.48
10	1.4	.84	.72	1.0	1.1	2.3	7.1	7.6	1.0	.52	3.4	.56
11	1.3	.78	.72	1.1	1.1	2.4	7.9	7.7	1.0	.40	2.6	.52
12	1.3	.78	.72	1.1	.99	2.5	10	8.0	.81	.26	2.5	.48
13	1.2	.88	.72	1.1	1.1	2.8	10	7.5	.72	.24	4.5	.43
14	1.2	.73	.72	1.0	.97	3.5	9.6	7.5	.60	.23	2.9	.41
15	1.2	.67	.72	.86	1.1	10	9.1	6.9	.56	.19	2.3	.73
16	1.2	.66	.72	.87	1.0	8.7	8.3	6.3	.54	.16	2.0	.61
17	1.2	.69	.72	.86	1.1	8.2	7.8	6.1	.42	.31	1.6	.64
18	1.2	.72	.72	.87	1.2	8.1	7.0	6.8	.39	1.2	1.4	.54
19	1.2	.72	.72	.87	1.3	8.0	6.4	7.9	.39	.57	1.4	.46
20	1.2	.71	.72	.80	1.2	7.9	5.9	8.0	.37	1.2	1.4	.41
21	1.1	.66	.69	.85	1.2	8.0	6.2	7.4	.32	.85	1.3	.39
22	1.2	.62	.66	.79	1.3	9.0	6.9	7.1	.30	1.3	1.2	.36
23	1.5	.53	.60	.76	1.5	10	8.0	6.1	.28	1.1	1.1	.35
24	1.2	.49	.60	.70	1.6	13	10	5.1	.27	.79	.92	.33
25	1.3	.45	.60	.72	1.6	15	13	4.5	.23	.75	.94	.35
26	1.1	.41	.60	.69	1.3	16	12	4.0	.18	2.5	2.6	.32
27	1.1	.63	.60	.72	1.3	15	9.6	3.8	.16	6.5	1.5	.30
28	1.1	.60	.60	.73	1.4	13	7.9	3.4	.15	21	1.3	.34
29	1.1	.51	.60	.73	---	11	6.4	3.2	.13	16	1.2	.36
30	1.1	.46	.68	.77	---	11	6.0	2.9	.12	22	1.2	.70
31	1.1	---	1.1	.78	---	9.6	---	2.6	---	31	1.3	---
TOTAL	46.8	22.07	21.71	29.88	31.08	210.7	250.2	212.4	23.28	114.28	213.16	17.58
MEAN	1.51	.74	.70	.96	1.11	6.80	8.34	6.85	.78	3.69	6.88	.59
MAX	4.7	1.0	1.1	1.9	1.6	16	13	11	2.3	31	45	1.3
MIN	1.1	.41	.45	.69	.72	1.3	5.9	2.6	.12	.13	.92	.30
AC-FT	93	44	43	59	62	418	496	421	46	227	423	35

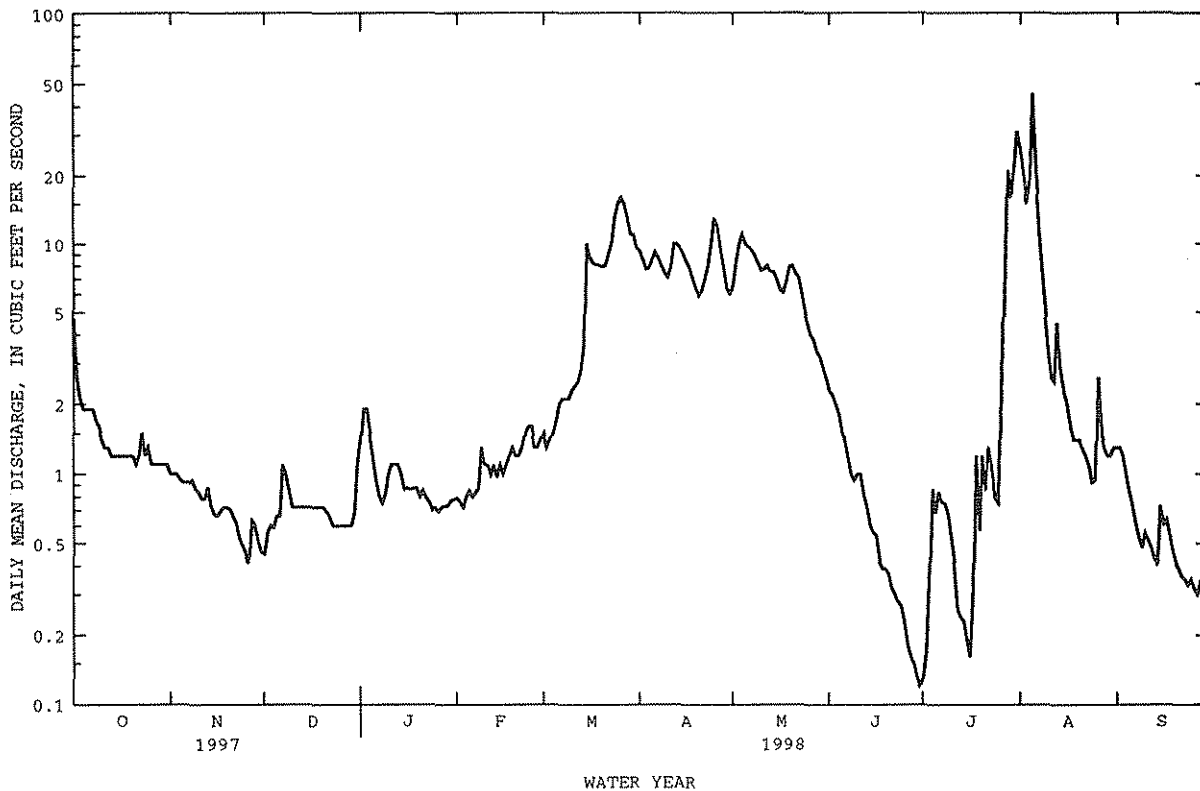
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1998, BY WATER YEAR (WY)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
MEAN	2.43	1.92	2.02	1.60	2.20	3.97	5.17	4.20	1.38	1.92	4.05	3.72
MAX	14.4	17.3	19.5	7.89	8.19	10.6	14.0	15.8	5.94	5.50	16.3	9.26
(WY)	1975	1979	1979	1979	1979	1979	1973	1973	1979	1990	1988	1974
MIN	.29	.17	.17	.22	.25	.14	.088	.000	.014	.10	.31	.35
(WY)	1990	1996	1997	1990	1996	1996	1996	1996	1996	1971	1994	1994

RIO GRANDE BASIN

08387600 EAGLE CREEK BELOW SOUTH FORK, NEAR ALTO, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1970 - 1998
ANNUAL TOTAL	1065.04	1193.14	
ANNUAL MEAN	2.92	3.27	2.83
HIGHEST ANNUAL MEAN			8.48
LOWEST ANNUAL MEAN			.39
HIGHEST DAILY MEAN	42 Jul 31	45 Aug 5	170 Dec 19 1978
LOWEST DAILY MEAN	.10 Jan 1	.12 Jun 30	.00 Jul 9 1989
ANNUAL SEVEN-DAY MINIMUM	.14 Jul 17	.15 Jun 26	.00 Jun 17 1990
INSTANTANEOUS PEAK FLOW		56 Jul 30	^a 206 Dec 19 1978
INSTANTANEOUS PEAK STAGE		6.72 Jul 30	6.87 Jul 30 1997
INSTANTANEOUS LOW FLOW		.08 Jul 6	.00 Jul 9 1989
ANNUAL RUNOFF (AC-FT)	2110	2370	2050
10 PERCENT EXCEEDS	6.2	9.0	7.3
50 PERCENT EXCEEDS	1.6	1.1	1.2
90 PERCENT EXCEEDS	.35	.43	.23

^a From rating curve extended above 40 ft³/s.

08390500 RIO HONDO AT DIAMOND A RANCH, NEAR ROSWELL, NM

LOCATION.--33°20'57", long 104°51'05", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.11 S, R.21 E., Chaves County, Hydrologic Unit 13060008, on right bank 40 ft downstream from bridge on Mossman Road at Diamond A Ranch farm, 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 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 with satellite telemetry 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.--Records fair. Diversions and ground-water withdrawals upstream from station for irrigation above and below station of about 6,500 acres, 1959 determination. Several observations of water temperature were made during the year. No flow most of 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	53	10	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	43	11	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	45	12	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	27	18	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.22	23	24	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.23	31	26	.00	.00	1.1	.00
7	.00	.00	.00	.00	.00	.00	34	21	.00	.00	17	.00
8	.00	.00	.00	.00	.00	.00	34	21	.00	.00	.90	.00
9	.00	.00	.00	.00	.00	.00	30	30	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	26	29	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	24	17	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	24	9.3	.00	.00	3.2	.00
13	.00	.00	.00	.00	.00	.00	45	9.7	.00	.00	5.0	.00
14	.00	.00	.00	.00	.00	.00	44	8.9	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	35	8.4	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	33	6.7	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	26	2.1	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	27	3.0	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	25	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	18	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	9.1	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	1.2	.77	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.43	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	9.1	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	39	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	18	94	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	67	103	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	87	76	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	61	52	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	54	33	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	68	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	355.45	1063.40	268.30	0.00	0.00	27.20	0.00
MEAN	.0000	.0000	.0000	.0000	.0000	11.5	35.4	8.65	.0000	.0000	.88	.0000
MAX	.00	.00	.00	.00	.00	87	103	30	.00	.00	17	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	705	2110	532	.00	.00	54	.00

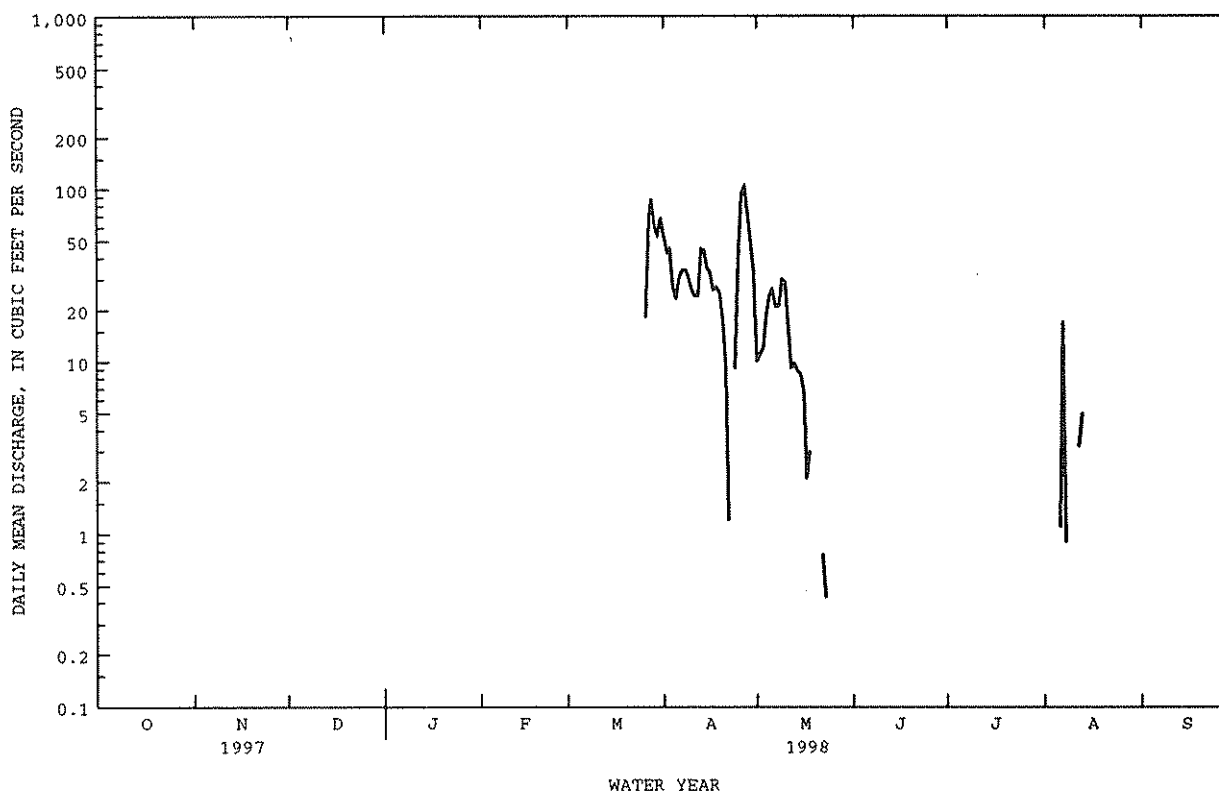
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

	MEAN	25.6	17.0	19.9	17.1	12.9	13.5	26.4	29.4	25.2	26.4	39.0	51.5
MAX	458	199	222	160	97.5	153	199	519	334	163	241	1090	
(WY)	1942	1942	1979	1985	1987	1987	1987	1941	1986	1955	1984	1941	
MIN	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	
(WY)	1941	1949	1940	1952	1940	1950	1946	1951	1951	1975	1960	1943	

RIO GRANDE BASIN

08390500 RIO HONDO AT DIAMOND A RANCH, NEAR ROSWELL, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1940 - 1998
ANNUAL TOTAL	3617.21	1714.35	
ANNUAL MEAN	9.91	4.70	25.4
HIGHEST ANNUAL MEAN			181 1941
LOWEST ANNUAL MEAN			1.30 1964
HIGHEST DAILY MEAN	660 Jun 8	103 Apr 27	8380 Sep 22 1941
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1939
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1939
INSTANTANEOUS PEAK FLOW		120 Apr 26	^a 54800 Jun 18 1965
INSTANTANEOUS PEAK STAGE		6.34 Apr 26	^b 28.78 Sep 22 1941
INSTANTANEOUS LOW FLOW		.00 Oct 1	.00 Oct 1 1939
ANNUAL RUNOFF (AC-FT)	7170	3400	18380
10 PERCENT EXCEEDS	22	19	63
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

^a From rating curve extended above 3,100 ft³/s, on basis of slope-area measurement of peak flow.^b Maximum gage height, 28.78 ft, Sept. 22, 1941.

08390600 TWO RIVERS RESERVOIR NEAR ROSWELL, NM

LOCATION.--08390610 Rio Hondo Reservoir: Lat 33°17'55", long 104°43'20", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.4, T.12 S., R.22 E., Chaves County, Hydrologic Unit 13060008, near center of Diamond A Dam on Rio Hondo, 13 mi southwest of Roswell at mile 33.4.
08390620 Rocky Arroyo Reservoir: Lat 33°16'20", long 104°43'20", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ NE1/4 sec.16, T.12 S., R.22 E., at left end of Rocky Dam on Rocky Arroyo, and 14 mi southwest of Roswell.

DRAINAGE AREA.--1,027 mi²; Rio Hondo, 963 mi²; Rocky Arroyo, 64 mi².

PERIOD OF RECORD.--July 1963 to current year (prior to October 1965 monthend contents only). Prior to October 1966, contents at 0800 hours.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Two Rivers Reservoir, completed July 16, 1963, is formed by earthfill dams on Rio Hondo, which forms Rio Hondo Reservoir, and on Rocky Arroyo, which forms Rocky Arroyo Reservoir. Above elevation 3,980.0 ft, the pools of the two reservoirs combine to form Two Rivers Reservoir with a total capacity of 163,800 acre-ft, at elevation 4,032.0 ft, crest of ungated spillway. Capacity by original survey was 167,900 acre-ft. Capacity of Rio Hondo Reservoir, 142 acre-ft, from capacity table dated January 1990, between elevations 3,957.0 ft, sill of outlet gate, and 3,980.0. Capacity of Rocky Arroyo Reservoir, 12,860 acre-ft, from capacity table dated January 1990, between elevations 3,945.0, sill of outlet gate, and 3,980.0 ft. No dead storage in Rio Hondo Reservoir or Rocky Arroyo Reservoir. Primary objective of project is flood control. Outlet conduits in Rocky Dam have fixed openings. Figures given herein represent total contents at 2400 hours.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Rio Hondo Reservoir: Maximum contents, 1,260 acre-ft, July 29, 1965, elevation, 3,985.7 ft; no storage most of time. Rocky Arroyo Reservoir: Maximum contents, 6,090 acre-ft, June 18, 1965, elevation, 3,970.7 ft; no storage most of time.

EXTREMES FOR CURRENT YEAR.--Maximum contents, Rio Hondo Reservoir, no storage during year; Rocky Arroyo Reservoir, no storage during year; no contents both reservoirs most of time.

08390800 RIO HONDO BELOW DIAMOND A DAM, NEAR ROSWELL, NM

LOCATION.--Lat 33°18'05", long 104°43'12", in NE¹/₄SE¹/₄NE¹/₄ 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 with satellite telemetry 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.--Records good, except for estimated daily discharges which are poor. 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 0.1 mi upstream; flow from reservoir can also be discharged into Rocky Arroyo through Rocky Dam (see REMARKS for station 08390600). Several observations of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	30	1.8	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	21	e.26	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	19	e.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	12	e.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	3.3	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	6.2	.00	.00	.00	.00	.00
7	.19	.00	.00	.00	.00	.00	5.6	.00	.00	.00	.00	.00
8	.16	.00	.00	.00	.00	.00	7.8	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	4.0	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	5.2	.00	.00	.00	.00	.00
14	.01	.00	.00	.00	.00	.00	15	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	7.3	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	7.0	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	3.9	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.72	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	39	.00	.00	.12	.00	.00
27	.00	.00	.00	.00	.00	19	55	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	39	44	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	32	28	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	22	14	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	37	---	.00	---	.00	.00	---
TOTAL	0.36	0.00	0.00	0.00	0.00	149.00	330.99	2.06	0.00	0.12	0.00	0.00
MEAN	.012	.000	.000	.000	.000	4.81	11.0	.066	.000	.004	.000	.000
MAX	.19	.00	.00	.00	.00	39	55	1.8	.00	.12	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.7	.00	.00	.00	.00	296	657	4.1	.00	.2	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

	13.5	11.7	15.3	16.1	13.8	14.4	20.7	16.5	9.02	7.60	25.4	25.2
MEAN	13.5	11.7	15.3	16.1	13.8	14.4	20.7	16.5	9.02	7.60	25.4	25.2
MAX	151	122	118	128	82.9	122	176	127	74.7	52.3	137	116
(WY)	1986	1987	1985	1985	1987	1987	1987	1987	1992	1986	1984	1988
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1964	1964	1964	1964	1964	1964	1964	1967	1971	1974	1975	1973

SUMMARY STATISTICS

	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998	
ANNUAL TOTAL	3477.87		482.53		15.8	
ANNUAL MEAN	9.53		1.32		85.6	
HIGHEST ANNUAL MEAN					.24	
LOWEST ANNUAL MEAN					1976	
HIGHEST DAILY MEAN	204	Aug 3	55	Apr 27	459	Sep 8 1965
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 15	.00	Oct 1 1963
INSTANTANEOUS PEAK FLOW			59	Apr 27	659	Jul 29 1965
INSTANTANEOUS PEAK STAGE			2.31	Apr 27	4.91	Jul 29 1965
INSTANTANEOUS LOW FLOW			.00	Oct 1	.00	Oct 1 1963
ANNUAL RUNOFF (AC-FT)	6900		957		11430	
10 PERCENT EXCEEDS	33		.00		55	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated

08393610 RIO HONDO NEAR ROSWELL, NM

LOCATION.--Lat 33°24'26", long 104°28'27", in SW¹/₄SW¹/₄ sec. 25, T.10 S., R.24 E., Chaves County, Hydrologic Unit 13060008, on right bank at bridge 0.70 mi downstream from Berrendo Creek, 1.1 mi north on State Road 265 (intersection of Red Bridge Road and US 380) and 3.0 mi west to Main Street. Mouth at Pecos River mi 588.

DRAINAGE.-- 2,900 mi², approximately. (contributing area)

PERIOD OF RECORD.--June 1997 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,500 ft. above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by Two Rivers Reservoir (083906000) 25.2 mi upstream. Diversions and ground-water withdrawals for irrigation upstream from station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,470 ft³/s, June 5, 1997, gage height, 10.61 ft, on basis of slope-area measurement of peakflow, minimum 25 ft³/s, Sept. 13, 1997,

EXTREMES FOR CURRENT YEAR.--Maximum discharge 348 ft³/s, October 22, gage height, 7.19 ft; minimum daily 1.6 ft³/s, February 12, 13, and 18.

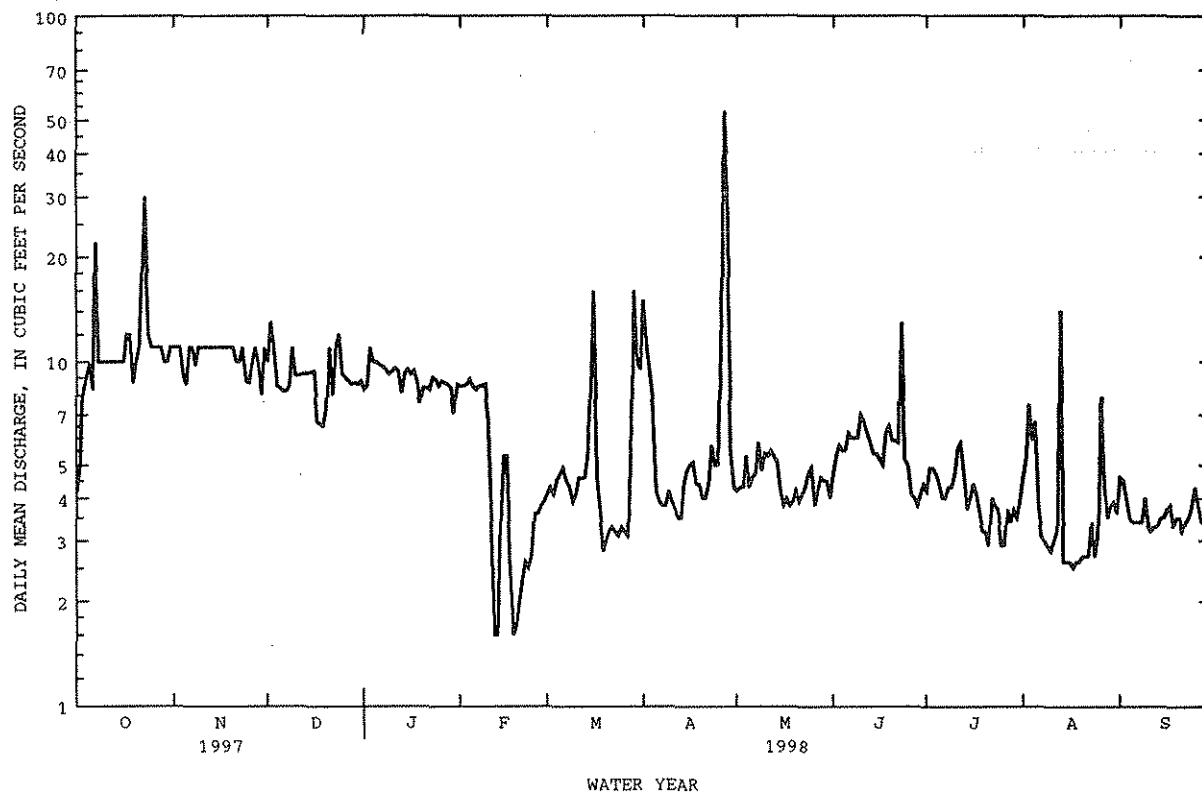
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	11	10	8.3	8.5	e4.1	15	4.2	4.7	4.2	4.6	4.6
2	4.9	11	13	8.5	8.5	e4.3	11	4.3	5.3	4.9	5.2	4.5
3	8.2	11	11	11	8.6	e4.1	9.1	4.3	5.7	4.9	7.5	4.0
4	9.0	9.1	8.5	10	8.9	e4.5	7.5	5.3	5.5	4.7	5.9	3.5
5	9.9	8.6	8.4	10	8.5	e4.7	4.2	4.3	5.5	4.4	6.7	3.4
6	8.3	11	8.2	9.8	8.3	4.9	3.9	4.6	6.2	4.0	3.8	3.4
7	22	11	8.2	9.7	8.5	4.5	3.8	4.7	6.0	4.0	3.1	3.4
8	e10	9.8	8.5	9.5	8.5	4.3	3.8	5.8	6.0	4.3	3.0	3.4
9	e10	11	11	9.2	8.6	3.9	4.2	4.8	6.0	4.3	2.9	4.0
10	e10	11	9.1	9.4	6.9	4.1	3.9	5.4	7.0	-4.7	2.8	3.3
11	e10	11	e9.1	9.6	3.4	4.6	3.7	5.3	6.7	5.6	3.0	3.2
12	e10	11	e9.2	9.4	1.6	4.6	3.5	5.5	6.2	5.8	3.2	3.3
13	e10	11	e9.2	8.1	1.6	4.6	3.5	5.3	5.8	4.7	14	3.3
14	e10	11	e9.3	9.2	3.4	5.4	4.4	5.1	5.4	3.7	2.6	3.5
15	10	11	e9.3	9.5	5.3	8.9	4.8	4.2	5.4	4.0	2.6	3.5
16	10	11	9.4	9.2	5.3	16	5.0	3.8	5.2	4.4	2.6	3.7
17	12	11	6.7	9.4	2.6	e4.6	5.1	4.0	5.0	4.1	2.5	3.8
18	12	11	6.6	8.8	1.6	e3.6	4.4	3.8	6.2	3.6	2.6	3.3
19	8.7	11	6.5	7.6	1.7	e2.8	4.4	3.9	6.5	3.2	2.6	3.5
20	10	11	7.3	8.4	2.0	e3.0	4.0	4.2	5.9	3.2	2.7	3.5
21	11	10	11	8.4	2.3	e3.2	4.0	3.9	5.9	2.9	2.7	3.2
22	18	10	8.0	8.3	2.6	e3.3	4.4	4.1	5.8	4.0	2.7	3.4
23	30	11	11	9.0	2.5	e3.2	5.7	4.3	13	3.8	3.4	3.5
24	12	8.8	12	8.9	2.7	3.1	5.0	4.7	5.2	3.7	2.7	3.8
25	11	8.7	9.2	8.5	3.6	3.3	5.0	4.9	5.0	2.9	3.1	4.3
26	11	9.9	9.0	8.8	e3.6	3.2	13	3.8	4.1	2.9	7.9	3.8
27	11	11	8.8	8.7	e3.8	3.1	53	4.2	4.0	3.7	4.3	3.4
28	11	9.9	8.6	8.6	e3.9	5.9	29	4.6	3.8	3.4	3.5	3.4
29	10	8.0	8.7	8.4	---	16	5.6	4.5	4.1	3.7	3.8	4.7
30	10	11	8.6	7.1	---	9.9	4.3	4.5	4.4	3.5	3.9	5.5
31	11	---	8.8	8.6	---	9.5	---	4.0	---	3.9	3.6	---
TOTAL	345.2	312.8	282.2	277.9	137.3	165.2	238.2	140.3	171.5	125.1	125.5	111.1
MEAN	11.1	10.4	9.10	8.96	4.90	5.33	7.94	4.53	5.72	4.04	4.05	3.70
MAX	30	11	13	11	8.9	16	53	5.8	13	5.8	14	5.5
MIN	4.2	8.0	6.5	7.1	1.6	2.8	3.5	3.8	3.8	2.9	2.5	3.2
AC-FT	685	620	560	551	272	328	472	278	340	248	249	220

WTR YR 1998 TOTAL 2432.3 MEAN 6.66 MAX 53 MIN 1.6 AC-FT 4820

e Estimated

RIO GRANDE BASIN
08393610 RIO HONDO NEAR ROSWELL, NM--Continued



08395500 PECOS RIVER NEAR LAKE ARTHUR, NM

LOCATION.--Lat 32°59'21", long 104°19'17", in SW¹/₄NE¹/₄ sec.27, T.15 S., R.26 E., Chaves County, Hydrologic Unit 13060007, on right bank 750 ft upstream from bridge on Yuma Road, 3.5 mi east of Lake Arthur, 7 mi upstream from Cottonwood Creek, 15 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. Elevation of gage is 3,327.07 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Lake Sumner (station 08384000) 180 mi upstream, since August 1937, and by Two Rivers Reservoir (station 08390600) 77 mi upstream, since July 1963. Diversions and ground-water withdrawals for irrigation of about 124,000 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year. No flow at times.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e79	111	106	113	96	66	134	e82	16	77	411	74
2	e74	108	112	117	96	65	123	e74	15	73	307	66
3	e72	97	114	123	94	62	109	e68	12	68	240	57
4	e71	96	117	126	95	62	108	e62	11	64	204	43
5	e70	109	115	140	96	66	104	e56	322	67	181	31
6	e69	359	113	143	102	62	100	e50	698	66	199	27
7	e72	897	111	142	111	65	98	e44	781	52	268	22
8	e95	1070	109	140	110	64	89	e42	862	48	168	22
9	e95	1160	105	137	109	65	89	e39	925	47	129	23
10	94	1230	102	133	108	84	88	e39	946	46	107	e21
11	88	1250	100	129	106	92	87	e40	1100	39	91	e20
12	81	1280	98	125	105	361	86	38	1070	39	82	e20
13	75	1310	95	123	101	826	82	33	969	41	77	e21
14	88	1110	92	121	97	938	69	37	1020	39	73	e20
15	73	465	90	120	96	979	65	38	1020	34	94	e18
16	71	339	93	119	97	1100	62	35	981	32	115	e17
17	69	294	93	118	100	1180	63	37	979	415	106	e25
18	69	256	92	115	100	1170	70	42	994	853	99	e37
19	69	218	90	113	96	1180	70	36	1010	895	74	e84
20	82	195	97	110	94	1200	70	35	1020	929	81	e540
21	88	178	97	109	94	1170	75	30	993	971	78	e948
22	93	157	102	107	93	1190	78	34	992	993	63	1040
23	104	147	121	106	93	1010	70	36	1010	1050	75	1110
24	128	139	127	105	91	338	88	31	1000	1050	102	1130
25	113	131	134	104	86	257	85	33	684	1020	81	1140
26	104	123	155	102	84	194	74	29	356	1080	61	1170
27	95	122	144	100	80	173	80	24	220	1170	54	1190
28	91	115	135	99	70	148	66	23	160	1160	47	1180
29	93	111	116	99	---	127	e80	21	123	1170	68	1200
30	104	109	112	98	---	130	e102	17	92	1180	106	1150
31	117	---	104	98	---	130	---	14	---	592	107	---
TOTAL	2686	13286	3391	3634	2700	14554	2564	1219	20381	15360	3948	12446
MEAN	86.6	443	109	117	96.4	469	85.5	39.3	679	495	127	415
MAX	128	1310	155	143	111	1200	134	82	1100	1180	411	1200
MIN	69	96	90	98	70	62	62	14	11	32	47	17
AC-FT	5330	26350	6730	7210	5360	28870	5090	2420	40430	30470	7830	24690

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

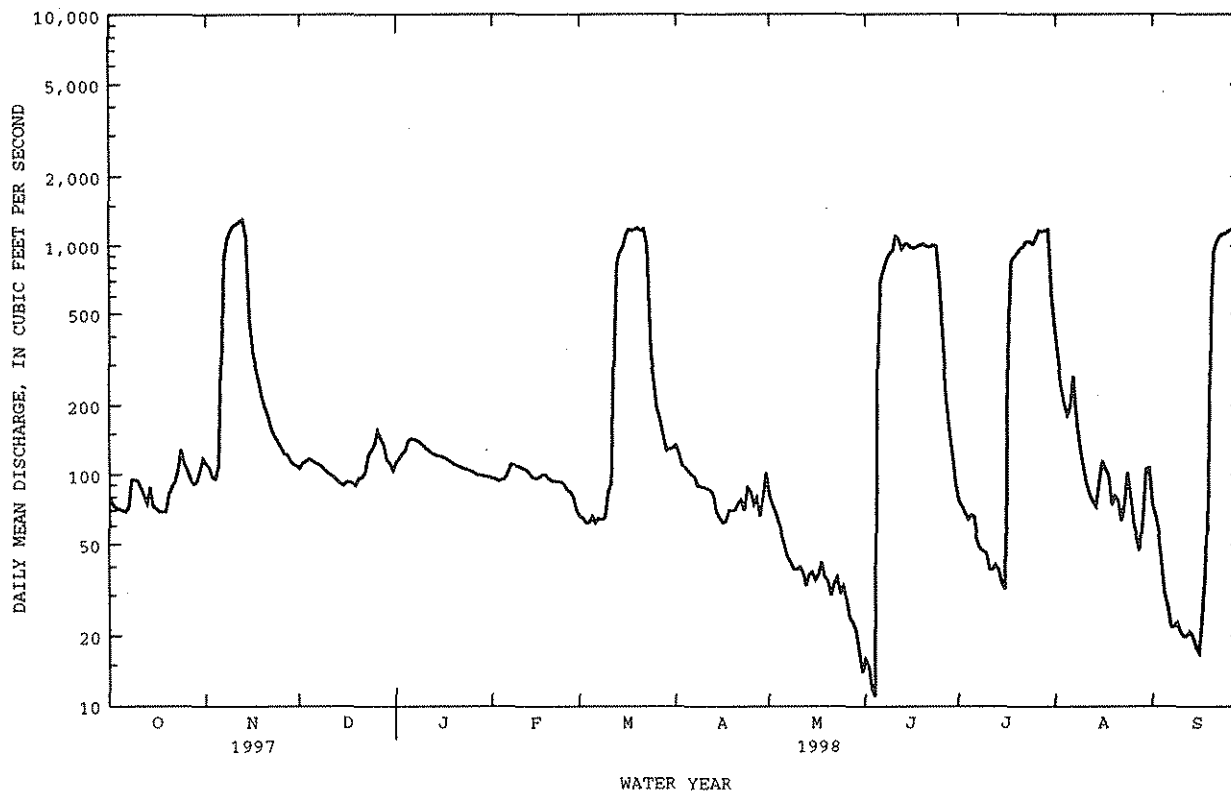
	MEAN	243	126	95.6	94.8	85.9	185	224	311	338	338	276	371
MAX	3701	983	546	451	446	682	1308	3673	2436	1521	913	5407	
(WY)	1942	1942	1942	1942	1942	1941	1942	1941	1941	1960	1941	1941	
MIN	3.89	32.0	29.9	34.5	26.6	16.6	7.35	11.9	4.78	1.02	.42	1.30	
(WY)	1965	1968	1967	1965	1965	1967	1967	1975	1977	1954	1964	1964	

RIO GRANDE BASIN

08395500 PECOS RIVER NEAR LAKE ARTHUR, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	87193		96169		224	
ANNUAL MEAN	239		263		1314	1941
HIGHEST ANNUAL MEAN					62.2	1964
LOWEST ANNUAL MEAN					39800	Sep 24 1941
HIGHEST DAILY MEAN	1510	Aug 14	1310	Nov 13	.00	Aug 21 1947
LOWEST DAILY MEAN	26	Jul 29	11	Jun 4	.10	Jul 26 1954
ANNUAL SEVEN-DAY MINIMUM	30	Jul 24	15	May 29	^a 49600	Sep 24 1941
INSTANTANEOUS PEAK FLOW			1360	Nov 13	21.90	Sep 24 1941
INSTANTANEOUS PEAK STAGE			7.60	Sep 30	^b .00	Oct 1 1946
INSTANTANEOUS LOW FLOW			8.8	Jun 4		
ANNUAL RUNOFF (AC-FT)	172900		190800		162600	
10 PERCENT EXCEEDS	999		1010		673	
50 PERCENT EXCEEDS	93		100		72	
90 PERCENT EXCEEDS	56		37		15	

e Estimated

^a From rating curve extended above 16,000 ft³/s, on basis of slope-area measurements at gage heights 21.77 ft.^b Also occurred in 1947, 1953, 1954, 1962, 1964.

08396500 PECOS RIVER NEAR ARTESIA, NM

LOCATION.--Lat 32°50'27", long 104°19'23", in NW¹/₄NW¹/₄ sec.18, T.17 S., R.27 E., Eddy County, Hydrologic Unit 13060007, on left bank 250 ft upstream from bridge on U.S. Highway 82, 4.3 mi east of Artesia, 7.0 mi upstream from Rio Penasco, and at mile 503.9.

DRAINAGE AREA.--15,300 mi², approximately (contributing area).

WATER-DISCHARGE RECORDS

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 with satellite telemetry. Elevation of gage is 3,291.92 ft above National Geodetic Vertical Datum of 1929 (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.--Water-discharge records fair except for estimated daily discharges, which are poor. Considerable flow regulation 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. No flow at times.

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 downstream from 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	99	114	112	e94	72	149	71	e8.8	80	364	80
2	75	95	115	121	e94	70	138	72	e12	67	259	68
3	70	91	116	121	e94	68	119	65	e9.4	61	203	60
4	68	86	118	127	e94	67	114	58	e9.2	57	180	57
5	68	90	119	128	98	68	105	53	98	54	158	53
6	71	153	115	134	99	68	98	49	507	62	164	45
7	78	527	115	134	108	66	90	43	579	51	192	36
8	82	650	115	131	112	66	87	42	663	48	182	33
9	78	718	113	131	110	67	83	e39	714	45	134	25
10	93	772	112	128	108	70	82	e38	732	43	116	27
11	94	871	111	125	106	88	83	e37	797	39	97	27
12	94	916	109	122	104	179	83	36	817	32	94	24
13	75	947	107	119	102	614	79	31	780	32	87	25
14	78	897	105	118	99	733	74	28	781	33	85	23
15	79	442	103	115	96	765	65	33	828	31	88	21
16	69	264	104	114	96	833	59	33	817	28	115	22
17	69	231	105	113	96	922	58	32	777	131	105	30
18	67	212	106	111	97	984	62	34	777	655	113	29
19	68	203	104	110	96	988	62	36	809	786	88	22
20	70	185	107	108	92	1040	66	32	853	859	81	250
21	82	172	112	106	92	1040	66	30	825	905	93	696
22	85	158	112	105	92	1030	60	27	855	937	77	882
23	98	150	127	102	92	994	69	31	869	943	71	969
24	105	145	135	102	90	457	68	30	884	944	92	1010
25	114	138	136	101	88	283	65	27	778	958	97	1010
26	101	131	146	101	84	256	73	29	339	982	73	1030
27	91	127	148	99	84	234	74	23	198	1040	63	1060
28	85	125	140	99	80	201	70	20	e140	1100	56	1110
29	83	120	131	97	---	173	71	19	e110	1070	50	1130
30	86	118	121	97	---	158	84	17	e92	1110	86	1160
31	96	---	114	97	---	155	---	12	---	e730	109	---
TOTAL	2551	9833	3635	3528	2697	12809	2456	1127	16458.4	13913	3772	11014
MEAN	82.3	328	117	114	96.3	413	81.9	36.4	549	449	122	367
MAX	114	947	148	134	112	1040	149	72	884	1110	364	1160
MIN	67	86	103	97	80	66	58	12	8.8	28	50	21
AC-FT	5060	19500	7210	7000	5350	25410	4870	2240	32650	27600	7480	21850

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1998, BY WATER YEAR (WY)

	MEAN	248	134	107	106	95.8	190	224	352	387	335	266	370
MAX	4203	1240	614	499	504	768	1292	3834	3495	1453	880	5704	
(WY)	1942	1942	1942	1942	1942	1941	1942	1941	1937	1960	1941	1941	
MIN	2.26	31.5	33.6	34.6	28.5	21.7	10.7	15.8	5.42	.77	.065	.27	
(WY)	1965	1968	1967	1965	1972	1981	1967	1975	1977	1954	1964	1964	

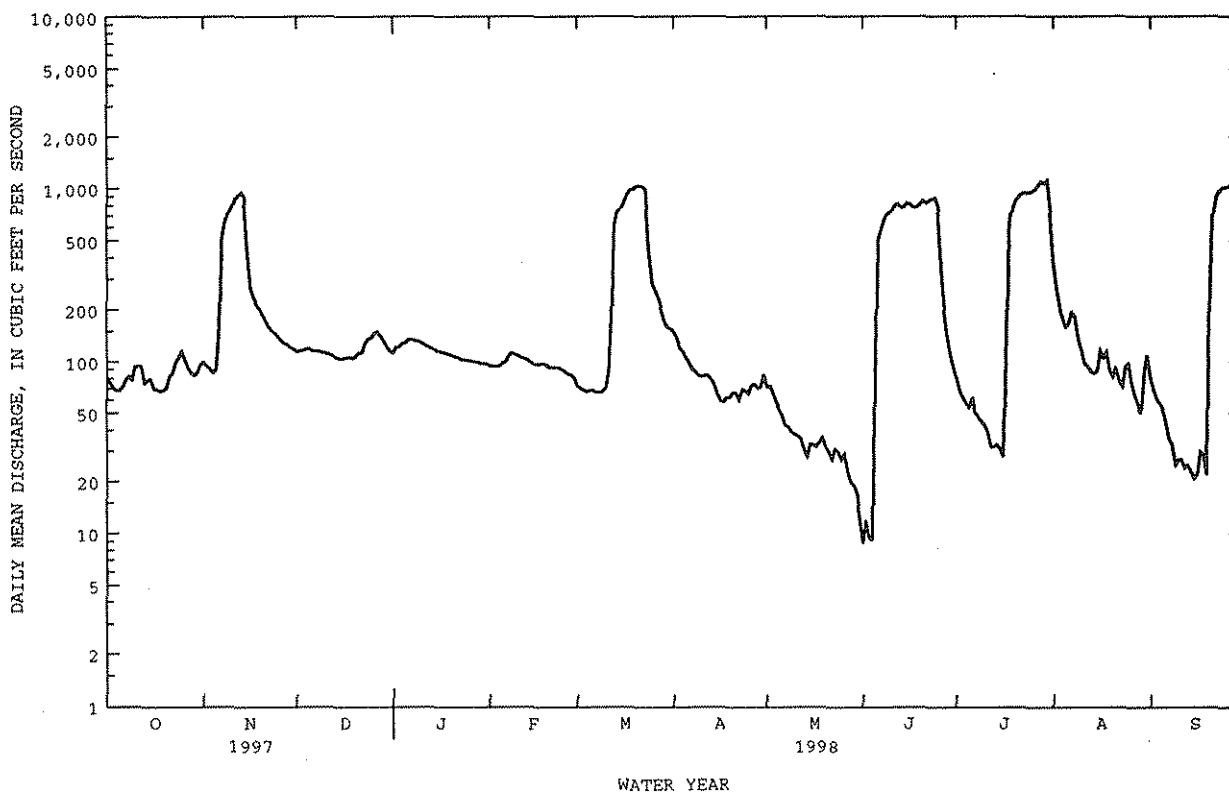
RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1937 - 1998	
ANNUAL TOTAL	80699		83793.4		235	
ANNUAL MEAN	221		230		1378	
HIGHEST ANNUAL MEAN					64.8	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	1480	Aug 20	1160	Sep 30	44300	Sep 25 1941
LOWEST DAILY MEAN	31	Jul 30	8.8	Jun 1	.00	Aug 14 1946
ANNUAL SEVEN-DAY MINIMUM	35	Jul 25	12	May 29	.00	Aug 14 1946
INSTANTANEOUS PEAK FLOW			1190	Sep 30	^a 51500	May 30 1937
INSTANTANEOUS PEAK STAGE			7.84	Sep 30	14.70	May 30 1937
INSTANTANEOUS LOW FLOW			6.7	Jun 5	.00	Oct 1 1934
ANNUAL RUNOFF (AC-FT)	160100		166200		170400	
10 PERCENT EXCEEDS	918		830		668	
50 PERCENT EXCEEDS	95		99		78	
90 PERCENT EXCEEDS	58		33		16	

e Estimated

* From a slope-area measurement made at a site 15 mi upstream.



08396500 PECOS RIVER NEAR ARTESIA, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CaCO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)
DEC 12...	1300	109	10700	8.1	7.0	3.0	685	11.0	95	2000	1900	520
MAR 12...	1345	93	7100	8.4	15.0	10.0	683	10.7	109	2100	2000	540
APR 28...	1030	84	8440	--	15.0	13.5	682	10.6	117	2200	2100	550
SEP 11...	1100	26	8480	--	26.0	21.0	680	--	--	2100	1900	500
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)
DEC 12...	180	1000	10	6.4	225	0	184	183	1700	1700	.8	16
MAR 12...	180	970	9	2.7	170	0	139	138	1800	1700	.8	9.6
APR 28...	200	1000	9	8.4	137	5	120	136	1800	1800	.9	10
SEP 11...	200	1100	10	9.8	134	8	124	127	1600	1900	.6	20
DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
DEC 12...	5240	1.47	.10	1.6	.31	.27	.8	.6	.04	.02	.01	2.9
MAR 12...	5220	.209	.01	.22	.06	.15	.4	.2	.03	.02	.01	2.7
APR 28...	5450	.278	.022	.300	.017	.26	.48	.28	<.020	<.020	<.010	2.3
SEP 11...	5370	.524	.02	.55	.07	.20	.5	.3	.05	<.01	<.01	2.5
DATE	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
DEC 12...	7	<4	<1	39	<4	191	<4	<4	<4	7	<60	<4
MAR 12...	5	<3	<1	27	<3	369	<3	<3	<3	5	<40	<3
APR 28...	<4	<4	<1	38	<4	393	<4	<4	<4	<4	<50	<4
SEP 11...	<4	<4	2	76	<4	593	<4	<4	<4	4	<100	<4

08396500 PECOS RIVER NEAR ARTESIA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITRO- GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOS- PHORUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)
DEC 12...	14	<.1	4	6	3	2	<4	8	9	<.2	30	48
MAR 12...	32	<.1	3	6	2	1	<3	7	--	--	--	--
APR 28...	26	<.1	4	5	2	<1	<4	<4	--	--	--	--
SEP 11...	14	<.1	<4	4	1	1	<4	6	--	--	--	--

[illegible]

08398500 RIO PENASCO AT DAYTON, NM

LOCATION.--Lat 32°44'36", long 104°24'49", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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.--Records good. Diversions and ground-water withdrawals for irrigation of about 3,000 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year. No flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about Sept. 22, 1941, reached a stage of about 9 ft, from floodmarks, 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 36,000 ft³/s, for peak of Oct. 6 or 7, 1954.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	2.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.47	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.099	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	2.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	6.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

MEAN	5.19	1.55	.000	.000	.000	.000	.018	1.23	12.6	8.99	16.1	10.9
MAX	201	72.8	.016	.000	.000	.000	.70	41.0	528	221	328	372
(WY)	1955	1984	1975	1952	1952	1952	1957	1965	1986	1968	1966	1974
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1952	1952	1952	1952	1952	1952	1951	1952	1951	1954	1951	1951

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1951 - 1998
ANNUAL TOTAL	3.06	3.06	
ANNUAL MEAN	.008	.008	4.82
HIGHEST ANNUAL MEAN			43.4
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	2.5 Oct 6	2.5 Oct 6	9490
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 9	.00
INSTANTANEOUS PEAK FLOW		42 Oct 6	^a 29800
INSTANTANEOUS PEAK STAGE		1.66 Oct 6	^b 16.40
INSTANTANEOUS LOW FLOW		.00 Oct 1	.00
ANNUAL RUNOFF (AC-FT)	6.1	6.1	3490
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

^a From rating curve extended above 7,800 ft³/s, on basis of slope-area measurements at gage heights 6.82 ft and 7.90 ft, at previous site and datum.

^b From floodmarks, present site and datum.

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 former Lake McMillan, 6.0 mi northeast of Lake-wood, 12 mi southeast of Artesia, and at mile 492.1.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,268.53 ft above National Geodetic Vertical Datum of 1929 (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.--Records good except for estimated daily discharges, which are poor. Considerable flow regulation 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 Brantley Lake (station 08401450). Several observations of water temperature were made during the year. Instantaneous peaks are not published because flood channel is separate from Kaiser Channel and is not gaged.

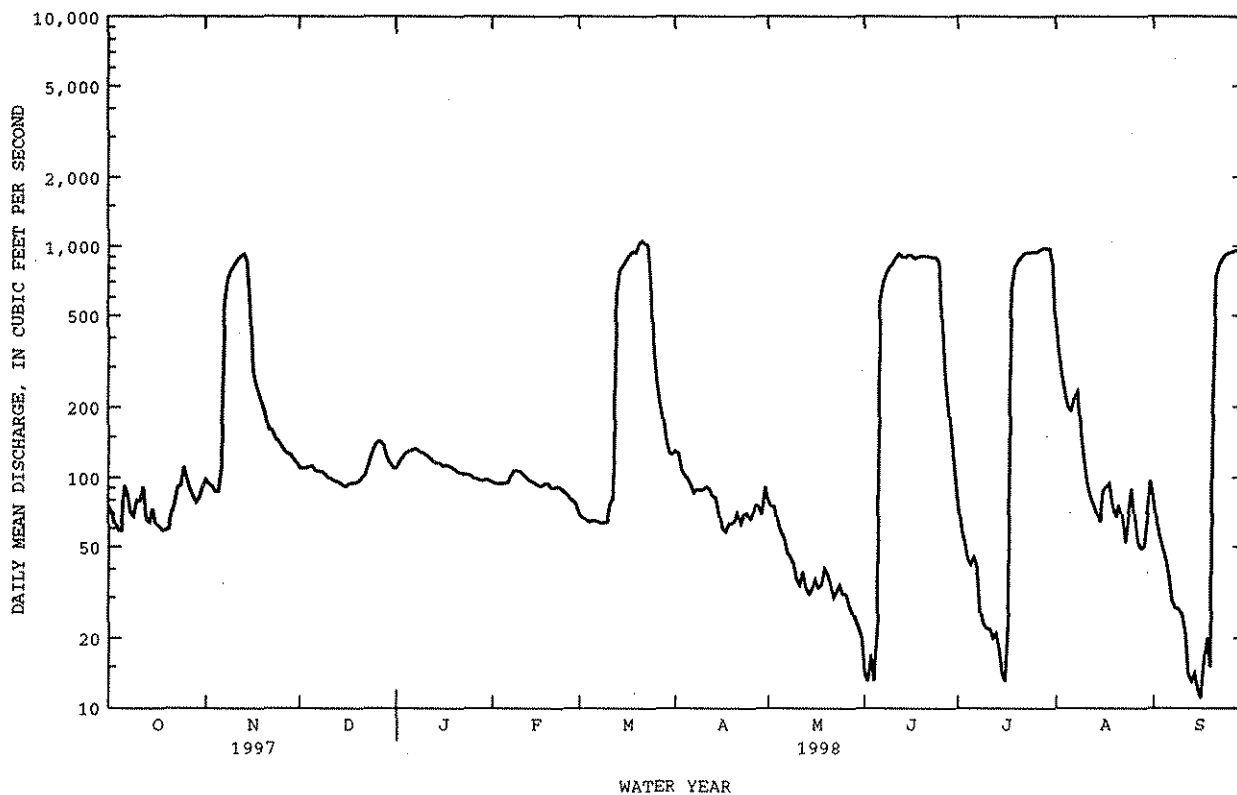
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	98	110	e110	96	70	130	79	14	78	462	83
2	71	94	110	e117	94	67	127	75	13	60	346	64
3	63	92	110	e122	94	66	108	75	17	52	278	55
4	59	87	111	e128	94	64	102	64	13	44	234	49
5	59	87	112	e130	95	65	99	58	23	42	202	44
6	92	112	107	e131	95	65	93	55	583	45	194	37
7	85	573	106	e133	102	64	86	47	700	41	219	e29
8	71	723	106	e131	107	63	89	45	768	26	234	e27
9	68	786	104	128	107	64	88	42	812	e23	153	e27
10	80	826	100	127	106	64	89	36	842	e22	119	e25
11	79	872	99	124	103	77	91	34	892	e22	95	e21
12	91	900	97	121	100	82	89	39	928	e20	83	14
13	66	923	96	117	97	e612	83	33	896	e21	77	13
14	64	869	95	115	96	e787	82	31	892	e18	70	14
15	73	584	92	115	94	e822	70	33	915	14	64	12
16	63	288	92	112	92	e865	60	36	909	13	88	11
17	61	250	94	113	92	e912	58	33	884	26	91	16
18	59	227	95	112	94	e943	63	34	895	640	94	20
19	59	208	95	110	94	e935	63	40	907	811	77	15
20	60	189	96	108	90	1020	65	38	905	856	67	177
21	70	161	100	105	90	1050	70	34	903	896	76	741
22	76	160	102	105	91	1020	63	30	895	929	67	833
23	91	149	113	103	90	1010	69	32	892	936	52	881
24	92	143	e125	103	87	e699	70	34	894	939	69	918
25	111	137	e136	102	84	e350	66	31	838	939	89	933
26	98	131	e143	99	81	e260	69	31	436	942	66	939
27	89	127	e143	99	79	e210	76	28	265	965	52	955
28	83	126	e137	97	77	180	75	e26	195	981	49	961
29	78	120	e122	97	---	146	69	e24	146	972	50	966
30	82	116	e115	98	---	127	91	22	106	975	68	983
31	91	---	e110	97	---	126	---	20	---	828	97	---
TOTAL	2359	10158	3373	3509	2621	12885	2453	1239	18378	13176	3982	9863
MEAN	76.1	339	109	113	93.6	416	81.8	40.0	613	425	128	329
MAX	111	923	143	133	107	1050	130	79	928	981	462	983
MIN	59	87	92	97	77	63	58	20	13	13	49	11
AC-FT	4680	20150	6690	6960	5200	25560	4870	2460	36450	26130	7900	19560

MEAN	135	88.3	78.4	79.5	74.3	159	153	242	255	273	248	202
MAX	695	339	272	307	291	417	489	1220	748	886	698	800
(WY)	1955	1998	1987	1987	1987	1987	1987	1973	1995	1960	1994	1988
MIN	.000	26.1	29.2	31.4	25.3	19.2	8.12	15.3	1.86	.041	.000	.000
(WY)	1965	1968	1965	1965	1972	1971	1967	1964	1977	1990	1964	1964

08399500 PECOS RIVER (KAISER CHANNEL) NEAR LAKEWOOD, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1950 - 1998	
ANNUAL TOTAL	78391		83996		166	
ANNUAL MEAN	215		230		353	1987
HIGHEST ANNUAL MEAN					64.1	1964
LOWEST ANNUAL MEAN						
HIGHEST DAILY MEAN	1120	Aug 21	1050	Mar 21	2920	Jul 12 1960
LOWEST DAILY MEAN	32	Jul 30	11	Sep 16	.00	Aug 21 1951
ANNUAL SEVEN-DAY MINIMUM	36	Jul 25	14	Sep 12	.00	Jun 29 1953
INSTANTANEOUS PEAK FLOW			1070	Mar 20	1370	Sep 14 1996
INSTANTANEOUS PEAK STAGE			9.08	Mar 20	10.84	Jul 1 1996
INSTANTANEOUS LOW FLOW			6.2	Sep 16	.50	Aug 14 1995
ANNUAL RUNOFF (AC-FT)	155500		166600		120200	
10 PERCENT EXCEEDS	886		893		592	
50 PERCENT EXCEEDS	91		95		61	
90 PERCENT EXCEEDS	55		31		11	

e Estimated



RIO GRANDE BASIN

08400000 FOURMILE DRAW NEAR LAKEWOOD, NM

LOCATION.--Lat 32°40'20", long 104°22'07", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.10, T.19 S., R.26 E., Eddy County, Hydrologic Unit 13060011, in left side of channel 360 ft downstream from ford on Lake 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.--WDR NM-68-1: 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.--Records good except for estimated daily discharges, which are poor. No surface diversions upstream from station. No flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	e.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	e.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1998, BY WATER YEAR (WY)

	MEAN	1.73	.000	.000	.000	.000	.000	.001	.91	9.25	2.86	16.2	9.82
MAX	73.0	.003	.000	.000	.000	.000	.000	.047	35.2	403	78.0	488	424
(WY)	1955	1959	1952	1952	1952	1952	1952	1982	1979	1986	1968	1966	1974
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1952	1952	1952	1952	1952	1952	1952	1952	1952	1953	1954	1952	1952

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1952 - 1998
ANNUAL MEAN			3.48
HIGHEST ANNUAL MEAN			41.6
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN			13000
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Aug 23 1966
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1951
INSTANTANEOUS PEAK FLOW		.00 Sep 30	.00 Aug 23 1966
INSTANTANEOUS PEAK STAGE		.00 Sep 30	.00 Aug 23 1966
INSTANTANEOUS LOW FLOW		.00 Oct 1	.00 Oct 1 1951
ANNUAL RUNOFF (AC-FT)			2520
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

a From rating curve extended above 5,000 ft³/s, on basis of slope-area measurement of peak flow.

b From floodmarks, present datum.

08401450 BRANTLEY LAKE NEAR CARLSBAD, NM

LOCATION.--Lat 32°32'48", long 104°22'43", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, in control tower at Brantley Dam, 2.4 mi downstream from South Seven Rivers, 4.2 mi southeast of Seven Rivers, 6.0 mi south of Lakewood, 11.5 mi northwest of Carlsbad, and at mile 478.6.

DRAINAGE AREA.--17,650 mi², approximately (contributing area).

PERIOD OF RECORD.--August 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,202.5 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Lake is formed by a concrete and earthfill dam on Pecos River. Storage began August 31, 1988. Capacity, 1,008,000 acre-ft, from capacity table dated June 1992, between elevations 3,202.5 ft and 3,303.5 ft. Dead storage 2,010 acre-ft. Lake was created primarily for irrigation storage and flood control.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 49,270 acre-ft, Sept. 22-24, 1991, elevation, 3,257.60 ft; minimum contents, 2,040 acre-ft, May 26, 1990, elevation, 3,224.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 47,990 acre-ft, Mar. 28, elevation, 3,255.69 ft; minimum, 15,290 acre-ft, Nov. 7, elevation, 3,241.39 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 0700 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35210	20420	19140	21040	25550	28040	46060	31620	19420	30910	32660	24030
2	34770	19510	19350	21170	25660	28060	45470	31650	19040	30180	32710	23880
3	34280	18570	19510	21170	25760	28080	44830	31650	18390	29580	32540	23720
4	33880	17670	19680	21170	25830	28110	44100	31480	17760	29190	32230	23400
5	33430	16760	19880	21700	25970	28200	43560	31260	17170	29210	31890	23130
6	33280	15900	20020	21890	26020	28130	43090	31000	16960	29210	31530	22970
7	33280	15290	19420	22080	26100	28200	42610	30770	17710	29190	31190	22830
8	33430	15670	18900	22230	26230	28170	42140	30510	18560	29170	31030	22540
9	33480	16250	18400	22440	26380	28170	41790	30300	19470	29050	30810	22250
10	33500	16870	18590	22620	26490	28200	41360	29950	20080	28650	30300	21720
11	33600	17510	18730	22830	26550	28260	40960	29810	21000	27880	29830	21150
12	33700	18290	18880	22970	26700	28260	40500	29580	22100	27050	29240	20470
13	33730	19190	18400	23110	26770	28670	40130	29350	23190	26170	28650	19770
14	33730	19930	17710	23270	26880	29930	39850	28850	24230	25260	28060	19440
15	33210	20560	17920	23420	26960	31740	39340	28350	25260	24660	27730	19050
16	32810	20040	18120	23600	27090	33230	38790	27840	26310	23940	27530	18710
17	32370	19520	18250	23780	27160	34850	38100	27360	27250	22830	27530	18220
18	31940	18850	18420	23920	27250	36670	37420	26680	27970	21660	27620	17670
19	31410	18090	18520	24030	27330	38460	36810	26080	28600	21940	27380	17190
20	31050	17360	18710	24210	27420	40190	36250	25400	29300	22170	27030	16900
21	30580	16630	18930	24310	27510	41970	35490	24720	29950	22400	26550	17120
22	29860	17000	19070	24450	27620	43680	34920	23990	30670	22400	26550	18250
23	29370	17330	19400	24580	27640	45500	34490	23340	31310	22540	26530	19330
24	24170	17670	19540	24660	27750	46920	34030	22730	31910	23560	26470	20470
25	28000	17920	19810	24780	27840	47680	33650	22190	32520	24510	26270	21620
26	26940	18150	19990	24930	27880	47720	33180	21720	32960	25640	25950	22820
27	25830	18390	20180	25010	27910	47850	32710	21280	32810	27110	25430	24130
28	24780	18640	20330	25110	27970	47990	32300	20930	32370	28600	24680	25430
29	23780	18830	20560	25230	---	47550	31910	20710	31940	30040	24330	26920
30	22770	18980	20710	25340	---	47180	31720	20260	31530	31190	24070	28420
31	21580	---	20840	25450	---	46500	---	19790	---	32230	24090	---
MAX	35210	20560	20840	25450	27970	47990	46060	31650	32960	32230	32710	28420
MIN	21580	15290	17710	21040	25550	28040	31720	19790	16960	21660	24070	16900
(+)	3245.15	3243.71	3244.75	3247.09	3248.26	3255.45	3249.88	3244.17	3248.80	3250.09	3246.43	3248.46
(++)	-14070	-2600	+1860	+4610	+2520	+18530	-14780	-11930	+11740	+700	-8140	+4330
CAL YR 1997	MAX 43620	MIN 15290	(++)	+420								
WTR YR 1998	MAX 47990	MIN 15290	(++)	-7230								

(+) ELEVATION, IN FEET, AT END OF MONTH
(++) CHANGE IN CONTENTS, IN ACRE-FEET

LOCATION.--Lat 32°32'38", long 104°22'00", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.27, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on left bank 0.8 mi downstream from Brantley Dam, 3.2 mi downstream from South Seven Rivers, 4.7 mi southeast of Seven Rivers, 6.4 mi south of Lakewood, 11.0 mi northwest of Carlsbad, and at mile 477.8.

PERIOD OF RECORD.--January 1947 to September 1950, October 1971 to current year. Prior to October 1989 published as "below Major Johnson Springs." Prior to October 1988, operated as a low-flow station only. Records prior to October 1971 not equivalent due to spring inflow between sites.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,191.15 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation reference point). Prior to October 1971, at site 1.3 mi upstream at different datum. October 1971 to June 4, 1985, at site 0.8 mi upstream at datum 7.29 ft higher. Prior to October 1988, at site 0.2 mi downstream at same datum.

REMARKS.--Water-discharge records fair, except for daily discharges which are poor. Flow completely regulated by Brantley Lake (station 08401450) 0.8 mi upstream since August 1988. Diversions and ground-water withdrawals for irrigation of about 173,000 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284	659	28	33	33	32	e397	92	e250	e400	280	124
2	284	626	28	33	33	32	427	60	e286	e410	275	124
3	283	622	27	33	33	32	427	110	e305	e305	291	170
4	282	618	27	33	32	32	e427	140	e332	e115	300	197
5	168	611	27	33	33	32	e366	141	e270	e35	305	134
6	197	606	248	33	33	32	e315	139	e225	e30	305	96
7	118	604	381	32	33	30	275	139	e225	e29	271	131
8	32	606	378	33	34	31	275	138	e290	30	251	152
9	31	609	161	33	32	32	275	138	e340	133	287	245
10	31	614	29	33	33	32	273	138	e316	337	337	299
11	32	619	29	33	33	32	e272	137	e270	408	354	353
12	30	624	169	33	33	33	e252	139	e235	451	353	383
13	31	626	459	32	33	33	e239	204	e210	474	353	271
14	189	630	194	33	34	32	e273	238	e190	384	288	206
15	287	633	31	33	33	32	272	266	e187	373	194	205
16	288	632	30	34	32	32	348	281	e220	535	82	267
17	288	629	31	33	33	33	392	341	e300	659	31	302
18	288	625	31	34	32	32	391	e400	e388	622	139	301
19	287	620	30	33	33	33	390	e400	e400	623	237	235
20	285	617	30	34	32	33	389	e415	e405	668	290	197
21	401	249	30	33	33	33	388	e430	e405	740	150	198
22	466	27	30	33	32	35	315	e430	e405	771	57	236
23	512	26	31	33	33	35	275	e385	e430	486	57	260
24	439	27	31	33	32	35	273	e340	e448	331	125	261
25	562	27	31	34	31	34	273	e323	e440	271	229	262
26	656	27	31	33	31	33	271	e298	e400	123	302	227
27	652	28	31	34	31	31	271	e240	e370	57	324	209
28	648	28	31	33	32	173	271	e175	e370	58	324	145
29	642	28	32	33	---	252	215	e210	e325	176	220	106
30	695	28	32	34	---	308	157	e232	e361	307	89	65
31	721	---	32	34	---	340	---	e234	---	343	92	---
TOTAL	10109	12925	2710	1028	912	1951	9384	7353	9598	10684	7192	6361
MEAN	326	431	87.4	33.2	32.6	62.9	313	237	320	345	232	212
MAX	721	659	459	34	34	340	427	430	448	771	354	383
MIN	30	26	27	32	31	30	157	60	187	29	31	65
AC-FT	20050	25640	5380	2040	1810	3870	18610	14580	19040	21190	14270	12620

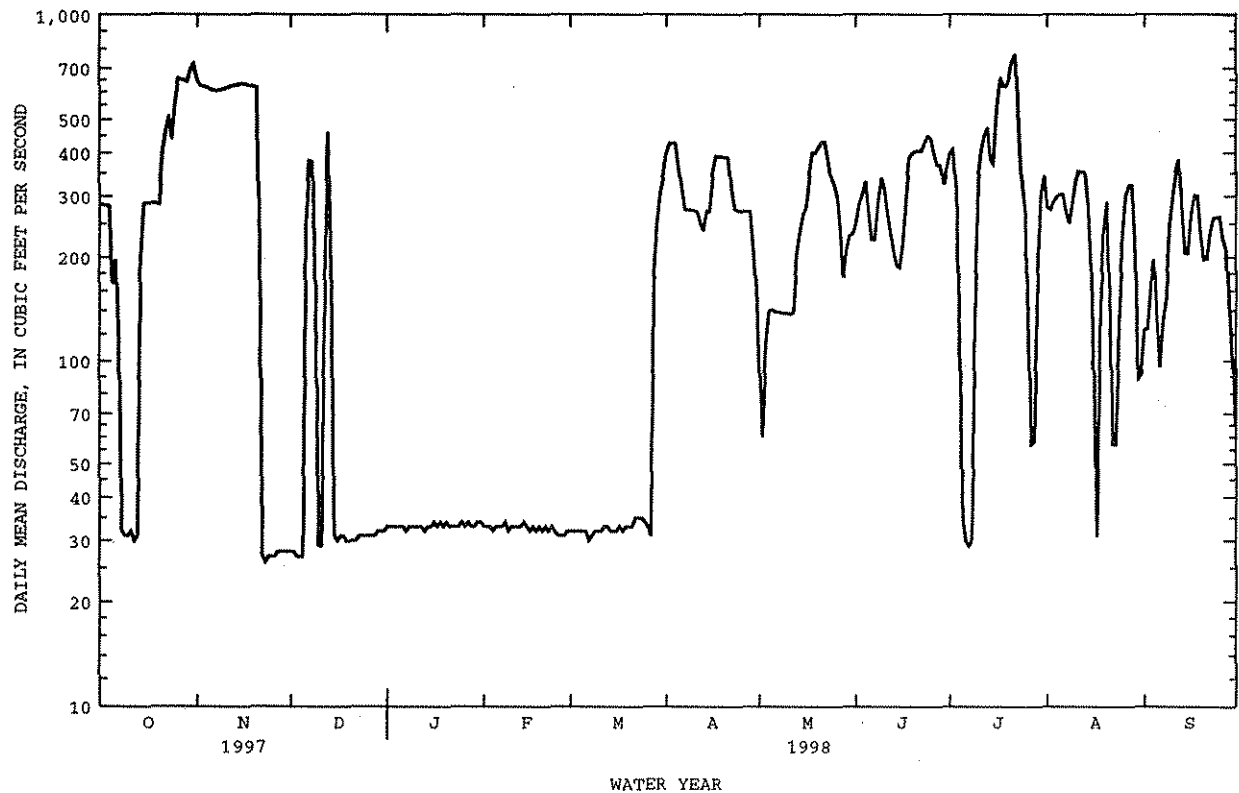
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1998, BY WATER YEAR (WY)

MEAN	165	62.8	51.2	43.9	54.8	75.1	234	216	225	235	201	170
MAX	412	431	460	297	300	149	313	1058	641	527	305	500
(WY)	1995	1998	1992	1987	1987	1994	1998	1973	1992	1995	1995	1991
MIN	22.6	5.92	1.22	3.49	20.6	19.1	136	79.9	66.5	11.3	18.4	50.9
(WY)	1979	1989	1995	1995	1978	1990	1981	1976	1977	1976	1981	1976

08401500 PECOS RIVER BELOW BRANTLEY DAM NEAR CARLSBAD, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1972 - 1998	
ANNUAL TOTAL	72083		80207		152	
ANNUAL MEAN	197		220		282	
HIGHEST ANNUAL MEAN					69.5	
LOWEST ANNUAL MEAN					2050	
HIGHEST DAILY MEAN	739	Jul 21	771	Jul 22	Sep 3 1972	
LOWEST DAILY MEAN	20	Apr 29	26	Nov 23	Nov 20 1994	
ANNUAL SEVEN-DAY MINIMUM	20	Apr 28	27	Nov 22	Nov 22 1988	
ANNUAL RUNOFF (AC-FT)	143000		159100		110200	
10 PERCENT EXCEEDS	493		479		336	
50 PERCENT EXCEEDS	141		204		83	
90 PERCENT EXCEEDS	25		31		22	

e Estimated



08401900 ROCKY ARROYO AT HIGHWAY BRIDGE, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'23", long 104°22'28", in SE¹/₄SE¹/₄ 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 mi², approximately.

PERIOD OF RECORD.--November 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. Prior to February 1985, at site 60 ft downstream at same datum.

REMARKS.--Records good, except for estimated daily discharges which are fair. Diversions for irrigation of 220 acres, upstream from station.

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 floodmarks, on downstream end of bridge pier, by slope-area measurement at site 5 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	e.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	e.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	e.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

MEAN	8.80	.24	.016	.000	.000	.000	.059	2.23	16.9	2.56	24.2	19.5
MAX	185	7.67	.56	.002	.000	.000	1.50	37.6	468	19.3	616	335
(WY)	1975	1975	1975	1975	1964	1964	1965	1979	1986	1964	1966	1974
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1964	1964	1964	1964	1964	1964	1964	1964	1964	1965	1964	1964

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1964 - 1998
ANNUAL TOTAL	244.01		
ANNUAL MEAN	.67		6.22
HIGHEST ANNUAL MEAN			53.9
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	244	Jun 27	13900
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
INSTANTANEOUS PEAK FLOW		.00 Oct 1	.00
INSTANTANEOUS PEAK STAGE		.00 Oct 1	15.35
INSTANTANEOUS LOW FLOW		.00 Oct 1	.00
ANNUAL RUNOFF (AC-FT)	484		4510
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

^a From rating curve extended above 8,500 ft³/s, on basis of slope-area measurement of peak flow.

08402000 PECOS RIVER AT DAMSITE 3, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'40", long 104°19'58", 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.--Water-stage recorder. Elevation of gage is 3,171.31 ft above National Geodetic Vertical Datum of 1929 (levels by 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.--Records good. Flow regulated by Brantley Lake (station 08401450) 4.8 mi upstream and other reservoirs and diversion dams. Diversions and ground-water withdrawals for irrigation of about 17,300 acres, 1959 determination, upstream from station. Discharge represents inflow to Lake Avalon. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks that 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	739	23	28	32	32	386	104	258	406	295	110
2	286	681	26	28	32	32	433	61	277	410	269	113
3	285	676	26	28	32	31	433	99	302	329	289	143
4	285	668	26	28	32	31	434	143	328	149	296	177
5	182	664	26	28	32	32	377	148	278	30	302	139
6	189	654	204	29	32	33	293	149	229	26	302	90
7	147	650	390	31	31	32	266	149	227	26	275	110
8	32	653	390	31	31	31	266	148	283	25	246	136
9	29	657	212	31	29	31	265	147	337	93	270	209
10	29	655	31	31	31	31	263	147	314	303	322	286
11	29	654	31	31	32	31	263	149	258	410	344	331
12	29	561	116	31	33	32	246	148	234	445	344	378
13	29	605	476	31	33	31	232	201	210	480	347	294
14	157	672	255	31	33	31	246	252	183	410	293	196
15	292	676	31	31	33	32	261	276	183	368	195	196
16	292	676	30	31	32	32	332	296	212	534	95	239
17	292	675	30	30	32	31	385	349	295	699	28	282
18	292	667	30	30	32	31	387	395	377	682	97	282
19	292	667	30	30	32	30	383	394	404	661	206	233
20	292	663	31	30	33	30	383	411	408	712	261	183
21	391	360	30	30	33	31	383	425	410	803	175	183
22	484	27	29	30	33	30	328	423	410	856	52	208
23	528	25	32	30	33	30	276	381	424	576	52	235
24	474	25	31	31	34	31	276	341	443	344	94	241
25	569	24	31	31	32	31	279	318	439	288	194	242
26	715	23	31	32	32	30	279	295	393	149	272	219
27	710	23	30	32	32	26	278	234	366	59	303	193
28	702	23	28	32	32	125	279	175	369	59	306	145
29	697	23	28	32	---	237	233	205	332	146	231	91
30	749	23	28	32	---	286	165	232	350	293	102	67
31	800	---	28	32	---	332	---	235	---	344	67	---
TOTAL	10562	13789	2740	943	900	1816	9310	7430	9533	11115	6924	5951
MEAN	341	460	88.4	30.4	32.1	58.6	310	240	318	359	223	198
MAX	800	739	476	32	34	332	434	425	443	856	347	378
MIN	29	23	23	28	29	26	165	61	183	25	28	67
AC-FT	20950	27350	5430	1870	1790	3600	18470	14740	18910	22050	13730	11800

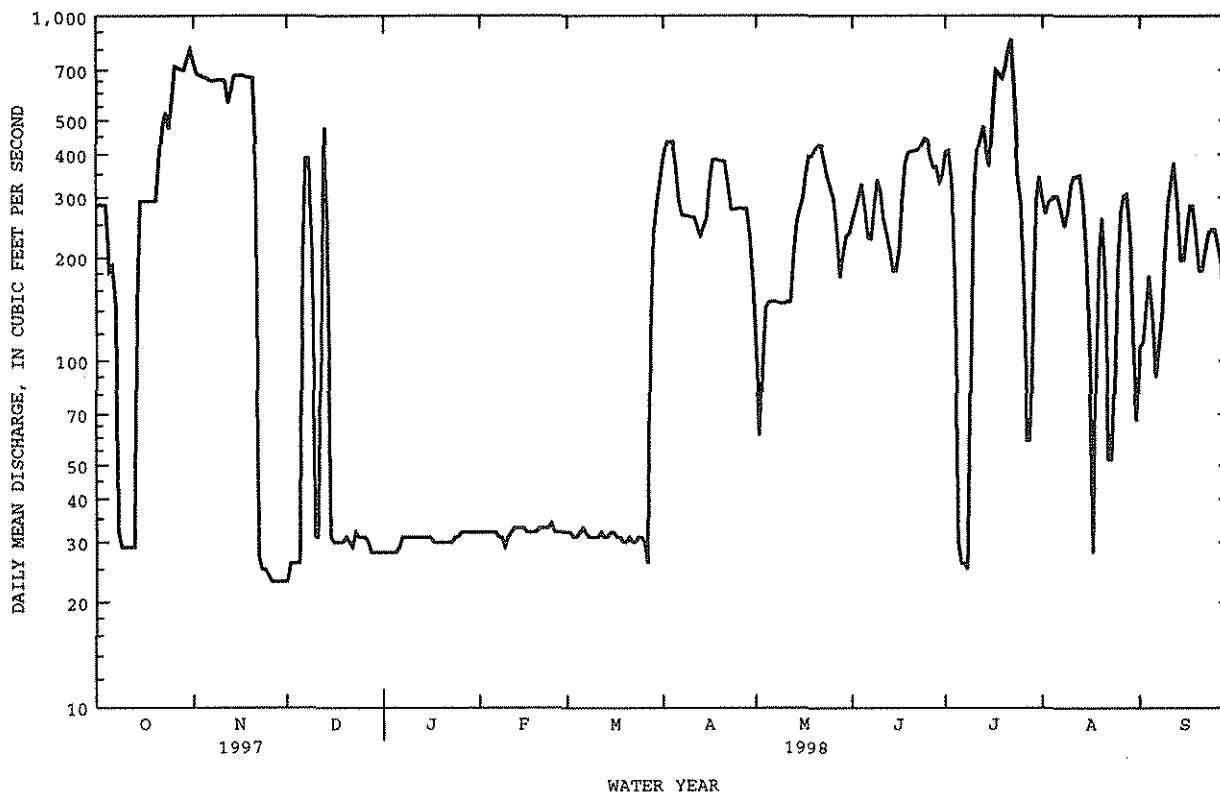
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998, BY WATER YEAR (WY)

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
MEAN	199	81.4	72.3	61.8	67.1	85.7	252	195	228	252	265	211
MAX	2609	464	421	284	293	382	345	1055	1892	794	2267	1156
(WY)	1955	1987	1992	1987	1987	1987	1945	1973	1986	1960	1966	1974
MIN	9.91	5.71	1.04	1.98	19.5	17.7	133	46.4	18.6	10.8	21.5	12.3
(WY)	1965	1989	1995	1995	1993	1965	1981	1946	1946	1976	1947	1964

RIO GRANDE BASIN

08402000 PECOS RIVER AT DAMSITE 3, NEAR CARLSBAD, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1939 - 1998	
ANNUAL TOTAL	73485		81013		165	
ANNUAL MEAN	201		222		395	
HIGHEST ANNUAL MEAN					66.8	
LOWEST ANNUAL MEAN					1955	
HIGHEST DAILY MEAN	808	Jul 21	856	Jul 22	39000	Aug 23 1966
LOWEST DAILY MEAN	22	Jan 31	23	Nov 26	.00	Dec 21 1988
ANNUAL SEVEN-DAY MINIMUM	23	Jan 29	23	Nov 25	.46	Dec 15 1988
INSTANTANEOUS PEAK FLOW			856	Jul 21	^a 69000	Aug 23 1966
INSTANTANEOUS PEAK STAGE			3.62	Jul 21	^b 21.32	Aug 23 1966
INSTANTANEOUS LOW FLOW			19	Mar 26	.00	Dec 21 1988
ANNUAL RUNOFF (AC-FT)	145800		160700		119200	
10 PERCENT EXCEEDS	541		502		346	
50 PERCENT EXCEEDS	132		196		93	
90 PERCENT EXCEEDS	24		30		22	

^a From rating curve extended above 25,000 ft³/s, on basis of slope-area measurement at gage height 19.53 ft.^b From floodmarks at present datum.

08403500 CARLSBAD MAIN CANAL AT HEAD, NEAR CARLSBAD, NM

LOCATION.--Lat 32°29'25", long 104°15'08", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank 220 ft downstream from headgates in Avalon Dam, and 3.3 mi north of Carlsbad. Pecos River mile 467.2.

PERIOD OF RECORD.--July 1939 to current year (monthly discharge only, July 1939 to September 1965). January 1941 to March 1951 published in WSP 1732.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 3,156.50 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to March 1951, at site 20 ft upstream at datum 0.9 ft higher.

REMARKS.--Records good. Carlsbad Main Canal diverts water from Lake Avalon (station 08403800) for irrigation of about 25,000 acres in the Carlsbad Irrigation District. About 1,600 acres are irrigated on the left bank, most of it upstream from gaging station 08405200. The remaining acreage (most of which is downstream from station 08405200) is on the right bank. Several observations of water temperature were made during the year. No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	227	.00	.00	.00	.00	.00	376	159	306	251	207	104
2	260	.00	.00	.00	.00	.00	367	178	309	206	218	121
3	262	.00	.00	.00	.00	.00	334	130	329	119	254	134
4	251	.00	.00	.00	.00	.00	299	111	321	.00	271	174
5	223	.00	.00	.00	.00	.00	285	119	242	.00	243	171
6	211	.00	.00	.00	.00	.00	279	110	199	.00	166	172
7	104	.00	.00	.00	.00	.00	340	108	206	.00	162	195
8	47	.00	.00	.00	.00	.00	343	135	268	91	185	220
9	.36	.00	.00	.00	.00	.00	352	145	315	251	161	262
10	.30	.00	.00	.00	.00	.00	302	129	269	370	245	270
11	.18	.00	.00	.00	.00	.00	273	176	205	370	298	316
12	.08	.00	.00	.00	.00	.00	257	197	197	363	328	258
13	.00	.00	.00	.00	.00	.00	291	293	163	355	315	196
14	.00	.00	.00	.00	.00	.00	329	329	149	358	257	233
15	.00	.00	.00	.00	.00	.00	358	299	211	368	169	225
16	.00	.00	.00	.00	.00	.00	353	234	276	376	117	236
17	.00	.00	.00	.00	.00	.00	319	229	336	341	177	219
18	.00	.00	.00	.00	.00	.00	300	241	358	237	216	212
19	.00	.00	.00	.00	.00	.00	263	339	385	173	229	180
20	76	.00	.00	.00	.00	.00	238	363	376	242	271	172
21	177	.00	.00	.00	.00	.00	223	363	375	290	188	169
22	160	.00	.00	.00	.00	.00	304	354	375	302	159	158
23	124	.00	.00	.00	.00	85	310	305	374	291	140	145
24	120	.00	.00	.00	.00	125	290	238	366	257	102	167
25	102	.00	.00	.00	.00	208	225	223	332	241	130	179
26	92	.00	.00	.00	.00	227	171	162	326	137	209	208
27	83	.00	.00	.00	.00	230	186	213	318	98	211	187
28	83	.00	.00	.00	.00	254	191	249	295	123	139	188
29	83	.00	.00	.00	---	254	170	258	319	187	79	206
30	80	.00	.00	.00	---	353	146	259	326	245	67	175
31	.02	---	.00	.00	---	344	---	253	---	236	82	---
TOTAL	2765.94	0.00	0.00	0.00	0.00	2080.00	8474	6956	8826	6878.00	5995	5852
MEAN	89.2	.000	.000	.000	.000	67.1	282	224	294	222	193	195
MAX	262	.00	.00	.00	.00	353	376	363	385	376	328	316
MIN	.00	.00	.00	.00	.00	.00	146	108	149	.00	67	104
AC-FT	5490	.00	.00	.00	.00	4130	16810	13800	17510	13640	11890	11610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998, BY WATER YEAR (WY)

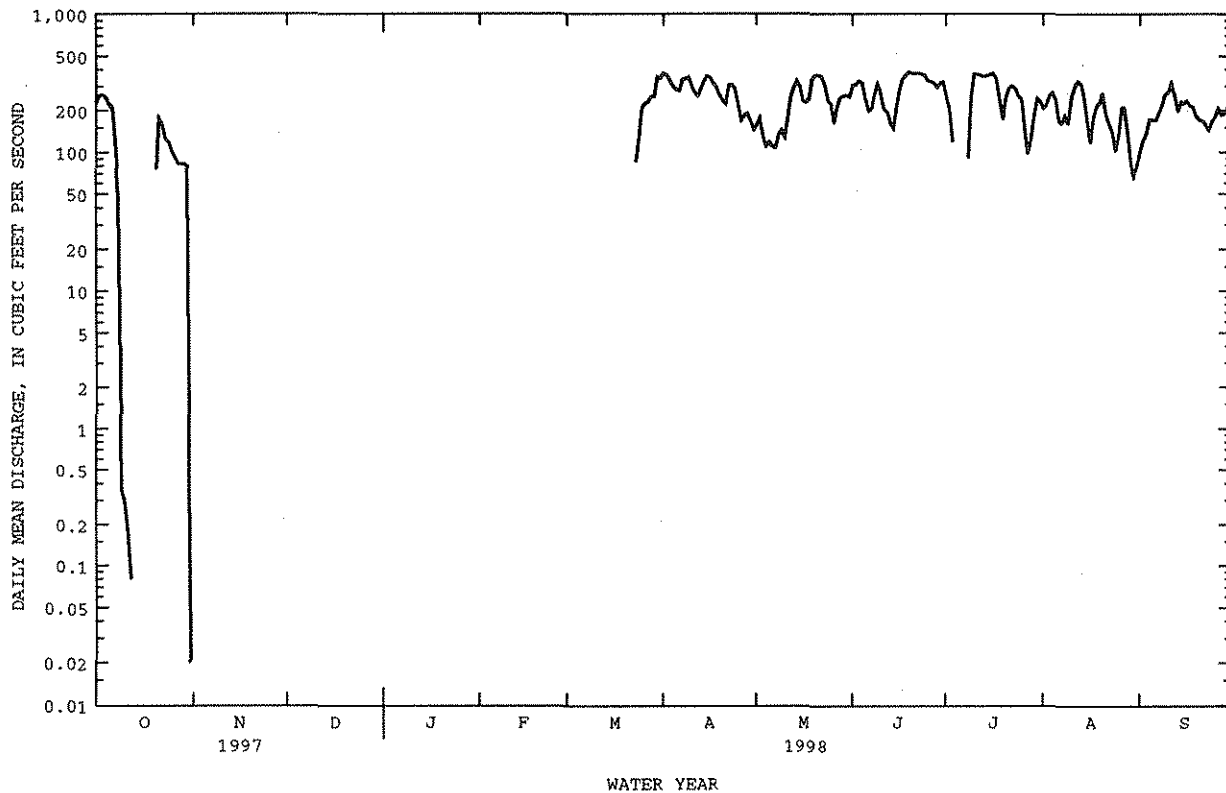
	MEAN	82.9	4.27	7.58	11.3	22.4	74.9	247	133	163	202	204	141
MAX	212	112	172	120	208	227	386	228	297	391	463	298	
(WY)	1980	1955	1947	1956	1950	1940	1943	1996	1942	1940	1943	1939	
MIN	.000	.000	.000	.000	.000	.000	.000	167	6.58	.000	.000	2.81	.000
(WY)	1953	1942	1941	1942	1941	1948	1967	1953	1953	1976	1981	1964	

RIO GRANDE BASIN

08403500 CARLSBAD MAIN CANAL AT HEAD, NEAR CARLSBAD, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1939 - 1998	
ANNUAL TOTAL	41282.94		47826.94			
ANNUAL MEAN	113		131		107	
HIGHEST ANNUAL MEAN					174	
LOWEST ANNUAL MEAN					51.8	
HIGHEST DAILY MEAN	376 Jun 26		385 Jun 19		a526 Sep 15 1946	
LOWEST DAILY MEAN	.00 Jan 1		.00 Oct 13		.00 Jul 1 1939	
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1		.00 Oct 13		.00 Oct 16 1939	
INSTANTANEOUS PEAK FLOW			405 Jul 15		405 Jul 15 1998	
INSTANTANEOUS PEAK STAGE			3.58 Jul 15		3.58 Jul 15 1998	
INSTANTANEOUS LOW FLOW			.00 Oct 13		.00 Oct 13 1997	
ANNUAL RUNOFF (AC-FT)	81880		94860		77370	
10 PERCENT EXCEEDS	305		326		295	
50 PERCENT EXCEEDS	83		121		68	
90 PERCENT EXCEEDS	.00		.00		.00	

^a Also occurred Sept. 16, 1946.



08403800 LAKE AVALON NEAR CARLSBAD, NM

LOCATION.--Lat 32°29'27", long 104°15'05", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on headwall at outlet gate of dam on Pecos River, 3.3 mi north of Carlsbad, and at mile 467.2.

DRAINAGE AREA.--18,070 mi², approximately (contributing area).

PERIOD OF RECORD.--January 1939 to September 1965 (monthend gage heights and contents), October 1965 to current year. Monthend gage heights January 1919 to December 1938 in files of Pecos River Commission.

REVISED RECORDS.--WSP 898: 1939.

GAGE.--Water-stage recorder. Elevation of gage is 3,157.0 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Lake is formed by Avalon Dam, an earthfill structure. The original Eddy (Avalon) Dam was completed and storage began in 1891. The dam was destroyed by the flood of Aug. 3, 1893; repaired immediately. The dam was destroyed again Oct. 2, 1904; construction of present dam commenced on June 1, 1906, and was 88 percent complete June 30, 1907. Capacity (based on February 1996 survey) 4,470 acre-ft between gage heights 0.0 (sill of outlet gates) and 20.4 ft crest of spillway 2. No dead storage. No storage allocated to flood control. New capacity table put into use January 1, 1997. Figures given herein represent usable contents. Water is used by Carlsbad Irrigation District

COOPERATION.--Records provided by Carlsbad Irrigation District.

EXTREMES FOR PERIOD OF RECORD (SINCE 1938).--Maximum contents, 11,000 acre-ft, May 22, 1941, gage height, 25.0 ft; no storage at times when natural flow is passing through reservoir.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,430 acre-ft, Mar. 10-23, gage height, 19.20 ft; minimum, 56 acre-ft, Nov. 23-25, gage height, 13.40 ft.

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	848	1530	84	2420	2950	3270	1150	1990	1270	907	1150	1720
2	966	1530	84	2490	2950	3270	1150	1790	1150	1030	1460	1720
3	1150	1530	84	2490	3030	3350	1150	1460	1090	1210	1400	1790
4	1210	1530	84	2490	3030	3350	1400	1460	1090	1330	1400	1790
5	1150	1530	84	2490	3030	3350	1280	1530	1030	1400	1460	1720
6	966	1530	84	2490	3030	3350	1860	1530	1090	1460	1530	1590
7	1030	1530	907	2490	3030	3350	1720	1660	1090	1530	1590	1530
8	1030	1530	2130	2490	3030	3350	1660	1660	1150	1590	1660	1470
9	1030	1530	1790	2570	3110	3350	1460	1590	1090	1460	1790	1400
10	1090	1530	1790	2570	3110	3430	1460	1590	1150	1270	1790	1270
11	1090	1530	1930	2570	3110	3430	1460	1530	1270	1210	1720	1150
12	1150	1530	1930	2570	3110	3430	1460	1330	1400	1210	1660	1270
13	1150	1530	1990	2570	3110	3430	1460	1210	1330	1270	1720	1530
14	1660	1530	1990	2570	3110	3430	1330	1090	1270	1270	1790	1460
15	2060	1530	2060	2640	3110	3430	1090	1090	1270	1330	1790	1460
16	2870	1530	2060	2640	3190	3430	848	1090	1150	1270	1720	1330
17	2870	1530	2130	2640	3190	3430	780	1090	1030	1530	1660	1270
18	2870	1530	2130	2640	3190	3430	780	1090	1030	1270	1530	1210
19	2790	1530	2200	2720	3190	3430	907	1030	1030	1150	1460	1270
20	2790	1530	2200	2720	3190	3430	1090	1090	1030	1210	1530	1330
21	1790	1530	2280	2720	3190	3430	1400	1090	1030	907	1590	1460
22	1790	619	2280	2720	3190	3430	1460	1090	966	732	1460	1460
23	1790	56	2280	2790	3190	3430	1530	1090	966	848	1460	1530
24	1790	56	2350	2790	3190	3110	1660	1150	907	1170	1460	1530
25	1660	56	2350	2790	3270	2870	1790	1150	848	1270	1330	1660
26	1590	69	2350	2870	3270	2490	1790	1330	848	1400	1150	1660
27	1590	69	2420	2870	3270	2200	1790	1460	790	1460	1030	1720
28	1590	69	2420	2870	3270	2060	1720	1660	848	1330	1270	1790
29	1530	69	2420	2870	---	1790	1720	1460	848	1150	1330	1930
30	1530	84	2420	2950	---	1460	1720	1330	790	907	1460	1790
31	1590	---	2420	2950	---	1210	---	1270	---	907	1790	---
MAX	2870	1530	2420	2950	3270	3430	1860	1990	1400	1590	1790	1930
MIN	848	56	84	2420	2950	1210	780	1030	790	732	1030	1150
(+)	16.70	13.60	17.90	18.60	19.00	16.10	16.90	16.20	15.40	15.60	17.00	17.00
(++)	+858	-1506	+2336	+530	+320	-2060	+510	-450	-480	+117	+883	0

CAL YR 1997 MAX 3030 MIN 56 (++) +670
WTR YR 1998 MAX 3430 MIN 56 (++) +1058

(+) GAGE HEIGHT, IN FEET, AT END OF MONTH
(++) CHANGE IN CONTENTS, IN ACRE-Feet

LOCATION.--Lat 32°28'55", long 104°15'47", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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.

PERIOD OF RECORD.--January 1906 to March 1907 (published as "at Avalon"), June 1951 to current year.

GAGE.--Water-stage recorder with satellite telemetry (satellite telemetry only during Avalon Dam releases). 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.--Records good. Flow completely regulated by Lake Avalon (station 08403800) 0.9 mi upstream. 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). Several observations of water temperature were made during the year. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

MEAN	103	33.0	23.4	9.85	11.2	4.56	1.27	40.3	56.1	34.9	57.8	51.9
MAX	2365	445	435	237	255	188	59.6	739	1832	595	2034	1113
(WY)	1955	1987	1992	1987	1987	1987	1987	1973	1986	1960	1966	1974
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1952	1952	1952	1952	1952	1952	1952	1952	1951	1951	1951	1951

WATER YEARS 1951 - 1998

ANNUAL TOTAL	22470.56			22123.35					
ANNUAL MEAN	61.6			60.6			36.1		
HIGHEST ANNUAL MEAN							206		1955
LOWEST ANNUAL MEAN							.000		1953
HIGHEST DAILY MEAN	641	Nov	1	641	Nov	1	33600	Aug	23 1966
LOWEST DAILY MEAN	.00	Jan	1	.00	Oct	1	.00	Jun	1 1951
ANNUAL SEVEN-DAY MINIMUM	.00	Jan	1	.00	Oct	1	.00	Jun	1 1951
INSTANTANEOUS PEAK FLOW							55500	Aug	23 1966
INSTANTANEOUS PEAK STAGE							26.40	Aug	23 1966
ANNUAL RUNOFF (AC-FT)	44570			43880			26170		
10 PERCENT EXCEEDS	335			321			.00		
50 PERCENT EXCEEDS	.00			.00			.00		
90 PERCENT EXCEEDS	.00			.00			.00		

^a From rating curve extended above 33,000 ft³/s, on basis of computation of peak flow over Tansill Dam 5.8 mi downstream.

b From floodmarks.

08405150 DARK CANYON DRAW AT CARLSBAD, NM

LOCATION.--Lat 32°24'24", long 104°13'34", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.7, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on downstream side of bridge on south Canal Street 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.--Records good except for estimated daily discharges, which are poor. 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. Several observations of water temperature were made during the year. No flow during water year.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	e31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	e.25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	e17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	48.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	1.56	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	96	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1998, BY WATER YEAR (WY)

	MEAN	7.90	.79	.000	.000	.000	.000	.000	.43	15.1	.48	6.48	25.8
MAX	196	19.7	.000	.000	.000	.000	.000	.000	8.81	386	12.4	162	331
(WY)	1975	1979	1974	1973	1973	1973	1973	1973	1979	1986	1981	1984	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1974	1974	1974	1973	1973	1973	1973	1973	1973	1973	1973	1973	1973

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1973 - 1998	
ANNUAL TOTAL	48.25		48.25			
ANNUAL MEAN	.13		.13		4.89	
HIGHEST ANNUAL MEAN					31.7	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	31	Oct 6	31	Oct 6	8750	Sep 26 1980
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Jan 1 1973
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 9	.00	Jan 1 1973
INSTANTANEOUS PEAK FLOW			203		27000	
INSTANTANEOUS PEAK STAGE			3.33		12.53	
INSTANTANEOUS LOW FLOW			.00		.00	
ANNUAL RUNOFF (AC-FT)	96		96		3540	Oct 1 1993
10 PERCENT EXCEEDS	.00		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated

RIO GRANDE BASIN

08405200 PECOS RIVER BELOW DARK CANYON DRAW, AT CARLSBAD, NM

LOCATION.--Lat 32°24'37", long 104°12'58", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 3,075.19 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except for estimated daily discharges, which are poor. Flow regulated by Lake Avalon (station 08403800) 8.1 mi upstream 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 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. 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.)

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	588	23	17	46	35	32	18	3.3	3.1	8.1	8.2
2	31	585	31	41	46	35	42	2.7	2.8	3.3	6.5	10
3	22	576	23	50	47	35	39	1.5	3.2	2.4	9.0	11
4	22	574	22	28	43	36	39	1.6	3.5	3.2	15	8.0
5	24	567	20	29	41	36	33	1.6	2.0	3.7	24	6.7
6	90	561	18	29	38	35	34	1.6	4.7	e3.4	7.2	8.4
7	112	554	19	40	41	37	38	1.5	4.3	3.2	5.7	11
8	87	550	72	48	43	41	38	1.8	5.3	4.0	5.3	12
9	27	548	373	62	41	41	34	2.0	4.5	1.9	5.2	11
10	27	561	31	69	38	33	34	2.6	9.6	3.7	5.3	8.9
11	26	552	13	64	37	31	33	2.9	10	10	5.0	11
12	26	556	9.5	62	37	31	32	2.9	11	15	4.4	18
13	23	557	121	81	36	32	33	2.4	14	7.2	27	22
14	34	552	410	70	37	33	32	2.6	3.5	7.4	17	18
15	26	556	272	50	40	33	31	3.2	3.2	7.4	23	11
16	28	559	11	57	40	37	31	2.6	5.2	5.2	12	11
17	347	563	7.5	47	38	31	35	2.0	5.8	142	12	12
18	382	568	11	42	37	32	39	2.7	5.0	449	9.2	17
19	381	563	8.9	44	35	31	34	2.6	5.1	430	8.2	18
20	406	559	13	43	35	32	33	2.6	4.4	420	17	15
21	388	554	11	58	36	32	33	2.6	8.8	403	11	16
22	364	390	16	47	37	33	40	2.6	9.3	405	11	15
23	383	64	23	44	36	34	43	2.8	4.4	293	11	14
24	394	8.0	13	44	37	38	50	2.9	e3.2	18	12	13
25	501	22	16	43	36	33	49	3.2	e3.3	9.4	12	21
26	507	22	14	43	35	34	45	3.5	3.9	8.3	11	26
27	542	25	13	42	36	32	38	5.0	4.6	6.5	11	23
28	533	22	15	42	36	32	40	6.8	4.5	6.3	24	14
29	538	20	15	42	---	32	40	6.8	3.7	6.1	10	12
30	581	21	16	43	---	32	37	5.3	3.6	6.7	9.1	13
31	579	---	18	46	---	29	---	4.8	---	7.4	7.2	---
TOTAL	7454	12397.0	1678.9	1467	1085	1048	1111	107.7	159.7	2694.8	355.4	415.2
MEAN	240	413	54.2	47.3	38.8	33.8	37.0	3.47	5.32	86.9	11.5	13.8
MAX	581	588	410	81	47	41	50	18	14	449	27	26
MIN	22	8.0	7.5	17	35	29	31	1.5	2.0	1.9	4.4	6.7
AC-FT	14790	24590	3330	2910	2150	2080	2200	214	317	5350	705	824

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1998, BY WATER YEAR (WY)

	MEAN	84.0	71.2	48.4	38.7	40.2	30.8	20.7	60.0	115	53.5	38.6	116
MAX	727	527	367	319	305	249	103	702	2041	345	674	1253	
(WY)	1975	1987	1992	1987	1987	1987	1987	1973	1986	1986	1984	1974	
MIN	9.11	8.07	6.27	9.80	10.5	6.02	.087	1.11	.34	.080	.18	3.22	
(WY)	1978	1978	1991	1978	1978	1978	1972	1972	1974	1977	1976	1977	

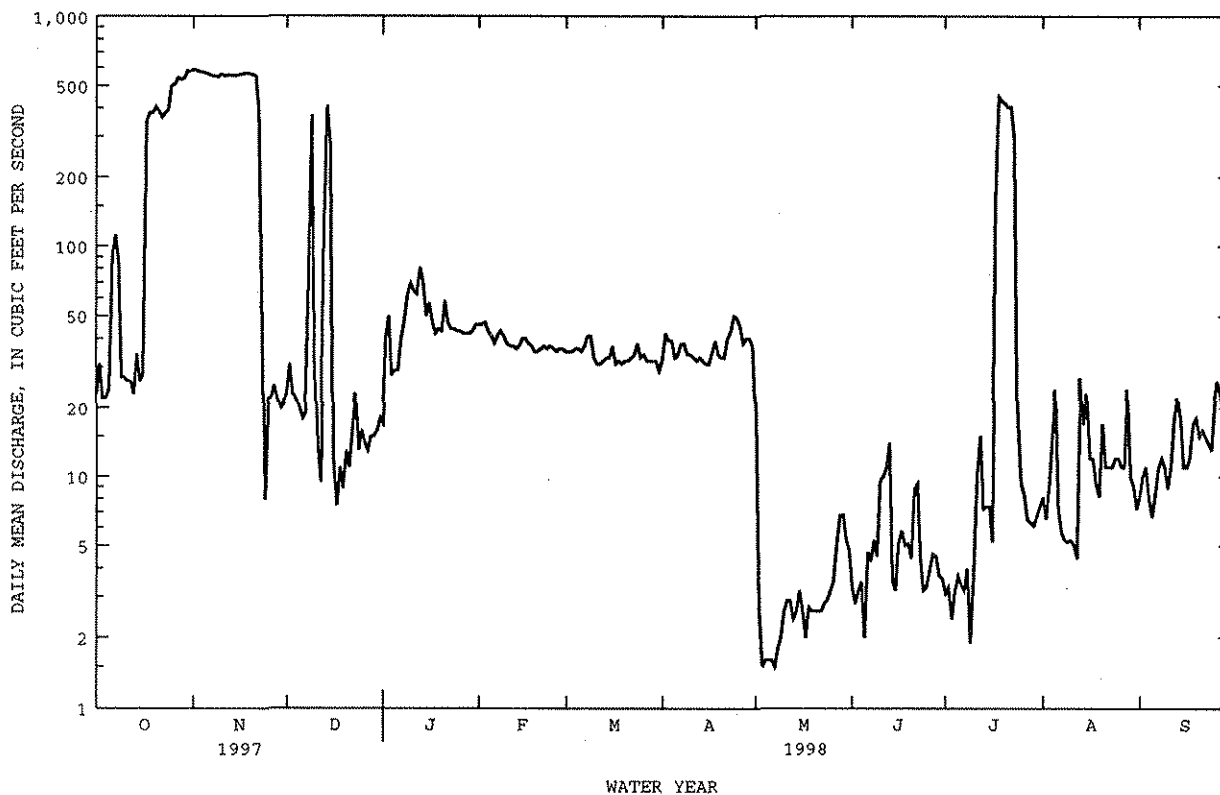
08405200 PECOS RIVER BELOW DARK CANYON DRAW, AT CARLSBAD, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1970 - 1998	
ANNUAL TOTAL	30127.9		29973.7		60.5	
ANNUAL MEAN	82.5		82.1		242	
HIGHEST ANNUAL MEAN					10.9	
LOWEST ANNUAL MEAN					22800	
HIGHEST DAILY MEAN	588	Nov 1	588	Nov 1		1987
LOWEST DAILY MEAN	7.5	Dec 17	1.5	May 3		1977
ANNUAL SEVEN-DAY MINIMUM	11	Dec 16	1.7	May 3		1977
INSTANTANEOUS PEAK FLOW			652	Nov 10		Jun 24 1986
INSTANTANEOUS PEAK STAGE			4.25	Nov 10		Jun 16 1971
INSTANTANEOUS LOW FLOW			1.5	May 7		Apr 16 1972
ANNUAL RUNOFF (AC-FT)	59760		59450			Aug 10 1984
10 PERCENT EXCEEDS	376		392			Aug 10 1984
50 PERCENT EXCEEDS	21		26			Mar 25 1995
90 PERCENT EXCEEDS	16		3.3			

e Estimated

a From rating curve extended above 12,000 ft³/s, on basis of slope-area measurement of peak flow.

b From floodmarks.



RIO GRANDE BASIN

08405200 PECOS RIVER BELOW DARK CANYON DRAW, AT CARLSBAD, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

REMARKS.--Replaces station 08405000 Pecos River at Carlsbad, New Mexico at which sample collection was discontinued after September, 1987.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-A-TURE AIR (DEG C) (00020)	TEMPER-A-TURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
DEC 12...	0930	26	5450	7.6	4.0	3.0	692	9.7	81	1300	370	100
MAR 23...	1300	34	4030	--	32.0	19.0	681	9.6	118	1400	340	140
APR 28...	1430	39	3990	--	24.0	21.0	686	9.6	122	1400	350	140
JUN 18...	1315	5.6	4520	7.4	34.0	28.0	682	7.9	115	1600	390	150
SEP 08...	1645	9.9	3840	8.3	35.0	29.0	681	--	--	1400	350	120
17...	0830	12	4060	7.8	22.0	23.0	685	--	--	1400	370	120

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
DEC 12...	390	5	4.3	145	1100	680	.6	12	2770	195	<30
MAR 23...	400	5	5.6	176	1200	680	.8	18	2880	276	<30
APR 28...	410	5	5.3	173	1200	690	.9	23	2930	279	<30
JUN 18...	460	5	5.0	144	1300	760	.8	22	3220	308	<50
SEP 08...	350	4	5.1	134	1200	590	.8	24	2680	251	<30
17...	400	5	5.2	69	1300	640	.67	21	2900	250	3.0

08405500 BLACK RIVER ABOVE MALAGA, NM

LOCATION.--Lat 32°13'44", long 104°09'02", in SW¹/₄NW¹/₄SW¹/₄ 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, 4.8 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.--Records good. Diversions and ground-water withdrawals for irrigation of about 1,000 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	11	11	11	13	12	12	5.3	4.8	2.0	6.2	4.8
2	3.2	11	12	11	13	12	12	7.2	6.0	4.7	6.2	5.7
3	4.4	11	11	12	13	13	10	7.8	.27	5.8	6.3	9.1
4	8.3	11	11	12	13	13	9.9	8.0	.94	6.3	6.3	7.6
5	9.4	11	11	12	13	12	9.8	7.8	5.5	6.5	6.4	6.3
6	14	8.0	11	12	13	12	9.5	7.6	6.2	6.5	7.6	5.9
7	34	5.4	11	11	13	13	9.2	7.0	6.4	6.3	7.4	5.8
8	56	5.6	11	11	13	12	9.0	6.9	6.7	6.0	6.4	6.3
9	18	9.4	11	11	13	12	9.3	6.8	6.5	6.3	5.8	6.3
10	12	10	10	11	13	12	9.6	7.2	6.5	6.3	5.7	6.1
11	12	11	11	12	13	12	9.7	6.8	6.4	6.6	5.8	5.6
12	11	12	11	11	13	12	9.6	6.5	5.9	6.4	6.3	5.5
13	10	12	11	11	12	12	9.1	6.4	6.1	6.4	6.5	5.5
14	11	11	11	12	12	13	9.2	6.0	5.6	6.5	6.4	5.4
15	11	11	11	12	13	13	9.2	5.7	5.5	6.3	6.2	5.3
16	11	11	11	12	13	14	9.1	6.0	6.5	6.6	5.9	5.3
17	12	11	11	12	12	14	9.2	5.6	10	6.8	5.7	5.4
18	12	11	11	12	13	13	9.3	4.7	13	6.8	5.6	5.4
19	11	11	11	12	12	12	9.5	4.6	20	6.6	5.6	5.5
20	11	11	12	12	13	12	9.4	4.5	22	6.4	5.8	5.6
21	11	11	12	12	13	12	9.1	4.8	23	6.5	6.0	5.9
22	11	11	12	12	13	13	9.1	5.3	19	7.3	6.1	5.5
23	12	11	15	12	13	13	9.1	5.2	19	6.4	6.1	5.6
24	11	11	14	12	13	12	9.0	5.4	19	6.3	5.8	5.6
25	11	11	13	12	13	12	9.0	5.4	18	6.6	5.8	5.6
26	11	11	13	12	13	12	7.8	5.2	5.3	6.7	5.8	5.2
27	11	11	12	12	12	12	7.6	5.2	5.7	6.8	5.8	3.5
28	11	11	12	12	12	12	7.7	5.1	5.0	6.9	59	1.9
29	11	10	12	13	---	12	5.9	4.7	3.4	6.6	33	.67
30	11	11	11	13	---	12	4.2	4.1	2.2	6.3	12	.01
31	11	---	11	13	---	11	---	4.1	---	6.1	6.4	---
TOTAL	396.8	314.4	358	367	358	383	272.1	182.9	270.41	194.6	275.9	157.88
MEAN	12.8	10.5	11.5	11.8	12.8	12.4	9.07	5.90	9.01	6.28	8.90	5.26
MAX	56	12	15	13	13	14	12	8.0	23	7.3	59	9.1
MIN	3.2	5.4	10	11	12	11	4.2	4.1	.27	2.0	5.6	.01
AC-FT	787	624	710	728	710	760	540	363	536	386	547	313

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1998, BY WATER YEAR (WY)

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
MEAN	13.1	9.63	9.88	10.8	10.5	7.05	10.6	12.8	14.8	14.6	24.5	20.2
MAX	80.4	33.0	17.5	18.7	19.7	15.0	55.5	106	87.8	111	553	121
(WY)	1955	1966	1989	1987	1987	1993	1954	1965	1986	1960	1966	1955
MIN	2.54	1.15	3.79	2.82	4.11	2.01	4.67	4.27	2.82	3.06	3.26	3.42
(WY)	1980	1978	1964	1964	1960	1978	1978	1974	1974	1974	1965	1977

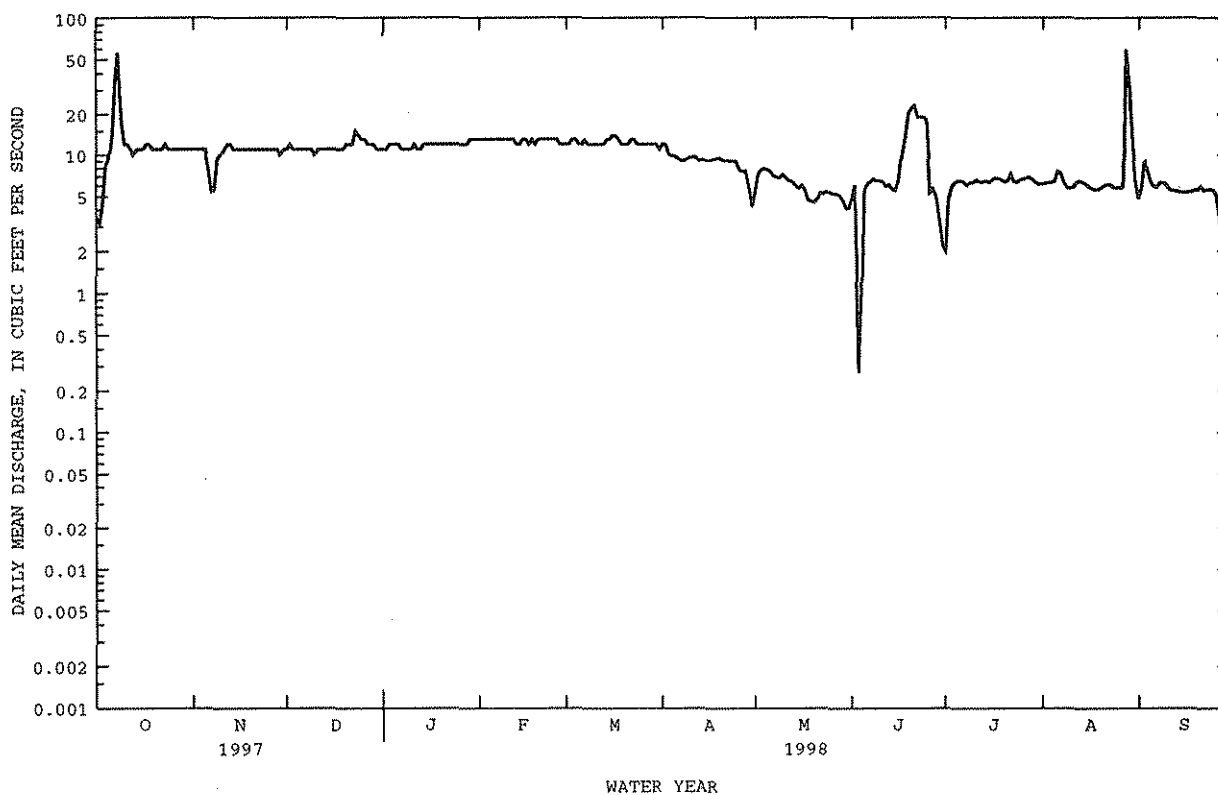
CERRO GRANDE BASIN

08405500 BLACK RIVER ABOVE MALAGA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1948 - 1998
ANNUAL TOTAL	4938.42	3530.99	
ANNUAL MEAN	13.5	9.67	13.2
HIGHEST ANNUAL MEAN			58.3
LOWEST ANNUAL MEAN			6.82
HIGHEST DAILY MEAN	159 Jul 5	59 Aug 28	12000 Aug 23 1966
LOWEST DAILY MEAN	.69 Aug 31	.01 Sep 30	.01 Sep 30 1998
ANNUAL SEVEN-DAY MINIMUM	1.6 Aug 27	3.2 Sep 24	1.0 Nov 9 1977
INSTANTANEOUS PEAK FLOW		227 Aug 28	^a 74600 Aug 23 1966
INSTANTANEOUS PEAK STAGE		2.39 Aug 28	^b 21.70 Aug 23 1966
INSTANTANEOUS LOW FLOW		.00 Sep 30	.00 Sep 30 1998
ANNUAL RUNOFF (AC-FT)	9800	7000	9580
10 PERCENT EXCEEDS	18	13	14
50 PERCENT EXCEEDS	12	10	8.4
90 PERCENT EXCEEDS	5.6	5.4	4.2

^a 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.

^b From floodmarks.



08406500 PECOS RIVER NEAR MALAGA, NM

LOCATION.--Lat 32°12'30", long 104°01'20", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ 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).

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except for estimated daily discharges, which are poor. 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.--16 years (water years 1921-36), 274 ft³/s, 198,500 acre-ft/yr, prior to completion of Lake Sumner.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	781	92	89	92	73	78	77	35	35	47	51
2	70	798	92	92	92	73	67	72	35	40	46	e56
3	63	770	98	90	89	74	62	66	34	36	45	e55
4	59	760	95	133	90	74	76	51	34	37	44	56
5	81	750	90	112	91	75	69	44	34	39	40	55
6	85	739	88	102	91	73	66	43	40	39	46	51
7	168	727	87	100	89	72	60	52	36	38	65	48
8	225	708	89	99	90	80	64	49	34	37	52	49
9	162	712	117	113	90	80	61	46	33	36	44	50
10	113	712	360	113	90	76	71	55	33	35	45	52
11	81	739	160	127	87	73	73	47	34	37	44	50
12	80	742	102	127	88	73	68	40	33	40	44	50
13	80	749	91	123	88	73	67	39	39	38	45	48
14	76	740	172	132	88	74	65	39	39	37	69	45
15	76	729	491	144	89	76	63	43	38	39	69	60
16	89	734	327	122	90	86	65	40	34	41	45	53
17	84	744	142	112	90	84	72	38	32	40	43	66
18	263	748	100	116	86	76	81	38	32	87	47	56
19	321	754	91	105	89	72	75	38	32	448	50	50
20	316	746	105	103	88	69	71	44	34	440	49	56
21	320	742	109	102	90	69	71	41	41	433	59	56
22	359	695	102	103	87	69	69	39	39	418	77	55
23	433	398	113	111	89	70	68	41	34	427	56	52
24	417	196	125	100	80	70	71	37	33	314	51	50
25	491	109	115	99	75	71	63	40	34	121	51	48
26	611	89	103	98	74	70	62	39	34	77	49	44
27	654	100	98	96	72	72	66	36	34	61	49	43
28	702	100	89	96	72	74	67	36	35	52	74	62
29	675	98	86	95	---	70	75	36	35	48	71	64
30	716	94	86	95	---	69	81	35	35	49	49	54
31	769	---	84	94	---	68	---	35	---	47	44	---
TOTAL	8709	17503	4099	3343	2426	2278	2067	1376	1049	3666	1609	1585
MEAN	281	583	132	108	86.6	73.5	68.9	44.4	35.0	118	51.9	52.8
MAX	769	798	491	144	92	86	81	77	41	448	77	66
MIN	59	89	84	89	72	68	60	35	32	35	40	43
AC-FT	17270	34720	8130	6630	4810	4520	4100	2730	2080	7270	3190	3140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

	MEAN	268	152	121	109	94.0	65.5	56.5	214	170	106	150	273
MAX	5302	1338	822	738	557	290	697	6887	2984	1171	4200	6975	
(WY)	1942	1942	1942	1942	1942	1987	1942	1941	1941	1941	1966	1941	
MIN	8.49	7.82	7.87	10.5	11.9	9.41	8.80	7.85	8.93	6.70	6.20	8.27	
(WY)	1978	1978	1978	1978	1965	1978	1965	1978	1977	1977	1977	1977	

RIO GRANDE BASIN

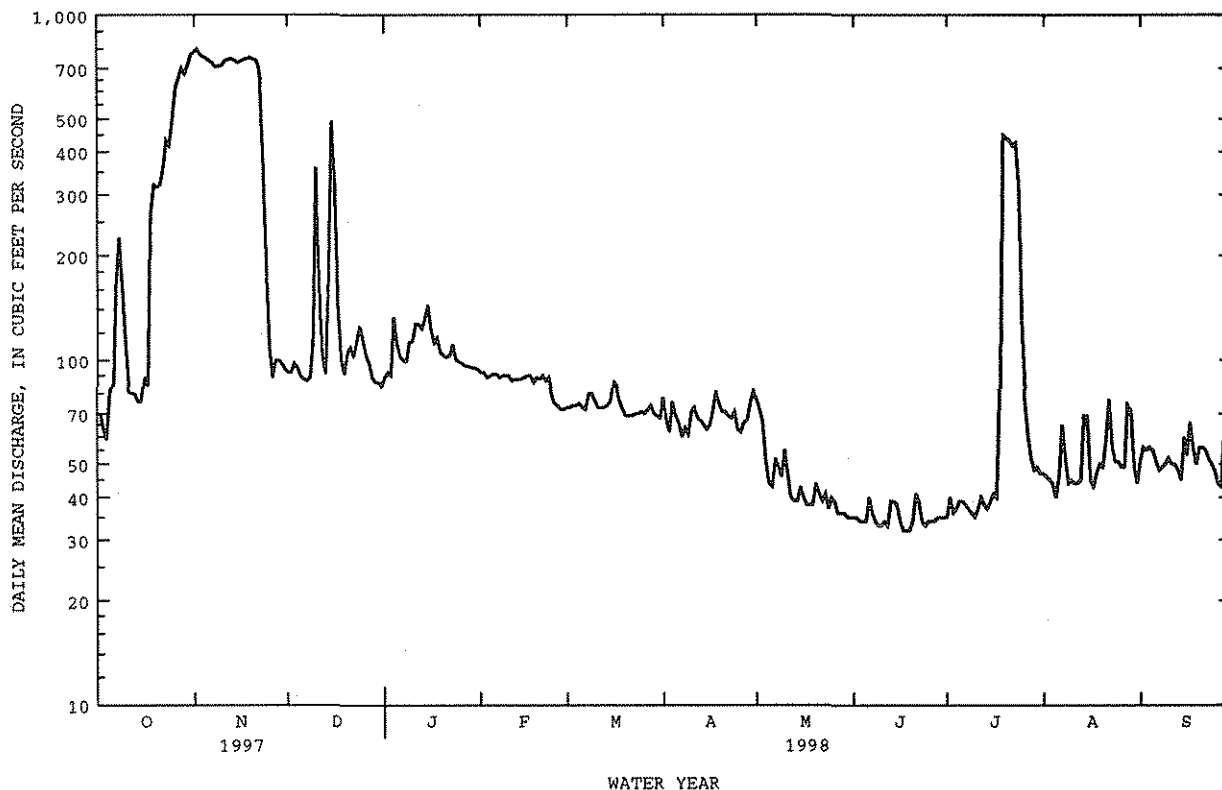
08406500 PECOS RIVER NEAR MALAGA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	51305		49710		148	
ANNUAL MEAN	141		136		1652	
HIGHEST ANNUAL MEAN					16.8	
LOWEST ANNUAL MEAN					68000	
HIGHEST DAILY MEAN	798	Nov 2	798	Nov 2	Aug 23	1966
LOWEST DAILY MEAN	42	Jun 19	32	Jun 17	May 20	1991
ANNUAL SEVEN-DAY MINIMUM	51	Jul 8	34	Jun 23	May 18	1991
INSTANTANEOUS PEAK FLOW			813	Nov 2	Aug 23	1966
INSTANTANEOUS PEAK STAGE			6.71	Nov 2	Aug 23	1966
INSTANTANEOUS LOW FLOW			32	Jun 16	Oct 20	1976
ANNUAL RUNOFF (AC-FT)	101800		98600		107600	
10 PERCENT EXCEEDS	354		417		198	
50 PERCENT EXCEEDS	70		72		53	
90 PERCENT EXCEEDS	56		37		15	

e Estimated

a From rating curve extended above 36,000 ft³/s, on basis of slope-area measurement of peak flow.

b From floodmarks.



08406500 PECOS RIVER NEAR MALAGA, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
DEC 11...	1200	170	6820	7.5	5.0	7.0	695	9.7	90	1800	450	170
MAR 13...	1300	75	5440	--	21.0	12.0	691	10.4	109	2000	470	200
APR 29...	1330	78	6300	--	28.0	19.5	690	9.6	118	2100	490	210
JUN 18...	1020	33	8710	7.9	30.0	24.0	688	8.0	109	2600	620	260
SEP 08...	1430	49	6920	--	34.0	29.0	685	6.8	101	2200	530	220
16...	1430	50	6900	7.7	28.0	26.0	692	--	--	2300	570	204

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC 11...	540	6	5.8	180	1500	970	.7	12	3800	282	<40
MAR 13...	700	7	9.2	163	1600	1200	.8	7.1	4300	379	<40
APR 29...	720	7	9.9	168	1700	1300	.9	21	4570	395	<40
JUN 18...	1000	8	12	136	2200	1800	.9	16	5990	535	<100
SEP 08...	780	7	10	147	1800	1300	.9	17	4770	440	<50
16...	800	7	9.6	166	1900	1300	.76	19	4900	400	8.5

LOCATION.--Lat 32°11'19", long 103°58'43", in SW¹/₄SW¹/₄NW¹/₄ sec.27, T.24 S., R.29 E., Eddy County, Hydrologic Unit 13060011, on right bank 550 ft upstream from Pierce Canyon Crossing, 6.0 mi southeast of Malaga, and at mile 425.7.

WATER-DISCHARGE RECORDS

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 (levels by Bureau of Reclamation). July 1938 to Sept. 1941, at datum 1.19 ft higher.

REMARKS.--Water-discharge records good except those above 300 ft³/s, which are fair, and estimated daily discharges which are poor. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	791	98	92	92	e79	81	70	34	36	47	e45
2	72	813	98	93	92	e78	79	66	35	38	46	e52
3	68	789	100	93	89	e78	74	62	36	39	44	e53
4	66	773	100	112	90	e77	77	57	34	37	46	54
5	73	763	96	116	90	e78	78	48	35	39	45	54
6	84	750	95	102	90	e79	73	43	36	41	43	52
7	141	739	95	100	90	79	71	44	42	38	53	50
8	215	718	94	98	87	79	71	52	36	36	53	50
9	155	721	124	104	88	84	70	46	30	33	46	50
10	118	718	317	108	86	82	73	49	31	31	44	51
11	85	743	e176	116	85	80	75	52	33	33	45	51
12	79	745	115	121	79	79	74	40	36	37	44	50
13	81	752	98	118	77	79	70	33	38	38	45	50
14	80	743	104	119	76	79	70	32	42	36	50	48
15	79	731	437	137	74	80	68	36	41	37	66	53
16	83	735	398	121	76	86	69	42	39	41	51	54
17	85	741	172	109	76	88	71	37	35	41	44	57
18	183	747	110	110	e76	80	77	34	32	42	47	57
19	336	753	98	104	e78	77	74	32	33	350	e51	51
20	335	745	102	101	e78	75	72	40	35	453	e51	53
21	341	741	107	100	e79	74	70	45	40	448	e56	54
22	362	721	105	99	e77	76	70	41	42	439	e76	54
23	435	519	107	106	e78	81	68	42	39	441	e58	52
24	459	246	118	100	e77	80	68	39	33	385	e53	51
25	473	134	115	97	e77	80	66	34	31	143	e51	49
26	610	99	104	97	e78	80	63	43	34	73	e50	48
27	654	101	101	96	e78	79	63	38	35	60	e49	44
28	717	102	97	94	e79	84	65	37	35	52	e66	51
29	694	101	94	95	---	80	66	36	35	49	e76	59
30	706	100	93	94	---	79	71	35	35	48	e58	55
31	784	---	93	93	---	77	---	35	---	47	e48	---
TOTAL	8721	17874	4161	3245	2292	2466	2137	1340	1072	3661	1602	1552
MEAN	281	596	134	105	81.9	79.5	71.2	43.2	35.7	118	51.7	51.7
MAX	784	813	437	137	92	88	81	70	42	453	76	59
MIN	66	99	93	92	74	74	63	32	30	31	43	44
AC-FT	17300	35450	8250	6440	4550	4890	4240	2660	2130	7260	3180	3080

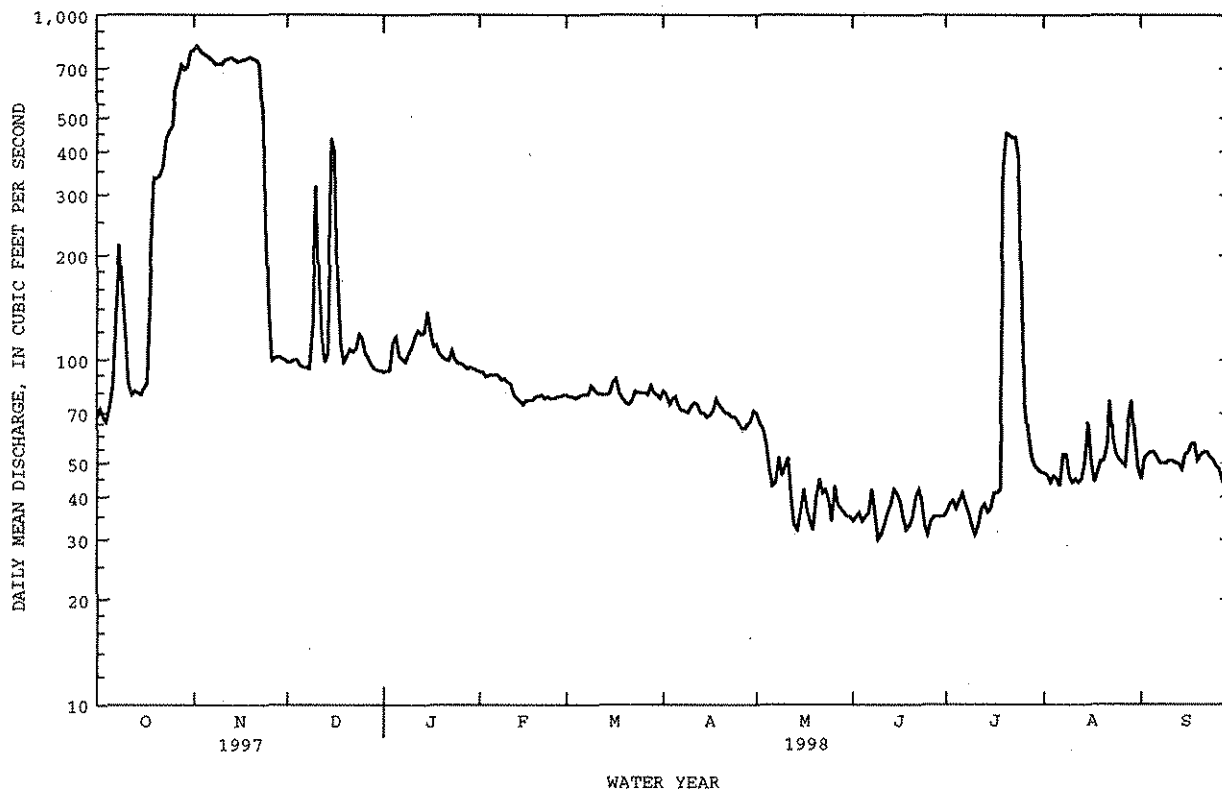
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

MEAN	176	104	91.2	79.1	71.1	52.0	39.1	220	169	101	160	263
MAX	2718	596	519	359	358	299	149	7108	3040	1184	4182	7129
(WY)	1955	1998	1992	1987	1987	1987	1987	1941	1941	1941	1966	1941
MIN	8.70	6.77	9.39	10.6	12.6	10.1	7.46	6.35	7.78	4.43	6.18	5.73
(WY)	1978	1978	1978	1965	1965	1978	1978	1978	1971	1966	1964	1977

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	50944		50123		128	
ANNUAL MEAN	140		137		1694	1941
HIGHEST ANNUAL MEAN					18.7	1977
LOWEST ANNUAL MEAN					65000	Aug 23 1966
HIGHEST DAILY MEAN	813	Nov 2	813	Nov 2	2.1	Jun 22 1978
LOWEST DAILY MEAN	45	Sep 1	30	Jun 9	2.6	Jul 21 1966
ANNUAL SEVEN-DAY MINIMUM	53	Aug 28	34	Jun 24	^a 65000	Aug 23 1966
INSTANTANEOUS PEAK FLOW			821	Nov 2	31.60	Aug 23 1966
INSTANTANEOUS PEAK STAGE			4.64	Nov 2	.54	May 30 1965
INSTANTANEOUS LOW FLOW			24	Jul 15		
ANNUAL RUNOFF (AC-FT)	101000		99420		92630	
10 PERCENT EXCEEDS	365		436		138	
50 PERCENT EXCEEDS	68		76		47	
90 PERCENT EXCEEDS	55		36		13	

e Estimated

^a From floodmarks.

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected 0.2 mi downstream from streamflow gaging station.

PERIOD OF RECORD.--Water years 1938-41, 1952 to current year.

REMARKS.--No significant inflow between streamflow gaging station and sampling cross-section.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-CENT SATUR-ATION (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
DEC 11...	1300	190	7200	7.6	7.0	7.0	704	10.3	94	1800	450	170
MAR 13...	1400	79	7570	--	22.0	12.0	690	10.6	112	2000	470	210
APR 29...	1430	76	8810	--	26.0	20.5	690	9.3	118	2200	500	220
JUN 18...	0845	32	12600	8.0	26.0	24.0	688	7.4	102	2700	620	290
SEP 08...	1530	49	9680	--	34.0	27.5	685	7.0	102	2300	540	230
SEP 16...	1300	55	9380	7.6	24.0	26.0	690	--	--	2400	570	234

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
DEC 11...	610	6	9.4	176	1500	1100	.8	12	3980	287	<40
MAR 13...	1200	11	31	153	1700	1900	.8	6.6	5580	478	<50
APR 29...	1300	12	38	168	1800	2200	.9	15	6090	494	<50
JUN 18...	1900	16	49	126	2300	3100	.9	26	8350	674	<100
SEP 08...	1300	12	36	139	1800	2300	.8	21	6310	575	<100
SEP 16...	1300	12	33	152	2000	2300	.72	17	6550	510	14

08407500 PECOS RIVER AT RED BLUFF, NM

LOCATION.--Lat 32°04'30", long 104°02'21", in SW¹/₄NW¹/₄NE¹/₄ 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 with satellite telemetry. Elevation of gage is 2,850.05 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Discharge records good. 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. Several observations of water temperature were made during the year.

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.)

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	697	92	86	99	74	66	79	33	33	48	47
2	67	715	90	87	98	75	72	75	33	34	46	46
3	65	718	90	90	97	75	61	70	33	39	45	49
4	60	704	94	95	95	75	57	65	33	36	45	53
5	59	699	89	136	98	75	69	52	32	46	52	54
6	70	693	85	108	98	75	62	45	34	63	62	53
7	141	687	84	102	98	73	59	42	39	38	46	49
8	217	675	83	99	96	70	55	49	39	36	62	47
9	196	671	83	101	97	79	57	49	33	34	51	46
10	140	671	207	114	96	79	55	45	32	32	45	48
11	98	683	310	118	95	76	62	54	32	32	45	49
12	68	697	142	133	93	73	64	46	33	33	44	47
13	63	705	93	129	93	73	60	36	34	36	44	47
14	62	705	85	127	93	74	59	34	39	36	45	45
15	61	700	285	147	92	75	57	34	41	34	70	46
16	61	699	472	146	94	78	56	39	40	49	66	56
17	70	704	268	123	94	88	57	39	36	41	47	52
18	87	712	131	118	94	82	65	35	32	39	44	62
19	299	721	95	117	91	75	71	34	32	190	47	54
20	334	722	97	108	93	71	66	34	32	464	49	48
21	335	716	105	107	92	69	61	43	33	449	50	52
22	340	710	105	104	92	69	62	42	41	450	57	53
23	391	634	110	110	90	68	61	40	40	423	76	51
24	437	366	115	113	90	67	62	41	34	429	59	48
25	428	194	123	104	82	67	63	35	32	254	52	45
26	502	114	110	103	78	67	57	36	32	102	51	44
27	568	100	99	102	76	65	57	41	33	69	49	41
28	614	104	94	101	74	70	63	36	33	57	48	40
29	631	100	88	102	---	69	63	35	33	52	52	56
30	622	96	87	101	---	67	73	34	33	49	80	58
31	668	---	86	100	---	65	---	33	---	49	60	---
TOTAL	7814	17112	4097	3431	2578	2258	1852	1372	1036	3728	1637	1486
MEAN	252	570	132	111	92.1	72.8	61.7	44.3	34.5	120	52.8	49.5
MAX	668	722	472	147	99	88	73	79	41	464	80	62
MIN	59	96	83	86	74	65	55	33	32	32	44	40
AC-FT	15500	33940	8130	6810	5110	4480	3670	2720	2050	7390	3250	2950

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

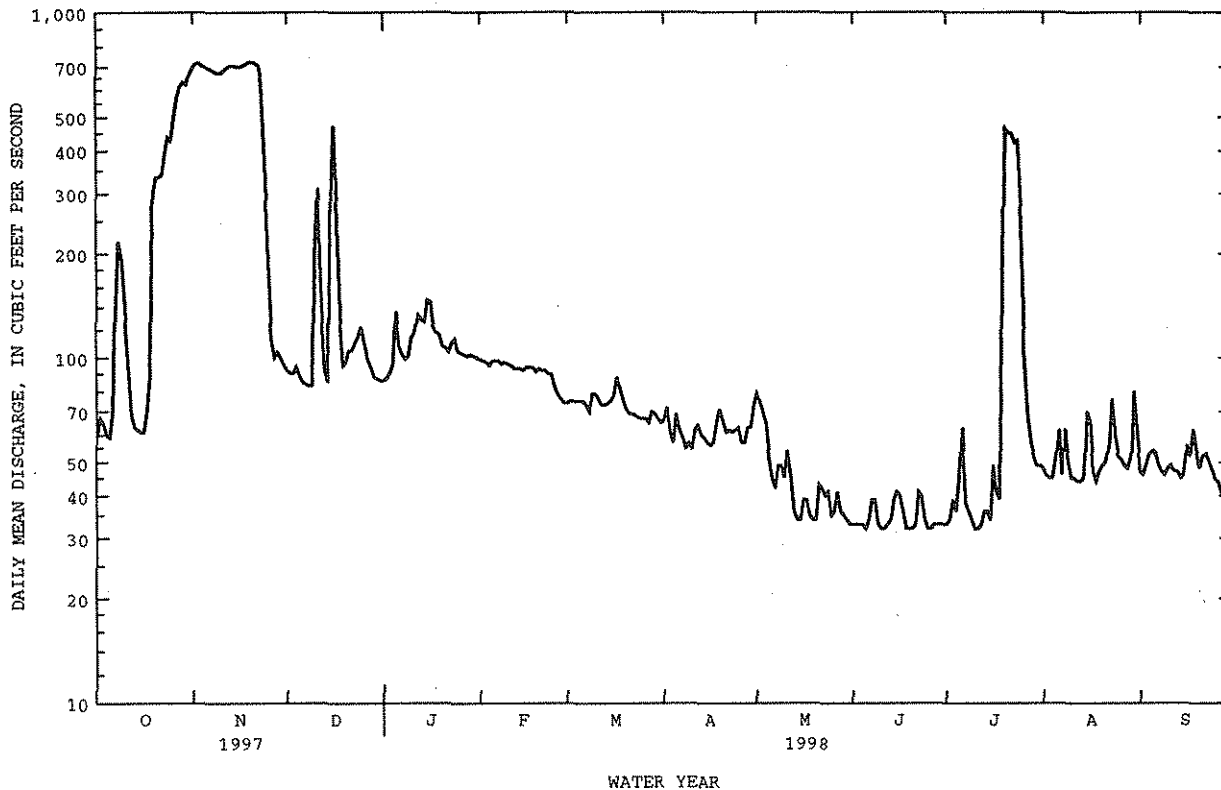
	MEAN	273	157	125	113	97.6	70.4	58.6	217	179	114	156	282
MAX	5255	1382	813	703	534	295	681	6954	3181	1273	4210	6521	
(WY)	1942	1942	1942	1942	1942	1942	1942	1941	1941	1941	1966	1941	
MIN	10.0	6.71	8.57	10.7	13.7	7.76	6.38	7.90	4.30	2.55	5.08	5.77	
(WY)	1965	1978	1978	1965	1965	1978	1978	1971	1990	1966	1964	1977	

RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	49477		48401		154	
ANNUAL MEAN	136		133		1655	1941
HIGHEST ANNUAL MEAN					19.2	1977
LOWEST ANNUAL MEAN					50700	Aug 24 1966
HIGHEST DAILY MEAN	722	Nov 20	722	Nov 20	.22	Aug 1 1966
LOWEST DAILY MEAN	41	Apr 2	32	Jun 5	.33	Jul 26 1966
ANNUAL SEVEN-DAY MINIMUM	49	Apr 14	33	Jun 25	^a 111000	Aug 23 1966
INSTANTANEOUS PEAK FLOW			728	Nov 2	33.32	Aug 23 1966
INSTANTANEOUS PEAK STAGE			6.50	Nov 2	.19	Aug 1 1966
INSTANTANEOUS LOW FLOW			31	Jun 19		
ANNUAL RUNOFF (AC-FT)	98140		96000		111500	
10 PERCENT EXCEEDS	340		425		208	
50 PERCENT EXCEEDS	68		69		57	
90 PERCENT EXCEEDS	50		35		14	

^a From rating curve extended above 32,000 ft³/s, on basis of slope-area measurement of peak flow.



08408500 DELAWARE RIVER NEAR RED BLUFF, NM

LOCATION.--Lat 32°01'23", long 104°03'15", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ 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.--Records good. One small upstream diversion. Several observations of water temperature were made during the year. No flow for many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.84	1.4	1.5	1.5	1.5	1.5	.72	.00	.00	.00	3.8
2	.00	.83	1.4	1.5	1.5	1.5	1.4	.66	.00	.00	.00	.89
3	.00	.83	1.3	1.5	1.5	1.5	1.4	.57	.00	.00	.00	.17
4	.00	.86	1.4	1.6	1.5	1.5	1.6	.46	.00	.00	.00	.00
5	.00	.83	1.4	1.6	1.5	1.5	1.7	.38	.00	.00	.01	.00
6	.00	.83	1.4	1.5	1.5	1.5	1.5	.33	.00	.00	.00	.00
7	.65	.87	1.5	1.5	1.6	1.5	1.5	.31	.00	.00	.00	.00
8	10	.84	1.4	1.5	1.6	1.5	1.4	.27	.00	.00	.00	.00
9	3.0	.83	1.3	1.5	1.6	1.5	1.4	.22	.00	.00	.00	.00
10	.42	.89	1.2	1.5	1.6	1.5	1.4	.21	.00	.00	.00	.00
11	1.3	.86	1.1	1.5	1.6	1.5	1.3	.17	.00	.00	.00	.00
12	120	.92	1.2	1.6	1.5	1.5	1.2	.10	.00	.00	.00	.00
13	8.9	1.1	1.2	1.6	1.5	1.6	1.2	.08	.00	.00	.00	.00
14	1.5	1.0	1.3	1.6	1.5	1.7	1.1	.06	.00	.00	.00	.00
15	.70	.95	1.3	1.4	1.5	1.7	1.1	.02	.00	.00	.00	.00
16	.54	.98	1.5	1.5	1.5	1.7	1.1	.01	.00	.00	.00	.00
17	.50	.94	1.4	1.4	1.5	1.8	1.0	.00	.00	.00	.00	.00
18	.50	1.0	1.4	1.4	1.4	1.7	1.1	.00	.00	.00	.00	.00
19	.52	1.1	1.4	1.4	1.4	1.7	1.1	.00	.00	.00	.00	.00
20	.54	1.1	1.8	1.4	1.4	1.7	1.1	.00	.00	.00	.00	.00
21	.57	1.1	1.9	1.4	1.4	1.6	.99	.00	.00	.00	.00	.00
22	.68	1.1	2.1	1.4	1.4	1.6	1.0	.00	.00	.00	.00	.00
23	.78	1.2	2.5	1.5	1.5	1.7	.99	.00	.00	.00	.00	.00
24	.75	1.2	2.3	1.5	1.5	1.6	.95	.00	.00	.00	.00	.00
25	.71	1.3	2.0	1.5	1.5	1.6	.82	.00	.00	.00	.00	.00
26	.69	1.3	1.7	1.5	1.5	1.6	.75	.00	.00	.00	.00	.00
27	.64	1.3	1.7	1.6	1.5	1.5	.69	.00	.00	.00	.00	.00
28	.65	1.3	1.7	1.6	1.5	1.5	.70	.00	.00	.00	.00	.00
29	.71	1.3	1.6	1.6	---	1.5	.73	.00	.00	.00	43	.00
30	.78	1.3	1.5	1.5	---	1.4	.74	.00	.00	.00	93	.00
31	.83	---	1.5	1.5	---	1.4	---	.00	---	.00	23	---
TOTAL	156.86	30.80	47.8	46.6	42.0	48.6	34.46	4.57	0.00	0.00	159.01	4.86
MEAN	5.06	1.03	1.54	1.50	1.50	1.57	1.15	.15	.000	.000	5.13	.16
MAX	120	1.3	2.5	1.6	1.6	1.8	1.7	.72	.00	.00	93	3.8
MIN	.00	.83	1.1	1.4	1.4	1.4	.69	.00	.00	.00	.00	.00
AC-FT	311	61	95	92	83	96	68	9.1	.00	.00	315	9.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

MEAN	28.5	3.44	3.23	3.29	3.08	2.75	5.64	9.35	18.1	13.9	21.9	21.6
MAX	748	18.9	7.99	8.57	8.77	9.44	135	233	281	166	326	303
(WY)	1956	1979	1987	1987	1987	1987	1954	1941	1938	1952	1966	1978
MIN	.000	.030	.17	.41	.13	.42	.23	.003	.000	.000	.000	.000
(WY)	1952	1965	1966	1965	1966	1993	1968	1950	1950	1947	1983	1953

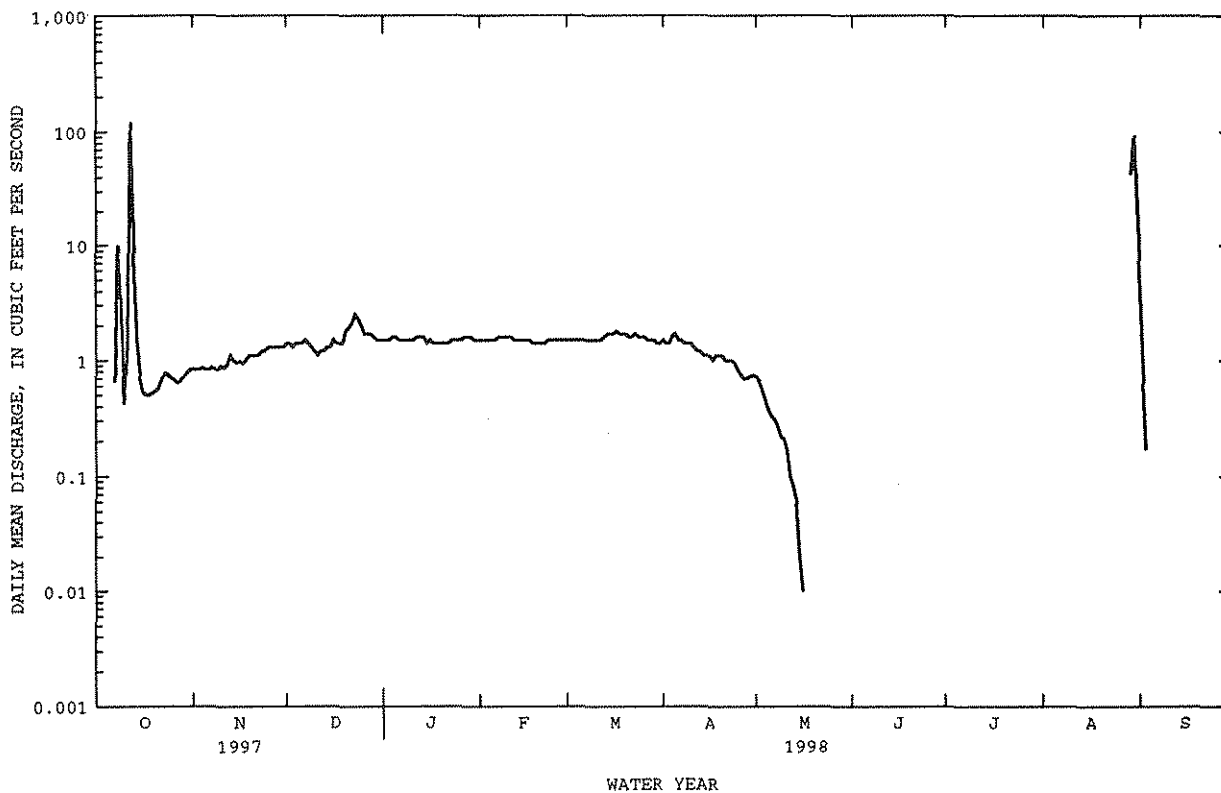
RIO GRANDE BASIN

08408500 DELAWARE RIVER NEAR RED BLUFF, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL TOTAL	1283.71		575.56		11.3	
ANNUAL MEAN	3.52		1.58		66.1	
HIGHEST ANNUAL MEAN					1.58	
LOWEST ANNUAL MEAN					22000	
HIGHEST DAILY MEAN	160	Jun 8	120	Oct 12		Oct 2 1955
LOWEST DAILY MEAN	.00	Jul 26	.00	Oct 1		Jun 12 1938
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 26	.00	May 17		Jul 29 1946
INSTANTANEOUS PEAK FLOW			375	Oct 12	^a 81400	Oct 2 1955
INSTANTANEOUS PEAK STAGE			4.77	Oct 12	^b 27.00	Oct 2 1955
INSTANTANEOUS LOW FLOW			.00	Oct 1	.00	Jun 11 1938
ANNUAL RUNOFF (AC-FT)	2550		1140		8180	
10 PERCENT EXCEEDS	2.5		1.6		7.0	
50 PERCENT EXCEEDS	1.4		.83		2.2	
90 PERCENT EXCEEDS	.00		.00		.00	

^a 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.

^b From floodmarks.



08410000 RED BLUFF RESERVOIR NEAR ORLA, TX

LOCATION.--Lat 31°54'04", long 103°54'35", Reeves County, Hydrologic Unit 13070001, at right end of Red Bluff Dam on the Pecos River, 2.8 mi upstream from Salt Creek, and 5.2 mi north of Orla.

DRAINAGE AREA.--20,720 mi², approximately (contributing area).

PERIOD OF RECORD.--February 1937 to current year. Monthly contents only for some periods, published in WSP 1312.

GAGE.--Nonrecording gage. Datum of gage is 0.43 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by a rock-faced earthfill dam 9,200 ft long. The dam was completed and storage began in September 1936. The dam and reservoir are owned and operated by the Red Bluff Water Power Control District. The water is used for power development and for irrigation from Mentone to Grandfalls. The uncontrolled emergency spillway, 790 ft wide, is a cut through natural ground located to the right of right end of dam. The controlled service spillway is equipped with 12 tainter gates that are 25 by 15 ft high. Inflow is regulated by many reservoirs and diversion dams. The capacity curve is based on Geological Survey topographic map and aerial photography, survey of 1986. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Gage height (feet)	Capacity (acre-feet)
Top of dam	2,856.0	-
Crest of emergency spillway.....	2,845.0	324,000
Top of gates (top of conservation pool)	2,842.0	289,700
Crest of service spillway and bottom of tainter gates.....	2,827.0	155,700
Lowest gated outlet (invert)	2,764.0	2,800

COOPERATION.--Gage-height records and capacity curve were furnished by Red Bluff Water Power and Control District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 352,000 acre-ft, Sept. 27, 28, 1941, gage height, 2,846.2 ft, observed on nonrecording gage at service spillway (affected by variable drawdown due to flow through tainter gates); minimum observed, 11,080 acre-ft, May 13, 1948, gage height, 2,781.4 ft.

EXTREMES (AT 0800) FOR CURRENT YEAR.--Maximum contents observed, 99,480 acre-ft, Mar. 26, gage height, 2,817.56 ft; minimum observed, 48,750 acre-ft, Sept. 30, gage height, 2,804.76 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49950	61440	86920	92600	96190	98530	98030	82110	74340	67600	56460	49770
2	50010	62600	86960	92700	96290	98530	97330	81890	74220	67060	55920	49740
3	50040	63820	87010	92800	96380	98580	96630	81670	74090	66520	55390	49680
4	50040	65040	87050	92900	96480	98630	95950	81460	73930	65990	54890	49590
5	50040	66220	87100	92990	96580	98680	95270	81190	73770	65480	54380	49490
6	50040	67370	87150	93090	96680	98730	94590	80930	73610	64960	53990	49410
7	50040	68300	87240	93190	96780	98780	93910	80670	73450	64440	53640	49320
8	50160	69190	87330	93290	96880	98830	93240	80410	73290	63930	53260	49230
9	50250	70070	87430	93380	96980	98830	92560	80100	73130	63410	52840	49150
10	50340	71000	87520	93480	97080	98880	91880	79800	72970	62900	52400	49060
11	50430	71960	87620	93570	97180	98930	91220	79500	72890	62390	52160	49010
12	50520	73050	87850	93670	97280	98980	90570	79150	72720	61890	51920	49030
13	50620	74010	88360	93770	97380	99030	89910	78800	72560	61400	51670	49060
14	50670	74930	88320	93860	97480	99080	89250	78450	72400	60910	51430	49090
15	50740	76100	88550	93960	97580	99030	88600	78150	72240	60420	51190	49120
16	50800	77190	88790	94060	97680	98980	87940	77860	72080	59920	50950	49150
17	50860	78190	89020	94150	97780	99030	87290	77570	71920	59430	50700	49180
18	50920	79320	89250	94250	97830	99080	86650	77270	71760	58940	50460	49230
19	50980	80450	89490	94350	97880	99130	86020	76980	71600	58470	50220	49290
20	51550	81540	89860	94450	97980	99190	85390	76690	71440	58000	49980	49350
21	52130	82630	90190	94590	98080	99230	84710	76390	71280	57830	49740	49380
22	52710	83760	90470	94740	98180	99280	84260	76100	71120	57670	49590	49410
23	53320	84800	90750	94880	98280	99330	83940	75810	70960	57830	49440	49440
24	53930	85700	91030	95030	98380	99380	83670	75520	70790	58000	49290	49440
25	54630	86150	91320	95170	98430	99430	83440	75220	70630	58270	49200	49320
26	55330	86380	91590	95320	98430	99480	83220	75100	70310	58600	49150	49200
27	56050	86510	91830	95470	98480	99330	82990	74970	69760	58540	49090	49090
28	56890	86650	92070	95610	98480	99190	82760	74840	69220	58200	49380	48980
29	58000	86780	92220	95760	---	99030	82540	74720	68680	57800	49620	48860
30	59110	86870	92360	95900	---	98880	82320	74590	68140	57330	49710	48750
31	60270	---	92360	96050	---	98730	---	74470	---	56930	49800	---
MAX	60270	86870	92360	96050	98480	99480	98030	82110	74340	67600	56460	49770
MIN	49950	61440	86920	92600	96190	98530	82320	74470	68140	56930	49090	48750
(+)	2308.36	2814.94	2816.11	2816.87	2817.36	2817.41	2813.93	2812.09	2810.50	2807.38	2805.12	2804.76
(++)	+10470	+26600	+5490	+3690	+2430	+250	-16410	-7850	-6330	-11210	-7130	-1050
CAL YR 1997	MAX 92360	MIN 48690	(++)	+18670								
WTR YR 1998	MAX 99480	MIN 48750	(++)	-1050								

(+) ELEVATION, IN FEET, AT END OF MONTH

(++) CHANGE IN CONTENTS, IN ACRE-FEET

RIO GRANDE BASIN

08412500 PECOS RIVER NEAR ORLA, TX

LOCATION.--Lat 31°52'21", long 103°49'52", Reeves County, Hydrologic Unit 1300001, on right bank at bridge on Farm Road 652, 5.5 mi downstream from Salt Creek (Screw Bean Arroyo), 5.9 mi northeast of Orla, and 8.5 mi downstream from Red Bluff Reservoir.

DRAINAGE AREA.--21,210 mi² approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1937 to current year.

REVISED RECORDS.--WSP 928: 1937.

GAGE.--Water-stage recorder. Datum of gage is 2,730.86 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 16, 1969, at site 6.9 mi downstream at datum 12.81 ft lower.

REMARKS.--Water-discharge records good. Most of flow is releases from storage in Red Bluff Reservoir (station 08410000) 8.5 mi upstream. Occasional runoff occurs from draws between dam and station. There are many diversions above Red Bluff Reservoir for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

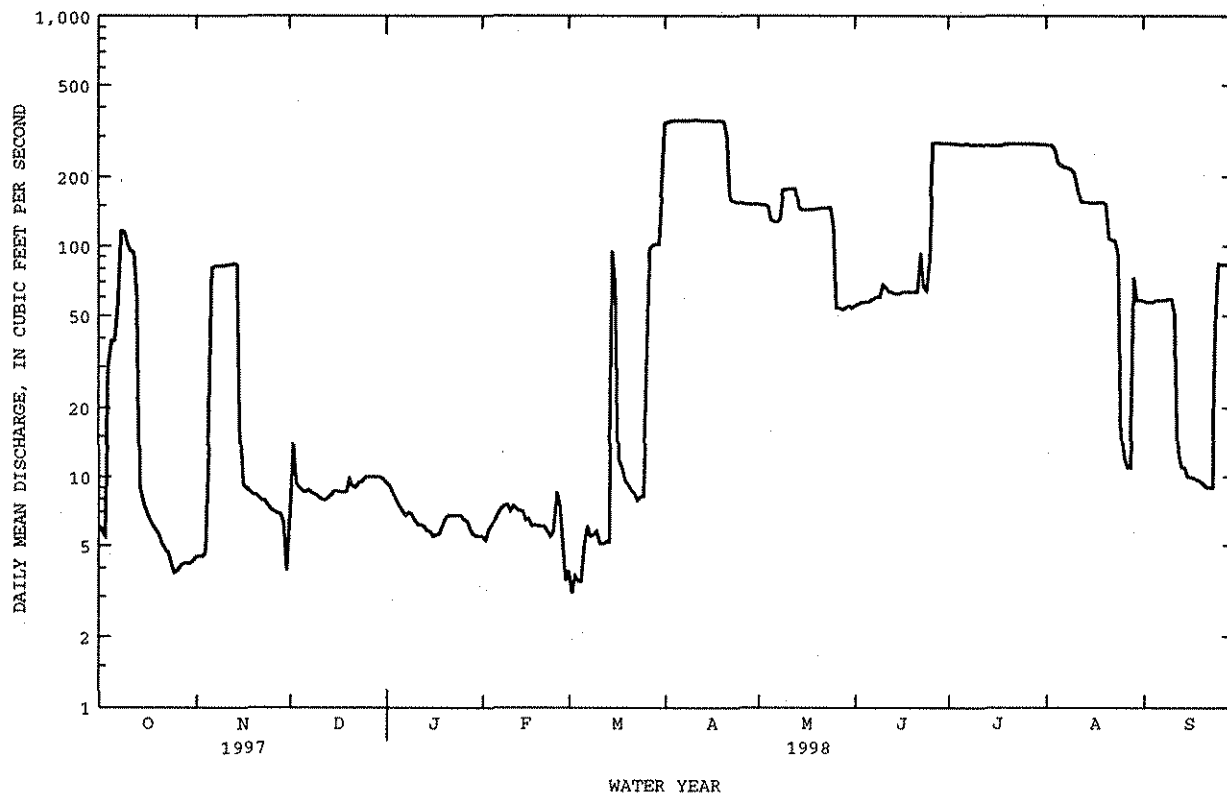
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	4.5	7.0	9.4	5.5	3.9	342	152	55	279	275	58
2	5.8	4.5	14	9.1	5.3	3.1	346	151	56	279	274	57
3	5.5	4.5	9.4	8.5	5.9	3.7	349	151	57	277	273	57
4	30	4.7	9.0	8.0	6.2	3.5	351	149	57	277	263	57
5	39	13	8.7	7.5	6.5	3.5	352	129	57	276	229	58
6	39	80	8.6	7.1	6.9	5.1	352	128	58	276	223	58
7	55	82	8.8	6.8	7.3	6.1	351	127	59	279	219	58
8	116	82	8.5	7.0	7.5	5.5	352	131	60	274	218	58
9	115	82	8.4	6.9	7.6	5.6	352	175	60	275	216	59
10	103	82	8.2	6.5	7.1	5.8	352	176	68	276	209	59
11	95	83	8.0	6.2	7.5	5.1	353	177	66	275	184	51
12	94	83	7.9	6.2	7.3	5.1	352	177	63	274	156	13
13	61	84	8.1	6.1	7.1	5.2	352	177	63	274	155	11
14	8.9	83	8.3	5.8	7.1	5.2	351	146	62	273	155	11
15	7.8	16	8.7	5.8	6.5	95	351	143	62	272	154	10
16	7.1	9.3	8.7	5.5	6.6	68	350	143	63	272	154	10
17	6.6	9.0	8.6	5.6	6.1	12	349	143	63	272	154	9.9
18	6.2	8.7	8.6	5.6	6.2	11	350	144	63	273	155	9.7
19	5.9	8.4	8.6	6.1	6.1	9.7	350	144	63	277	155	9.6
20	5.6	8.4	9.8	6.6	6.1	9.3	348	145	63	277	152	9.3
21	5.1	8.2	9.1	6.8	6.1	8.8	301	146	63	277	108	9.0
22	4.8	7.9	9.0	6.8	5.8	8.5	158	146	93	277	106	9.0
23	4.7	7.9	9.5	6.8	5.5	7.9	156	146	66	277	106	9.0
24	4.2	7.5	9.5	6.8	5.8	8.2	155	147	64	277	91	45
25	3.8	7.2	10	6.8	8.6	8.2	154	122	88	278	15	84
26	3.9	7.1	10	6.5	7.6	26	153	54	279	277	12	83
27	4.1	6.9	10	6.4	5.1	98	152	54	281	277	11	83
28	4.2	6.9	10	5.9	3.5	101	152	53	280	277	11	83
29	4.2	6.3	10	5.6	---	102	152	54	280	277	73	82
30	4.2	3.9	10	5.5	---	102	152	55	280	276	58	83
31	4.3	---	9.7	5.5	---	176	---	54	---	275	58	---
TOTAL	860.0	901.8	282.7	205.7	180.4	918.0	8690	4039	2992	8552	4622	1293.5
MEAN	27.7	30.1	9.12	6.64	6.44	29.6	290	130	99.7	276	149	43.1
MAX	116	84	14	9.4	8.6	176	353	177	281	279	275	84
MIN	3.8	3.9	7.0	5.5	3.5	3.1	152	53	55	272	11	9.0
AC-FT	1710	1790	561	408	358	1820	17240	8010	5930	16960	9170	2570

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
MEAN	155	69.5	41.8	38.8	44.4	85.9	200	199	225	239	194	231
MAX	5717	1474	838	712	617	288	601	2717	3481	1425	686	6515
(WY)	1942	1942	1942	1942	1942	1955	1942	1941	1941	1941	1941	1941
MIN	1.78	1.38	1.77	.76	.46	.84	1.05	5.86	17.1	8.11	.74	8.70
(WY)	1948	1960	1962	1965	1965	1965	1965	1978	1953	1984	1965	1953

08412500 PECOS RIVER NEAR ORLA, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1938 - 1998
ANNUAL TOTAL	28674.3	33537.1	144
ANNUAL MEAN	78.6	91.9	1284
HIGHEST ANNUAL MEAN			13.1
LOWEST ANNUAL MEAN			23700
HIGHEST DAILY MEAN	381 Jul 5	353 Apr 11	Sep 28 1941
LOWEST DAILY MEAN	1.7 Feb 9	3.1 Mar 2	Sep 9 1946
ANNUAL SEVEN-DAY MINIMUM	1.9 Feb 6	3.8 Feb 27	Jul 7 1965
INSTANTANEOUS PEAK FLOW		354 Apr 8	Sep 29 1941
INSTANTANEOUS PEAK STAGE		4.45 Apr 8	Sep 29 1941
INSTANTANEOUS LOW FLOW		2.8 Mar 2	Sep 9 1946
ANNUAL RUNOFF (AC-FT)	56880	66520	104200
10 PERCENT EXCEEDS	284	277	362
50 PERCENT EXCEEDS	10	55	34
90 PERCENT EXCEEDS	3.1	5.6	5.3



08412500 PECOS RIVER NEAR ORLA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: July 1937 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1937 to current year.

WATER TEMPERATURE: March 1953 to current year.

REMARKS.--October 1937 to September 1969, this station was published as 08410100 Pecos River below Red Bluff Dam, near Orla, TX. Water-quality station operation transferred from the Texas District to the New Mexico District beginning with the 1993 water year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 29,400 microsiemens, May 16, 1978; minimum daily, 1,600 microsiemens, June 19, 1984.

WATER TEMPERATURE: Maximum daily, 32.5 °C, July 20, 1998; minimum daily, 0.0 °C, many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 13,000 microsiemens, Mar. 6; minimum daily, 7,000 microsiemens, Apr. 5.

WATER TEMPERATURE: Maximum daily, 32.5 °C, July 20; minimum daily, 2.0 °C, Dec. 13

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
DEC												
11...	1000	8.0	10600	--	1.0	3.0	701	10.1	85	2000	1900	510
MAR												
13...	1030	4.8	9470	--	10.0	10.0	696	--	--	2300	--	580
APR												
29...	1130	150	7500	--	22.0	16.0	695	--	--	1900	1800	470
JUN												
17...	0930	64	8340	7.8	32.0	24.0	687	7.0	95	2100	2000	530
SEP												
08...	1230	58	9470	--	34.0	24.0	692	--	--	2300	2300	570
16...	0915	11	9910	7.8	23.0	24.0	694	--	--	2500	2500	650

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
DEC												
11...	180	1000	10	21	172	0	141	1700	1700	.9	13	5300
MAR												
13...	210	1500	13	2.1	--	--	--	2000	2600	1	7.2	--
APR												
29...	180	940	9	24	122	1	102	1700	1600	.9	17	4960
JUN												
17...	190	1100	10	24	99	0	81	1800	1700	.9	13	5430
SEP												
08...	220	1200	11	31	87	7	83	2000	2100	.9	12	6170
16...	220	1300	11	28	92	0	75	2200	2300	.76	13	6760

08412500 PECOS RIVER NEAR ORLA, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10400	11000	8870	11400	10900	9360	7050	7370	7870	8560	9450	9160
2	10500	11000	8840	11200	11100	9380	7030	7380	8020	8550	9410	9160
3	10700	10900	8290	11100	11000	12000	7050	7370	8470	8630	9480	9210
4	10600	10700	7740	11000	11200	10000	7060	7370	8720	8630	9420	9170
5	9480	10700	7890	11100	10900	11900	7000	7460	8790	8590	9330	9200
6	9420	8620	7940	11200	10600	13000	7040	7460	8660	8610	9380	9210
7	9390	8830	7720	11400	10600	12600	7050	7460	8500	8620	9340	9230
8	9150	8910	7920	11300	10400	12800	7040	7510	8590	8670	9330	9230
9	9290	8870	7930	10800	10200	12100	7050	7490	8480	8890	9390	9260
10	9370	7840	7980	10900	10200	11600	7120	7500	8420	8810	9380	---
11	9410	8340	8020	10800	10300	10700	7130	7460	8230	8840	9380	9320
12	9430	8370	7900	10700	10300	11000	7110	7510	8250	8890	9410	9330
13	9450	8230	7880	10700	10300	10600	7140	7520	8250	8890	9500	9520
14	9560	7990	7840	10900	10300	10800	7080	7520	8250	8970	9440	9770
15	9910	8030	7890	10800	10100	7410	7120	7540	8260	8960	9020	9800
16	10100	8200	7980	11000	10300	7310	7160	7590	8300	9030	9000	9900
17	10200	8640	7880	10800	11000	7250	7140	7550	8270	9090	8970	9900
18	10300	8720	7870	10900	10900	8120	7210	7530	8360	9060	8970	9910
19	10500	8630	7980	11000	10800	8710	7140	7570	8400	9110	8980	9940
20	10500	8670	7800	10900	10500	8900	7210	7620	8380	9120	9010	9970
21	10600	8610	7620	10800	10500	9390	7240	7600	8530	9170	9020	10200
22	10500	8490	7720	10600	10400	9450	7280	7600	8710	9230	9010	9990
23	10400	8470	7650	10500	10500	9470	7280	7600	8550	9280	9010	9900
24	10600	8550	8590	10400	10600	9410	7240	7700	8940	9480	9040	9920
25	10700	8510	8230	10200	10700	9610	7270	7680	8980	9470	9080	9370
26	11000	8520	---	10100	10500	9990	7360	7800	8590	9520	9340	9380
27	11000	---	8690	10100	9540	8090	7390	7720	8530	9420	9610	9410
28	10800	---	11000	10100	---	7530	7410	---	8540	9470	9760	9420
29	11000	8580	11300	10200	---	7550	7380	7790	8560	9420	9310	9410
30	11000	8700	11700	10200	---	7640	7410	7800	8480	9410	9130	9420
31	11000	---	11800	10500	---	7460	---	7800	---	9430	9150	---
MEAN	10200	8920	8480	10800	10500	9710	7170	7560	8460	9030	9260	9540
MAX	11000	11000	11800	11400	11200	13000	7410	7800	8980	9520	9760	10200
MIN	9150	7840	7620	10100	9540	7250	7000	7370	7870	8550	8970	9160

WTR YR 1998 MEAN 9130 MAX 13000 MIN 7000

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	14.0	9.0	4.0	10.0	9.0	13.0	16.0	22.0	24.0	26.0	---
2	23.0	13.0	11.0	5.5	8.0	7.0	13.0	16.0	22.0	25.0	26.0	---
3	22.5	11.0	10.0	13.0	8.0	10.0	14.0	17.0	22.0	25.0	26.0	---
4	22.0	11.0	9.0	10.0	10.0	7.0	14.0	17.0	23.0	25.0	26.0	---
5	22.0	12.0	6.5	9.0	9.0	11.0	14.0	17.5	20.0	25.0	25.0	---
6	22.5	13.0	7.0	8.0	9.0	12.0	14.0	17.0	21.0	25.0	25.0	---
7	23.0	13.5	12.0	8.0	8.0	14.0	15.0	17.0	21.0	25.0	25.0	---
8	22.0	17.0	10.0	5.0	10.0	11.0	14.0	17.0	22.0	24.0	25.0	---
9	22.0	14.0	12.0	5.0	10.5	9.0	14.0	18.0	21.0	26.0	25.0	---
10	22.5	13.0	7.0	4.0	11.0	8.5	15.0	17.0	23.0	25.0	25.0	---
11	22.5	11.0	6.0	5.0	9.0	7.0	15.0	17.0	20.0	26.0	25.0	---
12	21.5	13.0	3.0	6.0	12.0	9.5	16.0	18.0	23.0	29.0	25.0	---
13	18.0	13.5	2.0	7.0	8.0	10.0	15.0	17.0	24.0	26.0	25.0	---
14	17.0	13.0	3.0	5.0	11.0	12.0	15.0	18.0	23.0	26.0	25.0	---
15	15.0	11.0	3.0	5.0	12.0	12.5	15.0	17.0	20.0	26.0	---	---
16	14.5	7.0	3.5	5.0	10.0	11.0	16.0	17.0	24.0	27.0	---	---
17	14.0	7.0	3.0	6.0	9.5	11.5	16.0	18.0	24.0	26.0	---	---
18	14.0	8.0	4.0	8.0	10.0	12.0	15.0	19.0	23.0	26.0	---	---
19	14.5	7.0	4.0	8.0	10.5	14.0	15.0	20.0	23.5	26.0	---	---
20	15.0	10.0	5.5	10.0	9.0	15.0	15.0	20.0	24.0	32.5	---	---
21	16.5	10.5	9.0	9.0	11.0	12.0	15.5	20.0	24.0	26.0	---	---
22	16.0	10.0	4.5	9.0	10.0	13.0	16.0	20.0	25.0	25.0	---	---
23	16.0	9.0	5.0	7.0	11.0	14.0	16.0	20.0	24.0	25.0	---	---
24	16.5	8.0	8.0	6.0	12.0	15.0	15.0	20.0	25.0	26.0	---	---
25	15.0	11.0	6.5	7.0	12.0	17.0	17.0	20.0	25.0	26.0	---	---
26	13.0	9.5	---	6.0	10.0	13.0	17.0	22.0	24.0	26.0	---	---
27	11.0	---	10.0	7.0	10.0	12.5	16.0	21.0	24.0	26.0	---	---
28	12.5	---	4.0	7.0	---	13.0	18.0	---	24.0	26.0	---	---
29	12.5	9.0	3.0	8.0	---	13.0	16.0	22.0	24.0	26.0	---	---
30	13.5	8.0	3.0	7.0	---	13.0	16.0	22.5	24.0	26.0	---	---
31	13.0	---	4.0	9.5	---	12.0	---	22.0	---	26.0	---	---
MEAN	17.6	11.0	6.3	7.1	10.0	11.6	15.2	18.7	23.0	25.9	25.3	---
MAX	24.0	17.0	12.0	13.0	12.0	17.0	18.0	22.5	25.0	32.5	26.0	---
MIN	11.0	7.0	2.0	4.0	8.0	7.0	13.0	16.0	20.0	24.0	25.0	---

WTR YR 1998 MEAN 15.2 MAX 32.5 MIN 2.0

LOCATION.--Lat 32°51'17", long 107°58'23", in NW¼SW¼ sec.3, T.17 S., R.11 W., Grant County, Hydrologic Unit 13030202, on left bank 100 ft downstream from Willow Springs Canyon, 0.3 mi east of Mimbres, 1.1 mi downstream from Shepard Canyon, 2.5 mi downstream from Bear Canyon, and at mile 73.1.

PERIOD OF RECORD.--March 1978 to current year.

REMARKS.--Records good except for estimated daily discharges, which are poor.

MEAN	13.5	13.6	34.3	29.2	28.9	34.5	25.4	16.5	8.54	11.3	29.9	13.5
MAX	67.9	43.9	186	163	99.1	93.2	89.5	64.9	23.0	52.1	234	48.6
(WY)	1986	1979	1985	1993	1995	1992	1992	1992	1992	1986	1988	1988
MIN	2.56	2.47	3.65	4.24	3.11	2.16	2.34	1.84	2.82	1.64	3.30	2.64
(WY)	1995	1981	1981	1981	1981	1990	1990	1990	1996	1994	1994	1978

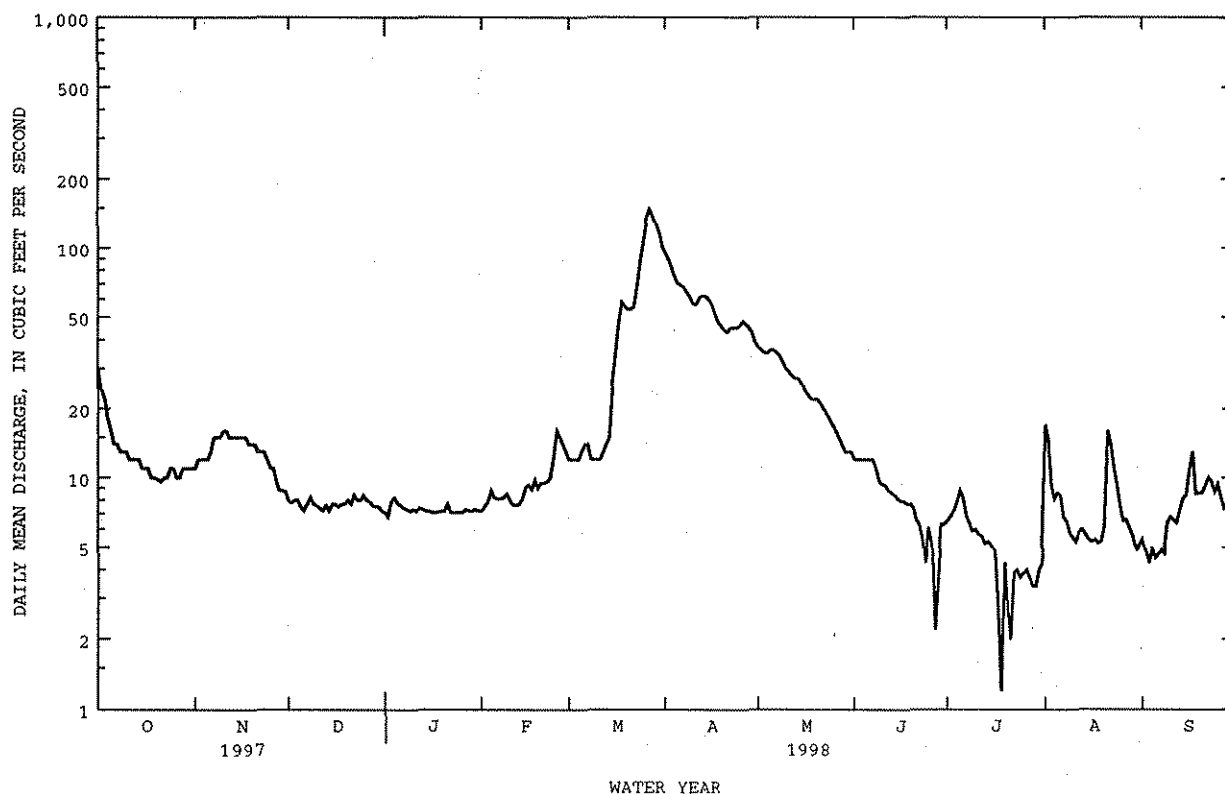
MIMBRES RIVER BASIN

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08477110 MIMBRES RIVER AT MIMBRES, NM--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1978 - 1998	
ANNUAL TOTAL	4744.2		6488.9		21.7	
ANNUAL MEAN	13.0		17.8		45.1	
HIGHEST ANNUAL MEAN					5.08	
LOWEST ANNUAL MEAN					2500	
HIGHEST DAILY MEAN	181	Sep 22	148	Mar 27	.07	Dec 28 1984
LOWEST DAILY MEAN	1.5	Jul 1	1.2	Jul 18	.34	Jul 11 1994
ANNUAL SEVEN-DAY MINIMUM	1.8	Jun 30	3.0	Jul 17	.34	Jul 8 1994
INSTANTANEOUS PEAK FLOW			159	Mar 27	^a 6360	Dec 28 1984
INSTANTANEOUS PEAK STAGE			3.24	Mar 26	^b 8.05	Dec 28 1984
INSTANTANEOUS LOW FLOW			.79	Jul 20	.22	Aug 22 1980
ANNUAL RUNOFF (AC-FT)	9410		12870		15690	
10 PERCENT EXCEEDS	28		46		51	
50 PERCENT EXCEEDS	8.7		9.3		8.7	
90 PERCENT EXCEEDS	3.7		5.4		3.0	

e Estimated

^a From rating curve extended above 450 ft³/s, on basis of slope-area measurement at gage heights 6.70 ft and 8.05 ft.^b From floodmarks.

TULAROSA VALLEY BASIN

08480595 SALT CREEK NEAR TULAROSA, NM

LOCATION.--Lat 33°16'32", long 106°23'50", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.16, T.12 S., R.6 E., Sierra County Hydrologic Unit 10301103, on right bank, 360 ft upstream from Range Road 316, .5 mi east of Range Road 7, and about 65 miles north of small missile range on U.S. Highway 70.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1995 to current year. Published as Salt Creek at Range Road 316 on White Sands Missile Range, August 1995 to September 1996.

GAGE.--Water-stage recorder. Elevation of gage is 4,020 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 88 ft³/s, July 3, 1996, gage height, 6.10 ft; minimum no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 69 ft³/s, August 5, 1998, gage height, 5.42 ft; minimum discharge, .17 ft³/s, February 17.

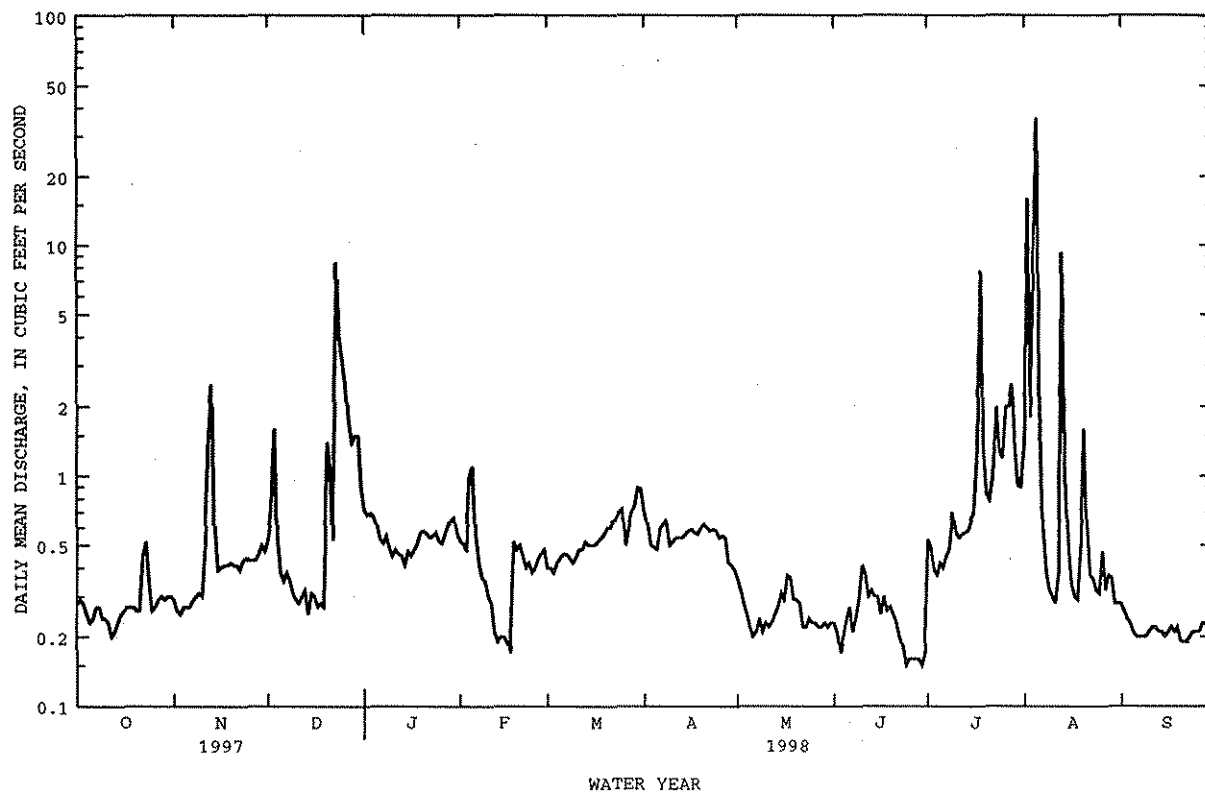
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.29	.53	.72	.52	e.40	e.71	.36	.23	.53	1.4	.28
2	.29	.26	.70	.68	.51	e.40	e.61	.32	.21	.49	16	.26
3	.28	.25	1.6	.69	.47	e.38	e.50	.28	.17	.39	1.8	.24
4	.25	.27	.53	.67	1.0	e.42	e.49	.25	.20	.37	11	.23
5	.23	.27	.38	.62	1.1	e.44	e.48	.22	.24	.42	36	.21
6	.24	.27	.35	.53	.55	e.46	e.60	.20	.27	.40	1.7	.20
7	.27	.29	.38	.51	.42	e.46	e.62	.21	.21	.45	.58	.20
8	.27	.30	.35	.55	.36	e.44	e.64	.24	.24	.48	.38	.20
9	.24	.31	.31	.49	.35	e.42	e.50	.21	.29	.70	.32	.20
10	.24	.30	.29	.45	.30	e.44	e.52	.23	.41	.57	.30	.21
11	.23	.51	.28	.48	.28	e.48	e.54	.22	.38	.54	.28	.22
12	.20	1.5	.30	.46	.21	e.48	e.54	.23	.30	.56	.38	.22
13	.21	2.5	.32	.45	.19	e.52	e.54	.25	.32	.57	9.3	.21
14	.23	.61	.25	.41	.20	e.50	e.56	.27	.30	.58	1.1	.21
15	.25	.39	.31	.47	.20	e.50	e.58	.31	.30	.65	.50	.20
16	.26	.40	.30	.45	.19	e.50	e.59	.29	.25	.70	.34	.21
17	.27	.41	.27	.48	.17	e.52	e.57	.37	.30	1.3	.30	.22
18	.27	.41	.28	.51	.52	e.54	e.56	.36	.26	7.7	.29	.21
19	.27	.42	.27	.57	e.48	e.56	e.60	.29	.27	1.3	.50	.22
20	.26	.41	1.4	.58	e.50	e.60	e.62	.29	.25	.84	1.6	.19
21	.26	.41	1.1	.56	e.45	e.60	e.60	.28	.23	.79	.62	.19
22	.45	.39	.53	.54	e.40	e.64	e.58	.22	.20	1.0	.37	.19
23	.52	.43	8.4	.55	e.42	e.65	e.59	.22	.18	2.0	.36	.20
24	.35	.44	4.0	.57	e.38	e.70	e.58	.24	.15	1.3	.32	.21
25	.26	.43	3.2	.52	e.40	e.72	e.54	.23	.16	1.2	.31	.21
26	.27	.43	2.5	.51	e.44	e.50	e.55	.23	.16	2.0	.47	.21
27	.29	.43	1.7	.57	e.46	e.60	e.54	.22	.16	2.0	.32	.23
28	.30	.46	1.4	.62	e.48	e.70	.42	.22	.16	2.5	.37	.23
29	.29	.50	1.5	.64	---	e.74	.41	.23	.15	1.3	.36	.21
30	.30	.47	1.5	.66	---	e.89	.39	.22	.17	.91	.28	.26
31	.30	---	.91	.56	---	e.88	---	.23	---	.90	.28	---
TOTAL	8.63	14.76	36.14	17.07	11.95	17.08	16.57	7.94	7.12	35.44	88.13	6.48
MEAN	.28	.49	1.17	.55	.43	.55	.55	.26	.24	1.14	2.84	.22
MAX	.52	2.5	8.4	.72	1.1	.89	.71	.37	.41	7.7	.36	.28
MIN	.20	.25	.25	.41	.17	.38	.39	.20	.15	.37	.28	.19
AC-FT	17	29	72	34	24	34	33	16	14	70	175	13

CAL YR 1997 TOTAL 280.66 MEAN .77 MAX 27 MIN .18 AC-FT 557
WTR YR 1998 TOTAL 267.31 MEAN .73 MAX 36 MIN .15 AC-FT 530

e Estimated

08480595 SALT CREEK NEAR TULAROSA, NM--Continued



TULAROSA VALLEY BASIN

08480595 SALT CREEK AT TULAROSA, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years August 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-A-TURE AIR (DEG C) (00020)	TEMPER-A-TURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
MAY 13...	1130	.32	26800	8.1	26.0	13.5	656	9.6	119	3800	3600	850	
AUG 06...	1715	.89	16300	8.1	31.0	33.5	659	5.0	86	2300	2200	540	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)
MAY 13...	400	4800	34	130	234	0	192	189	3700	7900	3.8	.38	
AUG 06...	240	2700	25	76	123	1	103	116	2200	4300	1.4	.08	
DATE		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS TOTAL DIS-SOLVED (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
MAY 13...	22	18900	18000	--	<.01	<.05	<.02	--	<.1	.2	<.01	<.01	
AUG 06...	15	10900	10100	.093	.02	.12	.23	.79	.4	1.0	.05	<.01	
DATE		PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	
MAY 13...	<.01	190	<150	1	2	<100	28	930	842	<5	<5		
AUG 06...	.02	3400	<100	3	3	200	300	590	538	<1	<2		
DATE		CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	
MAY 13...	<5	<5	<5	<5	110	<150	<5	<5	930	1400	60		
AUG 06...	6.2	<4	8	3	2900	<100	6	<4	550	720	320		
DATE		MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	
MAY 13...	<60	<.1	<.1	3	2	<5	<5	18000	19000	<10	<300		
AUG 06...	260	<.1	.2	2	2	<2	<2	12000	10000	20	<200		

TULAROSA VALLEY BASIN

345

08480595 SALT CREEK AT TULAROSA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	2,4-DP TOTAL (UG/L) (82183)
MAY 13...	1130	<.01	<.01	<.01	<.01
AUG 06...	1715	<.01	<.01	<.01	<.01

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in floodflow analyses. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in the second table.

Crest-stage partial-record stations

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device that will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each year is given. Information on some lower floods may have been obtained, and discharge measurements made for purposes of establishing the stage-discharge relation, but these are not published herein. The year given in the period of record column represents the first year of a period extending through the current year unless otherwise noted. For some stations, publication of discharge is delayed pending definition of stage-discharge relationship. Published maximums are for water years.

Annual maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1998 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
BRAZOS RIVER BASIN								
Blackwater Draw tributary near Floyd. (08079300)	Lat 34°14'52", long 103°44'51", Roosevelt County, Hydrologic Unit 12050001, 0.5 mi down- stream from section road, and 10 mi west of Floyd. Drainage area is ^a 10 mi ² .	1963-	08-03-98	0.32	7	- -69	5.96	3,400
Running Water Draw near Clovis. (08080600)	Lat 34°31'55", long 103°12'05", Curry County, Hydrologic Unit 12050005, 0.25 mi upstream from State Highway 209, and 8 mi north of Clovis. Drainage area is 109 mi ² .	1953-56 1957-64* 1965-	- -98 ---	---	k	07-24-72	---	8,000
RIO GRANDE BASIN								
Canjilon Creek above Abiquiu Reservoir. (08286650)	Lat 36°18'55", long 106°29'05", Rio Arriba County, Hydrologic Unit 13020102, in Piedra Lumbre Grant, 300 ft upstream from bridge on U.S. Highway 84, 0.2 mi northwest of entrance to Ghost Ranch and about 12 mi northwest of Abiquiu. Drainage area is 144 mi ² .	1965-	07-07-98	^d 11.56	4,620	07-07-98	^d 11.56	4,620
Rito De Los Frijoles in Bandelier Nation Monument (08313350)	Lat 35°46'35", long 106°16'06", Sandoval County, Hydrologic Unit 13020201, in Bandelier National Monument, on right bank 800 ft downstream from Monument Headquarters, 6.5 mi south of Los Alamos, 18.5 mi northwest of Santa Fe. Drainage area is 18.1 mi ² .	1963-69 1977-98	08-13-97	3.12	53	07-21-78	6.34	3,030
Capulin Canyon above Ranger Cabin, Bandelier National Monument (08313365)	Lat 35°46'36", long 106°21'00", Sandoval County, Hydrologic Unit 13020201, about .4 mi ² downstream from west park boundary, 2.25mi ² upstream from Ranger cabin. Drainage area is 6.5 mi ² .	1996-	08-11-98	<9.94	<125	09-02-96	13.66	3,020

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1998 maximum		Period of record maximum			
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
RIO GRANDE BASIN -- Continued								
Capulin Canyon at Ranger Cabin, Bandelier National Mounment (083133655)	Lat 35°45'28", long 106°19'46", Sandoval County Hydrologic Unit 13020201, at Ranger cabin, Drainage area is 8.3 mi ² .	1997-	08-11-98	6.08	75	09-03-97	7.20	270
Capulin Canyon below Ranger Cabin, Bandelier National Mounment (08313366)	Lat 35°45'21", long 106°19'36", Sandoval County Hydrologic Unit 13020201, about .25 mi downstream from Ranger cabin, Drainage area is 8.4 mi ² .	1996-	- 98	<4.62	<300	06-26-96	9.30	2,700
Capulin Canyon below Painted Cave, Bandelier National Mounmet (08313368)	Lat 35°44'21", long 106°19'09", Sandoval County, Hydrologic Unit 13020201, about 3.0 mi downstream from Ranger cabin, and 2.25 mi upstream from mouth. Drainage area is 14.1 mi ² .	1996-	08-11-98	2.29	150	06-26-96	7.90	3,630
Bland Canyon near Cochiti Pueblo. (08313400)	Lat 35°42'11", long 106°24'56", Sandoval County, Hydrologic Unit 13020201, 200 ft south of Forest Service Road, 0.3 mi inside Santa Fe National Forest, and 7.5 mi north of Cochiti Pueblo. Drainage area is 7.57 mi ² .	1962-	08-25-98	2.10	38	08-10-85	3.54	243
San Cristobal Arroyo near Galisteo. (08317600)	Lat 35°22'55", long 105°51'05", Santa Fe County, Hydrologic Unit 13020201, at bridge on U.S. Highway 285, 5.5 mi east of Galisteo. Drainage area is 116 mi ² .	1955-	07-26-98	11.12	6,110	08-17-61	13.34	9,500
San Pedro Creek near Golden. (08318900)	Lat 35°13'45", long 106°47'45", Sandoval County, Hydrologic Unit 13020201, 1 mi downstream from bridge on State Highway 14 and 5.5 mi southwest of Golden. Drainage area is 45.2 mi ² .	1953-	07-16-98	0.27	235	09-24-55	12.95	10,800
Tijeras Arroyo at Albuquerque. (08330500)	Lat 35°03'40", long 106°28'40", Bernalillo County, Hydrologic Unit 13020203, 300 ft south of old U.S. Highway 66, and 0.4 mi southeast of city limits of Albuquerque. Drainage area is 75.3 mi ² .	1943-48* 1958-	07-25-98	2.61	950	06-24-67	6.85	6,500
Canada Montoso near Scholle. (08331650)	Lat 34°23'11", long 106°28'37", Socorro County, Hydrologic Unit 13020203, 130 ft upstream from dip on abandoned highway, 500 ft upstream from bridge on U.S. Highway 60, and 3.6 mi southwest of Scholle. Drainage area is 35 mi ² .	1961-	08-12-98	3.33	940	07-31-97	7.47	5,600
Rio Puerco at Cuba (08332525)	Lat 36°38'00", long 106°58'48", Sandoval County, Hydrologic Unit 13020204, on downstream side of bridge of State Road 197, 0.50 mi to southwest of State Highway 44, and 1.0 mi southwest of Cuba.	1997	07-27-98	8.24	634	06-06-97	11.04	2,730

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1998 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
RIO GRANDE BASIN -- Continued								
La Jencia Creek near Magdalena. (08353500)	Lat 34°09'45", long 107°12'35", Socorro County, Hydrologic Unit 13020209, 3.5 mi north- east of Magdalena. Drainage area is 195 mi ² .	1957-	07-18-98	11.36	4,950	07-08-98	11.36	4,950
Alamosa Creek near Monticello. (08360000)	Lat 33°34'09", long 107°35'33", Socorro County, Hydrologic Unit 13020211, on left bank at Alamosa damsite and downstream from Old Fort Ojo Caliente, just downstream from Wildhorse Creek, 15 mi northwest of Monticello. Drainage area is 403 mi ² .	1931-42* 1956-58 1958-71* 1973-95g 1997-	07-23-98	5.32	1,300	08-13-64	14.04	10,800
Tecolote Creek at Tecolote. (08379300)	Lat 35°27'20", long 105°16'55", San Miguel County, Hydrologic Unit 13060001, on bridge on old U.S. Highway 85 at Tecolote. Drainage area is 122 mi ² .	1954-	07-27-98	5.77	709	06-01-37	---	nc20,000
Pintada Arroyo near Santa Rosa. (08383300)	Lat 34°53'20", long 104°43'50", Guadalupe County, at bridge on U.S. Highway 54, and 4.5 miles southwest of Santa Rosa. Drainage area is 896 mi ² .	1959-86 1996-	07-31-98	6.48	420	06-26-96	12.97	5,000
Yeso Creek near Fort Sumner. (08385600)	Lat 34°16'32", long 104°17'28", De Baca County, Hydrologic Unit 13060003, at abandoned bridge 1 mi downstream from State Highway 20, and 14.5 mi south of Fort Sumner. Drainage area is 242 mi ² .	1937-95 1997-	09-30-98	1.70	680	10-07-54	11.60	14,800
Rio Bonito near Fort Stanton. (08389000)	Lat 33°31'05", long 105°29'10", Lincoln County, Hydrologic Unit 13060008, on left bank 130 ft upstream from culvert on U.S. Highway 380, 2.5 mi northeast of Fort Stanton. Drainage area is 85 mi ² .	1955-95 1997-	- -98	<3.80	<230	05-17-79	7.20	4,100
North Spring River at Roswell. (08393600)	Lat 33°23'47", long 105°32'53", Chavez County, Roswell Municipal Golf Course, 2,400 ft upstream from Montana Ave in Roswell. Drainage area is 19.5 mi ² .	1958-86 1997-	- -98	---	k	05-03-81	3.50	95
Eight Mile Draw near Roswell. (08393900)	Lat 33°24'05", long 104°37'54", Chavez County, Hydrologic Unit 13060008, 6.5 mi west of Roswell. Drainage area is 397 mi ² .	1941 1952-	- -98	---	k	07-13-91	17.80	10,300

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1998 maximum		Period of record maximum			
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
RIO GRANDE BASIN -- Continued								
Rio Penasco near Dunken. (08397600)	Lat 33°52'55", long 105°10'40", Chavez County, Hydrologic Unit 13060010, on bridge on State Highway 24, 5 mi north of Dunken. Drainage area is 583 mi ² .	1952-56 1956-62* 1963-95 1997-	07-03-98	5.92	98	07-06-58	13.36	10,200
Mosley Canyon near Whites City. (08405100)	Lat 32°15'27", long 104°22'43", Eddy County, Hydrologic Unit 13060011, 600 ft downstream from dip on Dark Canyon Road, and 5.5 mi north of Whites City. Drainage area is 14.6 mi ² .	1959- h09-13-97	- -98 h09-13-97	--- h4.77	(k) h1,300	05-30-65	13.70	16,400
MIMBRES BASIN								
Mimbres River at Deming. (08478500)	Lat 32°17'00", long 107°45'35", Luna County, Hydrologic Unit 13030202, culvert on U.S. Highway 180, at north end of Deming. Drainage area is 1,370 mi ² .	1954-79 1983-	07-02-98	4.28	240	"12-19-78	"5.91	"2,350
TULAROSA BASIN								
White Oaks Canyon near Carrizozo. (08480150)	Lat 33°43'51", long 105°50'11", Lincoln County, Hydrologic Unit 13050003, 100 ft upstream from culvert on U.S. Highway 54, 6 mi north of Carrizozo. Drainage area is 31 mi ² .	1959- 1961-	07-07-98	3.74	1,650	07-26-59	14.30	7,690

< Less than.
+ Discharge not yet determined.
* Operated as continuous-record gaging station.
a Approximately.
b Peak too low to register on gage.
c Estimated.
d From floodmark.
e Gage height not determined.

f Contributing area.
g Discontinued at end of year.
h Revised.
j May not have been peak for year.
k No evidence of any flow during water year.
m No record.
n Correction.

Discharge Measurements Made at Miscellaneous Sites during Water Year 1998

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Date	Discharge (ft ³ /s)
RIO GRANDE BASIN						
Lea Lake Drain 08394018	Pecos River	Lat 33°18'56", long 104°19'56", in SW ¹ /4SE ¹ /4SW ¹ /4 sec. 34, T. 11 S., R. 26 Chaves County, Hydrologic Unit 13060007, on downstream side of road crossing at Bottomless Lakes State Park near Roswell.	---	1976-	10-08-97 01-06-98 04-09-98 07-09-98	6.42 6.59 4.66 4.03
Blue Springs 08405450	Black River	Lat 32°11'07", long 104°16'50", in SW ¹ /4NE ¹ /4SW ¹ /4 sec. 27, T. 24 S., R. 26 E., Eddy County, Hydrologic Unit 13060011, upstream from all diversions, 5.5 mi east of Whites City.	---	1907 1919-20 1923 1935 1952-70 1974-	10-17-97 01-12-98 04-30-98 07-09-98	13.3 13.0 12.2 12.7
Castle Springs 08405490	Black River	Lat 32°11'59", long 104°15'13", in SW ¹ /4SW ¹ /4SW ¹ /4 sec. 24, T. 24 S., R. 26 E., Eddy County, Hydrologic Unit 13060011, upstream from mouth at Black River Village, 7.2 mi east of Whites City.	---	1975-	10-16-97 01-12-98 04-21-98 07-09-98	0.754 0.579 0.715 0.350

REACH.--The seepage investigation was conducted along a 10.6-mile reach from the Leasburg Canal below Check No. 1 near Leasburg, New Mexico, to the Leasburg Canal above Doña Ana County Road D018 near Las Cruces, New Mexico. Canal miles are referenced downstream from the Leasburg Canal Heading at the Rio Grande, which is designated as canal mile 0.0.

PREVIOUS INVESTIGATIONS.--August 28, 1997

DATE.--April 9, 1998

WEATHER.--Weather was favorable for the seepage investigation; no precipitation occurred. The average daily temperature at Las Cruces, New Mexico on April 9, 1998 was 16 degrees Celsius, with a low of 2 degrees Celsius and a high of 23 degrees Celsius.

STREAMFLOW.--The canal seepage investigation was conducted during the irrigation-season at typical operating stage. Mean discharge at canal mile 1.3 was 345 ft³/s. Discharge measurements indicate a channel loss of 72 ft³/s from canal mile 1.3 to canal mile 11.9. The indicated channel loss is shown below. Side-channel outflow (diversion headings) is considered a withdrawal and not a loss; side-channel inflow (return inlets) is considered a contribution and not a gain. Channel loss includes seepage from the unlined channel, evaporation from the water surface, and transpiration by vegetation along the channel banks.

REMARKS.--The seepage investigation is rated good based upon steady streamflow conditions. The canal heading and all diversion gates were set prior to the seepage investigation on April 8. Side-channel outflow and inflow were minimal with most diversion headings closed for the seepage investigation. A temporary staff-gage at the downstream site (canal mile 11.9) showed steady canal stage during the seepage investigation on April 9 from 1000 hours to 1715 hours. Discharge measurements were conducted by the U.S. Geological Survey and the Elephant Butte Irrigation District. Individual discharge measurements were rated good (within 5 percent) throughout the stream reach. The indicated channel loss of 72 ft³/s along the 10.6-mile reach represents a canal loss of approximately 20.9 percent, or approximately 6.8 ft³/s per mile. Accuracy of discharge measurements needs to be considered when evaluating indicated channel loss. Special cooperation and assistance by the Elephant Butte Irrigation District and local farmers is gratefully acknowledged.

Canal mile	Stream	Location	Time	Water temper- ature (°C)	Specific conduc- tance (µS/cm)	Discharge, in ft ³ /s			
						Main stream	Outflow	Inflow	Channel loss
April 9, 1998									
1.3	Leasburg Canal	Below Check No. 1 at walkway near Leasburg	1040	12.0	678	345	--	--	--
		Lat 32°28'51", long 106°55'04"	1245	14.5	684	346	--	--	--
			1450	15.5	681	343	--	--	--
			1640	15.5	683	345	--	--	--
		^a Mean value	--	--	682	345	--	--	--
2.4	Selden Lateral	Heading	0940	--	--	--	0	--	--
		Lat 32°28'41", long 106°54'00"							
3.3	Baca Lateral	Heading	1010	12.0	672	--	^b 0.045	--	--
		Lat 32°28'05", long 106°53'27"							
4.0	Kerr Lateral	Heading	1055	13.0	681	--	16.3	--	--
		Lat 32°27'36", long 106°53'12"							
4.2	American Bend Lateral	Heading	1215	14.5	680	--	^c 0.345	--	--
		Lat 32°27'21", long 106°53'07"							
6.5	Hill Lateral	Heading	1300	14.1	676	--	18.2	--	--
		Lat 32°25'44", long 106°51'46"							
6.5	Rio Rancho Lateral	Heading	1250	--	--	--	0	--	--
		Lat 32°25'45", long 106°51'47"							
6.5	Doña Ana Lateral	Heading	1230	--	--	--	^c 25.6	--	--
		Lat 32°25'46", long 106°51'43"							
7.1	Rio Rancho	Return Inlet	1345	--	--	--	--	0	--
		Lat 32°25'19", long 106°51'26"							
8.3	Picacho Canal	Heading	1250	13.5	681	--	66.3	--	--
		Lat 32°24'25", long 106°50'46"							
8.5	Propeck Lateral	Heading	1400	--	--	--	0	--	--
		Lat 32°24'17", long 106°50'40"							
10.8	Spillway No. 5	Heading	1155	12.5	682	--	4.06	--	--
		Lat 32°22'40", long 106°49'23"							
11.2	Taylor Lateral	Heading	1630	16.0	677	--	7.81	--	--
		Lat 32°22'22", long 106°49'14"							
--	Turnouts	Miscellaneous leaky turnouts	--	--	--	--	^d 0.18	--	--
		Canal miles 1.3-11.9							
11.9	Leasburg Canal	Above County Road D018 (Lopez Rd)	1235	14.3	679	135	--	--	--
		approximately 20 feet above	1440	15.7	680	135	--	--	--
		Doña Ana Lateral Return Inlet	1640	16.5	679	132	--	--	--
		Lat 32°21'44", long 106°48'58"					--	--	--
		¹ Mean value	--	--	679	134	--	--	72

- a. Mean value of multiple measurements.
b. Leakage at closed heading measured with Parshall Flume
c. Flume rating.
d. Total leakage at closed turnouts.

REACH.--The seepage investigation was conducted along a 62.4-mile reach from the Rio Grande below Leasburg Dam near Radium Springs, New Mexico, to the Rio Grande at El Paso, Texas (08364000). River miles are referenced upstream from the Rio Grande at El Paso, Texas, which is designated as river mile 1,249.9.

PREVIOUS INVESTIGATIONS.--A seepage investigation from the gaging station "below Caballo Dam" (08362500) to a site 0.3 mi upstream from the gaging station "at El Paso" (08364000) was conducted by the U.S. Geological Survey on February 12-13, 1974. Seepage investigations from below Leasburg Dam near Radium Springs, New Mexico, to El Paso, Texas (08364000) were conducted on January 5-6, 1988, January 10-11, 1989, January 9-10, 1990, January 8-9, 1991, January 26-27, 1993, January 11-12, 1995, January 23-24, 1996, and January 28-29, 1997. A seepage investigation from below Leasburg Dam near Radium Springs, New Mexico, to NM-227 Bridge near Vado, New Mexico was conducted on December 17, 1991.

DATE.--January 27-28, 1998.

WEATHER.--Weather was favorable for the seepage investigation; no precipitation occurred. Temperature extremes at Las Cruces, New Mexico, ranged from a low of -3 degrees Celsius on January 27 to a high of 21 degrees Celsius on January 28.

STREAMFLOW.--The seepage investigation was conducted during a scheduled winter release from Caballo Reservoir of approximately 300 ft³/s. Discharge measurements indicate a net seepage loss of 63 ft³/s from river mile 1,312.3 to river mile 1,249.9. Indicated gains (+) and losses (-) throughout the reach are shown below. Tributary flow recorded as inflow is considered a contribution and not a gain; no outflow (diversions) occurred during the investigation. Evaporation from the water surface of the river in January is considered negligible.

REMARKS.--The seepage investigation is rated good based upon steady streamflow conditions. Recorded river stage in the Rio Grande at NM-227 Bridge near Vado, New Mexico (site 17), indicates steady stage at an outside-gage-height of 0.00 feet on January 27 at 1400 and January 28 at 0823. Individual discharge measurements were rated good (within 5 percent) to fair (within 8 percent) throughout most of the stream reach. Recent channel excavation in the Rio Grande at Vinton Bridge (site 25) may effect measured discharge at river mile 1,264.7. Discharge measurements at Picacho Drain (site 11), East Drain (site 24), and Keystone Reservoir Outlet (site 33) were rated poor (over 8 percent) based on poor channel conditions. Accuracy of discharge measurements needs to be considered when evaluating indicated gains and losses.

Site number	River mile	Stream	Location	Time	Water temperature (°C)	Specific conductance (µS/cm)	Discharge, in ft ³ /s		
							Main stream	Inflow	Gain or loss
January 27, 1998									
1	1,312.3	Rio Grande	Below Leasburg Dam, Radium Springs Lat 32°28'41", long 106°55'10"	0925	5.5	965	326	--	--
2	1,310.2	Rio Grande	Near Leasburg Lat 32°27'21", long 106°54'08"	1050	6.0	969	337	--	+11
3	1,307.6	Selden Drain	Near Leasburg Lat 32°25'38", long 106°52'50"	--	--	--	--	0	--
4	1,306.3	Rio Grande	Near Hill Lat 32°25'05", long 106°52'01"	1230	8.5	975	354	--	+17
5	1,302.7	Rio Grande	At Shalem Bridge near Doña Ana Lat 32°22'34", long 106°51'16"	1340	9.5	985	324	--	-30
6	1,301.2	Wasteway no. 5	Near Doña Ana Lat 32°22'14", long 106°50'14"	1420	--	--	--	0	--
7	1,298.8	Rio Grande	Near Picacho Lat 32°20'18", long 106°50'09"	0955	4.7	991	344	--	+20
8	1,295.6	Rio Grande	Below Picacho Bridge near Las Cruces Lat 32°17'45", long 106°49'25"	1145	6.8	987	316	--	-28
9	1,295.4	Wastewater inflow	City of Las Cruces Lat 32°17'35", long 106°49'26"	1300	18.2	1,230	--	^a 14.7	--
10	1,293.1	Rio Grande	At NM-359 Bridge near Mesilla Lat 32°15'49", long 106°49'29"	1345	10.7	1,010	318	--	-13
11	1,291.8	Picacho Drain	Above Mesilla Dam Lat 32°14'34", long 106°48'56"	1525	9.9	1,420	--	1.90	--
12	1,291.7	Rio Grande	Below Picacho Drain Lat 32°14'30", long 106°48'49"	1540	11.0	1,060	323	--	+3
13	1,289.5	Rio Grande	Below Mesilla Dam Lat 32°13'17", long 106°47'15"	0925	6.0	1,000	306	--	-17
14	1,287.3	Rio Grande	At NM-28 Bridge near San Pablo Lat 32°12'24", long 106°45'32"	1100	6.5	998	306	--	0
15	1,283.6	Santo Tomas River Drain	Near San Miguel Lat 32°10'16", long 106°43'11"	1138	--	--	--	0	--
16	1,282.7	Rio Grande	At NM-228 Bridge near San Miguel Lat 32°09'43", long 106°42'58"	1225	8.0	1,000	313	--	+7
17	1,277.8	Rio Grande	At NM-227 Bridge near Vado Lat 32°06'48", long 106°40'05"	1430	11.0	1,000	300	--	-13
January 28, 1998									
17	1,277.8	Rio Grande	At NM-227 Bridge near Vado Lat 32°06'48", long 106°40'05"	0840	6.0	1,010	283	--	--
18	1,276.6	Del Rio Drain	Near Vado Lat 32°06'09", long 106°39'27"	0935	8.5	1,330	--	25.0	--
19	1,273.8	Rio Grande	At NM-226 Bridge near Berino Lat 32°03'56", long 106°39'45"	1130	7.0	1,030	316	--	+8

Site number	River mile	Stream	Location	Time	Water temperature (°C)	Specific conductance (µS/cm)	Discharge, in ft ³ /s		
							Main stream	Inflow	Gain or loss
January 28, 1998									
20	1,271.6	La Mesa Drain	Near Chamberino Lat 32°02'15", long 106°39'23"	1240	12.0	1,890	--	9.24	--
21	1,271.5	Rio Grande	Below La Mesa Drain near Chamberino Lat 32°02'12", long 106°39'18"	1330	12.0	1,120	326	--	+1
22	1,268.5	Rio Grande	At NM-225 Bridge near Anthony Lat 31°59'58", long 106°38'07"	0930	5.9	1,050	336	--	+10
23	1,268.5	Pipe inflow	At NM-225 Bridge near Anthony Lat 31°59'58", long 106°38'07"	0840	13.6	1,510	--	0.02	--
24	1,265.4	East Drain	Near Vinton, Tex. Lat 31°58'09", long 106°36'17"	1155	9.1	2,430	--	9.37	--
25	1,264.7	Rio Grande	At Vinton Bridge near Vinton, Tex. Lat 31°57'33", long 106°36'16"	1100	7.0	1,130	322	--	-23
26	1,261.6	Rio Grande	At TX-259 Bridge, Cafutillo, Tex. Lat 31°54'54", long 106°36'06"	1740	10.1	1,090	338	--	+16
27	1,259.3	Rio Grande	At Borderland Bridge near Borderland, Tex. Lat 31°53'09", long 106°35'55"	1450	11.2	1,080	343	--	+5
28	1,256.2	Rio Grande	At TX-260 Bridge near Santa Teresa Lat 31°50'46", long 106°36'18"	0940	6.5	1,100	305	--	-38
29	1,252.8	Rio Grande	Near Sunland Park Lat 31°48'24", long 106°34'57"	1115	7.0	1,090	333	--	+28
30	1,251.0	Wastewater inflow	Sunland Plant, City of Sunland Park Lat 31°47'55", long 106°33'25"	1630	20.5	1,600	--	^a 0.94	--
31	1,250.9	Rio Grande	At Sunland Park Bridge, Sunland Park Lat 31°47'56", long 106°33'16"	1315	10.5	1,100	343	--	+9
32	1,250.3	Montoya Drain	Near Sunland Park Lat 31°48'10", long 106°32'47"	1430	14.5	2,500	--	30.9	--
33	1,250.1	Keystone Reservoir outlet	Near El Paso, Tex. Lat 31°48'18", long 106°32'39"	1620	20.0	4,830	--	^b 1.0	--
33A	1,250.0	Side-channel inflow	Above Courchesne Bridge near El Paso, Tex. Lat 31°48'13", long 106°32'28"	1640	--	--	--	^c 0.05	--
34	1,249.9	Rio Grande	At Courchesne Bridge, El Paso, Tex. Lat 31°48'09", long 106°32'26"	1550	11.5	1,090	339	--	-36

a Reported discharge.

b Estimated discharge.

c Side-channel inflow to the Rio Grande at left bank approximately 400 feet upstream from the Courchesne Bridge.

REACH.--The seepage investigation was conducted along a 9.4-mile reach from Eastside Canal below the heading near Mesilla, New Mexico, to Eastside Canal at Doña Ana County Road B31 near Mesquite, New Mexico. Canal miles are referenced downstream from the Eastside Canal Heading at the Rio Grande, which is designated as canal mile 0.0.

PREVIOUS INVESTIGATIONS.--September 25, 1997

DATE.--May 7, 1998

WEATHER.--Weather was favorable with no precipitation during the seepage investigation. The average daily temperature at Las Cruces, New Mexico on May 7, 1998 was 20 degrees Celsius, with a low of 9 degrees Celsius and a high of 29 degrees Celsius.

STREAMFLOW.--The canal seepage investigation was conducted during the irrigation-season at typical operating stage. Mean discharge at canal mile 0.1 was 242 ft³/s. Discharge measurements indicate a channel loss of 35 ft³/s from canal mile 0.1 to canal mile 9.5. The indicated channel loss is shown below. Side-channel outflow (diversion headings) is considered a withdrawal and not a loss; side-channel inflow (return inlets) is considered a contribution and not a gain. Channel loss includes seepage from the unlined channel, evaporation from the water surface, and transpiration by vegetation along the channel banks.

REMARKS.--The canal heading and all diversion gates were set prior to the seepage investigation on May 6. Side-channel outflow and inflow were minimal with most diversion headings closed for the seepage investigation. The seepage investigation is rated good based upon steady streamflow conditions. The staff-gage at the upstream site (canal mile 0.1) showed steady canal stage during the seepage investigation, with a gage-height of 3.00 feet on May 7 from 1000 hours to 1505 hours and a slight decrease in stage of 0.03 feet to a gage-height of 2.97 feet from 1600 hours to 1700 hours. A temporary staff-gage at the downstream site (canal mile 9.5) showed steady canal stage, with no change in stage on May 7 from 1000 hours to 1652 hours. Discharge measurements were conducted by the U.S. Geological Survey and the Elephant Butte Irrigation District. Individual discharge measurements were rated good (within 5 percent) throughout the canal reach. The indicated channel loss of 35 ft³/s along the 9.4-mile reach represents a canal loss of approximately 14.5 percent, or approximately 3.7 ft³/s per mile. Accuracy of discharge measurements needs to be considered when evaluating indicated channel loss. Special cooperation and assistance by the Elephant Butte Irrigation District and local farmers is gratefully acknowledged.

Canal mile	Stream	Location	Time	Water temper- ature (°C)	Specific conduc- tance (µS/cm)	Discharge, in ft ³ /s			
						Main stream	Outflow	Inflow	Channel loss
May 7, 1998									
0.1	Eastside Canal	At walkway below heading near Mesilla, NM	1030	17.5	704	243	--	--	--
		Lat 32°13'44", long 106°47'45"	1230	19.5	707	243	--	--	--
			1430	20.5	718	245	--	--	--
			1630	22.5	714	235	--	--	--
		^a Mean value	--	--	711	242	--	--	--
1.6	Louisiana Lat- eral	Return Inlet	1400	27.0	730	--	--	0.18	--
		Lat 32°13'19", long 106°46'16"							
3.1	Freudenthal Lateral	Return Inlet	0925	--	--	--	--	0	--
		Lat 32°12'50", long 106°44'51"							
4.3	Mesilla Lateral	Return Inlet	1000	24.0	729	--	--	b ₀	--
		Lat 32°12'09", long 106°43'59"							
4.3	Spillway No. 15	Heading	0935	--	713	--	0.097	--	--
		Lat 32°12'09", long 106°43'59"							
4.3	Brazito River Lateral	Heading	1030	18.0	708	--	25.3	--	--
		Lat 32°12'10", long 106°43'59"							
5.0	Middle Lateral	Return Inlet	1100	23.0	714	--	--	b ₀	--
		Lat 32°11'43", long 106°43'23"							
5.3	Brazito Lateral	Heading	1155	19.0	707	--	20.6	--	--
		Lat 32°11'36", long 106°43'11"							
5.8	Las Cruces Lat- eral	Return Inlet	1240	21.0	733	--	--	b ₀	--
		Lat 32°11'33", long 106°42'44"							
7.1	Bannock Lateral	Heading	1215	19.0	706	--	25.1	--	--
		Lat 32°10'39", long 106°41'59"							
7.1	Lake Lateral	Heading	1415	--	--	--	0	--	--
		Lat 32°10'39", long 106°41'59"							
8.8	Mitchell Lat- eral	Heading	1425	--	--	--	0	--	--
		Lat 32°09'19", long 106°41'08"							
--	Turnouts	Miscellaneous leaky turnouts	--	--	--	--	d _{0.35}	--	--
		Canal miles 0.1-9.5							
9.5	Eastside Canal	At County Road B31 near Mesquite, NM	1030	18.0	732	133	--	--	--
		Lat 32°08'47", long 106°40'49"	1230	19.0	723	136	--	--	--
			1430	20.0	715	135	--	--	--
			1630	20.0	711	139	--	--	--
		¹ Mean value	--	--	720	136	--	--	35

a. Mean value of multiple measurements.

b. No flow; backwater ponded

c. Leakage at closed heading measured with Parshall Flume

d. Total leakage at closed turnouts

REACH.--The seepage investigation was conducted along a 12.0-mile reach from Westside Canal below the heading near Mesilla, New Mexico, to Westside Canal above the NM226 Bridge near Chamberino, New Mexico. Canal miles are referenced downstream from the Westside Canal Heading at the Rio Grande, which is designated as canal mile 0.0.

PREVIOUS INVESTIGATIONS.--September 11, 1997

DATE.--April 23, 1998

WEATHER.--Weather was favorable with no precipitation during the seepage investigation. The average daily temperature at Las Cruces, New Mexico on April 23, 1998 was 22 degrees Celsius, with a low of 11 degrees Celsius and a high of 31 degrees Celsius.

STREAMFLOW.--The canal seepage investigation was conducted during the irrigation-season at typical operating stage. Mean discharge at canal mile 0.2 was 564 ft³/s. Discharge measurements indicate a channel loss of 86 ft³/s from canal mile 0.2 to canal mile 12.2. The indicated channel loss is shown below. Side-channel outflow (diversion headings) is considered a withdrawal and not a loss; side-channel inflow (return inlets) is considered a contribution and not a gain. Channel loss includes seepage from the unlined channel, evaporation from the water surface, and transpiration by vegetation along the channel banks.

REMARKS.--The seepage investigation is rated good based upon steady streamflow conditions. The canal heading and all diversion gates were set prior to the seepage investigation on April 22. Side-channel outflow and inflow were minimal with most diversion headings closed for the seepage investigation. The staff-gage at the upstream site (canal mile 0.2) showed steady canal stage during the seepage investigation on April 23 with a gage-height of 2.78 feet from 1000 hours to 1600 hours. The staff-gage at the downstream site (canal mile 12.2) showed no change in stage at a gage-height of 8.80 feet on April 23 from 0945 hours to 1600 hours. Discharge measurements were conducted by the U.S. Geological Survey and the Elephant Butte Irrigation District. Individual discharge measurements were rated good (within 5 percent), except for minor estimated leakage at closed headings and return inlets. The indicated channel loss of 86 ft³/s along the 12.0-mile reach represents a canal loss of approximately 15.2 percent, or approximately 7.2 ft³/s per mile. Accuracy of discharge measurements needs to be considered when evaluating indicated channel loss. Special cooperation and assistance by the Elephant Butte Irrigation District and local farmers is gratefully acknowledged.

Canal mile	Stream	Location	Time	Water temper- ature (°C)	Specific conduc- tance (µS/cm)	Discharge, in ft ³ /s			
						Main stream	Outflow	Inflow	Channel loss
April 23, 1998									
0.2	Westside Canal	At walkway below heading near Mesilla, NM	1035 1235	16.5 19.0	716 717	559 569	-- --	-- --	-- --
		Lat 32°13'31", long 106°47'48"	1435 1630	20.5 21.5	725 727	568 562	-- --	-- --	-- --
		^a Mean value	--	--	721	564	--	--	--
0.9	Santo Tomas Lateral	Heading Lat 32°13'01", long 106°47'19"	1035	17.0	716	--	0.84	--	--
5.2	Rodriguez Lateral	Heading Lat 32°10'01", long 106°44'47"	1245	18.0	716	--	19.2	--	--
5.9	Upper Chamberino Lateral	Heading Lat 32°09'24", long 106°44'28"	1125	17.5	715	--	143	--	--
6.6	Brown Lateral	Return Inlet Lat 32°08'56", long 106°44'10"	1325	--	--	--	--	0	--
7.9	Arkansas Lateral	Return Inlet Lat 32°07'52", long 106°43'37"	1350	--	--	--	--	^b 0.001	--
8.3	Fink Lateral	Heading Lat 32°07'37", long 106°43'25"	1430	--	--	--	^c 0.035	--	--
10.6	Corpening Lateral	Return Inlet Lat 32°05'46", long 106°42'22"	1345	--	--	--	--	^b 0.5	--
11.3	Walters Lateral	Return Inlet Lat 32°05'14", long 106°42'04"	1400	--	--	--	--	^b 0.1	--
--	Turnouts	Miscellaneous leaky turnouts Canal miles 0.2-12.2	--	--	--	--	^d 0.006	--	--
12.2	Westside Canal	At walkway above NM226 Bridge near Chamberino, NM	1040 1240	17.5 18.0	737 728	312 317	-- --	-- --	-- --
		Lat 32°04'31", long 106°41'39"	1450 1630	18.5 19.0	721 719	321 314	-- --	-- --	-- --
		¹ Mean value	--	--	726	316	--	--	86

a. Mean value of multiple measurements

b. Estimated leakage at closed heading or return inlet

c. Leakage at closed heading measured with Parshall Flume

d. Total leakage at closed turnouts

Water-quality partial-record stations and water-quality miscellaneous sites are surface-water locations where chemical-quality, biological, and/or sediment data are collected on a limited frequency over a short period of years or once only for use in hydrologic investigations. Continuous streamflow recording gages are not located at these stations or sites.

RIO GRANDE BASIN

08311475 PAJOAQUE RIVER AT EL RANCHO, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
APR 09...	1400	8.1	435	8.4	13.5	19.0	621	7.4	99	160	--	54	
AUG 13...	1330	E5.0	347	8.5	30.5	30.5	E630	6.1	--	130	120	44	
DATE		MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
APR 09...	--	5.4	--	28	1	--	3.0	220	3	186	201	22	
AUG 13...	13	4.1	24	21	.8	7.5	2.8	--	--	--	161	14	
DATE		CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
APR 09...	12	.4	.02	.02	21	275	259	--	<.01	.21	.02	--	.4
AUG 13...	6.7	.4	.03	.03	22	224	214	.165	.01	.18	.09	.03	1.5
DATE		NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CYANIDE TOTAL (MG/L AS CN) (00720)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL (UG/L AS AS) (01002)
APR 09...	<.1	.08	.02	.02	6.4	3.7	<.010	--	12	--	<1	--	--
AUG 13...	.1	.60	.01	.03	20	--	--	17000	7	2	<1	3	3
DATE		ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
APR 09...	2	--	150	--	<1	48.7	--	<1	--	3	--	<1	<1
AUG 13...	3	<100	135	<10	<1	43.4	<1	<1	14	2	10	<1	<1

RIO GRANDE BASIN

08311475 PAJOAQUE RIVER AT EL RANCHO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
APR 09...	--	2	--	<10	--	<1	--	54	--	12	--	<.1
AUG 13...	19	1	12000	<10	20	<1	110	47	930	<1	<.1	<.1
DATE	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
APR 09...	--	2	--	<1	--	<1	--	<1	--	<.5	<10	--
AUG 13...	1.0	2	22	<1	<1	<1	<1	<1	640	<.5	<10	60
DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA SUS SED (PCI/G AS) TH-230) (49960)	GROSS ALPHA SUS SED 2 SIGMA (PCI/G AS) TH-230) (49961)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS- SOLVED (PCI/L AS) CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA SUS SED (PCI/G AS) CS-137) (49964)	GROSS BETA SUS SED 2 SIGMA (PCI/G AS) CS-137) (49965)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM -234 WATER DISSOLV (PCI/L) (22610)	U-234 2 SIGMA WATER, DISS, (PCI/L) (75992)
APR 09...	2	--	--	30	6.10	11	1.66	--	--	40	17	1.78
AUG 13...	<1	15	5.40	21	4.89	17	4.40	35	8.01	30	11	1.18
DATE	U-234 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75942)	U-234 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75941)	URANIUM -235 WATER, DISS, (PCI/L) (22620)	U-235 2 SIGMA WATER, DISS, (PCI/L) (75994)	U-235 SED, SUSP, TOTAL, DRY WGT (PCI/L) (75975)	U-235 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75947)	URANIUM -238 WATER, DISSOLV (PCI/L) (22603)	U-238 2 SIGMA WATER, DISS, (PCI/L) (75991)	U-238 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75940)	U-238 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (04113)	STRON- TIUM 90 DIS- SOLVED (PCI/L) (13503)	SR-90 2 SIGMA WATER, DISS, (PCI/L) (76003)
APR 09...	--	--	.6	.096	--	--	15	1.57	--	--	--	--
AUG 13...	1.2	.173	.4	.065	<.1	.028	9.7	1.02	1.3	.179	<.5	.245
DATE	PLUTO- NIUM-238 WATER FILT (PCI/L) (22001)	PLUTON- IUM-238 WATER FLTRD 2 SIGMA (PCI/L) (49939)	PLUTON- IUM-239/240 WATER FLTRD (PCI/L) (49940)	PLUTON- IUM-239/240 WATER FLTRD 2 SIGMA (PCI/L) (49941)	PLUTON- IUM-238 SUS SED (PCI/G) (49974)	PLUTON- IUM-238 SUS SED 2 SIGMA (PCI/G) (49975)	PLUTON- IUM-239/240 SUS SED (PCI/G) (49976)	PLUTON- IUM-239/240 SUS SED 2 SIGMA (PCI/G) (49977)	AMERI- CIUM-241 WATER FILT (PCI/L) (29867)	AMERIC- IUM-241 WATER FLTRD 2 SIGMA (PCI/L) (49942)	AMERIC- IUM-241 SUS SED (PCI/G) (49980)	AMERIC- IUM-241 SUS SED 2 SIGMA (PCI/G) (49981)
APR 09...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	<.1	.002	<.1	.028	<.1	.007	<.1	.012	<.1	.044	<.1	.009

RIO GRANDE BASIN

08321500 JEMEZ R BL EAST FORK NR JEMEZ SPRINGS, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)		
APR 23...	1045	42	99	7.8	17.0	7.8	25	598	10.2	109	28	
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 CO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
APR 23...	8.6	1.6	7.2	.6	2.4	38	0	31	32	9.5	4.2	
DATE		FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
APR 23...	.4	31	103	84	<.01	.05	.04	.30	.7	.3	.09	
DATE		PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CYANIDE TOTAL (MG/L AS CN) (00720)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
APR 23...	.02	.03	<.01	109	<1	2	23	<1	<1	<1	<1	
DATE		COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	
APR 23...	1	85	<1	26	8	<.1	2	<1	<1	<1	<1	
DATE		ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	RADIUM 228 DIS-SOLVED, 2 SIGMA WATER, DISS, AS (PCI/L) (76001)	RADIUM 228 DIS-SOLVED (PCI/L AS RA-228) (81366)	RA-228 2 SIGMA WATER, DISS, AS (PCI/L) (76000)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	
APR 23...	2	<3.0	.51	<4.0	.88	.05	.01	<1.0	.406	<1		

RIO GRANDE BASIN

083299375 MARAPOSA DIV OF SAN ANTONIO ARR AT ALBQ, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

			DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)											
DATE	TIME	ENDING TIME												
			JUL 08... 2020 -- 5.0											
			JUL 08-08 2025 2325 14											
DATE	TIME	DI-BROMO-METHANE WHOLE RECOVER (UG/L) (30217)	BROMO-DI-CHLORO-METHANE TOTAL (UG/L) (32101)	CARBON TETRA-CHLO-RIDE TOTAL (UG/L) (32102)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L) (32103)	BROMO-FORM TOTAL (UG/L) (32104)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L) (32105)	CHLORO-FORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	ACE-NAPHTH-YLENE TOTAL (UG/L) (34200)	ACE-NAPHTH-ENE TOTAL (UG/L) (34205)		
JUL 08...	2020	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	--	--		
JUL 08-08	2025	--	--	--	--	--	--	--	--	--	<5	<5		
DATE	TIME	ACRYLO-NITRILE TOTAL (UG/L) (34215)	ANTHRA-CENE TOTAL (UG/L) (34220)	BENZO B FLUOR-AN-THENE TOTAL (UG/L) (34230)	BENZO K FLUOR-AN-THENE TOTAL (UG/L) (34242)	BENZO-A-PYRENE TOTAL (UG/L) (34247)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L) (34259)	BIS(2-CHLORO-ETHER UNFLTRD RECOVER (UG/L) (34273)	BIS(2-CHLORO-ETHOXY) METHANE TOTAL (UG/L) (34278)	BIS(2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L) (34283)	N-BUTYL BENZYL PHTHAL-ATE TOTAL (UG/L) (34292)	CHLORO-BENZENE TOTAL (UG/L) (34301)	CHLORO-ETHANE TOTAL (UG/L) (34311)	
JUL 08...	<5	--	--	--	--	--	--	--	--	--	--	<.4	<.4	
JUL 08-08	--	<5	<10	<10	<10	<10	<.09	<5	<5	<5	<5	--	--	
DATE	TIME	CHRY-SENE TOTAL (UG/L) (34320)	DIETHYL PHTHAL-ATE TOTAL (UG/L) (34336)	DI-METHYL PHTHAL-ATE TOTAL (UG/L) (34341)	ENDO-SULFAN SULFATE TOTAL (UG/L) (34351)	ENDO-SULFAN II TOTAL (UG/L) (34356)	ENDO-SULFAN-I WATER WHOLE REC TOTAL (UG/L) (34361)	ENDRIN ALDE-HYDE TOTAL (UG/L) (34366)	ETHYL-BENZENE TOTAL (UG/L) (34371)	FLUOR-ANTHENE TOTAL (UG/L) (34376)	FLUOR-ENE TOTAL (UG/L) (34381)	CYCLOPE-NTADIEN-HEXA-CHLORO-UNFLTRD RECOVER (UG/L) (34386)	ETHANE HEXA-CHLORO-WATER UNFLTRD RECOVER (UG/L) (34396)	
JUL 08...	--	--	--	--	--	--	--	--	<.4	--	--	--	--	
JUL 08-08	<10	<5	<5	<5	<.6	<.04	<.1	<.2	--	<5	<5	<20	<5	
DATE	TIME	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L) (34403)	ISO-PHORONE TOTAL (UG/L) (34408)	METHYL-BROMIDE TOTAL (UG/L) (34413)	METHYL-CHLO-RIDE TOTAL (UG/L) (34418)	METHYL-ENE CHLO-RIDE TOTAL (UG/L) (34423)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L) (34428)	N-NITRO-SODI-AMINE TOTAL (UG/L) (34433)	N-NITRO-SODI-METHYL-AMINE TOTAL (UG/L) (34438)	BENZENE NITRO-WATER UNFLTRD RECOVER (UG/L) (34447)	PARA-CHLORO-META CRESOL TOTAL (UG/L) (34452)	PHENAN-THRENE TOTAL (UG/L) (34461)	PYRENE TOTAL (UG/L) (34469)	
JUL 08...	--	--	--	<.4	<.4	<.5	--	--	--	--	--	--	--	
JUL 08-08	<10	<5	--	--	--	--	<5	<5	<5	<5	<30	<5	<5	
DATE	TIME	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L) (34475)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L) (34488)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L) (34501)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L) (34511)	ETHANE, 1,1,2,2-TETRA-CHLORO-WAT UNF REC TOTAL (UG/L) (34516)	BENZO-[GHI]-PERY-LENE TOTAL (UG/L) (34521)	BENZ(A) ANTHRA-CENE WATER UNFLTRD REC TOTAL (UG/L) (34526)	BENZENE O-DI-CHLORO-WATER UNFLTRD REC TOTAL (UG/L) (34536)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	TRANS-1,2-DI-CHLORO-ETHENE TOTAL (UG/L) (34546)	
JUL 08...	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	--	--	<.4	<.4	<.4	
JUL 08-08	--	--	--	--	--	--	--	--	<10	<10	<5	--	--	

083299375 MARAPOSA DIV OF SAN ANTONIO ARR AT ALBO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

RIO GRANDE BASIN

083299375 MARAPOSA DIV OF SAN ANTONIO ARR AT ALBQ, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	P-ISO- TOLUENE WATER WHOLE REC (UG/L) (77356)	123-TRI- CHLORO- PROPANE WATER WHOLE TOTAL (UG/L) (77443)	ETHANE, 1112-- TETRA- CHLORO- WAT UNF REC (UG/L) (77562)	1,2,3- TRI- CHLORO BENZENE WAT, WH REC (UG/L) (77613)	1,2- DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	METHYL TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	XYLENE WATER UNFLTRD REC (UG/L) (81551)	BROMO- BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	DIBROMO CHLORO- PROPANE WATER TOT.REC (UG/L) (82625)	1,2-DI- PHENYL- HYDRA- ZINE WATER TOT.REC (UG/L) (82626)
JUL 08...	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<2	--
JUL 08-08	--	--	--	--	--	--	--	--	--	--	<5

08333450 ARROYO CHAVEZ NEAR SAN LUIS, NM

DATE	TIME	ENDING TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT DIS- CHARGE (TONS) (80155)
JUL 1998					
7	1825	2045	e71	66200	e1880
25	1405	1625	4.8	45300	96
26	1755	2000	6.3	50700	124
AUG					
1	0135	0515	2.2	38300	62
12	2050	2400	2.4	32000	71
24	1915	2040	13	59900	186
SEPT					
29	1605	2015	42	e72000	e2600

08351225 VOLCANO HILL WASH NEAR CORREO, NM

DATE	TIME	ENDING TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT DIS- CHARGE (TONS) (80155)
NOV 1997					
12	1530	1630	1.0	17600	4.5
MAR 1998					
15	1130	1830	1.5	e31000	e49
16	0200	1630	1.6	e32600	e100
JUL					
7	1900	1930	.63	e29000	e1.0
8	1415	1445	.21	e20000	e.24
8	2045	2145	.07	e20000	e.16
9	0015	0300	1.6	e33300	e20
AUG					
11	1530	1825	.32	e21300	e2.8

e estimated

RIO GRANDE BASIN

The following water-quality tables for miscellaneous sites in the Rio Grande basin are identified by 15-digit latitude-longitude site numbers and are in order by ascending site number (shown before the site name). Inorganic analyses tables are followed by organic-compound analyses tables. This departure from the normal downstream order for surface-water sites was taken to facilitate locating these sites in this report and for comparing results for the same group of analyses

315454106360610 RIO GRANDE AT TX 259 BRIDGE, CANUTILLO, TX

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	
JAN 28...	1030	338	1080	8.1	9.7	7.3	40	665	10.4	99	250	72	
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
JAN 28...	73	16	120	3	7.1	216	0	177	190	180	120	.8	
DATE		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
JAN 28...	9.9	678	644	.524	.01	.54	.07	1	.20	.05	.07	<10.0	
DATE		BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LITHIUM, DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	
JAN 28...	66	<12	<10	110	<4	<60	1	<1	<1	930	<10		

RIO GRANDE BASIN

320648106400510 RIO GRANDE AT NM 227 BRIDGE NEAR VADO, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	
JAN 28...	0830	283	981	8.1	.7	6.1	30	663	10.2	95	240	
DATE		HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3 CO3) (00453)	CAR-BONATE WATER DIS IT (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
JAN 28...	71	70	15	110	3	6.7	203	0	166	181	160	
DATE		CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
JAN 28...	120	.7	8.6	618	584	.584	.03	.61	.14	1.0	.22	
DATE		PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
JAN 28...	.07	.09	<10.0	2	78	<1	<1.0	<12	<1	<10	<1	
DATE		LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	
JAN 28...	100	<4	<.1	<60	<1	<1	<1	880	<10	<20		

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

RIO GRANDE BASIN

321317106471510 RIO GRANDE BELOW MESILLA DAM NR SANTO TOMAS, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	
JAN 27...	1415	306	985	8.2	20.0	10.6	45	662	9.8	102	230	66	
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CAC03 (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CAC03) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
JAN 27...	68	15	110	3	6.7	201	0	164	179	160	110	.7	
DATE		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
JAN 27...	8.1	608	576	.248	.01	.26	.18	1.0	.18	.03	.05	<10.0	
DATE		BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	
JAN 27...	70	<12	<10	98	7	<60	<1	<1	<1	<1	850	<10	

RIO GRANDE BASIN

321745106492510 RIO GRANDE BELOW PICACHO BRIDGE NR LAS CRUCES, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CaCO3 (MG/L) (00904)	
JAN 27...	1145	316	972	8.1	12.4	6.8	32	663	10.1	96	240	66	
DATE		CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
JAN 27...	70	15	110	3	6.5	207	0	170	181	150	110	.7	
DATE		SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	
JAN 27...	7.9	605	576	<.01	<.05	<.02	.5	.06	<.01	<.01	<10.0		
DATE		BARIUM, DIS-SOLVED (UG/L AS Ba) (01005)	COBALT, DIS-SOLVED (UG/L AS Co) (01035)	IRON, DIS-SOLVED (UG/L AS Fe) (01046)	LITHIUM DIS-SOLVED (UG/L AS Li) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS Mn) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS Mo) (01060)	NICKEL, DIS-SOLVED (UG/L AS Ni) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS Se) (01145)	SILVER, DIS-SOLVED (UG/L AS Ag) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS Sr) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	
JAN 27...	68	<12	<10	99	<4	<60	6	<1	<1	860	<10		

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

RIO GRANDE BASIN

322841106551010 RIO GRANDE BELOW LEASBURG DAM, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	
JAN 27...	0915	326	922	8.2	4.0	5.4	32	663	10.0	91	230	
DATE	TIME	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FLD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FLD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FLD (MG/L AS CACO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
JAN 27...	66	67	15	100	3	6.3	200	0	164	175	150	
DATE	TIME	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
JAN 27...	110	.7	7.4	586	559	<.01	<.05	<.02	.6	.06	<.01	
DATE	TIME	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	
JAN 27...	.01	<10.0	2	80	<1	<1.0	<12	<1	<10	<1		
DATE	TIME	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	
JAN 27...	95	<4	<.1	<60	1	<1	<1	850	<10	<20		

RIO GRANDE BASIN

350610106223510 10N.05E.11.341 SANCHEZ

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
OCT 06...	1000	2.0	426	8.4	16.2	13.3	603	7.8	95	210	68	
DATE		MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT 06...	9.4	7.1	.2	.7	164	14	4.4	.2	19	221	<.01	
DATE		NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	
OCT 06...	.14	<.01	<.2	<.01	<.01	.7	<1	19.4	<3	<1		

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

RIO GRANDE BASIN

353725106435210 JEMEZ RIVER BELOW VALLECITOS CREEK, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
APR 22...	1010	168	262	8.2	11.0	7.0	628	9.7	97	88	30
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
APR 22...	3.1	15	.7	3.0	122	0	100	101	7.6	15	.3
DATE	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
APR 22...	<.01	21	169	156	<.01	.07	.04	.20	.6	.2	.08
DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CYANIDE TOTAL (MG/L AS CN) (00720)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
APR 22...	.02	.02	<.01	22	<1	10	68	<1	<1	1	<1
DATE	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	
APR 22...	1	53	<1	120	7	<.1	1	<1	<1	<1	
DATE	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ALPHA RADIO-WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS AS CS-137 (PCI/L) (75989)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	RADIUM 228, 2 SIGMA WATER, DISS, (PCI/L) (76001)	RADIUM 228, 2 SIGMA WATER, DISS, (PCI/L) (81366)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)		
APR 22...	4	<3.0	2.48	<4.0	.97	.44	.08	<1.0	.359	<1	

RIO GRANDE BASIN

353744106420110 VALLECITO CR NR JEMEZ RES BNDRY NR JEMEZ, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED CENT (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	
DEC 18...	1110	2.7	530	8.3	9.0	3.0	620	11.0	101	160	47	11	
DATE		SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CAC03) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
DEC 18...	51	2	4.8	224	57	11	.8	.11	40	365	357	<.01	
DATE		NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)
DEC 18...	<.05	<.02	.2	<.1	.11	.02	.03	1900	2	9	100	<10	
DATE		CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)
DEC 18...	<1	1.7	1	2	1200	<10	2	70	230	10	<.1	4.7	
DATE		NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL RECOV-ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED AS (PCI/L) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA WATER, WHOLE, TOTAL (PCI/L) (75985)	
DEC 18...	3	<1	<1	530	<10	3.5	2.99	5.2	4.11	10	1		

RIO GRANDE BASIN

354013106443510 RIO GUADALUPE AT MOUTH NEAR CANON, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-A-TURE AIR (DEG C) (00020)	TEMPER-A-TURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
DEC 12...	1300	9.6	349	7.9	2.0	1.5	--	626	11.0	96	150	52	
APR 23...	1405	157	182	8.2	--	10.5	93	621	9.0	99	--	--	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ANC UNFLTRD LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)
DEC 12...	5.5	17	.6	2.5	--	--	--	179	8.7	12	.6	.05	
APR 23...	--	--	--	--	118	0	97	--	--	--	--	--	--
DATE		SILICA, DIS-SOLVED (MG/L AS ST02) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	
DEC 12...	26	240	231	<.01	.07	<.02	<.1	<.1	<.01	<.01	<.01	<.01	
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--	
DATE		CYANIDE TOTAL (MG/L AS CN) (00720)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL RECOV-ERABLE (UG/L AS AS) (01097)	ARSENIC TOTAL RECOV-ERABLE (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM, WATER UNFLTRD TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	
DEC 12...	--	80	<1	<1	<100	<10	<1	<1.0	<1	<1	<1	130	
APR 23...	.27	--	--	--	--	--	--	--	--	--	--	--	
DATE		IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LITHIUM, TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY, TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL RECOV-ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	
DEC 12...	10	<1	80	20	7	<.1	2.1	<1	<1	<1	<1	210	
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--	
DATE		ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ALPHA RADIO. COUNT, 2 SIGMA TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	RADIUM 228, DIS-SOLVED, 2 SIGMA WATER, DISS, AS (PCI/L) (76001)	RADIUM 228, DIS-SOLVED, 2 SIGMA WATER, DISS, AS (PCI/L) (81366)	RA-228, 2 SIGMA WATER, DISS, AS (PCI/L) (76000)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM WHOLE, (PCI/L) (75985)	
DEC 12...	<10	7.7	3.48	<4.0	3.91	--	--	--	--	20	2		
APR 23...	--	<3.0	.88	<4.0	.89	.05	.02	<1.0	.452	--	--		

RIO GRANDE BASIN

354014106443310 JEMEZ R UPSTREAM OF RIO GUADALUPE NR CANON, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT) (00300)	OXYGEN, DIS-SOLVED (PER-CENT) (00301)	HARD-NESS TOTAL (MG/L CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	
DEC 12...	1100	8.8	690	8.3	-1.5	0	628	11.5	96	130	44	5.3	
DATE		SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
DEC 12...	87	3	13	182	17	110	1.2	.33	51	454	441	<.01	
DATE		NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)
DEC 12...	.07	<.02	.1	<.1	.05	.01	<.01	510	11	86	<100	<10	
DATE		CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)
DEC 12...	<1	<1.0	<1	<1	400	32	<1	1100	60	30	<.1	6.0	
DATE		NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM WHOLE, TOTAL (PCI/L) (75985)	
DEC 12...	1	<1	<1	<1	190	<10	8.3	4.12	15	4.60	11	1	

RIO GRANDE BASIN

354856106312810 E FK JEMEZ R NR NFS BOUNDRY NR JEMEZ SPRINGS, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
DEC 18...	1430	3.4	110	7.2	6.5	.5	556	10.4	99	26	7.8	
AUG 27...	1215	5.4	73	7.4	18.2	15.0	566	7.7	103	--	--	
DATE	TIME	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
DEC 18...	1.6	10	.9	3.1	47	3.1	3.4	.7	<.01	54	135	
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--
DATE	TIME	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. TOTAL (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)
DEC 18...	112	<.01	<.05	<.02	.3	.2	.03	.03	.04	490	<1	
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--
DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)
DEC 18...	<1	<100	<10	<1	1.0	<1	<1	320	55	<1	20	
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--
DATE	TIME	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL RECOV-ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)
DEC 18...	<10	7	<.1	2.1	<1	<1	<1	60	<10	<3.0	1.86	
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--
DATE	TIME	ALPHA SED BOT MAT DRY WGT AS TH-230 (PCI/G) (04125)	ALPHA, 2 SIGMA SED, BOT MAT TOT DRY (PCI/G) (75955)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA SED, BED MAT (PCI/G AS CS-137) (49962)	GROSS BETA BED MAT 2 SIGMA AS (PCI/G CS-137) (49963)	RADIUM 226 TOTAL IN BOTTOM MATERIL (PCI/L) (09507)	RA-226 2 SIGMA SED, BOT MAT DRY WGT TOTAL, (PCI/G) (04107)	RA-228 2 SIGMA SED, BOT MAT DRY WGT TOTAL, (PCI/G) (75977)	RA-228 2 SIGMA SED, BOT MAT DRY WGT TOTAL, (PCI/G) (04106)	URANIUM -234 SED, BOT MAT DRY WGT TOTAL (PCI/G) (28014)
DEC 18...	--	--	--	5.3	3.92	--	--	--	--	--	--	--
AUG 27...	15	4.4	--	--	--	29	3.6	.9	.13	1.5	.23	1.1

RIO GRANDE BASIN

354856106312810 E FK JEMEZ R NR NFS BOUNDRY NR JEMEZ SPRINGS, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	U-234 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04111)	URANIUM -235 SED, BOT MAT TOTAL, DRY WGT (PCI/G) (22612)	U-235 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04112)	URANIUM -238 SED, BOT MAT TOTAL, DRY WGT (PCI/G) (28016)	U-238 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (75962)	LEAD- 210 SED, BOT MAT TOTAL, DRY WGT (PCI/G) (17507)	POLON- IUM-210 SED, BOT MAT TOTAL, DRY WGT (PCI/G) (19507)	PO-210 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04105)	THORIUM -230 SED, BOT MAT TOTAL, DRY WGT (PCI/G) (26507)	TH-230 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04108)			
DEC 18...	--	--	--	--	--	--	--	--	--	--			
AUG 27...	.27	.08	.055	1.1	.27	<2.0	1.9	.31	1.5	.25			
	THORIUM -232 SED, BOT MAT TOTAL, DRY WGT (PCI/L) (26631)	TH-232 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04110)	PLUT- ONIUM 238 SEDI- MENT BED MAT (UG/KG) (50423)	PLUT- ONIUM 238 SEDIMNT BED MAT (UG/KG) (50422)	PLUT- ONIUM 239/240 SEDIMNT BED MAT (UG/KG) (50420)	PLUT- ONIUM 239/240 SEDIMNT BED MAT (UG/KG) (50421)	AMERIC- IUM-241 BOT MAT TOTAL, DRY WGT (PCI/G) (49980)	AMERIC- IUM-241 BOT MAT TOTAL, DRY WGT (PCI/G) (49981)	TRITIUM TOTAL, DRY WGT (PCI/L) (07000)	TRITIUM 2 SIGMA WATER, TOTAL, DRY WGT (PCI/L) (75985)			
DEC 18...	--	--	--	--	--	--	--	--	16	1			
AUG 27...	1.6	.25	.0107	.02	.0171	.03	<.1	.012	--	--			
			ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	P,P'- DDD, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39363)	P,P'- DDE, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39368)	P,P'- DDT, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)				
AUG 27...		1215	<.2	<.2	<3	<.5	.3	<.5	<.2				
			ENDO- SULFAN I TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOT- TOM MA- TERIAL (UG/KG) (39423)	METH- OXY- CHLOR, TOT. IN BOT- TOM MA- TERIAL (UG/KG) (39481)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)			
AUG 27...			<.2	<.2	<50	<.2	<.2	<2.5	<5	<.2			
			ALUM- INUM BOT MAT <63U WS FIELD PERCENT (34790)	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UWS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	
AUG 27...		1215	6.3	<10	480	3	<10	<2	.77	70	24	10	
			COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (34900)	MANGA- NESE BOT MAT <63U WS FIELD PERCENT (34905)
AUG 27...		6	<2	13	<8	<4	1.9	43	19	30	.58	660	
			MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)
AUG 27...		<.02	<2	28	15	40	.05	2.4	6	.2	<2	1.7	

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

RIO GRANDE BASIN

354856106312810 E FK JEMEZ R NR NFS BOUNDARY NR JEMEZ SPRINGS, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	STRONTIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (UG/G) (34970)	TANTALUM BOT MAT <63U WS FIELD (UG/G) (34975)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	TITANIUM, SED, BM WS, <63U DRY WGT REC (49274) PERCENT	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)	VANADIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTERBIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)
AUG 27...	170	<.05	<40	12	<5	.29	<100	44	23	2	53

RIO GRANDE BASIN

354940106383610 EAST FORK JEMEZ R AT MOUTH NEAR JEMEZ SPRINGS, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	
DEC 16...	1300	5.1	120	8.1	3.5	2.0	601	10.8	99	33	9.3	2.5	
DATE	TIME	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
DEC 16...	13	1	2.3	55	4.0	3.3	<.01	48	170	116	<.01	.15	
DATE	TIME	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. TOTAL (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)
DEC 16...	<.02	.5	.1	.02	.03	.03	.03	180	2	6	<100	<10	<1
DATE	TIME	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LITHIUM, TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY, TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)	
DEC 16...		<1.0	<1	<1	150	13	<1	80	<10	<4	<.1	6.3	
DATE	TIME	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ALPHA RADIO-WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED (PCI/L) CS-137 (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM WHOLE, TOTAL (PCI/L) (75985)	
DEC 16...		<1	<1	<1	60	<10	<3.0	1.33	<4.0	3.84	12	1	

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

RIO GRANDE BASIN

354943106384110 SAN ANTONIO CREEK AT MOUTH NEAR JEMEZ SPRINGS, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-A-TURE AIR (DEG C) (00020)	TEMPER-A-TURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
DEC 16...	1000	10	180	8.1	-4.5	.5	--	600	11.1	98	40	12	
APR 23...	0945	42	101	7.7	8.0	7.0	27	598	9.7	102	--	--	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
DEC 16...	2.3	17	1	2.6	--	--	--	63	16	5.0	.01	57	
APR 23...	--	--	--	--	35	0	29	--	--	--	--	--	--
DATE		SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL DIS-SOLVED (MG/L AS N) (00625)	NITRO-GEN, AMMONIA + ORGANIC TOTAL DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS TOTAL DIS-SOLVED (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	
DEC 16...	182	151	<.01	.08	<.02	<.1	<.1	.03	.01	.02	270		
APR 23...	--	--	--	--	--	--	--	--	--	--	--	--	
DATE		ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, TOTAL DIS-SOLVED (UG/L AS SB) (01097)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL DIS-SOLVED (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM WATER UNFLTRD DIS-SOLVED (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	
DEC 16...	--	<1	--	6	--	<100	--	<10	--	<1	--	--	
APR 23...	143	--	<1	--	2	--	22	--	<1	--	<1	--	
DATE		CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBAL-T, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COBAL-T, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	
DEC 16...	<1.0	--	<1	--	1	--	240	35	<1	--	90		
APR 23...	--	<1	--	<1	--	1	--	110	--	<1	--	--	
DATE		LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, TOTAL RECOV-ERABLE (UG/L AS SE) (01147)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	
DEC 16...	--	20	<1	<.1	7.8	--	<1	--	<1	--	<1	--	
APR 23...	23	--	13	<.1	--	2	--	<1	--	<1	--	--	

RIO GRANDE BASIN

354943106384110 SAN ANTONIO CREEK AT MOUTH NEAR JEMEZ SPRINGS, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	URANIUM NATURAL (UG/L AS U) (22703)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA WATER, WHOLE, TOTAL (PCI/L) (75985)
DEC 16...	--	70	<10	--	<3.0	2.18	4.8	3.92	--	8	1
APR 23...	<1	--	--	4	--	--	--	--	<1	--	--

RIO GRANDE BASIN

355112106141710 MORTANDAD CANYON BLW SAN ILDEFONSO PUEBLO BOUND, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		ALPHA, SED, BOT MAT DRY WGT AS TH-230 (PCI/G) (04125)	ALPHA, 2 SIGMA SED, BOT MAT TH-230 (PCI/G) (75955)	GROSS BETA SED BED MAT BED MAT AS CS-137 (49962)	GROSS BETA BED MAT 2 SIGMA AS CS-137 (49963)	URANIUM -234 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28014)	U-234 2 SIGMA SED, BOT MAT TOTAL DRY WGT (PCI/G) (04111)	URANIUM -235 SED, BOT MAT TOTAL DRY WGT (PCI/G) (22612)	U-235 2 SIGMA SED, BOT MAT TOTAL DRY WGT (PCI/G) (04112)				
MAY	28...	1435	21	5.31	46	5.34	1.3	.474	.02	.049			
		URANIUM -238 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28016)	U-238 2 SIGMA SED, BOT MAT TOTAL DRY WGT (PCI/G) (75962)	PLUT- ONIUM 238 SEDI- MENT BED MAT (PCI/G) (50423)	PLUT- ONIUM 238 2 SIGMA PRECIS. BED MAT (PCI/G) (50422)	PLUT- ONIUM 239/240 SEDIMNT BED MA- TERIAL (PCI/G) (50420)	PLUT- ONIUM 239/240 2 SIGMA PRECIS. BED MAT (PCI/G) (50421)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49980)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49981)				
MAY	28...	1.3	.456	.003	.007	.043	.02	<.1	.017				
		THAL- LIUM BED MAT D SIEVE <63 U TOTAL (UG/G) (04064)	ALUM- INUM BOT MAT <63U WS FIELD PERCENT (34790)	ANTI- MONY BOT MAT <63U WS FIELD (UG/G) (34795)	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180WS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	
MAY	28...	1435	<1	6.4	.8	5.4	380	5	<1	.4	.4	140	23
		COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (34900)	MANGA- NESE BOT MAT <63U WS FIELD (UG/G) (34905)
MAY	28...	7	20	<1	20	<.05	3	2.1	76	42	40	.25	850
		MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)	
MAY	28...	.03	2	58	12	89	.04	2.9	5	.2	1.7	2.0	
		STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (UG/G) (34970)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)	TITA- NIUM, SED, BM WS,<63U DRY WGT REC (49274)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)	
MAY	28...	76	<.05	6	21	4	5.6	.3	34	80	8	95	

RIO GRANDE BASIN

355120106130710 SANDIA CANYON AT SAN ILDEFONSO PUEBLO BOUNDARY, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		ALPHA, SED BOT MAT DRY WGT AS (PCI/G) (04125)	ALPHA, 2 SIGMA SED, BOT MAT TOT DRY TH-230 (PCI/G) (75955)	BETA SED BED MAT (PCI/G) AS (49962)	GROSS BETA SED BED MAT (PCI/G) AS (49963)	GROSS BETA SED BED MAT (PCI/G) AS (49963)	URANIUM -234 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28014)	U-234 2 SIGMA BOT MAT TOTAL DRY WGT (PCI/G) (04111)	URANIUM -235 SED, BOT MAT TOTAL DRY WGT (PCI/G) (22612)	U-235 2 SIGMA BOT MAT TOTAL DRY WGT (PCI/G) (04112)			
MAY 28...	1515	26	6.22	40	4.22	1.7	.572	.02	.051				
		URANIUM -238 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28016)	U-238 2 SIGMA SED, BOT MAT TOTAL DRY WGT (PCI/G) (75962)	PLUT- ONIUM 238 SEDI- MENT BED MAT (PCI/G) (50423)	PLUT- ONIUM 238 2 SIGMA PRECIS. BED MAT (PCI/G) (50422)	PLUT- ONIUM 239/240 SEDIMNT BED MA- TERIAL (PCI/G) (50420)	PLUT- ONIUM 239/240 2 SIGMA PRECIS. BED MAT (PCI/G) (50421)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49980)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49981)				
MAY 28...		1.8	.584	.003	.006	.00057	.006	<.1	.013				
DATE	TIME	THAL- LIUM BED MAT D SIEVE <63 U TOTAL (UG/G) (04064)	ALUM- INUM BOT MAT <63U WS FIELD PERCENT (34790)	ANTI- MONY BOT MAT <63U WS FIELD (UG/G) (34795)	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UWS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	
MAY 28...	1515	<1	6.4	.8	5.5	460	5	<1	.4	.59	110	51	
DATE	TIME	COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (34900)	MANGA- NESE BOT MAT <63U WS FIELD (UG/G) (34905)
MAY 28...	7	31	<1	19	<.05	3	2.3	67	48	40	.33	680	
DATE	TIME	MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)	
MAY 28...		.07	3	53	13	76	.03	2.6	6	.2	1.9	1.8	
DATE	TIME	STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (UG/G) (34970)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)	TITA- NIUM, SED, BM WS,<63U DRY WGT REC PERCENT (49274)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)	
MAY 28...	98	<.05	5	21	6	5.5	.3	42	73	8	110		

RIO GRANDE BASIN

355203106112810 LOS ALAMOS CANYON BELOW BASALT SPRING, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE PER (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	
AUG 25...	2000	E15	312	7.8	16.0	619	69	24	21	4.5	3.9	
DATE		SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	
AUG 25...	37	37	2	9.8	8.7	105	0	86	91	16	25	
DATE		FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
AUG 25...	.4	.02	37	229	219	2.53	.03	2.6	.09	.70	1.7	
DATE		NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
AUG 25...	.8	2.4	2.1	2.0	20	3600	8	1	<1	5	4	
DATE		BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
AUG 25...	<100	45	<10	<1	159	<1	<1	3.4	2	3	2	
DATE		COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)
AUG 25...	10	6	2400	33	10	<1	20	13	140	<1	<.1	
DATE		MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	THAL-LIUM, DIS-SOLVED (UG/L AS TL) (01057)
AUG 25...	<.1	1.4	3	9	6	<1	<1	<1	<1	120	<.5	

RIO GRANDE BASIN

355203106112810 LOS ALAMOS CANYON BELOW BASALT SPRING, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA SUS SED (PCI/G AS TH-230) (49960)	GROSS ALPHA SUS SED (PCI/G AS TH-230) (49961)	GROSS BETA SUS SED (PCI/G AS CS-137) (49964)	GROSS BETA SUS SED (PCI/G AS CS-137) (49965)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	U-234 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75942)	U-234 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75941)
AUG 25...	<10	30	8	28	7.83	53	9.28	<1	.5	.083
DATE	U-235 SED, SUSP, TOTAL, DRY WGT (PCI/L) (75975)	U-235 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75947)	U-238 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75940)	U-238 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (04113)	PLUTON- IUM-238 SUS SED (PCI/G) (49974)	PLUTON- IUM-238 SUS SED (PCI/G) (49975)	PLUTON- IUM- 239/240 SUS SED (PCI/G) (49976)	PLUTON- IUM- 239/240 SUS SED (PCI/G) (49977)	AMERIC- IUM-241 SUS SED (PCI/G) (49980)	AMERIC- IUM-241 2 SIGMA SUS SED (PCI/G) (49981)
AUG 25...	<.1	.014	.5	.089	<.1	.012	.4	.063	.1	.038

E estimated

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

RIO GRANDE BASIN

355216106110410 LOS ALAMOS CANYON NR WELL LA-5 AB TOTAVI, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	ALPHA SED BOT MAT DRY WGT AS TH-230 (PCI/G) (04125)	ALPHA, 2 SIGMA SED, BOT MAT TOT DRY TH-230 (PCI/G) (75955)	GROSS BETA SED BED MAT (PCI/G) AS CS-137 (49962)	GROSS BETA BED MAT 2 SIGMA (PCI/G) AS CS-137 (49963)	URANIUM -234 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28014)	U-234 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04111)	URANIUM -235 SED, BOT MAT TOTAL DRY WGT (PCI/G) (22612)	U-235 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04112)
MAY 28...	1335	24	5.56	37	4.43	1.8	.675	.1	.133

DATE	URANIUM -238 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28016)	U-238 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (75962)	PLUT- ONIUM 238 SEDI- MENT BED MAT (PCI/G) (50423)	PLUT- ONIUM 238 2 SIGMA PRECIS. BED MAT (PCI/G) (50422)	PLUT- ONIUM 239/240 SEDIMNT BED MA- TERIAL (PCI/G) (50420)	PLUT- ONIUM 239/240 2 SIGMA PRECIS. BED MAT (PCI/G) (50421)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49980)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49981)
MAY 28...	1.7	.632	.006	.007	.178	.04	<.1	.020

RIO GRANDE BASIN

355223106371710 REDONDO CR AT NFS-BACA BNDRY NR JEMEZ SPRINGS, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	
DEC 10...	1200	.12	100	7.5	-4.0	.5	568	10.5	98	29	9.8	1.1	
DATE		SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
DEC 10...	5.6	.5	1.8	32	6.8	4.6	.1	.01	27	82	77	.241	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
DEC 10...	.01	.25	<.02	.1	<.1	.07	.05	.05	.05	120	<1	<1	<100
DATE		BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)
DEC 10...	<10	<1	<1.0	<1	<1	170	41	<1	20	10	<4	<.1	
DATE		MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA WATER, WHOLE, TOTAL (PCI/L) (75985)
DEC 10...	<1.0	10	<1	<1	<10	<10	<3.0	1.54	4.4	3.75	38	3	

RIO GRANDE BASIN

355230106083910 LOS ALAMOS CANYON AB MOUTH NR OTOWI, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		ALPHA SED BOT MAT DRY WGT AS (PCI/G) (04125)	ALPHA, 2 SIGMA SED, BOT MAT TOT DRY (PCI/G) (75955)	GROSS BETA SED BED MAT (PCI/G) (49962)	GROSS BETA SED BED MAT (PCI/G) (49963)	URANIUM -234 SED, BOT MAT (PCI/G) (28014)	U-234 2 SIGMA SED, BOT MAT (PCI/G) (04111)						
MAY 28...	1650	14	4.55	31	3.47	1.0	.368						
		URANIUM -235 SED, BOT MAT TOTAL DRY WGT (PCI/G) (22612)	U-235 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04112)	URANIUM -238 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28016)	U-238 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (75962)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49980)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49981)						
MAY 28...		.04	.060	1.2	.403	<.1	.014						
DATE	TIME	THAL- LIUM BED MAT <63 U TOTAL (UG/G) (04064)	ALUM- INUM BOT MAT <63U WS FIELD PERCENT (34790)	ANTI- MONY BOT MAT <63U WS FIELD (UG/G) (34795)	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UWS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	
MAY 28...	1650	<1	6.5	.6	5.4	740	3	<1	.3	2.0	100	45	
DATE	TIME	COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (34900)	MANGA- NESE BOT MAT <63U WS FIELD (UG/G) (34905)
MAY 28...	12	20	1	16	<.05	2	3.2	55	28	40	.98	750	
DATE	TIME	MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)	
MAY 28...		<.02	2	43	23	37	.08	2.1	9	.1	.7	1.3	
DATE	TIME	STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (UG/G) (34970)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)	TITA- NIUM, SED, BM WS, <63U DRY WGT REC (49274)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)	
MAY 28...	270	<.05	2	15	3	3.6	.4	72	42	5	88		

RIO GRANDE BASIN

355236106374210 REDONDO C AB SULPHUR C, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT (MG/L AS CO3) (00452)
APR 22...	1445	.91	117	7.2	10.4	16	578	8.8	104	32	0
DATE	ALKA-LINITY TOT IT FIELD (MG/L AS CACO3 (39086)	CYANIDE TOTAL (MG/L AS CN) (00720)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	
APR 22...	26	<.01	53	<1	<1	20	<1	<1	<1	<1	
DATE	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	
APR 22...	<1	43	<1	27	20	<.1	<1	<1	<1	<1	
DATE	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS AS CS-137 (PCI/L) (75989)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	RADIUM 228, DIS-SOLVED, 2 SIGMA WATER, DISS, (PCI/L) (76001)	RADIUM 228, DIS-SOLVED (PCI/L AS) (81366)	RADIUM 228, 2 SIGMA WATER, DISS, (PCI/L) (76000)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	
APR 22...	5	<3.0	.52	<4.0	.91	.04	.01	<1.0	.329	<1	

RIO GRANDE BASIN

355239106375410 SULPHUR C AB REDONDO C, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	
APR 22...	1430	5.6	157	5.1	21.1	8.2	22	578	8.8	99	1	
DATE		CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CAC03 (39086)	CYANIDE TOTAL (MG/L AS CN) (00720)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
APR 22...	0	1	<.01	601	<1	<1	33	<1	<1	<1	<1	<1
DATE		COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	
APR 22...	2	280	<1	8	126	<.1	<1	2	<1	<1	<1	
DATE		ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ALPHA RADIO. COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS (PCI/L) (75989)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L) (09511)	RADIUM 228, DIS-SOLVED, 2 SIGMA WATER, DISS, (PCI/L) (76001)	RADIUM 228, DIS-SOLVED, 2 SIGMA WATER, DISS, (PCI/L) (81366)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)		
APR 22...	11	<3.0	.60	4.6	.96	.05	.01	<1.0	.427	<1		

RIO GRANDE BASIN

355335106114510 BARRANCAS CANYON AT SAN ILDEFONSO PUEBLO BOUND, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		ALPHA, SED, BOT MAT DRY WGT AS TH-230 (PCI/G) (04125)	ALPHA, 2 SIGMA SED, BOT MAT TOT DRY TH-230 (PCI/G) (75955)	GROSS BETA SED BED MAT AS CS-137 (49962)	GROSS BETA BED MAT 2 SIGMA AS CS-137 (49963)	URANIUM -234 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28014)	U-234 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04111)	URANIUM -235 SED, BOT MAT TOTAL, DRY WGT (PCI/G) (22612)	U-235 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04112)				
MAY 28...	1615	29	6.28	36	3.95	1.4	.501	.05	.071				
		URANIUM -238 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28016)	U-238 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (75962)	PLUT- ONIUM 238 SEDI- MENT BED MAT (PCI/G) (50423)	PLUT- ONIUM 238 2 SIGMA PRECIS. BED MAT (PCI/G) (50422)	PLUT- ONIUM 239/240 SEDIMNT BED MA- TERIAL (PCI/G) (50420)	PLUT- ONIUM 239/240 2 SIGMA PRECIS. BED MAT (PCI/G) (50421)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49980)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49981)				
MAY 28...		1.3	.470	.003	.006	.012	.01	<.1	.006				
DATE	TIME	THAL- LIUM BED MAT D SIEVE <63 U TOTAL (UG/G) (04064)	ALUM- INUM BOT MAT <63U WS FIELD PERCENT (34790)	ANTI- MONY BOT MAT <63U WS FIELD (UG/G) (34795)	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UMS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	
MAY 28...	1615	<1	7.3	.8	5.0	660	4	<1	.4	1.3	110	39	
DATE	TIME	COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (34900)	MANGA- NESE BOT MAT <63U WS FIELD (UG/G) (34905)
MAY 28...	11	30	1	18	<.05	2	2.9	54	30	50	.94	690	
DATE	TIME	MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)	
MAY 28...		.03	2	41	26	49	.07	2.4	9	.1	1	1.5	
DATE	TIME	STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (UG/G) (34970)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)	TITA- NIUM, BM WS,<63U DRY WGT REC PERCENT (49274)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)	
MAY 28...	220	<.05	3	16	3	3.9	.4	62	47	5	90		

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

RIO GRANDE BASIN

355353106112810 GUAJE CANYON BLW SAN ILDEFONSO PUEBLO BOUNDARY, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		ALPHA SED BOT MAT DRY WGT AS TH-230 (PCI/G) (04125)	ALPHA, 2 SIGMA SED, BOT MAT TOT DRY (PCI/G) (75955)	GROSS BETA BED MAT AS CS-137 (49962)	GROSS BETA BED MAT 2 SIGMA AS CS-137 (49963)	URANIUM -234 SED, BOT MAT TOTAL (PCI/G) (28014)	U-234 2 SIGMA SED, BOT MAT TOTAL, (PCI/G) (04111)	URANIUM -235 SED, BOT MAT TOTAL (PCI/G) (22612)						
DATE	TIME	MAY 28...	1550	28	6.24	31	3.46	1.7	.594	.05				
		U-235 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04112)	URANIUM -238 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28016)	U-238 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (75962)	PLUT- ONIUM 238 2 SIGMA PRECIS. BED MAT (PCI/G) (50422)	PLUT- ONIUM 239/240 SEDIMNT BED MA- TERIAL (PCI/G) (50420)	PLUT- ONIUM 239/240 PRECIS. BED MAT (PCI/G) (50421)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49980)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49981)					
DATE	TIME	MAY 28...	.083	2.0	.675	.003	.002	.009	<.1	.010				
		THAL- LIUM BED MAT D SIEVE <63 U TOTAL (UG/G) (04064)	ALUM- INUM BOT MAT <63U WS FIELD PERCENT (34790)	ANTI- MONY BOT MAT <63U WS FIELD (UG/G) (34795)	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UWS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34840)		
DATE	TIME	MAY 28...	1550	<1	5.9	.6	5.0	590	3	<1	.2	1.1	93	39
		COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (34900)	MANGA- NESE BOT MAT <63U WS FIELD (UG/G) (34905)	
DATE	TIME	MAY 28...	9	20	1	15	<.05	1	2.4	50	26	30	.43	570
		MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)		
DATE	TIME	MAY 28...	<.02	2	40	17	44	.04	2.3	6	.1	.8	1.6	
		STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (UG/G) (34970)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)	TITA- NIUM, BM WS,<63U DRY WGT REC (49274)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)		
DATE	TIME	MAY 28...	220	<.05	3	15	3	3.9	.4	55	41	4	72	

RIO GRANDE BASIN

355410106371510 SULPHUR CR AT NFS-BACA BNDRY NR JEMEZ SPRINGS, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (MG/L) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	
DEC 10...	1400	.12	1830	2.9	-4.5	.5	566	10.0	94	210	66	11	
DATE		SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
DEC 10...	13	.4	16	590	3.9	.2	.07	63	844	<.01	<.05	.36	
DATE		NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. TOTAL (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM WATER UNFLTDR TOTAL (UG/L AS CD) (01027)
DEC 10...	.06	.4	.4	.09	.08	.14	28000	<1	1	<100	<10	<1	
DATE		CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)	
DEC 10...	6.2	7	4	12000	11000	2	30	990	1000	<.1	<1.0		
DATE		NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL RECOV-ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM WHOLE, TOTAL (PCI/L) (75985)	
DEC 10...	16	<1	<1	<10	80	4.1	3.14	23	4.88	31	2		

RIO GRANDE BASIN

355457106081210 RETENTION AREA 2 BLW GARCIA CANYON NR PAJARITO, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		ALPHA SED BOT MAT DRY WGT AS TH-230 (PCI/G) (04125)	ALPHA, 2 SIGMA SED, BOT MAT TOT DRY TH-230 (PCI/G) (75955)	GROSS BETA SED BED MAT AS CS-137 (49962)	GROSS BETA BED MAT 2 SIGMA (PCI/G) AS CS-137 (49963)	URANIUM -234 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28014)	U-234 2 SIGMA SED, BOT MAT TOTAL DRY WGT (PCI/G) (04111)						
MAY	28...	1235	14	4.37	23	2.77	1.0	.364					
		URANIUM -235 SED, BOT MAT TOTAL DRY WGT (PCI/G) (22612)	U-235 2 SIGMA SED, BOT MAT TOTAL DRY WGT (PCI/G) (04112)	URANIUM -238 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28016)	U-238 2 SIGMA SED, BOT MAT TOTAL DRY WGT (PCI/G) (75962)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49980)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49981)						
MAY	28...	.04	.061	<1.0	.317	<.1	.011						
DATE	TIME	THAL- LIUM BED MAT D SIEVE <63 U TOTAL (UG/G) (04064)	ALUM- INUM BOT MAT <63U WS FIELD PERCENT (34790)	ANTI- MONY BOT MAT <63U WS FIELD (UG/G) (34795)	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UMS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	
MAY	28...	1235	<1	8.1	.6	5.6	770	2	<1	.2	3.5	80	43
DATE	TIME	COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (34900)	MANGA- NESE BOT MAT <63U WS FIELD (UG/G) (34905)
MAY	28...	13	30	1	17	<.05	1	3.4	39	22	50	1.7	740
DATE	TIME	MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)	
MAY	28...	.02	.6	33	27	18	.08	1.7	13	.1	.3	.60	
DATE	TIME	STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (UG/G) (34970)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)	TITA- NIUM, SED, BM WS, <63U DRY WGT REC (49274)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTIRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)	
MAY	28...	340	<.05	1	10	2	2.7	.4	68	29	3	78	

RIO GRANDE BASIN

355521106082110 RETENTION AREA 1 BLW GARCIA CANYON NR PAJARITO, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		ALPHA SED BOT MAT DRY WGT AS TH-230 (PCI/G) (04125)	ALPHA, 2 SIGMA SED, BOT MAT TOT DRY TH-230 (PCI/G) (75955)	GROSS BETA SED BED MAT (PCI/G) AS CS-137 (49962)	GROSS BETA BED MAT 2 SIGMA (PCI/G) AS CS-137 (49963)	URANIUM -234 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28014)	U-234 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04111)	URANIUM -235 SED, BOT MAT TOTAL DRY WGT (PCI/G) (22612)	U-235 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04112)				
MAY 28...	1125	20	5.13	21	2.83	<1.0	.296	.03	.053				
		URANIUM -238 SED, BOT MAT TOTAL DRY WGT (PCI/G) (28016)	U-238 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (75962)	PLUT- ONIUM 238 SEDI- MENT BED MAT (PCI/G) (50423)	PLUT- ONIUM 238 2 SIGMA PRECIS. BED MAT (PCI/G) (50422)	PLUT- ONIUM 239/240 SEDIMNT BED MA- TERIAL (PCI/G) (50420)	PLUT- ONIUM 239/240 2 SIGMA PRECIS. BED MAT (PCI/G) (50421)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49980)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49981)				
MAY 28...		<1.0	.327	.004	.01	.003	.008	<.1	.013				
DATE	TIME	THAL- LIUM BED MAT D SIEVE <63 U TOTAL (UG/G) (04064)	ALUM- INUM BOT MAT <63U WS FIELD PERCENT (UG/G) (34790)	ANTI- MONY BOT MAT <63U WS FIELD (UG/G) (34795)	ARSENIC BOT MAT <63U WS FIELD (UG/G) (34800)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UWS FIELD (UG/G) (34816)	CADMIUM BOT MAT <63U WS FIELD (UG/G) (34825)	CALCIUM BOT MAT <63U WS FIELD PERCENT (UG/G) (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	
MAY 28...	1125	<1	7.4	.6	5.2	740	2	<1	.2	3.8	78	39	
DATE	TIME	COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (UG/G) (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (UG/G) (34900)	MANGA- NESE BOT MAT <63U WS FIELD (UG/G) (34905)
MAY 28...	13	30	1	15	<.05	1	3.0	41	21	40	1.4	650	
DATE	TIME	MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (UG/G) (34935)	POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (UG/G) (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SELE- NIUM BOT MAT <63U WS FIELD (UG/G) (34950)	SILVER BOT MAT <63U WS FIELD (UG/G) (34955)	SODIUM BOT MAT <63U WS FIELD PERCENT (UG/G) (34960)	
MAY 28...		<.02	.6	32	24	18	.09	1.6	12	.1	.3	.74	
DATE	TIME	STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (UG/G) (34970)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	THORIUM BOT MAT <63U WS FIELD (UG/G) (34980)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	URANIUM BOT MAT <63U WS FIELD (UG/G) (35000)	TITA- NIUM, SED, BM WS, <63U DRY WGT REC (UG/G) (49274)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)	
MAY 28...		320	<.05	1	9.8	2	2.5	.4	65	28	3	71	

355632106383610 SAN ANTONIO CR AT SAN ANTONIO HOT SPRING, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

RIO GRANDE BASIN

355632106383610 SAN ANTONIO CR AT SAN ANTONIO HOT SPRING, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TH-230 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04108)	THORIUM -232 SED, BOT MAT TOTAL, DRY WGT (PCI/L) (26631)	TH-232 2 SIGMA SED, BOT MAT TOTAL, DRY WGT (PCI/G) (04110)	PLUT- ONIUM 238 SEDI- MENT BED MAT (PCI/G) (50423)	PLUT- ONIUM 238 2 SIGMA PRECIS. BED MAT (PCI/G) (50422)	PLUT- ONIUM 239/240 SEDI-MNT BED MA- TERIAL (PCI/G) (50420)	PLUT- ONIUM 239/240 2 SIGMA PRECIS. BED MAT (PCI/G) (50421)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49980)	AMERIC- IUM-241 BOT MAT 2 SIGMA (PCI/G) (49981)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM WATER, WHOLE, TOTAL (PCI/L) (75985)
NOV 20...	.306	2.7	.306	<.1	.015	<.1	.012	<.1	.010	--	--
JAN 14...	--	--	--	--	--	--	--	--	--	6	1
DATE	TIME	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	P,P'- DDD, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39363)	P,P'- DDE, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39368)	P,P'- DDT, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)			
NOV 20...	1530	<.2	<.2	<3	<.5	.5	<.5	<.2			
JAN 14...	1130	--	--	--	--	--	--	--			
DATE	TIME	ENDO- SULFAN I TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOKIDE TOT. IN BOT- TOM MA- TERIAL (UG/KG) (39423)	METH- OXY- CHLOR, TOT. IN BOT- TOM MA- TERIAL (UG/KG) (39481)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)		
NOV 20...		<.2	<.2	<50	<.2	<.2	<2.5	<5	<.2		
JAN 14...		--	--	--	--	--	--	--	--		
DATE	TIME	ALUM- INUM BOT MAT <63U WS FIELD PERCENT (34790)	BARIUM BOT MAT <63U WS FIELD (UG/G) (34805)	BERYL- LIUM BOT MAT <63U WS FIELD (UG/G) (34810)	BISMUTH BOT MAT <180UWS FIELD (UG/G) (34816)	CALCIUM BOT MAT <63U WS FIELD PERCENT (34830)	CERIUM BOT MAT <63U WS FIELD (UG/G) (34835)	CHRO- MIUM BOT MAT <63U WS FIELD (UG/G) (34840)	COBALT BOT MAT <63U WS FIELD (UG/G) (34845)	COPPER BOT MAT <63U WS FIELD (UG/G) (34850)	
NOV 20...	1530	5.5	320	6	<10	.56	70	13	3	14	
DATE	TIME	EURO- PIUM BOT MAT <63U WS FIELD (UG/G) (34855)	GALLIUM BOT MAT <63U WS FIELD (UG/G) (34860)	GOLD BOT MAT <63U WS FIELD (UG/G) (34870)	HOLMIUM BOT MAT <63U WS FIELD (UG/G) (34875)	IRON BOT MAT <63U WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63U WS FIELD (UG/G) (34885)	LEAD BOT MAT <63U WS FIELD (UG/G) (34890)	LITHIUM BOT MAT <63U WS FIELD (UG/G) (34895)	MAGNE- SIUM BOT MAT <63U WS FIELD PERCENT (34900)	MANGA- NESE BOT MAT <63U WS FIELD (UG/G) (34905)
NOV 20...		<2	13	<8	<4	1.4	38	24	40	.25	540
DATE	TIME	MERCURY BOT MAT <63U WS FIELD (UG/G) (34910)	MOLYB- DENUM BOT MAT <63U WS FIELD (UG/G) (34915)	NEODYM- IUM BOT MAT <63U WS FIELD (UG/G) (34920)	NICKEL BOT MAT <63U WS FIELD (UG/G) (34925)	NIOBIUM BOT MAT <63U WS FIELD (UG/G) (34930)	PHOS- PHORUS BOT MAT <63U WS FIELD PERCENT (34935)	POTAS- SIUM BOT MAT <63U WS FIELD PERCENT (34940)	SCAN- DIUM BOT MAT <63U WS FIELD (UG/G) (34945)	SODIUM BOT MAT <63U WS FIELD PERCENT (34960)	
NOV 20...		<.02	3	29	6	66	.03	2.7	3	2.4	
DATE	TIME	STRON- TIUM BOT MAT <63U WS FIELD (UG/G) (34965)	SULFUR BOT MAT <63U WS FIELD (UG/G) (34970)	TANTA- LUM BOT MAT <63U WS FIELD (UG/G) (34975)	TIN BOT MAT <63U WS FIELD (UG/G) (34985)	TITA- NIUM, SED, BM WS,<63U DRY WGT REC PERCENT (49274)	VANA- DIUM BOT MAT <63U WS FIELD (UG/G) (35005)	YTTRIUM BOT MAT <63U WS FIELD (UG/G) (35010)	YTTER- BIUM BOT MAT <63U WS FIELD (UG/G) (35015)	ZINC BOT MAT <63U WS FIELD (UG/G) (35020)	
NOV 20...		120	<.05	<40	<5	.18	24	44	5	79	

TULAROSA VALLEY BASIN

The following water-quality tables for miscellaneous sites in the Tularosa Valley Basin are identified by 15-digit latitude-longitude site numbers are in order by ascending site numbers as shown before the site names. The inorganic analyses tables are followed by the organic-compound analyses table for these sites. This departure from the normal downstream order for surface-water sites was taken to facilitate locating these sites in this report and for comparing results for the same group of analyses.

325231106105110 LOST RIVER AT WHITE SANDS NATIONAL MONUMENT, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L) (30217)	BROMO-DI-CHLORO-METHANE TOTAL (UG/L) (32101)	CARBON TETRA-CHLORIDE TOTAL (UG/L) (32102)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L) (32103)	BROMO-FORM TOTAL (UG/L) (32104)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L) (32105)	CHLORO-FORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	ACRYLO-NITRILE TOTAL (UG/L) (34215)	
AUG 07...	1240	<.25	<.24	<.44	<.67	<.52	<.91	<.26	<.27	<.5	<6.13	
DATE	TIME	CHLORO-BENZENE TOTAL (UG/L) (34301)	CHLORO-ETHANE TOTAL (UG/L) (34311)	ETHYL-BENZENE TOTAL (UG/L) (34371)	ETHANE HEXA-CHLORO-WATER UNFLTRD RECOVER (UG/L) (34396)	METHYL-BROMIDE TOTAL (UG/L) (34413)	METHYL-CHLORIDE TOTAL (UG/L) (34418)	METHYL-ENE CHLORIDE TOTAL (UG/L) (34423)	TETRA-CHLORO-ETHYLENE TOTAL (UG/L) (34475)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L) (34488)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHYLENE TOTAL (UG/L) (34501)
AUG 07...		<.14	<.6	<.15	<1.81	<.74	<1.27	<1.91	<.51	<.46	<.33	<.22
DATE	TIME	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L) (34511)	ETHANE, 1,1,2,2-TETRA-CHLORO-WAT UNF REC (UG/L) (34516)	BENZENE O-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34536)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	TRANS-1,2-DI-CHLORO-ETHYLENE TOTAL (UG/L) (34546)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L) (34551)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34571)	DI-CHLORO-FLUORO-METHANE TOTAL (UG/L) (34668)	
AUG 07...		<.16	<.32	<.66	<.24	<.34	<.16	<.94	<.27	<.25	<.69	
DATE	TIME	NAPHTH-ALENE TOTAL (UG/L) (34696)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34699)	CIS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34704)	VINYL CHLORIDE TOTAL (UG/L) (39175)	TRI-CHLORO-ETHYLENE TOTAL (UG/L) (39180)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L) (39702)	CIS-1,2-DI-CHLORO-ETHYLENE TOTAL (UG/L) (77093)	STYRENE TOTAL (UG/L) (77128)	1,1-DI-CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L) (77168)	2,2-DI-CHLORO-PROPANE WAT, WH TOTAL (UG/L) (77170)	
AUG 07...		<1.25	<.67	<.46	<.56	<.19	<.71	<.19	<.21	<.13	<.39	
DATE	TIME	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L) (77173)	BENZENE 124-TRI-METHYL UNFLTRD RECOVER (UG/L) (77222)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L) (77223)	BENZENE N-PROPYL WATER UNFLTRD REC (UG/L) (77224)	BENZENE 135-TRI-METHYL WATER UNFLTRD REC (UG/L) (77226)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L) (77275)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)	METHANE BROMO-CHLORO-WAT UNFLTRD REC (UG/L) (77297)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L) (77342)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L) (77350)	
AUG 07...		<.58	<.28	<.16	<.21	<.22	<.21	<.28	<.22	<.93	<.24	
DATE	TIME	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L) (77353)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L) (77356)	123-TRI-CHLORO-PROPANE WATER WHOLE TOTAL (UG/L) (77443)	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L) (77562)	1,2,3-TRI-CHLORO-BENZENE WAT, WH REC (UG/L) (77613)	1,2-DIBROMO-ETHANE WATER WHOLE TOTAL (UG/L) (77651)	FREON-113 WATER UNFLTRD REC (UG/L) (77652)	METHYL TERT-BUTYL-ETHER WAT UNF REC (UG/L) (78032)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	DIBROMO-CHLORO-PROPANE WATER, WHOLE TOT. REC (UG/L) (82625)	
AUG 07...		<.48	<.55	<.81	<.22	<1.33	<.18	<.16	<.83	<.18	<1.07	

TULAROSA VALLEY BASIN

330716106234510 SALT CREEK 3 AT RANGE ROAD 6 ON WSMR, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST: CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CaCO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
AUG 06...	1115	28	7360	8.3	24.0	26.0	666	8.6	125	1600	1500	490	
DATE	TIME	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)
AUG 06...	87	1100	12	40	82	11	85	117	1500	1600	.7	.24	
DATE	TIME	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL DIS-SOLVED (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS TOTAL DIS-SOLVED (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
AUG 06...	16	5150	4870	.595	.10	.70	.08	1.0	1.2	1.1	.09	.01	
DATE	TIME	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	
AUG 06...	<.01	2600	<50.0	2	1	<100	250	300	306	<1	<1		
DATE	TIME	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	
AUG 06...	5.0	<2	5	3	2000	<50	2	<2	250	280	120		
DATE	TIME	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, TOTAL RECOV-ERABLE (UG/L AS SE) (01147)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	
AUG 06...	66	<.1	<.1	2	2	<1	<1	11000	7100	10	<100		
DATE	TIME	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T, TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	2,4-DP, TOTAL (UG/L) (82183)								
AUG 06...	1115	<.01	<.01	<.01	<.01								

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

TULAROSA VALLEY BASIN

331158106265710 SALT CREEK NR NW-50 ON WSMR, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CaCO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
MAY 13...	1300	.24	43500	9.4	28.6	26.0	656	8.8	149	5400	5400	1000	
AUG 06...	1315	6.1	11800	8.3	29.9	31.1	664	9.7	157	1800	1700	480	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CaCO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)
MAY 13...	680	8200	49	220	17	17	42	46	5900	14000	5.3	3.4	
AUG 06...	150	1900	19	59	173	6.0	151	136	1800	2800	1.0	.44	
DATE		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
MAY 13...	2.3	31500	29700	--	.01	<.05	<.02	--	.5	.3	<.01	<.01	
AUG 06...	19	7800	7260	.333	.05	.38	.12	1.0	1.2	1.2	.04	.01	
DATE		PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)
MAY 13...	.01	110	<250	2	2	<100	44	1500	1400	<10	<10	<10	
AUG 06...	.02	1100	<100	2	2	8700	300	460	443	<1	<1	<4	
DATE		CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)
MAY 13...	<10	<10	<10	100	<250	<10	<10	2100	2200	90	<100	<.1	
AUG 06...	<4	4	3	540	<100	<2	<2	410	510	100	100	.1	
DATE		MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	SEDI-MENT, DIS-SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM (70331)
MAY 13...	<.1	<1	1	<10	<10	26000	26000	<10	<500	143	.09	.93	
AUG 06...	<.1	2	2	<2	<2	<10	8800	<10	<200	--	--	--	

TULAROSA VALLEY BASIN

331158106265710 SALT CREEK NR NW-50 ON WSMR, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	2,4-DP TOTAL (UG/L) (82183)
MAY 13...	1300	<.01	<.01	<.01	<.01
AUG 06...	1315	<.01	<.01	<.01	<.01

TULAROSA VALLEY BASIN

331657106185010 MALPAIS MARSH NR OSCURA, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)		
AUG 17...	1400	.73	7010	7.4	34.0	23.0	.58	657	8.2	114 2600		
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC UNFLTRD LAB (MG/L AS CaCO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)
AUG 17...	740	170	700	6	7.9	73	2200	1300	1.5	.42	26	
DATE		SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
AUG 17...	5540	5210	<.01	.58	.15	.00	.2	<.01	<.01	<10	<40.0	
DATE		ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	
AUG 17...		<1	<1	<100	13	300	246	<1	<2	<2.0	2.5	
DATE		COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	
AUG 17...		<1	<2	10	<40	<2	<2	60	72	40	<16	
DATE		MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	
AUG 17...		<.1	<.1	3	2	<1	<2	9500	13000	<10	<80	
DATE	TIME	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T, TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	2,4-DP, TOTAL (UG/L) (82183)							
AUG 17...	1400	<.01	<.01	<.01	<.01							

TULAROSA VALLEY BASIN

332057106211310 SALT CREEK 4 AT RANGE ROAD 7 ON WSMR, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
MAY 12...	1230	.14	29600	7.7	25.7	15.2	653	8.4	109	3700	3500	960	
AUG 06...	1515	.22	24800	7.9	31.0	27.9	662	16.0	257	3000	2800	820	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)
MAY 12...	310	5400	39	130	225	.0	184	191	3100	9300	4.0	2.2	
AUG 06...	230	4200	34	96	202	.0	165	185	2300	7000	2.2	1.3	
DATE		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
MAY 12...	26	20400	19400	--	<.01	<.05	<.02	--	.1	<.1	<.01	<.01	
AUG 06...	26	16300	14800	.104	.02	.13	.18	.41	.8	.6	.14	<.01	
DATE		PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM WATER UNFLTRD (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	
MAY 12...	.01	110	<150	<1	1	<100	27	640	522	<5	<5		
AUG 06...	.02	1800	<150	3	2	<100	240	510	480	<1	<1		
DATE		CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	
MAY 12...	<5	<5	<5	<5	180	<150	<5	<5	1500	1400	120		
AUG 06...	6.5	<5	4	2	1400	<150	<5	<5	700	1100	390		
DATE		MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	
MAY 12...	100	<.1	.1	1	<1	<10	<5	20000	20000	<10	<300		
AUG 06...	440	<.1	.3	1	<1	<5	<5	11000	15000	10	<300		

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

TULAROSA VALLEY BASIN

332057106211310 SALT CREEK 4 AT RANGE ROAD 7 ON WSMR, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	2,4-DP TOTAL (UG/L) (82183)
MAY 12...	1230	<.01	<.01	<.01	<.01
AUG 06...	1515	<.01	<.01	<.01	<.01

A

Abiquiu Reservoir near Abiquiu	93
Abo Arroyo near Blue Springs	185
Academy Acres Drain at Albuquerque	153
Access to USGS Water Data	20
Accuracy of the records, surface water	14
Acid neutralizing capacity, definition of	20
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Acre-foot (acre-ft, AC-FT), annual runoff, definition of	20
Albuquerque Riverside Drain near Isleta	176
Alkalinity, definition of	20
Annual 7-day minimum, definition of	13, 21
Annual mean, explanation of	13
Annual runoff, explanation of	13
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Aquifer, definition of	20
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Arroyo 19A at Albuquerque	165
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Atrisco Riverside Drain at Isleta	178
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B

Bacteria, definition of	20
Fecal coliform, definition of	20
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Non-ideal colony count	20
Barr/Chical Diversion at Isleta	183
Bed load discharge, definition of	23
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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

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 for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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