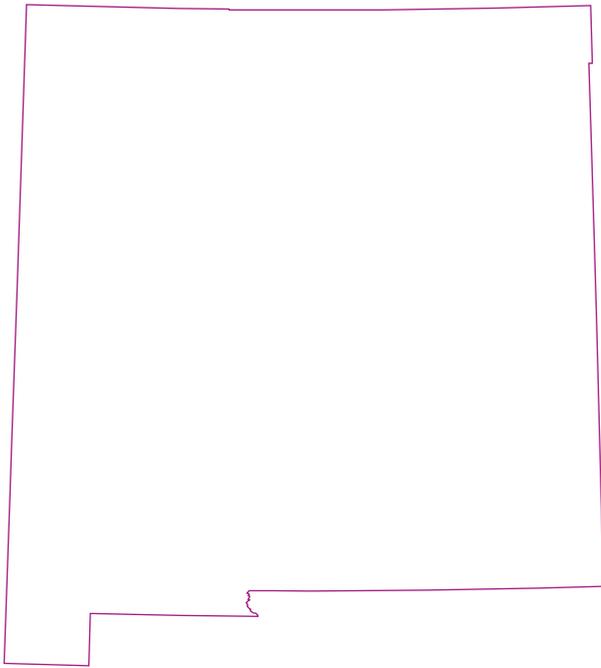


# Water Resources Data New Mexico Water Year 2002

Water-Data Report NM-02-1



# CALENDAR FOR WATER YEAR 2002

## 2001

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OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3							1
7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8
14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15
21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22
28	29	30	31				25	26	27	28	29	30		23	24	25	26	27	28	29
														30	31					

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## 2002

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JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2						1	2
6	7	8	9	10	11	12	3	4	5	6	7	8	9	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23	17	18	19	20	21	22	23
27	28	29	30	31			24	25	26	27	28			24	25	26	27	28	29	30
																				31

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6			1	2	3	4								1
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
28	29	30					26	27	28	29	30	31		23	24	25	26	27	28	29
														30						

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3	1	2	3	4	5	6	7
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

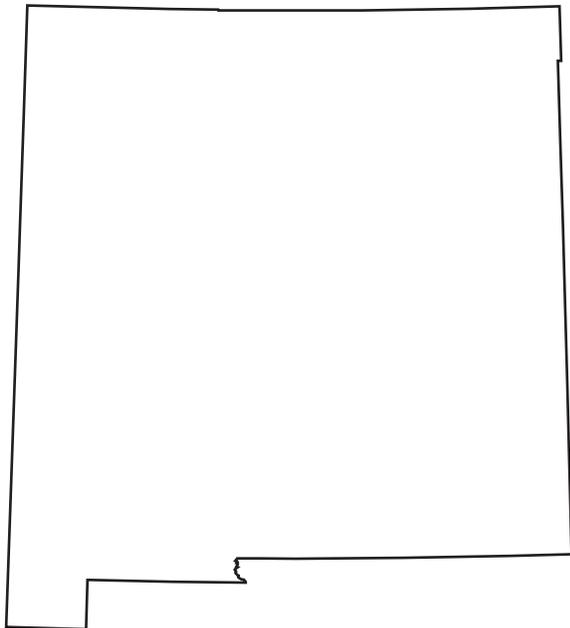
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U.S. Department of the Interior  
U.S. Geological Survey

# Water Resources Data New Mexico Water Year 2002

By Dave Byrd, Kathy Lange, and Linda Beal

Water-Data Report NM-02-1



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



U.S. DEPARTMENT OF THE INTERIOR

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U.S. GEOLOGICAL SURVEY

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Albuquerque, New Mexico 87109-1311

2003

## 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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Water-resources data for the 2002 water year for New Mexico consist of records of discharge and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality in wells and springs. This report contains discharge records for 176 gaging stations; stage and contents for 24 lakes and reservoirs; water quality for 42 gaging stations, 108 wells, and 9 partial-record stations and miscellaneous sites; and water levels at 135 observation wells. Also included are 80 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. Two 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.

14. SUBJECT TERMS <b>*New Mexico, *Hydrologic data, *Surface water, *Water quality, Lakes, Reservoirs, Sediments, Water levels, Flow rates, Gaging stations, Chemical analyses, Water analyses, Water temperature, Sampling sites</b>	15. NUMBER OF PAGES <b>433</b>
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 [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]

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## 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 <sup>2</sup> )	Period of record
ARKANSAS RIVER BASIN			
Bennett Spring near Capulin, NM	07153410	--	1977-81
Dry Cimarron River near Guy, NM	07153500	545	1942-73
Dry Cimarron River near Folsom, NM	07154000	895	1927-33
Canadian River near Hebron, NM	07199000	229	1946-86
Chicorica Creek below Lake Maloya, NM	07199500	26	1945-51
Chicorica Creek near Yankee, NM	07199600	32.5	1975-79, 1984-87
East Fork Chicorica Creek near Yankee, NM	07199650	23.9	1984-87
Vermejo River at Vermejo Park, NM	07202400	36.7	1985-93
Vermejo River near Maxwell, NM	07203525	486	1983-94
Chicorica Creek below East Fork near Raton, NM	07200000	71	1945-51
Chicorica Creek near Raton, NM	07200500	87	1910-14, 1984-87
Una de Gato Creek near Raton, NM	07201400	80	1910
Una de Gato Creek below Throttle Dam near Raton, NM	07201420	49.5	1975-83
Una de Gato Creek near Hebron, NM	07201500	224	1946-50
Chicorica Creek near Hebron, NM	07202000	381	1945-52, 1983-87
Vermejo River near Colfax, NM	07203500	--	1945-50
McEvoy Creek near Eagle Nest, NM	07206200	1.95	1961-68
Tolby Creek near Eagle Nest, NM	07206300	8.5	1961-68
Clear Creek near Ute Park, NM	07206400*	7.44	1961-68
Cimarron Creek at Ute Park, NM	07206500	260	1907-50
Rayado Creek below Abreu's Ranch, near Cimarron, NM	07209000	75	1912-13
Rayado Creek near Miami, NM	07209500	76	1939-55
Rayado Creek near Springer, NM	07210000	--	1907-09
Uracca Creek near Cimarron, NM	07210500	6.3	1912-15
East Fork Ocate Creek at Ocate, NM	07212000	35	1914-28
Ocate Creek near Ocate, NM	07212500	--	1914
Colmor intake canal near Ocate, NM	07213000	--	1933-51

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
ARKANSAS RIVER BASIN--Continued			
Sweetwater Creek near Colmor, NM	07213500	--	1914
Canadian River near Roy, NM	07214000	4,066	1936-65
Mora River near Holman, NM	07214500	57	1953-74
Vigil Canyon near Holman, NM	07214600	2.8	1956-63
Agua Fria Creek near Holman, NM	07214700	9.2	1956-63
Rio la Casa near Cleveland, NM	07214800	23	1956-70
La Cueva Canal at La Cueva, NM	07215000	--	1906-11
Cebolla River near Golondrinas, NM	07215600	64	1956-63
Mora River at Weber, NM	07216000	--	1903-04
Coyote Creek below Black Lake, NM	07217000	48	1952-63
Coyote Creek above Guadalupita, NM	07217100	71	1956-74
Coyote Creek at Guadalupita, NM	07217500	90	1920-23
Mora River near Watrous, NM	07218100	521	1956-63
Sapello River at Sapello, NM	07218500	--	1903-04
Sapello canal at Sapello, NM	07218600	--	1956-70
Manuelitas Creek near Rociada, NM	07218700	52	1956-63
Sapello River at Sapello, NM	07220000	132	1915-21
Lake Isabel feeder canal near Sapello, NM	07220100	--	1956-75
Sapello River at Los Alamos, NM	07220500	144	1905-11
Sapello River near Watrous, NM	07220600	213	1956-63
Mora River near Shoemaker, NM	07221000	6,015	1912-14 1935-96
Canadian River near Bell Ranch, NM	07222000	6,200	1915-17, 1927-39
Bell Ranch Canal near Conchas Dam, NM	07223000	--	1942-84
Canchos Canal below Conchas Dam, NM	07223300	--	1961-82, 1984-92
Canadian River below Conchas Dam, NM	07224500	7,417	1936-38, 1942-72
Conchas River at Verjadero, NM	07225000	523	1936-96
Pajarito Creek near Hanley, NM	07225100	310	1911-12
Pajarito Creek near Vigil Creek, near Hanley, NM	07225200	350	1912-13
Ute Creek near Bueyeros, NM	07226000	620	1949-54
Canadian River above New Mexico-Texas State line	072271401	2,616	1969-73
Tramperos Creek near Stead, NM	07227200*	556	1966-73
BRAZOS RIVER BASIN			
Running water Draw near Clovis, NM	08080600*	109	1956-64

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

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Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
RIO GRANDE BASIN			
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
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

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
RIO GRANDE BASIN--Continued			
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
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

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

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Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
RIO GRANDE BASIN--Continued			
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
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

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
RIO GRANDE BASIN--Continued			
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
Rio Tesuque at Grant Boundary at Tesuque, NM	08308025	12	1998-99
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
Santa Fe River below Nichols Reservoir near Santa Fe, NM	08316505	--	1998-99
Santa Fe River above St. Francis Dr. at Santa Fe, NM	08316530	--	1998-99
Santa Fe River at Ricardo Road at Santa Fe, NM	08316535	--	1998-99
Santa Fe River above Cochiti Lake, NM	08317200	232	1970-99
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

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
RIO GRANDE BASIN--Continued			
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
Rio del 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 Villa Del Oso at Albuquerque, NM	08329860	0.052	1976-98
Grant Line Arroyo at Albuquerque, NM	08329865	0.052	1987-91
Pino Arroyo at Ventura Blvd. at Albuquerque, NM	08329872	5.40	1990-2000
Hoffmantown Church Outlet No. 1 at Albuquerque, NM	08329873	0.859	1990-97
Hoffmantown Church Outlet No. 2 at Albuquerque, NM	08329874	0.413	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	1978-98
Rio Grande near Alameda, NM	08329928	17,263	1989-95
Corrales Riverside Drain near Corrales, NM	08329930	--	1996-99
Corrales Main Canal Outflow at Albuquerque, NM	08329931	--	1996-99
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

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
RIO GRANDE BASIN--Continued			
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
Albuquerque Riverside Drain near Isleta, NM	08330915	--	1997-99
Atrisco Riverside Drain at Isleta, NM	08330940	--	1997-99
Rio Grande near Isleta, NM	08331000	17,900	1925-29, 1936-38
Barr/Chical Diversion at Isleta, NM	08331105	--	1997-99
North Pajarito Arroyo at Albuquerque, NM	08331130	.58	1979-87
North Pajarito Arroyo at Albuquerque, NM	08331140	.81	1979-83
Rio Grande near Belen, NM	08331500	18,230	1941-57
Abo Arroyo near Blue Springs, NM	08331660	242	1996-2000
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 Cabezon, NM	08333000	360	1943-51
Rio Puerco at Cabezon, 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 above Bluewater Dam, near Bluewater, NM	08341300	75.0	1953-78, 1989-2001
Cottonwood Creek near Thoreau, NM	08341365	77.0	1989-2001
Bluewater Creek below Bluewater Dam, NM	08341500	201	1951-60, 1989-2001
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

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
RIO GRANDE BASIN--Continued			
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
Paguete Creek near Laguna, NM	08349500	--	1937-41
Rio Paguate below Jackpile Mine near Laguna, NM	08349800	107	1976-93
Paguete 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
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

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
RIO GRANDE BASIN--Continued			
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 Fort Sumner, NM	08385500	5,600	1957-58, 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
Pecos River above Acme, NM	08385648	--	1992-2000
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	1908-09, 1956-62
Rio Hondo at Hondo Reservoir site, near Roswell, NM	08392500	970	1903-05

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
RIO GRANDE BASIN--Continued			
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	--	1903-06 1981-97
North Spring River at Roswell, NM	08393600	19.5	1958-77
Pecos River near Roswell, NM	08394000	--	1903-06
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
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

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
TULAROSA VALLEY BASIN			
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
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 Fresnal near Mountain Park, NM	08484000	44	1911-12
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
SAN JUAN BASIN			
San Juan River at Rosa, NM	09350500	1,990	1895-99, 1910-65
Los Pinos River at Ignacio, CO	09354000	--	1910-61
Martinez ditch near Archuleta, NM	09355200	--	1955-57
Citizens ditch near Turley, NM	09356000	--	1938, 1951-58
San Juan River near Blanco, NM	09356500	3,560	1907-09, 1910, 1927-55

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

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Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
SAN JUAN BASIN--Continued			
Canon Largo near Blanco, NM	09356565	1,700	1977-81
San Juan River at Bloomfield, NM	09357000	5,410	1909, 1910-11, 1927-31, 1955-63
San Juan River at Hammond Bridge near Bloomfield, NM	09357100	5,540	1978-81
Gallegos Canyon near Farmington, NM	09357250	290	1978-81
Animas River at Aztec, NM	09364000	1,270	1904, 1907-15
Shumway Arroyo near Fruitland, NM	09367555	62.8	1975-82
Chaco Wash near Star Lake Trading Post, NM	09367660	59.0	1978-82
Chaco Wash at East Boundary at Chaco Canyon National Monument, NM	09367676	364	1980-82
Fajada Wash at Chaco Canyon National Monument, NM	09367678	199	1980-83
Chaco Wash at Chaco Culture National Monument, NM	09367800*	578	1976-90
Gallo Wash at Chaco National Monument, NM	09367682	36.2	1978-81
Chaco Wash near Pueblo Bonito at bridge at Chaco Canyon National Monument, NM	09367683	619	1980-83
Ah-shi-sle-pah Wash near Kimbeto, NM	09367685	8.2	1977-84
Kim-me-ni-oli Wash near Crownpoint, NM	09367687	228	1982-83
Kim-me-ni-oli Wash near Lake Valley, NM	09367689	400	1982-83
De-na-zin Wash near Bisti Trading Post, NM	09367710	184	1975-82
Black Springs Wash near Mexican Springs, NM	09367900*	7.55	1979-
Hunter Wash at Bisti Trading Post, NM	09367930*	45.6	1975-82
Teec-ni-di-tso Wash near Burnham Trading Post, NM	09367934	7.2	1978-82
Burnham Wash near Burnham, NM	09367936	8.6	1978-82
Chaco River near Burnham, NM	09367938	3,640	1978-82
Chaco River near Waterflow, NM	09367950	4,350	1975-94
LITTLE COLORADO RIVER BASIN			
Largo Creek near Mangas, NM	09386050	63	1959-66
Zuni River at Black Rock, NM	09387000	828	1910-30
Zuni River at New Mexico-Arizona State line	09387300	1,314	1985-87, 1987-89, 1990-94
Puerco River near Church Rock, NM	09395350	193	1978-82, 1989-91
Puerco River at Gallup, NM	09395500*	558	1940-46, 1977-82
Puerco River near Manuelito, NM	09395630	990	1989-93
Whitewater Arroyo near Cheechilgeetho, NM	09395700	78.5	1964-67

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Period of record
GILA RIVER BASIN			
Gila River near Silver City, NM	09430000	1,600	1912-19
Sapello Creek below Lake Roberts, near Silver City, NM	09430150	78	1964-71
Gila River near Cliff, NM	09431000	2,435	1942-51
Trout Creek near Luna, NM	09442653	27.1	1968-86
Tularosa River above Aragon, NM	09442692	94	1966-96
San Francisco River near Alma, NM	09443000	1,546	1904-07, 1909-10, 1912-14, 1964-86
Whitewater Creek near Mogollon, NM	09443500	34	1909-23

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following stations were discontinued as continuous-record surface-water-quality stations prior to the 2002 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 <sup>2</sup> )	Type of record	Period of record
Dry Cimarron River near Guy, NM	07153500	545	c, s, t	1964-74
Canadian River near Hebron, NM	07199000	229	c	1966-81
Chicorica Creek near Yankee, NM	07199600	32.5		1975-79
Una de Gato Creek below Throttle Dam near Raton, NM	07201420	49.5	c, s	1975-84
Chicorica Creek near Hebron, NM	07202000	381	c	1975-81
Vermejo River near Dawson, NM	07203000	301	c, s	1964-84
Cimarron River below Eagle Nest Dam, NM	07206000	167	c, s	1975-84
Ponil Creek near Cimarron, NM	07207500	171	c	1981-95
Rayado Creek at Sauble Ranch, near Cimarron, NM	07208500	85	c	1981-95
Canadian River near Taylor Springs, NM	07211500	2,850	b, c, s	1966-75
Mora River at La Cueva, NM	07215500	173	c	1981-95
Conchas Canal below Conchas Dam, NM	07223300	--	c	1964-77
Plaza Largo canal below Barranca Creek near Tucumcari, NM	07227073	602	c	1965-66
Revuelto Creek below Plaza Largo Creek near Tucumcari, NM	07227080	672	c	1965-66
Canadian River near Glenrio, NM	07227125	--	c, s, t	1965-66
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 Dam site 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	36.7	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

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Type of record	Period of record
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
Rio Pueblo De Taos below Los Cordovas, NM	08276300	380	b,c,t	1981; 1986-98
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	08284300	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
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 Pueblo, NM	08317300		c,s	1981-98
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

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Type of record	Period of record
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 Paguete 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
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,t	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,t	1937-98
Pecos River near Acme, NM	08386000	11,380	b,c,s,t	1937-98
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

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Type of record	Period of record
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
Rio Blanco near Pagosa Springs, CO	09343000	58		1962-65
Rio Blanco at U.S. Highway 84 near Pagosa Springs, NM	09343400	--	c,s	1972-74
Navajo River above Chromo, CO	09344300	96.4	s	1962-65
Navajo River below Oso Diverson Dam near Chromo, CO	09344450	--	c,s	1972-75
Navajo River at Edith, CO	09346000	172	b,c,s	1969-74
San Juan River near Carracas, CO	09346400	1,230	b,c,s	1969-73
Piedra River near Arboles, CO	09349800	629	b,c,s	1969-73
Los Pinos River at La Boca, CO	09354500	510	b,c,s	1969-73
Canon Largo near Blanco, NM	09356565	1,700	c,m,s	1978-81
San Juan River at Bloomfield, NM	09357000	5,410	s,t	1962-64
San Juan River at Hammond Bridge near Bloomfield, NM	09357100	5,540	b,c,m,s	1978-81
Gallegos Canyon near Farmington, NM	09357250	290	c,m,s	1978-81
San Juan River above Animas River at Farmington, NM	09357300	5,800	c	1966-79
Animas River near Cedar Hill, NM	09363500	1,090	c,m,s,t	1943-45 1958-59 1969-73 1975; 1987-98
San Juan River at Farmington, NM	09365000	7,240	c,s,t	1962-82
La Plata River at Colorado-New Mexico State line	09366500	331	b,c,m,s	1970-73
La Plata River near Farmington, NM	09367500	583	c,s	1970-73, 1978-81
Shumway Arroyo near Fruitland, NM	09367555	62.8	b,c,m,s	1976; 1978-82
Shumway Arroyo near Waterflow, NM	09367561	73.8	b,c,m,s	1974-84; 1986

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

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Station name	Station number	Drainage area (mi <sup>2</sup> )	Type of record	Period of record
Chaco Wash near Star Lake Trading Post, NM	09367660	59	c,s	1978-82
Chaco Wash at East Boundary at Chaco Canyon National Monument, NM	09367676	364	c,s	1981-82
Fajada Wash at Chaco Canyon National Monument, NM	09367678	199	c,s	1981-84
Chaco Wash at Chaco Canyon National Monument, NM	09367680	578	c,s	1976-84
Gallo Wash at Chaco Canyon National Monument, NM	09367682	36.2	c,s	1979
Chaco Wash near PB at bridge at Chaco Canyon National Monument, NM	09367683	619	c,s	1981-84
Ah-shi-sle-pah Wash near Kimbeto, NM	09367685	8.21	c,s	1977-83
Kim-me-ni-oli Wash near Crownpoint, NM	09367687	228	b,c,s	1981-83
Kim-me-ni-oli Wash near Lake Valley, NM	09367689	400	b,c,s	1981-83
San Juan River near Fruitland, NM	09367540	8,010	c	1978-95
De-na-zin Wash near Bisti Trading Post, NM	09367710	184	c,s	1975-82
Black Springs Wash near Mexican Springs, NM	09367900	7.05	c,s	1981-82
Hunter Wash at Bisti Trading Post, NM	09367930	45.6	c,s	1975-82
Teec-ni-di-tso Wash near Burnham, NM	09367934	7.2	c,m,s,t	1978-82
Burnham Wash near Burnham, NM	09367936	8.6	c,m,s,t	1978-82
Chaco River near Burnham, NM	09367938	3,640	c,m,s,t	1978-82
Chaco River near Waterflow, NM	09367950	4,350	c,s	1976-89
San Juan River near Bluff, UT	09379500	23,000	c,s,t	1962-68
Puerco River near Church Rock, NM	09395350	193	c,s	1979
Foster Canyon near Continental Divide, NM	09395381	16.8	c	1988
Puerco River at Gallup, NM	09395500	558	c,k,s,t	1975-77; 1979-84
Puerco River near Manuelito, NM	09395630	990	c,s	1989-93
Gila River near Gila, NM	09430500	1,864	c,s,t	1963-67
Mangas Creek below Mangas Springs, NM	09431100		c,m,s	1970-86
San Francisco River at Clifton, AZ	09445000	2,766	s	1963-67
Dry Beaver Creek near Rimrock, AZ	09505350	139	s	1964-65
Sunset Canal above New Mexico-Arizona State line	09433500	--	b,c,s	1969-72
New Model Canal above New Mexico-Arizona State line	09436500	--	b,c,s	1969-72
Gila River at New Mexico-Arizona State line	09438000	3,349	b,c,s	1968-73
San Francisco River at Clifton, AZ	09445000	2,766	s	1963-67
Dry Beaver Creek near Rimrock, AZ	09505350	139	s	1964-65

## 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."

This report includes 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 176 gaging stations and contents for 24 lakes and reservoirs; water quality for 42 gaging stations, 108 wells, and 9 partial record stations and miscellaneous sites, and water levels at 135 observation wells. Also included are 80 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. Two 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, Information Services Center, Box 25286 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, published annually for each State.

These reports have an identification number consisting of the two-letter State beginning with water year 1975; data for streamflow, water quality, and ground water were combined in reports 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-01-2." These Water-Data Reports are for sale by the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161.

## 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 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,  
Ward Irrigation District,  
City of Santa Rosa,  
City of Raton,  
Village of Ruidoso, and  
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 U.S. Army Corps of Engineers, by the Bureau of Reclamation, by the Bureau of Indian Affairs, and by the Bureau of Land Management,

Assistance in the form of services was provided by the Carlsbad Irrigation District. 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 well below normal throughout the State at the beginning of water year 2002. Rainfall rebounded somewhat in November to normal or near normal in most areas of the State. Rainfall at the end of the calendar year returned to below-normal levels. Winter precipitation was well below normal within the State with several exceptions.

For example, precipitation in March was zero in Albuquerque, Deming, and Las Vegas, whereas precipitation 496 percent of normal in Carlsbad, 598 percent of normal in Roswell, and 538 percent of normal in Tatum. Snowpack at the beginning of January was generally below normal: 72 percent of normal in the Rio Grande Basin, 82 percent of normal in the Pecos River Basin, and 58 percent of normal in the San Juan River Basin. Snowpack levels receded steadily and were generally well below normal at the end of February.

Precipitation, with a few exceptions, continued at below-normal levels from April through the summer months. July precipitation rebounded slightly but was still below normal. The water year ended on a more positive note, with precipitation amounts generally exceeding normal levels for September. September precipitation was 220 percent of normal in Quemado, 152 percent of normal in Albuquerque, 178 percent of normal in Raton, and 260 percent of normal in Farmington.

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 for such uses as irrigation, flood control, legal compacts, endangered species, and recreation. During periods of heavy storm activity, for example, reservoir

operators can reduce the amount of water in storage. A review of water storage during water year 2002 indicates various trends.

Storage at Brantley and Cochiti Reservoirs varied only slightly: storage at Brantley ranged from 1 to 3 percent of capacity, and Cochiti stayed at 10 percent of capacity. Storage in other reservoirs, however, represented operating schedules that resulted in a general decline in storage throughout the year with a small increase during March to April.

For example, storage in El Vado Reservoir began water year 2002 at 42 percent of capacity in October, peaked at 57 percent of capacity in April, and then declined to 4 percent of capacity at the end of the water year. Other reservoirs experienced steady decreases in storage throughout the year. The combined storage in Sumner and Santa Rosa Reservoirs ranged from 6 percent of capacity in October to 4 percent of capacity in March, dipping to 1 percent of capacity from April through August.

This trend in reservoir storage also occurred in Abiquiu, Navajo, and Conchas Reservoirs. The combined storage in Elephant Butte-Caballo Reservoirs closely reflected this trend. Storage in Elephant Butte-Caballo was 36 percent of normal in October, 40 percent of normal in January, 30 percent of normal in May, and 14 percent of normal at the end of September.

Reservoir storage in most of the State's reservoirs at the end of water year 2002 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 1,451,000 acre-feet during water year 2002, totaling 1,819,000 acre-feet by September 30, 2002. The combined capacity of these 13 reservoirs is 8,530,000 acre-feet.

Streamflow in New Mexico was generally below normal at the end of water year 2001. This trend continued into the beginning of water year 2002, with the notable exception of the upper Rio Grande where streamflow recorded at Rio Grande below Taos Junction Bridge (station 08276500) was 140 percent of normal in November.

As recorded at various index gaging stations, streamflows generally were below normal across the State throughout the water year. For example, streamflow at Pecos River near Pecos (station 08378500) was 72 percent of normal in October, 49 percent of normal in April, and 50 percent of normal in September, and streamflow at Gila River near Gila (09430500) was 87 percent of normal in October, 41 percent of normal in February, and 52 percent of normal in August.

Recorded flows were well below normal at the end of water year 2002 at index stations in the Rio Grande, Pecos, and Animas River Basins. In contrast, recorded streamflows were well above normal in the Gila and Delaware River Basins at the end of the water year.

### Ground-Water Levels

Ground-water levels are measured periodically in a network of about 6,000 observation wells in order to record changes in ground-water storage. Water levels in about 1,200 wells are measured annually and the remaining 4,800 wells are scheduled for measurement at 5-year intervals, so that wells in different areas are measured each year (fig. 1). The areas of water-level measurements are in eight of the nine major surface-water drainage basins; most are in areas where ground water is used in large quantities for irrigation, municipal, or industrial purposes. Twenty-one selected wells in various parts of the State are equipped with continuous water-level recorders.

Hydrographs of water levels in wells (fig. 2) in the four quadrants of the State illustrate the water-level trends for the last 20 years. A decrease in ground-water withdrawals for agriculture and mining operations may be responsible for the general rise in water levels in the well in Cibola County since 1979. The decrease in the water level in the Cibola County well since last year may be a result of recent withdrawals for industrial use. The wells in Luna, Union, and Chaves Counties are in areas of intensive irrigation. The water level in the Luna County well (Mimbres Valley) decreased from

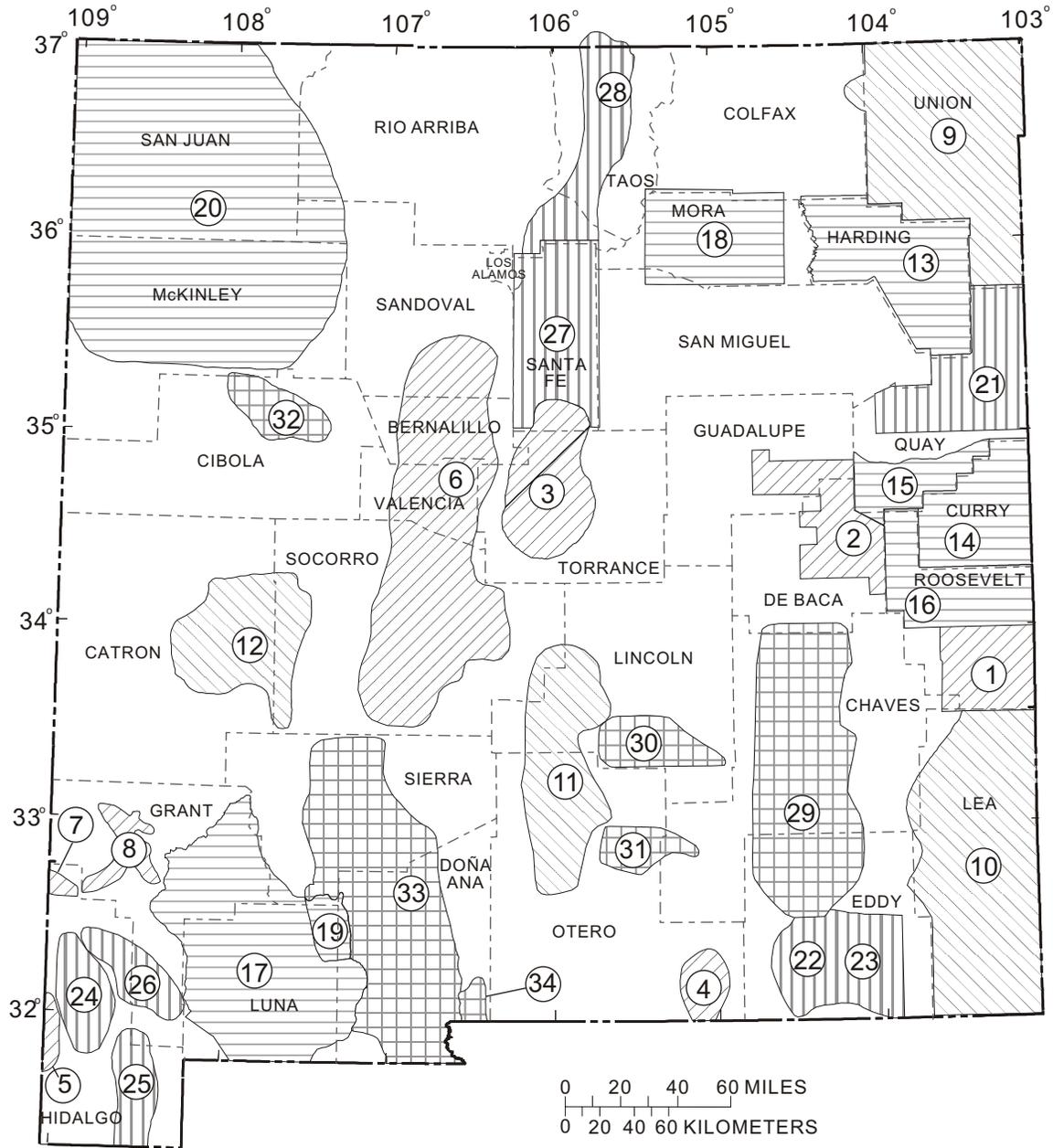
water year 1991, but continued to be higher than average for the past 20 years. The water level in the well in Union County continued to decline, which is typical of wells on the High Plains of northeastern New Mexico. The water level in the recorder well in Chaves County has yearly fluctuations that are typical of water levels in wells in the Roswell artesian basin. The water levels in the vicinity of this well have also risen since the mid-1970's, probably resulting from both a decrease in withdrawals for irrigation and an increase in recharge to the aquifer.

### SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative of undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program can be found at <http://water.usgs.gov/hbn/>.

Discharges for water year 2002 at four index streamflow-gaging stations compared to median annual discharge for water years 1972-2001 at the same stations are listed below:

Station number	Station name	Median annual discharge in acre-ft water years 1972-2001	Annual mean discharge in acre-ft water year 2002	2002 discharge as a percentage of median
08276500	Rio Grande below Taos Junction Bridge	582,100	216,700	37
08378500	Pecos River near Pecos	76,580	18,230	24
08408500	Delaware River near Red Bluff	3,724	1,780	48
09430500	Gila River near Gila	132,900	43,020	32



**EXPLANATION**

- |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|
|           |           |           |           |           |
| 2000/2005 | 2001/2006 | 1997/2002 | 1998/2003 | 1999/2004 |
- 
- |                      |                          |                    |                      |                      |
|----------------------|--------------------------|--------------------|----------------------|----------------------|
| 1. CAUSEY-LINGO      | 09. NORTHERN HIGH PLAINS | 13. HARDING COUNTY | 21. LOWER CANADIAN   | 29. ROSWELL BASIN    |
| 2. FT. SUMNER        | 10. LEA COUNTY           | 14. CURRY COUNTY   | 22. CARLSBAD         | 30. RIO HONDO        |
| 3. ESTANCIA          | 11. TULAROSA BASIN       | 15. HOUSE          | 23. CAPITAN REEF     | 31. RIO PEÑASCO      |
| 4. SALT BASIN        | 12. SAN AGUSTIN PLAINS   | 16. PORTALES       | 24. ANIMAS           | 32. GRANTS-BLUEWATER |
| 5. SAN SIMON         |                          | 17. MIMBRES BASIN  | 25. PLAYAS           | 33. LOWER RIO GRANDE |
| 6. MIDDLE RIO GRANDE |                          | 18. MORA           | 26. LORDSBURG        | 34. HUECO            |
| 7. VIRDEN            |                          | 19. NUTT-HOCKETT   | 27. SANTA FE COUNTY  |                      |
| 8. GILA RIVER        |                          | 20. SAN JUAN BASIN | 28. UPPER RIO GRANDE |                      |

Figure 1.--Areas of 5-year ground-water-level monitoring and years measured or scheduled for measurement.

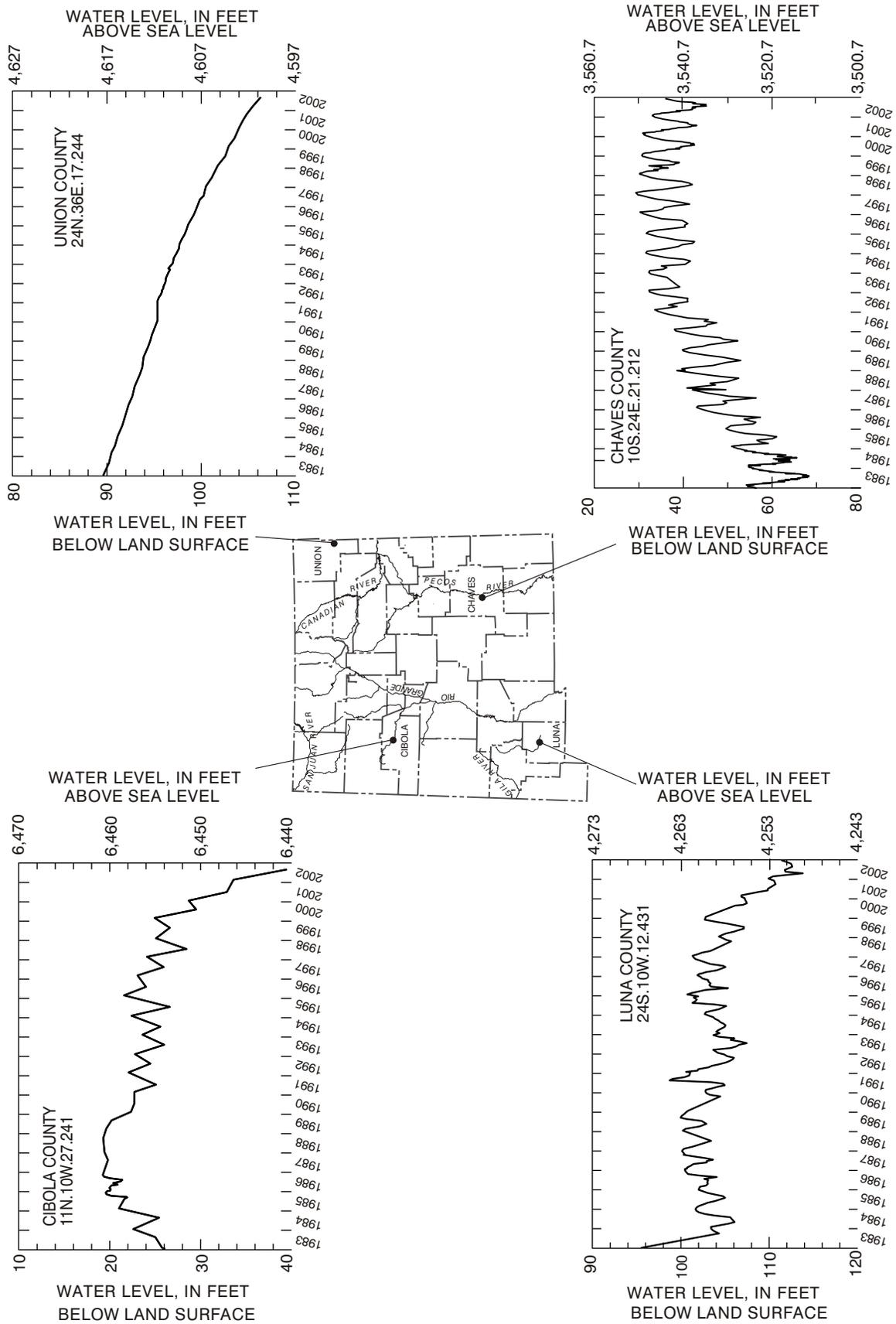


Figure 2.--Ground-water-level trends for the last 20 years.

National Stream Quality Accounting Network (NASQAN) monitors the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande Basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia so that a network of 5 stations could be implemented on the Yukon River. 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 for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at <http://water.usgs.gov/nasqan/>.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 225 precipitation chemistry monitoring sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as all data from the individual sites, can be found at <http://bqs.usgs.gov/acidrain/>.

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; provide an improved understanding of the primary natural and

human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 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 can be found at <http://water.usgs.gov/nawqa/>.

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 2002, which began October 1, 2001, and ended September 30, 2002. 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, 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, and 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 surface-water 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 is 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 is 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.)

Local Well Numbers

In New Mexico, to provide an additional means of identification and a cross reference to records in older reports, most wells and springs have been assigned a local identifier based on the system of public land surveys. In areas covered by such surveys, the local identifier consists of a series of numbers and letters separated by periods, giving the township, range, section, and tract within a section, in that order. The letters N or S locate the township north or south of the New Mexico base line. The letters E or W locate the range east or west of the New Mexico principal meridian. A zero in a tract number indicates that the well or spring is centrally positioned or has not been located accurately enough to be placed within a tract or quarter section. Three digits in a tract number will locate a well or spring to the

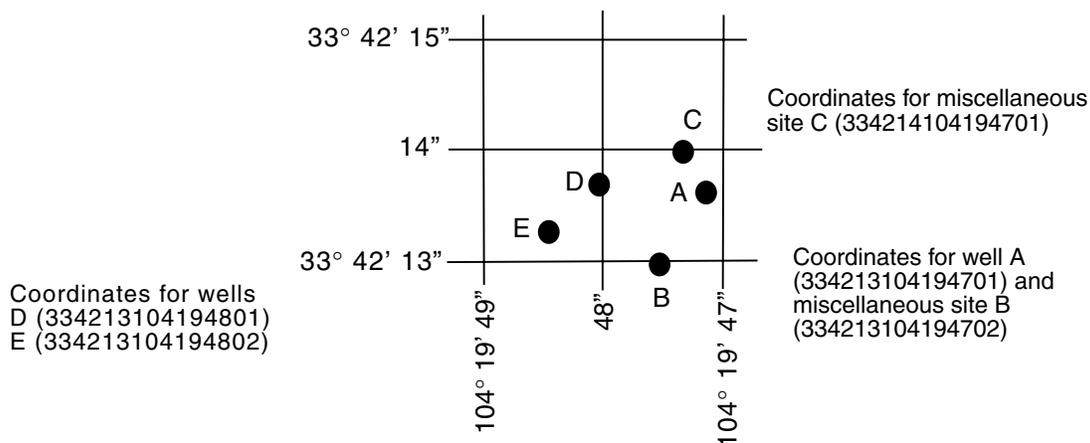


Figure 3.--System for assigning latitude-longitude numbers to wells, springs, and miscellaneous sites.

nearest 10-acre tract, and six digits will locate a site to the nearest 0.16-acre tract. This numbering system is illustrated in figure 4.

The well numbering system in Texas was developed by the Texas Water Development Board for use throughout the State. Under this system, each 1-degree quadrangle is given a number consisting of two digits. These are the first two digits in the well number. Each 1-degree quadrangle is divided into 7-1/2-minute quadrangles, which are given two digit numbers from 01 to 64. These are the third and fourth digits of the well number. Each 7-1/2-minute quadrangle is divided into 2-1/2-minute quadrangles, which are given a single-digit number from 1 to 9. This is the fifth digit of the well number. Finally, each well within a 2-1/2-minute quadrangle is given a two-digit number in the order in which it was inventoried, starting with 01. These are the last two digits of the well number. In addition to this seven-digit well number, a two-letter prefix is used to identify the county. An example of the Texas well-numbering system is provided in figure 5.

#### 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. Locations of all complete-record stations and partial-record stations for which data are given in this report are shown in figures 6 and 7.

#### 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 platforms 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.

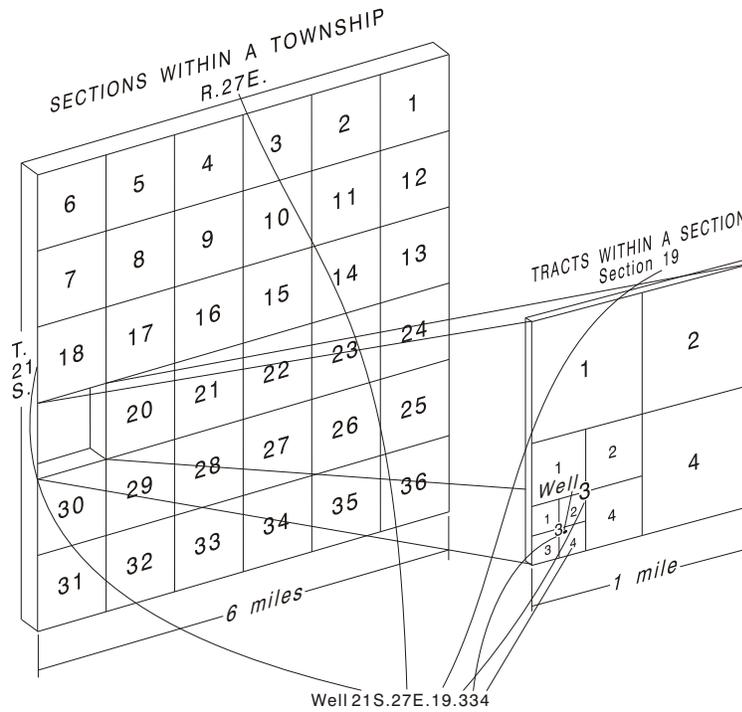


Figure 4.--New Mexico well-numbering system.

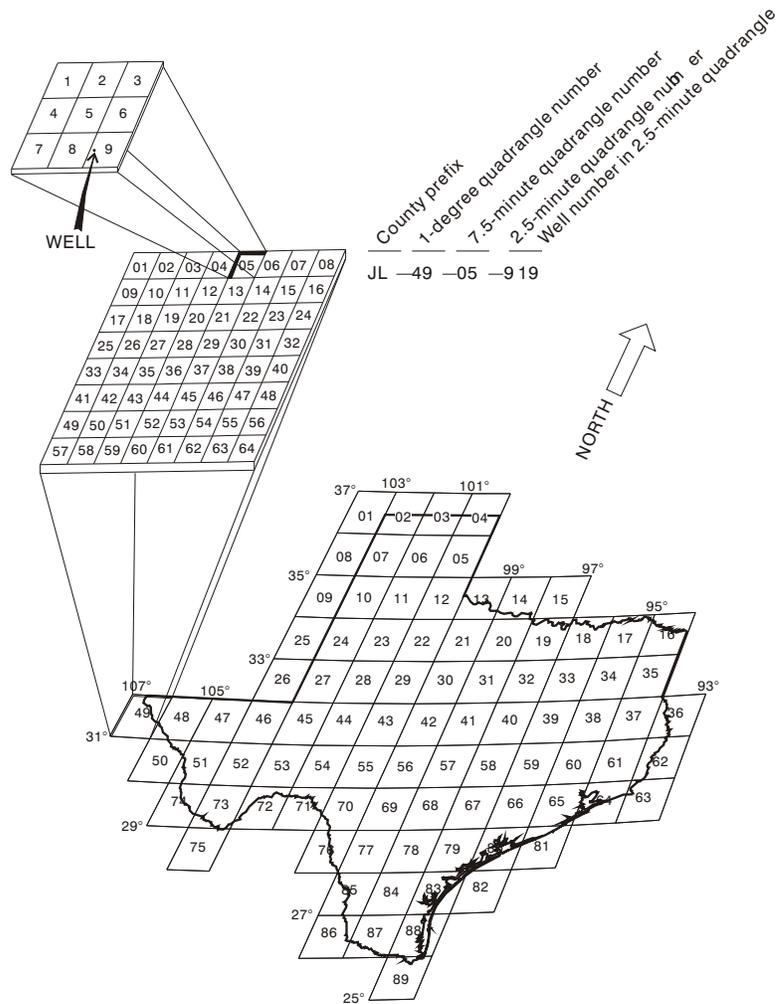


Figure 5.--Texas well-numbering system.

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 four 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; and 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 that follow clarify information presented under the various headings of the station description.

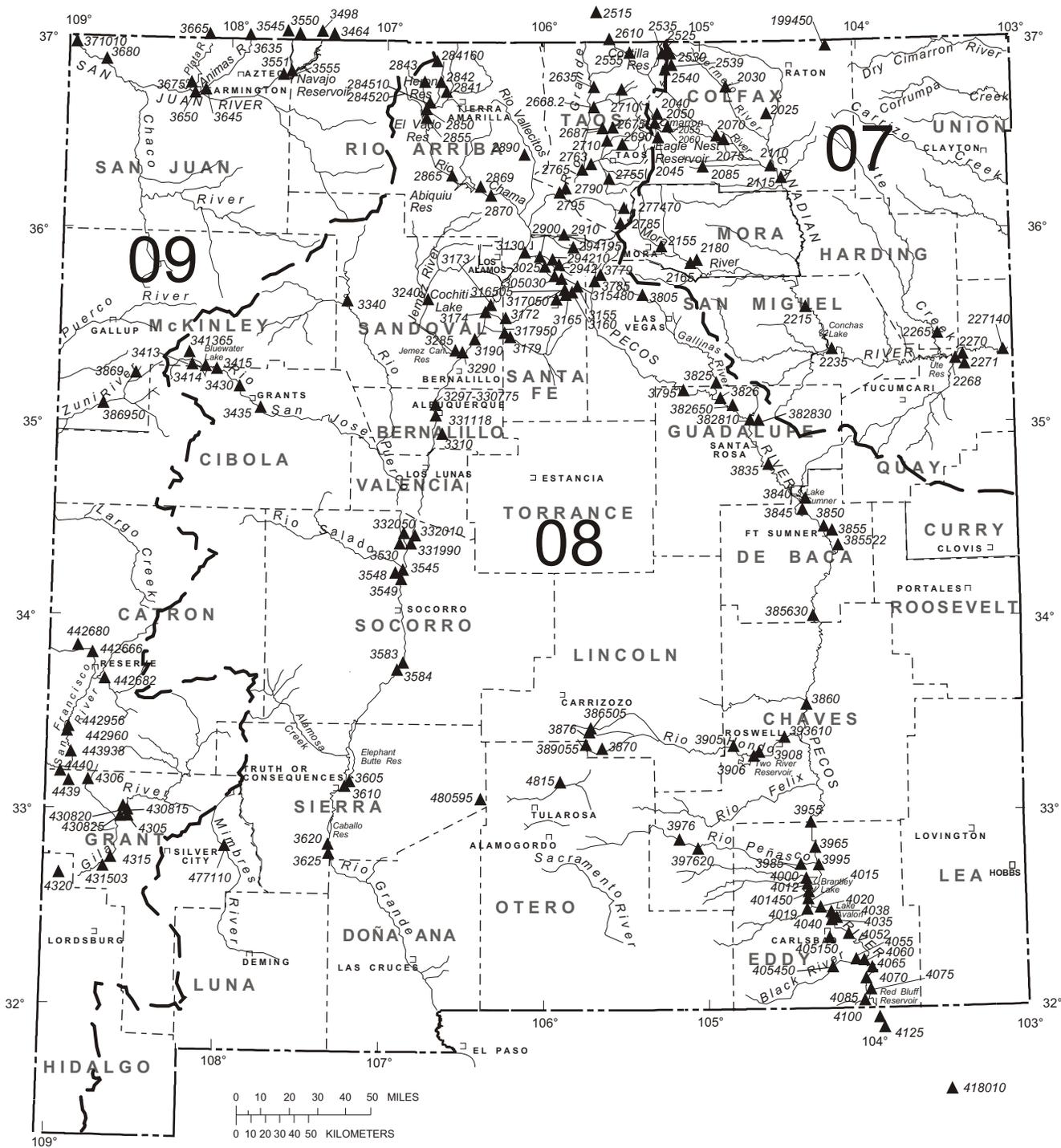
**LOCATION.**--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages were determined 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 can reasonably 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.



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 6.--Location of surface-water gaging stations.



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.)

**MAXIMUM PEAK FLOW.**--The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

**MAXIMUM PEAK STAGE.**--The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, 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.

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 ft<sup>3</sup>/s; to the nearest tenth between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to 3 significant figures for more than 1,000 ft<sup>3</sup>/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 20192, 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.

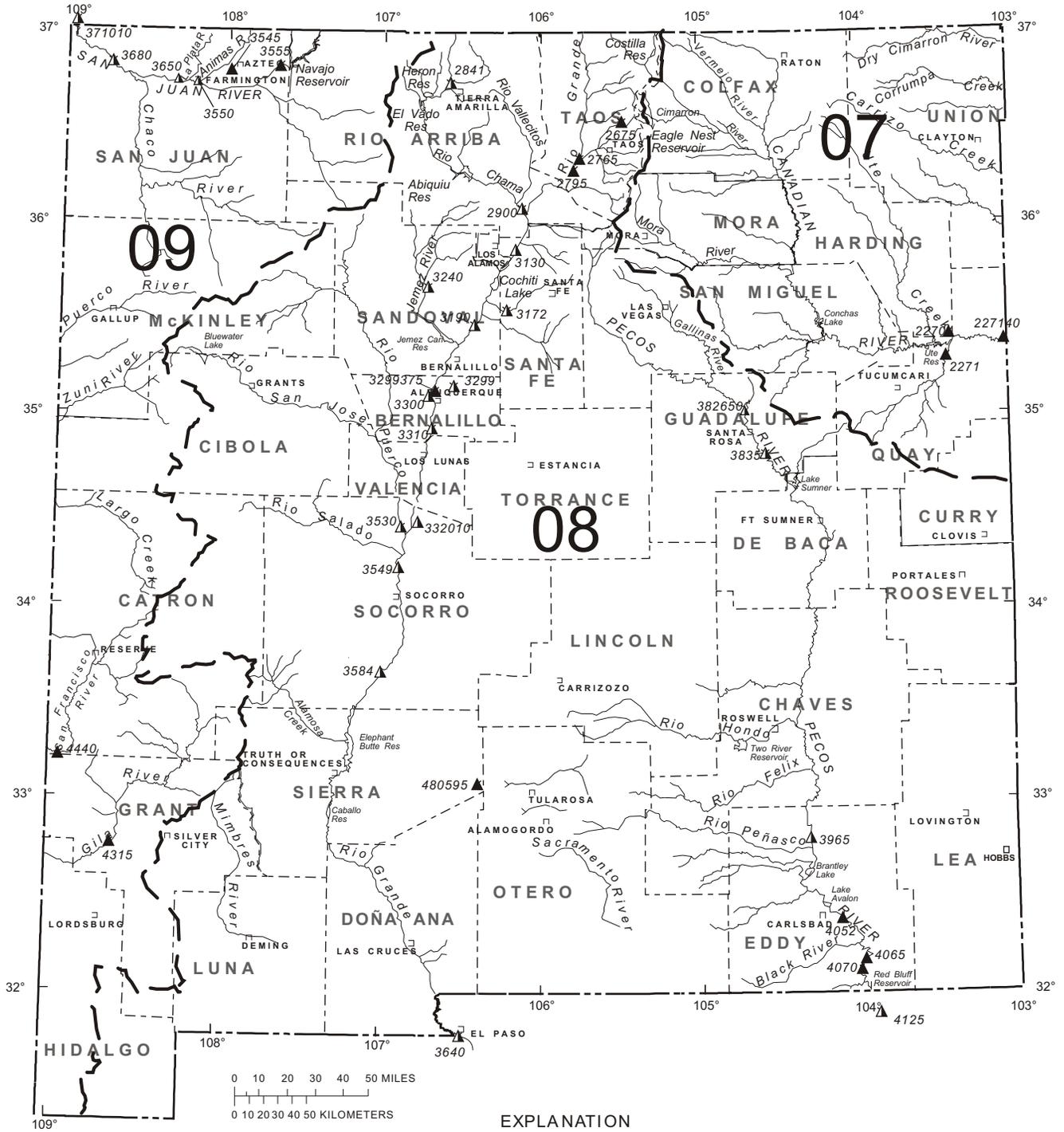
Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the New Mexico District Office. Also, most of the daily mean discharges are in computer-readable form and have been 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. Locations of surface-water-quality stations are shown in figure 8.

#### 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.S. Geological Survey base

BASIN AND STATION NUMBER

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

480595 ▲ STATION AND NUMBER--Number by symbol is abbreviated station number. Complete national station number is: 08 480595  
 Basin number + station number

STATION AND SAMPLING FREQUENCY

- CHEMICAL QUALITY: ▲ Daily ▲ Other than daily
- SUSPENDED SEDIMENT: △ Daily △ Other than daily
- CHEMICAL QUALITY AND SUSPENDED SEDIMENT: ▲ Both daily ▲ Both other than daily
- ▲ Daily chemical quality and other than daily suspended sediment
- ▲ Daily suspended sediment and other than daily chemical quality

Figure 8.--Location of active surface-water-quality gaging 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 on site 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 on site 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 on site measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigation," (TWRI) Book 1, Chap. D2; Book 3, Chap. A1, A3, and A4; and Book 9, Chap. A1-A9. 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 that 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 value 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. Water temperatures measured at the time of water-discharge measurements 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 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 analyzed 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; and 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 constituents<sup>1</sup>. 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.

The USGS National Water-Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDL's) and laboratory reporting levels (LRL's). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. The chance of falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a non-detection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as <LRL for samples in which the analyte was either not detected or did not pass identification. Analyses that are detected at concentrations between the LT-MDL and LRL and that pass identification criteria are estimated. Estimate concentrations will be noted with a remark code of "E". These data should be used with the understanding that their uncertainty is greater than that of data reported without the "E" remark code.

#### 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

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<sup>1</sup>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.

values of specific conductance, water temperature, and suspended sediment then follow in sequence.

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 in the U.S. Geological Survey's distributed data system, NWIS, and subsequently to its web-based National data system, NWISWeb [<http://water.usgs.gov/nwis/nwis>]. 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 NWIS or NWISWeb to ensure the most recent updates. Updates to NWISWeb are currently made on an annual basis.

## 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 (organism may be observed rather than counted)
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 analytic 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 and, split

samples, a type of replicate sample in which a sample is split into sub samples 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,  $\mu\text{g/L}$ ) 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  $\mu\text{g/L}$  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: 303-970-5643).

#### Records of Ground-Water Levels

Only selected water-level data from the New Mexico network of observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the more important aquifers. Locations of the observation wells in this network in New Mexico are shown in figure 9.

#### Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. Some wells show a former identification number in parenthesis next to the current identification number. The current identification number is a result of better methods and equipment used for obtaining latitude and longitude. The secondary identification number is the local well number, an alphanumeric number derived from the township-range location of the well.

Water-level records are obtained from direct measurements using a steel tape or from the graph or digital water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

#### Data Presentation

Each well record consists of two parts, the station description and data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

**LOCATION.**--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; and the hydrologic unit number.

**AQUIFER.**--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

**WELL CHARACTERISTICS.**--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and

additional information such as casing breaks, collapsed screen, and other changes since construction.

**INSTRUMENTATION.**--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

**DATUM.**--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base, and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) the National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

**REMARKS.**--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

**PERIOD OF RECORD.**--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

**EXTREMES FOR PERIOD OF RECORD.**--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; generally, only water-level highs are listed for every fifth day and the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

#### Publications

Publication of ground-water level data for the United States in water-supply papers was begun by the U.S.



Geological Survey in 1935. From 1935 through 1939, a single water-supply paper for each year covering the entire nation was issued (Water-Supply Papers 777, 817, 840, 845, and 886). From 1940 through 1974, separate water-supply papers were issued for 6 sections of the United States. Information about reports and other data on ground water in New Mexico may be obtained from the New Mexico District Office.

#### Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for many sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

#### Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed on a following page. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

#### Data Presentation

The records of ground-water quality are published in a section, "QUALITY OF GROUND WATER" immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by county, and are

identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

#### 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://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

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Definitions of common terms such as algae, water level, and precipitation are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting inch/pound 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. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

**Acre-foot** (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also "Annual runoff")

**Adenosine triphosphate** (ATP) is an organic, phosphate-rich compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an

excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

**Algal growth potential** (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample. (See also "Biomass" and "Dry weight")

**Alkalinity** is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

**Annual runoff** is the total quantity of water that is discharged ("runs off") from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

**Annual 7-day minimum** is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. 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.)

**Aroclor** is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

**Artificial substrate** is a device that is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

**Ash mass** is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter ( $\text{g/m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g/m}^2$ ). (See also "Biomass" and "Dry mass")

**Aspect** is the direction toward which a slope faces with respect to the compass.

**Bacteria** are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas 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.

**Bankfull stage**, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

**Base discharge** (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

**Base flow** is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

**Bedload** is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 foot) that are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

**Bedload discharge** (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

**Bed material** is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also “Bedload” and “Sediment”)

**Benthic organisms** are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

**Biochemical oxygen demand (BOD)** is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

**Biomass** is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

**Biomass pigment ratio** is an indicator of the total proportion of periphyton that are autotrophic (plants). This is also called the Autotrophic Index.

**Blue-green algae** (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also “Phytoplankton”)

**Bottom material** (See “Bed material”)

**Bulk electrical conductivity** is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved solids content of the pore water and lithology and porosity of the rock.

**Cells/volume** refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

**Cells volume** (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume ( $\mu\text{m}^3$ ) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50

cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } \frac{4}{3} \pi r^3 \quad \text{cone } \frac{1}{3} \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi ( $\pi$ ) is the ratio of the circumference to the diameter of a circle;  $\pi = 3.14159\dots$

From cell volume, total algal biomass expressed as biovolume ( $\mu\text{m}^3/\text{mL}$ ) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

**Cfs-day** (See “Cubic foot per second-day”)

**Channel bars**, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

**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. [See also “Biochemical oxygen demand (BOD)”]

***Clostridium perfringens* (*C. perfringens*)** is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and presence of microorganisms that are resistant to disinfection and environmental stresses. (See also “Bacteria”)

**Coliphages** are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

**Color unit** is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

**Confined aquifer** is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

**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.

**Continuous-record station** is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

**Control** designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

**Control structure**, as used in this report, is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

**Cubic foot per second (CFS, ft<sup>3</sup>/s)** is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

**Cubic foot per second-day (CFS-DAY, Cfs-day, [(ft<sup>3</sup>/s)/d])** 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, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables are numerically equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

**Cubic foot per second per square mile [CFSM, (ft<sup>3</sup>/s)/mi<sup>2</sup>]** is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also "Annual runoff")

**Daily mean suspended-sediment concentration** is the time-weighted concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

**Daily-record station** is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

**Data collection platform (DCP)** is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

**Data logger** is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from onsite data loggers for entry into office data systems.

**Datum** is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

**Diatoms** are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

**Diel** is of or pertaining to a 24-hour period of time; a regular daily cycle.

**Discharge, or flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

**Dissolved oxygen (DO)** is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing tempera-

ture or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

**Dissolved-solids concentration** in water is the quantity of dissolved material in a sample of water. It 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, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO<sub>3</sub>) can be converted to carbonate concentration by multiplying by 0.60.

**Diversity index (H)** (Shannon index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n},$$

where  $n_i$  is the number of individuals per taxon,  $n$  is the total number of individuals, and  $s$  is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

**Drainage area** of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the Earth’s surface that contains a drainage system with a common outlet for its surface runoff. (See “Drainage area”)

**Dry mass** refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also “Ash mass,” “Biomass,” and “Wet mass”)

**Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is

achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also “Wet weight”)

**Embeddedness** is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also “Substrate embeddedness class”)

**Enterococcus bacteria** are commonly found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also “Bacteria”)

**EPT Index** is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that are generally considered pollution sensitive; the index usually decreases with pollution.

**Escherichia coli** (*E. coli*) are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

**Estimated (E) concentration value** is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an ‘E’ code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an ‘E’ code even though the measured value is greater than the MDL. A value reported with an ‘E’ code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

**Euglenoids** (*Euglenophyta*) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also “Phytoplankton”)

**Extractable organic halides (EOX)** are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

**Fecal coliform bacteria** are present in the intestines or feces of warmblooded animals. They often are 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. (See also "Bacteria")

**Fecal streptococcal bacteria** are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that 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. (See also "Bacteria")

**Fire algae (*Pyrrhophyta*)** are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

**Flow-duration percentiles** are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

**Gage datum** is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or

National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

**Gage height (G.H.)** is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

**Gage values** are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

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

**Gas chromatography/flame ionization detector (GC/FID)** is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

**Geomorphic channel units**, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

**Green algae** have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

**Habitat**, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat are typically made over a wider geographic scale than are measurements of species distribution.

**Habitat quality index** is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

**Hardness** of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of

equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ( $\text{CaCO}_3$ ).

**High tide** is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day.

See NOAA web site:

<http://www.co-ops.nos.noaa.gov/tideglos.html>

**Hilsenhoff's Biotic Index (HBI)** is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \frac{\sum (n)(a)}{N},$$

where  $n$  is the number of individuals of each taxon,  $a$  is the tolerance value of each taxon, and  $N$  is the total number of organisms in the sample.

**Horizontal datum** (See "Datum")

**Hydrologic index stations** referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

**Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

**Inch** (IN., in.), as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it. (See also "Annual runoff")

**Instantaneous discharge** is the discharge at a particular instant of time. (See also "Discharge")

**Island**, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year on average, and remains stable except during large flood events.

**Laboratory reporting level (LRL)** is generally equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal

to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. [Note: In several previous NWQL documents (NWQL Technical Memorandum 98.07, 1998), the LRL was called the non-detection value or NDV—a term that is no longer used.]

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

**Latent heat flux** (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

**Light-attenuation coefficient**, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_o e^{-\lambda L},$$

where  $I_o$  is the source light intensity,  $I$  is the light intensity at length  $L$  (in meters) from the source,  $\lambda$  is the light-attenuation coefficient, and  $e$  is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_o}.$$

**Lipid** is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

**Long-term method detection level (LT-MDL)** is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. See NOAA web site:  
<http://www.co-ops.nos.noaa.gov/tideglos.html>

**Macrophytes** are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

**Mean concentration of suspended sediment** (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

**Mean discharge** (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period. (See also "Discharge")

**Mean high or low tide** is the average of all high or low tides, respectively, over a specific period.

**Mean sea level** is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

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

**Metamorphic stage** refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

**Method detection limit** (MDL) is the minimum concentration of a substance that can be measured and reported with

99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

**Methylene blue active substances** (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

**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 kilogram** (UG/KG,  $\mu\text{g/kg}$ ) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

**Micrograms per liter** (UG/L,  $\mu\text{g/L}$ ) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

**Microsiemens per centimeter** (US/CM,  $\mu\text{S/cm}$ ) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

**Milligrams per liter** (MG/L,  $\text{mg/L}$ ) is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.

**Minimum reporting level** (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

**Miscellaneous site**, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining

hydrologic and water-quality conditions over a broad area in a river basin.

**Most probable number (MPN)** is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

**Multiple-plate samplers** are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

**Nanograms per liter (NG/L, ng/L)** is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

**National Geodetic Vertical Datum of 1929** (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. *See NOAA web site: <http://www.ngs.noaa.gov/faqs.shtml#WhatVD29VD88>* (See "North American Vertical Datum of 1988")

**Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

**Nekton** are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

**Nephelometric turbidity unit (NTU)** is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

**North American Vertical Datum of 1988** (NAVD 1988) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States first-order terrestrial leveling networks.

**Open or screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

**Organic carbon (OC)** is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

**Organic mass or volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

**Organism count/area** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m<sup>2</sup>), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

**Organism count/volume** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

**Organochlorine compounds** are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

**Parameter code** is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

**Partial-record station** is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

**Particle size** is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) determine fall 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**, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, 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.

**Peak flow (peak stage)** is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

**Percent composition** or **percent of total** 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, weight, mass, or volume.

**Percent shading** is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

**Periodic-record station** is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

**Periphyton** is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

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

**pH** of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

**Phytoplankton** is the plant part of the plankton. They are usually microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and commonly are known as algae. (See also "Plankton")

**Picocurie (PC, pCi)** is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

**Plankton** is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

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

**Polychlorinated naphthalenes (PCNs)** are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

**Pool**, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

**Primary productivity** is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

**Primary productivity (carbon method)** is expressed as milligrams of carbon per area per unit time [ $\text{mg C}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg C}/(\text{m}^3/\text{time})$ ] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Primary productivity (oxygen method)** is expressed as milligrams of oxygen per area per unit time [ $\text{mg O}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg O}/(\text{m}^3/\text{time})$ ] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Radioisotopes** are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron.

There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

**Reach**, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

**Recoverable from bed (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. (See also "Bed material")

**Recurrence interval**, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ( $7Q_{10}$ ) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the  $7Q_{10}$  occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

**Replicate samples** are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

**Return period** (See “Recurrence interval”)

**Riffle**, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

**River mileage** is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

**Run**, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

**Runoff** is the quantity of water that is discharged (“runs off”) from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

**Sea level**, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums. See conversion factors page (inside back cover) for identification used in this report.

**Sediment** is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment 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 affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

**Sensible heat flux** (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

**Seven-day, 10-year low flow** ( $7Q_{10}$ ) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of

the  $7Q_{10}$  is 10 years; the chance that the annual 7-day minimum flow will be less than the  $7Q_{10}$  is 10 percent in any given year. (See also “Annual 7-day minimum” and “Recurrence interval”)

**Shelves**, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

**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. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

**Soil heat flux** (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

**Soil-water content** is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

**Specific electrical conductance (conductivity)** is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

**Stable isotope ratio** (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

**Stage** (See “Gage height”)

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

**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.

**Substrate** is the physical surface upon which an organism lives.

**Substrate embeddedness class** is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

**Surface area of a lake** is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

**Surficial bed material** is the upper surface (0.1 to 0.2 foot) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

**Suspended** (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is defined operationally as 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 suspended water-sediment sample that is retained on a 0.45-micrometer 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 directly analyzing the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and

(2) total recoverable concentrations of the constituent. (See also “Suspended”)

**Suspended sediment** is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also “Sediment”)

**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 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also “Sediment” and “Suspended sediment”)

**Suspended-sediment discharge** (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft<sup>3</sup>/s) x 0.0027. (See also “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

**Suspended-sediment load** is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also “Sediment”)

**Suspended, total** is the total amount of a given constituent in the part of a water-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. 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 directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also “Suspended”)

**Suspended solids, total residue at 105 °C concentration** is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

**Synoptic studies** are 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.

**Taxa (Species) richness** is the number of species (taxa) present in a defined area or sampling unit.

**Taxonomy** is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

**Thalweg** is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

**Thermograph** is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table descriptions 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 concentrations 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 resulting from the mixing of flow proportionally to the duration of the concentration.

**Tons per acre-foot (T/acre-ft)** is the dry mass (tons) of a constituent per unit volume (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, tons/d)** is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream

section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

**Total** is the amount of a given constituent in a representative whole-water (unfiltered) 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" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined at least 95 percent of the constituent in the sample.)

**Total coliform bacteria** are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also "Bacteria")

**Total discharge** is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, 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. 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 in bottom material."

**Total length (fish)** is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

**Total load** refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

**Total organism count** is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

**Total recoverable** is the amount of a given constituent in a whole-water sample after a 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 for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

**Total sediment discharge** is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

**Total sediment load** or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

**Transect**, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

**Turbidity** is the reduction in the transparency of a solution due to the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity.

Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to U.S. EPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

**Ultraviolet (UV) absorbance (absorption)** at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of pathlength of UV light through a sample.

**Unconfined aquifer** is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See "Water-table aquifer")

**Vertical datum** (See "Datum")

**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 human-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.

**Water table** is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

**Water-table aquifer** is an unconfined aquifer within which the water table is found.

**Water year** in USGS reports dealing with surface-water supply is the 12-month period October 1 through 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, 2002, is called the "2002 water year."

**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.

**Wet mass** is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

**Wet weight** refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

**WSP** is used as an acronym for “Water-Supply Paper” in reference to previously published reports.

**Zooplankton** is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also “Plankton”)

## TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The USGS publishes a series of manuals titled the “Techniques of Water-Resources Investigations” that describe procedures for planning and conducting specialized work in water-resources investigations. The material in these manuals 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. Each chapter then is limited to a narrow field of the section subject matter. This publication format permits flexibility when revision or printing is required.

Manuals in the Techniques of Water-Resources Investigations series, which are listed below, are available online at <http://water.usgs.gov/pubs/twri/>. Printed copies are available for sale from the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (an authorized agent of the Superintendent of Documents, Government Printing Office). Please telephone “1-888-ASK-USGS” for current prices, and refer to the title, book number, section number, chapter number, and mention the “U.S. Geological Survey Techniques of Water-Resources Investigations.” Other products can be viewed online at <http://www.usgs.gov/sales.html>, or ordered by telephone or by FAX to (303)236-4693. Order forms for FAX requests are available online at <http://mac.usgs.gov/isb/pubs/forms/>. Prepayment by major credit card or by a check or money order payable to the “U.S. Geological Survey” is required.

### Book 1. Collection of Water Data by Direct Measurement

#### Section D. Water Quality

- 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, chap. D1. 1975. 65 p.
- 1–D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

### Book 2. Collection of Environmental Data

#### Section D. Surface Geophysical Methods

- 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, chap. D1. 1974. 116 p.
- 2–D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

#### Section E. Subsurface Geophysical Methods

- 2–E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 p.
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#### Section F. Drilling and Sampling Methods

- 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, chap. F1. 1989. 97 p.

### Book 3. Applications of Hydraulics

#### Section A. Surface-Water Techniques

- 3–A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 p.
- 3–A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.
- 3–A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.

- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS-TWRI book 3, chap. A4. 1967. 44 p.
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- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS-TWRI book 3, chap. A6. 1968. 13 p.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A7. 1968. 28 p.
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- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 3, chap. A11. 1969. 22 p.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS-TWRI book 3, chap. A12. 1986. 34 p.
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- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS-TWRI book 3, chap. A21. 1995. 56 p.

### **Section B. Ground-Water Techniques**

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI book 3, chap. B1. 1971. 26 p.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G.D. Bennett: USGS-TWRI book 3, chap. B2. 1976. 172 p.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI book 3, chap. B3. 1980. 106 p.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS-TWRI book 3, chap. B4. 1990. 232 p.
- 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, chap. B4. 1993. 8 p.

- 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, chap. B5. 1987. 15 p.
- 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, chap. B6. 1987. 28 p.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS–TWRI book 3, chap. B7. 1992. 190 p.
- 3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

### **Section C. Sedimentation and Erosion Techniques**

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.
- 3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.
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### **Section A. Statistical Analysis**

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.
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- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

## **Book 5. Laboratory Analysis**

### **Section A. Water Analysis**

- 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, chap. A1. 1989. 545 p.
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- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.
- 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, chap. A5. 1977. 95 p.
- 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, chap. A6. 1982. 181 p.

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- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS-TWRI book 5, chap. C1. 1969. 58 p.

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- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS-TWRI book 6, chap. A1. 1988. 586 p.
- 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, chap. A2. 1991. 68 p.
- 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, chap. A3. 1993. 136 p.
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- 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, chap. A5. 1993. 243 p.
- 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: USGS-TWRI book 6, chap. A6. 1996. 125 p.
- 6-A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS-TWRI book 6, chap. A7. 2002. 77 p.

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- 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, chap. C1. 1976. 116 p.
- 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, chap. C2. 1978. 90 p.
- 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, chap. C3. 1981. 110 p.

**Book 8. Instrumentation****Section A. Instruments for Measurement of Water Level**

- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS-TWRI book 8, chap. A1. 1968. 23 p.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS-TWRI book 8, chap. A2. 1983. 57 p.

**Section B. Instruments for Measurement of Discharge**

- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 8, chap. B2. 1968. 15 p.

**Book 9. Handbooks for Water-Resources Investigations****Section A. National Field Manual for the Collection of Water-Quality Data**

- 9–A1. *National field manual for the collection of water-quality data: Preparations for water sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.
- 9–A2. *National field manual for the collection of water-quality data: Selection of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.
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- 9–A4. *National field manual for the collection of water-quality data: Collection of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.
- 9–A5. *National field manual for the collection of water-quality data: Processing of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.
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- 9–A7. *National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9–A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
- 9–A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.



07199450 LAKE MALOYA NEAR RATON, NM

LOCATION.--Lat 36°59'02", long 104°22'24", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, near spillway of dam on Chicorica Creek, 6.5 mi northeast of Raton, and at mile 21.5.

DRAINAGE AREA.--20.8 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1975 to September 1987 (monthend contents only), October 1987 to current year.

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

REMARKS.--Reservoir is formed by an earthfill dam, completed in 1907, capacity, 59 acre-ft. Reservoir enlarged in 1916, capacity, 1,130 acre-ft, spillway elevation, 7,479.0 ft. Reservoir enlarged again in 1948, capacity, 3,690 acre-ft, spillway elevation, 7,511.0 ft. Elevation of lowest outlet, 7,439.0 ft. No dead storage. Water is for municipal use of City of Raton. See table below for total monthly diversion, in acre-ft, from Lake Maloya for municipal supply for City of Raton and releases to Vermejo Conservancy District.

COOPERATION.--Diversion, spillage, and release data provided by City of Raton.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,970 acre-ft, May 31, 1975, elevation, 7,510.79 ft; maximum elevation observed, 7,513.01 ft, May 29, 1995; minimum observed, 911 acre-ft, Feb. 28, 1979, elevation, 7,479.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,340 acre-ft, Dec. 31 to Jan. 5, elevation, 7,508.06 ft; minimum contents, 3,140 acre-ft, Sept. 18, elevation 7,506.31 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3260	3240	3270	3340	3250	3260	3250	3280	3260	3220	3210	3160
2	3260	3240	3270	3340	3250	3250	3250	3280	3260	3230	3210	3160
3	3260	3240	3270	3340	3250	3250	3250	3280	3250	3220	3210	3160
4	3250	3240	3270	3340	3250	3250	3250	3280	3250	3230	3210	3160
5	3250	3240	3270	3340	3250	3250	3250	3280	3260	3230	3210	3150
6	3250	3240	3270	3330	3250	3250	3250	3280	3260	3220	3210	3150
7	3250	3240	3270	3330	3240	3250	3270	3280	3270	3220	3210	3150
8	3250	3240	3270	3330	3240	3240	3270	3280	3280	3220	3200	3150
9	3250	3240	3280	3320	3240	3240	3270	3280	3280	3220	3200	3150
10	3250	3240	3280	3320	3240	3240	3280	3280	3280	3220	3200	3150
11	3250	3240	3280	3320	3230	3240	3280	3280	3270	3220	3200	3150
12	3250	3240	3280	3310	3230	3240	3280	3280	3270	3210	3190	3150
13	3250	3240	3280	3310	3230	3250	3280	3280	3260	3210	3190	3150
14	3250	3240	3290	3310	3230	3250	3290	3280	3260	3210	3190	3150
15	3240	3240	3290	3300	3230	3250	3290	3280	3250	3210	3190	3150
16	3240	3250	3290	3300	3230	3250	3290	3280	3250	3200	3180	3150
17	3240	3250	3290	3290	3230	3250	3290	3280	3250	3200	3180	3150
18	3240	3250	3300	3290	3230	3240	3280	3280	3250	3200	3180	3140
19	3240	3250	3300	3290	3240	3240	3280	3280	3240	3190	3170	3180
20	3240	3250	3300	3280	3240	3240	3290	3280	3240	3190	3170	3200
21	3240	3250	3310	3280	3240	3240	3290	3280	3240	3180	3170	3200
22	3240	3250	3310	3280	3240	3240	3290	3280	3240	3210	3170	3210
23	3240	3260	3310	3270	3240	3240	3290	3280	3240	3210	3170	3210
24	3240	3260	3320	3270	3240	3240	3280	3280	3240	3220	3170	3210
25	3240	3260	3320	3270	3250	3240	3280	3280	3230	3220	3160	3210
26	3240	3260	3320	3270	3250	3240	3290	3270	3230	3220	3160	3210
27	3240	3260	3320	3260	3250	3240	3280	3270	3230	3220	3160	3210
28	3240	3260	3330	3260	3250	3250	3290	3270	3230	3220	3160	3210
29	3240	3270	3330	3260	---	3250	3280	3270	3230	3220	3160	3220
30	3240	3270	3330	3260	---	3250	3280	3270	3230	3220	3160	3220
31	3240	---	3340	3260	---	3250	---	3260	---	3210	3160	---
MAX	3260	3270	3340	3340	3250	3260	3290	3280	3280	3230	3210	3220
MIN	3240	3240	3270	3260	3230	3240	3250	3260	3230	3180	3160	3140
(+)	7507.18	7507.41	7508.06	7507.33	7507.30	7507.26	7507.59	7507.39	7507.06	7506.94	7506.46	7507.00
(++)	-20	+30	+70	-80	-10	0	+30	-20	-30	-20	-50	+60
(+++)	0	0	0	114	101	135	0	24	52	7	2	0
(++++)	0	0	0	0	0	0	0	0	0	0	0	0

CAL YR 2001 MAX 3720 MIN 3240 (++) -70 (+++) 429 (++++) 0  
WTR YR 2002 MAX 3340 MIN 3140 (++) -40 (+++) 435 (++++) 0

(+) Elevation in feet, at end of month.  
(++) Change in contents, in acre-ft.  
(+++)  
(++++)





ARKANSAS RIVER BASIN

07203000 VERMEJO RIVER NEAR DAWSON, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-84, September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
SEP 09...	1230	.98	606	6.7	101	8.3	848	27.0	24.0	220	64.6	14.1	3.45
Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
SEP 09...	3	104	222	17.3	11.3	179	528	<.04	.14	.48	.011	<.06	<.02
Date	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	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)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)				
SEP 09...	<.06	<20	<.04	1.6	<10	<.08	47.6	<1	7				

Remark codes used in this report:  
 < -- Less than

07204000 MORENO CREEK AT EAGLE NEST, NM

LOCATION.--Lat 36°33'14", long 105°16'03", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on right bank 175 ft upstream from U.S. Highway 64, 250 ft northwest of intersection of U.S. Highway 64 and State Highway 38, about 1,000 ft upstream from high-water line of Eagle Nest Lake at Eagle Nest.

DRAINAGE AREA.--73.8 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1928 to October 1955, June 1964 to current year (seasonal records except water year 1932). Monthly discharge only for some periods, published in WSP 1311. Records for December 1930 to March 1931, published in WSP 732, are unreliable and should not be used. Published as "near Therma" 1928-34.

REVISED RECORDS.--WSP 1281: 1931(M), 1932, 1935(M), 1939-41(M), 1946-47(M). WSP 1921: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Concrete control since Oct. 3, 1952. Datum of gage is 8,197.39 ft above National Geodetic Vertical Datum of 1929. See WSP 1921 for history of changes prior to Oct. 26, 1955. Oct. 26, 1955, to Nov. 12, 1974, water-stage recorder at site 160 ft downstream at datum 1.41 ft lower.

REMARKS.--Records fair. Diversions for irrigation of about 1,200 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 240 ft<sup>3</sup>/s, Sept. 1, 1946, gage height, 3.10 ft, site and datum then in use; maximum gage height, 3.55 ft, May 12, 1973; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 65 ft<sup>3</sup>/s, July 6, gage height, 2.58 ft; minimum daily discharge, 0.00 ft<sup>3</sup>/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.17	---	---	---	---	---	0.85	0.16	0.00	0.00	0.00	0.00
2	0.45	---	---	---	---	---	0.82	0.17	0.00	0.00	0.00	0.00
3	---	---	---	---	---	---	0.75	0.17	0.00	0.00	0.00	0.00
4	---	---	---	---	---	---	0.72	0.15	0.00	0.00	0.00	0.00
5	---	---	---	---	---	---	0.54	0.13	0.00	0.00	0.00	0.00
6	---	---	---	---	---	---	0.53	0.11	0.00	8.5	0.00	0.00
7	---	---	---	---	---	---	0.58	0.10	0.00	0.49	0.00	0.00
8	---	---	---	---	---	---	0.59	0.10	0.00	0.07	0.00	0.00
9	---	---	---	---	---	---	0.55	0.10	0.00	0.00	0.00	0.00
10	---	---	---	---	---	---	0.54	0.08	0.00	0.00	0.00	0.00
11	---	---	---	---	---	---	0.51	0.05	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.53	0.04	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.50	0.06	0.00	0.00	0.00	0.00
14	---	---	---	---	---	---	0.43	0.07	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.39	0.12	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.43	0.08	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.74	0.08	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	0.87	0.08	0.00	0.00	0.00	0.00
19	---	---	---	---	---	e7.4	0.79	0.04	0.00	0.00	0.00	0.00
20	---	---	---	---	---	7.4	0.71	0.03	0.00	0.00	0.00	0.00
21	---	---	---	---	---	7.3	0.57	0.02	0.00	0.00	0.00	0.00
22	---	---	---	---	---	7.1	0.48	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	4.7	0.33	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	1.1	0.74	0.00	0.00	1.4	0.00	0.00
25	---	---	---	---	---	0.99	1.1	0.00	0.00	0.04	0.00	0.00
26	---	---	---	---	---	0.92	1.2	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	0.87	1.1	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	0.85	0.82	0.00	0.00	0.11	0.00	0.00
29	---	---	---	---	---	0.91	0.67	0.00	0.00	0.00	0.00	0.00
30	---	---	---	---	---	0.77	0.22	0.00	0.00	0.00	0.00	0.00
31	---	---	---	---	---	0.80	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	19.60	1.94	0.00	10.61	0.00	0.00
MEAN	---	---	---	---	---	---	0.653	0.063	0.000	0.342	0.000	0.000
MAX	---	---	---	---	---	---	1.2	0.17	0.00	8.5	0.00	0.00
MIN	---	---	---	---	---	---	0.22	0.00	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	39	3.8	0.00	21	0.00	0.00

e Estimated

## ARKANSAS RIVER BASIN

07204500 CIENEGUILLA CREEK NEAR EAGLE NEST, NM

LOCATION.--Lat 36°29'07", long 105°15'54", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on right bank 0.1 mi downstream from Schoolhouse Draw, 0.4 mi upstream from high-water line of Eagle Nest Lake, 0.5 mi east of U.S. Highway 64, and 4.7 mi south of Eagle Nest.

DRAINAGE AREA.--56 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1928 to September 1955 and June 1964 to current year (seasonal records except in water years 1932, 1948, and 1951). Monthly discharge only for some periods, published in WSP 1311 and 1731. Records for December 1930 to March 1931, published in WSP 732, are unreliable and should not be used. Published as "near Therma" 1928-34.

REVISED RECORDS.--WSP 957: 1941. WSP 1281: Drainage area. WSP 1311: 1932(M), 1935(M), 1937(M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Concrete control since Sept. 25, 1947. Elevation of gage is 8,200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 8, 1928, nonrecording gage, and May 8, 1928, to Sept. 1, 1934, water-stage recorder at site 0.2 mi downstream at different datums.

REMARKS.--Records fair. Diversions for irrigation of about 1,000 acres upstream from station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 505 ft<sup>3</sup>/s, June 16, 1965, gage height, 5.63 ft, Mar. 19, 1994, from rating curve extended above 110 ft<sup>3</sup>/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 11 ft<sup>3</sup>/s, at 1745 hours, Mar. 20, gage height, 2.96 ft; minimum daily discharge 0 ft<sup>3</sup>/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	---	---	---	---	---	4.0	0.86	0.29	0.52	0.20	0.00
2	1.7	---	---	---	---	---	4.0	0.89	0.34	0.41	0.12	0.00
3	---	---	---	---	---	---	3.7	0.88	0.28	0.40	0.12	0.00
4	---	---	---	---	---	---	3.4	0.86	0.46	0.37	0.16	0.00
5	---	---	---	---	---	---	3.5	0.81	2.0	0.39	0.22	0.00
6	---	---	---	---	---	---	3.4	0.78	0.92	0.52	0.26	0.00
7	---	---	---	---	---	---	3.4	0.73	0.49	1.2	0.94	0.00
8	---	---	---	---	---	---	3.6	0.69	0.31	1.1	0.40	0.00
9	---	---	---	---	---	---	3.2	0.74	0.23	0.57	0.21	0.00
10	---	---	---	---	---	---	2.9	0.64	0.16	0.71	0.08	0.11
11	---	---	---	---	---	---	2.7	0.55	0.12	1.2	0.02	1.5
12	---	---	---	---	---	---	2.4	0.56	0.06	1.1	0.00	1.4
13	---	---	---	---	---	---	2.3	0.59	0.03	0.55	0.00	0.64
14	---	---	---	---	---	---	2.1	0.58	0.04	0.35	0.00	0.43
15	---	---	---	---	---	---	2.1	0.61	0.37	0.37	0.00	0.34
16	---	---	---	---	---	---	2.1	0.54	0.27	0.77	0.00	0.31
17	---	---	---	---	---	---	2.1	0.53	0.16	0.40	0.00	0.29
18	---	---	---	---	---	---	1.8	0.54	0.10	0.26	0.00	0.39
19	---	---	---	---	---	---	1.7	0.59	0.04	0.17	0.00	2.9
20	---	---	---	---	---	4.2	1.6	0.61	0.00	0.12	0.00	3.5
21	---	---	---	---	---	3.7	1.4	0.53	0.00	0.46	0.00	2.1
22	---	---	---	---	---	3.8	1.4	0.42	0.46	0.82	0.00	1.2
23	---	---	---	---	---	3.3	1.3	0.38	2.0	0.47	0.00	0.82
24	---	---	---	---	---	3.4	1.1	0.40	0.58	1.6	0.00	0.70
25	---	---	---	---	---	3.1	1.2	0.37	0.31	1.6	0.00	0.59
26	---	---	---	---	---	3.9	1.4	0.39	0.23	0.86	0.00	0.54
27	---	---	---	---	---	3.9	1.4	0.45	0.32	0.53	0.00	0.50
28	---	---	---	---	---	3.8	1.3	0.54	0.50	0.33	0.00	0.58
29	---	---	---	---	---	4.1	1.1	0.51	0.51	0.25	0.00	0.67
30	---	---	---	---	---	4.1	0.99	0.42	0.39	0.27	0.00	0.63
31	---	---	---	---	---	4.2	---	0.32	---	0.24	0.00	---
TOTAL	---	---	---	---	---	---	68.59	18.31	11.97	18.91	2.73	20.14
MEAN	---	---	---	---	---	---	2.286	0.591	0.399	0.610	0.088	0.671
MAX	---	---	---	---	---	---	4.0	0.89	2.0	1.6	0.94	3.5
MIN	---	---	---	---	---	---	0.99	0.32	0.00	0.12	0.00	0.00
AC-FT	---	---	---	---	---	---	136	36	24	38	5.4	40

07205000 SIXMILE CREEK NEAR EAGLE NEST, NM

LOCATION.--Lat 36°31'07", long 105°16'29", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on left upstream wingwall of concrete control, 250 ft downstream from concrete box culvert on U.S. Highway 64, and 2.6 mi southwest of Eagle Nest.

DRAINAGE AREA.--10.5 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1928 to September 1955 (seasonal records in water years 1929-31, 1933-55), July 1958 to current year (seasonal records subsequent to water year 1975). Prior to October 1930, monthly discharge only, published in WSP 1311. Records for December 1930 to March 1931, published in WSP 732, are unreliable and should not be used. Published as "near Therma" 1928-34.

REVISED RECORDS.--WSP 1311: 1932-33(M), 1935(M), 1943(M). WSP 1681: 1937(M). WSP 1921: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Concrete control Sept. 11, 1931 to May 1933, and since Sept. 13, 1934. Datum of gage is 8,195.16 ft above National Geodetic Vertical Datum of 1929. Prior to May 18, 1928, nonrecording gage at site 88 ft upstream at datum 0.98 ft higher. May 18, 1928 to Sept. 11, 1938, water-stage recorder at site 88 ft upstream at datum 0.43 ft higher.

REMARKS.--Records fair. Diversions for irrigation of about 300 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years (water years 1932, 1959-75), 2.51 ft<sup>3</sup>/s, 1,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1930-55 and since 1957).--Maximum discharge, 128 ft<sup>3</sup>/s, Aug. 5, 1969, gage height, 2.86 ft, from rating curve extended above 32 ft<sup>3</sup>/s; maximum gage height recorded, 3.38 ft, Apr. 2, 1937 (ice jam), site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 8.9 ft<sup>3</sup>/s, July 24, gage height 1.02 ft; minimum daily discharge, 0 ft<sup>3</sup>/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.96	---	---	---	---	---	1.1	0.00	0.00	0.04	0.00	0.00
2	0.96	---	---	---	---	---	1.1	0.00	0.00	0.05	0.00	0.00
3	---	---	---	---	---	---	1.0	0.00	0.00	0.04	0.00	0.00
4	---	---	---	---	---	---	0.83	0.00	0.00	0.04	0.01	0.00
5	---	---	---	---	---	---	0.80	0.00	0.00	0.03	0.00	0.00
6	---	---	---	---	---	---	0.79	0.00	0.00	0.03	0.04	0.00
7	---	---	---	---	---	---	0.84	0.00	0.00	0.03	0.00	0.00
8	---	---	---	---	---	---	0.88	0.00	0.00	0.02	0.00	0.00
9	---	---	---	---	---	---	0.76	0.00	0.00	0.01	0.00	0.00
10	---	---	---	---	---	---	0.70	0.00	0.00	0.02	0.00	0.00
11	---	---	---	---	---	---	0.60	0.00	0.00	0.02	0.00	0.00
12	---	---	---	---	---	---	0.55	0.00	0.00	0.02	0.00	0.00
13	---	---	---	---	---	---	0.52	0.00	0.00	0.00	0.00	0.00
14	---	---	---	---	---	---	0.44	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.39	0.00	0.00	0.01	0.00	0.00
16	---	---	---	---	---	---	0.39	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.34	0.00	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	0.62	0.00	0.00	0.00	0.00	0.00
19	---	---	---	---	---	---	1.2	0.00	0.00	0.00	0.00	0.01
20	---	---	---	---	---	1.5	1.2	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	1.7	1.2	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	1.8	1.0	0.00	0.05	0.00	0.00	0.00
23	---	---	---	---	---	1.9	0.82	0.00	0.03	0.00	0.00	0.00
24	---	---	---	---	---	2.1	0.54	0.00	0.02	0.32	0.00	0.00
25	---	---	---	---	---	1.5	0.04	0.00	0.02	0.02	0.00	0.00
26	---	---	---	---	---	2.0	0.02	0.00	0.03	0.02	0.00	0.00
27	---	---	---	---	---	1.9	0.07	0.00	0.04	0.02	0.00	0.00
28	---	---	---	---	---	1.7	0.05	0.00	0.03	0.01	0.00	0.00
29	---	---	---	---	---	1.7	0.03	0.00	0.03	0.00	0.00	0.00
30	---	---	---	---	---	1.6	0.02	0.00	0.04	0.00	0.00	0.00
31	---	---	---	---	---	1.1	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	18.84	0.00	0.29	0.75	0.05	0.01
MEAN	---	---	---	---	---	---	0.628	0.000	0.010	0.024	0.002	0.000
MAX	---	---	---	---	---	---	1.2	0.00	0.05	0.32	0.04	0.01
MIN	---	---	---	---	---	---	0.02	0.00	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	37	0.00	0.6	1.5	0.1	0.02

## ARKANSAS RIVER BASIN

07205500 EAGLE NEST LAKE NEAR EAGLE NEST, NM

LOCATION.--Lat 36°31'53", long 105°13'44", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, at upstream face of Eagle Nest Dam on Cimarron River, 2.5 mi southeast of Eagle Nest, 6.7 mi west of Ute Park, and at mile 48.7.

DRAINAGE AREA.--167 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1927 to December 1944 (monthend contents only, published in WSP 1311), May 1950 to September 1965 (monthend contents only), October 1965 to June 1987 (nonrecording gage read several times a month at random intervals), July 1987 to current year. Prior to January 1972, published as Eagle Nest Reservoir.

REVISED RECORDS.--WSP 1281: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,056.8 ft above National Geodetic Vertical Datum of 1929. Prior to October 1964, gage heights were raised by addition of 8,000 ft and called elevations.

REMARKS.--Lake is formed by concrete dam with spillway cut in natural rock, completed June 30, 1918; storage began in June 1917. Capacity, 79,120 acre-ft between gage heights 35.0 ft, sill of outlet gate, and 137.0 ft, crest of ungated spillway. Dead storage negligible. Records given herein represent usable contents. Water released is used for irrigation. Lake is recreational area. Diversions for irrigation of about 2,500 acres upstream from reservoir.

COOPERATION.--Supplemental gage readings provided by Cimarron River watermaster.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 81,360 acre-ft, May 21-29, 1994, gage height, 137.86 ft; minimum observed, 635 acre-ft, Dec. 14, 1954, gage height, 61.33 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 49,000 acre-ft, Oct. 1, gage height, 122.85 ft; minimum, 36,100 acre-ft, Sept. 28-30, gage height, 115.12 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49000	e47600	47400	e46100	e46900	47700	48200	45700	42700	40800	39500	36900
2	48900	47600	47300	e46000	e46900	47700	48200	e45500	42700	40700	39400	36900
3	48900	47600	47300	e46000	47000	e47800	48100	45400	42500	40600	39400	36800
4	48900	47600	47300	e45900	47100	48000	48100	45300	42500	40600	39300	36800
5	48900	47600	47300	e45900	46900	48000	48100	45300	42500	40500	39300	36700
6	48900	47500	47300	e45800	e47100	e48000	48000	45100	42500	40500	39200	36600
7	48900	47500	47300	e45800	47300	e48000	48000	45000	42400	40500	39200	36600
8	48800	47500	47300	e45700	47400	47900	47900	45000	42400	40500	39100	36500
9	48700	e47500	47300	e45700	47400	48000	48000	44800	42300	40400	39000	36500
10	48700	e47500	47300	45600	47500	48100	47900	44700	42200	40400	39000	36500
11	48700	e47500	47300	45700	47600	48100	47700	44600	42200	40400	38900	36600
12	48600	e47500	47300	46000	47600	48000	47800	44500	42000	40400	38800	36600
13	48600	e47500	47300	45900	47700	48200	47700	44400	42000	40300	38700	36500
14	48600	e47500	e47300	45900	47800	48100	47600	44300	41900	40300	38600	36500
15	48500	e47500	e47200	46100	47500	48100	47500	44300	41900	40300	38500	36400
16	48500	e47500	e47100	46100	e47700	48200	47400	44100	41800	40200	38400	36400
17	48500	e47500	e47100	46000	47800	48100	47400	44000	41700	40200	38300	36400
18	48400	e47500	e47000	46100	47800	48100	47200	43900	41700	40100	38200	36400
19	48400	e47500	e46900	46300	47800	48100	47100	43800	41600	40000	38100	36400
20	48400	e47500	e46800	46300	47800	48100	46900	43700	41400	39900	38000	36300
21	48400	47500	e46700	46300	47900	48100	46800	43600	41400	39900	37900	36300
22	48400	47500	e46700	46500	47900	48200	46700	43400	41300	39800	37700	36300
23	48400	47500	e46600	46400	47900	48200	46500	43400	41300	39800	37600	36300
24	48000	47500	e46600	46500	47900	48200	46500	43200	41200	39700	37500	36200
25	47900	47500	e46500	46500	47900	48200	46400	43100	41100	39700	37400	36200
26	47800	47400	e46400	46800	47900	48200	46300	43000	41000	39600	37300	36200
27	47900	47400	e46400	46700	48000	48200	46100	43000	41000	39600	37300	36200
28	47700	47400	e46300	46800	47900	48300	46100	42900	40900	39600	37200	36100
29	47700	47400	e46300	46800	---	48200	46000	42800	40900	39600	37100	36100
30	47800	47400	e46200	46900	---	48300	45900	42800	40800	39600	37100	36100
31	47800	---	e46100	46500	---	48200	---	42800	---	39600	37000	---
MAX	49000	47600	47400	46900	48000	48300	48200	45700	42700	40800	39500	36900
MIN	47700	47400	46100	45600	46900	47700	45900	42800	40800	39600	37000	36100
(+)	122.09	121.95	e121.94	121.43	122.26	122.39	121.10	119.30	118.15	117.35	115.69	115.12
(++)	-1100	-400	-1300	+400	+1400	+300	-2300	-3100	-2000	-1200	-2600	-900
CAL YR 2001	MAX 58900	MIN 46100	(++) -7600									
WTR YR 2002	MAX 49000	MIN 36100	(++) -12800									

e Estimated

(+) Gage height, in feet, at end of month.  
(++) Change in contents, in acre-feet.



## ARKANSAS RIVER BASIN

07207000 CIMARRON RIVER NEAR CIMARRON, NM

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

DRAINAGE AREA.--294 mi<sup>2</sup>.

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

REVISED RECORDS.--WSP 1281: Drainage area.

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

REMARKS.--Records good except for those estimated, which are poor. Flow regulated by Eagle Nest Lake (station 07205500). Diversions upstream from station for irrigation of about 3,500 acres, part of which is downstream from station. Philmont ditch (formerly known as Cimarroncito ditch) diverts from left bank 1.5 mi upstream from station, siphons under river 0.9 mi upstream, and bypasses station for off-channel storage and irrigation downstream; Raton diversion pipeline 300 ft upstream from station for City of Raton Water Supply started June 1983. See tabulation below for monthly diversions. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.5	e3.1	e2.1	e1.8	e2.0	1.7	36	19	15	11	19
2	10	8.5	e3.8	e3.3	e2.0	e2.5	2.2	34	21	15	12	18
3	9.9	8.5	e4.0	e4.5	e2.2	e3.1	4.2	32	27	15	12	18
4	9.8	7.7	e4.4	e4.0	e2.4	e3.6	6.4	31	30	15	14	17
5	9.8	7.1	e5.0	e4.2	e3.4	e3.5	7.1	31	29	15	15	12
6	10	6.7	e4.4	e4.1	e4.5	e3.4	11	31	19	16	14	e11
7	9.8	6.8	e3.9	e3.0	e3.8	e3.3	18	30	16	16	16	e12
8	8.3	7.8	e3.3	1.9	e3.0	e3.0	22	31	14	15	17	e12
9	9.4	8.5	e2.7	1.0	3.5	2.8	22	31	14	14	17	e13
10	9.4	8.7	e2.1	1.8	2.9	2.3	23	31	18	8.2	18	e14
11	9.6	8.7	e1.6	3.5	4.1	1.7	24	30	18	9.5	17	8.4
12	10	8.5	e1.0	3.8	5.4	1.4	25	30	21	8.3	18	5.0
13	10	8.8	e1.0	5.2	4.6	1.3	25	28	20	7.7	19	3.8
14	10	8.6	e1.5	5.3	e4.0	e1.0	27	28	20	9.0	23	3.6
15	9.7	11	e1.4	6.8	e3.8	e0.70	32	28	20	15	32	3.3
16	7.5	17	e1.3	4.1	e3.9	1.0	33	28	19	17	31	6.5
17	5.9	12	e1.6	e2.2	e3.8	1.2	37	28	19	e17	35	8.1
18	5.4	11	e1.5	e2.6	e4.0	0.92	40	28	20	e17	38	9.0
19	4.9	10	e1.4	e3.0	4.1	0.99	41	28	27	e17	39	13
20	4.5	7.3	e1.4	e3.5	3.9	0.91	42	31	25	e16	39	11
21	3.8	4.1	e1.6	e3.9	4.7	0.72	42	34	25	e14	39	9.4
22	3.2	2.9	e1.7	e3.5	4.9	0.76	42	33	28	e14	39	8.6
23	2.3	2.2	e1.5	e2.9	4.6	0.85	42	33	27	e14	38	8.5
24	3.8	1.9	e1.4	e3.1	e4.2	0.77	42	34	26	e9.5	32	5.1
25	5.9	1.9	e1.4	3.3	e3.7	1.2	43	34	25	9.2	31	2.7
26	e5.9	1.9	e2.1	4.1	e3.3	1.3	44	34	13	9.5	27	2.4
27	e6.3	1.1	e2.7	3.4	e2.9	0.94	44	35	11	9.1	16	2.1
28	e6.5	0.17	e2.1	e3.7	e2.4	0.67	43	35	11	8.9	16	1.6
29	e6.7	e1.9	e1.3	e2.6	---	0.22	43	33	13	8.8	16	1.5
30	e7.1	e2.5	e1.2	e1.6	---	0.12	41	19	14	9.4	17	1.1
31	7.4	---	e1.9	e1.7	---	0.23	---	17	---	9.1	18	---
TOTAL	233.8	202.27	69.3	103.7	101.8	48.40	869.6	946	609	393.2	726	260.7
MEAN	7.542	6.742	2.235	3.345	3.636	1.561	28.99	30.52	20.30	12.68	23.42	8.690
MAX	11	17	5.0	6.8	5.4	3.6	44	36	30	17	39	19
MIN	2.3	0.17	1.0	1.0	1.8	0.12	1.7	17	11	7.7	11	1.1
AC-FT	464	401	137	206	202	96	1720	1880	1210	780	1440	517
(+)	0	0	0	0	0	0	0	346	113	74	115	24
(++)	193	181	123	0	0	0	144	184	161	172	176	164
CAL YR 2001	AC-FT	(+)	812	(++)	979							
WTR YR 2002	AC-FT	(+)	672	(++)	1498							

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2002, BY WATER YEAR (WY)												
MEAN	17.68	9.963	5.005	4.217	5.087	12.45	35.26	65.47	49.17	37.96	27.66	19.42
MAX	44.9	26.7	18.5	18.5	43.7	149	237	329	158	79.5	81.0	50.4
(WY)	1976	1982	1995	1992	1992	1987	1994	1994	1994	1995	1995	1968
MIN	0.14	1.80	1.32	1.13	1.11	1.56	2.70	23.5	8.55	6.13	1.95	0.12
(WY)	1957	1993	1957	1957	1997	2002	1955	1957	1956	1956	1954	1956

SUMMARY STATISTICS		FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1950 - 2002	
ANNUAL TOTAL		6390.97		4563.77			
ANNUAL MEAN		17.51		12.50		24.05	
HIGHEST ANNUAL MEAN						80.7	
LOWEST ANNUAL MEAN						9.09	
HIGHEST DAILY MEAN		89	Sep 26	c44	Apr 26	1240	Jun 17 1965
LOWEST DAILY MEAN		0.17	Nov 28	0.12	Mar 30	0.00	Sep 14 1956
ANNUAL SEVEN-DAY MINIMUM		1.3	Dec 12	0.67	Mar 25	0.00	Sep 14 1956
MAXIMUM PEAK FLOW				45	Apr 27	a15500	Jun 17 1965
MAXIMUM PEAK STAGE				1.35	Apr 27	b12.42	Jun 17 1965
INSTANTANEOUS LOW FLOW				0.08	Mar 31	0.00	Sep 14 1956
ANNUAL RUNOFF (AC-FT)		12680		9050		17420	
10 PERCENT EXCEEDS		42		32		55	
50 PERCENT EXCEEDS		12		8.6		14	
90 PERCENT EXCEEDS		2.6		1.5		2.7	

e Estimated

a From rating curve extended above 800 ft<sup>3</sup>/s, on basis of slope-area measurement at gage heights 4.88 ft and 12.4 ft.

b From floodmarks.

c Also Apr. 27.

(+) Diversion, in acre-ft, by Philmont Ditch, data provided by Cimarron River Watermaster.

(++) Diversion, in acre-ft, by Raton Diversion, data provided by City of Raton.









07215500 MORA RIVER AT LA CUEVA, NM

LOCATION.--Lat 35°56'27", long 105°14'59", Mora County, Hydrologic Unit 11080004, in Mora Grant, on left bank 45 ft upstream from bridge on State Highway 518 at La Cueva, 0.3 mi downstream from La Cueva damsite, and at mile 86.8.

DRAINAGE AREA.--173 mi<sup>2</sup>.

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

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

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

REMARKS.--Records fair except for those estimated, which are poor. Diversions upstream from station for irrigation of about 7,000 acres, part of which are downstream from station. See tabulation below for monthly and yearly diversion of La Cueva Canal, which bypasses gage on left bank. Several observations of water temperature were made during the year. No flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1904, may have exceeded 20,000 ft<sup>3</sup>/s; another major flood occurred June 11, 1913, but is believed less to be than that of 1904.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	4.9	e1.2	e0.94	1.5	e0.60	3.6	2.5	2.0	2.8	2.7	0.15
2	6.0	4.8	e1.1	e1.0	1.1	e0.65	3.7	2.2	2.0	2.6	3.1	0.14
3	8.5	1.9	e1.2	e1.1	0.79	e0.70	3.2	3.1	1.9	3.8	4.9	0.14
4	12	2.0	e1.3	e1.2	0.52	e0.64	2.3	3.1	2.4	5.1	6.0	0.13
5	15	3.1	e1.3	e1.3	0.41	e0.60	2.0	3.3	2.4	5.0	5.9	0.08
6	17	1.4	e1.4	e1.2	0.54	e0.68	2.8	2.6	2.2	4.6	3.5	0.06
7	18	1.7	e1.1	e1.3	0.72	e0.64	2.5	2.6	2.0	4.8	3.3	0.09
8	9.3	1.4	e1.0	e1.5	0.81	e0.58	2.1	3.6	2.1	4.4	3.2	0.58
9	2.2	1.3	e1.3	e1.6	1.4	e0.60	2.0	3.9	1.9	3.8	3.8	0.45
10	2.8	1.4	e1.4	1.7	1.4	0.60	2.3	3.9	1.8	2.9	3.7	0.80
11	2.0	2.1	e1.2	1.7	1.7	0.61	2.3	3.8	2.2	3.3	2.2	0.93
12	1.5	2.0	e1.4	1.4	0.86	0.66	1.7	3.7	2.2	3.6	2.1	0.72
13	1.6	1.6	e1.2	e1.0	0.90	0.66	1.6	4.4	2.2	4.0	1.6	0.72
14	5.2	1.3	e1.1	e0.94	0.98	0.69	1.7	4.5	2.1	4.9	1.5	0.69
15	4.0	2.7	e1.3	e0.98	0.94	0.71	2.4	4.1	2.1	3.9	1.4	0.69
16	1.5	7.9	e1.4	1.0	1.0	0.74	2.2	4.1	2.3	1.5	0.46	0.69
17	6.4	2.8	e1.2	1.1	0.80	0.64	1.5	4.7	1.5	3.3	0.47	0.69
18	5.7	2.1	e1.1	1.1	0.88	1.6	2.6	4.9	1.9	2.5	0.49	0.69
19	2.2	1.8	e1.3	e1.2	0.82	4.0	2.5	5.0	2.2	2.3	0.79	1.1
20	4.0	1.3	e1.4	e1.1	0.82	e3.6	3.0	4.7	2.5	0.94	1.1	1.1
21	1.8	1.5	e1.4	e1.1	0.85	e3.4	3.1	4.2	2.3	0.85	0.72	2.2
22	2.3	1.5	e1.2	e1.0	0.82	e3.7	2.5	4.0	3.2	1.5	0.63	2.9
23	2.1	1.7	e1.0	e0.94	0.89	3.8	2.4	2.8	4.6	2.0	0.83	5.0
24	1.0	1.2	e1.1	e0.93	0.96	4.1	2.7	3.2	2.5	4.1	0.78	3.1
25	2.7	1.4	e1.2	e0.88	0.97	e3.9	2.6	3.3	2.3	2.8	0.65	0.84
26	3.1	1.5	e1.1	e0.92	0.87	e3.8	2.1	2.2	2.2	2.8	1.8	0.72
27	4.3	1.1	e1.2	e0.95	e0.80	e3.6	2.3	2.0	2.2	2.9	0.19	1.2
28	6.9	e1.0	e1.3	e0.96	e0.70	e3.4	2.7	2.1	2.3	4.1	0.28	2.8
29	5.4	e1.1	e1.4	e0.98	---	e3.6	3.2	2.0	2.2	3.5	0.18	4.6
30	2.9	e1.2	e1.2	e1.0	---	3.8	2.7	1.9	2.0	1.7	0.16	2.9
31	1.2	---	e1.0	1.1	---	3.7	---	1.8	---	1.7	0.18	---
TOTAL	165.5	62.7	38.0	35.12	25.75	61.00	74.3	104.2	67.7	97.99	58.61	36.90
MEAN	5.339	2.090	1.226	1.133	0.920	1.968	2.477	3.361	2.257	3.161	1.891	1.230
MAX	18	7.9	1.4	1.7	1.7	4.1	3.7	5.0	4.6	5.1	6.0	5.0
MIN	1.0	1.0	1.0	0.88	0.41	0.58	1.5	1.8	1.5	0.85	0.16	0.06
AC-FT	328	124	75	70	51	121	147	207	134	194	116	73
(+)	481	>81	a	a	a	>33	121	124	119	198	183	194

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 2002, BY WATER YEAR (WY)												
MEAN	17.13	10.97	8.476	7.978	7.700	10.82	32.85	78.44	65.75	34.28	44.14	28.17
MAX	87.6	60.7	39.4	21.9	25.5	51.2	244	555	314	142	182	111
(WY)	1942	1942	1907	1907	1907	1987	1942	1941	1941	1911	1961	1991
MIN	0.64	0.38	0.55	0.000	0.53	1.05	2.05	1.53	1.11	3.02	1.43	0.46
(WY)	1957	1957	1957	1908	1957	1957	1933	1967	1956	1934	1956	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1906 - 2002	
ANNUAL TOTAL	4523.2		827.77			
ANNUAL MEAN	12.39		2.268		28.87	
HIGHEST ANNUAL MEAN					113	
LOWEST ANNUAL MEAN					2.27	
HIGHEST DAILY MEAN	66	May 29	18	Oct 7	1060	Apr 23 1942
LOWEST DAILY MEAN	1.0	Jan 1	0.06	Sep 6	0.00	Dec 22 1907
ANNUAL SEVEN-DAY MINIMUM	1.1	Nov 27	0.11	Sep 1	0.00	Dec 22 1907
MAXIMUM PEAK FLOW			19		1530	
MAXIMUM PEAK STAGE			1.77		7.58	
INSTANTANEOUS LOW FLOW			0.04		0.00	
ANNUAL RUNOFF (AC-FT)	8970 (+) >5070		1640 (+) >1530		20920	
10 PERCENT EXCEEDS	30		4.1		73	
50 PERCENT EXCEEDS	8.8		1.7		12	
90 PERCENT EXCEEDS	1.3		0.69		1.6	

e Estimated  
a Unknown  
(+) Diversion, in acre-feet, by La Cueva Canal.  
> Greater than.







07223500 CONCHAS LAKE AT CONCHAS DAM, NM

LOCATION.--Lat 35°24'10", long 104°11'25", San Miguel County, Hydrologic Unit 11080003, in Pablo Montoya Grant, stilling well within concrete portion of Conchas Dam on Canadian River, 24.0 mi north of Newkirk, and at mile 746.0.

DRAINAGE AREA.--7,409 mi<sup>2</sup>, of which 433 mi<sup>2</sup>, probably is noncontributing.

PERIOD OF RECORD.--December 1938 to September 1965 (monthend contents only), October 1965 to current year. Prior to October 1965, published as Conchas Reservoir near Conchas Dam.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by dam consisting of concrete main section and earthfill wings, completed Sept. 15, 1939; storage began Dec. 29, 1938. Capacity, 315,700 acre-ft between elevations 4,060.0 ft and 4,201.0 ft, crest of 300-ft ungated service spillway. Inactive storage, 70,490 acre-ft, at elevation 4,155.0 ft. Lake usually not drawn below elevation, 4,157.35 ft, sill of irrigation outlet, capacity, 77,790 acre-ft, except for minor sluicing; at times irrigation water is pumped into Conchas Canal. Capacity of 198,800 acre-ft between elevations 4,201.0 ft, crest of 300-ft ungated service spillway, and 4,218.0 ft, crest of 3,000-ft ungated emergency spillway, acts as detention storage in the control of floods. Figures given herein represent total contents. Lake is used for irrigation, flood control, and recreation. Diversions upstream from station for irrigation of about 57,000 acres. Direct diversions through Conchas Dam to Bell Ranch canal and Conchas canal (stations 07223000, 07223300) irrigate about 36,000 acres near Tucumcari, and on Bell Ranch. 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, 479,600 acre-ft, Apr. 24, 1942, elevation, 4,208.41 ft; minimum after initial filling, 78,080 acre-ft, Sept. 18, 1976, elevation, 4,157.44 ft; minimum elevation, 4,155.80 ft, Sept. 24, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 114,960 acre-ft, Oct. 1, elevation, 4,170.56 ft; minimum, 79,320 acre-ft, Sept. 7, elevation, 4,160.91 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114960	105540	104670	103760	104000	103370	102240	98310	81960	82530	82430	79780
2	114250	105500	104630	103800	103960	103370	102000	97860	81630	82430	82400	79720
3	113620	105460	104550	103800	103960	103410	101850	97370	81400	82530	82330	79650
4	112870	105420	104510	103800	104040	103330	101770	96880	81400	82500	82230	79550
5	112250	105380	104470	103880	103960	103330	101690	96320	81300	82640	82130	79520
6	111680	105380	104430	103880	104000	103290	101650	95750	81200	82770	82030	79420
7	111060	105260	104270	103880	103960	103250	101960	95200	81370	82840	81930	79320
8	110360	105180	104310	103920	103960	103170	101930	94450	81470	83070	81870	79360
9	109800	105140	104270	104000	103880	103130	101890	93830	81530	83100	81700	79880
10	109190	105100	104160	104080	103880	103130	101770	93200	81430	83100	81600	88050
11	108660	105060	104160	104120	103840	103060	101730	92510	81400	83070	81530	89700
12	108060	104980	104160	104190	103840	103060	101690	91820	81270	83070	81300	90520
13	107490	104940	104190	104120	103840	102980	101650	91210	81200	82970	81200	90810
14	107210	104980	104080	104190	103800	102860	101580	90700	81130	82900	81170	90920
15	107090	105180	104080	104160	103800	102820	101540	89950	81070	82900	81000	90960
16	107050	105300	104080	104120	103800	102780	101420	89350	81730	83210	80940	90990
17	107010	105260	104120	104120	103760	102740	101380	88720	82170	83270	80800	90880
18	106890	105220	104000	104120	103720	102700	101340	88150	82400	83210	80700	90880
19	106770	105180	104040	104120	103760	102630	101310	87590	82470	83170	80600	91130
20	106730	105140	103960	104080	103800	102670	101270	87040	82470	83070	80600	91130
21	106650	105100	104000	104080	103680	102470	101230	86620	82470	83040	80600	91060
22	106650	105060	103840	103960	103680	102430	101190	86000	82500	83040	80570	91130
23	106490	104980	103760	103920	103720	102390	101150	85520	82470	83040	80470	91100
24	106370	104940	103800	103920	103600	102350	101110	85000	82600	83000	80440	91100
25	106330	104900	103760	103920	103570	102310	101110	84630	82600	82970	80280	91100
26	105860	104820	103800	103880	103570	102310	100300	84220	82740	82900	80140	91030
27	105860	104790	103800	103800	103530	102280	100110	83780	82770	82800	80040	91030
28	105740	104820	103760	103840	103530	102280	99960	83370	82640	82740	80040	91030
29	105740	104870	103720	103800	---	102240	99650	83000	82570	82670	79980	90990
30	105660	104710	103720	103920	---	102240	99000	82670	82640	82600	79910	90920
31	105620	---	103760	103960	---	102240	---	82330	---	82530	79850	---
MAX	114960	105540	104670	104190	104040	103410	102240	98310	82770	83270	82430	91130
MIN	105620	104710	103720	103760	103530	102240	99000	82330	81070	82430	79850	79320
(+)	4168.18	4167.95	4167.71	4167.76	4167.65	4167.32	4166.48	4161.82	4161.91	4161.88	4161.07	4164.30
(++)	-9930	-910	-950	+200	-430	-1290	-3240	-16670	+310	-110	-2680	+11070

CAL YR 2001 MAX 207060 MIN 103720 (++) -84800  
WTR YR 2002 MAX 114960 MIN 79320 (++) -24630

(+) Elevation, in feet, at end of month.  
(++) Change in contents, in acre-ft.

## ARKANSAS RIVER BASIN

07226500 UTE CREEK NEAR LOGAN, NM

LOCATION.--Lat 35°26'18", long 103°31'31", in NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.15, T.14 N., R.32 E., Harding County, Hydrologic Unit 11080007, on right bank 1.9 mi downstream from Alamosa Creek, 4.5 mi upstream from State Road 155, 4.7 mi upstream from high-water line of Ute Reservoir, 8.2 mi northwest of Logan, and at mile 10.0.

DRAINAGE AREA.--2,060 mi<sup>2</sup>, of which 617 mi<sup>2</sup> probably is noncontributing.

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

REVISED RECORDS.--WSP 1281: 1942-48, 1950, 1951(P). WDR NM-81-1: 1965(P), 1967-68(M), 1969(P), 1971(M), 1972, 1975(M), 1977, 1979. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 2121 for history of changes prior to Oct. 1, 1964.

REMARKS.--Records poor. Diversions for irrigation of a few hundred acres upstream from station. No flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 1, 1914, reached a stage of 22.95 ft at site and datum then in use. Another major flood reached a stage of 16.0 ft, 1942 datum, sometime in 1941, from information furnished by Bureau of Reclamation; discharge, about 70,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35	e62
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	205	e43
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e470	1.1	59	e9.0
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e125	3.2	e1.1	e0.30
6	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e53	0.52	e0.50	e0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	e0.10	0.00	e20	4.2	e0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e12	0.15	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.80	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	645
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	274
12	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	80
13	0.00	0.00	0.00	0.00	0.00	0.00	e5.6	0.00	0.00	0.00	0.00	40
14	0.00	0.00	0.00	0.00	0.00	0.00	e0.80	0.00	e53	0.00	0.00	24
15	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e135	5.2	0.00	11
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e59	0.53	0.00	4.1
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e10	0.00	0.00	0.10
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.50	0.00	0.00	10
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	93
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e29
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33	0.00	e0.10
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	173	0.00	e0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	141	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.80	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e601	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	335	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	e47	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	e217	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	6.50	0.00	938.30	377.70	1500.60	1568.60
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.217	0.000	31.28	12.18	48.41	52.29
MAX	0.00	0.00	0.00	0.00	0.00	0.00	5.6	0.00	470	173	601	645
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	13	0.00	1860	749	2980	3110

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2002, BY WATER YEAR (WY)

MEAN	10.25	3.090	1.706	2.398	1.966	1.698	9.951	36.43	26.89	49.20	67.56	28.87
MAX	139	92.5	39.9	39.7	26.3	23.7	459	351	191	317	520	261
(WY)	1955	1979	1943	1942	1942	1948	1942	1955	1965	1950	1981	1969
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.000
(WY)	1945	1946	1946	1946	1946	1946	1943	1945	1953	1946	1983	1948

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1942 - 2002	
ANNUAL TOTAL	1170.86		4391.70			
ANNUAL MEAN	3.208		12.03		19.17	
HIGHEST ANNUAL MEAN					57.2	
LOWEST ANNUAL MEAN					0.084	
HIGHEST DAILY MEAN	719	Sep 17	645	Sep 10	7420	May 28 1946
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Jul 17 1942
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Mar 18 1943
MAXIMUM PEAK FLOW			5560	Aug 28	a24500	May 28 1946
MAXIMUM PEAK STAGE			5.87	Aug 28	b9.94	Aug 11 1981
INSTANTANEOUS LOW FLOW			0.00	Oct 1	0.00	Jul 17 1942
ANNUAL RUNOFF (AC-FT)	2320		8710		13890	
10 PERCENT EXCEEDS	0.00		4.1		14	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated

a From rating curve extended above 7,700 ft<sup>3</sup>/s, on basis of slope-area measurement at gage heights 5.2 ft and 7.2 ft.

b Site and datum then in use.

07226800 UTE RESERVOIR NEAR LOGAN, NM

LOCATION.--Lat 35°20'35", long 103°26'37", in NW<sup>1</sup>/<sub>4</sub> sec.21, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080006, on face of Ute Dam on Canadian River, 2.5 mi southwest of Logan, 3.5 mi downstream from Ute Creek, and at mile 673.1.

DRAINAGE AREA.--11,140 mi<sup>2</sup>, of which 1,110 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--May 1963 to September 1965 (monthend contents only), October 1965 to current year.

REVISED RECORDS.--WDR NM-78-1: 1977.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Interstate Stream Commission). Prior to Feb. 25, 1974, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by an earthfill dam 132 ft high above streambed, 2,050 ft long; an earthen dike section on north bank of Canadian River 3,640 ft long with a maximum height of 38 ft; a concrete labyrinth spillway section with an equivalent weir length of 3,360 ft is located upstream from an 840-ft-long ogee section between the main embankment and dike. Original construction completed in May 1963, storage began Dec. 13, 1962; modification project to construct labyrinth spillway and increase height of dam and dike completed April 1984. Capacity, 244,960 acre-ft at elevation 3,787.0 ft, crest of labyrinth spillway, from capacity table dated Nov. 1992. Original capacity at elevation 3,787.0 ft was 272,770 acre-ft. Top of dam is at elevation 3,812.0 ft. Dead storage, 10,780 acre-ft at elevation 3,725.0 ft, sill of outlet intake tower; inactive pool of 25,070 acre-ft, between elevations 3,725.0 and 3,741.6 ft, maintained for sediment control and fish and wildlife. Figures given herein represent total contents. Reservoir storage is for municipal and industrial uses, recreational purposes, sediment control and some incidental flood control. Diversions upstream from station for irrigation of about 90,000 acres.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 250,000 acre-ft, May 20, 21, 1987, elevation, 3,787.40 ft; minimum since reservoir first filled in Sept. 1965, 31,320 acre-ft, June 6, 1984, elevation, 3,739.10 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 189,000 acre-ft, Sept. 20-25, elevation, 3,779.37 ft; minimum, 171,000 acre-ft, June 2, 3, and 13, elevation, 3,776.58 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188000	184000	182000	181000	181000	179000	178000	175000	172000	176000	176000	178000
2	187000	184000	182000	181000	181000	179000	177000	175000	171000	175000	177000	178000
3	188000	184000	182000	181000	181000	179000	177000	175000	171000	175000	178000	178000
4	187000	184000	182000	181000	181000	179000	177000	175000	173000	175000	178000	178000
5	187000	184000	182000	181000	180000	179000	177000	175000	174000	176000	178000	178000
6	187000	184000	182000	181000	180000	179000	177000	175000	174000	176000	177000	178000
7	187000	184000	182000	181000	181000	179000	177000	175000	173000	177000	177000	178000
8	187000	183000	182000	181000	181000	179000	177000	174000	173000	177000	177000	178000
9	187000	183000	182000	181000	180000	179000	177000	174000	173000	177000	176000	178000
10	186000	183000	182000	181000	180000	179000	177000	174000	173000	177000	176000	181000
11	186000	183000	182000	181000	180000	179000	177000	173000	173000	176000	176000	185000
12	186000	183000	182000	181000	180000	179000	177000	174000	172000	176000	176000	187000
13	186000	183000	182000	181000	180000	179000	177000	174000	171000	176000	176000	187000
14	186000	183000	182000	181000	180000	178000	177000	173000	174000	176000	175000	187000
15	186000	184000	182000	181000	180000	178000	177000	173000	177000	176000	175000	187000
16	186000	184000	182000	181000	180000	178000	177000	173000	177000	176000	175000	187000
17	185000	184000	182000	181000	180000	178000	177000	173000	177000	176000	175000	187000
18	185000	184000	182000	181000	180000	178000	177000	173000	177000	176000	175000	187000
19	185000	184000	182000	181000	180000	178000	177000	173000	177000	176000	175000	188000
20	185000	184000	182000	181000	180000	178000	176000	173000	177000	176000	174000	189000
21	185000	184000	181000	181000	180000	178000	176000	173000	177000	176000	174000	189000
22	185000	184000	181000	181000	180000	178000	176000	172000	177000	176000	174000	189000
23	185000	183000	181000	181000	180000	178000	176000	172000	177000	177000	174000	189000
24	185000	183000	181000	181000	180000	178000	176000	172000	176000	177000	174000	189000
25	185000	183000	181000	180000	180000	178000	176000	172000	176000	177000	174000	189000
26	184000	183000	181000	181000	179000	178000	176000	172000	176000	177000	174000	188000
27	184000	183000	181000	180000	179000	178000	176000	172000	176000	177000	173000	188000
28	184000	183000	181000	180000	180000	178000	176000	172000	176000	177000	173000	188000
29	184000	183000	181000	180000	---	178000	175000	172000	176000	177000	176000	188000
30	184000	183000	181000	181000	---	178000	175000	172000	176000	177000	176000	188000
31	184000	---	181000	181000	---	178000	---	172000	---	177000	177000	---
MAX	188000	184000	182000	181000	181000	179000	178000	175000	177000	177000	178000	189000
MIN	184000	183000	181000	180000	179000	178000	175000	172000	171000	175000	173000	178000
(+)	3778.64	3778.41	3778.19	3778.09	3777.94	3777.65	3777.30	3776.69	3777.35	3777.49	3777.57	3779.26
(++)	-4000	-1000	-2000	0	-1000	-2000	-3000	-3000	+4000	+1000	0	+11000

CAL YR 2001 MAX 197000 MIN 181000 (++) -12000  
WTR YR 2002 MAX 189000 MIN 171000 (++) 0

(+) Elevation in feet, at end of month.  
(++) Change in contents, in acre-ft.

## ARKANSAS RIVER BASIN

07227000 CANADIAN RIVER AT LOGAN, NM

LOCATION.--Lat 35°21'25", long 103°25'03", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.15, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080006, on left bank 1,110 ft upstream from bridge on U.S. Highway 54, 0.7 mi south of Logan, 1.4 mi upstream from Chicago, Rock Island & Pacific Railroad Co. bridge, 2.0 mi downstream from Ute Dam, 4.3 mi upstream from Revuelto Creek, and at mile 672.0.

DRAINAGE AREA.--11,141 mi<sup>2</sup>, of which 1,110 mi<sup>2</sup> probably is noncontributing.

## WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 3,667.1 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1987, same site at datum 1.0 ft higher. See WSP 1311 or 1731 for history of changes prior to Oct. 1, 1934.

REMARKS.--Water-discharge records fair except for those estimated, which are poor. Flow regulated by Ute Reservoir, 2.0 mi upstream (station 07226800). Diversions for irrigation of about 90,000 acres upstream from station. No flow at times prior to completion of Ute Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 278,000 ft<sup>3</sup>/s, Sept. 30, 1904, gage height, about 36.5 ft, site and datum used in 1909, from rating curve extended above 14,000 ft<sup>3</sup>/s, from Ninth Biennial Report of New Mexico State Engineer.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.1	e3.1	3.1	3.9	2.6	3.5	2.8	2.9	2.4	2.6	3.0	e3.6
2	e3.1	e3.0	3.1	3.6	2.6	3.3	2.9	3.1	2.4	2.6	2.9	e3.5
3	e3.1	e3.1	3.2	3.4	2.7	3.2	2.7	3.1	2.4	2.8	6.2	e3.3
4	e3.1	e3.1	3.3	3.3	2.6	3.2	2.7	3.0	7.1	2.8	2.8	e3.2
5	e3.2	e3.3	3.1	3.0	2.6	3.1	2.7	3.0	3.8	3.2	2.7	e3.2
6	e3.2	e3.2	3.1	3.0	2.6	3.0	2.8	5.6	2.8	3.2	3.5	3.4
7	e3.2	e3.2	3.2	3.0	3.0	3.0	3.1	4.1	2.8	3.3	7.9	3.4
8	e3.1	e3.2	3.1	3.1	3.3	2.6	2.9	3.0	2.7	2.9	4.2	3.4
9	e3.1	e3.3	3.2	3.1	3.1	2.7	3.7	3.1	2.5	2.8	4.3	3.4
10	e3.0	e3.3	3.2	3.0	3.4	2.8	3.2	3.5	2.4	2.8	4.1	e9.5
11	e3.0	e3.3	3.4	3.1	3.4	3.1	2.6	3.0	2.4	2.8	4.6	7.6
12	e3.0	e3.3	3.3	2.9	3.3	3.4	2.6	2.7	2.6	3.0	4.8	7.5
13	e3.8	e3.3	3.1	3.1	3.4	6.0	2.6	2.7	2.7	2.5	4.6	7.5
14	e3.5	4.4	3.2	2.8	2.9	3.5	3.8	2.8	6.1	2.4	5.2	7.4
15	e3.3	4.9	3.2	2.8	3.4	2.9	3.8	2.7	6.2	2.3	5.0	7.1
16	e3.3	5.6	3.1	2.9	3.4	2.8	2.7	2.7	2.9	2.2	5.0	7.1
17	e3.3	3.8	3.1	2.8	3.4	2.8	2.8	2.8	2.7	2.2	4.9	7.1
18	e3.2	3.8	3.1	2.8	3.1	3.1	2.8	2.7	2.6	2.2	4.8	6.8
19	e3.2	3.8	3.1	2.8	3.4	3.5	3.8	2.6	3.8	2.2	4.8	7.0
20	e3.2	3.7	3.1	2.6	3.4	3.7	4.4	2.7	2.8	2.2	4.6	6.7
21	e3.2	3.8	3.2	2.7	3.4	3.1	4.4	2.8	2.6	2.2	4.7	6.5
22	e3.1	3.7	3.0	2.7	3.4	2.8	3.8	4.2	2.5	2.9	4.4	6.3
23	e3.1	3.7	3.0	2.9	3.4	2.9	3.0	3.2	2.4	2.9	4.3	6.3
24	e3.2	3.6	7.2	2.8	3.2	2.8	3.1	2.8	2.6	2.7	4.3	6.3
25	e3.2	3.3	5.5	2.7	3.4	2.9	3.0	2.9	2.6	2.6	4.2	5.9
26	e3.2	3.3	4.5	2.8	3.2	3.2	3.6	2.8	2.6	2.6	4.1	5.9
27	e3.1	3.4	4.1	2.7	3.2	3.1	2.9	2.6	2.7	2.7	4.3	5.9
28	e3.2	3.6	4.1	2.7	3.4	2.9	2.9	2.5	2.6	2.7	5.1	5.7
29	e3.2	3.3	4.0	2.9	---	3.0	3.0	2.4	2.5	2.7	6.1	5.5
30	e3.3	3.1	4.0	3.1	---	3.3	3.0	2.4	2.5	2.7	4.1	5.5
31	e3.1	---	4.1	2.9	---	3.3	---	2.4	---	2.7	4.0	---
TOTAL	98.9	106.5	110.0	91.9	88.2	98.5	94.1	92.8	91.7	82.4	139.5	171.5
MEAN	3.190	3.550	3.548	2.965	3.150	3.177	3.137	2.994	3.057	2.658	4.500	5.717
MAX	3.8	5.6	7.2	3.9	3.4	6.0	4.4	5.6	7.1	3.3	7.9	9.5
MIN	3.0	3.0	3.0	2.6	2.6	2.6	2.6	2.4	2.4	2.2	2.7	3.2
AC-FT	196	211	218	182	175	195	187	184	182	163	277	340
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)												
MEAN	27.30	23.05	6.484	7.002	15.05	10.23	16.43	49.47	62.23	80.93	103.0	96.30
MAX	325	287	84.1	62.7	254	282	239	767	575	608	720	838
(WY)	1966	1983	1983	1992	2000	2000	1987	1987	1969	1982	1981	1969
MIN	1.30	1.19	1.24	0.86	1.13	0.63	0.26	0.64	0.62	0.65	1.19	1.36
(WY)	1964	1984	1984	1963	1987	1963	1963	1963	1963	1963	1963	1983
SUMMARY STATISTICS												
FOR 2001 CALENDAR YEAR				FOR 2002 WATER YEAR				WATER YEARS 1963 - 2002				
ANNUAL TOTAL	1437.6			1266.0								
ANNUAL MEAN	3.939			3.468			a41.56					
HIGHEST ANNUAL MEAN							145					
LOWEST ANNUAL MEAN							1.62					
HIGHEST DAILY MEAN	21			Aug 11			9.5		Sep 10		6860	
LOWEST DAILY MEAN	1.8			Jun 14			d2.2		Jul 16		0.10	
ANNUAL SEVEN-DAY MINIMUM	1.9			Jun 13			2.2		Jul 15		0.10	
MAXIMUM PEAK FLOW							49		Jun 4		b219000	
MAXIMUM PEAK STAGE							1.96		Jun 4		c29.30	
INSTANTANEOUS LOW FLOW							1.0		Jun 26		1.0	
ANNUAL RUNOFF (AC-FT)	2850			2510			30110					
10 PERCENT EXCEEDS	7.3			4.9			54					
50 PERCENT EXCEEDS	3.2			3.1			2.9					
90 PERCENT EXCEEDS	3.0			2.6			1.7					

e Estimated

a Average discharge for 15 years (water years 1909, 1912-13,) 392 ft<sup>3</sup>/s, 284,000 acre-ft/yr, prior to completion of Conchas Dam, 24 years (water years 1939-62), 257 ft<sup>3</sup>/s, 186,200 acre-ft/yr, prior to completion of Ute Dam.

b From rating curve extended above 75,000 ft<sup>3</sup>/s.

c From floodmarks.

d Also July 17-21.

07227000 CANADIAN RIVER AT LOGAN, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-62, 1992 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPER-AIR (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	HARDNESS TOTAL AS (MG/L CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)
DEC 05...	1600	3.2	672	10.3	109	8.0	8870	11.5	11.0	--	--	--	--
FEB 01...	1147	2.6	679	11.7	99	8.0	7530	-.5	2.5	530	110	61.6	7.92
APR 17...	1450	2.8	667	8.7	116	8.2	8770	28.0	21.5	570	116	67.8	7.88
AUG 18...	1250	4.8	665	7.9	122	8.1	8140	40.0	29.0	520	104	63.5	9.95

Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD LAB (MG/L AS CACO3) (90410)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	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 05...	--	--	--	--	--	--	--	--	--	--
FEB 01...	27	1450	310	2070	1.0	11.0	476	4370	340	12
APR 17...	31	1690	314	2380	1.07	10.4	522	4980	410	E27n
AUG 18...	28	1450	295	2200	1.05	10.9	506	4530	390	<50d

Remark codes used in this report:

- < -- Less than
- E -- Estimated value

Value qualifier codes used in this report:

- d -- Diluted sample: method hi range exceeded
- n -- Below the laboratory reporting level

## ARKANSAS RIVER BASIN

07227100 REVUELTO CREEK NEAR LOGAN, NM

LOCATION.--Lat 35°20'29", long 103°23'37", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.24, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080008, on right bank 0.3 mi upstream from bridge on State Highway 469, 1.9 mi southeast of Logan, and at mile 2.3.

DRAINAGE AREA.--786 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,660 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 16, 1981, at site 320 ft upstream at datum 0.56 ft higher.

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

EXTREMES OUTSIDE PERIOD OF RECORD (1941-47).--Maximum discharge determined, about 13,400 ft<sup>3</sup>/s, Sept. 18, 1946, gage height, 9.04 ft, at site 180 ft downstream at different datum, from unpublished records collected by Bureau of Reclamation. A peak of 26,100 ft<sup>3</sup>/s, date unknown, gage height, 12.9 ft, at former site and datum, was measured by slope-area method in May 1957.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e19	0.0	2.1	3.9	4.5	0.41	0.23	0.0	0.0	e0.30	1.2	e8.8
2	e17	0.0	1.1	4.0	5.7	0.52	0.40	0.0	0.0	e24	1.0	e2.2
3	e8.8	0.0	0.79	5.9	10	0.48	0.32	0.01	0.0	5.8	157	e0.54
4	e8.1	0.0	0.62	5.7	13	0.35	0.36	7.6	0.07	0.05	66	e0.15
5	e15	0.0	0.42	8.0	8.1	1.1	0.44	0.36	16	0.0	31	e0.08
6	e29	0.0	0.26	4.5	4.6	0.74	0.58	0.0	3.4	5.0	e20	0.07
7	e40	0.0	0.25	3.7	4.2	0.36	21	0.0	0.18	3.8	e11	0.01
8	e45	0.0	0.17	3.7	2.9	0.12	27	0.0	0.0	13	e5.0	0.0
9	e43	0.0	0.18	3.1	0.88	0.03	0.97	0.0	0.0	10	e5.0	0.0
10	e36	0.0	0.25	3.3	0.35	0.01	0.60	0.06	0.0	0.14	e5.0	632
11	e34	0.0	0.75	5.7	0.21	0.04	0.35	1.6	0.0	0.0	e1.8	206
12	e45	0.0	2.1	3.5	0.48	0.11	0.34	0.64	0.0	0.02	e0.38	239
13	e54	0.0	2.4	2.9	0.62	0.10	0.24	1.7	0.0	0.0	0.51	166
14	e42	2.0	1.6	1.5	0.41	0.05	0.16	1.3	0.45	0.0	0.60	140
15	e27	16	0.98	1.5	0.39	0.09	0.06	0.70	1450	115	0.42	61
16	20	161	1.2	1.4	0.39	0.10	0.0	0.70	70	83	0.27	34
17	14	47	0.83	1.2	0.89	0.10	0.01	0.15	20	137	0.12	15
18	16	52	1.2	1.0	0.62	0.12	0.0	0.03	e8.8	30	0.22	9.0
19	17	23	0.62	0.96	2.2	4.0	0.0	0.08	e2.1	10	0.05	234
20	14	8.4	0.70	1.7	4.5	92	0.31	0.06	e0.40	4.0	0.07	138
21	5.7	4.0	1.4	1.0	2.0	17	0.29	7.0	e27	1.7	0.04	63
22	1.8	2.5	0.62	0.82	0.53	2.1	0.14	3.1	e10	782	0.01	42
23	1.1	1.9	0.35	0.48	0.66	0.99	0.04	2.7	e2.2	663	0.04	29
24	0.15	1.3	0.64	0.38	0.40	0.38	0.03	1.1	e0.50	134	0.0	20
25	0.0	0.59	1.3	0.59	0.08	0.23	0.04	0.26	e0.40	50	0.02	13
26	0.0	0.28	1.2	0.66	0.40	0.26	0.11	0.23	e0.30	30	0.08	4.3
27	0.13	0.26	1.2	0.55	0.39	0.18	0.05	0.20	e0.30	21	0.0	2.9
28	0.52	1.5	1.5	0.30	0.18	0.22	0.03	0.55	e0.20	9.6	7.1	1.6
29	0.22	2.8	1.2	0.64	---	0.37	0.0	0.02	e0.15	4.5	74	0.96
30	0.04	3.1	3.5	1.8	---	0.34	0.03	0.03	e0.04	1.2	27	0.63
31	0.0	---	1.8	4.7	---	0.28	---	0.0	---	0.10	e14	---
TOTAL	553.56	327.63	33.23	79.08	69.58	123.18	54.13	30.18	1612.49	2138.21	428.93	2063.24
MEAN	17.86	10.92	1.072	2.551	2.485	3.974	1.804	0.974	53.75	68.97	13.84	68.77
MAX	54	161	3.5	8.0	13	92	27	7.6	1450	782	157	632
MIN	0.00	0.00	0.17	0.30	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	1100	650	66	157	138	244	107	60	3200	4240	851	4090

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MIN	(WY)
MEAN	38.94	9.863	9.621	5.575	7.110	9.389
MAX	320	41.2	129	27.9	42.5	79.3
(WY)	1961	1999	1960	1990	1983	2001
MIN	0.000	0.056	0.001	0.000	0.000	0.003
(WY)	1965	1978	1976	1965	1965	1980

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1959 - 2002

ANNUAL TOTAL	15989.67	7513.44	
ANNUAL MEAN	43.81	20.58	44.52
HIGHEST ANNUAL MEAN			204
LOWEST ANNUAL MEAN			4.72
HIGHEST DAILY MEAN	939	Mar 8	13800
LOWEST DAILY MEAN	0.00	Apr 21	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 31	0.00
MAXIMUM PEAK FLOW			8560
MAXIMUM PEAK STAGE			8.93
INSTANTANEOUS LOW FLOW			b0.00
ANNUAL RUNOFF (AC-FT)	31720	14900	32260
10 PERCENT EXCEEDS	120	30	63
50 PERCENT EXCEEDS	11	0.70	5.2
90 PERCENT EXCEEDS	0.12	0.00	0.00

e Estimated

a From slope-area measurement of peak flow.

b Many days.

07227100 REVUELTO CREEK NEAR LOGAN, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
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DEC	05...	1345	.38	672	9.3	103	8.2	2080	18.0	14.0	350	69.8	42.6	4.38
FEB	01...	1420	4.4	678	11.5	97	8.3	2150	6.0	3.0	--	--	--	--
APR	17...	1430	.01	667	7.0	97	8.4	7440	31.0	23.5	520	71.2	83.4	7.25
AUG	18...	0930	.54	665	6.7	108	8.3	6110	36.5	32.0	370	74.3	45.7	7.97

Date	Time	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
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DEC	05...	7	317	245	263	.6	8.8	474	1330	--	--	--	--	--
FEB	01...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR	17...	27	1430	448	1940	.91	11.4	462	4270	--	--	--	--	--
AUG	18...	25	1090	286	1590	.89	10.0	355	3350	<.04	.14	.15	<.05	<.008

Date	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
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DEC	05...	--	--	--	290	<10
FEB	01...	--	--	--	--	--
APR	17...	--	--	--	680	<50
AUG	18...	E.004	<.02	.008	660	<30

Date	Time	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
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AUG	18...	0930	<.006	<.006	<.004	<.005	.022	<.010	<.002	<.041	<.020	<.005	<.018	<.003
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Date	Time	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-THION, WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
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AUG	18...	E.009	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
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## ARKANSAS RIVER BASIN

07227100 REVUELTO CREEK NEAR LOGAN, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, FLTRD DISS, 0.7 U REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, 0.7 U REC (UG/L) (04024)
AUG 18...	E.003n	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010
Date			PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)		
AUG 18...		<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009			

Remark codes used in this report:

< -- Less than  
E -- Estimated value

Value qualifier codes used in this report:

n -- Below the laboratory reporting level

07227140 CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE, NM

WATER-QUALITY RECORDS

LOCATION.--Lat 35°23'35", long 103°02'30", in SW<sup>1</sup>/<sub>4</sub> sec.32, T.14 N., R.37 E., Quay County, Hydrologic Unit 11080006, 0.1 mi upstream from New Mexico-Texas State line, 5.5 mi downstream from Rana Canyon, and 14.7 mi north of Glenrio.

PERIOD OF RECORD.--Water years 1969-73, 1975-86, 1992 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
DEC 05...	0930	10	673	10.5	101	8.3	6970	13.0	7.0	540	108	65.3	7.31
FEB 28...	1040	20	673	12.1	102	8.3	7370	11.5	2.0	570	114	69.8	7.92
APR 17...	1010	4.0	672	8.7	103	8.3	9310	26.0	16.0	610	106	83.5	8.49
AUG 23...	1132	.50	676	8.0	123	8.4	7590	34.0	30.0	540	89.4	77.5	9.10
Date		SODIUM AD-SORP-TION RATIO (00931)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
DEC 05...	24	1270	283	1900	.5	11.3	482	4020	--	--	--	--	--
FEB 28...	25	1390	273	2100	.6	12.1	423	4290	--	--	--	--	--
APR 17...	31	1760	255	2640	.69	11.4	519	5290	--	--	--	--	--
AUG 23...	27	1430	195	2070	.61	8.7	458	4260	<.04	.17	.32	<.05	<.008
Date					PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)				
DEC 05...					--	--	--	320	<50				
FEB 28...					--	--	--	300	<50				
APR 17...					--	--	--	410	<50				
AUG 23...					E.003	<.02	.028	460	<50d				
Date	Time	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
AUG 23...	1132	<.006	<.006	<.004	<.005	.019	<.010	<.002	<.041	<.020	<.005	<.018	<.003

## ARKANSAS RIVER BASIN

07227140 CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN, DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U (UG/L) (82677)	EPTC WATER FLTRD 0.7 U (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U (UG/L) (82666)	METHYL AZIN- PHOS WAT FLT 0.7 U (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U (UG/L) (82667)	
AUG 23...	E.007	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
Date	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U (UG/L) (82664)	PRO- METON, WATER, FLTRD 0.7 U DISS, REC (UG/L) (04037)	PRON- AMIDE WATER, FLTRD 0.7 U REC (UG/L) (82676)	PROPA- CHLOR, WATER, FLTRD 0.7 U REC (UG/L) (04024)
AUG 23...	E.003n	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010
Date	PRO- PANIL WATER FLTRD 0.7 U (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82661)				
AUG 23...		<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009			

Remark codes used in this report:

< -- Less than  
E -- Estimated value

Value qualifier codes used in this report:

d -- Diluted sample: method hi range exceeded  
n -- Below the laboratory reporting level

08251500 RIO GRANDE NEAR LOBATOS, CO

LOCATION.--Lat 37°04'43", long 105°45'23", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> 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 Antonito.

DRAINAGE AREA.--7,700 mi<sup>2</sup>, approximately, includes 2,940 mi<sup>2</sup> in closed basin in northern part of San Luis Valley, Colorado.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1899 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "at Cenicero" 1899-1901, and as "near Cenicero" 1902-4. Statistical summary computed for 1931 to current year.

REVISED RECORDS.-- WSP 210: Drainage area. WSP 1312: 1919 (monthly runoff). WDR CO-78-1: 1976.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,427.63 ft above sea level. Prior to Nov. 8, 1910, nonrecording gages at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, and return flows from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	55	e200	e255	e240	e290	297	31	23	17	4.3	8.5
2	45	58	e240	e250	e240	e200	297	37	24	17	4.4	7.6
3	46	60	e270	e240	e235	e280	198	28	22	14	4.4	7.7
4	46	57	e290	e240	e230	e290	134	38	22	12	7.2	9.3
5	47	60	e260	e235	e230	e280	105	42	23	15	7.5	9.7
6	48	67	e280	e240	e225	e270	90	40	23	16	6.2	9.3
7	53	69	e270	e250	e220	e290	72	39	23	15	9.4	9.0
8	55	69	e220	e255	e225	e300	72	38	25	14	9.7	8.6
9	58	65	e220	e255	e220	e330	71	38	25	12	7.7	8.8
10	61	65	e220	e260	e220	e350	63	39	23	10	6.4	14
11	55	65	e230	e250	e230	e360	57	35	22	11	7.7	13
12	61	65	e240	e260	e230	e380	55	28	22	10	7.3	13
13	66	67	e220	e235	e235	372	53	28	22	8.0	7.1	13
14	62	92	e220	e245	e240	391	57	31	23	8.1	7.1	15
15	58	163	e220	e255	e245	364	58	36	24	9.3	7.3	12
16	53	209	e220	e260	e250	352	59	28	22	9.3	7.1	9.3
17	54	238	e230	e250	e260	347	57	31	22	9.6	5.9	9.0
18	55	250	e230	e240	e265	314	55	31	22	8.8	7.7	13
19	57	250	e230	e235	e270	301	49	28	21	7.9	7.7	18
20	53	258	e240	e235	e280	293	54	29	21	8.2	8.9	17
21	53	259	e230	e240	e290	294	57	29	22	8.3	9.1	16
22	54	254	e230	e240	e290	292	56	30	22	8.2	9.7	14
23	64	248	e230	e235	e295	310	51	26	22	8.4	9.0	14
24	64	e220	e220	e235	e300	316	50	24	20	11	8.1	14
25	60	e220	e220	e235	e295	312	45	25	19	8.8	7.4	13
26	60	e210	e230	e240	e265	294	48	25	22	6.9	6.9	14
27	60	e180	e220	e240	e295	293	49	25	20	6.3	6.8	15
28	58	e160	e220	e240	e300	263	37	25	19	6.0	7.2	18
29	55	e160	e240	e245	---	262	33	28	20	5.4	9.7	24
30	56	e170	e250	e245	---	272	35	28	19	5.0	13	25
31	58	---	e250	e235	---	287	---	26	---	4.7	12	---
TOTAL	1718	4363	7290	7575	7120	9549	2414	966	659	311.2	239.9	391.8
MEAN	55.4	145	235	244	254	308	80.5	31.2	22.0	10.0	7.74	13.1
MAX	66	259	290	260	300	391	297	42	25	17	13	25
MIN	43	55	200	235	220	200	33	24	19	4.7	4.3	7.6
AC-FT	3410	8650	14460	15030	14120	18940	4790	1920	1310	617	476	777

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002, BY WATER YEAR (WY)

	187	313	284	265	316	417	511	1096	1214	432	169	135
MEAN	187	313	284	265	316	417	511	1096	1214	432	169	135
MAX	1401	1199	763	521	595	884	2326	4958	4470	2754	1281	938
(WY)	1942	1942	1942	1986	1986	1987	1985	1987	1941	1995	1999	1999
MIN	12.9	59.6	61.7	75.7	102	66.0	32.3	31.2	19.8	1.28	3.21	1.91
(WY)	1957	1955	1964	1957	1957	1957	1935	2002	1977	1951	1956	1956

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1931 - 2002
ANNUAL TOTAL	146361	42596.9	
ANNUAL MEAN	401	117	a445
HIGHEST ANNUAL MEAN			1264
LOWEST ANNUAL MEAN			70.9
HIGHEST DAILY MEAN	2140	391	b9110
LOWEST DAILY MEAN	29	4.3	c0.00
ANNUAL SEVEN-DAY MINIMUM	32	4.9	0.00
MAXIMUM PEAK FLOW		440	d11600
MAXIMUM PEAK STAGE		f1.72	8.76
ANNUAL RUNOFF (AC-FT)	290300	84490	322100
10 PERCENT EXCEEDS	1100	280	961
50 PERCENT EXCEEDS	229	55	242
90 PERCENT EXCEEDS	55	8.4	39

e Estimated.

a Average discharge for 31 years (water years 1900-30), 846 ft<sup>3</sup>/s; 612,900 acre-ft/yr, includes period of extensive development for irrigation.

b Maximum daily discharge for period of record, 13,100 ft<sup>3</sup>/s, Jun 8, 1905.

c No flow at times in 1950-51, 1956.

d Maximum discharge and stage for period of record, 13,200 ft<sup>3</sup>/s, Jun 8, 1905, gage height, 9.1 ft, from rating curve extended above 8,000 ft<sup>3</sup>/s.

f Maximum gage height, 3.01 ft, Dec 8, backwater from ice.

## RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1969 to current year. September 1969 to September 1993 under the National Stream-Quality Accounting Network (NASQAN). April 1993 to September 1996 under the Rio Grande National Water-Quality Assessment Program.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to September 1981.

WATER TEMPERATURE: October 1975 to September 1981.

REMARKS.--Additional water-quality data were collected as part of a water-quality assessment of drought conditions and are published in the "Drought Synoptic Sampling" section of the Colorado report.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	
OCT 17...	1235	56	10.0	8.7	455	9.5	130	36.9	8.66	6.82	48.2	12.7	.7	
MAR 14...	0915	385	10.4	8.1	205	2.0	70	21.5	3.96	3.15	15.1	5.07	.3	
MAY 15...	1000	34	8.6	8.4	496	11.0	130	36.9	8.59	6.59	58.0	13.7	.73	
JUN 04...	1015	22	8.3	8.5	517	14.0	120	34.9	8.54	6.86	64.0	16.3	.99	
JUL 11...	1130	12	9.5	8.6	461	21.5	84	20.8	7.78	7.82	64.0	15.4	.86	
AUG 15...	1030	7.0	7.6	9.0	450	18.5	58	12.1	6.66	8.31	69.5	17.6	1.08	
Date		SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00623)	NITROGEN, AMMONIA + ORGANIC (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS, DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
OCT 17...	27.4	59.5	290	<.04	.27	.34	<.05	<.008	.035	.02	.052	15	.13	
MAR 14...	27.8	23.7	156	<.04	.11	.50	.19	<.008	.041	.03	.197	--	--	
MAY 15...	25.4	65.0	333	<.04	.32	.46	<.05	<.008	.028	.02	.070	13	.16	
JUN 04...	23.3	65.7	342	<.04	.31	.51	<.05	<.008	.024	E.01	.064	16	.10	
JUL 11...	17.8	51.4	284	<.04	.38	.64	<.05	<.008	.011	<.02	.069	6	.17	
AUG 15...	8.79	53.0	263	<.04	.43	.68	<.05	<.008	.013	<.02	.061	--	--	
Date		ARSENIC, DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	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)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)
OCT 17...	3	35	<.06	<.04	<.8	.20	--	31	<.08	11.1	3.7	.43	<2	
MAR 14...	--	--	--	--	--	--	--	85	--	14.5	--	--	--	
MAY 15...	4	38	<.06	E.02	<.8	.29	6.8	43	.14	35.8	6.3	1.04	<2	
JUN 04...	4	38	<.06	E.03	<.8	.28	--	33	.13	36.5	7.7	1.22	<2	
JUL 11...	5	34	<.06	E.03	<.8	.32	--	E7	.13	20.3	8.1	.81	<2	
AUG 15...	--	--	--	--	--	--	--	14	--	20.3	--	--	--	

E Estimated laboratory analysis value.

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	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 17...	<1	1	1.98
MAR 14...	--	--	--
MAY 15...	<1	1	2.81
JUN 04...	<1	1	2.72
JUL 11...	<1	1	1.96
AUG 15...	--	--	--

08252500 COSTILLA CREEK ABOVE COSTILLA DAM, NM

LOCATION.--Lat 36°53'54", 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 mi<sup>2</sup>.

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 with satellite telemetry. Concrete control since Sept. 17, 1965. Elevation of gage is 9,454 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. Natural flow may be augmented by transbasin diversions or irrigation returns from about 1,300 acres irrigated from Casias Creek (station 08253000).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 3,870 ft<sup>3</sup>/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, 26 ft<sup>3</sup>/s, Sept. 18, gage height, 2.44 ft; minimum daily discharge, 0.96 ft<sup>3</sup>/s, Aug. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	---	---	---	---	---	---	3.2	1.9	1.6	1.4	1.1
2	3.2	---	---	---	---	---	---	3.1	1.9	1.6	1.6	1.1
3	---	---	---	---	---	---	---	3.1	1.8	1.7	2.1	1.4
4	---	---	---	---	---	---	---	3.0	3.3	1.7	4.3	1.7
5	---	---	---	---	---	---	---	2.9	4.9	2.0	3.7	1.2
6	---	---	---	---	---	---	---	2.8	2.6	2.8	2.4	1.1
7	---	---	---	---	---	---	---	2.8	2.1	2.9	2.3	1.2
8	---	---	---	---	---	---	---	2.8	2.0	2.5	2.1	1.2
9	---	---	---	---	---	---	---	2.8	1.9	1.9	1.8	2.2
10	---	---	---	---	---	---	---	2.7	1.8	1.9	1.7	4.9
11	---	---	---	---	---	---	---	2.6	1.7	3.4	1.6	2.6
12	---	---	---	---	---	---	---	2.7	1.7	1.9	1.4	2.0
13	---	---	---	---	---	---	---	2.7	1.7	1.7	1.4	1.9
14	---	---	---	---	---	---	---	2.7	1.8	1.7	1.4	2.0
15	---	---	---	---	---	---	---	2.6	1.9	1.8	1.2	1.8
16	---	---	---	---	---	---	---	2.5	1.7	1.7	1.2	1.7
17	---	---	---	---	---	---	---	2.5	1.6	1.6	1.2	1.6
18	---	---	---	---	---	---	---	2.5	1.6	1.5	1.2	1.2
19	---	---	---	---	---	---	---	2.6	1.4	1.4	1.3	8.4
20	---	---	---	---	---	---	---	2.9	1.4	1.8	1.6	5.6
21	---	---	---	---	---	---	---	2.7	1.7	2.4	1.7	4.6
22	---	---	---	---	---	---	---	2.2	2.7	1.9	1.3	3.7
23	---	---	---	---	---	---	---	2.3	1.8	2.2	1.3	3.5
24	---	---	---	---	---	---	---	2.2	1.6	2.7	1.2	2.9
25	---	---	---	---	---	---	3.8	2.2	1.6	2.0	1.0	2.6
26	---	---	---	---	---	---	3.9	2.1	1.6	1.8	0.96	2.4
27	---	---	---	---	---	---	4.1	2.3	1.6	1.8	0.98	2.5
28	---	---	---	---	---	---	4.1	2.3	1.9	1.7	1.2	4.6
29	---	---	---	---	---	---	3.6	2.1	1.7	1.5	1.3	3.9
30	---	---	---	---	---	---	3.3	2.0	1.4	1.6	1.3	3.7
31	---	---	---	---	---	---	---	2.0	---	1.5	1.1	---
TOTAL	---	---	---	---	---	---	---	79.9	58.3	60.2	50.24	91.1
MEAN	---	---	---	---	---	---	---	2.577	1.943	1.942	1.621	3.037
MAX	---	---	---	---	---	---	---	3.2	4.9	3.4	4.3	12
MIN	---	---	---	---	---	---	---	2.0	1.4	1.4	0.96	1.1
AC-FT	---	---	---	---	---	---	---	158	116	119	100	181

08253000 CASIAS CREEK NEAR COSTILLA, NM

LOCATION.--Lat 36°53'49", long 105°15'37", 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 mi<sup>2</sup>.

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 with satellite telemetry and concrete control. Elevation of gage is 9,437 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. Prior to March 25, 1999, water-stage recorder and concrete control 140 ft downstream at same gage datum.

REMARKS.--Records good. 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 ft<sup>3</sup>/s, July 20, 1971, gage height, 2.07 ft, from rating curve extended above 85 ft<sup>3</sup>/s; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 25 ft<sup>3</sup>/s, Sept. 18, gage height, 3.70 ft; minimum daily discharge, 1.6 ft<sup>3</sup>/s, Sept. 6 and 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	---	---	---	---	---	---	4.8	3.6	3.2	2.2	1.7
2	6.2	---	---	---	---	---	---	4.7	3.7	3.2	2.4	1.7
3	6.3	---	---	---	---	---	---	4.8	3.9	3.0	2.5	1.8
4	---	---	---	---	---	---	---	4.7	5.3	3.0	4.0	1.9
5	---	---	---	---	---	---	---	4.8	6.3	3.0	3.4	1.7
6	---	---	---	---	---	---	---	4.7	4.9	3.4	3.2	1.6
7	---	---	---	---	---	---	---	4.8	4.4	4.2	3.1	1.6
8	---	---	---	---	---	---	---	4.4	4.1	3.9	2.8	1.7
9	---	---	---	---	---	---	---	3.6	3.9	3.3	2.6	2.7
10	---	---	---	---	---	---	---	3.6	3.8	3.7	2.5	4.9
11	---	---	---	---	---	---	---	3.5	3.7	4.5	2.4	3.0
12	---	---	---	---	---	---	---	3.6	3.7	3.4	2.3	2.4
13	---	---	---	---	---	---	---	3.6	3.7	3.3	2.3	2.2
14	---	---	---	---	---	---	---	3.8	3.8	3.3	2.2	2.3
15	---	---	---	---	---	---	---	3.7	3.8	3.4	2.2	2.2
16	---	---	---	---	---	---	---	3.6	3.6	3.2	2.1	2.1
17	---	---	---	---	---	---	---	3.6	3.5	3.1	2.1	2.0
18	---	---	---	---	---	---	---	3.6	3.6	2.9	2.0	11
19	---	---	---	---	---	---	---	4.0	3.5	2.8	2.1	7.6
20	---	---	---	---	---	---	---	4.1	3.5	3.2	2.3	5.2
21	---	---	---	---	---	---	---	4.3	3.5	3.2	2.3	4.6
22	---	---	---	---	---	---	---	4.1	4.8	3.1	2.1	4.6
23	---	---	---	---	---	---	---	4.3	3.6	3.4	2.0	4.9
24	---	---	---	---	---	---	---	4.3	3.4	3.2	1.8	5.1
25	---	---	---	---	---	---	5.1	4.2	3.4	2.8	1.8	5.2
26	---	---	---	---	---	---	5.3	4.1	3.4	2.7	1.7	5.3
27	---	---	---	---	---	---	5.4	4.2	3.5	2.7	1.7	5.4
28	---	---	---	---	---	---	5.1	4.2	3.4	2.5	1.9	7.9
29	---	---	---	---	---	---	5.1	3.9	3.2	2.3	1.8	6.4
30	---	---	---	---	---	---	4.9	3.8	3.1	2.3	1.8	6.2
31	---	---	---	---	---	---	---	3.7	---	2.2	1.7	---
TOTAL	---	---	---	---	---	---	---	127.1	115.6	97.4	71.3	116.9
MEAN	---	---	---	---	---	---	---	4.100	3.853	3.142	2.300	3.897
MAX	---	---	---	---	---	---	---	4.8	6.3	4.5	4.0	11
MIN	---	---	---	---	---	---	---	3.5	3.1	2.2	1.7	1.6
AC-FT	---	---	---	---	---	---	---	252	229	193	141	232

08253500 SANTISTEVAN CREEK NEAR COSTILLA, NM

LOCATION.--Lat 36°53'03", long 105°16'52", 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 mi<sup>2</sup>.

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 with satellite telemetry and Parshall flume. Elevation of gage is 9,520 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 fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20 ft<sup>3</sup>/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, 7.5 ft<sup>3</sup>/s, Aug. 4, gage height, 1.01 ft; minimum daily, 0.35 ft<sup>3</sup>/s, Sept. 1, 2, and 5-7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.75	---	---	---	---	---	---	0.60	0.68	0.65	0.47	0.35
2	0.72	---	---	---	---	---	---	0.60	0.69	0.65	0.53	0.35
3	---	---	---	---	---	---	---	0.61	0.69	0.62	0.53	0.38
4	---	---	---	---	---	---	---	0.61	0.81	0.64	1.0	0.37
5	---	---	---	---	---	---	---	0.61	0.93	0.64	0.59	0.35
6	---	---	---	---	---	---	---	0.60	0.76	0.66	0.63	0.35
7	---	---	---	---	---	---	---	0.60	0.74	0.70	0.56	0.35
8	---	---	---	---	---	---	---	0.62	0.73	0.65	0.52	0.39
9	---	---	---	---	---	---	---	0.63	0.72	0.61	0.49	0.52
10	---	---	---	---	---	---	---	0.62	0.71	0.63	0.48	0.99
11	---	---	---	---	---	---	---	0.62	0.71	0.62	0.46	0.58
12	---	---	---	---	---	---	---	0.66	0.71	0.57	0.45	0.47
13	---	---	---	---	---	---	---	0.66	0.71	0.55	0.45	0.45
14	---	---	---	---	---	---	---	0.68	0.73	0.56	0.44	0.45
15	---	---	---	---	---	---	---	0.67	0.72	0.55	0.43	0.44
16	---	---	---	---	---	---	---	0.66	0.71	0.54	0.42	0.43
17	---	---	---	---	---	---	---	0.66	0.70	0.52	0.39	0.42
18	---	---	---	---	---	---	---	0.67	0.69	0.51	0.39	1.6
19	---	---	---	---	---	---	---	0.72	0.68	0.50	0.41	0.80
20	---	---	---	---	---	---	---	0.70	0.70	0.56	0.41	0.84
21	---	---	---	---	---	---	---	0.68	0.68	0.54	0.42	0.74
22	---	---	---	---	---	---	---	0.70	0.85	0.54	0.39	0.73
23	---	---	---	---	---	---	---	0.70	0.69	0.66	0.38	0.70
24	---	---	---	---	---	---	---	0.70	0.68	0.61	0.36	0.69
25	---	---	---	---	---	---	0.62	0.70	0.68	0.54	0.36	0.67
26	---	---	---	---	---	---	0.63	0.70	0.67	0.57	0.36	0.65
27	---	---	---	---	---	---	0.63	0.72	0.69	0.58	0.36	0.66
28	---	---	---	---	---	---	0.61	0.72	0.67	0.51	0.38	0.91
29	---	---	---	---	---	---	0.62	0.69	0.64	0.51	0.39	0.71
30	---	---	---	---	---	---	0.61	0.70	0.64	0.50	0.37	0.69
31	---	---	---	---	---	---	---	0.68	---	0.49	0.36	---
TOTAL	---	---	---	---	---	---	---	20.49	21.41	17.98	14.18	18.03
MEAN	---	---	---	---	---	---	---	0.661	0.714	0.580	0.457	0.601
MAX	---	---	---	---	---	---	---	0.72	0.93	0.70	1.0	1.6
MIN	---	---	---	---	---	---	---	0.60	0.64	0.49	0.36	0.35
AC-FT	---	---	---	---	---	---	---	41	42	36	28	36

08253900 COSTILLA RESERVOIR NEAR COSTILLA, NM

LOCATION.--Lat 36°52'31", long 105°16'47", 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 mi<sup>2</sup>.

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 telemetry. Elevation of gage is 9,473 above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are fair. 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 Oct. 1925 to Feb. 1926, Sept. 1956, Aug. 22 to Sept. 24, 1972, July 29 to Sept. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 6,110 acre-ft, May 4, gage height, 76.55 ft; minimum, 535 acre-ft, Aug. 17, gage height, 32.29 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2930	3440	3910	4290	4670	5010	5540	6090	3930	2470	1080	558
2	2950	3450	3920	4300	4680	5020	5560	6100	3900	2400	1060	559
3	2970	3470	3940	4310	4700	5030	5590	6100	3800	2330	1060	561
4	2990	3490	3960	4330	4710	5040	5620	6110	3730	2270	1050	563
5	3000	3500	3970	4340	4720	5050	5640	6080	3640	2260	1030	564
6	3020	3520	3980	4350	4730	5060	5660	6000	3560	2260	1000	565
7	e3040	3530	4000	4360	4740	5070	5680	5910	3530	2240	968	566
8	e3060	3550	4010	4360	4760	5100	5700	5840	3530	2140	e930	567
9	e3080	3550	4020	4390	4770	5100	5720	5750	3500	2050	e916	577
10	e3100	3580	4040	4410	4780	5120	5740	5740	3390	1980	e918	602
11	e3110	3600	4050	4420	4790	5130	5760	5740	3300	1920	e902	611
12	e3120	3610	4060	4440	4800	5150	5790	5710	3210	1890	e832	616
13	3140	3630	4070	4450	4810	5170	5810	5580	3130	1890	e738	621
14	3150	3650	4090	4460	4820	5180	5820	5460	3110	1860	e648	625
15	3170	3660	4100	4470	4840	5200	5850	5340	3110	1800	581	629
16	3190	3690	4110	4480	4850	5230	5870	5220	3070	1740	546	632
17	3200	3700	4120	4500	4860	5230	5900	5190	2990	1680	535	634
18	3220	3720	4130	4510	4880	5250	5910	5200	2910	1630	536	711
19	3240	3730	4140	4520	4890	5260	5930	5160	2830	1610	538	751
20	3250	3750	4150	4530	4900	5280	5940	5030	2760	1620	541	772
21	3270	3760	4170	4540	4910	5300	5950	4900	2730	1600	545	788
22	3280	3770	4170	4550	4920	5320	5970	4770	2750	1540	547	801
23	3290	3790	4190	4560	4940	5340	5990	4640	2730	1490	549	814
24	3310	3800	4200	4570	4950	5360	6000	4590	2680	1430	550	828
25	3320	3820	4210	4580	4960	5370	6010	4590	2650	1370	550	842
26	3340	3830	4220	4590	4970	5390	6020	4540	2610	1360	550	855
27	3350	3840	4230	4600	4980	5410	6040	4400	2580	1370	551	868
28	3370	3860	4240	4620	4990	5430	6060	4260	2570	1330	553	898
29	3390	3870	4250	4630	---	5450	6070	4120	2570	1270	554	918
30	3400	3890	4270	4650	---	5470	6080	3990	2550	1210	556	940
31	3420	---	4280	4660	---	5500	---	3940	---	1150	557	---
MAX	3420	3890	4280	4660	4990	5500	6080	6110	3930	2470	1080	940
MIN	2930	3440	3910	4290	4670	5010	5540	3940	2550	1150	535	558
(+)	63.88	66.41	68.34	70.17	71.73	74.00	76.43	66.63	58.67	46.15	32.94	42.50
(++)	+520	+470	+390	+380	+330	+510	+580	-2140	-1390	-1400	-593	+383

CAL YR 2001 MAX 11400 MIN 2900 (++) +250  
WTR YR 2002 MAX 6110 MIN 535 (++) -1960

e Estimated

(+) Gage height, in ft, at end of month.  
(++) Change in contents, in acre-ft.

## 08254000 COSTILLA CREEK BELOW COSTILLA DAM, NM

LOCATION.--Lat 36°52'23", long 105°17'02", 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 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1937 to current year (seasonal records 1937-44, 1947-49, 1988 to current year). 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 with satellite telemetry and concrete control. Elevation of gage is 9,300 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 366 ft<sup>3</sup>/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, 75 ft<sup>3</sup>/s, May 28; minimum daily, 0.52 ft<sup>3</sup>/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	---	---	---	---	---	---	1.9	7.1	41	32	3.5
2	0.52	---	---	---	---	---	---	1.9	19	38	14	3.5
3	---	---	---	---	---	---	---	1.9	47	34	4.3	3.5
4	---	---	---	---	---	---	---	1.9	52	31	13	3.5
5	---	---	---	---	---	---	---	16	50	15	24	3.5
6	---	---	---	---	---	---	---	46	48	5.6	23	3.5
7	---	---	---	---	---	---	---	44	22	21	23	3.5
8	---	---	---	---	---	---	---	42	5.9	49	22	3.5
9	---	---	---	---	---	---	---	38	20	49	11	3.5
10	---	---	---	---	---	---	---	14	49	43	4.6	3.6
11	---	---	---	---	---	---	---	2.1	49	38	17	3.5
12	---	---	---	---	---	---	---	23	46	18	35	3.5
13	---	---	---	---	---	---	---	68	43	6.8	38	3.5
14	---	---	---	---	---	---	---	64	20	17	37	3.5
15	---	---	---	---	---	---	---	62	4.4	35	34	3.5
16	---	---	---	---	---	---	---	60	18	35	21	3.5
17	---	---	---	---	---	---	---	22	45	33	9.6	3.5
18	---	---	---	---	---	---	---	2.1	41	31	3.7	3.9
19	---	---	---	---	---	---	---	23	39	15	3.7	3.7
20	---	---	---	---	---	---	---	69	38	5.1	3.6	3.7
21	---	---	---	---	---	---	---	69	18	15	3.6	3.7
22	---	---	---	---	---	---	---	68	5.5	34	3.7	3.8
23	---	---	---	---	---	---	---	68	13	34	3.6	3.9
24	---	---	---	---	---	---	---	29	27	34	3.5	3.9
25	---	---	---	---	---	---	0.99	7.6	25	34	3.5	3.9
26	---	---	---	---	---	---	1.7	27	21	16	3.5	3.9
27	---	---	---	---	---	---	1.7	72	21	4.6	3.5	3.9
28	---	---	---	---	---	---	1.7	75	11	19	3.5	3.9
29	---	---	---	---	---	---	1.9	74	4.6	33	3.5	3.9
30	---	---	---	---	---	---	2.0	69	17	32	3.5	2.2
31	---	---	---	---	---	---	---	36	---	32	3.5	---
TOTAL	---	---	---	---	---	---	---	1197.4	826.5	848.1	412.4	107.9
MEAN	---	---	---	---	---	---	---	38.63	27.55	27.36	13.30	3.597
MAX	---	---	---	---	---	---	---	75	52	49	38	3.9
MIN	---	---	---	---	---	---	---	1.9	4.4	4.6	3.5	2.2
AC-FT	---	---	---	---	---	---	---	2380	1640	1680	818	214

08255500 COSTILLA CREEK NEAR COSTILLA, NM

LOCATION.--Lat 36°58'01", long 105°30'26", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on right bank 70 ft downstream from bridge on State Highway 196, 0.5 mi upstream from diversion dam, 1.6 mi southeast of Costilla, and at mile 15.9.

DRAINAGE AREA.--195 mi<sup>2</sup>.

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

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

GAGE.--Water-stage recorder with satellite telemetry. Concrete control since Oct. 13, 1952. Elevation of gage is 7,936 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 18, 1944, at site 200 ft downstream at different datum. June 18, 1944, to Sept. 30, 1964, at site 0.4 mi upstream at different datum.

REMARKS.--Records good except for those estimated, which are poor. Flow regulated by Costilla Reservoir (station 08253900) 19 mi upstream. Diversions for irrigation of about 2,000 acres upstream from station. Several observations of water temperature were made during the year.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	8.3	e8.0	e5.1	e3.8	e9.7	21	9.8	16	26	31	4.0
2	11	8.0	e8.4	e5.2	e3.9	e4.4	21	9.6	13	34	29	3.7
3	9.1	7.8	e8.7	e4.6	e3.7	e9.6	21	9.5	32	35	12	3.8
4	8.3	7.9	e9.0	e5.0	e3.4	e9.9	20	9.2	45	31	11	4.6
5	7.6	8.0	e9.4	e5.3	e3.5	e9.1	19	9.1	53	29	26	4.4
6	7.4	8.4	e9.0	e5.3	e3.5	e8.4	19	40	46	13	27	3.8
7	7.3	9.2	e9.6	e5.5	e4.1	e11	18	51	41	12	27	4.0
8	7.3	9.2	e9.9	e5.9	e4.8	e12	18	48	15	42	25	3.8
9	7.4	9.0	e9.2	e6.1	e4.4	e11	17	48	12	45	23	4.7
10	7.8	8.2	e9.6	e6.4	e4.5	e11	17	39	38	45	9.9	15
11	7.4	8.2	e10	e5.5	e5.1	e9.7	17	14	46	37	7.6	12
12	8.1	8.9	e9.8	e6.1	e5.0	e11	17	10	47	32	26	9.2
13	8.3	8.8	e9.2	e6.2	e5.3	e13	16	53	43	12	35	7.5
14	9.0	8.9	e8.6	e5.8	e5.9	e13	16	60	41	9.3	36	7.9
15	8.2	8.9	e10	e6.0	e6.0	e12	16	58	14	27	36	7.1
16	7.9	9.7	e9.4	e6.4	e5.3	e11	17	59	9.7	34	27	6.5
17	7.8	10	e7.7	e6.2	e6.4	e13	16	50	32	35	16	6.0
18	7.7	9.6	e6.8	e5.2	e7.3	12	14	14	38	31	8.7	29
19	7.5	8.8	e6.0	e5.6	e6.6	11	13	12	35	28	6.6	35
20	7.5	7.5	e5.8	e5.6	e6.2	11	12	52	35	11	7.5	23
21	7.6	7.0	e5.6	e5.2	e7.1	13	11	64	32	9.9	6.9	17
22	7.8	e8.4	e6.0	e5.6	e8.8	15	12	65	15	19	6.1	14
23	7.7	e9.6	e5.7	e6.0	e9.1	17	10	66	10	28	5.3	13
24	7.5	e9.0	e6.6	e5.3	e7.7	17	9.4	55	21	29	4.9	12
25	7.2	e9.6	e6.0	e5.0	e11	15	9.3	18	20	29	4.3	11
26	7.4	e8.2	e5.6	e5.1	e7.0	15	11	14	18	27	4.1	9.9
27	7.5	e7.2	e6.2	e5.3	e11	16	12	59	17	13	3.7	9.8
28	8.0	e6.7	e5.7	e5.9	e12	18	11	71	18	9.6	3.8	17
29	8.2	e7.0	e5.6	e6.3	---	19	10	72	8.7	26	4.8	17
30	8.1	e7.6	e6.0	e6.3	---	17	10	66	7.3	31	4.9	15
31	8.1	---	e6.6	e3.6	---	21	---	57	---	30	4.2	---
TOTAL	254.7	253.6	239.7	172.6	172.4	395.8	450.7	1262.2	818.7	819.8	480.3	330.7
MEAN	8.216	8.453	7.732	5.568	6.157	12.77	15.02	40.72	27.29	26.45	15.49	11.02
MAX	17	10	10	6.4	12	21	21	72	53	45	36	35
MIN	7.2	6.7	5.6	3.6	3.4	4.4	9.3	9.1	7.3	9.3	3.7	3.7
AC-FT	505	503	475	342	342	785	894	2500	1620	1630	953	656

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2002, BY WATER YEAR (WY)

MEAN	15.47	11.71	8.702	7.882	9.357	18.11	49.62	118.3	115.3	84.56	68.87	36.21
MAX	44.9	30.1	19.6	15.0	16.9	70.9	223	594	342	160	137	109
(WY)	1962	1942	1942	1950	1942	1989	1942	1942	1983	1944	1973	1957
MIN	4.85	4.11	3.71	3.44	3.38	6.92	13.1	30.8	27.3	23.8	15.5	7.93
(WY)	1964	1965	1964	1964	1964	1964	1956	1967	2002	1946	2002	1974

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1942 - 2002

ANNUAL TOTAL	14581.5	5651.2	
ANNUAL MEAN	39.95	15.48	45.74
HIGHEST ANNUAL MEAN			134 1942
LOWEST ANNUAL MEAN			15.5 2002
HIGHEST DAILY MEAN	121 Jul 10	72 May 29	1000 May 11 1942
LOWEST DAILY MEAN	5.6 Feb 28	3.4 Feb 4	1.0 Dec 1 1958
ANNUAL SEVEN-DAY MINIMUM	5.9 Dec 20	3.6 Jan 31	2.5 Dec 5 1964
MAXIMUM PEAK FLOW		76 May 29	1150 May 11 1942
MAXIMUM PEAK STAGE		b3.28 Mar 5	a5.37 May 11 1942
INSTANTANEOUS LOW FLOW		2.3 Mar 19	0.34 Mar 15 1969
ANNUAL RUNOFF (AC-FT)	28920	11210	33140
10 PERCENT EXCEEDS	96	35	117
50 PERCENT EXCEEDS	24	9.6	18
90 PERCENT EXCEEDS	6.4	5.2	6.4

e Estimated  
a Site and datum then in use.  
b Ice effect.

RIO GRANDE BASIN

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 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder with satellite telemetry and concrete control since Oct. 9, 1956. Elevation of gage is 7,821 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 except for those estimated, which are poor. Flow partly regulated by Costilla Reservoir (station 08253900) 22 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 444 ft<sup>3</sup>/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 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 45 ft<sup>3</sup>/s, May 24, gage height, 3.13 ft; no flow most days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
2	0.00	---	---	---	---	---	---	0.00	0.00	0.00	1.8	0.00
3	0.00	---	---	---	---	---	---	0.00	0.00	0.00	3.7	0.00
4	---	---	---	---	---	---	---	0.00	0.00	0.00	1.8	0.00
5	---	---	---	---	---	---	---	0.00	0.29	0.00	0.16	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
7	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
10	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.07
11	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	2.0
12	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.16
14	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.09
15	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.02
16	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	7.9
19	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	17
20	---	---	---	---	---	---	---	0.19	0.00	0.00	0.00	8.6
21	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	5.0
22	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	4.2
23	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	4.1
24	---	---	---	---	---	---	e0.00	6.7	0.00	0.00	0.00	3.9
25	---	---	---	---	---	---	e0.00	7.9	0.00	0.00	0.00	3.0
26	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	2.3
27	---	---	---	---	---	---	e0.00	2.6	0.00	0.00	0.00	1.2
28	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
29	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
30	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
31	---	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	17.39	0.29	0.00	7.46	59.54
MEAN	---	---	---	---	---	---	---	0.561	0.010	0.000	0.241	1.985
MAX	---	---	---	---	---	---	---	7.9	0.29	0.00	3.7	17
MIN	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	34	0.6	0.00	15	118

e Estimated

08263500 RIO GRANDE NEAR CERRO, NM

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

DRAINAGE AREA.--8,440 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

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 with satellite telemetry. Elevation of gage is 7,110 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, 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 the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e93	98	197	263	218	329	317	79	70	59	44	47
2	e81	97	235	267	223	310	323	76	66	58	43	48
3	e83	98	272	237	225	236	304	78	62	56	44	47
4	e81	103	307	235	219	309	223	80	61	56	43	46
5	84	100	325	254	215	311	181	79	63	55	43	45
6	82	100	281	251	218	302	154	86	64	51	43	45
7	85	109	303	254	218	297	140	86	65	51	44	46
8	90	111	291	266	231	320	129	85	64	57	47	46
9	93	112	251	269	243	326	123	82	63	54	45	46
10	95	107	245	279	236	352	121	81	63	51	46	49
11	98	107	253	272	238	378	116	81	62	50	47	49
12	99	107	258	265	248	403	109	78	61	49	45	51
13	99	108	265	271	247	425	109	77	61	48	44	52
14	105	108	247	251	250	401	104	74	62	48	44	51
15	104	125	246	258	260	410	106	73	62	47	44	49
16	99	206	248	267	261	386	105	77	61	46	44	50
17	96	245	246	275	266	362	102	79	63	46	44	49
18	94	268	257	264	273	355	102	75	62	46	44	50
19	93	275	247	257	281	336	100	77	60	47	44	50
20	99	277	256	252	287	327	99	76	60	47	44	50
21	96	281	265	251	293	320	99	73	59	47	45	56
22	93	281	260	255	301	320	103	71	61	46	46	55
23	93	278	257	255	300	316	104	67	62	47	46	52
24	98	269	252	250	310	330	101	71	61	47	46	50
25	107	238	246	249	320	344	97	68	60	46	46	49
26	101	249	246	252	318	335	93	65	59	47	45	49
27	102	232	250	255	262	319	93	68	58	47	45	49
28	102	212	248	254	318	313	92	69	60	47	44	50
29	101	161	247	257	---	287	86	69	60	45	44	52
30	99	200	262	262	---	294	81	68	59	45	44	54
31	96	---	270	260	---	310	---	72	---	44	44	---
TOTAL	2941	5262	8033	8007	7279	10363	4016	2340	1854	1530	1381	1482
MEAN	94.87	175.4	259.1	258.3	260.0	334.3	133.9	75.48	61.80	49.35	44.55	49.40
MAX	107	281	325	279	320	425	323	86	70	59	47	56
MIN	81	97	197	235	215	236	81	65	58	44	43	45
AC-FT	5830	10440	15930	15880	14440	20560	7970	4640	3680	3030	2740	2940

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2002, BY WATER YEAR (WY)

	1949	1950	1951	1952	1953	1954	1955	2002	1977	2002	2002	1956
MEAN	217.7	353.9	302.9	299.6	357.8	472.1	527.0	936.1	1107	451.2	246.7	192.2
MAX	1310	1073	774	566	657	1010	2335	4577	4400	2181	1273	970
(WY)	1998	1987	1987	1987	1987	1987	1987	1987	1949	1986	1999	1999
MIN	52.7	88.1	100	116	140	110	107	75.5	58.1	49.4	44.5	44.8
(WY)	1957	1957	1964	1957	1957	1957	1955	2002	1977	2002	2002	1956

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1949 - 2002

ANNUAL TOTAL	156607	54488	
ANNUAL MEAN	429.1	149.3	455.1
HIGHEST ANNUAL MEAN			1275
LOWEST ANNUAL MEAN			112
HIGHEST DAILY MEAN	2110	May 31	9440
LOWEST DAILY MEAN	81	Oct 2	40
ANNUAL SEVEN-DAY MINIMUM	84	Oct 2	42
MAXIMUM PEAK FLOW			483
MAXIMUM PEAK STAGE			4.23
INSTANTANEOUS LOW FLOW			42
ANNUAL RUNOFF (AC-FT)	310600	108100	329700
10 PERCENT EXCEEDS	1070	302	976
50 PERCENT EXCEEDS	250	99	275
90 PERCENT EXCEEDS	99	46	80

e Estimated

## RIO GRANDE BASIN

08265000 RED RIVER NEAR QUESTA, NM

LOCATION.--Lat 36°42'12", long 105°34'06", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> 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 mi 9.0.

DRAINAGE AREA.--113 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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" 1910-11, 1926-30, and as "Rio Colorado" 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 those estimated, which are poor. 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. Jan. 1966 to Dec. 1991, surface-water 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 the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	9.7	e9.2	e9.0	e9.6	e10	11	10	7.9	5.8	5.6	5.2
2	19	9.8	e8.6	e8.0	e12	e8.7	12	11	7.9	6.0	5.9	5.2
3	19	9.7	e8.5	e9.4	e12	e9.5	12	10	7.1	6.1	6.9	5.2
4	17	11	e9.3	e11	e10	e11	12	9.6	8.3	7.3	7.8	5.5
5	16	12	e10	e9.4	e11	e13	12	9.6	10	7.0	7.8	5.3
6	15	13	e9.6	e9.8	e12	e13	12	9.6	9.1	7.1	7.5	5.0
7	15	14	e10	e12	e13	e9.6	13	9.6	8.2	15	7.4	5.2
8	13	10	e9.1	e12	e11	e9.4	13	9.8	7.8	17	7.0	5.4
9	13	12	e8.4	e13	e9.4	e10	12	9.9	7.6	15	7.3	5.7
10	13	14	e9.0	e9.7	e10	e11	12	9.7	7.1	12	6.1	13
11	14	14	e9.7	e12	e11	9.9	12	9.2	7.0	12	5.3	11
12	17	14	e9.6	e10	e10	9.5	12	9.1	6.8	10	5.3	9.6
13	17	14	e8.6	e8.6	e11	10	12	9.2	6.6	9.3	5.1	9.4
14	17	11	e9.3	e10	e12	9.7	12	9.3	6.6	9.5	4.6	9.8
15	17	11	e11	e12	e10	9.1	11	9.3	7.3	10	4.5	9.2
16	17	11	e9.1	e10	e11	9.3	13	9.2	6.8	8.2	4.4	8.5
17	15	12	e11	e9.2	e10	9.9	12	9.4	6.5	5.9	4.0	8.3
18	14	11	e10	e8.0	e10	9.1	12	9.4	6.5	5.7	4.1	42
19	14	11	e12	e8.7	e9.6	9.4	12	9.5	6.1	5.9	4.9	36
20	14	9.3	e11	e9.7	e9.4	9.6	12	9.8	6.1	6.0	5.3	22
21	14	9.8	e9.9	e11	e9.4	9.8	12	10	6.5	5.7	5.8	18
22	13	11	e10	e12	e9.6	9.6	12	9.9	7.3	5.0	5.0	17
23	13	12	e12	e11	e9.9	9.8	12	12	6.9	5.3	5.2	16
24	13	10	e10	e10	e9.9	9.8	11	9.8	6.6	13	5.4	15
25	13	11	e9.0	e11	e9.5	9.6	13	9.8	6.2	9.9	5.3	14
26	13	10	e10	e12	e8.6	9.4	14	9.7	6.2	7.8	5.1	14
27	14	e7.0	e9.6	e13	e9.7	9.7	11	9.6	6.1	7.7	4.9	14
28	15	e6.0	e11	e12	e12	10	11	9.5	6.0	7.6	5.0	21
29	15	e7.0	e12	e11	---	11	11	9.2	5.9	7.7	5.4	17
30	15	e8.5	e11	e10	---	11	11	8.6	5.7	7.0	5.5	16
31	12	---	e12	e8.4	---	11	---	8.1	---	5.8	5.2	---
TOTAL	465	325.8	309.5	322.9	292.6	311.4	359	298.4	210.7	263.3	174.6	388.5
MEAN	15.00	10.86	9.984	10.42	10.45	10.05	11.97	9.626	7.023	8.494	5.632	12.95
MAX	19	14	12	13	13	13	14	12	10	17	7.8	42
MIN	12	6.0	8.4	8.0	8.6	8.7	11	8.1	5.7	5.0	4.0	5.0
AC-FT	922	646	614	640	580	618	712	592	418	522	346	771

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2002, BY WATER YEAR (WY)

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002			
MEAN	22.52	16.70	11.90	12.19	12.68	15.69	36.03	114.2	133.7	61.16	38.62	28.05																												
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	9.63	7.02	8.49	5.63	8.81																												
(WY)	1973	1977	1975	1973	1977	1977	1971	2002	2002	2002	2002	1978																												

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1966 - 2002

ANNUAL TOTAL	14308.4	3721.7	
ANNUAL MEAN	39.20	10.20	a42.05
HIGHEST ANNUAL MEAN			87.6
LOWEST ANNUAL MEAN			10.2
HIGHEST DAILY MEAN	218	May 20	557
LOWEST DAILY MEAN	5.6	Jan 2	2.5
ANNUAL SEVEN-DAY MINIMUM	6.4	Jan 1	3.1
MAXIMUM PEAK FLOW			102
MAXIMUM PEAK STAGE			c3.66
INSTANTANEOUS LOW FLOW			3.4
ANNUAL RUNOFF (AC-FT)	28380	7380	30460
10 PERCENT EXCEEDS	119	14	106
50 PERCENT EXCEEDS	19	9.8	22
90 PERCENT EXCEEDS	9.1	5.8	8.0

e Estimated

a Average discharge for 52 years (water years 1913-25, 1927-65), 55.9 ft<sup>3</sup>/s, 40,500 acre-ft/yr, prior to extensive upstream diversions by Molycorp.

b From rating curve extended above 450 ft<sup>3</sup>/s.

c Ice jam.

08265000 RED RIVER NEAR QUESTA, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979-87, September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
SEP 10...	0800	29	584	8.6	105	7.4	400	11.0	12.0	180	55.0	11.2	2.05
Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
SEP 10...	.2	6.79	29	4.91	9.88	148	259	<.04	.12	.58	.009	<.06	<.02
Date	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	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)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)				
SEP 10...	5.71	30	.15	1.8	<10	<.08	584	<1	18				

Remark codes used in this report:  
 < -- Less than

## RIO GRANDE BASIN

08266820 RED RIVER BELOW FISH HATCHERY NEAR QUESTA, NM

LOCATION.--Lat 36°40'58", long 105°39'15", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.10, T.28 N., R.12 E., Taos County, Hydrologic Unit 13020101, on right bank at the State Fish Hatchery, 3.7 mi southwest of Questa, and 3.8 mi upstream from mouth.

DRAINAGE AREA.--185 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Elevation of gage is 7,105 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 5, 1999, at site about .25 mi downstream at datum 11.54 ft lower.

REMARKS.--Records good except for those estimated, which are poor. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e42	37	35	39	34	40	36	29	26	29	23	25
2	e41	36	36	37	39	34	37	29	26	29	23	24
3	e41	37	38	33	40	32	37	30	25	29	25	25
4	e41	38	39	39	42	34	38	29	26	30	24	25
5	40	39	41	40	43	37	38	29	27	30	28	24
6	40	40	40	38	39	39	39	27	27	30	31	23
7	39	41	41	41	42	39	39	26	27	32	28	24
8	38	39	38	41	43	39	40	26	27	41	25	25
9	38	39	34	43	41	34	38	26	27	42	25	25
10	38	41	36	42	40	38	38	26	27	34	25	31
11	39	42	39	39	42	39	37	26	27	33	24	35
12	42	42	39	41	45	37	35	26	27	30	24	33
13	43	43	37	44	41	39	34	27	27	30	25	33
14	43	38	34	39	44	37	30	26	28	28	25	33
15	42	37	38	41	44	33	28	26	28	31	25	31
16	41	36	37	41	41	36	29	25	27	28	25	29
17	41	36	35	40	44	34	29	25	27	26	24	30
18	40	37	37	39	43	34	30	26	27	26	25	69
19	39	36	35	36	41	36	29	26	27	26	25	67
20	39	34	35	37	40	35	29	26	28	25	25	46
21	39	33	38	40	40	35	29	26	28	26	26	40
22	39	37	38	43	38	36	29	28	28	26	25	39
23	39	40	34	45	38	34	30	30	28	26	25	37
24	39	37	35	40	38	34	29	29	28	32	25	37
25	39	40	33	39	38	34	30	29	29	34	25	36
26	39	36	36	43	35	33	30	27	29	30	25	36
27	40	32	38	44	34	34	30	27	29	27	25	34
28	42	27	38	44	36	34	29	27	30	25	25	41
29	42	29	39	43	---	35	29	27	29	25	25	39
30	41	34	40	42	---	36	29	27	29	24	25	37
31	40	---	39	41	---	36	---	27	---	23	25	---
TOTAL	1246	1113	1152	1254	1125	1107	984	840	825	907	780	1033
MEAN	40.19	37.10	37.16	40.45	40.18	35.71	32.80	27.10	27.50	29.26	25.16	34.43
MAX	43	43	41	45	45	40	40	30	30	42	31	69
MIN	38	27	33	33	34	32	28	25	25	23	23	23
AC-FT	2470	2210	2280	2490	2230	2200	1950	1670	1640	1800	1550	2050

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

MEAN	52.61	47.28	42.71	43.42	43.79	47.13	74.73	185.2	199.8	98.54	67.71	58.29
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	32.8	27.1	27.5	29.3	25.2	31.2
(WY)	1979	1979	1979	1979	1981	1981	2002	2002	2002	2002	2002	1978

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1978 - 2002

ANNUAL TOTAL	23088	12366	
ANNUAL MEAN	63.25	33.88	80.30
HIGHEST ANNUAL MEAN			129 1979
LOWEST ANNUAL MEAN			33.9 2002
HIGHEST DAILY MEAN	225	69	Sep 18 676 May 27 1979
LOWEST DAILY MEAN	27	23	Jul 31 23 Jul 31 2002
ANNUAL SEVEN-DAY MINIMUM	30	24	Jul 29 24 Jul 29 2002
MAXIMUM PEAK FLOW		159	Sep 18 755 Jun 8 1979
MAXIMUM PEAK STAGE		4.54	Sep 18 a5.30 Jun 8 1979
INSTANTANEOUS LOW FLOW		18	Aug 18 18 Aug 18 2002
ANNUAL RUNOFF (AC-FT)	45800	24530	58170
10 PERCENT EXCEEDS	137	41	155
50 PERCENT EXCEEDS	42	35	53
90 PERCENT EXCEEDS	34	25	36

e Estimated

a Site and datum then in use.

08267500 RIO HONDO NEAR VALDEZ, NM

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

DRAINAGE AREA.--36.2 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records fair except for those estimated, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	13	10	e11	e8.8	e10	12	12	9.9	7.1	6.7	5.8
2	14	12	11	e9.0	e10	e8.3	12	12	9.9	7.1	6.9	5.9
3	14	12	11	e8.2	e10	e7.7	13	12	9.8	7.1	7.8	6.0
4	14	12	11	e10	e11	e8.1	12	12	10	7.4	7.5	5.8
5	13	12	11	e9.8	e11	e9.4	13	12	10	7.4	7.4	5.7
6	13	12	10	e10	e10	e10	13	12	9.6	8.3	7.9	5.6
7	13	12	10	e11	e11	e10	13	13	9.2	8.9	7.9	5.7
8	13	12	e9.7	e11	e11	e10	13	13	8.9	9.1	7.2	5.8
9	14	13	e8.8	e12	e10	e8.4	13	13	8.7	9.3	6.9	6.1
10	13	12	e10	e11	e10	e10	12	13	8.5	8.6	6.7	8.4
11	13	12	11	e10	e11	11	13	13	8.4	8.4	6.4	8.7
12	13	12	11	e11	e11	11	13	13	8.3	8.3	6.4	8.2
13	13	12	e9.7	e9.0	e10	11	13	13	8.2	8.0	6.2	8.2
14	13	12	e8.8	e9.3	e11	11	12	13	8.3	7.7	6.1	8.2
15	13	12	11	e10	e11	11	11	13	9.4	7.7	6.1	7.7
16	13	13	e9.9	e11	e10	11	11	13	8.4	7.7	6.0	7.5
17	13	12	e9.0	e10	e11	11	10	13	8.2	7.5	5.8	7.2
18	13	12	e9.9	e9.7	e11	11	10	13	7.9	7.3	5.8	12
19	13	12	e9.3	e9.4	e10	10	10	14	7.5	7.0	5.8	13
20	13	11	e11	e9.0	e10	11	10	14	7.6	7.0	6.0	11
21	13	10	e10	e9.7	e10	11	10	14	7.5	7.1	6.5	9.7
22	13	11	e9.5	e9.7	e9.8	11	10	14	8.6	7.0	6.1	9.3
23	13	12	e9.0	e9.2	e9.8	11	10	13	8.3	7.2	5.8	9.0
24	13	11	e9.0	e9.2	e9.8	11	10	13	7.7	7.5	5.7	8.7
25	12	11	e9.0	e9.0	e9.8	11	11	13	7.5	7.5	5.6	8.6
26	12	11	e9.5	e10	e8.8	11	11	13	7.4	7.4	5.6	8.6
27	12	9.7	e9.0	e11	e8.3	11	11	13	7.5	7.1	5.5	8.6
28	13	e7.5	e9.0	e11	e9.0	11	11	13	7.6	7.0	5.6	9.9
29	13	e9.3	e10	e10	---	11	11	12	7.2	6.9	6.1	9.6
30	13	10	e11	e10	---	12	11	10	7.1	7.1	6.2	9.3
31	13	---	e11	e10	---	12	---	10	---	7.1	5.9	---
TOTAL	406	344.5	309.1	310.2	284.1	323.9	345	394	253.1	235.8	198.1	243.8
MEAN	13.10	11.48	9.971	10.01	10.15	10.45	11.50	12.71	8.437	7.606	6.390	8.127
MAX	15	13	11	12	11	12	13	14	10	9.3	7.9	13
MIN	12	7.5	8.8	8.2	8.3	7.7	10	10	7.1	6.9	5.5	5.6
AC-FT	805	683	613	615	564	642	684	781	502	468	393	484

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2002, BY WATER YEAR (WY)

	1935	1942	1942	1942	1942	1942	1942	1942	1942	1942	1942	1942
MEAN	18.35	14.81	12.03	10.72	10.65	14.23	33.60	94.86	111.7	47.82	28.72	21.98
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	12.7	8.44	7.61	6.39	8.13
(WY)	1957	1952	1964	1935	1935	1964	1977	2002	2002	2002	2002	2002

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1935 - 2002

ANNUAL TOTAL	13104.9	3647.6	
ANNUAL MEAN	35.90	9.993	35.02
HIGHEST ANNUAL MEAN			69.9
LOWEST ANNUAL MEAN			9.99
HIGHEST DAILY MEAN	216	May 20	416
LOWEST DAILY MEAN	3.4	Feb 4	3.0
ANNUAL SEVEN-DAY MINIMUM	4.6	Jan 31	4.2
MAXIMUM PEAK FLOW			541
MAXIMUM PEAK STAGE			1.19
INSTANTANEOUS LOW FLOW			5.3
ANNUAL RUNOFF (AC-FT)	25990	7240	25370
10 PERCENT EXCEEDS	103	13	85
50 PERCENT EXCEEDS	15	10	17
90 PERCENT EXCEEDS	7.4	7.0	9.6

e Estimated  
a Maximum gage height on Dec. 24, 1965, 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
OCT 25...	0845	12	580	10.4	102	8.1	155	.0	3.0	<.01	<.20	<.20	.01
APR 10...	0820	12	580	10.2	102	7.6	163	6.5	4.0	.01	<.20	<.20	.02
AUG 13...	1730	6.1	578	8.8	113	8.2	175	25.0	14.0	<.01	<.20	<.20	.01
SEP 10...	1220	10	580	8.6	105	8.0	169	14.0	12.0	<.01	<.20	<.20	.03

Date	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
OCT 25...	.21	<.010	<.02	<.01	<.02
APR 10...	.43	<.010	<.02	<.01	<.02
AUG 13...	.21	<.010	<.02	<.01	<.02
SEP 10...	.21	<.010	<.02	<.01	<.02

Date	Time	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
AUG 13...	1730	<1	<.5	<.5	<.5	<.5

Remark codes used in this report:  
 < -- Less than





08271000 RIO LUCERO NEAR ARROYO SECO, NM

LOCATION.--Lat 36°30'30", long 105°31'51", 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 mi<sup>2</sup>.

PERIOD OF RECORD.--April to December 1910 (discharge measurements and occasional gage heights); January 1911 to September 1915, March to December 1916 (fragmentary); water years 1911-15, 1934 to current year (annual maximum); water years 1952-62, October to November 1962 (monthly discharge only); January 1913 to September 1915, October 1934 to September 1951, December 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 those estimated, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	6.4	e5.2	e4.5	e4.7	e5.0	7.9	6.7	5.1	4.0	3.8	3.3
2	7.7	6.2	e5.6	e4.2	e4.9	e4.3	8.3	6.6	5.0	4.0	4.0	3.3
3	7.5	6.1	e5.8	e4.7	e5.2	e4.6	8.3	6.5	5.0	4.1	4.3	3.2
4	7.4	6.1	e5.9	e5.1	e5.3	e5.2	8.2	6.4	5.3	4.3	4.1	3.3
5	7.3	6.1	e5.7	e4.6	e5.0	e5.5	8.1	6.4	5.4	4.2	4.1	3.2
6	7.2	6.1	e5.3	e4.4	e5.2	e5.3	8.0	6.4	5.0	4.4	4.2	3.1
7	7.2	6.1	e5.1	e4.7	e5.4	e4.7	8.0	6.4	4.8	7.4	4.1	3.1
8	7.3	5.9	e4.4	e5.0	e5.5	e4.9	7.5	6.4	4.8	6.3	3.9	3.3
9	8.1	5.8	e4.0	e4.9	e5.2	e5.2	7.1	6.4	4.6	5.3	3.7	3.4
10	7.5	5.8	e5.2	e4.7	e5.1	5.4	7.0	6.4	4.6	5.0	3.7	5.6
11	7.3	5.7	e5.7	e4.5	e5.3	5.5	7.1	6.3	4.4	4.8	3.6	5.5
12	7.2	5.7	e5.2	e5.0	e5.6	5.5	7.2	6.3	4.3	4.7	3.5	4.6
13	7.1	5.7	e5.0	e5.1	e5.1	5.9	7.1	6.3	4.3	4.5	3.5	4.8
14	7.0	5.6	e4.9	e4.5	e5.2	5.8	7.6	6.2	4.3	4.3	3.5	4.7
15	6.9	5.6	e4.9	e4.9	e5.6	5.6	8.2	6.1	4.3	4.4	3.4	4.1
16	6.9	5.6	e4.8	e5.0	e5.1	5.5	8.2	6.0	4.2	4.3	3.3	3.9
17	6.9	5.6	e4.8	e4.8	e5.2	6.3	7.5	6.0	4.2	4.1	3.3	3.9
18	6.8	5.6	e4.9	e4.6	e5.4	6.7	7.4	6.0	4.0	4.1	3.3	7.3
19	6.6	5.3	e4.8	e4.7	e5.4	7.5	7.4	6.0	4.0	4.0	3.3	8.0
20	6.6	5.1	e4.7	e5.0	e5.1	6.3	7.5	6.1	4.1	4.0	3.4	6.7
21	6.6	6.2	e4.8	e5.2	e4.9	6.3	7.2	6.0	4.1	4.0	4.0	6.2
22	6.6	5.6	e4.7	e5.4	e4.9	6.6	7.1	5.9	5.2	3.9	3.5	5.9
23	6.6	5.2	e4.5	e5.0	e4.8	6.7	7.0	5.8	5.0	3.9	3.4	5.7
24	6.5	5.1	e4.4	e4.8	e4.7	6.5	7.1	5.7	4.3	4.4	3.3	5.5
25	6.4	e5.6	e4.1	e4.9	e4.5	6.1	7.3	5.6	4.2	4.1	3.3	5.4
26	6.4	e5.0	e4.2	e5.2	e4.7	6.3	7.2	5.4	4.1	4.0	3.2	5.2
27	6.4	e4.4	e4.6	e5.3	e4.9	6.3	7.1	5.6	4.2	3.8	3.1	5.1
28	6.4	e4.1	e4.4	e5.2	e5.2	6.5	6.9	5.5	4.3	3.7	3.4	5.9
29	6.4	e4.6	e4.5	e5.1	---	6.9	6.8	5.3	4.1	3.7	3.7	5.5
30	6.4	e4.9	e4.6	e4.9	---	7.0	6.6	5.3	4.0	3.9	3.6	5.2
31	6.3	---	e4.6	e4.6	---	7.5	---	5.2	---	4.2	3.4	---
TOTAL	215.4	166.8	151.3	150.5	143.1	183.4	223.9	187.2	135.2	135.8	111.9	143.9
MEAN	6.948	5.560	4.881	4.855	5.111	5.916	7.463	6.039	4.507	4.381	3.610	4.797
MAX	8.1	6.4	5.9	5.4	5.6	7.5	8.3	6.7	5.4	7.4	4.3	8.0
MIN	6.3	4.1	4.0	4.2	4.5	4.3	6.6	5.2	4.0	3.7	3.1	3.1
AC-FT	427	331	300	299	284	364	444	371	268	269	222	285

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2002, BY WATER YEAR (WY)

	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	11.38	8.976	7.185	5.991	5.996	9.154	21.80	58.12	69.45	29.79	18.12	13.48																																																																														
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	6.01	5.05	4.26	3.51	3.47	4.11	7.46	6.04	4.51	4.38	3.61	4.80																																																																														
(WY)	2001	2001	1951	1951	1964	1977	2002	2002	2002	2002	2002	2002																																																																														

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1913 - 2002
ANNUAL TOTAL	7479.0	1948.4	
ANNUAL MEAN	20.49	5.338	21.89
HIGHEST ANNUAL MEAN			46.7
LOWEST ANNUAL MEAN			5.34
HIGHEST DAILY MEAN	130	May 20	246
LOWEST DAILY MEAN	3.1	Jan 31	2.0
ANNUAL SEVEN-DAY MINIMUM	3.4	Jan 27	2.7
MAXIMUM PEAK FLOW			310
MAXIMUM PEAK STAGE			3.17
INSTANTANEOUS LOW FLOW			1.4
ANNUAL RUNOFF (AC-FT)	14830	3860	15860
10 PERCENT EXCEEDS	64	7.1	54
50 PERCENT EXCEEDS	8.2	5.2	11
90 PERCENT EXCEEDS	4.1	3.9	5.4

e Estimated





RIO GRANDE BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981, 1986-98, September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
SEP 11...	0920	14	602	6.4	83	8.1	610	12.0	16.0	240	67.2	16.4	5.34
Date		SODIUM AD-SORP-TION RATIO (MG/L AS NA) (00931)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
SEP 11...	1	38.3	205	17.1	20.3	94.5	386	1.90	2.5	.24	.063	.14	.12
Date			PHOS-PHORUS TOTAL (MG/L AS P) (00665)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	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)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)		
SEP 11...			.17	<20	<.04	1.1	22	E.05	14.4	<1	7		

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value



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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
OCT 25...	1235	247	2.4	4.4	617	10.4	117	8.4	338	19.0	11.0	110	30.3	
FEB 19...	1130	440	3.8	3.6	612	11.2	108	7.9	251	5.0	4.5	83	24.5	
APR 10...	1130	281	6.9	6.1	604	9.4	116	8.5	319	21.0	14.0	100	30.0	
JUN 19...	1140	180	4.8	5.4	610	--	--	8.5	316	34.5	20.0	93	26.0	
Date	Time	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3 CO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT 25...	7.48	3.45	1	27.5	118	109	130	1	8.49	.8	26.4	43.8	214	
FEB 19...	5.33	2.71	.8	17.3	92	87	106	--	5.60	.5	30.9	29.6	170	
APR 10...	7.00	3.12	1	23.3	111	106	126	1	7.22	.6	26.5	40.3	202	
JUN 19...	6.78	3.31	1	28.9	109	100	117	2	8.43	.79	27.7	36.6	199	
Date	Time	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (MG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (MG/L AS SB) (01095)	ARSENIC DIS-SOLVED (MG/L AS AS) (01000)	BARIUM, DIS-SOLVED (MG/L AS BA) (01005)	
OCT 25...	<.01	.20	<.20	.02	.26	<.010	<.02	<.01	<.02	--	--	--	--	
FEB 19...	<.01	.20	.20	.03	.31	<.010	.03	.03	.04	9	E.05	3	24	
APR 10...	.02	<.20	.20	.06	.16	<.010	<.02	.02	.04	--	--	--	--	
JUN 19...	<.01	<.20	.40	.02	.14	<.010	<.02	<.01	.03	3	E.04	2n	28	
Date	Time	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)	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)
OCT 25...	--	50	--	--	--	--	E6	--	--	<.01	--	--	--	--
FEB 19...	<.06	30	E.04	E.7	.08	.8	10	E.08	7.6	E.01n	5.9	.29	<2	
APR 10...	--	40	--	--	--	--	E6	--	--	<.01	--	--	--	
JUN 19...	<.06	60	.04	1.0	.12	.8	<10	<.08	8.1	<.01	13.5	.68	<2	

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
OCT 25...	<2	--	--	--	94	22
FEB 19...	E1	<1	3	1.88	83	25
APR 10...	<2	--	--	--	93	29
JUN 19...	<2	<1	2	2.73	98	31

Remark codes used in this report:

< -- Less than  
E -- Estimated value

Value qualifier codes used in this report:

n -- Below the laboratory reporting level

08277470 RIO PUEBLO NEAR PENASCO, NM

LOCATION.--Lat 36°10'07", long 105°36'10", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.1, T.22 N., R.12 E., Taos County, Hydrologic Unit 13020101, on left bank, downstream side of 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 mi<sup>2</sup>.

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	e5.0	e5.4	e4.2	e6.4	18	7.7	2.5	2.3	3.4	2.8
2	11	10	e3.6	e4.6	e5.2	e6.2	20	6.6	2.5	2.2	3.7	2.7
3	11	10	e5.6	e4.0	e6.2	e5.6	21	6.2	2.3	2.1	5.0	2.8
4	11	9.9	e7.0	e3.6	e6.8	e7.0	22	5.2	2.8	2.1	7.3	3.0
5	9.7	9.9	e8.0	e4.4	e5.2	e7.8	25	2.8	4.5	2.5	8.6	2.6
6	8.8	10	e9.2	e4.7	e6.0	e7.3	24	2.4	2.3	3.6	5.4	2.6
7	8.9	10	e10	e5.1	e7.0	e7.0	26	2.1	2.1	3.8	4.4	2.9
8	8.6	10	e11	e4.8	e8.0	e7.3	27	1.9	2.0	6.6	2.0	2.8
9	9.9	10	e11	e5.4	e6.0	e7.8	27	1.9	1.9	19	1.5	1.8
10	9.6	9.4	e9.6	e6.6	e5.0	e7.7	25	1.9	1.6	36	1.2	4.5
11	9.4	9.3	e8.4	e9.0	e6.4	e7.3	26	1.8	1.5	16	1.2	5.0
12	9.2	9.8	e7.2	e7.4	e8.8	e8.3	27	2.1	1.4	11	1.0	5.1
13	11	10	e8.6	e6.4	e7.0	e9.3	29	2.2	1.3	7.9	0.98	3.4
14	12	10	e10	e5.6	e7.8	e9.4	31	2.7	1.3	5.5	1.00	3.7
15	9.8	e10	e9.0	e5.8	e8.3	e9.4	34	2.5	1.3	5.0	1.0	3.1
16	9.5	e9.8	e7.2	e6.2	e7.0	e9.2	35	1.2	1.3	6.1	1.3	2.7
17	9.3	e9.0	e8.6	e6.0	e7.6	e9.0	30	1.2	1.4	8.7	1.3	2.7
18	8.8	e8.2	e9.4	e5.6	e7.2	e8.7	29	1.3	1.3	5.6	1.6	5.3
19	8.8	e7.8	e7.8	e4.6	e6.8	e8.6	27	1.9	1.5	4.4	2.0	15
20	8.8	e8.4	e8.6	e3.6	e6.6	e8.8	23	2.2	1.6	1.9	3.1	11
21	8.8	e8.0	e9.2	e5.2	e6.2	e8.6	17	2.2	2.0	3.5	3.5	7.8
22	9.1	e7.4	e7.6	e7.2	e5.6	e9.3	14	2.0	3.2	2.3	3.1	6.4
23	9.3	e6.6	e6.8	e8.0	e5.4	e8.8	12	2.2	7.1	3.1	3.2	5.4
24	9.1	e8.0	e6.2	e5.4	e5.2	9.1	11	2.4	2.5	7.2	3.1	5.1
25	9.5	e8.4	e5.6	e6.1	e5.2	8.1	11	2.4	2.3	7.1	2.8	4.8
26	9.8	e8.3	e5.8	e6.8	e4.8	7.1	11	2.4	2.0	4.7	2.7	4.6
27	9.7	e8.6	e6.1	e7.6	e4.6	7.7	11	2.7	2.0	5.6	2.6	4.5
28	10	e7.6	e6.4	e8.8	e5.6	9.1	9.4	3.0	2.1	4.4	2.7	5.9
29	11	e6.4	e6.7	e9.8	---	11	8.3	2.7	2.3	3.6	3.5	7.4
30	10	e5.8	e6.4	e8.6	---	11	8.1	2.5	2.2	4.9	3.0	6.4
31	10	---	e5.6	e6.6	---	15	---	2.5	---	3.5	2.8	---
TOTAL	302.4	267.6	237.2	188.9	175.7	262.9	638.8	84.8	66.1	202.2	89.98	143.8
MEAN	9.755	8.920	7.652	6.094	6.275	8.481	21.29	2.735	2.203	6.523	2.903	4.793
MAX	12	11	11	9.8	8.8	15	35	7.7	7.1	36	8.6	15
MIN	8.6	5.8	3.6	3.6	4.2	5.6	8.1	1.2	1.3	1.9	0.98	1.8
AC-FT	600	531	470	375	349	521	1270	168	131	401	178	285

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2002, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	13.70	14.39	11.63	9.952	11.12	23.30	94.70	260.6	133.5	47.51	23.58	16.39
MAX	19.0	24.9	17.2	14.6	16.8	39.3	242	924	608	290	52.4	33.3
(WY)	1999	1999	1997	1992	1992	1997	1994	1994	1995	1995	1998	1993
MIN	9.75	8.92	7.65	6.09	6.27	8.48	21.3	2.74	2.20	6.52	2.90	4.79
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1992 - 2002
ANNUAL TOTAL	9814.2	2660.38	
ANNUAL MEAN	26.89	7.289	54.14
HIGHEST ANNUAL MEAN			124
LOWEST ANNUAL MEAN			7.29
HIGHEST DAILY MEAN	182	May 3	1720
LOWEST DAILY MEAN	3.6	Dec 2	0.98
ANNUAL SEVEN-DAY MINIMUM	5.9	Nov 28	1.1
MAXIMUM PEAK FLOW			88
MAXIMUM PEAK STAGE			3.53
INSTANTANEOUS LOW FLOW			a0.91
ANNUAL RUNOFF (AC-FT)	19470	5280	39220
10 PERCENT EXCEEDS	90	11	117
50 PERCENT EXCEEDS	10	6.4	14
90 PERCENT EXCEEDS	7.2	2.0	7.1

e Estimated

a Also Aug. 14.



## 08279000 EMBUDO CREEK AT DIXON, NM

LOCATION.--Lat 36°12'39", long 105°54'47", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

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 and 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.--Records good except for those estimated, which are poor. Diversions upstream from station for irrigation of about 6,600 acres, a small part of which is downstream from gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	20	32	31	22	29	23	7.5	2.4	1.5	1.8	1.9
2	12	22	35	33	e19	19	23	6.7	2.7	1.5	e1.8	1.8
3	12	22	39	21	e18	21	23	4.7	3.4	1.5	1.8	1.9
4	12	21	41	35	e19	e20	22	3.7	3.9	1.5	1.8	1.9
5	11	23	41	33	e18	e19	22	3.8	4.0	1.5	1.8	1.9
6	12	23	32	26	e20	e18	22	3.9	3.2	1.4	4.9	1.6
7	12	25	33	32	e22	e19	20	3.9	1.6	1.5	3.7	1.6
8	12	26	31	32	e19	e21	23	3.5	1.6	1.5	3.6	1.6
9	12	26	23	34	e17	22	22	3.4	1.6	1.5	3.6	1.6
10	13	26	27	35	e16	27	20	3.1	1.4	2.5	3.4	15
11	14	26	39	26	e17	31	17	3.0	1.5	6.4	2.0	5.8
12	17	27	37	e21	e16	28	15	2.7	1.5	8.3	1.9	5.2
13	20	27	26	e22	e17	32	16	2.4	1.4	3.4	1.8	5.0
14	20	27	e23	23	e22	34	13	3.9	1.6	1.9	1.9	4.2
15	18	26	e21	27	32	26	14	4.1	1.6	2.0	1.9	4.5
16	17	30	e24	36	27	26	16	3.7	1.7	e1.8	1.7	4.6
17	18	31	e23	e25	32	24	15	3.5	1.6	1.7	1.8	3.6
18	19	27	e24	e21	31	23	14	3.4	1.8	1.4	1.8	4.1
19	17	27	e23	e20	28	25	12	2.6	1.8	1.0	1.9	3.8
20	17	27	e27	e21	26	23	10	2.6	1.5	1.2	e1.9	2.4
21	16	25	36	e23	29	25	9.3	2.6	1.2	1.2	e1.8	2.1
22	14	26	37	e24	24	26	8.0	2.9	2.5	1.1	e1.7	1.7
23	14	34	26	e22	30	25	7.5	2.7	3.5	1.2	1.7	1.6
24	16	29	32	e21	32	25	7.4	2.8	1.7	1.0	1.8	1.7
25	17	31	27	e23	28	23	7.5	2.9	1.6	1.2	1.7	2.3
26	18	31	26	30	22	22	5.9	3.3	1.5	1.6	1.9	2.5
27	18	27	31	31	25	21	4.4	3.2	1.5	1.3	1.9	2.7
28	19	26	29	32	29	21	4.2	3.4	1.6	1.4	2.1	3.1
29	20	27	31	30	---	22	4.6	3.4	1.4	1.4	2.3	3.3
30	16	40	36	29	---	22	6.2	3.0	1.5	1.6	2.0	3.3
31	17	---	34	24	---	20	---	2.3	---	1.7	1.9	---
TOTAL	482	805	946	843	657	739	427.0	108.6	59.8	59.7	67.6	98.3
MEAN	15.55	26.83	30.52	27.19	23.46	23.84	14.23	3.503	1.993	1.926	2.181	3.277
MAX	20	40	41	36	32	34	23	7.5	4.0	8.3	4.9	15
MIN	11	20	21	20	16	18	4.2	2.3	1.2	1.0	1.7	1.6
AC-FT	956	1600	1880	1670	1300	1470	847	215	119	118	134	195

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2002, BY WATER YEAR (WY)

MEAN	37.69	36.24	31.63	29.02	30.66	46.70	141.1	309.1	197.6	50.06	49.57	40.75
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	3.50	1.99	0.86	2.18	2.79
(WY)	1951	1951	1951	1951	1951	1951	1972	2002	2002	1951	2002	1950

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1924 - 2002
ANNUAL TOTAL	18714.5	5293.0	
ANNUAL MEAN	51.27	14.50	83.64
HIGHEST ANNUAL MEAN			235 1941
LOWEST ANNUAL MEAN			12.8 1951
HIGHEST DAILY MEAN	337 May 19	41 Dec 4	2590 May 14 1941
LOWEST DAILY MEAN	8.8 Jul 13	1.0 Jul 19	0.20 Jun 27 1950
ANNUAL SEVEN-DAY MINIMUM	10 Jul 7	1.1 Jul 19	0.60 Jul 16 1951
MAXIMUM PEAK FLOW		151 Sep 10	a4200 Aug 29 1977
MAXIMUM PEAK STAGE		2.65 Sep 10	b7.10 Aug 29 1977
INSTANTANEOUS LOW FLOW		0.68 Jul 19	0.06 Jun 26 1950
ANNUAL RUNOFF (AC-FT)	37120	10500	60590
10 PERCENT EXCEEDS	142	31	209
50 PERCENT EXCEEDS	27	15	35
90 PERCENT EXCEEDS	12	1.6	13

e Estimated

a From rating curve extended above 1,600 ft<sup>3</sup>/s.

b Maximum gage height, 7.60 ft, Aug. 4, 1967.



## 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 2001 TO SEPTEMBER 2002												
Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY (NTU) (00076)	FIELD WATER UNFLTRD (NTU) (61028)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
MAR 19...	1355	528	9.5	9.6	614	10.6	113	8.4	185	12.5	8.5	34
APR 17...	1500	251	6.4	5.9	614	9.4	119	7.1	345	22.0	16.0	18
MAY 08...	1030	195	3.6	4.5	613	8.5	90	8.5	322	23.0	8.1	14
JUN 13...	1300	176	5.8	5.5	--	--	--	--	--	26.0	22.0	12
JUL 18...	1400	156	12	12	612	8.5	132	8.6	306	--	26.0	--
AUG 26...	1215	162	10	14	620	8.5	117	8.5	274	--	20.5	--
SEP 10...	1230	185	2300	1600	622	8.4	113	7.8	276	19.5	19.5	--



WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
AUG 14...	1430	2.9	590	7.5	117	8.6	333	28.0	24.5	130	34.3	10.6	2.89	
SEP 10...	1320	6.8	617	7.8	101	8.1	355	17.0	17.5	150	41.6	11.0	2.51	
Date	Time	SODIUM AD-SORP-TION RATIO (00931)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	
AUG 14...	.6	16.4	125	6.08	.18	11.7	43.6	201	<.01	.30	3.3	.02	<.02	
SEP 10...	.5	14.8	160	5.68	.19	17.9	32.6	223	.01	.30	.60	.04	<.02	
Date	Time		NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (MG/L) (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)				
AUG 14...			<.010	.02	<.01	.08	30	E7	74	158				
SEP 10...			<.010	<.02	.01	.09	30	E5	--	--				
Date	Time	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (82660)	ACETO-CHLOR, WATER FLTRD (49260)	ALA-CHLOR, WATER, DISS, REC (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (82673)	BUTYL-ATE, WATER, DISS, REC (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (04041)	DCPA WATER FLTRD 0.7 U GF, REC (82682)	
AUG 14...	1430	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	
Date	Time	DEETHYL ATRA-ZINE, WATER, DISS, REC (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (82677)	EPTC WATER FLTRD 0.7 U GF, REC (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (82672)	FONOFOS WATER DISS REC (04095)	LIN-URON WATER FLTRD 0.7 U GF, REC (82666)	LINDANE DIS-SOLVED (UG/L) (39341)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-THION, WAT FLT 0.7 U GF, REC (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (82667)
AUG 14...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
Date	Time	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN WATER FLTRD 0.7 U GF, REC (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FLTRD 0.7 U GF, REC (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (82683)	PER-METHRIN CIS WATER FLTRD 0.7 U GF, REC (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (82664)	PRO-METON, WATER, DISS, REC (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (82676)	PROP-ALOR, WATER, DISS, REC (04024)
AUG 14...		<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010

08284100 RIO CHAMA NEAR LA PUENTE, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, FLTRD DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
AUG 14...	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

## RIO GRANDE BASIN

08284160 AZOTEA TUNNEL AT OUTLET NEAR CHAMA, NM

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

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

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

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

COOPERATION.--Records provided by Bureau of Reclamation.

AVERAGE DISCHARGE.--32 years, 125 ft<sup>3</sup>/s, 90,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft<sup>3</sup>/s, May 17, 1978, gage height, 7.85 ft; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 140 ft<sup>3</sup>/s, Apr. 2; no flow most days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	113	7.1	1.5	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	140	4.0	6.5	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	119	2.0	15	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	122	2.0	12	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	118	2.0	15	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	95	8.1	13	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	88	31	11	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	70	28	9.6	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	70	12	7.6	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	75	14	6.5	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	70	11	3.5	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	90	16	1.0	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	75	12	1.0	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	99	27	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	12	126	28	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	114	33	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	86	26	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	62	30	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	53	32	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	40	29	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	4.0	25	31	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	6.5	26	21	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	28	35	7.6	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	9.6	58	2.5	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	11	73	3.0	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	4.0	59	4.0	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	6.5	53	4.0	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	33	41	3.5	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	56	46	2.0	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	108	25	2.0	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	97	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	375.60	2266	434.80	103.20	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	12.12	75.53	14.03	3.440	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	108	140	33	15	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	25	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	745	4490	862	205	0.00	0.00	0.00
CAL YR 2001	TOTAL	55747.70	MEAN	152.7	MAX	1000	MIN	0.00	AC-FT	110600		
WTR YR 2002	TOTAL	3179.60	MEAN	8.711	MAX	140	MIN	0.00	AC-FT	6310		

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 mi<sup>2</sup>.

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 ft<sup>3</sup>/s, 7,610 acre-ft/yr, prior to completion of Azotea tunnel. 32 years (water years 1971-2002), 137 ft<sup>3</sup>/s, 99,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,610 ft<sup>3</sup>/s, Mar. 12, 1985, gage height, 6.65 ft; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 136 ft<sup>3</sup>/s, Apr. 3; no flow most days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	116	6.0	1.5	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	113	3.0	11	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	136	1.5	11	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	128	0.50	12	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	111	0.50	11	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	90	0.50	12	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	81	21	11	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	68	23	8.6	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	63	12	6.5	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	66	9.1	4.5	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	66	7.1	3.0	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	81	10	1.5	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	69	9.1	0.50	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	85	17	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	4.5	117	21	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	106	26	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	83	22	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	57	23	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	47	26	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	32	24	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	1.0	18	26	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	7.1	19	21	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	17	15	6.0	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	11	47	2.0	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	5.5	60	2.0	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	11	53	2.0	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	3.5	46	2.5	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	18	38	3.0	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	43	36	3.0	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	66	27	2.0	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	105	---	2.0	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	292.60	2074	333.80	94.10	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	9.439	69.13	10.77	3.137	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	105	136	26	12	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	15	0.50	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	580	4110	662	187	0.00	0.00	0.00
CAL YR 2001	TOTAL	58714.50	MEAN	160.9	MAX	940	MIN	0.00	AC-FT	116500		
WTR YR 2002	TOTAL	2794.50	MEAN	7.656	MAX	136	MIN	0.00	AC-FT	5540		

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 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October and November 1962 (monthly discharge only), December 1962 to current year. (Seasonal 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 7,187.01 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to May 1, 2001, datum 1.84 ft higher. Prior to July 1, 1971, at site 1,100 ft upstream at higher datums.

REMARKS.--Records good except for those estimated, which are poor. Diversions upstream from station for irrigation of meadows and for off-channel stock tanks.

AVERAGE DISCHARGE.--11 years (water years 1963-73), 1.10 ft<sup>3</sup>/s, 797 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft<sup>3</sup>/s, July 30, 1968, gage height, 4.9 ft, site and datum then in use, from rating curve extended above 37 ft<sup>3</sup>/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 discharge, 20.5 ft<sup>3</sup>/s, Sept. 18, gage height, 3.89 ft; No flow during most of seasonal operation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
2	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
3	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
4	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
5	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
6	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
7	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
8	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
9	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
10	0.00	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
11	---	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
14	---	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	1.2
19	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
20	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
29	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
30	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
31	---	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	1.20
MEAN	---	---	---	---	---	---	---	0.000	0.000	0.000	0.000	0.040
MAX	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	1.2
MIN	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	2.4

e Estimated

08284510 HERON RESERVOIR NEAR LOS OJOS, NM

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.

DRAINAGE AREA.--193 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Mar. 24, 1971, nonrecording gage.

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.

COOPERATION.--Records provided by Bureau of Reclamation.

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, 340,220 acre-ft, Oct. 1, elevation, 7,175.26 ft; minimum, 167,630 acre-ft, Sept. 30, elevation, 7,136.52 ft.

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

(Based on survey by Bureau of Reclamation in 1986)

7,160	263,800
7,170	312,700
7,180	366,200
7,190	424,800

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340220	335790	311850	291070	279450	268280	256900	246740	245760	211690	182440	169260
2	340120	334980	311090	290680	279120	267860	256720	246700	245670	210460	181650	169220
3	340060	334140	310370	290340	278730	267440	256580	246660	245620	209200	180950	169150
4	339960	333450	309610	289940	278350	267020	256440	246610	245580	207990	180170	169150
5	339850	332650	308750	289500	277920	266640	256260	246570	245540	206820	179690	169080
6	339800	331800	307940	289110	277530	266260	256120	246480	245490	205490	178910	169040
7	339800	331110	307180	288820	277150	265800	255850	246480	245490	204320	178620	168970
8	339740	330220	306320	288420	276720	265470	255620	246480	245450	203130	177370	168900
9	339740	329430	305660	288080	276290	265100	255390	246430	245360	201970	176600	168830
10	339740	328640	304810	287740	275910	264680	255160	246390	245270	200940	175800	168940
11	339630	327850	304150	287450	275480	264400	254840	246340	244780	199910	175000	168900
12	339480	327060	303400	287060	275050	263930	254610	246340	243660	199280	174200	168870
13	339420	326220	302590	286670	274670	263460	254430	246300	242110	198340	173260	168900
14	339310	325340	301790	286230	274290	263040	254160	246300	240560	197430	172250	168800
15	339200	324600	301090	285890	273960	262670	253930	246300	238930	196450	171570	168690
16	339150	323820	300290	285550	273480	262300	253790	246300	237440	195590	171470	168520
17	339100	322980	299440	285160	273100	261880	253560	246300	236000	194700	171400	168410
18	338990	322150	298690	284770	272770	261470	253250	246340	234340	193810	171360	168970
19	338940	321320	297900	284380	272340	261140	252930	246340	232740	192920	170900	168870
20	338940	320600	297150	284000	271920	260720	252470	246250	231220	192030	170500	168760
21	338940	319720	296400	283560	271580	260360	252060	246250	229760	191260	170460	168690
22	338880	318990	295760	283170	271160	259980	251750	246160	228170	190420	170360	168520
23	338720	318220	295170	282780	270730	259610	251340	246070	226640	189580	170320	168370
24	338620	317340	294470	282400	270400	259240	250520	246070	224940	189230	170250	168230
25	338560	316670	293930	282060	269930	258880	249170	246030	222950	188090	170150	168130
26	338510	315900	293340	281620	269550	258510	248400	245940	221010	187250	170110	167950
27	338460	314870	292800	281240	269130	258280	248360	245890	219090	186460	169760	167880
28	338460	314260	292350	280900	268750	257910	248360	245890	217130	185660	169500	167840
29	338240	313590	292060	280560	---	257590	248400	245890	215220	184870	169430	167740
30	337600	312670	291860	280220	---	257360	247730	245850	213290	184040	169400	167630
31	336800	---	291420	279840	---	257220	---	245800	---	183260	169300	---
MAX	340220	335790	311850	291070	279450	268280	256900	246740	245760	211690	182440	169260
MIN	336800	312670	291420	279840	268750	257220	247730	245800	213290	183260	169300	167630
(+)	7174.62	7170.00	7165.76	7163.38	7161.05	7158.57	7156.48	7156.05	7148.47	7140.82	7136.99	7136.52
(++)	-3530	-24130	-21250	-11580	-11090	-11530	-9490	-1930	-32510	-30030	-13960	-1670
CAL YR 2001	MAX 342490	MIN 259480	(++)	+24030								
WTR YR 2002	MAX 340220	MIN 167630	(++)	-172700								

(+) Elevation, in feet, at end of month.  
(++) Change in contents, in acre-ft.

08284520 WILLOW CREEK BELOW HERON DAM, NM

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

DRAINAGE AREA.--193 mi<sup>2</sup>.

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

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

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

COOPERATION.--Records provided by Bureau of Reclamation.

AVERAGE DISCHARGE.--31 years, 132 ft<sup>3</sup>/s, 95,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,780 ft<sup>3</sup>/s, Dec. 18, 19, 1982; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 920 ft<sup>3</sup>/s, June 25-30; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	400	400	185	185	200	200	344	0.00	800	375	0.00
2	0.00	400	400	185	185	200	200	0.00	0.00	575	375	0.00
3	0.00	400	400	185	185	200	200	0.00	0.00	575	375	0.00
4	0.00	400	400	185	200	200	200	0.00	0.00	575	375	0.00
5	0.00	400	400	185	200	200	200	0.00	0.00	575	375	0.00
6	0.00	400	400	185	200	200	200	0.00	0.00	575	375	19
7	0.00	400	400	185	200	200	200	0.00	0.00	575	375	39
8	0.00	400	400	185	200	200	200	0.00	0.00	575	375	39
9	0.00	400	400	185	200	200	200	0.00	0.00	575	375	39
10	0.00	400	400	185	200	200	200	0.00	0.00	477	375	40
11	0.00	400	400	185	200	200	200	0.00	190	430	375	40
12	0.00	400	400	185	200	200	200	0.00	569	430	375	40
13	0.00	400	400	185	200	200	200	0.00	710	430	453	40
14	0.00	400	400	185	200	200	200	0.00	710	430	500	40
15	0.00	400	400	185	200	200	200	0.00	710	430	260	40
16	0.00	400	400	185	200	200	200	0.00	710	430	0.00	40
17	0.00	400	400	185	200	200	200	0.00	710	430	0.00	40
18	0.00	400	400	185	200	200	200	0.00	710	430	0.00	40
19	0.00	400	400	185	200	200	200	0.00	710	430	217	40
20	0.00	400	400	185	200	200	200	0.00	710	430	186	40
21	0.00	400	347	185	200	200	200	0.00	710	430	0.00	40
22	0.00	400	300	185	200	200	200	0.00	710	430	0.00	40
23	0.00	400	300	185	200	200	200	0.00	710	430	0.00	40
24	0.00	400	300	185	200	200	466	0.00	820	400	0.00	40
25	0.00	400	300	185	200	200	700	0.00	920	375	0.00	40
26	0.00	400	300	185	200	200	438	0.00	920	375	0.00	40
27	0.00	400	247	185	200	200	0.00	0.00	920	375	172	40
28	0.00	400	200	185	200	200	0.00	0.00	920	375	93	40
29	192	400	200	185	---	200	0.00	0.00	920	375	0.00	40
30	400	400	200	185	---	200	469	0.00	920	375	0.00	40
31	400	---	200	185	---	200	---	0.00	---	375	0.00	---
TOTAL	992.00	12000	10894	5735	5555	6200	6673.00	344.00	14909.00	14492	6381.00	976.00
MEAN	32.00	400.0	351.4	185.0	198.4	200.0	222.4	11.10	497.0	467.5	205.8	32.53
MAX	400	400	400	185	200	200	700	344	920	800	500	40
MIN	0.00	400	200	185	185	200	0.00	0.00	0.00	375	0.00	0.00
AC-FT	1970	23800	21610	11380	11020	12300	13240	682	29570	28740	12660	1940
CAL YR 2001	TOTAL	48475.00	MEAN	132.8	MAX	550	MIN	0.00	AC-FT	96150		
WTR YR 2002	TOTAL	85151.00	MEAN	233.3	MAX	920	MIN	0.00	AC-FT	168900		

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 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> 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 Jan.1935. Capacity 186,250 acre-ft from capacity table of 1987 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 Dec. 1972, for storage of contract water from San Juan-Chama Project. Rehabilitation of outlet works, completed in Dec. 1966, increased valve-controlled release from about 1,750 ft<sup>3</sup>/s to about 6,000 ft<sup>3</sup>/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, Sept. 29, 2000, gage height, 6,826.08 ft; no storage at times prior to December 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 112,010 acre-ft, Apr. 18-20, gage height, 6,875.42 ft; minimum, 7,920 acre-ft, Sept. 6, gage height, 6,796.83 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)

(Based on survey by Bureau of Reclamation in 1987)

6,820	25,620	6,865	89,870
6,825	30,720	6,875	111,000
6,830	36,330	6,885	135,900
6,830	42,400	6,895	164,400
6,840	48,980	6,900	179,800
6,845	56,100	6,901	183,040
6,850	63,730		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96850	78830	90750	99100	99520	100940	104000	104720	59040	35890	21620	10150
2	95580	79200	90950	99080	99540	100980	104320	103040	57540	35530	21090	9390
3	94360	79580	91440	99060	99580	101020	104670	101360	56070	35170	20500	8820
4	93250	79990	91940	99060	99630	101060	105160	99650	54480	34800	19990	8460
5	92240	80380	92220	99040	99670	101110	105730	97970	52930	34450	19700	8090
6	91250	80790	92580	99020	99710	101190	106220	96160	51280	34060	19570	7920
7	90280	81170	92970	99020	99770	101260	106820	94850	49460	33690	19450	7980
8	89230	81590	93340	99020	99860	101410	107220	94280	47620	33370	19250	8030
9	88280	81970	93700	99000	99880	101450	107690	92870	45880	33020	18950	8060
10	87440	82360	94080	99020	99920	101530	108200	91130	44210	32580	18560	8150
11	86640	82740	94500	99020	99960	101660	108700	89400	42850	32030	18170	8190
12	85980	83140	94890	99020	100030	101730	109350	87630	42110	31550	17790	8190
13	85430	83510	95260	99000	100070	101860	109790	85880	41620	30980	17500	8220
14	84780	83880	95620	98970	100150	102010	110380	84400	41160	30470	17320	8230
15	84200	84290	96010	98950	100200	102090	111040	83140	40650	30030	17240	8240
16	83730	84660	96340	99020	100240	102200	111530	81860	40240	29580	16870	8180
17	83360	85060	96730	99040	100340	102260	111800	80580	39820	29090	16530	8130
18	82980	85410	97100	99080	100380	102370	112010	79340	39060	28620	16140	8510
19	82610	85810	97450	99100	100450	102440	112010	78050	38670	28170	16060	8620
20	82230	86190	97720	99100	100510	102500	112010	76820	38170	27710	16090	8530
21	81860	86540	98100	99120	100560	102610	111970	75520	37680	27220	15790	8410
22	81370	86980	98280	99140	100620	102690	111730	74150	37220	26800	15450	8290
23	80780	87360	98470	99180	100660	102780	111180	72630	36750	26380	15010	8110
24	80160	87750	98660	99200	100700	102870	110790	71130	36490	25960	14560	8090
25	79630	88230	98830	99230	100770	103020	110770	69560	36450	25440	14120	8080
26	79020	88570	99020	99270	100790	103080	110750	67970	36350	24910	13680	8060
27	78440	88960	99080	99290	100830	103170	109130	66420	36280	24360	13440	8020
28	77870	89290	99080	99310	100870	103280	107800	64880	36190	23830	13150	8000
29	77700	89680	99080	99370	---	103450	106570	63410	36110	23290	12480	7970
30	78050	90170	99120	99460	---	103670	105770	61990	36000	22720	11720	7960
31	78460	---	99120	99480	---	103760	---	60520	---	22190	10920	---
MAX	96850	90170	99120	99480	100870	103760	112010	104720	59040	35890	21620	10150
MIN	77700	78830	90750	98950	99520	100940	104000	60520	36000	22190	10920	7920
(+)	6858.85	6865.15	6869.57	6869.74	6870.40	6871.74	6872.66	6847.94	6829.72	6816.34	6801.76	6796.90
(++)	-19820	+11710	+8950	+360	+1390	+2890	+2010	-45250	-24520	-13810	-11270	-2960

CAL YR 2001 MAX 180550 MIN 20810 (++) +75180  
WTR YR 2002 MAX 112010 MIN 7920 (++) -90320

(+) Gage height, in feet, at end of month.  
(++) Change in contents, in acre-ft.



08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, NM

LOCATION.--Lat 36°19'06", long 106°35'50", Rio Arriba County, Hydrologic Unit 13020102, on left bank 40 ft downstream from site of former bridge, 7.7 mi downstream from Rio Gallina, 9.0 mi northwest of Youngsville, 15.6 mi upstream from Abiquiu Dam, 30.3 mi downstream from El Vado Dam, and at mile 47.4.

DRAINAGE AREA.--1,600 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> probably is noncontributing.

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. Aug. 1961 to Oct. 1998, water-stage recorder at present site at datum 3.00 ft higher.

REMARKS.--Records good. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	689	220	224	227	201	212	210	877	743	886	587	374
2	661	219	224	227	208	204	210	881	741	738	600	372
3	594	219	225	228	214	212	211	886	747	736	615	353
4	571	219	225	230	210	211	210	890	794	735	619	196
5	500	220	228	230	208	210	211	889	779	732	633	189
6	499	221	224	226	204	211	212	886	790	734	667	187
7	498	220	224	231	209	212	215	873	872	734	481	67
8	498	226	224	229	208	219	218	358	870	732	464	29
9	497	226	225	228	207	208	214	489	866	731	458	26
10	480	224	226	231	207	210	214	892	861	715	513	122
11	419	223	227	231	206	210	213	895	859	655	514	184
12	397	225	227	230	206	212	213	895	886	635	517	72
13	314	224	226	230	206	215	213	895	939	631	519	59
14	313	225	228	231	206	215	213	830	938	629	520	71
15	312	225	230	232	207	213	212	665	927	630	475	54
16	298	226	228	229	207	212	216	661	898	628	200	51
17	216	226	227	209	208	212	216	660	941	627	194	63
18	213	226	229	204	209	212	262	659	974	651	192	94
19	213	225	228	202	209	211	270	659	935	624	191	183
20	213	226	229	209	215	211	315	659	932	625	192	141
21	213	226	226	209	217	211	316	657	935	627	218	134
22	221	229	226	212	218	212	333	654	946	734	131	132
23	317	237	228	213	217	210	454	753	931	1030	217	131
24	317	230	229	210	223	210	616	770	926	744	218	130
25	318	228	226	209	226	213	696	800	922	629	217	75
26	318	224	230	211	217	212	704	798	926	598	215	63
27	317	224	232	209	217	211	701	789	941	592	223	65
28	321	224	228	207	212	209	701	786	942	592	231	79
29	306	223	229	207	---	210	700	776	940	589	329	79
30	221	225	232	208	---	211	758	723	938	590	330	81
31	219	---	228	208	---	211	---	727	---	587	374	---
TOTAL	11483	6735	7042	6797	5902	6552	10447	23632	26639	21120	11854	3856
MEAN	370.4	224.5	227.2	219.3	210.8	211.4	348.2	762.3	888.0	681.3	382.4	128.5
MAX	689	237	232	232	226	219	758	895	974	1030	667	374
MIN	213	219	224	202	201	204	210	358	741	587	131	26
AC-FT	22780	13360	13970	13480	11710	13000	20720	46870	52840	41890	23510	7650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)

	238.3	191.5	283.0	165.9	192.7	333.6	860.0	1684	907.8	429.1	398.7	343.1
MEAN	238.3	191.5	283.0	165.9	192.7	333.6	860.0	1684	907.8	429.1	398.7	343.1
MAX	737	676	1273	431	495	1050	1985	3741	2619	841	784	1036
(WY)	1998	1987	1976	1987	1987	1985	1985	1984	1995	2000	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

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1971 - 2002

ANNUAL TOTAL	114293	142059	
ANNUAL MEAN	313.1	389.2	a503.9
HIGHEST ANNUAL MEAN			823
LOWEST ANNUAL MEAN			204
HIGHEST DAILY MEAN	2100	May 22	1030
LOWEST DAILY MEAN	98	Aug 23	26
ANNUAL SEVEN-DAY MINIMUM	109	Jan 10	66
MAXIMUM PEAK FLOW			2830
MAXIMUM PEAK STAGE			9.08
INSTANTANEOUS LOW FLOW			c7.5
ANNUAL RUNOFF (AC-FT)	226700	281800	365000
10 PERCENT EXCEEDS	690	860	1140
50 PERCENT EXCEEDS	219	227	235
90 PERCENT EXCEEDS	113	204	67

a Average discharge for 9 years (water years 1962-70), 358 ft<sup>3</sup>/s, 259,400 acre-ft/yr, prior to release of transmountain water.

b Maximum gage height, 9.08 ft, July 22, 2002.

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 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> probably is 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. Army 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 1990 survey. No dead storage. Reservoir is used for flood control and, since Mar. 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 Dec. 1975. U.S. Army Corps of Engineers satellite telemetry 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, 156,450 acre-ft, Mar. 19 and 20, elevation, 6,212.88 ft; minimum, 47,220 acre-ft, Sept. 30, elevation, 6,174.78 ft.

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

(Based on survey by U.S. Army Corps of Engineers in 1997)

6,180	57,260	6,200	111,760
6,190	81,920	6,220	183,880

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115050	110200	120790	131540	141890	151550	154230	130640	109440	98070	89060	59610
2	115020	110550	121120	131920	142210	151840	153790	130290	108680	97650	88570	58870
3	115020	110900	121460	132270	142530	152140	153350	129980	107870	97320	88400	58120
4	114980	111250	121860	132620	142850	152500	152950	129670	107020	97020	88460	57260
5	114860	111630	122190	133000	143180	152870	152180	129360	106210	96780	88830	55900
6	114700	111980	122530	133350	143460	153240	151330	129150	105400	96540	89610	54630
7	114540	112330	122900	133700	143820	153680	150490	128770	104800	96300	89840	53480
8	114370	112780	123240	134050	144140	154050	149760	127670	104030	96240	89870	52490
9	114310	113190	123540	134400	144470	154340	148990	126670	103380	96060	89520	51470
10	114280	113540	123880	134780	144760	154640	148120	125920	102700	95680	88980	51450
11	114250	113890	124280	135130	145040	155010	147180	125200	102020	95260	88370	51660
12	114180	114250	124620	135480	145510	155300	146120	124450	101200	94880	87510	51530
13	114060	114600	124960	135830	145940	155640	144970	123370	100490	94490	86370	51360
14	113930	114950	125270	136190	146300	155970	143820	122390	99790	94080	85180	51190
15	113830	115240	125610	136540	146670	156120	142740	121660	99130	93640	83840	51010
16	113510	115600	125920	136920	147060	156230	141530	121120	98580	93280	82190	50520
17	112900	115980	126260	137280	147430	156340	140280	120430	98190	92900	80480	49880
18	112200	116340	126600	137560	147830	156420	139010	119570	97950	92490	78760	49440
19	111630	116700	126950	137800	148120	156450	137800	118720	97650	91990	77150	49380
20	111180	117050	127330	138050	148520	156450	136780	117770	97350	91470	75740	49380
21	110710	117340	127770	138300	148920	156300	135660	116820	97380	90880	73950	49380
22	110390	117800	128050	138650	149280	156040	134610	115980	97560	91200	72160	49400
23	110300	118160	128360	138970	149610	155790	133870	115340	97770	92110	70550	49400
24	110200	118520	128700	139260	149940	155530	133420	114790	98160	92400	69040	49380
25	110170	118880	129010	139570	150230	155380	133110	114150	98370	92400	67540	49160
26	110040	119170	129360	139930	150560	155340	132720	113450	98430	92170	66240	48700
27	109920	119470	129700	140280	150890	155340	132270	112810	98310	91900	64800	48300
28	109760	119770	130050	140640	151260	155300	131850	112200	98310	91580	63400	47960
29	109540	120100	130430	141000	---	155080	131400	111660	98310	91000	62370	47620
30	109570	120460	130780	141350	---	154820	130980	111090	98310	90280	61400	47220
31	109850	---	131160	141600	---	154570	---	110260	---	89700	60480	---
MAX	115050	120460	131160	141600	151260	156450	154230	130640	109440	98070	89870	59610
MIN	109540	110200	120790	131540	141890	151550	130980	110260	97350	89700	60480	47220
(+)	6199.40	6202.69	6205.83	6208.80	6211.47	6212.37	6205.78	6199.53	6195.67	6192.75	6181.53	6174.78
(++)	-5260	+10610	+10700	+10440	+9660	+3310	-23590	-20720	-11950	-8610	-29220	-13260
CAL YR 2001	MAX 153500	MIN 91500	(++) +39840									
WTR YR 2002	MAX 156450	MIN 47220	(++) -67890									

(+) Elevation, in feet, at end of month.

(++) Change in contents, in acre-feet.

08287000 RIO CHAMA BELOW ABIQUIU DAM, NM

LOCATION.--Lat 36°14'12", long 106°24'59", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.8, T.23 N., R.5 E., Rio Arriba County, Hydrologic Unit 13020102, on right bank 0.8 mi downstream from Abiquiu Dam, 5.9 mi northwest of Abiquiu, and at mile 31.3.

DRAINAGE AREA.--2,147 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> is probably noncontributing.

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

REVISED 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 those estimated, which are fair. Flow regulated 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	772	38	43	45	36	25	419	985	e1130	1010	931	801
2	690	39	43	45	36	25	385	1010	e1120	980	894	800
3	651	39	41	45	36	25	384	1060	e1120	926	789	719
4	593	39	43	45	36	25	445	1050	e1190	905	639	739
5	561	39	43	45	36	25	553	987	e1200	876	465	808
6	563	40	43	45	30	25	654	951	1190	856	331	871
7	592	42	43	45	25	25	682	951	1190	862	355	658
8	615	43	43	45	25	25	601	986	1190	865	469	576
9	577	44	43	45	25	26	566	1000	1190	865	611	575
10	510	44	43	45	25	26	631	1010	1180	887	773	311
11	476	43	44	45	25	26	654	1160	1240	872	824	90
12	428	43	47	45	25	26	714	1430	1270	856	951	131
13	392	43	42	45	25	26	768	1540	1270	853	1050	235
14	371	42	42	45	25	53	777	1330	1280	852	1070	164
15	e335	42	45	45	25	98	817	1030	1270	854	1100	106
16	e425	43	45	45	25	115	732	910	1240	825	1060	251
17	e514	43	45	45	25	115	849	991	1120	837	1000	389
18	552	43	45	45	25	153	882	1050	1070	864	988	354
19	548	43	44	45	25	179	857	1080	1080	901	931	225
20	464	43	44	45	25	201	821	1160	1080	924	928	157
21	412	43	44	45	25	245	817	1120	1070	923	969	136
22	366	43	44	45	25	298	810	1060	1000	711	994	136
23	331	43	44	45	25	321	810	1030	810	561	968	136
24	330	43	44	42	25	320	807	1030	687	630	922	135
25	332	43	44	36	25	283	831	1100	788	699	894	192
26	358	43	44	36	25	221	865	1130	946	750	892	267
27	428	43	44	36	25	218	867	1120	1000	743	875	284
28	410	43	44	36	25	199	917	1110	979	740	867	286
29	394	43	45	36	---	201	945	1050	956	883	837	288
30	268	43	45	36	---	291	960	1030	967	978	814	288
31	65	---	45	36	---	427	---	e1040	---	949	803	---
TOTAL	14323	1265	1358	1329	760	4268	21820	33491	32823	26237	25994	11108
MEAN	462.0	42.17	43.81	42.87	27.14	137.7	727.3	1080	1094	846.4	838.5	370.3
MAX	772	44	47	45	36	427	960	1540	1280	1010	1100	871
MIN	65	38	41	36	25	25	384	910	687	561	331	90
AC-FT	28410	2510	2690	2640	1510	8470	43280	66430	65100	52040	51560	22030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
MEAN	305.4	275.3	281.7	174.8	226.4	395.1	841.4	1191	1071	661.5	507.1	454.0
MAX	1261	1181	1308	860	1708	1668	1894	2055	2418	1488	1135	1199
(WY)	1988	1980	1976	1986	1987	1987	1985	1983	1984	1973	2000	1987
MIN	44.9	42.2	43.8	35.7	27.1	50.6	111	170	184	201	98.4	64.4
(WY)	1979	2002	2002	1978	2002	2001	1977	2001	1976	1972	1979	1972

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1971 - 2002
ANNUAL TOTAL	99275	174776	
ANNUAL MEAN	272.0	478.8	a533.0
HIGHEST ANNUAL MEAN			872
LOWEST ANNUAL MEAN			213
HIGHEST DAILY MEAN	1030	1540	2660
LOWEST DAILY MEAN	38	25	10
ANNUAL SEVEN-DAY MINIMUM	39	25	21
ANNUAL RUNOFF (AC-FT)	196900	346700	386200
10 PERCENT EXCEEDS	749	1060	1530
50 PERCENT EXCEEDS	148	385	310
90 PERCENT EXCEEDS	43	34	52

e Estimated

a Average discharge for 9 years (water years 1962-70), 384 ft<sup>3</sup>/s, 278,200 acre-ft/yr, prior to release of transmountain water.



08290000 RIO CHAMA NEAR CHAMITA, NM

LOCATION.--Lat 36°04'26", long 106°06'40", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> probably is 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.--Water-discharge records fair except for those estimated, which are poor. 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 Jan. 1935 and Abiquiu Reservoir (station 08286900), 29.3 mi upstream since Feb. 1963. Since May 1971 flow affected by release of transmountain water from Heron 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 ft<sup>3</sup>/s. Another major flood occurred in 1884, from newspaper accounts.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	767	80	e56	e66	e59	52	433	939	1150	1000	927	807
2	615	61	e58	e66	e59	50	376	972	1140	997	942	805
3	619	54	e63	e65	e59	51	385	1050	1150	936	861	742
4	568	51	e66	e71	e60	52	412	1050	1190	900	697	713
5	513	46	e66	e69	e60	57	505	1030	1200	894	560	786
6	499	42	e62	e67	e59	54	649	953	1190	852	350	847
7	515	42	e62	e71	e59	53	710	964	1210	866	292	779
8	566	37	e62	e68	59	53	684	991	1210	868	366	603
9	563	43	e62	e67	55	53	571	1030	1200	971	482	634
10	510	45	e62	e67	57	51	644	1010	1180	938	687	655
11	449	50	e63	e67	60	53	646	1100	1200	916	785	194
12	429	49	e63	e67	56	53	670	1380	1270	856	824	137
13	367	48	e63	e67	56	53	737	1590	1260	842	995	208
14	362	48	e64	e67	55	55	750	1420	1260	845	1030	227
15	316	48	e64	e67	56	77	756	1120	1260	849	1100	133
16	330	51	e64	e67	54	121	712	906	1250	832	1080	112
17	457	58	e65	e67	55	132	764	958	1170	793	996	340
18	502	57	e65	e66	54	134	806	1050	1090	841	991	418
19	531	49	e66	e65	55	188	862	1050	1090	858	917	346
20	484	47	e66	e65	54	197	792	1170	1090	907	899	219
21	389	45	e65	e66	56	232	800	1160	1110	953	922	155
22	382	48	e65	e66	54	275	806	1110	1120	833	973	140
23	314	55	e65	e66	54	305	799	1060	999	500	970	134
24	313	60	e65	e66	55	326	794	1050	736	557	927	115
25	318	58	e65	e65	54	321	797	1070	741	630	883	121
26	322	53	e65	e62	52	264	859	1130	918	740	872	243
27	378	52	e66	e59	53	219	851	1110	1000	705	851	284
28	448	e53	e66	e58	53	186	888	1130	995	692	867	270
29	335	e56	e66	e58	---	196	931	1070	955	765	865	267
30	421	e56	e66	e58	---	200	926	1020	945	946	823	267
31	136	---	e66	e59	---	365	---	1040	---	931	814	---
TOTAL	13718	1542	1982	2025	1572	4478	21315	33683	33279	26013	25548	11701
MEAN	442.5	51.40	63.94	65.32	56.14	144.5	710.5	1087	1109	839.1	824.1	390.0
MAX	767	80	66	71	60	365	931	1590	1270	1000	1100	847
MIN	136	37	56	58	52	50	376	906	736	500	292	112
AC-FT	27210	3060	3930	4020	3120	8880	42280	66810	66010	51600	50670	23210
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)												
MEAN	320.0	302.4	313.1	214.9	267.9	461.6	1079	1517	1067	628.1	490.5	443.8
MAX	1273	1224	1291	876	1677	1705	2534	2741	2346	1477	1114	1164
(WY)	1988	1980	1976	1986	1987	1987	1985	1983	1984	1983	2000	1987
MIN	37.3	51.4	63.9	63.5	56.1	85.1	120	204	117	170	95.5	83.1
(WY)	1979	2002	2002	1975	2002	1977	1977	1972	1976	1972	1979	1974
SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1971 - 2002												
ANNUAL TOTAL	112897			176856								
ANNUAL MEAN	309.3			484.5			a593.2					
HIGHEST ANNUAL MEAN							923 1987					
LOWEST ANNUAL MEAN							234 1972					
HIGHEST DAILY MEAN				1020			1590			May 13 1985		
LOWEST DAILY MEAN				37			Nov 8			1.2 Sep 16 1971		
ANNUAL SEVEN-DAY MINIMUM				44			Nov 5			1.7 Sep 10 1971		
MAXIMUM PEAK FLOW							1950			b15000 May 22 1920		
MAXIMUM PEAK STAGE							5.86			Jul 9 c11.68 Sep 1 1994		
INSTANTANEOUS LOW FLOW							28			Jan 20		
ANNUAL RUNOFF (AC-FT)	223900			350800			429700					
10 PERCENT EXCEEDS	748			1070			1650					
50 PERCENT EXCEEDS	180			367			338					
90 PERCENT EXCEEDS	63			54			77					

e Estimated  
a Average discharge for 58 years (water years 1913-70), 541 ft<sup>3</sup>/s, 392,000 acre-ft/yr, prior to release of transmountain water.

b From rating curve extended above 2,000 ft<sup>3</sup>/s.

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



08290000 RIO CHAMA NEAR CHAMITA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	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)	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)
MAR 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	30	--	--	--	--	<10	--	--	<.01	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	84	<.06	30	E.03	<.8	.15	1.5	<10	<.08	3.7	E.01n	1.9	1.58
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDEd (MG/L) (80154)
MAR 20...	--	--	--	--	--	421	--
APR 18...	--	--	--	--	--	543	--
30...	--	<2	--	--	--	332	18
MAY 08...	--	--	--	--	--	157	--
JUN 14...	--	--	--	--	--	146	--
AUG 14...	<2	E2	<1	1	.98	--	--
29...	--	--	--	--	--	--	--
SEP 13...	--	--	--	--	--	--	--

Remark codes used in this report:

- < -- Less than
- E -- Estimated value

Value qualifier codes used in this report:

- k -- Counts outside acceptable range
- n -- Below the laboratory reporting level



08294195 RIO NAMBE ABOVE NAMBE FALLS DAM NEAR NAMBE, NM

LOCATION.--Lat 35°51'00", long 105°53'40", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.29, T.19 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, on Nambe Indian Reservation, 0.6 mi upstream from Nambe Falls, 3.4 mi upstream from Rio En Medio, 5.0 mi southeast of Nambe Pueblo, and 6.0 mi southeast of Nambe.

DRAINAGE AREA.--25 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 2001 to September 2002.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,885 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19 ft<sup>3</sup>/s, July 19, 2002, gage height 0.87 ft; minimum, no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19 ft<sup>3</sup>/s, July 19, gage height 0.87 ft; minimum, no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.7	4.8	3.2	e2.6	3.2	4.3	3.3	1.8	0.49	2.0	1.8
2	3.8	3.6	4.6	3.2	e2.3	e3.9	4.4	3.1	2.0	0.16	1.8	1.8
3	3.7	3.6	4.5	3.3	1.9	e3.7	4.3	3.1	1.7	0.61	3.3	1.9
4	3.7	3.7	4.4	3.2	1.7	e3.6	4.1	3.0	2.0	1.4	5.5	2.3
5	3.6	3.7	4.3	3.1	1.6	e3.7	4.2	3.0	2.7	0.79	3.5	2.0
6	3.6	3.6	e4.1	3.1	e1.7	3.5	4.1	2.9	2.2	0.79	3.3	1.9
7	3.6	3.6	4.3	3.2	1.8	2.6	4.9	3.0	1.9	2.5	3.2	1.8
8	3.6	3.6	e4.4	3.2	1.9	2.5	4.6	3.0	1.8	5.6	3.9	2.2
9	4.0	3.6	e3.8	2.9	1.6	e3.2	5.0	3.0	1.5	5.9	3.0	3.1
10	3.8	3.8	e3.6	2.8	1.9	e3.8	4.8	3.0	1.3	4.3	2.7	4.4
11	3.6	3.8	3.5	e2.6	2.0	2.7	5.2	2.9	1.1	2.7	2.5	6.2
12	3.7	3.8	e3.6	e2.4	2.1	3.0	5.1	2.8	0.97	2.4	2.3	4.8
13	3.8	3.9	e3.7	2.4	2.0	3.5	5.1	2.9	0.85	1.9	2.3	4.4
14	3.8	3.9	e3.8	e2.5	1.6	3.7	5.0	2.9	0.89	1.6	2.2	5.0
15	3.8	4.1	3.8	2.4	1.6	e3.6	5.0	2.9	1.6	1.9	2.1	3.6
16	3.7	4.3	e3.5	2.4	1.8	3.9	5.0	2.7	0.47	1.7	2.2	3.4
17	3.7	4.2	e3.2	2.4	1.6	e3.4	4.4	2.6	0.28	2.4	2.2	3.2
18	3.7	4.0	3.2	e2.6	1.6	e3.7	4.5	3.1	0.09	2.1	2.1	3.4
19	3.6	3.8	3.1	e3.0	1.5	e3.8	4.3	3.4	0.00	2.6	2.5	5.4
20	3.6	e4.0	3.3	e3.4	1.8	e3.0	4.4	3.4	0.00	3.9	3.3	4.7
21	3.6	e4.2	3.4	e3.2	1.5	3.1	4.0	3.3	0.38	6.8	2.6	4.1
22	3.6	4.1	3.3	3.1	e1.7	e3.4	3.9	3.2	1.4	4.5	2.5	3.6
23	3.7	4.1	3.9	2.4	1.8	3.5	3.8	3.2	1.1	3.4	2.3	3.6
24	3.7	3.7	3.4	e2.3	1.9	3.3	3.8	3.1	0.39	3.4	2.2	3.5
25	3.6	4.0	e4.2	e2.2	e1.8	2.9	3.8	3.0	0.05	4.3	e2.0	3.4
26	3.6	e4.2	e4.3	2.1	e2.0	2.7	3.7	2.9	0.00	2.6	e1.8	3.4
27	3.6	e4.5	e4.1	1.9	e2.1	3.1	3.7	2.8	0.00	2.3	1.7	3.5
28	3.9	e4.7	e3.8	1.8	e2.7	3.5	3.4	2.5	0.40	2.0	1.9	e3.4
29	3.9	e5.2	3.8	1.8	---	3.8	3.5	2.4	0.31	1.9	2.2	e3.4
30	3.8	e5.1	3.5	2.2	---	3.5	3.3	2.1	0.12	1.9	2.0	e3.3
31	3.7	---	3.3	e2.4	---	4.0	---	2.0	---	2.2	1.8	---
TOTAL	115.0	120.1	118.5	82.7	52.1	104.8	129.6	90.5	29.30	81.04	78.9	102.5
MEAN	3.710	4.003	3.823	2.668	1.861	3.381	4.320	2.919	0.977	2.614	2.545	3.417
MAX	4.0	5.2	4.8	3.4	2.7	4.0	5.2	3.4	2.7	6.8	5.5	6.2
MIN	3.6	3.6	3.1	1.8	1.5	2.5	3.3	2.0	0.00	0.16	1.7	1.8
AC-FT	228	238	235	164	103	208	257	180	58	161	156	203

WTR YR 2002 TOTAL 1105.04 MEAN 3.028 MAX 6.8 MIN 0.00 AC-FT 2190

e Estimated

## 08294200 NAMBE FALLS RESERVOIR NEAR NAMBE, NM

LOCATION.--Lat 35°50'46", long 105°54'17", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>, sec.29, T.19 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, on Nambe Indian Reservation, 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 mi<sup>2</sup>.

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-inch and two 12-inch 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, 1,630 acre-ft, May 1 and 2, elevation 6,819.38 ft; minimum, 748 acre-ft, Sept. 7, elevation, 6,796.98 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	873	985	1120	1240	1340	1460	1630	931	899	982	753
2	1100	874	990	1120	1250	1340	1460	1630	929	898	980	751
3	1100	e876	993	1120	1250	1350	1460	1620	927	899	985	750
4	1100	883	997	1130	1260	1350	1470	1590	927	900	992	750
5	1100	887	1000	e1130	1260	1350	1480	1550	927	901	993	749
6	1100	891	1000	e1140	1260	1360	1480	1510	926	901	992	749
7	1100	895	1010	1140	1270	1360	1490	1480	926	906	994	748
8	1100	900	1010	1150	1270	1360	1500	1440	926	919	995	749
9	1100	904	e1010	1150	1270	1370	1510	1410	925	929	995	750
10	1100	908	1020	1160	1280	1370	1510	1380	924	936	994	757
11	1100	912	1020	1160	1280	1370	1520	1350	923	940	992	770
12	1100	916	1030	1160	1280	1380	1530	1310	923	939	989	771
13	1100	920	1030	1170	1290	1380	1540	1280	923	934	987	774
14	1100	924	1040	1170	1290	1380	1540	1240	924	931	988	777
15	1100	928	1040	1180	1300	1390	1550	1210	925	930	983	775
16	1100	933	1050	1180	1300	1390	1560	1170	925	925	978	772
17	1100	937	1050	1190	1300	1390	1570	1130	925	923	975	768
18	1100	941	1050	1190	1310	1390	1570	1090	924	922	972	767
19	1070	945	1060	1190	1310	1400	1580	1060	923	948	970	769
20	1040	948	1060	1200	1310	1400	1580	1030	918	957	971	770
21	1000	951	1070	1200	1320	1410	1590	1000	911	974	969	769
22	971	955	1070	1200	1320	1410	1590	973	908	980	967	767
23	941	958	1080	1210	1320	1410	1600	943	902	987	963	765
24	916	962	e1080	1210	1330	1420	1600	934	900	985	960	762
25	913	965	1080	1220	1330	1420	1600	934	899	992	956	760
26	915	967	e1090	1220	1330	1420	1610	934	899	991	930	758
27	917	968	e1090	1220	1340	1420	1610	934	900	989	897	755
28	920	971	e1100	1230	1340	1430	1610	936	900	990	865	755
29	923	975	1100	1230	---	1440	1610	934	900	983	833	754
30	906	980	1110	1240	---	1440	1620	934	899	984	801	752
31	881	---	1110	1240	---	1450	---	935	---	983	769	---
MAX	1100	980	1110	1240	1340	1450	1620	1630	931	992	995	777
MIN	881	873	985	1120	1240	1340	1460	934	899	898	769	748
(+)	6801.33	6804.29	6807.83	6810.91	6813.20	6815.52	6819.25	6802.88	6801.88	6804.36	6797.72	6797.14
(++)	-209	+99	+130	+130	+100	+110	+170	-685	-36	+84	-214	-17

CAL YR 2001 MAX 2040 MIN 873 (++) -196  
WTR YR 2002 MAX 1630 MIN 748 (++) -338

e Estimated

(+) Elevation, in feet, at end of month  
(++) Change in contents, in acre-feet

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

LOCATION.--Lat 35°50'46", long 105°54'17", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

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-inch and two 12-inch diameter pipes.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	7.7	1.7	1.0	1.1	1.1	1.3	1.5	2.5	0.92	2.6	9.4
2	2.9	3.3	1.7	1.0	1.1	1.1	1.3	1.6	2.5	0.91	2.6	2.2
3	3.3	1.5	1.7	0.95	1.1	1.1	1.2	6.2	2.4	0.92	2.4	1.9
4	4.0	1.4	1.7	0.96	1.2	1.1	1.2	20	2.2	0.94	2.7	1.5
5	4.0	1.4	1.7	0.94	1.2	1.1	1.3	20	2.3	0.92	2.7	1.5
6	3.9	1.4	1.7	0.95	1.2	1.1	1.3	20	2.4	0.94	2.7	1.4
7	4.0	1.4	1.7	0.96	1.2	1.1	1.4	20	2.0	0.96	2.8	1.5
8	4.0	1.4	1.6	0.98	1.2	1.1	1.4	20	1.8	0.97	2.7	1.6
9	4.0	1.4	1.7	0.97	1.2	1.1	1.4	19	1.7	0.98	2.7	1.6
10	4.0	1.4	1.5	0.98	1.2	1.1	1.4	18	1.6	0.99	2.7	1.6
11	4.0	1.4	1.2	0.99	1.1	1.1	1.4	18	1.3	0.96	2.7	1.7
12	4.0	1.4	1.1	0.99	1.1	1.1	1.4	18	1.2	2.2	2.6	3.6
13	4.0	1.4	1.1	0.99	1.1	1.1	1.4	19	1.1	4.2	2.6	4.0
14	4.0	1.4	1.1	0.97	1.1	1.1	1.4	21	1.2	4.2	2.6	3.1
15	3.9	1.5	1.1	0.98	1.1	1.1	1.4	21	1.2	4.4	2.6	4.2
16	3.9	1.6	1.1	0.99	1.1	1.1	1.4	21	1.2	4.4	2.6	4.2
17	3.9	1.6	1.1	1.0	1.1	1.1	1.3	21	1.2	4.3	2.8	4.2
18	3.9	1.6	1.1	1.1	1.1	1.2	1.4	20	1.2	2.1	2.8	4.2
19	16	1.6	1.1	1.0	1.1	1.2	1.4	19	1.1	1.4	2.8	4.2
20	20	1.5	1.1	1.0	1.1	1.2	1.5	18	3.4	1.3	2.8	4.2
21	20	1.5	1.1	1.1	1.1	1.2	1.5	18	4.8	1.3	2.8	4.2
22	20	1.5	1.1	1.1	1.1	1.2	1.4	18	5.0	1.3	2.8	4.2
23	19	1.5	1.0	1.1	1.1	1.2	1.4	19	4.6	1.2	2.8	4.2
24	16	1.5	1.0	1.1	1.1	1.2	1.5	7.1	2.3	1.8	2.8	4.2
25	5.5	1.5	1.0	1.1	1.1	1.2	1.5	2.7	0.91	2.8	2.9	4.1
26	2.4	1.5	1.0	1.1	1.1	1.2	1.5	2.5	0.92	2.8	13	4.1
27	2.5	1.5	1.0	1.1	1.1	1.2	1.5	2.5	0.92	2.7	16	4.2
28	2.5	1.5	1.0	1.1	1.1	1.3	1.5	2.5	0.92	2.6	16	4.2
29	2.5	1.6	1.0	1.1	---	1.3	1.5	2.5	0.92	2.6	16	4.1
30	12	1.7	1.1	1.1	---	1.3	1.4	2.5	0.92	2.6	16	4.2
31	16	---	1.0	1.1	---	1.3	---	2.5	---	2.6	16	---
TOTAL	223.0	52.6	39.1	31.80	31.5	35.9	41.9	422.1	57.71	63.21	160.6	103.5
MEAN	7.194	1.753	1.261	1.026	1.125	1.158	1.397	13.62	1.924	2.039	5.181	3.450
MAX	20	7.7	1.7	1.1	1.2	1.3	1.5	21	5.0	4.4	16	9.4
MIN	2.4	1.4	1.0	0.94	1.1	1.1	1.2	1.5	0.91	0.91	2.4	1.4
AC-FT	442	104	78	63	62	71	83	837	114	125	319	205

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002, BY WATER YEAR (WY)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
MEAN	7.171	4.128	2.259	2.093	2.875	5.693	15.56	37.52	44.26	21.50	15.95	11.79
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	0.45	0.45	0.45	0.49	1.40	9.89	1.92	2.04	2.86	1.47
(WY)	1991	1997	1980	1980	1980	1979	2002	1981	2002	2002	1989	1994

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1979 - 2002

ANNUAL TOTAL	3607.8	1262.92	
ANNUAL MEAN	9.884	3.460	
HIGHEST ANNUAL MEAN			13.74
LOWEST ANNUAL MEAN			25.7
HIGHEST DAILY MEAN	58	May 21	21
LOWEST DAILY MEAN	1.0	Dec 23	0.91
ANNUAL SEVEN-DAY MINIMUM	1.0	Dec 23	0.92
ANNUAL RUNOFF (AC-FT)	7160		2510
10 PERCENT EXCEEDS	28		7.3
50 PERCENT EXCEEDS	3.9		1.5
90 PERCENT EXCEEDS	1.2		1.0

a At site 1,100 ft downstream (maximum release and spill computed at Nambe Falls Dam, 250 ft<sup>3</sup>/s, June 9, 1979).

08302500 TESUQUE CREEK ABOVE DIVERSIONS NEAR SANTA FE, NM

LOCATION.--Lat 35°44'25", long 105°53'51", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> 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, and 10 mi northeast of Santa Fe.

DRAINAGE AREA.--12 mi<sup>2</sup>,

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.--Records fair except for those estimated, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.62	0.58	e0.59	e0.60	e0.69	0.95	0.98	0.44	0.09	0.00	0.20	0.00
2	0.58	0.58	e0.62	e0.64	e0.57	e0.76	0.98	0.43	0.11	0.00	0.17	0.00
3	0.57	0.58	e0.70	e0.57	e0.62	e0.52	0.92	0.42	0.07	0.00	0.32	0.00
4	0.57	0.59	e0.75	e0.56	e0.64	e0.51	0.84	0.41	0.19	0.01	0.26	0.00
5	0.56	0.63	0.60	e0.67	e0.57	e0.57	0.89	0.38	0.23	0.02	0.21	0.00
6	0.57	0.61	e0.70	e0.62	e0.55	e0.60	0.85	0.36	0.14	0.04	0.19	0.00
7	0.59	0.59	e0.63	e0.59	e0.56	e0.65	1.1	0.35	0.08	0.46	0.19	0.00
8	0.60	0.59	e0.65	e0.58	e0.52	e0.85	1.3	0.35	0.06	0.54	0.19	0.00
9	0.75	0.61	e0.58	e0.59	e0.61	e0.99	1.3	0.35	0.04	0.57	0.17	0.00
10	0.63	0.58	e0.78	e0.63	e0.62	e0.55	1.3	0.34	0.03	1.8	e0.08	0.95
11	0.60	0.57	e0.75	0.52	e0.57	0.48	1.2	0.32	0.02	0.22	e0.02	1.4
12	0.60	0.58	e0.82	0.52	e0.60	0.66	0.99	0.31	0.01	0.24	e0.01	0.42
13	0.61	0.56	e0.70	0.53	e0.63	0.55	0.92	0.31	0.00	0.17	0.00	0.21
14	0.58	0.57	e0.65	e0.52	e0.81	0.59	0.88	0.30	0.00	0.15	0.00	0.27
15	0.56	0.62	e0.63	e0.55	e0.79	e0.92	0.86	0.29	0.04	0.16	0.00	0.22
16	0.56	0.64	e0.62	e0.57	e0.78	e0.80	0.85	0.26	0.02	0.16	0.00	0.19
17	0.56	0.64	e0.58	0.54	e0.79	e1.6	0.77	0.27	0.00	0.17	0.00	0.21
18	0.55	0.60	e0.54	0.53	e0.69	e1.6	0.70	0.29	0.00	0.16	0.00	0.26
19	0.55	0.59	e0.55	0.63	e0.58	e1.7	0.65	0.26	0.00	0.16	0.00	0.86
20	0.54	0.59	e0.61	e0.57	e0.53	e1.8	0.63	0.27	0.00	0.88	0.00	0.56
21	0.54	0.63	e0.56	e0.54	e0.54	1.7	0.63	0.24	0.02	0.41	0.00	0.55
22	0.59	0.63	e0.60	e0.52	e0.52	1.1	0.61	0.23	0.09	0.16	0.00	0.43
23	0.65	0.63	e0.56	e0.53	e0.57	1.0	0.59	0.23	0.11	0.13	0.00	0.15
24	0.62	0.58	e0.55	e0.53	0.50	0.95	0.58	0.22	0.05	0.12	0.00	0.12
25	0.61	0.63	e0.54	e0.55	0.80	0.86	0.58	0.23	0.01	0.10	0.00	0.12
26	0.61	0.82	e0.57	e0.57	e0.80	1.0	0.55	0.22	0.00	0.09	0.00	0.13
27	0.60	e0.80	e0.55	e0.55	0.76	0.93	0.51	0.31	0.00	0.08	0.00	0.14
28	0.63	e0.67	e0.55	e0.57	0.65	0.98	0.48	0.28	0.00	0.07	0.00	0.15
29	0.63	e0.62	e0.65	e0.62	---	1.0	0.46	0.20	0.00	0.07	0.00	0.20
30	0.60	e0.64	e0.78	e0.72	---	0.95	0.46	0.15	0.00	0.17	0.00	0.18
31	0.59	---	e0.71	e0.91	---	0.96	---	0.13	---	0.23	0.00	---
TOTAL	18.42	18.55	19.67	18.14	17.86	29.08	24.36	9.15	1.41	7.54	2.01	7.72
MEAN	0.594	0.618	0.635	0.585	0.638	0.938	0.812	0.295	0.047	0.243	0.065	0.257
MAX	0.75	0.82	0.82	0.91	0.81	1.8	1.3	0.44	0.23	1.8	0.32	1.4
MIN	0.54	0.56	0.54	0.52	0.50	0.48	0.46	0.13	0.00	0.00	0.00	0.00
AC-FT	37	37	39	36	35	58	48	18	2.8	15	4.0	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2002, BY WATER YEAR (WY)

MEAN	1.765	1.370	1.014	0.953	1.029	2.038	5.651	9.692	6.012	2.182	1.991	1.405
MAX	10.3	6.60	2.65	2.02	1.98	4.32	26.4	37.0	27.0	7.68	7.34	4.43
(WY)	1942	1942	1942	1942	1942	1940	1942	1941	1941	1941	1999	1941
MIN	0.38	0.39	0.35	0.35	0.49	0.42	0.75	0.30	0.047	0.24	0.065	0.26
(WY)	1951	1951	1951	1951	1951	1951	1951	2002	2002	2002	2002	2002

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1936 - 2002

ANNUAL TOTAL	1106.11	173.91	
ANNUAL MEAN	3.030	0.476	2.951
HIGHEST ANNUAL MEAN			8.14 1941
LOWEST ANNUAL MEAN			0.48 2002
HIGHEST DAILY MEAN		1.8 Mar 20	72 Apr 23 1942
LOWEST DAILY MEAN	0.49 Sep 29	0.00 Jun 13	0.00 Aug 25 1950
ANNUAL SEVEN-DAY MINIMUM	0.52 Sep 24	0.00 Jun 26	0.00 Jun 26 2002
MAXIMUM PEAK FLOW		117 Jul 10	a425 Jul 19 1938
MAXIMUM PEAK STAGE		5.05 Jul 10	5.05 Jul 10 2002
INSTANTANEOUS LOW FLOW		0.00 Jun 12	0.00 Aug 25 1950
ANNUAL RUNOFF (AC-FT)	2190	345	2140
10 PERCENT EXCEEDS	9.4	0.86	7.4
50 PERCENT EXCEEDS	1.0	0.55	1.2
90 PERCENT EXCEEDS	0.57	0.00	0.60

e Estimated

a Gage height 4.30 ft from floodmarks, from rating curve extended above 10 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 4.0 ft, at different datum.

08305030 LITTLE TESUQUE CREEK AT BISHOPS LODGE NEAR SANTA FE, NM

LOCATION.--Lat 35°43'52", long 105°54'39", in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.5, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, on right bank 100 ft downstream of entrance to Bishops Lodge, and 9.0 mi northeast of Santa Fe.

DRAINAGE AREA.--7.61 mi<sup>2</sup> approximately.

PERIOD OF RECORD.--July 1999 to current year.

GAGE.--Water-stage recorder. Concrete low-flow control. Elevation of gage is 7,100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.35	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.00	0.06
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.000	0.002
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.03
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.00	0.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
MEAN	0.164	0.265	0.048	0.000	0.047	0.912	0.910	0.410	0.030	0.018	0.596	0.051
MAX	0.48	0.79	0.14	0.000	0.14	2.74	2.73	1.23	0.084	0.035	2.26	0.18
(WY)	2001	2001	2001	2000	2001	2001	2001	2001	2001	2002	1999	1999
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.002
(WY)	2002	2002	2002	2000	2000	2002	2002	2002	2002	2001	2002	2001

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1999 - 2002

ANNUAL TOTAL	211.56	1.14		
ANNUAL MEAN	0.580	0.003	0.238	
HIGHEST ANNUAL MEAN			0.70	2001
LOWEST ANNUAL MEAN			0.003	2002
HIGHEST DAILY MEAN	17	Mar 25	0.61	Jul 20
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1
MAXIMUM PEAK FLOW			20	Jul 20
MAXIMUM PEAK STAGE			4.39	Jul 20
ANNUAL RUNOFF (AC-FT)	420	2.3	173	Mar 26 2001
10 PERCENT EXCEEDS	1.6	0.00	0.56	
50 PERCENT EXCEEDS	0.00	0.00	0.00	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

## RIO GRANDE BASIN

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

LOCATION.--Lat 35°52'29", long 106°08'30", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

## 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 except for those estimated, which are poor. 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. Yeós file on floods.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	948	400	501	583	538	604	958	1130	1270	1090	990	909
2	846	386	505	580	526	579	907	1150	1290	1100	1050	911
3	852	383	536	567	554	541	916	1220	1250	1060	1000	875
4	795	359	579	546	537	497	922	1210	1310	1000	842	802
5	730	356	607	557	537	590	940	1190	1330	1010	726	879
6	742	358	625	555	540	606	985	1100	1330	961	561	929
7	754	351	591	566	540	593	1040	1120	1310	978	486	939
8	769	352	609	575	558	583	1020	1130	1310	972	490	718
9	788	375	587	584	530	577	881	1180	1280	1010	577	763
10	751	376	545	597	529	581	896	1160	1270	1170	740	1410
11	688	377	559	605	530	645	938	1190	1260	1110	865	611
12	695	388	581	578	532	659	906	1420	1360	1050	861	402
13	663	390	565	580	533	678	967	1710	1370	998	1040	751
14	639	e390	559	581	528	705	974	1710	1530	970	1060	495
15	596	e385	555	549	534	695	970	e1360	1390	958	1130	401
16	589	400	563	582	537	748	1020	e1070	1360	957	1150	329
17	690	452	553	590	542	731	949	e1060	1280	894	1060	476
18	726	489	554	579	570	717	1040	e1210	1180	931	1050	566
19	761	514	563	550	553	754	1080	e1220	1180	921	1010	618
20	730	537	553	544	555	751	1010	e1310	1170	1070	972	465
21	645	538	567	558	589	777	978	1310	1210	1010	974	378
22	644	548	573	555	e562	829	991	1230	1310	985	1050	344
23	575	575	557	578	e569	e889	981	1180	1510	650	1060	342
24	547	571	549	558	e607	e893	1000	1190	975	645	990	323
25	547	555	543	544	e606	e902	1000	1150	925	762	926	315
26	560	535	540	546	571	865	1060	1260	1060	873	936	361
27	615	549	542	553	566	796	1080	1250	1150	832	925	433
28	701	519	532	557	543	740	1070	1260	1160	821	950	443
29	641	523	537	553	---	728	1130	1220	1100	838	982	462
30	698	488	555	556	---	702	1140	1130	1050	1000	940	455
31	507	---	570	578	---	829	---	1160	---	1020	922	---
TOTAL	21432	13419	17355	17584	15416	21784	29749	38190	37480	29646	28315	18105
MEAN	691.4	447.3	559.8	567.2	550.6	702.7	991.6	1232	1249	956.3	913.4	603.5
MAX	948	575	625	605	607	902	1140	1710	1530	1170	1150	1410
MIN	507	351	501	544	526	497	881	1060	925	645	486	315
AC-FT	42510	26620	34420	34880	30580	43210	59010	75750	74340	58800	56160	35910

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)

MEAN	825.5	964.5	920.6	805.4	920.7	1350	2185	3589	3190	1562	1009	908.9
MAX	2225	2034	1959	1757	2641	3127	6412	8390	7914	4548	2132	1553
(WY)	1998	1987	1976	1986	1987	1987	1985	1985	1979	1995	1999	1999
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
SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR				FOR 2002 WATER YEAR				WATER YEARS 1971 - 2002			

ANNUAL TOTAL	390136				288475							
ANNUAL MEAN	1069				790.3				1521			
HIGHEST ANNUAL MEAN									2764			
LOWEST ANNUAL MEAN									602			
HIGHEST DAILY MEAN	3700				May 17				12000			
LOWEST DAILY MEAN	351				Nov 7				195			
ANNUAL SEVEN-DAY MINIMUM	361				Nov 4				229			
MAXIMUM PEAK FLOW					4530				24400			
MAXIMUM PEAK STAGE					6.43				14.50			
INSTANTANEOUS LOW FLOW									195			
ANNUAL RUNOFF (AC-FT)	773800				572200				1102000			
10 PERCENT EXCEEDS	2210				1200				3480			
50 PERCENT EXCEEDS	847				726				998			
90 PERCENT EXCEEDS	532				493				502			

e Estimated

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

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-AIRE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)
OCT 24...	1100	559	18	25	626	8.8	97	8.0	364	17.0	11.0	130	41.0
NOV 07...	1054	360	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	1115	360	8.1	10	631	9.2	102	8.1	397	16.5	11.5	140	41.5
DEC 19...	1130	574	7.3	--	631	11.8	100	8.1	323	.5	1.0	110	33.6
JAN 30...	1045	540	4.3	4.5	635	11.4	106	8.4	309	5.0	4.5	110	33.8
JAN 30...	1105	540	--	--	--	--	--	--	--	--	4.0	--	--
FEB 21...	1100	592	5.5	6.3	635	11.8	111	8.1	302	13.0	5.0	110	32.2
MAR 14...	1045	697	23	21	620	9.8	101	8.2	270	14.0	7.5	96	29.1
APR 09...	1040	908	20	18	630	9.0	101	8.1	335	20.0	12.0	120	36.9
MAY 01...	1110	1160	27	29	623	8.4	98	8.2	349	23.0	13.0	130	40.8
JUN 05...	1000	1330	28	27	625	8.6	104	8.2	324	23.0	15.0	120	38.1
JUL 24...	1050	649	35	37	628	7.2	99	8.3	354	29.0	21.0	140	43.7
AUG 08...	1245	536	230	200	633	7.4	103	8.3	401	32.0	22.0	150	46.7
SEP 25...	1050	313	31	30	626	8.2	104	8.1	412	26.5	17.0	150	46.6

Date	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT 24...	7.90	2.63	.8	21.0	122	110	134	--	6.28	.4	16.9	58.8	221
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	8.11	3.48	1	29.8	154	136	163	--	9.56	.6	22.1	51.1	247
DEC 19...	6.64	2.85	.9	22.9	124	120	145	--	8.47	.6	27.3	37.7	213
JAN 30...	6.60	2.84	.8	20.4	116	109	131	1	8.35	.5	25.0	37.7	202
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	6.45	2.56	.9	21.0	113	103	132	--	8.05	.5	24.7	35.5	197
MAR 14...	5.65	2.81	.8	17.9	99	91	110	--	6.63	.4	23.5	30.6	172
APR 09...	7.16	2.31	.7	18.1	105	100	121	--	5.53	.3	17.1	56.5	203
MAY 01...	7.75	2.25	.7	18.4	106	100	120	--	5.29	.24	14.1	65.1	213
JUN 05...	7.11	2.00	.6	15.8	100	90	108	1	3.89	.28	14.9	59.4	196
JUL 24...	8.11	2.27	.6	17.2	107	99	119	1	4.61	.32	15.0	65.0	216
AUG 08...	8.28	2.72	.8	21.6	136	111	132	1	5.55	.35	18.6	75.7	247
SEP 25...	9.21	2.81	.9	26.6	E129	122	148	--	7.99	.54	20.0	73.3	260

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 24...	<.01	<.20	.20	.02	<.02	<.010	<.02	<.01	.10	2.9	4.6	77	40
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	.03	<.20	.30	<.01	.07	<.010	<.02	.02	.05	1.9	4.0	E35k	E30k
DEC 19...	.03	.20	.20	.04	.29	<.010	<.02	.02	.02	1.4	2.1	E4k	E3k
JAN 30...	<.01	<.20	.30	.02	.17	<.010	<.02	<.01	.04	1.5	1.8	E33k	65
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	<.01	<.20	.30	<.01	.17	<.010	.04	<.01	.08	1.7	2.6	<3k	<3k
MAR 14...	.01	<.20	.40	.02	.21	<.010	<.02	.02	.11	1.7	5.3	110	E40k
APR 09...	.02	<.20	.40	.03	<.02	<.010	<.02	.01	.08	3.0	4.4	59	E110k
MAY 01...	<.01	<.20	<.20	<.01	<.02	<.010	<.02	<.01	.07	3.7	4.2	E25k	120
JUN 05...	E.01	<.20	E.20	E.03	<.02	<.010	<.02	<.01	E.04	2.8	4.1	60	44
JUL 24...	<.01	<.20	.40	.02	<.02	<.010	.02	<.01	.09	3.0	3.6	250	130
AUG 08...	.36	<.20	.70	.04	.11	.010	.02	.01	.19	2.7	5.9	E500k	730
SEP 25...	<.01	<.20	.30	.03	.04	<.010	.02	<.01	.07	2.2	3.3	100	100
Date	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	ALUM- INUM, DIS- SOLVED (MG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (MG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIIUM, 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)
OCT 24...	89	2	.09	2	69	<.06	30	<.04	<.8	.11	.9	<10	<.08
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	E22k	2	.06	3	71	<.06	60	E.02	<.8	.12	.8	<10	<.08
DEC 19...	27	3	.06	2	47	<.06	50	E.02	E.6	.10	.7	E7	<.08
JAN 30...	E10k	5	E.04	2	43	<.06	40	E.02	E.5	.08	.7	11	E.04
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	E10k	4	E.04	2	33	<.06	30	E.02	E.6	.08	.9	11	.12
MAR 14...	E45k	5	E.05	2	36	<.06	40	<.04	<.8	.10	.7	17	E.07
APR 09...	120	2	.13	3	59	<.06	30	<.04	<.8	.12	1.3	<10	<.08
MAY 01...	150	2	.25	2	63	<.06	30	<.04	<.8	.12	1.3	<10	<.08
JUN 05...	49	2	.14	E1	56	<.06	20	<.04	<.8	.08	1.1	<10	<.08
JUL 24...	170	2	.21	E2	77	<.06	30	<.04	<.8	.11	1.1	<10	<.08
AUG 08...	300	2	.20	7	103	<.06	40	<.04	<.8	.13	1.2	<10	<.08
SEP 25...	100	3	.11	2	78	<.06	50	E.02	<.8	.15	1.3	<10	<.08

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	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, DIS-SOLVED (UG/L AS SE) (01145)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	RA-226 2 SIGMA WATER, DISS. (PCI/L) (76001)	RADIUM 226, DIS-SOLVED, RADON WATER, METHOD (PCI/L) (09511)	URANIUM NATURAL 2 SIGMA WATER, DISS. (UG/L AS U) (75990)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 24...	2.7	<.01	5.2	.15	<2	E1	<1	<1	.02	.05	M	2.20	10
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	3.5	<.01	7.7	.71	<2	<4	<1	<1	.02	.06	M	4.04	--
DEC 19...	3.9	<.01	5.2	.57	<2	<2	<1	<1	.02	.05	M	3.20	11
JAN 30...	4.6	E.01n	5.2	.22	<2	<2	<1	1	.02	.03	M	3.34	--
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	4.4	E.01n	5.3	.35	<2	<2	<1	1	.02	.05	M	2.58	14
MAR 14...	5.4	E.01n	4.6	.33	E1	<2	<1	2	.01	.04	M	2.54	26
APR 09...	2.7	<.01	3.9	.86	<2	<2	<1	3	.03	.10	M	2.09	23
MAY 01...	2.9	<.01	2.9	.63	<2	<2	<1	3	.02	.09	M	1.51	22
JUN 05...	1.7	<.01	2.5	.72	<2	<2	<1	3	.02	.05	M	1.10	18
JUL 24...	2.0	<.01	3.5	<.06	<2	<2	<1	1	.02	.08	M	1.52	32
AUG 08...	.9	E.01n	4.8	.73	<2	E1	<1	1	.03	.11	M	2.47	86
SEP 25...	2.2	<.01	8.1	1.77	<2	<2	<1	1	--	--	--	3.21	30

SEDI-MENT, SUS-PENDED (MG/L) (80154)

Date	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 24...	401
NOV 07...	188
NOV 07...	--
DEC 19...	572
JAN 30...	--
JAN 30...	301
FEB 21...	200
MAR 14...	299
APR 09...	254
MAY 01...	345
JUN 05...	268
JUL 24...	264
AUG 08...	331
SEP 25...	180

Remark codes used in this report:

- < -- Less than
- E -- Estimated value
- M -- Presence verified, not quantified

Value qualifier codes used in this report:

- k -- Counts outside acceptable range
- n -- Below the laboratory reporting level

08313268 RIO GRANDE NEAR WHITE ROCK, NM

LOCATION.--Lat 35°46'51", long 106°12'20", Santa Fe County, Hydrologic Unit 13020201, in Caja Del Rio Grant, on left bank 0.25 mi downstream from Water Canyon, 3.2 mi south of White Rock, and at mile 1,605.1.

PERIOD OF RECORD.--June 2000 to current year.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 5,390.0 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for those above 1,900 ft<sup>3</sup>/s, and those estimated, which are poor. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	389	465	585	540	575	969	1180	1300	e1110	e1040	e918
2	886	374	480	581	505	611	935	1200	1330	e1120	e1070	e916
3	877	376	518	556	543	558	917	1260	1300	e1100	e1040	e880
4	812	365	589	526	553	500	924	1250	1350	1030	858	e825
5	733	364	621	548	557	563	957	1240	1360	1030	694	e890
6	751	368	653	555	548	582	1020	1160	1360	968	530	e935
7	770	353	599	560	535	601	1100	1170	1350	991	430	e940
8	798	353	614	573	551	591	1070	1180	1340	996	443	e740
9	824	375	587	587	551	586	839	1240	1320	1060	537	e920
10	762	374	524	605	538	597	815	1220	1310	e1190	768	e1450
11	682	370	546	611	530	633	900	1220	1310	e1140	966	e620
12	681	365	580	577	532	636	861	1400	1380	e1100	984	397
13	652	364	551	577	552	661	957	1640	1400	1050	e1000	651
14	621	363	544	574	544	714	967	1600	1470	1020	e1090	487
15	576	358	535	539	550	701	965	1350	1540	1000	e1150	396
16	556	354	550	573	556	744	1070	1140	1490	1000	e1190	e360
17	680	403	533	589	552	751	914	1120	1410	908	e1170	e490
18	753	481	534	581	567	715	1070	1240	1240	965	e1110	e600
19	788	520	545	544	576	724	1130	1250	1230	936	e1050	663
20	749	539	536	523	569	740	1020	1310	1220	1130	e1000	479
21	630	538	561	535	557	769	973	1340	1250	e1070	e1020	379
22	623	554	580	552	562	811	999	1290	1370	e1040	e1060	336
23	551	594	558	581	574	882	997	1240	1520	672	e1070	333
24	530	586	549	561	592	910	1020	1250	1070	581	e1020	313
25	531	559	540	541	584	926	1030	1220	968	712	e1010	304
26	541	528	529	539	572	860	1110	1310	e1100	852	e945	339
27	603	554	543	555	574	765	1130	1300	e1160	826	e940	434
28	700	499	554	569	520	720	1110	1310	e1170	822	e960	454
29	631	519	551	566	---	698	1180	1270	e1140	822	e980	483
30	679	460	566	572	---	667	1180	1200	e1080	e1020	e950	473
31	506	---	575	595	---	767	---	1220	---	e1040	e920	---
TOTAL	21566	13199	17210	17530	15484	21558	30129	39320	38838	30301	28995	18405
MEAN	695.7	440.0	555.2	565.5	553.0	695.4	1004	1268	1295	977.5	935.3	613.5
MAX	1090	594	653	611	592	926	1180	1640	1540	1190	1190	1450
MIN	506	353	465	523	505	500	815	1120	968	581	430	304
AC-FT	42780	26180	34140	34770	30710	42760	59760	77990	77040	60100	57510	36510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	653.1	458.0	537.3	544.6	579.2	768.0	1103	2031	1712	1325	1177	1013
MAX	696	476	555	565	605	841	1202	2794	2130	1629	1458	1248
(WY)	2002	2001	2002	2002	2001	2001	2001	2001	2001	2000	2000	2000
MIN	611	440	519	524	553	695	1004	1268	1295	977	935	614
(WY)	2001	2002	2001	2001	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR
ANNUAL TOTAL	410820	292535										
ANNUAL MEAN	1126	801.5										
HIGHEST ANNUAL MEAN												
LOWEST ANNUAL MEAN												
HIGHEST DAILY MEAN	3590	May 18	1640	May 13	3590	May 18	2001					
LOWEST DAILY MEAN	353	Nov 7	304	Sep 25	304	Sep 25	2002					
ANNUAL SEVEN-DAY MINIMUM	364	Nov 10	348	Sep 21	348	Sep 21	2002					
MAXIMUM PEAK FLOW			2760	Sep 13	3670	May 17	2001					
MAXIMUM PEAK STAGE			12.93	Sep 13	13.64	May 17	2001					
INSTANTANEOUS LOW FLOW			290	Sep 26	290	Sep 26	2002					
ANNUAL RUNOFF (AC-FT)	814900	580200										
10 PERCENT EXCEEDS	2350	1240										
50 PERCENT EXCEEDS	877	714										
90 PERCENT EXCEEDS	519	482										

e Estimated

08315480 SANTA FE RIVER ABOVE McCLURE RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'23", long 105°49'25", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>, sec.24, T.17 N., R.11 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, on right bank upstream from flow line of McClure Reservoir, 0.20 mi upstream from McClure Reservoir, 2.3 mi upstream from Nichols Reservoir, and 6.0 mi east of Santa Fe.

PERIOD OF RECORD.--July 1998 to current year.

GAGE.--Water-stage recorder with satellite telemetry and 1.5-ft and 8-ft Parshall flume. Elevation of gage is 7,920 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for those estimated, which are poor. Low flows in 1.5-ft Parshall flume computed under station 08315479.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	0.89	e0.80	e1.0	e0.60	e0.55	1.6	1.5	0.59	0.29	0.75	0.14
2	0.88	0.89	e0.90	e0.95	e0.55	e0.60	1.6	1.4	0.58	0.27	0.85	0.12
3	0.85	0.89	e0.95	e1.1	e0.65	e0.60	1.6	1.4	0.52	0.28	3.5	0.12
4	0.88	0.90	e0.90	e1.1	e0.80	e0.65	1.5	1.4	0.59	0.46	2.3	0.20
5	0.81	0.93	e0.85	e1.0	e0.95	e0.65	1.6	1.3	0.74	0.46	1.5	0.14
6	0.85	0.94	e0.85	e0.95	e1.1	e0.70	1.5	1.2	0.62	0.40	1.3	0.07
7	0.83	0.94	e0.80	e1.1	e1.0	e0.70	1.9	1.2	0.54	0.45	1.1	0.05
8	0.85	0.92	e0.85	e1.1	e0.95	e0.65	2.3	1.2	0.50	0.66	1.1	0.07
9	1.0	0.96	e0.85	e1.1	e1.0	e0.70	2.3	1.2	0.45	0.70	0.93	0.55
10	1.0	0.94	e0.90	e1.0	e1.1	e0.60	2.1	1.1	0.41	0.90	0.81	0.72
11	0.94	0.94	e0.95	e0.95	e1.0	0.60	2.1	1.1	0.37	0.82	0.73	2.4
12	0.99	0.91	e0.80	e1.1	e1.0	0.70	2.0	1.0	0.31	0.89	0.65	1.3
13	0.98	0.89	e0.60	e0.70	e0.95	0.80	2.1	1.0	0.28	0.64	0.59	0.88
14	0.96	0.87	e0.65	e0.65	e0.95	0.83	2.1	1.0	0.38	0.51	0.55	1.1
15	0.91	0.94	e0.75	e0.80	e0.90	e0.77	2.1	1.0	0.48	0.53	0.49	0.80
16	0.90	0.95	e0.80	e0.95	e0.95	0.71	2.2	0.95	0.35	0.46	0.43	0.65
17	0.89	0.97	e0.80	e0.95	e0.95	0.93	2.0	0.93	0.29	0.43	0.39	0.59
18	0.85	0.93	e0.95	e1.0	e0.90	0.95	1.9	0.93	0.24	0.40	0.35	0.68
19	0.84	0.91	e0.90	e1.0	e0.90	1.0	1.9	0.89	0.21	0.39	0.37	1.6
20	0.81	e0.90	e0.90	e1.0	e0.85	1.1	1.9	0.88	0.21	1.0	0.57	1.2
21	0.82	e0.95	e0.90	e1.1	e0.90	0.92	1.8	0.84	0.49	2.5	0.51	0.92
22	0.82	0.97	e0.85	e0.95	e0.95	1.1	1.8	0.79	0.91	2.4	0.44	0.81
23	0.92	0.89	e0.85	e0.95	e0.90	1.2	1.8	0.78	0.98	1.9	0.36	0.77
24	0.85	e0.95	e0.80	e0.80	e0.60	1.2	1.7	0.75	0.59	2.3	0.31	0.75
25	0.81	0.98	e0.65	e0.55	e0.65	1.1	1.7	0.74	0.40	2.2	0.26	0.74
26	0.82	e0.95	e0.70	e0.60	e0.50	1.1	1.7	0.73	0.35	1.3	0.20	0.73
27	0.83	0.89	e0.95	e0.75	e0.50	1.1	1.6	0.91	0.29	0.96	0.18	0.74
28	0.89	0.89	e0.90	e1.0	e0.55	1.2	1.6	0.93	0.28	0.81	0.19	0.99
29	1.0	0.89	e0.95	e1.0	---	1.4	1.6	0.76	0.27	0.86	0.22	1.0
30	0.92	0.77	e0.95	e0.90	---	1.3	1.5	0.68	0.26	0.88	0.20	0.86
31	0.89	---	e1.0	e0.85	---	1.5	---	0.64	---	0.97	0.13	---
TOTAL	27.59	27.54	26.25	28.95	23.60	27.91	55.1	31.13	13.48	28.02	22.26	21.69
MEAN	0.890	0.918	0.847	0.934	0.843	0.900	1.837	1.004	0.449	0.904	0.718	0.723
MAX	1.0	0.98	1.0	1.1	1.1	1.5	2.3	1.5	0.98	2.5	3.5	2.4
MIN	0.81	0.77	0.60	0.55	0.50	0.55	1.5	0.64	0.21	0.27	0.13	0.05
AC-FT	55	55	52	57	47	55	109	62	27	56	44	43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002		
MEAN	2.353	3.095	1.815	1.692	1.690	3.009	5.664	12.18	5.621	2.680	7.994	2.198
MAX	3.32	5.95	2.82	2.54	2.95	7.62	13.3	28.9	11.3	5.38	23.4	4.19
(WY)	1999	1999	2001	2001	2001	2001	2001	2001	1999	1998	1999	1998
MIN	0.89	0.92	0.85	0.93	0.84	0.90	1.84	1.00	0.45	0.90	0.72	0.72
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1998 - 2002

ANNUAL TOTAL	2231.06	333.52		
ANNUAL MEAN	6.112	0.914	4.040	
HIGHEST ANNUAL MEAN			6.72	2001
LOWEST ANNUAL MEAN			0.91	2002
HIGHEST DAILY MEAN	43	May 17	67	Aug 9 1999
LOWEST DAILY MEAN	0.60	Dec 13	0.05	Sep 7 2002
ANNUAL SEVEN-DAY MINIMUM	0.76	Dec 11	0.11	Sep 2 2002
MAXIMUM PEAK FLOW			4.3	Aug 3 1999
MAXIMUM PEAK STAGE			0.79	Aug 3 1999
INSTANTANEOUS LOW FLOW			0.02	Sep 6 2002
ANNUAL RUNOFF (AC-FT)	4430	662	2930	
10 PERCENT EXCEEDS	18	1.5	10	
50 PERCENT EXCEEDS	2.4	0.89	1.9	
90 PERCENT EXCEEDS	0.88	0.39	0.76	

e Estimated

08315500 MCCLURE RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'18", long 105°50'06", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>, 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 mi<sup>2</sup>.

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 more than 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.

COOPERATION.--Capacity table provided by Public Service Co. of New Mexico. Supplementary gage readings provided by City of Santa Fe.

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, 1,220 acre-ft, Oct. 1, elevation, 7,854.49 ft; minimum, 377 acre-ft, June 9-13, elevation, 7829.94 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	723	724	779	831	e876	e599	689	e446	384	434	469
2	1190	713	726	779	833	e877	e601	691	e435	384	437	468
3	1150	704	728	782	835	e878	e604	695	e423	384	445	468
4	1120	695	730	784	837	e880	e608	696	e411	385	450	468
5	1090	688	731	785	838	e881	e611	698	e401	385	453	468
6	1060	685	732	787	840	e882	e615	699	e389	386	455	468
7	1030	687	734	789	842	e884	e619	693	e378	387	458	468
8	999	688	736	791	844	885	e623	682	e378	388	460	468
9	970	690	738	792	846	887	e626	672	e377	391	461	469
10	949	691	740	794	847	889	e630	660	e377	393	463	471
11	938	692	742	796	848	890	e633	648	377	395	464	476
12	927	694	744	798	850	891	e636	637	377	396	465	479
13	917	695	747	799	852	892	e639	626	377	397	465	481
14	906	696	748	800	853	893	e643	615	378	398	466	484
15	895	698	749	802	854	894	e646	603	379	398	466	485
16	885	700	751	804	856	891	e649	591	379	399	466	486
17	874	702	752	805	859	878	e652	581	379	399	466	487
18	864	704	754	806	860	846	e655	570	378	400	467	489
19	853	705	756	808	862	814	e658	560	378	401	468	492
20	843	706	758	810	e863	785	e661	550	378	408	468	495
21	832	707	761	812	e865	e762	e665	539	379	413	469	496
22	822	709	762	814	e866	e734	e668	528	380	419	469	498
23	812	711	763	815	e867	e708	e671	517	382	423	469	499
24	801	712	764	816	e869	e679	e673	506	383	428	469	500
25	790	714	766	819	e870	e648	e675	495	383	432	469	501
26	780	715	768	821	e871	e625	e677	e487	383	435	469	502
27	770	718	769	823	e873	e601	e679	e476	383	436	469	504
28	761	719	771	824	e874	e593	e680	e465	384	437	469	507
29	752	721	772	826	---	e591	e682	e458	383	439	469	509
30	742	722	775	829	---	e594	e684	e454	384	436	469	510
31	733	---	777	830	---	e596	---	e450	---	433	469	---
MAX	1220	723	777	830	874	894	684	699	446	439	469	510
MIN	733	685	724	779	831	591	599	450	377	384	434	468
(+)	7842.63	7842.31	7843.91	7845.34	7846.49	7838.36	7841.17	7832.96	7830.20	7832.29	7833.71	7835.28
(++)	-517	-11	+55	+53	+44	-273	+88	-234	-66	+49	+36	+41

CAL YR 2001 MAX 3260 MIN 685 (++) -273  
WTR YR 2002 MAX 1220 MIN 377 (++) -740

e Estimated

(+) Elevation, in ft, at end of month.  
(++) Change, in contents, in acre-ft.



## 08316500 NICHOLS RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'24", long 105°52'46", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

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, 604 acre-ft, Nov. 5 and 6, gage height, 164.21 ft; minimum, 241 acre-ft, Mar. 16 and 17, gage height, 147.52 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e458	586	e525	456	380	328	483	360	e481	395	361	325
2	479	591	e524	456	377	324	477	354	e485	390	362	e325
3	484	596	e520	456	374	318	471	347	e490	385	362	e324
4	502	600	e514	456	372	311	465	339	e492	379	362	e324
5	518	604	505	456	370	306	459	333	e499	374	362	e323
6	529	604	492	456	368	300	454	325	e502	370	362	e322
7	540	e600	484	456	365	293	449	319	e506	368	361	e322
8	553	e593	482	455	363	286	443	318	e506	365	361	e321
9	570	e585	478	452	361	279	438	319	e503	364	360	e321
10	587	e578	478	449	359	273	434	326	e498	363	360	e322
11	587	e572	478	445	359	267	430	332	e491	363	359	e323
12	587	e570	478	443	360	261	428	338	e486	362	358	e322
13	587	e569	478	440	360	256	426	345	e482	362	358	322
14	587	e567	478	437	360	251	424	355	e478	361	357	321
15	585	e565	478	434	361	246	422	362	e473	360	356	320
16	577	e564	478	431	361	241	420	370	e468	360	356	320
17	571	e562	478	429	361	241	418	378	e462	359	355	319
18	567	e560	473	419	360	268	416	388	e457	359	354	319
19	566	e555	468	417	358	295	413	397	453	358	355	319
20	566	e550	462	414	355	323	410	407	447	362	354	318
21	565	e546	457	412	352	350	408	e417	442	362	353	317
22	564	e544	456	407	349	374	406	e427	438	361	353	317
23	565	e540	456	403	347	402	404	e434	432	361	352	316
24	567	e536	456	399	344	429	400	e440	427	361	351	315
25	566	e532	455	395	342	452	395	e450	424	360	350	315
26	568	e531	454	392	338	473	389	e458	420	359	349	314
27	574	e529	454	390	334	493	383	e463	416	359	349	313
28	578	e528	454	388	331	505	377	e468	411	358	347	314
29	576	e527	454	387	---	500	372	e468	406	357	340	313
30	576	e526	455	387	---	494	367	e474	401	357	333	313
31	581	---	455	383	---	488	---	e478	---	362	327	---
MAX	587	604	525	456	380	505	483	478	506	395	362	325
MIN	458	526	454	383	331	241	367	318	401	357	327	313
(+)	163.37	161.31	158.44	155.36	152.75	159.88	154.57	159.44	156.10	154.31	152.51	151.75
(++)	+141	-55	-71	-72	-52	+157	-121	+111	-77	-39	-35	-14

CAL YR 2001 MAX 688 MIN 160 (++) +50  
WTR YR 2002 MAX 604 MIN 241 (++) -127

e Estimated

(+) Gage height, in ft, at end of month.  
(++) Change in contents, in acre-ft.

08317050 ARROYO HONDO NEAR SANTA FE, NM

LOCATION.--Lat 35°37'19", long 105°55'06", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec 18, T.16 N., R.9 E., Santa Fe County, Hydrologic Unit 13020201, on left bank 150 ft upstream from U.S. Highway 85, approximately 7 mi east of Santa Fe.

PERIOD OF RECORD.--October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21 ft<sup>3</sup>/s, July 1, 2000, gage height, 3.65 ft; minimum, no flow most days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2.3 ft<sup>3</sup>/s, July 30, gage height, 1.98 ft; minimum, no flow most days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.04	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.1	0.00	0.00

CAL YR 2001 TOTAL 155.37 MEAN 0.426 MAX 4.7 MIN 0.00 AC-FT 308  
WTR YR 2002 TOTAL 0.06 MEAN 0.000 MAX 0.04 MIN 0.00 AC-FT 0.1

## RIO GRANDE BASIN

08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM

LOCATION.--Lat 35°37'01", long 106°18'58", in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup> approximately, including 2,940 mi<sup>2</sup>, in closed basin in San Luis Valley, Colorado.

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, 1999, 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, 53,720 acre-ft, Feb. 28, elevation, 5,343.54 ft; minimum, 47,560 acre-ft, Nov. 23, elevation, 5,338.60 ft.

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

(Based on Survey by U.S. Army Corps of Engineers in 1998)

5,338.0	46,900	5,340.0	49,140
5,339.0	48,000	5,350.0	63,850

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48230	47860	47880	50270	50960	53630	52850	52200	51310	50300	49910	49350
2	48220	47830	47970	50280	50790	53610	52940	52220	51310	50390	49970	49260
3	48270	47850	48090	50230	50660	53530	52960	52330	51200	50450	50260	49290
4	48260	47900	48270	50190	50600	53400	52880	52440	51180	50420	50480	49140
5	48150	47860	48320	50260	50560	53240	52780	52510	51230	50330	50440	48960
6	48030	47880	48370	50300	50580	53270	52740	52430	51260	50270	50160	48880
7	48020	47880	48360	50390	50600	53300	52910	52290	51260	50240	49770	49040
8	48040	47850	48360	50350	50640	53260	53050	52200	51240	50220	49410	49050
9	48220	47860	48380	50330	50690	53200	52920	52220	51190	50230	49050	49110
10	48370	47910	48400	50270	50700	53190	52700	52220	51100	50300	48820	49910
11	48410	47920	48490	50260	50800	53230	52590	52220	50930	50440	48850	49900
12	48440	47960	48520	50190	50950	53310	52430	52550	50830	50430	48840	49410
13	48510	47920	48630	50100	51130	53380	52370	52620	50810	50290	48890	49280
14	48520	47820	48660	50080	51350	53310	52330	52140	50780	50110	48990	49620
15	48330	47760	48620	50000	51580	53200	52290	51920	51220	50010	49160	49490
16	47990	47680	48630	49890	51830	53130	52270	51680	51370	49910	49390	49060
17	47800	47660	48630	49820	52060	53090	52160	51350	51410	49770	49530	48830
18	47800	47810	48710	49550	52280	52980	52250	51170	51240	49600	49560	49090
19	47910	47800	48780	49030	52520	52870	52440	51080	51050	49490	49620	49540
20	48160	47690	48900	48420	52820	52840	52500	51150	50910	49420	49530	49840
21	48330	47650	48980	47900	53080	52780	52510	51350	50900	49770	49440	49830
22	48390	47580	49130	48060	53200	52840	52500	51480	51140	50120	49440	49630
23	48390	47560	49310	48670	53310	52980	52540	51490	51620	50110	49500	49450
24	48310	47590	49430	49250	53410	53140	52560	51480	51330	49780	49510	49250
25	48200	47580	49610	49800	53470	53380	52390	51400	50790	49630	49450	49000
26	48030	47610	49610	50320	53550	53540	52310	51440	50460	49680	49410	48780
27	47840	47750	49790	50540	53650	53550	52250	51460	50390	49770	49350	48770
28	47810	47840	49890	50660	53720	53460	52080	51490	50380	49790	49350	48820
29	47800	47910	49940	50710	---	53240	52130	51580	50370	49670	49470	48850
30	47710	47920	50050	50880	---	52950	52220	51460	50290	49760	49450	48930
31	47860	---	50160	51000	---	52730	---	51320	---	49880	49420	---
MAX	48520	47960	50160	51000	53720	53630	53050	52620	51620	50450	50480	49910
MIN	47710	47560	47880	47900	50560	52730	52080	51080	50290	49420	48820	48770
(+)	5338.88	5338.93	5340.84	5341.52	5343.54	5342.83	5342.46	5341.77	5340.95	5340.61	5340.23	5339.82
(++)	-370	+60	+2240	+840	+2720	-990	-510	-900	-1030	-410	-460	-490
CAL YR 2001	MAX 52650	MIN 47560	(++) -1540									
WTR YR 2002	MAX 53720	MIN 47560	(++) +700									

(+) Elevation, in feet, at end of month.

(++) Change in contents, in acre-ft.

08317400 RIO GRANDE BELOW COCHITI DAM, NM

LOCATION.--Lat 35°37'05", long 106°19'24", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

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 ft<sup>3</sup>/s at a nearby site upstream from mouth of Santa Fe River. The flood of May 23, 1920, probably exceeded 23,400 ft<sup>3</sup>/s, and is likely the highest since 1905.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	787	214	462	545	583	575	676	918	983	784	773	795
2	704	191	462	584	613	553	674	936	1030	769	793	794
3	652	164	462	606	612	560	691	960	1060	772	726	728
4	635	164	501	568	612	560	760	961	1060	773	626	746
5	620	165	570	538	610	564	761	961	1060	770	590	781
6	620	190	632	539	571	491	763	963	1060	768	588	781
7	601	227	620	541	542	473	766	963	1050	768	530	732
8	588	255	590	582	543	495	767	964	1050	768	495	717
9	544	277	591	624	542	493	766	966	1050	770	547	720
10	523	278	536	641	544	491	764	962	1040	818	609	740
11	521	279	532	642	500	493	762	955	1080	849	628	711
12	490	279	562	642	477	483	762	952	1100	847	689	559
13	471	305	562	642	477	503	763	1370	1100	843	758	416
14	472	327	562	600	460	567	763	1650	1100	842	807	301
15	532	352	563	615	450	591	764	1270	1020	805	830	362
16	575	418	563	641	452	609	765	1010	1010	782	832	371
17	566	419	544	641	454	610	768	1010	1040	783	832	323
18	552	418	530	735	455	608	768	1010	1000	782	845	332
19	537	517	530	834	455	608	769	1010	975	782	845	300
20	453	588	532	829	456	608	772	982	946	772	850	315
21	429	558	517	826	457	608	772	966	939	739	850	354
22	441	588	505	491	519	608	774	959	955	668	844	353
23	428	568	503	304	557	610	776	959	957	638	842	351
24	418	555	504	307	557	609	812	958	955	640	844	350
25	431	555	504	307	558	610	886	961	935	635	812	349
26	463	520	505	309	555	612	892	996	872	633	793	348
27	514	460	507	438	556	611	890	1020	861	633	794	347
28	517	469	526	537	525	609	888	999	884	629	798	347
29	520	496	541	539	---	651	887	971	834	677	804	328
30	520	482	544	542	---	678	913	962	806	707	800	314
31	e368	---	544	540	---	676	---	960	---	730	795	---

TOTAL	16492	11278	16606	17729	14692	17817	23534	31484	29812	23176	23169	14965
MEAN	532.0	375.9	535.7	571.9	524.7	574.7	784.5	1016	993.7	747.6	747.4	498.8
MAX	787	588	632	834	613	678	913	1650	1100	849	850	795
MIN	368	164	462	304	450	473	674	918	806	629	495	300
AC-FT	32710	22370	32940	35170	29140	35340	46680	62450	59130	45970	45960	29680
(+)	8420	2590	0	0	0	5130	6720	7000	6680	5150	4690	4120
(++)	4020	1270	0	0	0	3100	4010	4260	4160	3510	3370	2350
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)												
MEAN	603.6	870.6	894.5	830.3	964.8	1205	1932	3115	2932	1635	916.3	729.8
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
SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1971 - 2002												

ANNUAL TOTAL	341873	240754					
ANNUAL MEAN	936.6	659.6					
HIGHEST ANNUAL MEAN		1386					
LOWEST ANNUAL MEAN		452					
HIGHEST DAILY MEAN	4090	May 22	1650	May 14	8290	May 7	1985
LOWEST DAILY MEAN	164	Nov 3	164	Nov 3	0.51	Aug 4	1977
ANNUAL SEVEN-DAY MINIMUM	188	Nov 1	188	Nov 1		Sep 16	1977
MAXIMUM PEAK FLOW					a10300	Jul 26	1971
MAXIMUM PEAK STAGE					b7.90	Jul 26	1971
INSTANTANEOUS LOW FLOW					c0.51	Aug 5	1977
ANNUAL RUNOFF (AC-FT)	678100	477500	1004000				
10 PERCENT EXCEEDS	1790	962	3510				
50 PERCENT EXCEEDS	744	612	875				
90 PERCENT EXCEEDS	499	370	389				

e Estimated  
a From rating curve extended above 2,600 ft<sup>3</sup>/s.  
b Site and datum then in use.  
c Aug. 3-5, Aug. 27 and 28, 1978, result of regulation.  
(+) Diversion, in acre-ft, by Cochiti Eastside Main Canal at Head.  
(++) Diversion, in acre-ft, Sili Main Canal at Head.

## RIO GRANDE BASIN

08317900 GALISTEO RESERVOIR NEAR CERRILLOS, NM

LOCATION.--Lat 35°27'44", long 106°12'30", in NW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

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 Jan. 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 telemetry 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

08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM

LOCATION.--Lat 35°27'53", long 106°12'49", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.8, T.14 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, on right bank 0.4 mi downstream from Galisteo Dam, 5.3 mi northwest of Cerrillos, and at mile 11.4.

DRAINAGE AREA.--597 mi<sup>2</sup>.

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 poor. Flow regulated by Galisteo Reservoir 0.4 mi upstream. Diversions for irrigation of about 50 acres upstream from station. No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.80
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.20
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.00	0.00	e0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	e0.00	0.00	e0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	e0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.13	0.00	0.00	34.80
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.204	0.000	0.000	1.160
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.00	0.00	28
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	0.00	0.00	69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
MEAN	4.548	1.580	1.346	1.379	1.875	2.674	2.551	2.835	6.752	18.93	17.48	8.971																							
MAX	28.9	7.70	6.55	6.25	11.6	19.8	23.8	31.7	33.8	110	70.0	52.4																							
(WY)	1982	1995	1987	1993	1993	1973	1985	1996	1971	1999	1972																								
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																							
(WY)	1980	1980	1980	1981	1981	1981	1981	1971	1971	1987	2002	1979																							

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1970 - 2002

ANNUAL TOTAL	672.09	40.93	
ANNUAL MEAN	1.841	0.112	5.834
HIGHEST ANNUAL MEAN			12.8
LOWEST ANNUAL MEAN			0.11
HIGHEST DAILY MEAN	134	Aug 14	28
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 22	0.00
MAXIMUM PEAK FLOW			257
MAXIMUM PEAK STAGE			3.12
INSTANTANEOUS LOW FLOW			0.00
ANNUAL RUNOFF (AC-FT)	1330	81	4230
10 PERCENT EXCEEDS	2.5	0.00	6.6
50 PERCENT EXCEEDS	0.00	0.00	0.27
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

## RIO GRANDE BASIN

08319000 RIO GRANDE AT SAN FELIPE, NM

LOCATION.--Lat 35°26'47", long 106°26'24", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

## 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 with satellite telemetry. 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 May 16, 1945, to Sept. 30, 1946, when it was 5.94 ft lower than present datum.

REMARKS.--Water-discharge records fair. Flow completely regulated since Nov. 1973 by Cochiti Dam (station 08317300) 17 mi upstream. Prior to Nov. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	899	393	553	611	601	644	800	938	1080	927	835	970
2	867	384	549	634	647	646	784	947	1130	884	889	965
3	784	339	546	678	649	656	783	978	1180	887	1090	939
4	785	330	565	661	652	653	843	976	1170	901	932	887
5	759	332	648	607	650	654	848	967	1180	921	798	951
6	765	334	709	605	630	635	843	974	1180	918	780	955
7	762	350	739	603	583	576	841	964	1170	931	733	935
8	737	348	687	628	582	583	841	972	1170	936	637	878
9	716	379	686	680	580	581	834	969	1170	933	659	862
10	671	380	660	712	580	592	830	960	1170	1000	756	895
11	677	378	612	706	559	594	830	944	1170	1050	801	976
12	670	377	657	709	514	587	828	947	1200	1050	821	799
13	643	388	656	707	513	593	828	1180	1200	1060	957	656
14	645	433	655	682	505	671	830	1680	1210	1060	998	423
15	670	438	654	660	487	710	823	1520	1180	1030	1040	433
16	745	509	655	697	486	729	830	1180	1130	891	1050	506
17	728	507	641	697	488	748	830	1170	1140	943	1050	449
18	718	509	617	741	490	747	828	1170	1130	917	1060	415
19	705	560	612	878	492	747	821	1170	1100	866	1060	412
20	653	689	611	878	491	747	811	1140	1090	889	1060	368
21	587	663	603	878	491	750	830	1100	1070	750	1070	421
22	615	695	584	693	524	748	828	1100	1070	835	1060	417
23	605	689	582	372	590	751	823	1100	1070	674	1060	414
24	587	667	582	358	594	744	825	1100	1070	674	1060	414
25	598	667	582	350	596	755	915	1100	1060	669	1030	413
26	629	648	581	347	593	749	918	1120	1020	683	985	418
27	691	577	581	405	596	750	926	1160	974	674	982	414
28	702	544	590	571	553	751	925	1130	1010	676	976	414
29	705	594	612	577	---	774	919	1090	989	708	985	413
30	695	589	620	584	---	805	925	1080	956	833	983	410
31	645	---	611	582	---	797	---	1070	---	782	977	---
TOTAL	21658	14690	19240	19491	15716	21467	25340	33896	33439	26952	29174	18822
MEAN	698.6	489.7	620.6	628.7	561.3	692.5	844.7	1093	1115	869.4	941.1	627.4
MAX	899	695	739	878	652	805	926	1680	1210	1060	1090	976
MIN	587	330	546	347	486	576	783	938	956	669	637	368
AC-FT	42960	29140	38160	38660	31170	42580	50260	67230	66330	53460	57870	37330
(+)	3520	1230	0	0	0	3000	3160	2960	2910	2250	1750	1980
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, BY WATER YEAR (WY)												
MEAN	734.3	907.6	958.9	886.8	1021	1316	2086	3258	3148	1835	1084	871.5
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
SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1974 - 2002												
ANNUAL TOTAL				358685				279885				
ANNUAL MEAN				982.7				766.8	a1510			
HIGHEST ANNUAL MEAN									2493 1987			
LOWEST ANNUAL MEAN									547 1977			
HIGHEST DAILY MEAN				3970	May 22	1680		May 14	8100 May 7 1985			
LOWEST DAILY MEAN				330	Nov 4	330		Nov 4	67 Aug 28 1978			
ANNUAL SEVEN-DAY MINIMUM				345	Nov 3	345		Nov 3	135 Aug 23 1978			
MAXIMUM PEAK FLOW								2200	Aug 3	b273000 May 26 1937		
MAXIMUM PEAK STAGE								5.64	Aug 3	c11.13 Jun 26 1937		
INSTANTANEOUS LOW FLOW									32 Jul 7 1934			
ANNUAL RUNOFF (AC-FT)				711500				555200	1094000			
10 PERCENT EXCEEDS				1890				1090	3660			
50 PERCENT EXCEEDS				824				739	990			
90 PERCENT EXCEEDS				562				471	490			

a Average discharge for 48 years (water years 1926-73), 1,374 ft<sup>3</sup>/s, 995,500 acre-ft/yr, prior to closure of Cochiti.

b From rating curve extended above 15,000 ft<sup>3</sup>/s.

c Site and datum then in use.

(+) Monthly diversion, in acre-ft, of Cochiti Eastside Canal, record furnished by Middle Rio Grande Conservancy District.

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-AIRE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
DEC 07...	1130	758	6.3	8.4	636	10.4	100	8.0	355	11.5	6.0	130	40.4	
MAR 25...	1210	758	6.2	7.5	638	11.3	111	8.2	325	15.0	7.0	120	35.1	
MAY 10...	1050	975	11	11	633	8.4	99	8.1	357	22.0	13.9	--	--	
JUN 13...	1140	1200	15	13	632	9.4	125	8.1	348	30.0	20.0	130	40.0	
AUG 21...	1210	1060	20	21	635	7.4	102	8.2	378	28.0	22.0	150	46.3	
Date		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
DEC 07...	7.61	2.81	.8	22.2	125	114	138	--	8.24	.4	19.4	53.5	223	
MAR 25...	6.82	2.79	.9	21.4	121	116	140	--	9.16	.5	23.0	39.9	208	
MAY 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUN 13...	7.43	2.48	.7	17.2	108	97	117	--	5.03	.37	15.2	60.8	206	
AUG 21...	8.32	2.61	.7	18.8	111	106	127	1	4.82	.31	14.9	73.3	234	
Date		NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, 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)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	
DEC 07...	<.01	<.20	.30	.03	<.02	<.010	.03	<.01	.04	<1	.07	2	74	
MAR 25...	.01	.30	.30	.02	.07	<.010	<.02	<.01	<.02	1	<.05	3n	59	
MAY 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUN 13...	<.01	<.20	.30	.03	<.02	<.010	<.02	<.01	.04	1	.19	E1	66	
AUG 21...	<.01	.20	.40	.03	<.02	<.010	<.02	<.01	.05	<1	.07	2	116	
Date		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)	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)
DEC 07...	<.06	50	<.04	<.8	.12	1.0	<10	<.08	8.1	<.01	5.2	.42	<2	
MAR 25...	<.06	40	E.02	<.8	.13	.9	<10	<.08	14.6	<.01	5.2	.14	<2	
MAY 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUN 13...	<.06	30	<.04	<.8	.11	1.1	<10	E.07	4.2	E.01n	3.0	.28	E1	
AUG 21...	<.06	40	<.04	<.8	.70	.5	<10	<.08	989	<.01	4.0	1.88	<2	

## RIO GRANDE BASIN

08319000 RIO GRANDE AT SAN FELIPE, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
DEC 07...	<2	<1	<1	2.58	78	50
MAR 25...	<2	<1	6	3.19	80	44
MAY 10...	--	--	--	--	51	84
JUN 13...	<4	<1	11	1.50	52	53
AUG 21...	<14d	<1	1	.50	78	72

Remark codes used in this report:

< -- Less than  
E -- Estimated value

Value qualifier codes used in this report:

d -- Diluted sample: method hi range exceeded  
n -- Below the laboratory reporting level



WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
JUN 12...	1310	14	622	7.8	112	8.5	796	33.0	23.0	150	48.8	5.60	16.1	
SEP 12...	1010	32	612	7.8	99	8.4	517	18.5	16.0	110	37.1	4.35	8.86	
Date	Time	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
JUN 12...	3	92.9	206	191	226	3	121	1.41	44.4	10.3	456	<.01	<.20	
SEP 12...	2	57.5	167	142	169	2	71.4	.95	42.0	8.3	316	<.01	<.20	
Date	Time	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	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)
JUN 12...	.30	.03	<.02	<.010	.04	.02	.05	2	.14	110	93	<.06	1050	
SEP 12...	.80	.03	.04	<.010	.04	.04	.18	3	.15	53	82	<.06	600	
Date	Time	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)	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)
JUN 12...	<.04	<.8	.16	.8	14	E.04	15.3	6.0	<.06	E2	<1	4	1.73	
SEP 12...	<.04	<.8	.14	.8	24	E.04	4.8	4.3	1.58	<2	<1	3	1.17	
Date	Time	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDIMENT, SUS-PENDED (MG/L) (80154)											
JUN 12...		88	112											
SEP 12...		70	384											
Date	Time	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC, DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER, FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	
SEP 12...	1010	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	

08324000 JEMEZ RIVER NEAR JEMEZ, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN, DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U (UG/L) (82677)	EPTC WATER FLTRD 0.7 U (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U (UG/L) (82666)	METHYL AZIN- PHOS WAT FLT 0.7 U (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U (UG/L) (82667)	
SEP 12...	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
Date	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
SEP 12...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010
Date	PRO- PANIL WATER FLTRD 0.7 U (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82661)				
SEP 12...		<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009			

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

08328500 JEMEZ CANYON RESERVOIR NEAR BERNALILLO, NM

LOCATION.--Lat 35°23'40", long 106°32'50", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 6.0 mi north of Bernalillo.

DRAINAGE AREA.--1,034 mi<sup>2</sup>.

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 Oct. 19, 1953. Capacity, 172,800 acre-ft, from capacity table adapted Jan. 1, 1999, 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 ft<sup>3</sup>/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 telemetry 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 Mar. 1979 and Oct. 27, 2001, to present.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,620 acre-ft, Oct. 1, elevation, 5,171.61 ft; minimum contents, 0 acre-ft, Oct. 27 to Sept. 30, elevation, 5,155.50 ft.

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

(Based on survey by U.S. Army Corps of Engineers in 1998)

5,180.0	8,650	5,190.0	17,360
5,185.0	12,800	5,195.0	23,220

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3620	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	3460	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	3240	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	3030	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	2820	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	2620	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	2420	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	2220	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	2040	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	1850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	1670	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	1490	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	1340	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	1190	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	1100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	1100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	1100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	1090	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	1080	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	1000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	852	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	662	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	421	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	234	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
MAX	3620	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(+)	5155.50	5155.50	5155.50	5155.50	5155.50	5155.50	5155.50	5155.50	5155.50	5155.50	5155.50	5155.50
(++)	-3660	0	0	0	0	0	0	0	0	0	0	0
CAL YR	MAX 16180	MIN 0.00	(++) -4510									
WTR YR	MAX 3620	MIN 0.00	(++) -3660									

(+) Elevation, in feet, at end of month.

(++) Change in contents, in acre-ft.

08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, NM

LOCATION.--Lat 35°23'24", long 106°32'03", in NE<sup>1</sup>/<sub>4</sub> 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 6.0 mi north of Bernalillo.

DRAINAGE AREA.--1,038 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1936 to January 1938, March 1943 to current year. Published as "Jemez Creek" prior to 1948, and as "near Bernalillo" prior to 1954.

REVISED RECORDS.--WSP 1178: 1949. WSP 1212: 1950. WSP 1512: 1936, 1943, 1945, 1947-48, 1949(M), 1950. WSP 1732: Drainage area.

GAGE.--Water-stage recorder 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 Jan. 1953.

REMARKS.--Records poor. Subsequent to October 1953, flow at this station can be completely regulated by Jemez Canyon Reservoir (station 08328500). However, reservoir is designed essentially for desilting and flood control rather than storage. Diversions for irrigation of about 3,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in 1900 was probably less than 16,000 ft<sup>3</sup>/s but highest observed outside period of record.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	0.33	e8.9	e8.8	e14	e2.6	3.1	e0.16	e10	0.28	0.18	1.0
2	77	0.28	e8.8	e5.6	e16	e2.6	3.2	e0.20	e9.2	0.29	0.27	1.4
3	106	0.27	e8.9	e8.4	e12	e2.2	3.2	e0.09	e0.90	0.38	65	1.6
4	104	0.27	e8.7	e7.3	e11	e2.4	3.5	e0.09	1.5	0.69	11	1.6
5	102	0.26	e8.5	e6.6	e5.9	e3.7	3.8	e0.80	1.5	0.59	11	1.5
6	100	0.22	e8.5	e7.6	e3.3	e4.5	e1.3	e1.1	1.5	0.58	96	1.5
7	99	0.17	e8.3	e8.8	e1.7	e5.9	e3.9	e1.0	1.5	1.0	21	1.5
8	98	0.17	e8.0	e9.2	e1.9	e6.3	e3.7	e0.90	1.5	1.3	0.40	1.5
9	97	0.18	e7.8	e33	e1.4	e7.3	e3.5	2.2	1.4	1.3	0.35	1.6
10	96	0.20	e7.9	e19	e0.90	e8.1	e5.3	2.1	1.1	1.2	0.31	75
11	93	0.22	e7.7	e25	e0.44	e8.0	e3.0	2.1	1.0	1.2	0.34	460
12	91	0.50	e7.5	e28	e1.4	e8.4	e3.2	1.9	0.87	1.2	0.36	125
13	90	1.1	e7.4	e31	e3.5	e13	e3.9	2.1	0.81	1.2	0.36	621
14	88	1.4	e7.7	e33	e2.4	e14	e2.2	2.2	0.85	1.2	0.44	11
15	60	4.3	e7.4	e43	e2.0	e17	e1.3	e2.4	0.70	1.1	0.42	4.7
16	1.3	e8.2	e7.1	e48	e1.5	e12	e0.70	e11	0.69	1.3	0.43	1.0
17	0.83	e7.9	e7.2	e53	e3.0	e7.7	e0.45	e12	0.61	1.2	0.51	0.28
18	4.5	e8.1	e7.1	e37	e3.2	e12	e0.38	e13	0.58	1.4	0.59	0.23
19	12	e8.8	e7.5	e29	e2.0	e15	e0.38	e10	0.51	12	0.74	0.18
20	79	e12	e7.0	e27	e2.0	e12	e0.31	e10	0.48	0.53	0.84	0.16
21	111	e11	e7.6	e30	e1.5	e11	e0.31	e13	0.50	4.0	0.86	0.16
22	108	11	e7.4	e35	e1.8	e9.3	e0.37	e13	51	3.2	0.90	0.14
23	120	12	e5.1	e37	e2.0	e12	e0.50	e16	29	1.5	0.90	0.20
24	115	14	e5.7	e35	e5.6	e9.7	e2.0	e13	4.7	5.8	0.88	0.17
25	110	15	e5.1	e25	e3.1	e9.3	e1.9	e13	1.7	0.35	0.88	0.17
26	73	12	e4.7	e29	e2.8	e8.5	e2.2	e14	0.21	0.16	0.80	0.16
27	19	5.9	e5.0	e33	e3.3	e5.1	e1.6	e13	0.16	0.10	0.77	0.18
28	0.71	6.6	e4.7	e35	e3.4	e2.0	e1.2	e11	0.17	0.09	0.85	0.21
29	4.9	9.2	e4.8	e33	---	3.1	e0.52	e13	0.21	0.11	0.90	0.19
30	0.49	e9.0	e6.3	e38	---	3.0	e0.26	e10	0.23	0.14	0.91	0.24
31	0.40	---	e4.2	e26	---	3.1	---	e9.2	---	0.15	1.00	---
TOTAL	2083.13	160.57	218.5	824.3	113.04	240.8	61.18	213.54	125.08	45.54	220.19	1313.57
MEAN	67.20	5.352	7.048	26.59	4.037	7.768	2.039	6.888	4.169	1.469	7.103	43.79
MAX	120	15	8.9	53	16	17	5.3	16	51	12	96	621
MIN	0.40	0.17	4.2	5.6	0.44	2.0	0.26	0.09	0.16	0.09	0.18	0.14
AC-FT	4130	318	433	1630	224	478	121	424	248	90	437	2610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)								
MEAN	28.48	29.07	21.20	23.89	27.78	64.76	180.8	183.6	73.93	25.20	43.62	23.51
MAX	193	179	74.4	67.9	75.1	288	772	968	988	358	247	157
(WY)	1987	1958	1987	1999	1987	1995	1985	1973	1958	1987	1991	1988
MIN	0.000	2.22	0.20	0.25	0.34	7.77	0.96	0.000	0.000	0.000	0.13	0.000
(WY)	1956	1997	1985	1985	1985	2002	1996	1972	1946	1947	1950	1945

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1943 - 2002

ANNUAL TOTAL	20462.60	5619.44		
ANNUAL MEAN	56.06	15.40		
HIGHEST ANNUAL MEAN			60.96	
LOWEST ANNUAL MEAN			178	1973
HIGHEST DAILY MEAN	1580	May 22	10.6	1953
LOWEST DAILY MEAN	0.17	Nov 7	3640	Jun 19 1958
ANNUAL SEVEN-DAY MINIMUM	0.20	Nov 5	0.09	May 3 1943
MAXIMUM PEAK FLOW			0.13	Jul 26 1943
MAXIMUM PEAK STAGE			2140	Sep 13 1943
ANNUAL RUNOFF (AC-FT)	40590	11150	9.38	Sep 13 1998
10 PERCENT EXCEEDS	117	35	a16300	Aug 29 1943
50 PERCENT EXCEEDS	20	3.2	b6.63	Apr 28 1998
90 PERCENT EXCEEDS	2.1	0.26	44170	

e Estimated

a From rating curve extended above 3,000 ft<sup>3</sup>/s.

b Site and datum then in use.

08329700 CAMPUS WASH AT ALBUQUERQUE, NM

LOCATION.--Lat 35°05'38", long 106°37'25", in SE<sup>1</sup>/<sub>4</sub> 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 Barelmas 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 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1982 to September 1996 (seasonal records). October 1996 to current year.

GAGE.--Water-stage and rainfall recorder and concrete-lined channel. Elevation of gage is 5,143 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor. Recording rain gage at station. Prior to water year 1997, some minor streamflow may exist on days when 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.69	0.41	0.37	0.28	1.3	0.55	0.45	0.52	0.28	0.71	0.55	0.56
2	0.64	0.41	0.32	0.42	e0.60	e0.50	0.49	0.52	0.41	0.51	6.8	0.62
3	0.65	0.42	0.35	e0.40	e0.40	e0.40	0.56	0.63	0.70	0.53	7.1	0.58
4	0.68	0.47	0.34	e0.40	0.19	e0.30	0.48	0.49	0.70	0.61	0.54	0.59
5	0.65	0.45	0.35	e0.40	e0.30	0.21	0.50	0.50	0.61	0.51	0.64	0.55
6	0.63	0.45	0.46	e0.40	e0.40	0.61	0.70	0.52	0.68	0.55	0.66	0.59
7	0.61	0.45	0.50	0.42	e0.40	0.26	2.9	0.51	0.70	1.9	0.65	0.62
8	0.79	0.56	e0.40	0.36	0.36	0.33	0.40	0.48	0.81	1.5	0.63	0.52
9	0.70	0.48	e0.40	0.87	0.69	0.29	0.45	0.49	0.94	0.52	0.65	0.85
10	0.78	0.41	0.45	1.6	e0.70	0.24	0.59	0.48	1.2	1.7	0.56	9.7
11	0.59	0.36	0.90	e0.70	0.84	0.26	0.59	0.14	0.86	0.55	0.50	9.2
12	0.48	0.44	0.62	e0.60	0.50	0.29	0.57	0.01	1.0	0.51	0.60	1.2
13	0.30	0.40	e0.60	e0.50	0.67	0.21	0.53	0.39	1.3	0.47	0.66	1.7
14	0.36	3.4	e0.50	e0.40	0.44	0.38	0.25	0.61	17	0.40	0.60	0.56
15	0.49	1.1	0.55	0.31	0.44	0.34	0.54	0.49	0.62	0.49	0.59	0.51
16	0.56	0.80	e0.40	0.54	0.29	0.41	0.54	0.51	0.48	0.61	0.53	0.59
17	0.65	0.50	0.26	0.28	0.29	0.36	0.59	0.51	0.91	0.78	0.43	0.61
18	0.77	0.42	e0.30	e0.30	0.55	0.35	0.52	0.14	0.66	0.68	0.51	4.2
19	0.76	0.45	e0.30	e0.20	0.38	0.36	0.55	0.11	0.51	1.5	0.86	0.59
20	0.64	0.41	e0.30	0.10	0.49	0.38	0.51	0.46	0.69	0.50	0.81	0.55
21	0.55	0.30	0.31	0.63	0.45	0.54	0.50	0.55	0.65	0.57	0.61	0.51
22	0.58	0.29	0.52	e0.40	0.22	0.39	0.48	0.52	0.77	4.1	0.58	0.56
23	0.57	2.9	1.4	0.27	0.14	0.34	0.53	0.49	0.62	0.56	0.56	0.53
24	0.55	0.33	e0.80	e0.30	0.20	0.33	0.53	0.46	0.70	0.67	0.51	0.56
25	0.38	0.26	e0.80	e0.20	0.33	0.36	0.57	0.29	0.74	0.68	0.42	0.58
26	0.40	0.40	e0.90	e0.20	0.57	0.37	0.55	0.28	0.74	1.1	0.52	0.57
27	0.34	0.54	0.94	0.17	0.54	0.38	0.48	0.93	0.54	0.60	0.54	0.58
28	0.35	0.87	e1.0	0.22	0.41	0.42	0.58	0.80	0.60	0.71	0.62	1.2
29	0.40	e0.40	0.98	0.59	---	0.45	0.66	0.73	0.56	0.64	0.43	0.67
30	0.37	0.32	1.4	3.1	---	0.41	0.63	0.73	0.55	0.65	0.45	0.54
31	0.43	---	0.26	e0.60	---	0.45	---	0.86	---	0.59	0.49	---
TOTAL	17.34	19.40	17.98	16.16	13.09	11.47	18.22	15.15	37.53	26.40	30.60	41.19
MEAN	0.559	0.647	0.580	0.521	0.468	0.370	0.607	0.489	1.251	0.852	0.987	1.373
MAX	0.79	3.4	1.4	3.1	1.3	0.61	2.9	0.93	17	4.1	7.1	9.7
MIN	0.30	0.26	0.26	0.10	0.14	0.21	0.25	0.01	0.28	0.40	0.42	0.51
AC-FT	34	38	36	32	26	23	36	30	74	52	61	82
(+)	0.00	0.38	0.17	0.18	0.03	0.00	0.14	0.04	0.57	0.12	0.45	0.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	1.287	0.592	0.365	0.341	0.424	0.899
MAX	2.39	0.76	0.58	0.52	0.62	1.97
(WY)	2001	2001	2002	2002	1998	1998
MIN	0.54	0.46	0.096	0.15	0.15	0.26
(WY)	1998	1999	1997	1998	1997	2000

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1997 - 2002

ANNUAL TOTAL	292.07	264.53		
ANNUAL MEAN	0.800	0.725	0.902	
HIGHEST ANNUAL MEAN			1.09	1997
LOWEST ANNUAL MEAN			0.72	2002
HIGHEST DAILY MEAN	17	Aug 14	17	Jun 14
LOWEST DAILY MEAN	0.15	Jan 7	0.00	May 12
ANNUAL SEVEN-DAY MINIMUM	0.21	Jan 1	0.25	Jan 22
MAXIMUM PEAK FLOW			584	Jun 14
MAXIMUM PEAK STAGE			2.88	Jun 14
ANNUAL RUNOFF (AC-FT)	579	525	653	4.50
10 PERCENT EXCEEDS	1.1	0.87	1.2	
50 PERCENT EXCEEDS	0.63	0.53	0.50	
90 PERCENT EXCEEDS	0.30	0.30	0.15	

e Estimated

(+) Total rainfall accumulation in inches.

08329720 EMBUDO ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°06'08", long 106°29'33", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.14, T.10 N., R.4 E., Bernalillo County, Hydrologic Unit 13020203, on left bank of concrete lined channel, approximately 90 ft upstream from Monte Largo bridge over Embudo Arroyo, between Indian School Road to the south and Rover Street to the north in Albuquerque.

DRAINAGE AREA.--3.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete weir control. Elevation of gage is 5,925 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Recording rain gage located in drainage basin, approximately 1 mi upstream. Site used for gathering water-quality data for undeveloped upper drainage basin, which represents undeveloped foothill east of Albuquerque.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	1999	2000	2001	1999	2000	2001	2002	1999	2001
MEAN	0.003	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.002	0.007	0.000
MAX	0.010	0.002	0.000	0.000	0.000	0.002	0.000	0.000	0.002	0.004	0.014	0.001
(WY)	2001	2001	1999	1999	1999	2000	1999	1999	2000	2000	1999	2001
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2000	1999	1999	1999	1999	1999	1999	1999	1999	2002	2002	1999

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1999 - 2002

ANNUAL TOTAL	0.40	0.00	
ANNUAL MEAN	0.001	0.000	
HIGHEST ANNUAL MEAN			0.001
LOWEST ANNUAL MEAN			0.002
HIGHEST DAILY MEAN	0.14	Aug 14	0.00
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			0.07
MAXIMUM PEAK STAGE			1.08
ANNUAL RUNOFF (AC-FT)	0.8	0.00	0.8
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 08329835 NORTH FLOODWAY CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'03", long 106°36'42", in SE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1982 to September 1999 year (seasonal records). October 1999 to current year.

GAGE.--Water-stage recorder and recording tipping-bucket rain gage with 0.01-inch increment, and concrete lined channel. Elevation of gage is 5,110 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor. Prior to water year 2001 some minor streamflow may exist on days when 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.8	1.7	e1.5	2.1	0.55	0.69	1.1	0.58	0.57	2.0	3.3
2	2.1	e2.0	1.1	e1.5	1.6	0.99	0.74	1.2	0.38	0.33	82	4.0
3	2.5	e2.0	1.2	e1.5	0.96	e1.0	0.84	1.1	0.73	0.96	50	3.8
4	2.3	e2.0	1.7	e2.5	0.93	0.89	1.3	1.2	1.0	0.67	25	2.7
5	2.7	e2.5	2.2	e1.5	0.97	1.2	0.90	0.70	0.76	0.49	2.5	2.8
6	2.2	e2.5	2.1	e1.0	e1.0	1.0	3.3	0.91	0.75	0.40	61	2.3
7	1.6	e2.0	1.7	e1.0	e1.0	1.3	84	1.4	0.52	5.5	21	2.1
8	2.0	e2.5	1.5	1.6	0.96	0.62	3.9	1.2	0.54	11	2.4	3.7
9	4.2	1.7	e1.5	2.0	e0.80	0.71	1.5	1.0	0.49	1.3	1.9	7.0
10	3.5	2.1	1.6	9.3	e0.70	0.64	1.1	1.0	0.83	42	1.7	110
11	2.6	1.0	8.2	2.1	0.65	0.48	1.0	0.94	0.72	14	1.6	80
12	2.0	0.97	8.2	1.6	0.71	0.51	1.0	0.17	0.75	1.1	1.5	14
13	1.8	1.5	3.5	1.2	1.4	0.53	1.1	0.10	0.99	0.62	1.9	8.6
14	1.0	37	3.9	1.5	0.89	0.48	0.71	3.5	102	0.69	2.0	2.2
15	1.9	14	3.0	1.3	0.98	0.62	0.58	1.5	1.4	0.79	2.0	1.6
16	2.3	7.3	1.4	1.5	1.0	0.66	0.90	1.6	0.39	0.98	2.1	1.6
17	2.7	2.4	1.7	1.2	0.44	0.64	0.71	2.9	0.84	3.0	2.2	e2.0
18	2.4	1.8	3.4	0.88	1.1	0.70	0.71	1.1	0.58	1.5	1.8	e25
19	2.4	2.0	2.9	e1.0	1.4	0.79	0.73	0.41	0.32	23	4.3	e2.0
20	2.6	2.3	e2.0	0.99	0.92	0.63	5.1	0.89	0.60	8.2	3.9	e1.5
21	2.3	2.2	1.4	1.6	1.0	0.88	0.93	0.95	2.5	2.5	2.0	e1.5
22	3.0	1.5	1.5	0.97	0.68	0.88	0.95	1.0	0.61	21	1.5	e1.5
23	1.2	38	e1.5	1.3	0.57	0.62	0.97	0.54	0.54	2.7	1.2	e1.5
24	1.5	2.6	1.6	1.8	0.19	0.32	1.6	0.55	0.41	4.8	1.2	e1.5
25	1.9	1.9	1.6	1.2	0.38	0.71	1.4	0.73	0.47	2.7	1.1	e1.5
26	2.3	1.9	e1.5	e1.0	0.80	0.88	1.4	0.18	0.50	3.2	1.5	e1.5
27	2.9	2.1	1.5	0.75	1.0	0.76	1.6	1.2	0.43	2.2	1.6	e2.5
28	1.7	2.2	1.5	0.87	0.98	0.64	1.5	1.2	0.38	2.3	2.4	e5.0
29	2.6	2.0	3.9	1.6	---	1.1	1.5	0.98	0.39	2.2	2.3	e2.0
30	1.7	1.6	15	30	---	1.1	1.2	0.88	0.32	2.1	2.2	e1.5
31	1.7	---	1.3	6.1	---	0.54	---	0.87	---	2.1	2.2	---
TOTAL	69.7	148.37	86.8	83.86	26.11	23.37	123.86	33.00	121.72	164.90	292.0	300.2
MEAN	2.248	4.946	2.800	2.705	0.932	0.754	4.129	1.065	4.057	5.319	9.419	10.01
MAX	4.2	38	15	30	2.1	1.3	84	3.5	102	42	82	110
MIN	1.0	0.97	1.1	0.75	0.19	0.32	0.58	0.10	0.32	0.33	1.1	1.5
AC-FT	138	294	172	166	52	46	246	65	241	327	579	595
(+)	0.00	0.48	0.32	0.34	0.06	0.10	0.34	0.07	0.66	0.52	0.79	1.47

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	10.16	4.541	2.016	2.408	2.378	5.582	3.152	1.752	4.508	6.526	9.655	4.960
MAX	26.2	8.68	3.25	3.88	4.64	10.4	5.27	4.07	6.05	9.51	11.7	10.0
(WY)	2001	2001	2001	2001	2001	2000	2001	2001	2000	2001	2001	2002
MIN	2.00	0.000	0.000	0.63	0.93	0.75	0.058	0.12	3.42	4.74	7.81	0.38
(WY)	2000	2000	2000	2000	2002	2002	2000	2000	2001	2000	2000	2000

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 2000 - 2002

ANNUAL TOTAL	1908.77	1473.89	
ANNUAL MEAN	5.230	4.038	
HIGHEST ANNUAL MEAN			4.827
LOWEST ANNUAL MEAN			7.61
HIGHEST DAILY MEAN	183	Aug 14	2001
LOWEST DAILY MEAN	0.97	Nov 12	2000
ANNUAL SEVEN-DAY MINIMUM	1.5	Jun 11	2000
MAXIMUM PEAK FLOW			2000
MAXIMUM PEAK STAGE			2.84
ANNUAL RUNOFF (AC-FT)	3790	2920	3500
10 PERCENT EXCEEDS	8.5	3.9	6.7
50 PERCENT EXCEEDS	2.6	1.5	1.5
90 PERCENT EXCEEDS	1.6	0.58	0.00

e Estimated

(+) Total rainfall accumulation in inches.

08329838 SOUTH FORK HAHN ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'16", long 106°34'04", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> 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 Road, and 1,700 ft north of Candelaria Road, in Albuquerque.

DRAINAGE AREA.--2.03 mi<sup>2</sup>.

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

REVISED RECORD.--WDR NM-99-1: 1992-98(M), (mean daily values).

GAGE.--Water-stage recorder and recording tipping-bucket rain gage with 0.01-in. increment, 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. Some minor streamflow may exist on days when 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	0.08	0.03	0.02	0.10	0.03	0.05	0.05	0.00	0.07	0.04	0.00
2	0.09	0.05	0.00	0.03	0.01	0.04	0.02	0.06	0.01	0.06	7.7	0.03
3	0.08	0.06	0.05	0.03	0.06	0.02	0.03	0.05	0.00	0.07	1.3	0.06
4	0.08	0.00	0.05	0.30	0.06	0.19	0.00	0.00	0.00	0.03	9.9	0.03
5	0.08	0.06	0.03	0.04	0.04	0.08	0.02	0.00	0.00	0.08	0.13	0.00
6	0.00	0.10	0.03	0.04	0.00	0.08	0.13	0.04	0.00	0.00	4.4	0.03
7	0.02	0.06	0.02	0.06	0.00	0.10	5.6	0.05	0.00	0.04	8.5	0.16
8	0.14	0.05	0.02	0.07	0.00	0.08	0.12	0.05	0.00	0.23	0.08	0.09
9	0.09	0.05	0.03	0.08	0.00	0.06	0.03	0.05	0.00	0.29	0.03	0.15
10	0.12	0.00	0.04	0.39	0.00	0.03	0.05	0.05	0.00	11	0.00	7.3
11	0.11	0.00	0.45	0.08	0.05	0.06	0.04	0.00	0.00	3.9	0.00	4.6
12	0.10	0.00	0.45	0.05	0.03	0.06	0.06	0.00	0.00	0.04	0.04	1.3
13	0.00	0.00	0.18	0.02	0.03	0.06	0.00	0.05	0.00	0.02	0.05	0.73
14	0.04	0.99	0.03	0.06	0.03	0.04	0.00	0.33	1.9	0.01	0.05	0.00
15	0.12	0.42	0.03	0.07	0.03	0.08	0.04	0.05	0.01	0.04	0.04	0.00
16	0.08	0.41	0.03	0.04	0.02	0.03	0.04	0.06	0.02	0.04	0.04	0.03
17	0.08	0.02	0.04	0.10	0.02	0.07	0.04	0.06	0.06	0.04	0.00	0.03
18	0.07	0.02	0.11	0.07	0.02	0.07	0.08	0.00	0.02	0.06	0.00	1.3
19	0.08	0.07	0.13	0.04	0.02	0.06	0.05	0.09	0.05	4.5	0.22	0.06
20	0.00	0.06	0.02	0.04	0.02	0.06	0.05	0.03	1.2	0.26	0.13	0.03
21	0.00	0.06	0.03	0.16	0.02	0.04	0.00	0.05	0.27	0.03	0.04	0.00
22	0.10	0.07	0.03	0.15	0.04	0.04	0.04	0.03	0.00	0.48	0.04	0.00
23	0.05	0.96	0.04	0.05	0.02	0.04	0.05	0.04	0.01	0.04	0.04	0.05
24	0.08	0.04	0.03	0.23	0.02	0.00	0.06	0.05	0.05	0.79	0.00	0.05
25	0.05	0.02	0.02	0.15	0.02	0.02	0.05	0.03	0.03	0.11	0.00	0.09
26	0.06	0.05	0.02	0.04	0.03	0.04	0.06	0.00	0.05	0.12	0.03	0.03
27	0.00	0.08	0.02	0.03	0.03	0.06	0.00	0.05	0.05	0.01	0.00	0.07
28	0.33	0.18	0.02	0.07	0.05	0.03	0.01	0.05	0.07	0.00	0.02	0.30
29	0.07	0.06	0.36	0.05	---	0.03	0.04	0.05	0.00	0.07	0.03	0.00
30	0.08	0.06	0.84	1.2	---	0.00	0.05	0.04	0.01	0.05	0.02	0.07
31	0.05	---	0.02	0.36	---	0.03	---	0.04	---	0.05	0.04	---
TOTAL	2.35	4.08	3.20	4.12	0.77	1.63	6.81	1.50	3.81	22.53	32.91	16.59
MEAN	0.076	0.136	0.103	0.133	0.028	0.053	0.227	0.048	0.127	0.727	1.062	0.553
MAX	0.33	0.99	0.84	1.2	0.10	0.19	5.6	0.33	1.9	11	9.9	7.3
MIN	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	4.7	8.1	6.3	8.2	1.5	3.2	14	3.0	7.6	45	65	33
(+)	0.02	0.60	0.37	0.30	0.05	0.08	0.61	0.14	0.47	0.88	1.46	2.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002	2000	2001	2002	1997	1998	1999	2000	2001	2002
MEAN	0.411	0.187	0.129	0.129	0.136	0.316	0.281	0.192	0.358	0.794	0.827	0.269			
MAX	0.84	0.30	0.38	0.22	0.28	0.68	0.59	0.47	1.23	2.34	1.23	0.55			
(WY)	2001	1997	1998	1997	1998	1998	1997	1999	1999	1997	1997	2002			
MIN	0.076	0.066	0.023	0.056	0.027	0.053	0.068	0.048	0.079	0.14	0.50	0.064			
(WY)	2002	2000	2000	2000	2002	2002	2000	2002	1998	2000	1998	2000			

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1997 - 2002

ANNUAL TOTAL	83.37	100.30		
ANNUAL MEAN	0.228	0.275	0.338	
HIGHEST ANNUAL MEAN			0.57	1997
LOWEST ANNUAL MEAN			0.16	2000
HIGHEST DAILY MEAN	9.3	Sep 14	11	Jul 10
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 6
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 7	0.00	Jun 3
MAXIMUM PEAK FLOW			698	Aug 4
MAXIMUM PEAK STAGE			3.75	Aug 4
ANNUAL RUNOFF (AC-FT)	165	199	245	
10 PERCENT EXCEEDS	0.45	0.24	0.43	
50 PERCENT EXCEEDS	0.07	0.04	0.07	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

(+) Total rainfall accumulation in inches.

08329839 NORTH FORK HAHN ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'37", long 106°34'04", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> 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 Road, and 1,450 ft south of Montgomery Boulevard, in Albuquerque.

DRAINAGE AREA.--1.51 mi<sup>2</sup>.

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

REVISED RECORD.--WDR NM-99-1: 1992-98(M) (mean daily values).

GAGE.--Water-stage recorder and recording tipping-bucket rain gage with 0.01 inch increment, 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 when 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	1.1
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.36	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.29	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.10	1.72	3.02	2.89
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.003	0.055	0.097	0.096
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.10	0.53	1.1	1.1
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.2	0.00	0.2	3.4	6.0	5.7
(+)	0.02	0.54	0.43	0.31	0.05	0.00	0.57	0.04	0.43	0.84	1.23	2.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	0.042	0.025	0.029	0.039	0.011	0.011
MAX	0.11	0.12	0.16	0.19	0.062	0.047
(WY)	2001	1998	1998	1998	1998	1997
MIN	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2000	1997	1999	1999	1999	2000

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1997 - 2002

ANNUAL TOTAL	5.34	7.84		
ANNUAL MEAN	0.015	0.021	0.033	
HIGHEST ANNUAL MEAN			0.060	1997
LOWEST ANNUAL MEAN			0.014	2000
HIGHEST DAILY MEAN	1.5	May 19	1.1	Aug 3
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1
MAXIMUM PEAK FLOW			60	Aug 4
MAXIMUM PEAK STAGE			1.40	Aug 4
ANNUAL RUNOFF (AC-FT)	11		16	
10 PERCENT EXCEEDS	0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00	

(+) Total rainfall accumulation in inches.

08329840 HAHN ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'33", long 106°35'23", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

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

REVISED RECORD.--WDR NM-99-1: 1992-98(M) (mean daily values).

GAGE.--Water-stage and recording tipping-bucket rain gage with 0.01 in. increment 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 those estimated, which are poor. Some minor streamflow may exist on days when 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.6	2.3	1.2	e2.0	3.7	2.7	0.75	0.70	0.11	1.1	1.0	1.4
2	1.6	1.7	0.39	1.8	2.7	2.1	0.73	0.80	0.27	1.2	17	0.99
3	1.6	1.5	1.3	e2.0	2.4	1.6	0.93	0.69	0.93	1.4	14	2.0
4	1.7	0.32	1.2	1.9	0.94	e2.5	1.0	0.07	0.92	1.6	12	1.8
5	1.6	2.9	e1.5	2.9	1.5	e2.0	0.67	0.05	0.73	2.7	4.6	1.1
6	0.05	3.1	1.8	2.1	0.50	1.7	1.4	0.90	1.2	1.2	9.8	1.1
7	0.23	2.2	1.1	e2.0	0.43	2.0	23	0.81	1.2	1.9	11	0.97
8	2.8	2.5	1.3	e2.0	0.24	2.2	2.1	0.76	0.28	e2.0	2.2	1.8
9	1.3	2.6	0.60	22	0.34	0.89	1.1	0.96	0.51	e6.0	1.3	2.2
10	2.5	1.1	1.0	14	0.33	1.2	1.4	0.83	1.4	e12	0.74	21
11	2.0	0.00	6.1	14	0.91	1.2	1.0	0.34	1.9	7.9	0.55	17
12	2.3	1.4	6.7	e2.0	0.69	1.5	2.3	0.56	3.2	2.0	0.81	7.2
13	0.28	1.9	1.6	e1.5	1.1	1.8	1.7	1.4	2.0	0.99	1.0	8.4
14	1.0	9.5	3.5	e1.5	1.3	1.2	0.56	2.7	13	0.89	1.1	1.0
15	2.5	6.1	2.8	e2.0	0.94	2.7	1.4	1.2	e2.0	1.4	1.9	0.19
16	2.3	7.5	0.96	e1.5	1.3	0.94	1.5	0.73	e1.0	1.1	1.5	0.73
17	2.2	1.4	0.85	e2.0	0.16	3.2	1.2	0.64	e1.5	0.92	0.24	0.78
18	3.0	0.67	1.7	e1.5	0.23	2.4	1.7	0.03	e1.0	1.2	0.78	7.8
19	1.6	1.5	1.6	e1.5	0.89	2.4	0.77	1.2	e1.5	6.9	3.7	1.0
20	0.49	1.1	e1.5	e1.5	1.1	2.6	0.51	0.88	13	4.3	2.4	0.65
21	0.23	0.90	1.7	3.1	1.4	2.5	0.24	0.92	e3.0	1.8	2.2	0.18
22	1.9	1.2	1.4	3.3	1.9	2.4	0.62	0.70	e0.50	5.7	0.88	0.23
23	1.2	9.7	1.7	2.2	1.6	1.4	0.79	0.62	e1.0	1.6	0.95	0.82
24	1.9	1.2	1.4	3.5	0.65	0.42	0.80	0.74	e1.5	4.1	0.09	1.8
25	1.2	0.56	2.4	2.9	1.1	0.44	0.59	0.34	e1.0	2.9	0.00	2.3
26	1.5	0.54	e2.5	1.5	1.3	0.52	0.61	0.26	e1.0	2.5	0.63	1.2
27	0.29	1.00	2.7	0.71	2.6	0.56	0.16	1.2	e1.5	0.63	0.37	2.0
28	3.3	1.2	1.9	1.3	2.1	0.41	0.29	0.75	1.1	0.48	1.4	3.7
29	2.3	0.93	11	1.3	---	0.94	0.89	0.73	0.41	1.3	1.0	0.22
30	2.5	1.2	0.54	11	---	0.28	0.58	0.71	0.62	1.1	0.75	1.2
31	2.1	---	1.9	4.0	---	0.43	---	0.64	---	1.2	4.0	---
TOTAL	51.07	69.72	67.84	116.51	34.35	49.13	51.29	23.86	59.28	82.01	99.89	92.76
MEAN	1.647	2.324	2.188	3.758	1.227	1.585	1.710	0.770	1.976	2.645	3.222	3.092
MAX	3.3	9.7	11	22	3.7	3.2	23	2.7	13	12	17	21
MIN	0.05	0.00	0.39	0.71	0.16	0.28	0.16	0.03	0.11	0.48	0.00	0.18
AC-FT	101	138	135	231	68	97	102	47	118	163	198	184
(+)	0.01	0.64	0.38	0.50	0.00	0.05	0.51	0.06	0.49	0.69	1.49	2.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	2.296	1.428	1.347	1.668	1.443	2.288
MAX	5.26	2.32	2.59	3.76	3.52	4.02
(WY)	2001	2002	1998	2002	2001	2001
MIN	0.82	0.21	0.082	0.74	0.43	1.00
(WY)	1998	2000	2000	1999	1997	1997

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1997 - 2002	
ANNUAL TOTAL	1137.80		797.71			
ANNUAL MEAN	3.117		2.186		2.065	
HIGHEST ANNUAL MEAN					3.37	
LOWEST ANNUAL MEAN					1.24	
HIGHEST DAILY MEAN	27	Aug 14	23	Apr 7	170	Jun 16 1999
LOWEST DAILY MEAN	0.00	Nov 11	0.00	Nov 11	0.00	Dec 15 1996
ANNUAL SEVEN-DAY MINIMUM	0.92	Nov 26	0.49	Feb 6	0.00	Nov 23 1999
MAXIMUM PEAK FLOW			404	Aug 4	6120	Jun 16 1999
MAXIMUM PEAK STAGE			1.98	Aug 4	5.98	Jun 16 1999
ANNUAL RUNOFF (AC-FT)	2260		1580		1500	
10 PERCENT EXCEEDS	6.5		3.7		4.4	
50 PERCENT EXCEEDS	2.2		1.3		0.90	
90 PERCENT EXCEEDS	0.94		0.42		0.10	

e Estimated

(+) Total rainfall accumulation in inches.

## 08329880 ACADEMY ACRES DRAIN AT ALBUQUERQUE, NM

LOCATION.--Lat 35°09'04", long 106°34'23", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1976 to current year (seasonal records).

GAGE.--Water-stage recorder and recording tipping-bucket rain gage with 0.01 in. increment, control for site is a V-notch weir. Elevation of gage is 5,305 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. The basin is primarily urban residential. Some minor streamflow may exist on days when 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, 88 ft<sup>3</sup>/s, Aug. 3, 1978, gage height, 4.09 ft, from rating curve extended above 24 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow and theoretical computations for weir flow; no flow most time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 26 ft<sup>3</sup>/s, Aug. 4, gage height, 3.04 ft; no flow most of times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.26	0.00
3	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.10	0.17	0.00
4	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.29	0.00
5	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.02	0.00
7	0.00	0.00	---	---	---	0.00	0.21	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.52
11	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.05	0.00	0.20
12	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.06
13	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.04
14	0.00	0.09	---	---	---	0.00	0.00	0.00	0.15	0.00	0.00	0.00
15	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.10
19	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.04	0.00	0.00
20	0.00	0.00	---	---	---	0.00	0.00	0.00	0.03	0.09	0.00	0.00
21	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.04	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.03	0.00	0.00
27	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.0	0.13	---	---	---	0.00	0.21	0.00	0.18	0.31	0.74	0.92
MEAN	0.000	0.004	---	---	---	0.000	0.007	0.000	0.006	0.010	0.024	0.031
MAX	0.00	0.09	---	---	---	0.00	0.21	0.00	0.15	0.10	0.29	0.52
MIN	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.3	---	---	---	0.00	0.4	0.00	0.4	0.6	1.5	1.8
(+)	0.00	0.72	0.74	0.70	0.09	0.00	0.61	0.02	0.38	0.79	1.42	2.01

(+) Total rainfall accumulation in inches.

08329882 PINO ARROYO AT JEFFERSON STREET AT ALBUQUERQUE, NM

LOCATION.--Lat 35°09'34", long 106°35'51", Bernalillo County, Hydrologic Unit 13020203, in the Elena Gallego Grant, on the right bank 1200 ft downstream from the Jefferson Street culvert over Pino Arroyo; approximately 1,200 ft north of the intersection of Jefferson Street. and Osuna Road in northeast Albuquerque.

DRAINAGE AREA.--8.3 mi<sup>2</sup> (but is controlled by detention pond upstream).

PERIOD OF RECORD.--May 2000 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete-lined channel. Elevation of gage is 5,119 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Water-stage records good except for those estimated, which are fair. Since installation of the large static tube around the orifice on Aug. 22, 2001, only flows over about 0.03 ft deep (1.03 on recorder) will cover the orifice sufficiently to record true water depths. This channel often shows trickle flows not related to rainfall.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.00
3	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	1.8	3.1	0.00
4	0.00	0.00	0.00	e0.00	0.00	e0.00	0.00	0.00	0.00	0.00	4.8	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00
6	0.00	0.00	0.00	0.00	e0.00	0.00	0.11	0.00	0.00	0.00	0.34	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.07	0.00	0.00
8	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00
9	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
10	0.00	0.04	e0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.26	0.00	13
11	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	4.0
12	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
13	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
14	0.00	1.4	0.01	0.00	0.00	0.00	1.4	0.00	1.00	0.00	0.00	0.00
15	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
16	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3
19	0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00
20	0.00	0.00	e0.00	0.03	0.00	0.00	0.00	0.00	0.22	0.86	0.39	0.00
21	0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.09	0.00
23	0.00	0.39	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
25	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.55	0.00	0.00
27	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
28	0.00	e0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
29	0.00	e0.00	0.47	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.90	1.9	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.16	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	2.17	1.97	3.16	0.00	0.00	2.11	0.07	1.41	5.02	11.57	20.20
MEAN	0.000	0.072	0.064	0.102	0.000	0.000	0.070	0.002	0.047	0.162	0.373	0.673
MAX	0.00	1.4	0.90	1.9	0.00	0.00	2.0	0.03	1.0	1.8	4.8	13
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	4.3	3.9	6.3	0.00	0.00	4.2	0.1	2.8	10	23	40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	0.859	0.508	0.271	0.453	0.352	0.323	0.401	0.444	0.650	0.660	1.301	0.667
MAX	1.72	0.94	0.48	0.80	0.70	0.65	0.73	0.89	1.18	1.09	1.99	0.93
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000
MIN	0.000	0.072	0.064	0.10	0.000	0.000	0.070	0.002	0.047	0.16	0.37	0.39
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 2000 - 2002

ANNUAL TOTAL	260.87	47.68	
ANNUAL MEAN	0.715	0.131	0.549
HIGHEST ANNUAL MEAN			0.97
LOWEST ANNUAL MEAN			0.13
HIGHEST DAILY MEAN	16	Aug 14	13
LOWEST DAILY MEAN	0.00	Aug 23	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 31	0.00
MAXIMUM PEAK FLOW			311
MAXIMUM PEAK STAGE			2.69
ANNUAL RUNOFF (AC-FT)	517	95	398
10 PERCENT EXCEEDS	1.4	0.15	1.2
50 PERCENT EXCEEDS	0.55	0.00	0.16
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

08329888 LA CUEVA ARROYO TRIBUTARY AT ALBUQUERQUE, NM

LOCATION.--Lat 35°11'22", long 106°29'43", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on the left bank of a concrete lined arroyo, approximately 100 ft upstream of a box culvert passing under Tramway Blvd., in the extreme northeast corner of Albuquerque city limits. This site is located approximately 0.2 mi south of the old gage site La Cueva Arroyo Tributary at Tramway Blvd. (08329890).

DRAINAGE AREA.--0.5103 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1999 to current year.

GAGE.--Water-stage recorder. A tipping bucket raingage recording in 0.01 inch increment is located approximately 0.25 mi north of gage. Elevation of gage is 6,080 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00
7	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.01
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.01	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.12	0.07	0.09
MEAN	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.004	0.002	0.003
MAX	0.01	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.05	0.06	0.07
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.02	0.04	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.2	0.1	0.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002	
MEAN	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.005	0.001
MAX	0.004	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.002	0.004	0.012	0.003
(WY)	2001	2001	2000	2000	2000	2000	2000	2002	2001	2001	2001	2001	2002
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.000
(WY)	2002	2000	2000	2000	2000	2001	2000	2000	2000	2000	2000	2000	2000

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 2000 - 2002

ANNUAL TOTAL	0.63	0.33	
ANNUAL MEAN	0.002	0.001	0.001
HIGHEST ANNUAL MEAN			0.002 2001
LOWEST ANNUAL MEAN			0.000 2000
HIGHEST DAILY MEAN	0.14 Aug 14	0.07 Sep 10	0.14 Aug 14 2001
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1999
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 8	0.00 Oct 1 1999
MAXIMUM PEAK FLOW		9.0 Aug 6	12 Aug 14 2001
MAXIMUM PEAK STAGE		1.51 Aug 6	1.56 Aug 14 2001
ANNUAL RUNOFF (AC-FT)	1.2	0.7	0.8
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM

LOCATION.--Lat 35°11'53", long 106°35'59", 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 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1968 to September 1989 (seasonal records). October 1989 to current year.

GAGE.--Water-stage recorder with satellite telemetry, recording rain gage, 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.--Water-discharge records good except for those estimated, which are poor. For water years 1997-99, low-flow values of 15 ft<sup>3</sup>/s or less were obtained from gaging station (08329914), 1,000 ft downstream. Prior to water year 1997, any discharges below 15 ft<sup>3</sup>/s were reported as "zero flow" in the mean daily values tables. 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. See tabulation below for monthly precipitation in inches.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	3.1	1.8	0.86	2.7	0.98	e1.0	0.38	1.7	1.3	0.03	2.0
2	2.0	3.0	1.7	1.3	1.8	e1.0	e1.0	0.52	0.98	1.8	109	2.7
3	1.8	2.7	2.5	1.1	1.8	e1.5	e1.5	0.27	1.4	12	116	2.3
4	1.8	2.4	1.5	4.2	1.9	2.0	e1.5	0.67	1.9	3.6	86	1.2
5	1.9	3.0	2.3	2.5	e1.5	2.6	e1.5	0.50	1.4	2.2	6.2	1.6
6	1.5	3.5	2.1	0.88	e1.5	1.5	e2.0	0.32	1.0	2.8	73	1.2
7	1.3	2.5	2.4	0.92	1.1	1.5	129	0.23	0.97	9.6	41	0.48
8	1.4	4.1	2.7	1.1	1.5	1.3	20	0.62	0.99	23	5.9	2.9
9	2.1	2.6	e2.5	1.1	0.66	e1.5	1.7	0.20	0.93	8.1	1.1	8.7
10	1.4	2.4	2.6	17	0.85	e1.0	2.0	0.34	1.4	56	0.40	251
11	1.8	1.4	13	1.9	e0.80	e1.5	1.2	0.40	1.7	19	0.02	177
12	1.5	2.3	6.4	2.0	0.75	1.7	1.3	0.50	1.5	3.2	0.06	37
13	1.4	2.5	2.1	1.6	1.1	1.1	1.1	0.99	1.7	0.99	0.14	24
14	1.4	41	4.0	1.1	1.1	e1.0	0.84	2.7	124	0.83	1.2	2.6
15	2.0	35	2.7	1.1	0.98	e1.0	1.4	1.5	4.5	0.50	0.21	0.87
16	2.2	15	1.5	1.3	1.00	e1.5	0.83	1.5	0.29	0.63	0.46	1.0
17	3.4	3.5	e2.0	1.5	0.86	e1.5	1.2	e2.0	0.46	2.0	0.40	0.75
18	3.6	2.8	5.5	0.86	0.73	e1.5	0.95	e1.5	0.31	1.3	0.33	55
19	3.0	3.0	6.4	e0.90	1.5	e1.5	1.1	e1.0	0.60	27	2.2	1.7
20	3.6	3.1	5.0	0.68	1.0	e1.5	2.9	e1.0	0.84	26	2.3	0.76
21	4.2	2.7	1.8	0.94	0.97	e2.0	0.12	e1.0	10	3.1	3.1	1.2
22	3.7	2.2	1.2	2.2	0.83	e2.0	0.00	e1.5	0.87	33	1.1	1.0
23	3.2	46	1.3	1.2	0.87	2.2	0.05	e1.0	1.3	0.90	1.1	1.1
24	3.0	1.5	1.3	e1.2	0.80	2.2	0.41	e1.0	1.4	5.0	0.89	1.8
25	2.9	0.98	1.4	1.4	0.67	1.8	0.70	1.4	1.6	8.7	0.81	2.2
26	2.8	0.64	2.0	e1.0	0.67	1.9	0.56	1.4	1.4	8.9	0.80	1.9
27	2.5	0.58	1.2	0.78	0.69	2.4	0.52	1.3	1.7	3.5	0.86	1.8
28	2.6	0.91	2.1	0.66	1.1	e1.5	0.41	1.5	1.7	1.4	0.92	12
29	2.7	1.6	2.0	0.81	---	e1.5	0.34	1.6	1.7	1.9	0.96	1.4
30	2.8	1.9	49	48	---	e1.5	0.39	2.0	1.5	0.64	0.20	0.27
31	2.9	---	1.2	11	---	e1.0	---	2.2	---	0.03	0.45	---
TOTAL	74.2	197.91	135.2	113.09	31.73	48.68	177.52	33.04	171.74	268.92	457.14	599.43
MEAN	2.394	6.597	4.361	3.648	1.133	1.570	5.917	1.066	5.725	8.675	14.75	19.98
MAX	4.2	46	49	48	2.7	2.6	129	2.7	124	56	116	251
MIN	1.3	0.58	1.2	0.66	0.66	0.98	0.00	0.20	0.29	0.03	0.02	0.27
AC-FT	147	393	268	224	63	97	352	66	341	533	907	1190
(+)				0.21	0.04	0.00	0.23	0.00	1.01	1.43	0.82	2.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

MEAN	11.89	8.783	5.134	8.098	4.170	7.787	7.304	9.083	9.100	26.20	35.57	16.43
MAX	38.3	24.5	28.5	39.9	19.7	21.3	42.9	41.2	27.6	75.0	53.4	40.1
(WY)	2001	1995	1994	1995	1993	2000	1997	1994	1996	1991	1994	1991
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.24	14.1	2.15
(WY)	1996	1990	1990	1990	1991	1996	1991	1996	1995	1995	1995	2000

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1990 - 2002
ANNUAL TOTAL	2603.09	2308.60	
ANNUAL MEAN	7.132	6.325	12.55
HIGHEST ANNUAL MEAN			21.6
LOWEST ANNUAL MEAN			6.32
HIGHEST DAILY MEAN	360	251	961
LOWEST DAILY MEAN	0.45	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.78	0.34	0.00
MAXIMUM PEAK FLOW		3470	12300
MAXIMUM PEAK STAGE		5.39	10.40
ANNUAL RUNOFF (AC-FT)	5160	4580	9090
10 PERCENT EXCEEDS	13	7.1	20
50 PERCENT EXCEEDS	2.4	1.5	0.42
90 PERCENT EXCEEDS	1.3	0.54	0.00

e Estimated

(+) Total rainfall accumulation in inches.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1982-83, 1991-2000, April and July 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Ending time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL AS (MG/L) (00900)	CALCIUM DIS-SOLVED (MG/L) (00915)	MAGNESIUM, DIS-SOLVED (MG/L) (00925)	POTASSIUM, DIS-SOLVED (MG/L) (00935)	SODIUM ADSORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L) (00930)
APR 07...	1021	--	--	677	7.2	103	17.0	--	--	--	--	--	--
APR 07-07	1031	1331	440	--	6.7	98	17.0	29	10.5	.727	2.84	.5	6.08
JUL 10...	1821	--	--	586	8.1	121	18.0	--	--	--	--	--	--
JUL 10-10	1826	2056	375	--	7.9	128	18.0	38	13.7	.984	3.27	.3	3.80
Date	ANC UNFLTRD TIT 4.5 LAB (MG/L) AS (CACO3) (90410)	CHLORIDE, DIS-SOLVED (MG/L) AS (CL) (00940)	SULFATE DIS-SOLVED (MG/L) AS (SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA DIS-SOLVED (MG/L) AS (N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L) AS (N) (00625)	NITROGEN, DIS-SOLVED (MG/L) AS (N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L) AS (N) (00613)	PHOSPHORUS, DIS-SOLVED (MG/L) AS (P) (00666)	PHOSPHORUS TOTAL (MG/L) AS (P) (00665)	CARBON, ORGANIC TOTAL (MG/L) AS (C) (00680)
APR 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 07-07	59	6.52	5.2	336	66	71	.75	2.7	.53	.036	.30	.90	35.9
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10-10	79	3.98	6.6	454	103	85	.83	4.3	1.01	.041	.30	1.19	47.0
Date	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340)	ALUMINUM, DIS-SOLVED (UG/L) AS (AL) (01106)	ANTIMONY, DIS-SOLVED (UG/L) AS (SB) (01095)	ANTI-MONY UNFLTRD TOT REC EPA-CON TRACT (UG/L) (99897)	ARSENIC DIS-SOLVED (UG/L) AS (AS) (01000)	BARIUM, DIS-SOLVED (UG/L) AS (BA) (01005)	BERYLLIUM, DIS-SOLVED (UG/L) AS (BE) (01010)	BERYLLIUM, TOTAL RECOVERABLE (UG/L) AS (BE) (01012)	CADMIUM DIS-SOLVED (UG/L) AS (CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L) AS (CD) (01027)	CHROMIUM, DIS-SOLVED (UG/L) AS (CR) (01030)	CHROMIUM, TOTAL RECOVERABLE (UG/L) AS (CR) (01034)	COBALT, DIS-SOLVED (UG/L) AS (CO) (01035)
APR 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 07-07	120	15	.51	<10	E1	16	<.06	<2	.04	.4	E.8	7.1	.35
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10-10	100	25	.99	<10	<2	28	<.06	<2	.06	1.0	1.5	10.5	.52
Date	COPPER, DIS-SOLVED (UG/L) AS (CU) (01040)	COPPER, TOTAL RECOVERABLE (UG/L) AS (CU) (01042)	CYANIDE TOTAL (MG/L) AS (CN) (00720)	LEAD, DIS-SOLVED (UG/L) AS (PB) (01049)	LEAD, TOTAL RECOVERABLE (UG/L) AS (PB) (01051)	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)	NICKEL, TOTAL RECOVERABLE (UG/L) AS (NI) (01067)	SELENIUM, DIS-SOLVED (UG/L) AS (SE) (01145)	SILVER, DIS-SOLVED (UG/L) AS (AG) (01075)	SILVER, TOTAL RECOVERABLE (UG/L) AS (AG) (01077)
APR 07...	--	--	<.01	--	--	--	--	--	--	--	--	--	--
APR 07-07	5.8	24.7	--	.28	35	18.1	.06	1.2	.83	9.7	<2	<1	.7
JUL 10...	--	--	<.01	--	--	--	--	--	--	--	--	--	--
JUL 10-10	6.4	77.0	--	.66	116	21.7	.06	2.1	1.52	13.5	<2	<1	E1.4

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Ending time	SILVER UNFLTRD			ZINC		ZINC		OIL AND GREASE		URANIUM	
			TOT REC EPA-CONTRACT (99895)	THAL-LIUM, TOTAL (01059)	ZINC, DIS-SOLVED (01090)	ZINC, RECOVERABLE (01092)	ZINC, TOTAL RECOVERABLE (01092)	TOTAL RECOVER (00556)	TOTAL RECOVER (00556)	NATURAL DIS-SOLVED (22703)			
APR 07...			--	--	--	--	--	--	E5n	--	--	--	--
APR 07-07			E.6	<10	11	190	--	--	--	--	.09	--	--
JUL 10...			--	--	--	--	--	--	<7	--	--	--	--
JUL 10-10			E.8	<10	17	280	--	--	--	--	.10	--	--

Date	Time	Ending time	1,2,5,6-DIBENZ-ANTHRA-CENE	1,2-DI-PHENYL-HYDRA-ZINE	2,4,6-TRI-CHLORO-PHENOL	2,4-DI-METHYL-PHENOL	2,4-DI-CHLORO-PHENOL	2,4-DI-CHLORO-PHENOL	2,4-DI-NITRO-PHENOL	2,4-DI-NITRO-TOLUENE	2,6-DI-NITRO-TOLUENE	2-CHLORO-NAPHTH-THALENE	2-CHLORO-PHENOL	2-NITRO-PHENOL
			TOTAL (34556)	TOT.REC (82626)	TOTAL (34621)	TOTAL (34606)	TOTAL (34601)	TOTAL (34616)	TOTAL (34611)	TOTAL (34626)	TOTAL (34581)	TOTAL (34586)	TOTAL (34591)	
APR 07...	1021	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 07-07	1031	1331	<3	<2	<3	E.1	<3	<3	<3	<3	<2	<2	<2	<1
JUL 10...	1821	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10-10	1826	2056	M	<2	<3	E.2	<3	<3	<3	<3	<2	<2	<2	<1

Date	Time	Ending time	3,3'-DI-CHLORO-BENZIDINE	4,6-DINITRO-CRESOL	4-BROMO-PHENYL ETHER	4-CHLORO-PHENYL ETHER	4-NITRO-PHENOL	ACE-NAPHTH-ENE	ACE-NAPHTH-YLENE	ALDRIN,	ALPHA-BHC	ANTHRA-CENE	AROCLOR 1221 PCB	AROCLOR 1232 PCB	AROCLOR 1248 PCB
			TOTAL (34631)	TOTAL (34657)	TOTAL (34636)	TOTAL (34641)	TOTAL (34646)	TOTAL (34205)	TOTAL (34200)	TOTAL (39330)	TOTAL (39337)	TOTAL (34220)	TOTAL (39488)	TOTAL (39492)	TOTAL (39500)
APR 07...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 07-07	<5	M	<2	<2	E2	M	M	<.04	<.03	M	<1	<.1	<.1	<.1	
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUL 10-10	<5	<3	<2	<2	<3	M	M	<.04	<.03	M	<1	<.1	<.1	<.1	

Date	Time	Ending time	AROCLOR 1254 PCB	AROCLOR 1260 PCB	BENZENE NITRO-WATER UNFLTRD RECOVER	BENZI-DINE TOTAL	BENZO-A-PYRENE TOTAL	BENZO B FLUOR-AN-THENE TOTAL	BENZO K FLUOR-AN-THENE TOTAL	BENZO-[A]-ANTHRA-CENE WAT UNF	BENZO-[GHI]-PERY-LENE TOTAL	BETA BENZENE HEXA-CHLOR-IDE TOTAL	BIS(2-CHLORO-ETHOXY) METHANE TOTAL	BIS(2-CHLORO-ETHYL) ETHER UNFLTRD RECOVER	BIS(2-CHLORO-ISO-PROPYL) ETHER TOTAL
			TOTAL (39504)	TOTAL (39508)	(34447)	(39120)	(34247)	(34230)	(34242)	(34526)	(34521)	(39338)	(34278)	(34273)	(34283)
APR 07...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 07-07	<.1	<.1	<2	<40	M	E1	M	M	M	<.03	<3	<2	<2		
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--		
JUL 10-10	<.1	<.1	<2	<40	E2	3	E1	M	E1	<.03	<3	<2	<2		

## 08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BIS (2-ETHYL HEXYL) PHTHALATE TOTAL (UG/L) (39100)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L) (39062)	CHLOR-DANE TECH-NICAL WATER WHOLE TOTAL (UG/L) (39350)	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L) (39065)	CHRY-SENE TOTAL (UG/L) (34320)	CYCLOPE NTADIEN HEXA-CHLORO-UNFLTRD RECOVER TOTAL (UG/L) (34386)	DELTA BENZENE HEXA-CHLOR-IDE TOTAL (UG/L) (34259)	DI-ELDRIN TOTAL (UG/L) (39380)	DIETHYL PHTHALATE TOTAL (UG/L) (34336)	DI-METHYL PHTHALATE TOTAL (UG/L) (34341)	DI-N-BUTYL PHTHALATE TOTAL (UG/L) (39110)	DI-N-OCTYL PHTHALATE TOTAL (UG/L) (34596)	ENDO-SULFAN I WATER WHOLE REC TOTAL (UG/L) (34361)
APR 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 07-07	E3	<.1	<.1	<.1	E1	<4	<.09	<.02	M	M	M	<5	<.1
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10-10	E6	<.1	<.1	<.1	E2	<4	<.09	<.02	M	<2	M	E2	<.1
Date	ENDO-SULFAN I TOTAL (UG/L) (34356)	ENDO-SULFAN SULFATE TOTAL (UG/L) (34351)	ENDRIN ALDEHYDE TOTAL (UG/L) (34366)	ENDRIN WATER UNFLTRD REC TOTAL (UG/L) (39390)	FLUOR-ANTHENE TOTAL (UG/L) (34376)	FLUOR-ENE TOTAL (UG/L) (34381)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA-CHLOR, CHLOR, TOTAL (UG/L) (39410)	HEXA-CHLORO-BENZENE TOTAL (UG/L) (39700)	INDENO (1,2,3-CD) PYRENE TOTAL (UG/L) (34403)	ISO-PHORONE TOTAL (UG/L) (34408)	LINDANE TOTAL (UG/L) (39340)	N-BUTYL BENZYL PHTHALATE TOTAL (UG/L) (34292)
APR 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 07-07	<.04	<.6	<.2	<.06	E2	M	<.8	<.03	<2	M	M	<.03	<4
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10-10	<.04	<.6	<.2	<.06	3	M	<.8	<.03	<2	E1	M	<.03	<4
Date	N-NITRO-SODI-METHYL-AMINE TOTAL (UG/L) (34438)	N-NITRO-SODI-N-PROPYL-AMINE TOTAL (UG/L) (34428)	N-NITRO-SODI-PHENYL-AMINE TOTAL (UG/L) (34433)	P, P' DDD, TOTAL (UG/L) (39310)	P, P' DDE, TOTAL (UG/L) (39320)	P, P' DDT, TOTAL (UG/L) (39300)	PARA-CHLORO-META-CRESOL TOTAL (UG/L) (34452)	PENTA-CHLORO-PHENOL TOTAL (UG/L) (39032)	PHENAN-THRENE TOTAL (UG/L) (34461)	PHENOL UNFILT. WATER TOTAL (UG/L) (34694)	PHENOLS TOTAL (UG/L) (32730)	PYRENE TOTAL (UG/L) (34469)	TOX-APHENE, TOTAL (UG/L) (39400)
APR 07...	--	--	--	--	--	--	--	--	--	--	E1	--	--
APR 07-07	<3	<2	<2	<.1	<.04	<.1	<3	M	M	E.8	--	E1	<2
JUL 10...	--	--	--	--	--	--	--	--	--	--	<16	--	--
JUL 10-10	<3	<2	<2	<.1	<.04	<.1	<3	M	E1	E1.9	--	3	<2
Date	XYLENE WATER UNFLTRD REC TOTAL (UG/L) (81551)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L) (34511)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHENE TOTAL (UG/L) (34501)	1,1-DI-CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L) (77168)	123-TRI-CHLORO-PROPANE WATER WHOLE TOTAL (UG/L) (77443)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L) (32103)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	TRANS-1,2-DI-CHLORO-ETHENE TOTAL (UG/L) (34546)	2,2-DI-CHLORO-PRO-PANE WAT, WH TOTAL (UG/L) (77170)	ACRYLO-NITRILE TOTAL (UG/L) (34215)
APR 07...	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<5.0
APR 07-07	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10-10	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	1,2,3-TRI-CHLORO WAT, WH REC TOTAL (UG/L) (77613)	BENZENE 1,2,4-TRI-CHLORO WAT UNF REC TOTAL (UG/L) (34551)	BENZENE 124-TRI-METHYL UNFILT RECOVER TOTAL (UG/L) (77222)	BENZENE 135-TRI METHYL UNFLTRD REC TOTAL (UG/L) (77226)	BENZENE 1,3-DI-CHLORO-UNFLTRD REC TOTAL (UG/L) (34566)	BENZENE 1,4-DI-CHLORO-UNFLTRD REC TOTAL (UG/L) (34571)	ISO-PROPYL-BENZENE WATER WHOLE UNFLTRD REC TOTAL (UG/L) (77223)	BENZENE N-BUTYL UNFLTRD REC TOTAL (UG/L) (77342)	BENZENE N-PROPY WATER UNFLTRD REC TOTAL (UG/L) (77224)	BENZENE O-DI-CHLORO-WATER UNFLTRD REC TOTAL (UG/L) (34536)	BENZENE SEC BUTYL-WATER UNFLTRD REC TOTAL (UG/L) (77350)	BENZENE TERT-BUTYL-WATER UNFLTRD REC TOTAL (UG/L) (77353)	BENZENE TOTAL (UG/L) (34030)
APR 07...	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4
APR 07-07	--	<2	--	--	<2	M	--	--	--	<2	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10-10	--	<2	--	--	<2	M	--	--	--	<2	--	--	--

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	BROMO-FORM TOTAL (UG/L) (32104)	CARBON TETRA-CHLORIDE TOTAL (UG/L) (32102)	CHLORO-BENZENE TOTAL (UG/L) (34301)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L) (32105)	CHLORO-ETHANE TOTAL (UG/L) (34311)	CHLORO-FORM TOTAL (UG/L) (32106)	CIS-1,2-DI-ETHENE WATER TOTAL (UG/L) (77093)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34704)	DIBROMO-CHLORO-PROPANE WHOLE TOT.REC (UG/L) (82625)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L) (30217)	BROMO-DI-CHLORO-METHANE TOTAL (UG/L) (32101)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L) (34668)
APR 07...	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<2	<.4	<.4	<.4
APR 07-07	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10-10	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	ETHANE, 1112-TETRA-CHLORO-WAT UNF REC (UG/L) (77562)	ETHANE, 1,1,2,2-TETRA-CHLORO-WAT UNF REC (UG/L) (34516)	ETHANE HEXA-CHLORO-WATER UNFLTRD RECOVER (UG/L) (34396)	ETHYL-BENZENE TOTAL (UG/L) (34371)	FREON-113 WATER UNFLTRD REC (UG/L) (77652)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L) (39702)	METHANE BROMO-CHLORO-WAT UNFLTRD REC (UG/L) (77297)	METHYL TERT-BUTYL ETHER WAT UNF REC (UG/L) (78032)	METHYL-BROMIDE TOTAL (UG/L) (34413)	METHYL-CHLORIDE TOTAL (UG/L) (34418)	METHYL-ENE RIDE TOTAL (UG/L) (34423)	NAPHTH-ALENE TOTAL (UG/L) (34696)	O-CHLORO-TOLUENE WHOLE TOTAL (UG/L) (77275)
APR 07...	<.4	<.4	--	<.4	<.4	<.4	<.4	<.4	<.6	<.4	<.4	<1.0	<.4
APR 07-07	--	--	<2	--	--	<1	--	--	--	--	--	M	--
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 10-10	--	--	<2	--	--	<1	--	--	--	--	--	M	--

Date	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L) (77356)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L) (77173)	STYRENE TOTAL (UG/L) (77128)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L) (34475)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)	TOLUENE TOTAL (UG/L) (34010)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34699)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L) (39180)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L) (34488)	VINYL CHLORIDE TOTAL (UG/L) (39175)
APR 07...	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4
APR 07-07	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--
JUL 10-10	--	--	--	--	--	--	--	--	--	--

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value  
 M -- Presence verified, not quantified

Value qualifier codes used in this report:  
 n -- Below the laboratory reporting level

08329911 NORTH CAMINO ARROYO AT SUNSET HILLS IN ALBUQUERQUE, NM

LOCATION.--Lat 35°11'40", long 106°31'57", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on right bank of concrete lined arroyo, 10 ft above Holbrook Ave. Bridge over North Camino Arroyo. This is located approximately 100 ft north of intersection of Holbrook Ave. and Elena Drive, and 1.3 mi north of Paseo del Norte, on the northern edge of Albuquerque.

DRAINAGE AREA.--2.06 mi<sup>2</sup>.

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, 39 ft<sup>3</sup>/s, at 1955 hours, July 23, 2001, gage height, 1.38 ft, from step-forward analysis of concrete lined stream channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 15 ft<sup>3</sup>/s, Sept. 10, gage height, 1.24 ft; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.08	0.00
3	0.00	0.00	0.00	---	---	---	0.00	0.00	0.00	0.06	0.08	0.00
4	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.02	0.06	0.00
5	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.45	0.00
7	0.00	0.00	---	---	---	0.00	0.19	0.00	0.00	0.12	0.03	0.00
8	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.45	0.00	0.00
9	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.03
10	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.09	0.00	0.43
11	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.08	0.00	0.30
12	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.08
13	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.14	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.05	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.12	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.13
19	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.02	0.00	0.00
20	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.42	0.05	0.00
21	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.02	0.00	0.00
23	0.00	0.02	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	---	---	---	0.00	0.00	0.00	0.17	0.00	0.00	0.00
25	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.03	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.03
29	0.00	e0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	0.00	0.00	0.00	---	0.00	0.00	---
TOTAL	0.00	0.36	---	---	---	---	0.19	0.00	0.17	1.28	0.75	1.00
MEAN	0.000	0.012	---	---	---	---	0.006	0.000	0.006	0.041	0.024	0.033
MAX	0.00	0.14	---	---	---	---	0.19	0.00	0.17	0.45	0.45	0.43
MIN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.7	---	---	---	---	0.4	0.00	0.3	2.5	1.5	2.0

e Estimated

08329935 ARROYO 19A AT ALBUQUERQUE, NM

LOCATION.--Lat 35°09'24", long 106°43'50", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1977 to current year (seasonal records).

GAGE.--Water-stage recorder and recording tipping-bucket rain gage with 0.01 in. increment; the control at the site is a Parshall flume. Elevation of gage is 5,341 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, 234 ft<sup>3</sup>/s, Aug. 2, 1999, gage height, 2.93 ft, on basis of two slope-area measurements of peak flow needed to extend rating beyond flume capacity. no flow most time.

EXTREMES FOR CURRENT YEAR.--No flow this year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	---	---	---	---	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
(+)	0.00	0.40	0.40	0.24	0.00	0.00	0.32	0.00	0.32	0.25	0.27	1.97

CAL YR 2001 TOTAL 0.00 MEAN 0.000 MAX 0.00 MIN 0.00 AC-FT 0.00  
WTR YR 2002 TOTAL 0.00 MEAN 0.000 MAX 0.00 MIN 0.00 AC-FT 0.00

(+) Total rainfall accumulation in inches.

083299375 MARIPOSA DIVERSION OF SAN ANTONIO ARROYO AT ALBUQUERQUE

LOCATION.--Lat 35°08'24", long 106°42'17", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> of sec.35, T.11 N., R.2 E., Bernalillo County, Hydrologic Unit 13020203, 1,500 ft upstream from the San Antonio underpass at Coors Blvd. on Albuquerque's west side, and 1.1 mi north of Interstate 25 and Coors Blvd. intersection.

DRAINAGE AREA.--30.5 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Summer, 1993 to October 1999, only recorded flow events during water-quality sampling. October 1999 to current year(continuous record).

GAGE.--Water-stage recorder and crest-stage gage referenced to outside staff gage. Elevation of gage is 5,100 ft above the National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. No flows will occur until significant precipitation falls in the watershed.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.4
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	11.08	12.67
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.357	0.422
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	8.8	6.8
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	22	25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	0.190	0.083	0.004	0.009	0.001	0.087	0.008	0.003	0.100	0.091	0.195	0.141
MAX	0.55	0.25	0.011	0.027	0.002	0.23	0.016	0.008	0.30	0.14	0.36	0.42
(WY)	2001	2001	2001	2001	2001	2000	2001	2001	2000	2000	2002	2002
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.000
(WY)	2002	2000	2002	2000	2000	2002	2002	2000	2001	2002	2001	2000

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 2000 - 2002

ANNUAL TOTAL	8.55	23.78	
ANNUAL MEAN	0.023	0.065	0.076
HIGHEST ANNUAL MEAN			0.092
LOWEST ANNUAL MEAN			0.065
HIGHEST DAILY MEAN	1.5	Jul 26	8.8
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			34
MAXIMUM PEAK STAGE			2.35
ANNUAL RUNOFF (AC-FT)	17	47	55
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

083299375 MARIPOSA DIVERSION OF SAN ANTONIO ARROYO AT ALBUQUERQUE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1992-93, 1998-2000, September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Ending time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL AS (MG/L) (00900)	CALCIUM DIS-SOLVED (MG/L) (00915)	MAGNESIUM, DIS-SOLVED (MG/L) (00925)	POTASSIUM, DIS-SOLVED (MG/L) (00935)	SODIUM ADSORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L) (00930)		
SEP 10...	1101	--	--	5.0	9.7	105	19.0	--	--	--	--	--	--		
SEP 10-10	1106	1351	24	--	8.4	71	19.0	23	8.27	.684	2.80	.2	2.46		
Date	Time	Ending time	ANC UNFLTRD TIT 4.5 LAB (MG/L) AS (CACO3) (90410)	CHLORIDE, DIS-SOLVED (MG/L) AS CL) (00940)	SULFATE DIS-SOLVED (MG/L) AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA + ORGANIC (MG/L) AS N) (00608)	NITROGEN, AMMONIA + ORGANIC (MG/L) AS N) (00625)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L) AS N) (00613)	PHOSPHORUS, DIS-SOLVED (MG/L) AS P) (00666)	PHOSPHORUS, TOTAL (MG/L) AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L) AS C) (00680)
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	42	1.38	3.3	98	59	46	<.04	.79	.32	.017	.14	.26	10.2		
Date	Time	Ending time	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) AS AL) (00340)	ALUMINUM, DIS-SOLVED (UG/L) AS AL) (01106)	ANTIMONY, DIS-SOLVED (UG/L) AS SB) (01095)	ANTI-MONY UNFLTRD TOT REC EPA-CONTRACT (UG/L) AS SB) (99897)	ARSENIC DIS-SOLVED (UG/L) AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L) AS BA) (01005)	BERYLLIUM, DIS-SOLVED (UG/L) AS BE) (01010)	BERYLLIUM, TOTAL RECOVERABLE (UG/L) AS BE) (01012)	CADMIUM, DIS-SOLVED (UG/L) AS CD) (01025)	CADMIUM, TOTAL UNFLTRD (UG/L) AS CD) (01027)	CHROMIUM, DIS-SOLVED (UG/L) AS CR) (01030)	CHROMIUM, TOTAL RECOVERABLE (UG/L) AS CR) (01034)	COBALT, DIS-SOLVED (UG/L) AS CO) (01035)
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	30	12	.14	<10	<2	21	<.06	<2	<.04	E.1	E.4	1.8	.19		
Date	Time	Ending time	COPPER, DIS-SOLVED (UG/L) AS CU) (01040)	COPPER, TOTAL RECOVERABLE (UG/L) AS CU) (01042)	CYANIDE TOTAL (MG/L) AS CN) (00720)	LEAD, DIS-SOLVED (UG/L) AS PB) (01049)	LEAD, TOTAL RECOVERABLE (UG/L) AS PB) (01051)	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)	NICKEL, TOTAL RECOVERABLE (UG/L) AS NI) (01067)	SELENIUM, DIS-SOLVED (UG/L) AS SE) (01145)	SILVER, DIS-SOLVED (UG/L) AS AG) (01075)	SILVER, TOTAL RECOVERABLE (UG/L) AS AG) (01077)
SEP 10...	--	--	<.01	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	2.6	5.2	--	E.07	4	5.5	.01	.5	.88	2.9	<2	<1	<.3		
Date	Time	Ending time	SILVER UNFLTRD TOT REC EPA-CONTRACT (UG/L) (99895)	THALLIUM, TOTAL (UG/L) AS TL) (01059)	ZINC, DIS-SOLVED (UG/L) AS ZN) (01090)	ZINC, TOTAL RECOVERABLE (UG/L) AS ZN) (01092)	OIL AND GREASE, TOTAL RECOVERABLE (MG/L) (00556)	URANIUM, NATURAL DIS-SOLVED (UG/L) AS U) (22703)							
SEP 10...	--	--	--	--	--	--	<7	--							
SEP 10-10	<1.0	<10	3	E20n	--	.08									

## 083299375 MARIPOSA DIVERSION OF SAN ANTONIO ARROYO AT ALBUQUERQUE--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Ending time	1,2,5,6-DIBENZ-ANTHRA-CENE TOTAL (UG/L) (34556)	1,2-DI-HYDRA-ZINE WATER TOT. REC (UG/L) (82626)	1,2-DI-PHENYL- HYDRA-ZINE WATER TOTAL (UG/L) (34621)	2,4,6-TRI- CHLORO- PHENOL TOTAL (UG/L) (34606)	2,4-DI-METHYL- PHENOL TOTAL (UG/L) (34606)	2,4-DI- CHLORO- PHENOL TOTAL (UG/L) (34601)	2,4,- DI- NITRO- PHENOL TOTAL (UG/L) (34616)	2,4-DI- NITRO- TOLUENE TOTAL (UG/L) (34611)	2,6-DI- NITRO- TOLUENE TOTAL (UG/L) (34626)	2- CHLORO- NAPH- THALENE TOTAL (UG/L) (34581)	2- CHLORO- PHENOL TOTAL (UG/L) (34586)	2- NITRO- PHENOL TOTAL (UG/L) (34591)
SEP 10...	1101	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	1106	1351	M	<2	<3	<.7	<3	<3	<3	<2	<2	<2	<2	<1
Date	3,3'-DI- CHLORO- BENZI- DINE TOTAL (UG/L) (34631)	4,6- DINITRO- ORTHOCRESOL TOTAL (UG/L) (34657)	4- BROMO- PHENYL ETHER TOTAL (UG/L) (34636)	4- CHLORO- PHENYL ETHER TOTAL (UG/L) (34641)	4- NITRO- PHENOL TOTAL (UG/L) (34646)	ACE- NAPHTH- ENE TOTAL (UG/L) (34205)	ACE- NAPHTH- YLENE TOTAL (UG/L) (34200)	ANTHRA- CENE TOTAL (UG/L) (34220)	BENZENE NITRO- WATER RECOVER TOTAL (UG/L) (34447)	BENZI- DINE TOTAL (UG/L) (39120)	BENZO- A- PYRENE TOTAL (UG/L) (34247)	BENZO B FLUOR- AN- THENE TOTAL (UG/L) (34230)	BENZO K FLUOR- AN- THENE TOTAL (UG/L) (34242)	
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	<5	<3	<2	<2	<3	<2	<2	M	<2	<40	<1	M	M	
Date	BENZO- [A]- ANTHRA- CENE WAT UNF TOTAL (UG/L) (34526)	BENZO- [GHI]- PERY- LENE TOTAL (UG/L) (34521)	BIS(2- CHLORO- ETHYL- ETHER TOTAL (UG/L) (34278)	BIS(2- CHLORO- ETHYL- ETHER TOTAL (UG/L) (34273)	BIS(2- CHLORO- ISO- PROPYL- ETHER TOTAL (UG/L) (34283)	BIS(2- ETHYL- HEXYL- PHTHAL- ATE TOTAL (UG/L) (39100)	CHRY- SENE TOTAL (UG/L) (34320)	CYCLOPE NTADIEN HEXA- CHLORO- UNFLTRD TOTAL (UG/L) (34386)	DIETHYL PHTHAL- ATE TOTAL (UG/L) (34336)	DI- METHYL PHTHAL- ATE TOTAL (UG/L) (34341)	DI-N- BUTYL PHTHAL- ATE TOTAL (UG/L) (39110)	DI-N- OCTYL PHTHAL- ATE TOTAL (UG/L) (34596)	FLUOR- ANTHENE TOTAL (UG/L) (34376)	
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	<2	M	<3	<2	<2	<6	M	<4	M	<2	M	<5	M	
Date	FLUOR- ENE TOTAL (UG/L) (34381)	HEXA- CHLORO- BENZENE TOTAL (UG/L) (39700)	INDENO (1,2,3- CD) PYRENE TOTAL (UG/L) (34403)	ISO- PHORONE TOTAL (UG/L) (34408)	N-BUTYL PHTHAL- ATE TOTAL (UG/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (UG/L) (34438)	N-NITRO SODI-N- PROPYL- AMINE TOTAL (UG/L) (34428)	N-NITRO SODI- PHENYL- AMINE TOTAL (UG/L) (34433)	PARA- CHLORO- META CRESOL TOTAL (UG/L) (34452)	PENTA- CHLORO- PHENOL TOTAL (UG/L) (39032)	PHENAN- THRENE TOTAL (UG/L) (34461)	PHENOL UNFILT. TOTAL (UG/L) (34694)	PHENOLS TOTAL (UG/L) (32730)	
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	<16
SEP 10-10	<2	<2	M	M	<4	<3	<2	<2	<3	M	M	E1.2	--	
Date	PYRENE TOTAL (UG/L) (34469)	XYLENE UNFLTRD REC TOTAL (UG/L) (81551)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1-DI- CHLORO- PRO- PENE, WAT, WH TOTAL (UG/L) (77168)	1,23-TRI CHLORO- PROPANE WATER WHOLE TOTAL (UG/L) (77443)	1,2- DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	2,2-DI- CHLORO- PRO- PANE WAT, WH TOTAL (UG/L) (77170)	
SEP 10...	--	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2
SEP 10-10	M	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	ACRYLO- NITRILE TOTAL (UG/L) (34215)	1,2,3- TRI- CHLORO- BENZENE WAT, WH REC TOTAL (UG/L) (77613)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC TOTAL (UG/L) (34551)	BENZENE 124-TRI METHYL UNFILT RECOVER TOTAL (UG/L) (77222)	BENZENE 135-TRI METHYL WATER UNFLTRD REC TOTAL (UG/L) (77226)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC TOTAL (UG/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC TOTAL (UG/L) (34571)	ISO- PROPYL- BENZENE WATER WHOLE REC TOTAL (UG/L) (77223)	BENZENE N-BUTYL WATER UNFLTRD REC TOTAL (UG/L) (77342)	BENZENE N-PROPY WATER UNFLTRD REC TOTAL (UG/L) (77224)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC TOTAL (UG/L) (34536)	BENZENE SEC BUTYL- WATER UNFLTRD REC TOTAL (UG/L) (77350)	BENZENE TERT- BUTYL- WATER UNFLTRD REC TOTAL (UG/L) (77353)	
SEP 10...	<2.5	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2
SEP 10-10	--	--	<2	--	--	<2	M	--	--	--	<2	--	--	

083299375 MARIPOSA DIVERSION OF SAN ANTONIO ARROYO AT ALBUQUERQUE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BENZENE TOTAL (UG/L) (34030)	BROMO- BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	BROMO- FORM TOTAL (UG/L) (32104)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- ETHANE TOTAL (UG/L) (34311)	CHLORO- FORM TOTAL (UG/L) (32106)	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	DIBROMO CHLORO- PROPANE WATER TOT. REC (UG/L) (82625)	DI- BROMO- METHANE WATER RECOVER (UG/L) (30217)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)
SEP 10...	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<1	<.2	<.2
SEP 10-10	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (UG/L) (77562)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (UG/L) (34396)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L) (39702)	METHANE BROMO CHLORO- WAT UNFLTRD REC (UG/L) (77297)	METHYL TERT- BUTYL ETHER METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)	METHYL ENE CHLO- RIDE TOTAL (UG/L) (34423)	NAPHTH- ALENE TOTAL (UG/L) (34696)	
SEP 10...	<.2	<.2	<.2	--	<.2	<.2	<.2	<.2	<.2	<.3	<.2	<.2	<.5
SEP 10-10	--	--	--	<2	--	--	<1	--	--	--	--	--	<5

Date	O- CHLORO- TOLUENE WATER WHOLE TOTAL (UG/L) (77275)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (UG/L) (77356)	1,3-DI- CHLORO- PROPANE WAT. WH TOTAL (UG/L) (77173)	STYRENE TOTAL (UG/L) (77128)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)	TOLUENE TOTAL (UG/L) (34010)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)
SEP 10...	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2
SEP 10-10	--	--	--	--	--	--	--	--	--	--	--

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value  
 M -- Presence verified, not quantified

Value qualifier codes used in this report:  
 n -- Below the laboratory reporting level

08329938 LADERA ARROYO AT ALBUQUERQUE, NM

LOCATION.--Lat 35°06'56", long 106°44'48", 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 98th Street, and 2.3 mi west of North Coors Road in Albuquerque.

DRAINAGE AREA.--0.34 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1981 to current year (seasonal records).

GAGE.--Water-stage recorder and recording tipping-bucket rain gage with 0.01-in. increment. Elevation of gage is 5,312 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, 195 ft<sup>3</sup>/s, Aug. 2, 1999, gage height, 4.12 ft, from slope-area indirect measurement; no flow most of time.

EXTREMES FOR CURRENT YEAR.--No flow this water year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	---	---	---	---	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00

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 mi 1,540.0.

DRAINAGE AREA.--17,440 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

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. Flow completely regulated since Nov. 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.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	503	586	513	555	547	459	530	591	595	561	403	422
2	499	378	457	542	592	539	527	623	625	501	471	424
3	518	297	454	565	623	571	436	615	673	432	1060	417
4	468	260	458	582	638	585	449	654	706	435	653	371
5	452	255	497	561	636	571	513	653	696	462	543	364
6	440	275	564	549	620	580	494	640	721	474	389	415
7	459	297	622	553	582	511	622	624	708	476	504	408
8	472	307	618	562	551	485	592	621	694	492	331	383
9	443	315	594	589	531	518	554	637	697	501	197	500
10	388	328	588	641	519	550	548	631	709	493	219	939
11	367	334	581	658	532	546	536	628	688	631	281	1100
12	399	327	571	645	495	474	525	621	737	610	301	821
13	413	316	573	648	457	406	528	645	762	579	324	952
14	379	332	554	647	461	404	522	1090	776	567	398	560
15	369	462	558	610	441	521	532	1240	893	568	443	294
16	328	446	561	616	422	578	526	867	727	547	463	264
17	323	443	564	648	424	603	558	684	725	485	462	280
18	325	421	550	639	425	584	538	669	710	465	485	255
19	294	410	553	721	419	526	510	656	670	522	509	299
20	300	484	538	803	415	513	474	671	657	570	508	233
21	344	582	532	822	419	487	492	639	644	653	536	179
22	302	559	549	836	410	423	512	608	673	568	538	208
23	342	628	528	563	480	411	475	612	754	472	535	201
24	322	568	515	356	547	444	457	623	695	349	540	212
25	306	549	533	321	544	472	495	631	676	342	521	177
26	324	541	521	306	538	496	570	644	645	326	476	166
27	310	520	515	298	532	443	562	705	584	337	439	198
28	317	455	520	393	538	423	572	696	565	299	439	216
29	315	448	541	529	---	423	590	662	577	279	446	240
30	343	501	625	548	---	482	580	627	564	376	442	249
31	553	---	577	607	---	515	---	609	---	398	420	---
TOTAL	11917	12624	16924	17913	14338	15543	15819	21116	20546	14770	14276	11747
MEAN	384.4	420.8	545.9	577.8	512.1	501.4	527.3	681.2	684.9	476.5	460.5	391.6
MAX	553	628	625	836	638	603	622	1240	893	653	1060	1100
MIN	294	255	454	298	410	404	436	591	564	279	197	166
AC-FT	23640	25040	33570	35530	28440	30830	31380	41880	40750	29300	28320	23300
(+)	16550	3590	1850	1530	980	6470	14950	16250	15020	17050	16540	11830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, BY WATER YEAR (WY)												
MEAN	491.4	940.7	1005	934.5	1042	1252	1970	3121	2812	1479	814.7	610.2
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	528	480	137	148	336	287	278	51.4
(WY)	1978	1990	1975	1977	2002	1977	1977	1977	1989	1974	1978	1974

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1974 - 2002
ANNUAL TOTAL	297422	187533	
ANNUAL MEAN	814.9	513.8	a1373
HIGHEST ANNUAL MEAN			2486 1987
LOWEST ANNUAL MEAN			356 1977
HIGHEST DAILY MEAN	4760	May 23	1240 May 15 8650 Apr 24 1985
LOWEST DAILY MEAN	255	Nov 5	166 Sep 26 0.00 May 30 1977
ANNUAL SEVEN-DAY MINIMUM	287	Nov 3	192 Sep 21 0.00 May 30 1977
MAXIMUM PEAK FLOW			1770 Sep 10 b25000 Apr 24 1942
MAXIMUM PEAK STAGE			3.94 Sep 10 7.82 Aug 10 1967
INSTANTANEOUS LOW FLOW			152 Sep 25 147 Jul 6 1996
ANNUAL RUNOFF (AC-FT)	589900 (+) 137190	372000 (+) 122610	994600
10 PERCENT EXCEEDS	1580	670	3470
50 PERCENT EXCEEDS	617	525	835
90 PERCENT EXCEEDS	415	315	325

a Average discharge for 33 years (water years 1942-74), 1,440 ft<sup>3</sup>/s, 1,043,000 acre-ft, prior to closure of Cochiti Dam.  
b From rating curve extended above 13,900 ft<sup>3</sup>/s.

(+) Combined flow, in acre-ft, of Albuquerque Riverside Drain and Arenal, Armijo, and Atrisco Canals. This flow, which bypasses river gage, can be added to river records to get the entire flow in valley cross section.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	FIELD WATER UNFLTRD (NTU) (61028)	TUR-BID-ITY (MM OF HG) (00025)	BARO-METRIC PRES-SURE (00300)	OXYGEN, DIS-SOLVED (MG/L) (00301)	OXYGEN, (PER-CENT SATUR-ATION) (00400)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00020)	TEMPER-ATURE AIR (DEG C) (00010)	TEMPER-ATURE WATER (DEG C) (80154)	SEDI-MENT, SUS-PENDED (MG/L)
OCT 09...	1040	447	--	--	--	--	--	--	--	--	--	--	174
OCT 09...	1055	447	41	--	639	8.4	103	7.8	422	19.5	16.5	--	--
NOV 08...	1117	327	12	--	649	10.9	--	--	--	14.5	5.0	--	--
DEC 06...	1109	593	1600	--	647	10.7	104	7.9	433	6.0	7.0	--	--
JAN 15...	1123	599	510	--	640	--	--	7.8	425	7.5	1.0	443	--
FEB 28...	1200	555	680	550	637	11.0	109	7.9	430	12.5	7.0	492	--
MAR 19...	1200	527	220	--	641	12.5	120	7.8	386	9.5	6.0	263	--
APR 26...	1115	574	59	--	637	9.7	113	7.8	370	18.5	14.0	149	--
JUN 25...	1006	714	460	390	644	7.7	100	7.9	369	28.5	19.5	502	--
JUL 25...	0857	363	1300	980	645	7.2	97	7.6	372	25.0	21.5	1300	--
AUG 15...	0832	434	130	330	--	--	--	--	--	--	--	853	--
AUG 15...	0837	434	--	--	640	5.9	75	7.7	380	19.0	18.0	--	--
SEP 24...	1008	205	86	100	645	8.4	103	7.8	425	21.0	17.0	139	--

Date	Time	STREAM DEPTH, MEAN (FT) (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM VELOC-ITY, MEAN (F/S) (00055)	STREAM WIDTH (FT) (00004)	TEMPER-ATURE WATER (DEG C) (00010)	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 .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)
OCT 09...	1200	1.1	447	1.76	243	16.5	--	--	--	--	82	84	93
NOV 08...	1200	.92	327	1.46	244	5.0	--	--	--	--	--	--	--
DEC 06...	1156	1.2	593	1.96	252	7.0	69	82	89	94	96	97	99
JAN 15...	1045	1.5	599	1.81	263	1.0	--	--	--	--	85	85	89
FEB 28...	1254	1.5	555	1.60	263	7.0	--	--	--	--	95	95	98
APR 26...	1109	1.5	574	1.79	258	14.0	--	--	--	--	39	41	51
MAY 23...	1020	1.8	616	1.70	259	16.0	--	--	--	--	18	18	22
JUN 25...	0845	1.7	714	1.83	264	19.5	--	--	--	--	88	88	94
JUL 25...	0804	1.5	363	1.48	264	21.5	76	82	89	93	99	99	100
AUG 15...	0919	1.5	434	1.43	259	18.0	--	--	--	--	97	99	99
SEP 05...	0854	1.3	338	1.52	248	20.0	--	--	--	--	91	94	100

08330000 RIO GRANDE AT ALBUQUERQUE, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	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)	SEDI-MENT, SUS-PENDEDED (MG/L) (80154)
OCT 09...	100	--	--	--	--	102
NOV 08...	--	--	72	100	--	41
DEC 06...	100	--	--	--	--	837
JAN 15...	96	100	--	--	--	535
FEB 28...	100	--	--	--	--	587
APR 26...	84	86	--	--	100	303
MAY 23...	61	93	--	--	100	615
JUN 25...	100	--	--	--	--	602
JUL 25...	--	--	--	--	--	1240
AUG 15...	100	--	--	--	--	427
SEP 05...	--	--	--	--	--	92

Date	Time	DIS-CHARGE, INST. STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC-ITY, MEAN (F/S) (00055)	STREAM WIDTH (FT) (00004)	TEMPER-ATURE WATER (DEG C) (00010)	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)	
OCT 09...	1200	1.1	447	1.76	243	16.5	0	1	10	65	92	98	99
NOV 08...	1200	.92	327	1.46	244	5.0	--	0	9	56	90	97	99
DEC 06...	1156	1.2	593	1.96	252	7.0	0	1	8	59	87	96	99
JAN 15...	1045	1.5	599	1.81	263	1.0	1	3	9	57	89	96	98
FEB 28...	1254	1.5	555	1.60	263	7.0	3	9	19	59	88	96	99
APR 26...	1109	1.5	574	1.79	258	14.0	0	1	9	48	79	86	89
MAY 23...	1020	1.8	616	1.70	259	16.0	0	1	11	59	89	96	98
JUN 25...	0845	1.7	714	1.83	264	19.5	1	1	8	58	87	94	96
JUL 25...	0804	1.5	363	1.48	264	21.5	--	0	5	34	61	72	75
AUG 15...	0919	1.5	434	1.43	259	18.0	1	2	12	58	87	93	95
SEP 05...	0854	1.3	338	1.52	248	20.0	--	0	7	53	84	91	93

Date	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)	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM (80174)
OCT 09...	100	--	--	--
NOV 08...	100	--	--	--
DEC 06...	100	--	--	--
JAN 15...	100	--	--	--
FEB 28...	100	--	--	--
APR 26...	90	96	100	--
MAY 23...	99	100	--	--
JUN 25...	97	100	--	--
JUL 25...	77	80	80	100
AUG 15...	96	96	100	--
SEP 05...	93	93	100	--

08330540 TRAMWAY FLOODWAY CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°04'42", long 106°29'49", 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 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1987 to November 2000 (seasonal record), March 2001 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete-lined channel. Recording rain gage at this site since May 2001. Elevation of gage is 5,740 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor. Prior to water year 1998, some minor streamflow may have existed on days where daily mean discharges have been recorded as zero due to the sensitivity limits of the streamflow monitoring equipment. Since 1998, all flows above zero are recorded. See tabulation below for monthly precipitation in inches.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.15	0.44	0.00	0.13	1.5	0.00	0.24	0.10	0.04	0.17	0.03	0.06
2	0.15	0.68	0.00	0.03	0.10	0.00	0.21	0.08	0.03	0.12	0.86	0.06
3	0.19	0.61	0.00	0.00	0.19	0.00	0.07	0.09	0.02	0.15	1.2	0.27
4	0.19	0.62	0.00	0.48	0.15	0.00	0.11	0.10	0.02	0.14	2.4	0.08
5	0.16	0.81	0.00	0.25	0.03	0.00	0.27	0.09	0.04	0.13	0.27	0.14
6	0.07	0.47	0.00	0.00	0.00	0.00	0.70	0.09	0.07	0.15	1.5	0.04
7	0.11	0.63	0.00	0.00	0.00	0.03	5.4	0.13	0.10	0.27	0.42	0.77
8	0.27	0.15	0.00	0.00	0.00	0.02	0.56	0.13	0.26	0.77	0.24	0.55
9	0.36	0.16	0.00	0.03	0.00	0.00	0.29	0.10	0.13	0.51	0.14	0.82
10	0.37	0.03	0.00	1.3	0.00	0.02	0.42	0.13	0.15	e1.5	0.07	3.9
11	0.08	0.06	0.45	e2.5	0.00	0.00	0.28	0.12	0.12	e0.20	0.08	2.1
12	0.19	0.18	1.0	e0.50	0.00	0.00	0.20	0.09	0.15	0.11	0.09	0.74
13	0.04	0.04	e1.0	0.08	0.00	0.00	0.21	0.15	0.15	0.11	0.04	0.59
14	0.06	3.1	e0.20	0.12	0.00	0.00	0.39	0.24	1.3	0.11	0.05	0.03
15	0.10	0.89	0.08	0.07	0.01	0.02	0.29	0.17	0.14	0.13	0.04	0.04
16	0.08	0.80	e0.00	0.04	0.02	0.00	0.21	0.14	0.07	0.04	0.03	0.06
17	0.17	0.00	0.00	0.01	0.00	0.01	0.14	0.14	0.16	0.64	0.04	0.10
18	0.10	0.00	0.07	0.00	0.43	0.00	0.07	0.12	0.06	0.13	0.09	1.5
19	0.12	0.00	e0.00	0.00	0.07	0.06	0.10	0.23	0.08	0.73	0.11	0.31
20	0.08	0.00	0.00	0.01	0.00	0.08	0.12	0.19	0.07	1.3	0.25	0.08
21	0.11	0.00	0.00	0.24	0.00	0.05	0.10	0.17	0.03	0.34	0.08	0.07
22	0.17	0.00	0.00	0.00	0.00	0.09	0.10	0.16	0.14	0.27	0.06	0.03
23	0.10	1.5	0.00	0.10	0.05	0.13	0.08	0.19	0.10	0.15	0.02	0.04
24	0.14	0.00	0.00	e0.10	0.05	0.08	0.07	0.17	0.15	0.39	0.06	0.05
25	0.18	0.04	0.00	0.03	0.00	0.05	0.10	0.19	0.14	0.14	0.10	0.06
26	0.55	0.00	0.00	0.07	0.00	0.16	0.13	0.14	0.08	0.11	0.12	0.06
27	0.52	0.00	0.00	0.17	0.00	0.19	0.13	0.14	0.13	0.07	0.08	0.12
28	0.53	0.00	0.00	0.02	0.01	0.11	0.12	0.17	0.08	0.05	0.03	0.75
29	0.71	0.19	0.76	0.00	---	0.43	0.09	0.18	0.10	0.04	0.10	0.05
30	0.62	0.00	1.5	1.3	---	0.16	0.16	0.11	0.11	0.05	0.12	0.06
31	0.68	---	0.16	e1.5	---	0.22	---	0.09	---	0.13	0.07	---
TOTAL	7.35	11.40	5.22	9.08	2.61	1.91	11.36	4.34	4.22	9.15	8.79	13.53
MEAN	0.237	0.380	0.168	0.293	0.093	0.062	0.379	0.140	0.141	0.295	0.284	0.451
MAX	0.71	3.1	1.5	2.5	1.5	0.43	5.4	0.24	1.3	1.5	2.4	3.9
MIN	0.04	0.00	0.00	0.00	0.00	0.00	0.07	0.08	0.02	0.04	0.02	0.03
AC-FT	15	23	10	18	5.2	3.8	23	8.6	8.4	18	17	27
(+)	0.07	2.77	1.52	1.14	0.40	0.08	0.70	0.03	0.44	1.28	1.40	1.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	0.253	0.090	0.128	0.293	0.093	0.318	0.118	0.126	0.120	0.364	0.505	0.235	
MAX	1.03	0.38	0.17	0.29	0.093	1.17	0.38	0.38	0.41	0.95	1.44	0.93	
(WY)	1990	2002	2002	2002	2002	1990	2002	1998	2001	1998	2001	1991	
MIN	0.000	0.000	0.000	0.29	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
(WY)	1991	1990	1990	2002	2002	1991	1991	1995	1990	1994	1994	1990	

SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 1990 - 2002

ANNUAL TOTAL	88.96												
ANNUAL MEAN	0.244									0.238			
HIGHEST ANNUAL MEAN										0.59			2001
LOWEST ANNUAL MEAN										0.000			1995
HIGHEST DAILY MEAN	5.4	Apr	7							32	Oct	4	1989
LOWEST DAILY MEAN	0.00	Nov	17							0.00	Oct	1	1989
ANNUAL SEVEN-DAY MINIMUM	0.00	Nov	30							0.00	Oct	5	1989
MAXIMUM PEAK FLOW	102	Aug	4							3190	Jul	9	1988
MAXIMUM PEAK STAGE	1.96	Aug	4							8.62	Jul	9	1988
ANNUAL RUNOFF (AC-FT)	176									172			
10 PERCENT EXCEEDS	0.63									0.48			
50 PERCENT EXCEEDS	0.10									0.00			
90 PERCENT EXCEEDS	0.00									0.00			

e Estimated

(+) Total rainfall accumulation in inches.

08330600 TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'10", long 106°38'53", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1951 to September 1968 (annual maximum only), August 1974 to September 1998 (seasonal records), October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,999 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 good except for those estimated, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.1	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e9.1	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e8.0	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	0.00	1.5
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e3.7	0.00	1.9
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.28	0.00	0.00
23	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.02	24.78	50.74	3.90
MEAN	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.799	1.637	0.130
MAX	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.02	17	15	1.9
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.9	0.00	0.00	0.00	0.00	0.00	0.00	0.04	49	101	7.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	1999	2000	1999	2000	1999	2000	2001	2000	2001	2000	2001
MEAN	0.624	0.056	0.000	0.000	0.000	0.009	0.018	0.008	0.117	0.309	1.646	0.074		
MAX	2.20	0.21	0.000	0.000	0.000	0.029	0.065	0.032	0.37	0.80	4.35	0.13		
(WY)	2001	2001	1999	1999	1999	2000	1999	2001	2000	2002	1999	2002		
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.040	0.28	0.026		
(WY)	2000	1999	1999	1999	1999	2001	2000	1999	2002	2000	2000	2000		

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1999 - 2002

ANNUAL TOTAL	20.97	79.90	
ANNUAL MEAN	0.057	0.219	0.242
HIGHEST ANNUAL MEAN			0.43 1999
LOWEST ANNUAL MEAN			0.063 2000
HIGHEST DAILY MEAN	5.3 Aug 14	17 Jul 10	47 Aug 3 1999
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1998
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1998
MAXIMUM PEAK FLOW		416 Aug 19	a2930 Jul 9 1988
MAXIMUM PEAK STAGE		4.94 Aug 19	b9.60 Jul 9 1988
ANNUAL RUNOFF (AC-FT)	42	158	175
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

a From rating curve extended above 10 ft<sup>3</sup>/s, on basis of step-backwater analysis, and slope-area measurement.

b From floodmarks.

08330775 SOUTH DIVERSION CHANNEL ABOVE TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'10", long 106°39'26", 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 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 4,930 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.03	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.9	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.00	0.00	0.00	0.15	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6
11	0.00	0.00	0.00	e1.2	0.00	0.00	0.00	0.00	0.00	0.01	0.00	13
12	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.02	0.00	e3.7
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
15	0.00	2.2	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.00	0.00	0.20
16	0.00	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00
17	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.65	0.30
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00
23	0.00	1.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00
24	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
25	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.09	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.58	e3.5	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	5.32	0.67	4.89	0.42	0.00	2.18	0.00	5.26	1.35	12.25	21.66
MEAN	0.000	0.177	0.022	0.158	0.015	0.000	0.073	0.000	0.175	0.044	0.395	0.722
MAX	0.00	2.2	0.58	3.5	0.42	0.00	1.4	0.00	5.0	0.61	9.9	13
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	11	1.3	9.7	0.8	0.00	4.3	0.00	10	2.7	24	43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	0.987	0.805	0.062	0.067	0.077	0.217	0.129	0.253	0.495
MAX	2.88	4.50	0.39	0.18	0.21	0.69	0.57	1.83	3.14
(WY)	1995	1995	1995	1995	1998	2000	1997	1994	1996
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2002	1996	1994	1994	1996	1996	1994	1995	1995

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1994 - 2002

ANNUAL TOTAL	86.62	54.00
ANNUAL MEAN	0.237	0.148
HIGHEST ANNUAL MEAN		0.94
LOWEST ANNUAL MEAN		0.15
HIGHEST DAILY MEAN	17 Aug 14	13 Sep 11
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1
MAXIMUM PEAK FLOW		49 Aug 3
MAXIMUM PEAK STAGE		1.96 Aug 3
ANNUAL RUNOFF (AC-FT)	172	107
10 PERCENT EXCEEDS	0.37	0.02
50 PERCENT EXCEEDS	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00

e Estimated





08331000 RIO GRANDE AT ISLETA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
DEC								
18...	1.33	E1	E1	<1	3	2.62	67	322
28...	--	--	--	--	--	--	--	--
MAR								
27...	.57	<2	<2	<1	6	3.11	97	125
APR								
30...	--	--	--	--	--	--	--	--
MAY								
30...	--	--	--	--	--	--	--	326
JUN								
04...	.87	<2	<2	<1	3	1.97	96	602
26...	--	--	--	--	--	--	--	918
JUL								
23...	.23	<2	<2	<1	3	2.24	99	2560
AUG								
02...	--	--	--	--	--	--	--	520
22...	--	--	--	--	--	--	--	468
SEP								
09...	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	139

Remark codes used in this report:

- < -- Less than
- E -- Estimated value

Value qualifier codes used in this report:

- k -- Counts outside acceptable range

08331118 AMOLE DEL NORTE CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°02'14", long 106°43'15", Bernalillo County, Hydrologic Unit 13020203, in Atrisco Grant, on right bank of concrete lined channel 100 ft south of Blake Road and 2,500 ft west of intersection of Blake Road and Coors Blvd. in southwest Albuquerque.

DRAINAGE AREA.--6.302 mi<sup>2</sup>.

PERIOD OF RECORD.--April 2000 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 4,997 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.8	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.6	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.0
11	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.6
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
15	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.29	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.21
19	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.2	0.00	0.00
23	0.00	1.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.01
29	0.00	0.00	0.11	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.24	0.21	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.36	2.58	0.58	0.77	0.40	0.00	0.19	0.04	0.63	3.08	23.17	15.83
MEAN	0.012	0.086	0.019	0.025	0.014	0.000	0.006	0.001	0.021	0.099	0.747	0.528
MAX	0.29	1.7	0.24	0.56	0.28	0.00	0.19	0.04	0.63	2.2	9.8	9.0
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.7	5.1	1.2	1.5	0.8	0.00	0.4	0.08	1.2	6.1	46	31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	0.385	0.294	0.024	0.127	0.009	0.065	0.055	0.175	0.123	0.377	0.338	0.201
MAX	0.76	0.50	0.028	0.23	0.014	0.13	0.10	0.38	0.35	0.83	0.75	0.53
(WY)	2001	2001	2001	2001	2002	2001	2001	2000	2000	2000	2002	2002
MIN	0.012	0.086	0.019	0.025	0.004	0.000	0.006	0.001	0.001	0.099	0.13	0.000
(WY)	2002	2002	2002	2002	2001	2002	2002	2002	2001	2002	2000	2000

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 2000 - 2002

ANNUAL TOTAL	35.06	47.63	
ANNUAL MEAN	0.096	0.130	0.162
HIGHEST ANNUAL MEAN			0.19 2001
LOWEST ANNUAL MEAN			0.13 2002
HIGHEST DAILY MEAN	4.0 Mar 7	9.8 Aug 3	9.8 Aug 3 2002
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Apr 20 2000
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Apr 20 2000
MAXIMUM PEAK FLOW		125 Aug 2	125 Aug 2 2002
MAXIMUM PEAK STAGE		3.45 Aug 2	3.45 Aug 2 2002
ANNUAL RUNOFF (AC-FT)	70	94	118
10 PERCENT EXCEEDS	0.04	0.00	0.01
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00



## 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, 5.0 mi downstream from heading of conveyance channel, and at mile 1,487.2.

DRAINAGE AREA.--19,230 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

## 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 datum 3.00 ft higher.

REMARKS.--Water-discharge records good except for those estimated, which are poor. Since November 1973, flow 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.

AVERAGE DISCHARGE.--19 years (water years 1937-38, 1942-58,) 1,125 ft<sup>3</sup>/s, 815,100 acre-ft/yr. Includes flow of floodway, conveyance channel, and Bernardo Interior Drain. 15 years (water years 1959-73,) 898 ft<sup>3</sup>/s, Riverside drain, prior to closure of Cochiti Dam. 29 years (water years 1974-2002,) 1,394 ft<sup>3</sup>/s, 1,010,000 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 ft<sup>3</sup>/s, Apr. 25, 1942, gage height, 6.90 ft; no flow some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	524	593	628	615	408	e28	79	58	12	0.00	0.00
2	93	753	613	562	581	347	e33	54	52	1.8	3.2	0.00
3	115	640	577	549	586	354	e5.5	82	51	0.11	340	0.00
4	105	537	582	545	618	392	4.5	104	65	0.06	119	0.00
5	136	488	581	578	633	414	6.4	68	128	0.01	e398	0.00
6	110	420	587	569	625	326	12	104	124	0.00	308	0.00
7	95	387	650	525	613	328	6.0	117	117	0.00	163	0.00
8	100	424	713	541	581	275	17	85	104	0.00	95	0.00
9	166	425	749	538	527	219	103	81	95	0.00	e123	0.00
10	141	428	707	551	511	230	98	33	100	0.00	e95	0.00
11	143	427	707	637	517	237	14	68	106	0.00	e45	0.16
12	146	432	705	676	526	220	23	63	72	0.00	e1.7	815
13	137	427	648	654	517	e134	16	96	48	6.1	e33	1700
14	139	414	668	637	467	e79	17	103	69	20	4.5	e1300
15	152	475	626	615	447	76	44	152	62	22	0.00	e1370
16	113	570	622	545	440	56	37	e529	128	1.8	0.00	e737
17	114	629	616	543	416	90	31	509	161	55	0.00	e270
18	90	655	586	e639	404	85	51	261	71	78	0.00	e187
19	82	645	586	e608	401	102	55	191	55	34	0.00	e416
20	84	643	e550	e654	400	101	48	187	32	155	0.00	e371
21	84	617	e601	e720	389	74	10	212	e18	176	0.00	e335
22	76	700	e529	e712	390	92	7.2	209	e8.6	270	0.00	e288
23	95	708	533	712	392	81	8.4	173	75	264	0.00	e249
24	79	725	520	656	392	56	20	160	43	197	0.00	e262
25	74	737	504	443	459	48	3.8	149	95	130	0.00	e177
26	84	671	502	372	478	63	2.6	145	53	49	0.00	e112
27	71	687	515	e355	511	85	3.6	126	30	21	0.00	89
28	69	658	528	344	514	41	3.3	89	19	6.7	0.00	39
29	148	581	532	349	---	43	27	156	3.2	1.4	0.00	e51
30	120	528	538	466	---	e24	153	136	3.2	0.08	0.00	44
31	117	---	597	547	---	e23	---	88	---	0.0	0.00	---
TOTAL	3389	16955	18565	17470	13950	5103	888.3	4609	2046.0	1501.06	1728.40	8812.16
MEAN	109.3	565.2	598.9	563.5	498.2	164.6	29.61	148.7	68.20	48.42	55.75	293.7
MAX	166	753	749	720	633	414	153	529	161	270	398	1700
MIN	69	387	502	344	389	23	2.6	33	3.2	0.00	0.00	0.00
AC-FT	6720	33630	36820	34650	27670	10120	1760	9140	4060	2980	3430	17480
(+)	27410	39850	44190	42760	35040	25380	18510	27250	20910	20410	19200	31360

CAL YR 2001 TOTAL 200624 MEAN 549.7 MAX 4830 MIN 42 AC-FT 397900 (+) MEAN 796 AC-FT 575500  
WTR YR 2002 TOTAL 95016.92 MEAN 260.3 MAX 1700 MIN 0.00 AC-FT 188500 (+) MEAN 486 AC-FT 352300

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.

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	FIELD WATER UNFLTRD (NTU) (61028)	TUR-BID-ITY (MM OF HG) (00025)	BARO-METRIC PRES-SURE (00300)	OXYGEN, DIS-SOLVED (MG/L) (00301)	OXYGEN, (PER-CENT SATUR-ATION) (00400)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00020)	TEMPER-ATURE AIR (DEG C) (00010)	TEMPER-ATURE WATER (DEG C) (80154)	SEDI-MENT, SUS-PENDED (MG/L)
NOV 26...	1500	643	250	220	639	10.1	105	--	561	7.0	9.0	--	
JAN 28...	1430	341	610	460	638	10.2	101	8.2	549	--	7.0	--	
APR 15...	1330	68	74	77	637	8.8	124	8.6	550	--	23.0	151	
JUN 12...	1332	70	--	--	--	--	--	--	--	--	--	93	
JUN 12...	1337	70	37	41	644	9.2	148	8.6	472	36.0	31.0	--	
JUL 15...	1344	34	66	79	644	8.6	136	--	520	--	30.0	--	
JUL 15...	1354	34	--	--	--	--	--	--	--	--	--	71	
AUG 12...	1444	.39	--	--	--	--	--	--	--	--	--	61	
AUG 12...	1448	.39	38	39	643	7.0	125	8.4	601	37.0	37.0	--	
SEP 26...	1154	121	320	--	642	7.8	105	8.2	540	21.0	21.0	--	
SEP 26...	1218	121	--	310	642	7.8	105	--	540	--	21.0	243	

Date	Time	STREAM DEPTH, MEAN (FT) (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM VELOC-ITY, MEAN (F/S) (00055)	STREAM WIDTH (FT) (00004)	TEMPER-ATURE WATER (DEG C) (00010)	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 .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)
OCT 18...	1400	1.2	94	1.20	66.5	--	--	--	--	--	71	73	89
NOV 26...	1440	1.1	643	1.67	366	9.0	--	--	--	--	69	73	94
DEC 20...	1500	.79	552	1.80	244	5.5	56	57	66	68	78	81	91
JAN 28...	1350	.90	341	1.50	252	7.0	--	--	--	--	91	92	98
FEB 11...	1540	1.2	487	1.87	210	7.5	--	--	--	--	92	93	97
MAR 20...	1428	.89	90	1.36	75.0	17.5	--	--	--	--	98	98	100
APR 15...	1248	.74	68	1.25	74.0	23.0	--	--	--	--	80	83	95
MAY 10...	1321	.76	35	.64	72.0	24.0	--	--	--	--	--	--	--
JUN 12...	1241	.75	70	1.37	82.0	31.0	--	--	--	--	--	--	--
JUL 15...	1335	.41	34	.96	85.7	30.0	--	--	--	--	--	--	--
AUG 12...	1424	.09	.39	.43	10.4	37.0	--	--	--	--	3	3	19
SEP 23...	1340	1.2	261	1.51	147	23.0	--	--	--	--	95	97	100

RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date		SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SEDI-MENT, SUS-PENDEDED (MG/L) (80154)							
Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00064)	STREAM VELOC-ITY, MEAN (F/S) (00055)	STREAM WIDTH (FT) (00004)	TEMPER-ATURE WATER (DEG C) (00010)	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)	
OCT													
18...	1400	1.2	94	--	66.5	--	0	2	27	81	97	99	100
NOV													
26...	1440	1.1	643	1.67	366	9.0	0	3	26	85	98	100	--
DEC													
20...	1500	.79	552	1.80	244	5.5	0	1	26	77	96	99	100
JAN													
28...	1350	.90	341	1.50	252	7.0	0	4	36	82	96	99	100
FEB													
11...	1540	1.2	487	1.87	210	7.5	0	2	28	86	98	99	100
MAR													
20...	1428	.89	90	1.36	75.0	17.5	0	2	37	92	99	100	--
APR													
15...	1248	.74	68	1.25	74.0	23.0	0	1	19	79	94	97	98
MAY													
10...	1330	.76	35	.64	72.0	24.0	0	1	32	85	98	100	--
JUN													
12...	1224	.75	70	1.37	82.0	31.0	0	1	24	80	97	100	--
JUL													
15...	1330	.41	34	.96	85.7	30.0	0	1	21	79	97	100	--
AUG													
12...	1419	.09	.39	.43	10.4	37.0	0	1	11	71	96	99	100
SEP													
23...	1350	1.2	261	1.51	147	23.0	0	1	21	76	96	99	100

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.
	% FINER THAN 8.00 MM (80171)	% FINER THAN 16.0 MM (80172)
OCT		
18...	--	--
NOV		
26...	--	--
DEC		
20...	--	--
JAN		
28...	--	--
FEB		
11...	--	--
MAR		
20...	--	--
APR		
15...	98	100
MAY		
10...	--	--
JUN		
12...	--	--
JUL		
15...	--	--
AUG		
12...	--	--
SEP		
23...	--	--

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 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	50	52	83	78	61	114	101	95	116	83	108
2	106	51	56	83	78	81	102	98	91	125	84	96
3	114	46	49	84	78	38	102	128	101	114	109	109
4	118	43	48	85	78	33	95	125	105	92	127	115
5	126	41	49	86	73	40	83	114	116	87	149	110
6	134	39	48	85	73	65	93	114	114	91	144	69
7	135	37	54	67	74	67	86	117	117	104	144	59
8	138	36	54	68	74	57	89	124	100	115	141	57
9	146	36	49	69	78	42	91	122	115	96	152	62
10	132	37	50	81	78	49	112	109	101	90	139	124
11	133	35	49	74	71	44	111	117	94	113	122	116
12	131	43	51	76	80	43	116	124	102	122	102	106
13	124	36	48	76	80	49	124	124	85	136	88	113
14	130	35	53	76	81	69	112	114	99	140	99	143
15	148	34	48	75	82	75	113	129	117	124	99	147
16	133	34	53	77	82	75	128	144	123	142	117	133
17	140	41	52	76	83	88	112	150	121	149	109	119
18	138	32	60	74	85	106	129	146	117	155	101	112
19	135	32	74	74	86	108	130	142	112	155	102	144
20	138	29	72	75	87	104	125	124	107	143	92	107
21	138	27	79	81	85	103	132	117	124	153	87	96
22	123	36	80	76	82	110	119	110	127	130	100	92
23	112	39	82	76	83	103	94	90	141	154	106	89
24	109	38	84	76	84	122	119	101	143	161	124	86
25	117	38	85	80	85	115	103	113	144	123	120	82
26	129	29	78	73	85	114	102	139	146	119	125	84
27	119	25	78	71	68	115	105	115	152	134	105	83
28	122	37	79	79	59	113	105	101	143	103	78	87
29	116	57	83	78	---	113	95	106	126	93	106	97
30	120	53	77	77	---	112	96	85	114	116	109	87
31	111	---	82	78	---	103	---	97	---	83	119	---
TOTAL	3919	1146	1956	2389	2210	2517	3237	3640	3492	3778	3482	3032
MEAN	126.4	38.20	63.10	77.06	78.93	81.19	107.9	117.4	116.4	121.9	112.3	101.1
MAX	148	57	85	86	87	122	132	150	152	161	152	147
MIN	104	25	48	67	59	33	83	85	85	83	78	57
AC-FT	7770	2270	3880	4740	4380	4990	6420	7220	6930	7490	6910	6010

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2002, BY WATER YEAR (WY)

	MEAN	78.00	31.75	28.77	27.81	27.64	50.48	62.74	67.76	62.67	65.34	74.01	77.36
MAX	168	87.9	79.5	87.7	79.0	96.9	138	141	134	146	146	164	164
(WY)	1996	1987	2001	1990	2002	1985	2001	2001	1992	1992	1992	1995	1995
MIN	0.11	1.37	3.50	3.30	3.90	5.61	4.81	4.84	1.64	0.18	0.006	0.010	0.010
(WY)	1957	1957	1955	1957	1957	1954	1955	1954	1954	1956	1954	1956	1956

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1954 - 2002

ANNUAL TOTAL	38226	34798	
ANNUAL MEAN	104.7	95.34	55.53
HIGHEST ANNUAL MEAN			107
LOWEST ANNUAL MEAN			4.29
HIGHEST DAILY MEAN	165	May 20	208
LOWEST DAILY MEAN	25	Nov 27	0.00
ANNUAL SEVEN-DAY MINIMUM	33	Nov 15	0.00
MAXIMUM PEAK FLOW			168
MAXIMUM PEAK STAGE			6.74
INSTANTANEOUS LOW FLOW			14
ANNUAL RUNOFF (AC-FT)	75820	69020	40230
10 PERCENT EXCEEDS	145	137	120
50 PERCENT EXCEEDS	117	99	44
90 PERCENT EXCEEDS	47	49	6.0



## RIO GRANDE BASIN

08334000 RIO PUERCO ABOVE ARROYO CHICO, NEAR GUADALUPE, NM--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-56 (published as "below Cabezon"), 1981-96, 2001 to current.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
AUG			
06...	1128	253	76100
06...	1130	253	77400

08341400 BLUEWATER LAKE NEAR BLUEWATER, NM

LOCATION.--Lat 35°17'31", long 108°06'40", in SE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1927 to December 1950 (monthend contents only, published in WSP 1732), April 1958 to current year (monthend contents only).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,345.57 ft above National Geodetic Vertical Datum of 1929. July 1958 to Jan. 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 ft<sup>3</sup>/s occurred at station 8 mi downstream; no storage at times prior to 1947.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,140 acre-ft, Oct. 1 and 2, elevation, 7,364.68 ft; minimum, 1,750 acre-ft, Sept. 30, elevation, 7,359.07 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3140	2970	2890	2840	2810	2760	2650	2480	2290	2060	1940	1820
2	3140	2970	2890	2840	2810	2760	2650	2470	2280	2060	1960	1820
3	3130	2960	2890	2840	2810	2750	2650	2460	2280	2060	1960	1810
4	3120	2960	e2890	2840	2810	2750	2640	e2460	2270	2060	1980	1810
5	3120	2960	e2890	2830	2810	2750	2640	e2460	2260	2060	1970	1810
6	3110	2950	2880	2830	2800	2750	2640	e2460	2260	2050	1960	1800
7	3110	2950	2880	2830	2800	2740	2640	e2450	2250	2050	1970	1800
8	3100	2950	2880	2830	2800	2740	2630	e2450	2240	2060	1960	1800
9	3100	2940	2870	2830	2800	2740	2630	e2440	2230	2070	1960	1810
10	3090	2940	2870	2840	2800	2740	2630	e2440	2220	2060	1960	1820
11	3080	2940	2870	2840	2790	2730	2620	e2430	2210	2050	1950	1850
12	3070	2940	2870	2840	2790	2730	2620	e2430	2200	2050	1930	1840
13	3060	2930	2870	2830	2790	2730	2610	e2420	2190	2040	1920	1840
14	3060	2930	2870	2830	2790	2720	2600	e2420	2180	2030	1910	1830
15	3050	2930	2870	2830	2790	2710	2600	e2410	2170	2030	1900	1830
16	3050	2930	2870	2830	2790	2710	2590	e2410	2160	2030	1890	1820
17	3050	2930	2860	2830	2790	2700	2580	e2400	2150	2030	1890	1820
18	3040	2920	2860	2830	2790	2700	2580	e2400	2140	2030	1900	1810
19	3030	2910	2860	2820	2790	2700	2570	e2390	e2140	2030	1890	1800
20	3030	2910	2860	2820	2790	2700	2560	e2380	e2130	2010	1890	1800
21	3020	2910	2860	2820	2790	2690	2550	e2360	2130	2010	1880	1790
22	3020	2910	2860	2820	2790	2690	2540	2350	2120	2000	1870	1790
23	3020	2910	2850	2820	2790	2690	2540	2350	2110	2000	1860	1780
24	3010	2910	2850	2820	2780	2670	2540	2330	2100	2000	1860	1770
25	3000	2910	2850	2820	2780	2670	2530	2330	2090	2000	1860	1770
26	3000	2900	2850	2820	2770	2670	2540	2330	2090	1990	1850	1770
27	2990	2900	2840	2820	2770	2670	2510	2320	2080	1990	1840	1770
28	2990	2900	2840	2810	2770	2660	2510	2320	2080	1980	1850	1760
29	2980	2900	2840	2810	---	2670	2500	2310	2070	1980	1840	1760
30	2980	2890	2840	2820	---	2660	2500	2300	2070	1960	1830	1750
31	2980	---	2840	2810	---	2660	---	2300	---	1960	1830	---
MAX	3140	2970	2890	2840	2810	2760	2650	2480	2290	2070	1980	1850
MIN	2980	2890	2840	2810	2770	2660	2500	2300	2070	1960	1830	1750
(+)	7364.09	7363.79	7363.60	7363.49	7363.33	7362.93	7362.29	7361.51	7360.50	7360.03	7359.43	7359.07
(++)	-170	-90	-50	-30	-40	-110	-160	-200	-230	-110	-130	-80

CAL YR 2001 MAX 5200 MIN 2610 (++) +200  
WTR YR 2002 MAX 3140 MIN 1750 (++) -1400

e Estimated

(+) Elevation, in feet, at end of month.

(++) Change in contents, in acre-ft.

08343000 RIO SAN JOSE AT GRANTS, NM

LOCATION.--Lat 35°09'16", long 107°52'11", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, 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. 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. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	---	0.0	0.0	---	0.0	---	0.0	---	0.0	0.0	---
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.84
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.661
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2002, BY WATER YEAR (WY)

MEAN	0.215	0.019	0.000	0.008	0.000	0.200	4.963	1.580	0.014	0.111	0.449	0.287
MAX	2.51	0.57	0.000	0.29	0.000	6.30	87.0	22.5	0.33	1.20	7.79	5.49
(WY)	1970	1999	1969	1998	1969	1985	1980	1983	1999	1981	1993	1972
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1969	1969	1969	1969	1969	1969	1969	1969	1968	1968	1969	1968

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1968 - 2002	
ANNUAL TOTAL	3.32		19.84			
ANNUAL MEAN	0.009		0.054		0.653	
HIGHEST ANNUAL MEAN					8.10	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	2.2		Aug 5		355	
LOWEST DAILY MEAN	0.00		Jan 1		0.00	
ANNUAL SEVEN-DAY MINIMUM	0.00		Jan 1		0.00	
MAXIMUM PEAK FLOW			40		a1760	
MAXIMUM PEAK STAGE			2.42		5.35	
ANNUAL RUNOFF (AC-FT)	6.6		39		473	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From rating curve extended above 300 ft<sup>3</sup>/s, on basis of velocity area studies.

08343500 RIO SAN JOSE NEAR GRANTS, NM

LOCATION.--Lat 35°04'27", long 107°45'01", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, approximately, of which 1,130 mi<sup>2</sup> does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1936 to current year. Prior to October 1955, published as "San Jose River."

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.--Records good except for those estimated, which are fair. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	2.9	3.8	3.9	3.4	3.5	3.3	3.1	3.1	2.7	4.5	1.9
2	3.8	2.9	3.9	4.0	3.5	3.5	3.3	3.3	3.0	2.7	4.5	1.9
3	3.8	2.9	4.1	3.8	3.5	3.4	3.3	3.3	3.0	3.0	4.6	1.8
4	3.7	2.9	4.1	3.6	3.6	3.4	3.2	3.4	2.8	3.0	4.5	1.6
5	3.6	3.2	3.8	3.6	3.5	3.4	3.2	3.4	2.9	2.9	5.2	1.5
6	3.6	3.3	3.7	3.6	3.5	3.5	3.2	3.5	3.0	2.9	4.5	1.4
7	3.4	3.3	3.7	3.6	3.5	3.5	3.1	3.5	3.1	3.1	4.4	1.4
8	3.3	3.4	3.6	3.6	3.4	3.5	2.9	3.5	3.0	3.1	4.2	1.4
9	3.3	3.4	3.6	3.6	3.4	3.4	2.9	3.6	3.1	2.8	4.4	65
10	3.2	3.6	3.6	3.7	3.5	3.3	2.9	3.7	3.1	2.8	4.4	11
11	3.2	3.6	3.4	3.6	3.6	3.2	2.9	3.7	3.3	2.6	4.4	90
12	3.2	3.6	3.5	3.6	3.6	3.2	2.9	3.7	3.3	2.8	4.4	26
13	3.3	3.7	3.5	3.6	3.6	3.2	2.9	3.8	3.2	2.7	3.9	11
14	3.4	3.7	3.4	3.5	3.6	3.2	2.9	3.8	3.4	2.8	3.5	10
15	2.9	3.6	3.3	3.5	3.6	3.2	2.9	3.7	3.3	3.1	3.4	6.7
16	2.6	3.8	3.2	3.5	3.6	3.2	2.9	3.7	3.5	3.3	3.3	4.7
17	2.5	3.8	3.3	3.5	3.6	3.2	2.9	3.9	3.5	3.4	3.3	4.1
18	2.7	3.7	3.4	3.6	3.6	3.2	3.0	3.9	3.5	3.1	3.2	3.9
19	2.7	3.6	3.6	3.5	3.6	3.2	3.1	3.8	3.4	3.1	3.1	e3.8
20	2.7	3.6	3.6	3.4	3.6	3.3	3.2	3.8	3.3	3.2	2.9	e3.6
21	2.6	3.7	3.9	3.5	3.6	3.3	3.0	3.8	3.2	3.0	2.7	e3.7
22	2.8	3.8	4.2	3.5	3.6	3.4	2.9	3.8	3.1	3.2	2.8	e3.8
23	2.9	3.7	4.4	3.5	3.6	3.2	2.9	3.8	3.1	3.1	2.8	e3.8
24	2.7	3.6	4.5	3.4	3.6	3.3	3.0	3.7	2.9	3.1	2.8	e3.7
25	2.7	3.7	4.1	3.5	3.6	3.3	3.1	3.6	3.0	3.2	2.7	3.6
26	2.8	3.6	4.2	3.5	3.6	3.4	3.2	3.6	3.0	3.4	2.5	3.6
27	3.0	3.9	4.1	3.6	3.6	3.4	3.0	3.5	2.8	3.5	2.3	3.6
28	3.0	3.8	4.0	3.6	3.6	3.3	3.1	3.5	3.0	3.7	2.1	3.8
29	2.9	3.9	4.1	3.6	---	3.3	3.2	3.3	2.8	3.9	2.0	3.9
30	2.9	3.8	3.9	3.6	---	3.3	3.1	3.2	2.6	4.0	2.0	3.9
31	2.9	---	3.9	3.5	---	3.3	---	3.1	---	4.2	2.0	---
TOTAL	96.0	106.0	117.4	111.1	99.6	103.0	91.4	111.0	93.3	97.4	107.3	290.1
MEAN	3.097	3.533	3.787	3.584	3.557	3.323	3.047	3.581	3.110	3.142	3.461	9.670
MAX	3.9	3.9	4.5	4.0	3.6	3.5	3.3	3.9	3.5	4.2	5.2	90
MIN	2.5	2.9	3.2	3.4	3.4	3.2	2.9	3.1	2.6	2.6	2.0	1.4
AC-FT	190	210	233	220	198	204	181	220	185	193	213	575

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2002, BY WATER YEAR (WY)

	5.480	5.208	5.069	5.375	5.517	5.460	7.861	7.693	5.369	6.577	8.826	6.448
MEAN	5.480	5.208	5.069	5.375	5.517	5.460	7.861	7.693	5.369	6.577	8.826	6.448
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	2.39	3.23	2.86	2.49	3.11	3.14	3.16	3.52
(WY)	1990	1994	1994	1994	2000	1999	1994	1996	2002	2002	1994	1990

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1937 - 2002

ANNUAL TOTAL	1359.0	1423.6	
ANNUAL MEAN	3.723	3.900	6.246
HIGHEST ANNUAL MEAN			19.3
LOWEST ANNUAL MEAN			3.53
HIGHEST DAILY MEAN	6.0	Jul 31	90
LOWEST DAILY MEAN	2.5	Oct 17	b1.4
ANNUAL SEVEN-DAY MINIMUM	2.7	Oct 16	1.6
MAXIMUM PEAK FLOW			526
MAXIMUM PEAK STAGE			3.92
INSTANTANEOUS LOW FLOW			c1.3
ANNUAL RUNOFF (AC-FT)	2700	2820	4520
10 PERCENT EXCEEDS	4.2	3.9	7.0
50 PERCENT EXCEEDS	3.7	3.4	5.0
90 PERCENT EXCEEDS	3.1	2.8	3.7

e Estimated

a From rating curve extended above 450 ft<sup>3</sup>/s, on basis of slope-area measurements at gage height 3.19 and 4.87 ft.

b Also Sept. 7 and 8.

c Also Sept. 6-9.

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, NM

LOCATION.--Lat 34°24'33", long 106°51'09", in SE<sup>1</sup>/<sub>4</sub> sec.8, T.2 N., R.1 E., Socorro County, Hydrologic Unit 13020204, on left bank 300 ft upstream from 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 18.0 mi south of Belen.

DRAINAGE AREA.--7,350 mi<sup>2</sup>, approximately, of which at least 1,130 mi<sup>2</sup> 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 good except for those estimated, which are poor. Diversions for irrigation of about 11,500 acres upstream from station (includes 3,700 acres irrigated wholly or partly from wells). No flow much of the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since about 1880 occurred Sept. 23, 1929, from information by local residents (discharge, about 35,000 ft<sup>3</sup>/s, estimated on the basis of peak at Rio Puerco). Another flood occurred Aug. 12, 1929 (discharge, 30,600 ft<sup>3</sup>/s, by slope-area measurement, from reports of New Mexico State Engineer).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.11	0.06	e0.20	0.02	0.00	0.00	0.00	3.5	49
2	0.00	0.00	0.00	0.02	0.10	0.23	0.00	0.00	0.00	0.00	1.3	12
3	0.00	0.00	0.00	0.02	0.10	0.07	0.00	0.00	0.00	0.00	6.9	3.4
4	0.00	0.00	0.00	0.00	0.09	0.14	0.01	0.00	0.00	0.00	31	0.20
5	0.00	0.00	0.00	0.00	0.11	0.23	0.02	0.00	0.00	0.00	4.5	0.00
6	0.00	0.00	0.00	0.00	0.13	0.22	0.03	0.00	0.00	0.00	29	0.00
7	0.00	0.00	0.00	0.00	0.20	0.18	0.03	0.00	0.00	0.00	152	0.00
8	0.00	0.00	0.00	0.00	0.27	0.12	0.02	0.00	0.00	0.00	305	0.00
9	0.00	0.00	0.00	0.00	0.25	e0.11	0.00	0.00	0.00	0.00	58	0.00
10	0.00	0.00	0.00	0.00	0.13	e0.11	0.00	0.00	0.00	0.00	13	11
11	0.00	0.00	0.00	0.00	0.21	e0.11	0.00	0.00	0.00	0.00	5.0	82
12	0.00	0.00	0.00	0.02	0.19	0.11	0.00	0.00	0.00	0.00	8.8	271
13	0.00	0.00	0.00	0.00	0.22	0.14	0.00	0.00	0.00	0.00	e3.5	391
14	0.00	0.00	0.00	0.00	0.16	0.12	0.00	0.00	0.00	0.00	e0.09	424
15	0.00	0.00	0.00	0.03	0.19	0.14	0.01	0.00	0.00	0.00	e0.10	264
16	0.00	0.00	0.00	0.05	0.17	e0.05	0.00	0.00	0.00	0.00	0.00	57
17	0.00	0.00	0.00	0.11	0.14	e0.02	0.02	0.00	0.00	0.00	0.00	25
18	0.00	0.00	0.00	0.19	0.14	e0.01	0.02	0.00	0.00	0.33	0.00	62
19	0.00	0.00	0.00	0.28	0.08	0.00	0.02	0.00	0.00	1.3	0.00	122
20	0.00	0.00	0.00	e0.27	0.12	0.00	0.01	0.00	0.00	58	0.00	15
21	0.00	0.00	0.00	e0.30	0.16	0.00	0.00	0.00	0.00	45	21	7.1
22	0.00	0.00	0.00	0.22	0.28	0.00	0.02	0.00	0.00	7.5	e0.05	3.7
23	0.00	0.00	0.00	e0.25	0.14	0.00	0.02	0.00	0.00	1.00	24	4.0
24	0.00	0.00	0.00	e0.32	0.11	0.00	0.00	0.00	0.00	0.00	26	4.0
25	0.00	0.00	0.00	0.29	0.06	0.00	0.00	0.00	0.00	0.00	8.2	2.3
26	0.00	0.00	0.00	0.16	0.08	0.00	0.02	0.00	0.00	1.5	2.6	1.2
27	0.00	0.00	0.04	0.16	0.17	0.00	0.00	0.00	0.00	15	0.21	0.52
28	0.00	0.00	0.00	0.11	e0.20	0.00	0.00	0.00	0.00	29	0.00	0.09
29	0.00	0.00	0.04	0.16	---	0.00	0.00	0.00	0.00	103	0.00	0.00
30	0.00	0.00	0.00	0.17	---	0.00	0.00	0.00	0.00	31	0.00	0.00
31	0.00	---	0.06	0.06	---	0.01	---	0.00	---	8.0	0.00	---
TOTAL	0.00	0.00	0.14	3.30	4.26	2.32	0.27	0.00	0.00	300.63	703.75	1811.51
MEAN	0.000	0.000	0.005	0.106	0.152	0.075	0.009	0.000	0.000	9.698	22.70	60.38
MAX	0.00	0.00	0.06	0.32	0.28	0.23	0.03	0.00	0.00	103	305	424
MIN	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.3	6.5	8.4	4.6	0.5	0.00	0.00	596	1400	3590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

	MEAN	47.85	6.933	1.187	2.411	14.60	17.70	14.46	40.21	19.03	61.75	179.9	83.12
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
(WY)	1952	1940	1940	1940	1942	1942	1944	1950	1945	1942	2000	1956	

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1940 - 2002

ANNUAL TOTAL	1876.52	2826.18	
ANNUAL MEAN	5.141	7.743	40.81
HIGHEST ANNUAL MEAN			171
LOWEST ANNUAL MEAN			4.80
HIGHEST DAILY MEAN	381	Aug 16	5980
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			443
MAXIMUM PEAK STAGE			7.22
INSTANTANEOUS LOW FLOW			0.00
ANNUAL RUNOFF (AC-FT)	3720	5610	29570
10 PERCENT EXCEEDS	4.1	4.2	62
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

a From rating curve extended above 7,800 ft<sup>3</sup>/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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-AIRE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)
FEB 20...	1245	.02	330	340	645	10.8	120	8.3	5700	18.5	11.5	--	--
JUL 22...	1149	5.8	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	1151	5.8	130000	92000	648	5.2	71	7.5	1790	36.0	22.0	--	--
AUG 08...	1320	335	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	1335	335	130000	83000	651	10.8	149	7.6	1800	26.4	23.1	--	--
SEP 12...	1542	353	--	60000	--	--	--	--	--	--	--	--	--
SEP 12...	1543	353	70000	--	647	5.5	68	8.4	1520	26.0	17.5	--	--
SEP 17...	1320	23	36000	27000	641	7.4	100	8.1	1070	32.5	21.0	220	66.5

Date	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
FEB 20...	--	--	--	--	188	168	199	3	1060	1.1	12.1	1390	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 17...	12.0	5.81	4	141	E643	113	137	--	42.0	.77	9.3	341	687

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)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 17...	43	.30	<2	62	<.06	180	<.04	<.8	.26	5.5	<10	E.07	1.2

## RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
FEB								
20...	--	--	--	--	--	--	100	690
JUL								
22...	--	--	--	--	--	--	--	71600
22...	--	--	--	--	--	--	--	--
AUG								
08...	--	--	--	--	--	--	--	93800
08...	--	--	--	--	--	--	--	--
SEP								
12...	--	--	--	--	--	--	--	63000
12...	--	--	--	--	--	--	--	--
17...	4.7	3.20	E2	<1	5	4.14	100	25000

Remark codes used in this report:

< -- Less than  
E -- Estimated value

08354500 SOCORRO MAIN CANAL NORTH AT SAN ACACIA, NM

LOCATION.--Lat 34°15'17", long 106°53'43", in SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.1, T.1 S., R.1 W., Socorro County, Hydrologic Unit 13020203, on right bank at San Acacia, and 0.1 mi downstream from point of diversion.

PERIOD OF RECORD.--April 1936 to September 1964 (monthly discharge only), October 1964 to current year.

REVISED RECORDS.--WSP 1242: 1951.

GAGE.--Water-stage recorder. Datum of gage is 4,660.16 ft above National Geodetic Vertical Datum of 1929 (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 except for those estimated, which are poor. 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 8,600 acres. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	251	e6.0	0.0	0.0	0.0	87	136	173	162	191	121	156
2	245	0.0	0.0	0.0	0.0	96	131	115	146	213	124	160
3	256	0.0	0.0	0.0	0.0	99	128	155	162	197	132	144
4	245	0.0	0.0	0.0	0.0	95	118	138	162	145	166	197
5	248	0.0	0.0	0.0	0.0	112	107	163	193	134	e188	154
6	267	0.0	0.0	0.0	0.0	142	103	140	e255	149	191	118
7	260	0.0	0.0	0.0	0.0	165	103	179	e211	185	e190	98
8	258	0.0	0.0	0.0	0.0	173	104	185	e140	176	193	93
9	252	0.0	0.0	0.0	0.0	161	100	148	147	158	190	143
10	255	0.0	0.0	0.0	0.0	166	163	142	147	131	210	145
11	260	0.0	0.0	0.0	0.0	160	117	125	136	138	184	149
12	254	0.0	0.0	0.0	0.0	174	136	161	151	164	189	136
13	248	0.0	0.0	0.0	0.0	187	167	166	127	219	177	131
14	252	0.0	0.0	0.0	0.0	168	195	177	138	e230	171	e196
15	238	0.0	0.0	0.0	0.0	149	169	156	169	e238	145	e174
16	200	0.0	0.0	0.0	0.0	132	141	120	167	e250	159	e174
17	207	0.0	0.0	0.0	0.0	138	143	114	e226	e250	143	e153
18	206	0.0	0.0	0.0	0.0	160	139	151	201	e245	142	146
19	212	0.0	0.0	0.0	0.0	167	161	139	165	e238	147	e192
20	222	0.0	0.0	0.0	0.0	172	163	142	150	199	145	153
21	226	0.0	0.0	0.0	0.0	184	175	176	160	192	136	130
22	231	0.0	0.0	0.0	0.0	177	142	185	180	174	133	127
23	238	0.0	0.0	0.0	0.0	170	106	186	e217	185	145	124
24	239	0.0	0.0	0.0	0.0	173	124	175	e233	192	201	129
25	242	0.0	0.0	0.0	0.0	169	125	191	e206	186	171	149
26	234	0.0	0.0	0.0	0.0	173	117	e217	e247	170	194	148
27	238	0.0	0.0	0.0	0.0	177	117	e208	228	200	175	163
28	242	0.0	0.0	0.0	0.0	169	144	175	221	192	117	162
29	240	0.0	0.0	0.0	---	166	135	167	225	188	152	162
30	236	0.0	0.0	0.0	---	153	125	173	195	207	161	168
31	e150	---	0.0	0.0	---	136	---	151	---	133	159	---
TOTAL	7352	6.0	0.0	0.0	0.0	4750	4034	4993	5467	5869	5051	4474
MEAN	237.2	0.200	0.000	0.000	0.000	153.2	134.5	161.1	182.2	189.3	162.9	149.1
MAX	267	6.0	0.00	0.00	0.00	187	195	217	255	250	210	197
MIN	150	0.00	0.00	0.00	0.00	87	100	114	127	131	117	93
AC-FT	14580	12	0.00	0.00	0.00	9420	8000	9900	10840	11640	10020	8870

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	1964	1967	1976	1976	1979	1995	1998	1997	1994	1995	1995	1999
MEAN	137.7	8.077	6.591	6.032	4.449	154.7	201.2	203.2	200.1	180.9	156.7	140.5
MAX	260	86.0	79.0	56.7	52.4	234	254	279	298	291	277	253
(WY)	2000	1989	1976	1976	1979	1995	1998	1997	1994	1995	1995	1999
MIN	17.1	0.000	0.000	0.000	0.000	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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1964 - 2002
ANNUAL TOTAL	56388.0	41996.0	
ANNUAL MEAN	154.5	115.1	117.3
HIGHEST ANNUAL MEAN			170
LOWEST ANNUAL MEAN			63.7
HIGHEST DAILY MEAN	276	267	325
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
ANNUAL RUNOFF (AC-FT)	111800	83300	84990
10 PERCENT EXCEEDS	260	225	246
50 PERCENT EXCEEDS	215	142	127
90 PERCENT EXCEEDS	0.00	0.00	0.00

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, 2.0 mi downstream from Rio Salado, and at mile 1,472.6.

DRAINAGE AREA.--26,770 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

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, 1,000 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 those estimated, 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. Diversions upstream from station for irrigation of about 760,000 acres; this includes Socorro Main Canal North, which bypasses station and irrigates about 8,600 acres. No flow at times.

AVERAGE DISCHARGE.--22 years (water years 1937-58), 1,192 ft<sup>3</sup>/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 ft<sup>3</sup>/s, 660,000 acre-ft/yr, combined flow of floodway, conveyance channel and Socorro Main Canal North, prior to closure of Cochiti Dam. 29 years (water years 1974-2002), 1,386 ft<sup>3</sup>/s, 1,004,000 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 ft<sup>3</sup>/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, 1,920 ft<sup>3</sup>/s, Sept. 11; minimum daily, 28 ft<sup>3</sup>/s, Aug. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	380	621	884	452	580	168	173	146	73	63	87
2	147	478	625	767	478	482	181	164	127	72	72	68
3	146	488	613	711	509	467	153	164	124	67	1310	50
4	160	468	594	714	588	553	150	201	115	73	281	182
5	153	473	591	753	647	628	143	187	147	73	327	62
6	156	488	595	772	686	497	151	191	217	80	464	54
7	154	518	626	699	682	394	148	210	199	72	488	50
8	136	542	647	677	702	445	166	204	171	68	568	44
9	174	562	663	668	652	389	182	195	202	66	345	150
10	180	579	e704	673	606	336	222	178	187	64	320	319
11	187	591	e800	747	617	446	158	169	180	62	115	1920
12	218	611	903	830	627	372	182	178	162	68	61	767
13	205	624	841	812	647	292	165	178	155	73	63	1310
14	189	622	819	772	574	221	168	196	161	98	e34	1310
15	210	634	804	794	551	233	180	233	197	91	e36	1110
16	210	e685	785	703	565	217	155	884	162	96	e39	830
17	204	e723	755	696	538	204	193	794	258	82	e28	339
18	191	e731	695	729	510	251	182	414	160	117	55	712
19	173	e685	701	717	505	243	189	347	135	152	60	1510
20	159	646	668	669	514	275	195	228	110	378	90	384
21	167	642	705	875	521	232	180	267	109	252	93	341
22	142	668	723	914	e556	217	150	264	95	290	43	352
23	135	691	688	920	e563	222	169	219	90	709	45	281
24	138	669	699	899	e576	198	154	205	91	376	56	331
25	138	697	641	399	e673	184	150	229	116	269	56	383
26	145	682	631	281	e742	184	155	216	130	190	60	293
27	150	681	696	252	e742	190	136	224	109	270	50	204
28	130	667	684	248	800	175	152	193	85	474	55	121
29	157	637	692	240	---	192	153	180	83	112	58	164
30	193	624	725	307	---	181	156	206	67	108	54	208
31	205	---	765	426	---	154	---	198	---	77	51	---
TOTAL	5205	18186	21699	20548	16823	9654	4986	7889	4290	5052	5440	13936
MEAN	167.9	606.2	700.0	662.8	600.8	311.4	166.2	254.5	143.0	163.0	175.5	464.5
MAX	218	731	903	920	800	628	222	884	258	709	1310	1920
MIN	130	380	591	240	452	154	136	164	67	62	28	44
AC-FT	10320	36070	43040	40760	33370	19150	9890	15650	8510	10020	10790	27640
(+)	24910	36080	43040	40760	33370	28570	17890	25550	19350	21660	20810	37760

CAL YR 2001 TOTAL 198807 MEAN 544.7 MAX 2890 MIN 101 AC-FT 394300 (+) MEAN 735 AC-FT 531830  
WTR YR 2002 TOTAL 133708 MEAN 366.3 MAX 1920 MIN 28 AC-FT 265200 (+) MEAN 483 AC-FT 349760

e Estimated

(+) Combined flow, in acre-ft, and mean, in cubic feet per second, of Floodway, Conveyance Channel, and Socorro Main Canal North.

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937-56, 1959 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE AIR (DEG C) (00020)	TEMPER-AIRE WATER (DEG C) (00010)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT													
25...	1400	145	--	--	--	--	--	--	--	26.0	13.5	99	59
31...	1345	145	84	110	641	--	--	8.4	634	26.0	12.0	--	--
DEC													
06...	1335	695	990	690	650	10.8	105	--	611	11.5	7.0	--	--
19...	1240	719	350	280	649	10.7	101	8.3	569	10.7	6.0	--	--
19...	1245	719	--	--	--	--	--	--	--	--	6.0	--	697
MAR													
20...	1101	287	120	--	651	10.0	102	8.3	592	--	9.0	--	--
20...	1112	287	--	--	--	--	--	--	--	--	--	--	175
APR													
22...	1330	145	24	22	646	9.5	117	8.7	737	23.0	17.0	--	--
22...	1334	145	--	--	--	--	--	--	--	--	--	--	80
MAY													
07...	1605	221	34	31	640	--	--	8.7	628	--	20.0	--	--
07...	1612	221	--	--	--	--	--	--	--	--	--	--	82
21...	1124	261	72	72	642	8.5	107	8.5	592	--	18.0	--	--
21...	1130	261	--	--	--	--	--	--	--	--	--	--	179
JUN													
20...	1130	105	64	110	646	7.7	107	8.6	640	29.0	23.0	--	--
20...	1137	105	--	--	--	--	--	--	--	--	--	--	94
JUL													
24...	1556	306	--	--	--	--	--	--	--	--	--	--	935
24...	1605	306	1200	880	649	6.7	101	8.2	613	--	27.5	--	--
AUG													
14...	1357	32	710	590	648	7.0	97	8.3	743	30.0	23.0	--	--
14...	1402	32	--	--	--	--	--	--	--	--	--	--	461
SEP													
04...	1425	122	46000	52000	648	5.8	82	7.8	830	23.5	24.5	--	43300

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM VELOC-ITY, MEAN (F/S) (00055)	STREAM WIDTH (FT) (00004)	TEMPER-AIRE WATER (DEG C) (00010)	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 .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)
OCT													
25...	1400	1.6	145	114	82.0	13.5	--	--	--	--	--	--	--
NOV													
07...	1425	1.0	546	3.41	155	16.5	9	11	13	16	21	50	91
DEC													
19...	1245	.63	719	2.98	153	6.0	--	--	--	--	57	66	93
JAN													
09...	1424	2.0	701	2.19	156	9.0	--	--	--	--	73	75	87
MAR													
14...	1339	1.0	197	1.66	123	12.5	--	--	--	--	51	52	64
APR													
05...	1340	.90	146	1.47	111	16.0	--	--	--	--	--	--	--
MAY													
07...	1523	1.1	221	1.64	122	20.0	--	--	--	--	43	43	60
JUN													
05...	1314	.71	128	1.44	111	21.0	--	--	--	--	--	--	--
JUL													
23...	1418	1.6	349	1.74	130	24.0	78	86	89	95	97	98	100
AUG													
14...	1312	.48	32	.98	68.0	23.0	--	--	--	--	--	--	--
SEP													
04...	1422	1.4	122	1.20	75.0	23.5	56	76	90	98	--	--	--

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. SIEVE DIAM. .062 MM (70331)	SED. SUSP. SIEVE DIAM. .125 MM (70332)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 25...	--	99	100	59
NOV 07...	100	--	--	2840
DEC 19...	100	--	--	697
JAN 09...	100	--	--	544
MAR 14...	100	--	--	266
APR 05...	--	85	100	43
MAY 07...	100	--	--	98
JUN 05...	--	88	100	47
JUL 23...	--	--	--	1380
AUG 14...	--	99	100	501
SEP 04...	--	100	--	28500

Date	Time	STREAM DEPTH, MEAN (FT) (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM VELOC-ITY, MEAN (F/S) (00055)	STREAM WIDTH (FT) (00004)	TEMPER-ATURE WATER (DEG C) (00010)	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)
OCT 25...	1400	1.6	145	114	82.0	13.5	0	1	10	44	59	69	80
NOV 07...	1425	1.0	546	3.41	155	16.5	0	5	75	99	100	--	--
DEC 19...	1245	.63	719	2.98	153	6.0	0	1	12	53	76	84	89
JAN 09...	1424	2.0	701	2.19	156	9.0	0	1	13	62	73	77	80
MAR 14...	1339	1.0	197	1.66	123	12.5	--	0	6	44	64	72	77
APR 05...	1340	.90	146	1.47	111	16.0	--	0	16	77	91	96	98
MAY 07...	1512	1.1	221	1.64	122	20.0	0	1	19	89	97	98	99
JUN 05...	1322	.71	128	1.44	111	21.0	0	2	15	62	79	88	94
JUL 23...	1410	1.6	349	1.74	130	24.0	0	2	22	69	79	84	89
AUG 14...	1317	.48	32	.96	68.0	23.0	0	1	9	77	95	98	100
SEP 04...	1405	1.4	122	1.20	75.0	23.5	2	3	14	64	83	91	95

Date	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)	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM (80174)
OCT 25...	92	97	100	--
NOV 07...	--	--	--	--
DEC 19...	95	98	100	--
JAN 09...	87	97	100	--
MAR 14...	81	86	88	100
APR 05...	100	--	--	--
MAY 07...	100	--	--	--
JUN 05...	97	100	--	--
JUL 23...	95	98	100	--
AUG 14...	--	--	--	--
SEP 04...	98	100	--	--

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 at San Marcial, 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.

WATER-DISCHARGE RECORDS

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 with satellite telemetry. 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. 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. Flow from the river has been diverted since 1965.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	228	197	223	207	206	158	76	80	67	109	61
2	107	297	201	220	208	236	139	83	67	65	80	54
3	133	215	210	220	209	267	146	86	68	71	146	42
4	124	208	208	220	210	272	178	72	63	67	165	42
5	157	195	200	219	206	273	162	79	86	71	167	53
6	150	192	197	219	194	292	152	118	111	62	218	44
7	154	187	198	218	213	307	144	133	87	75	225	41
8	177	180	187	213	224	326	146	122	102	112	239	39
9	189	163	195	214	219	331	127	108	109	87	234	41
10	184	172	196	215	213	326	102	85	81	72	245	47
11	166	176	203	213	210	302	96	112	60	67	253	115
12	191	184	227	212	208	291	98	101	57	59	212	143
13	235	192	229	215	211	274	96	118	89	61	136	99
14	227	200	212	215	215	264	88	108	102	64	95	104
15	235	201	213	204	217	263	77	94	106	70	60	161
16	238	204	214	192	214	205	74	89	81	67	62	167
17	217	188	207	205	213	180	71	88	55	80	61	138
18	229	196	183	213	213	168	77	136	61	122	59	138
19	228	197	183	211	212	165	78	131	74	138	64	177
20	217	212	217	211	205	175	88	156	59	147	55	144
21	206	232	198	210	193	192	91	172	76	230	62	165
22	196	214	203	215	198	206	147	140	64	189	63	177
23	210	209	202	220	204	189	119	150	73	190	58	174
24	195	199	206	219	202	185	95	128	139	168	61	155
25	184	202	203	218	201	178	85	117	105	176	62	153
26	184	196	205	218	201	173	84	109	88	198	58	123
27	183	181	208	216	204	154	89	94	79	173	53	141
28	164	193	211	216	207	142	100	102	74	176	58	147
29	196	198	215	217	---	121	96	73	63	187	62	172
30	205	201	215	202	---	119	79	64	65	151	53	157
31	212	---	216	211	---	144	---	82	---	179	47	---
TOTAL	5789	6012	6359	6634	5831	6926	3282	3326	2424	3641	3522	3414
MEAN	186.7	200.4	205.1	214.0	208.2	223.4	109.4	107.3	80.80	117.5	113.6	113.8
MAX	238	297	229	223	224	331	178	172	139	230	253	177
MIN	96	163	183	192	193	119	71	64	55	59	47	39
AC-FT	11480	11920	12610	13160	11570	13740	6510	6600	4810	7220	6990	6770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
MEAN	265.3	485.5	476.7	407.5	406.7	420.5	448.6	521.2	462.1	331.8	282.8	253.6	
MAX	759	1729	1880	1558	1112	1394	1679	1782	1652	1690	986	730	
(WY)	1985	1970	1966	1974	1985	1966	1966	1969	1973	1973	1973	1972	
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
(WY)	1969	1977	1975	1975	1975	1977	1976	1976	1976	1976	1976	1974	

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1965 - 2002
ANNUAL TOTAL	84450	57160	
ANNUAL MEAN	231.4	156.6	401.5
HIGHEST ANNUAL MEAN			1137
LOWEST ANNUAL MEAN			0.000
HIGHEST DAILY MEAN	419	331	2200
LOWEST DAILY MEAN	96	39	0.00
ANNUAL SEVEN-DAY MINIMUM	112	43	0.00
ANNUAL RUNOFF (AC-FT)	167500	113400	290900
10 PERCENT EXCEEDS	324	220	1010
50 PERCENT EXCEEDS	215	173	272
90 PERCENT EXCEEDS	151	64	0.30

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954-94, December 2001, January and August 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
DEC 18...	1125	188	19	20	652	9.8	101	8.2	975	.2	9.5	--	--
JAN 07...	1745	218	16	--	645	9.4	104	8.2	1020	15.0	12.0	--	--
AUG 20...	1115	48	--	--	648	6.8	96	8.2	1310	28.0	24.0	235	281

Date	NITRO-GEN, AM-MONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + DIS-ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
DEC 18...	--	--	--	--	--	--	--
JAN 07...	--	--	--	--	--	--	--
AUG 20...	<.04	.18	.06	<.008	E.05	.06	.14

Date	Time	2,6-DI-ETHYL ANILINE WAT FLTRD 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR WATER, FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER, FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER, FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER, FLTRD 0.7 U GF, REC (UG/L) (82682)
AUG 20...	1115	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003

Date	Time	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER, FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER, FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER, FLTRD 0.7 U GF, REC (UG/L) (82672)	FONO-FOS WATER, DISS, REC (UG/L) (04095)	LINDANE, DIS-SOLVED (UG/L) (39341)	LIN-URON WATER, FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-THION, WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION, WAT FLT 0.7 U GF, REC (UG/L) (82667)
AUG 20...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006

Date	Time	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER, FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER, FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER, FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER, FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER, FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)
AUG 20...		<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010

Date	Time	PRO-PANIL WATER, FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER, FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER, FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER, FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER, FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER, FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER, FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
AUG 20...		<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

## 08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM

LOCATION.--Lat 33°40'45", long 106°59'42", Socorro County, Hydrologic Unit 13020203, in Pedro Armendaris Grant No. 33 at San Marcial, 500 ft downstream of southern pier of the Atchison, Topeka, and Santa Fe Railway Co. bridge, on right bank 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

## 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 fair except for those estimated, which are poor. Floodway is 1 of 2 channels (station 08358300) carrying flow in valley cross section. Prior to 1950, all flow was in floodway channel. 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.)

AVERAGE DISCHARGE.--38 years (water years 1965-2002), 780 ft<sup>3</sup>/s, 565,110 acre-ft/yr. Total flow of river, 107 years (water years 1895-2002), 1,253 ft<sup>3</sup>/s, 907,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, since Jan. 1895, about 50,000 ft<sup>3</sup>/s, Oct. 11, 1904; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,900 ft<sup>3</sup>/s, Sept. 12; minimum daily discharge, 3.2 ft<sup>3</sup>/s, Aug. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	121	381	479	412	422	79	37	36	16	96	30
2	50	190	350	509	452	340	62	28	27	17	66	45
3	60	455	388	e520	469	268	80	51	26	16	113	65
4	55	524	406	e476	448	248	79	51	28	28	409	35
5	50	355	370	e462	456	271	61	50	22	25	151	82
6	54	297	369	e469	469	305	62	76	25	23	85	33
7	58	242	381	e497	465	284	60	56	24	24	155	21
8	57	209	404	481	461	214	70	59	19	32	201	15
9	50	191	481	465	460	213	62	72	21	25	239	18
10	41	213	545	463	447	193	73	87	25	26	137	62
11	80	213	549	460	432	138	77	74	24	26	133	353
12	87	214	540	476	432	178	80	52	11	24	e79	1150
13	e96	218	517	506	426	171	46	44	14	21	e43	966
14	e96	240	488	510	423	117	72	48	15	25	e30	1130
15	e81	249	477	497	408	69	54	42	13	31	e27	888
16	81	231	477	507	390	78	63	61	19	25	e19	736
17	97	280	446	485	381	84	63	199	19	31	e11	454
18	72	333	425	481	372	69	52	446	16	24	e11	233
19	76	378	395	489	359	81	76	294	19	30	e6.5	899
20	48	383	396	505	350	93	72	192	18	24	3.2	477
21	e47	353	396	500	354	90	76	95	13	31	13	226
22	e46	372	412	551	349	79	57	72	15	40	49	204
23	e38	399	432	579	354	62	50	91	14	100	21	e178
24	25	481	437	579	352	85	56	78	11	170	11	e151
25	27	e442	447	603	349	76	61	52	14	181	11	e125
26	34	519	406	480	359	69	61	52	21	124	14	114
27	41	471	385	396	396	60	40	69	20	60	25	57
28	55	460	391	360	407	87	45	56	25	136	19	47
29	56	466	394	347	---	87	39	65	15	271	24	37
30	44	410	395	344	---	71	47	48	17	144	31	31
31	77	---	413	344	---	86	---	37	---	119	27	---
TOTAL	1818	9909	13293	14820	11432	4688	1875	2734	586	1869	2259.7	8862
MEAN	58.65	330.3	428.8	478.1	408.3	151.2	62.50	88.19	19.53	60.29	72.89	295.4
MAX	97	524	549	603	469	422	80	446	36	271	409	1150
MIN	25	121	350	344	349	60	39	28	11	16	3.2	15
AC-FT	3610	19650	26370	29400	22680	9300	3720	5420	1160	3710	4480	17580
(+)	15090	31570	38980	42560	34250	23040	10230	12020	5970	10930	11470	24350

CAL YR 2001 TOTAL 138061.0 MEAN 378 MAX 2430 MIN 8.0 AC-FT 273800 (+) MEAN 609 AC-FT 441300  
WTR YR 2002 TOTAL 74145.7 MEAN 203 MAX 1150 MIN 3.2 AC-FT 147100 (+) MEAN 360 AC-FT 260500

e Estimated

(+) Combined flow, in acre-ft, and mean, in cubic feet per second, of Floodway and Conveyance Channel.

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1905-07, 1946 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-AIRE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
OCT														
24...	1630	26	56	71	650	10.2	134	8.4	908	25.0	20.5	--	--	
NOV														
20...	1200	384	2300	1500	653	11.6	117	8.3	609	3.0	9.0	--	--	
DEC														
13...	1420	527	2000	1200	650	11.4	101	8.4	569	4.5	3.5	170	52.0	
17...	1530	465	2700	900	652	12.0	103	8.2	600	8.2	2.5	--	--	
17...	1545	465	--	--	--	--	--	--	--	--	--	--	--	
JAN														
08...	1331	475	--	--	--	--	--	--	--	--	5.0	--	--	
08...	1356	475	1600	1000	652	10.3	95	8.3	596	--	5.0	--	--	
MAR														
11...	1305	112	--	--	--	--	--	--	--	--	14.0	--	--	
11...	1531	112	650	540	650	8.9	102	8.3	589	--	14.0	--	--	
APR														
02...	1210	58	69	75	645	8.6	109	8.3	980	28.5	18.5	210	62.2	
16...	1456	73	110	--	647	8.5	113	8.4	1050	27.5	21.0	--	--	
16...	1511	73	--	--	--	--	--	--	--	--	--	--	--	
JUN														
03...	1438	22	43	43	644	6.9	104	8.5	1290	31.0	27.0	--	--	
03...	1604	22	--	--	--	--	--	--	--	--	27.0	--	--	
10...	1310	20	33	29	643	8.2	120	8.4	1150	35.0	25.5	250	74.9	
JUL														
17...	1030	27	38	45	652	8.1	113	8.4	1110	24.0	24.0	--	--	
17...	1038	27	--	--	--	--	--	--	--	--	--	--	--	
AUG														
06...	1604	61	--	--	--	--	--	--	--	--	--	--	--	
06...	1610	61	17000	16000	651	5.7	91	8.1	887	35.0	31.0	--	--	
SEP														
03...	1456	79	2900	7000	650	6.5	97	8.2	1030	--	27.0	--	--	
19...	1100	160	17000	9800	648	8.2	66	8.1	663	19.5	.0	190	60.4	
Date		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT														
24...		--	--	--	--	--	--	--	--	--	--	--	--	--
NOV														
20...		--	--	--	--	--	--	--	--	--	--	--	--	--
DEC														
13...	9.21	4.59	2	53.7	232	148	178	1	33.2	.5	24.2	87.0	358	
17...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN														
08...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR														
11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APR														
02...	12.7	6.63	3	111	202	190	228	2	95.7	.6	24.1	154	582	
16...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN														
03...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	15.7	7.23	4	134	219	198	234	3	114	.66	25.7	198	689	
JUL														
17...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG														
06...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP														
03...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	10.1	5.08	2	61.9	E825	147	178	--	30.6	.59	19.5	135	413	

## 08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, AM- MONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	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)	BIARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
13...	.02	.30	1.8	.08	.98	<.010	.15	.17	.82	<1	.13	6	77
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	.01	.30	.40	.02	<.02	<.010	.07	.06	.11	1	<.05	8	103
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	<.01	<.20	.30	.02	<.02	<.010	.08	.03	.10	<1	.06	6	94
JUL													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.01	<.20	13	.08	.57	<.010	.05	.05	6.90	2	.34	3	78
Date	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)	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)
OCT													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
13...	<.06	130	.04	<.8	.38	1.1	<10	<.08	1.4	.03	5.9	1.59	E1
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
02...	<.06	190	.07	<.8	.42	1.7	<10	E.06	4.7	<.01	7.6	1.68	<2
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	<.06	210	<.04	<.8	.30	1.8	<10	<.08	3.8	<.01	7.1	<.06	<2
JUL													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.06	140	.04	<.8	.45	2.1	<10	E.04	.5	.37	6.4	3.10	<2

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SELENIUM, TOTAL (UG/L AS SE) (01147)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDEDED (MG/L) (80154)
OCT 24...	--	--	--	--	--	133
NOV 20...	--	--	--	--	--	1290
DEC 13...	<2	<1	2	2.56	76	1400
17...	--	--	--	--	--	--
17...	--	--	--	--	--	2220
JAN 08...	--	--	--	--	--	1050
08...	--	--	--	--	--	--
MAR 11...	--	--	--	--	--	416
11...	--	--	--	--	--	--
APR 02...	<2	<1	2	2.13	97	145
16...	--	--	--	--	--	--
16...	--	--	--	--	--	199
JUN 03...	--	--	--	--	--	--
03...	--	--	--	--	98	52
10...	<4	<1	3	1.92	98	144
JUL 17...	--	--	--	--	--	--
17...	--	--	--	--	--	93
AUG 06...	--	--	--	--	--	--
06...	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	5410
19...	E2	<1	3	3.67	91	12400

Date	Time	STREAM DEPTH, MEAN (FT) (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM VELOCITY, MEAN (F/S) (00055)	STREAM WIDTH (FT) (00004)	TEMPER-ATURE WATER (DEG C) (00010)	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 .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)
OCT 24...	1400	.68	26	.89	42.0	20.5	--	--	--	--	--	--	--
NOV 02...	1243	1.0	192	1.54	122	14.5	61	81	93	97	97	98	100
DEC 03...	1458	1.9	395	1.79	118	6.5	43	49	58	72	78	83	99
17...	1445	.48	465	2.00	112	3.0	56	70	74	80	81	86	98
JAN 08...	1331	1.5	475	1.93	164	5.0	--	--	--	--	75	79	99
FEB 12...	1522	1.7	436	1.57	164	6.0	--	--	--	--	71	75	96
MAR 11...	1305	1.3	112	1.30	65.0	14.0	--	--	--	--	98	98	100
APR 16...	1441	.82	73	1.39	66.0	21.0	--	--	--	--	79	82	96
MAY 03...	1131	.50	48	1.07	70.0	18.0	--	--	--	--	--	--	--
JUN 03...	1604	.61	22	.76	48.0	27.0	--	--	--	--	--	--	--
JUL 17...	1010	.57	27	.68	70.0	24.0	--	--	--	--	--	--	--
AUG 06...	1547	1.2	61	.81	64.0	31.0	71	95	97	99	100	--	--
SEP 03...	1432	.96	79	1.85	44.0	--	74	89	97	98	99	99	100

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 24...	--	88	100	80
NOV 02...	--	--	--	3880
DEC 03...	100	--	--	1070
17...	100	--	--	1450
JAN 08...	100	--	--	1050
FEB 12...	100	--	--	1050
MAR 11...	--	--	--	416
APR 16...	100	--	--	189
MAY 03...	--	50	100	226
JUN 03...	--	98	100	52
JUL 17...	--	90	100	37
AUG 06...	--	--	--	9080
SEP 03...	--	--	--	4330

Date	Time	STREAM DEPTH, MEAN (FT) (00064)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM VELOC-ITY, MEAN (F/S) (00055)	STREAM WIDTH (FT) (00004)	TEMPER-ATURE WATER (DEG C) (00010)	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)
OCT 24...	1400	.68	26	.89	42.0	20.5	0	3	61	99	100	--	--
NOV 02...	1243	1.0	192	1.54	122	14.5	0	5	57	99	100	--	--
DEC 03...	1458	1.9	395	1.79	118	6.5	0	6	69	99	100	--	--
17...	1445	.48	465	2.00	112	3.0	0	6	66	99	100	--	--
JAN 08...	1331	1.5	475	1.93	164	5.0	0	7	71	99	100	--	--
FEB 12...	1522	1.7	436	1.57	164	6.0	4	22	72	98	99	99	100
MAR 11...	1305	1.3	112	1.30	65.0	14.0	0	3	42	98	100	--	--
APR 16...	1441	.82	73	1.39	66.0	21.0	0	2	34	98	100	--	--
MAY 03...	1124	.50	48	1.07	70.0	18.0	0	5	43	98	100	--	--
JUN 03...	1608	.61	22	.76	48.0	27.0	0	2	44	98	100	--	--
JUL 17...	1004	.57	27	.68	70.0	24.0	2	8	62	98	100	--	--
AUG 06...	1543	1.2	61	.81	64.0	31.0	1	12	74	99	100	--	--
SEP 03...	1428	.96	79	1.85	44.0	27.0	0	1	38	96	98	98	99

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)
OCT	
24...	--
NOV	
02...	--
DEC	
03...	--
17...	--
JAN	
08...	--
FEB	
12...	--
MAR	
11...	--
APR	
16...	--
MAY	
03...	--
JUN	
03...	--
JUL	
17...	--
AUG	
06...	--
SEP	
03...	100

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

## 08360500 ELEPHANT BUTTE RESERVOIR AT ELEPHANT BUTTE, NM

LOCATION.--Lat 33°09'15", long 107°11'28", in NW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

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. Prior to Sept. 1930, Oct. 16, 1939, and May 2,1940, were 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, 916,700 acre-ft, Jan. 27 and Feb. 12-14, gage height, 4,365.90 ft; minimum contents, 305,300 acre-ft, Sept. 30, gage height, 4,322.60 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	853000	849600	875500	898000	914700	892600	822200	739500	644900	537200	434700	341800
2	852600	850400	876600	899200	914700	889900	820100	736200	642000	532900	431800	339700
3	852200	851100	877700	900700	914700	887600	816800	733200	638100	528600	431100	336800
4	851500	851900	878900	901900	915100	885400	814300	730200	634300	524900	429200	333400
5	850400	853000	879600	902300	914700	883400	811800	727600	630200	521200	427500	329900
6	847800	853700	880800	902700	915100	881900	809300	724300	627000	518000	425900	327000
7	845200	854800	882300	903400	914700	880400	806500	721400	623200	514300	424000	325100
8	841500	856000	882700	904200	915100	878900	804000	718500	620000	510600	421600	323100
9	840400	856000	883800	905000	915100	876600	801900	715900	616800	506400	418800	320600
10	840800	856300	885000	905800	914700	874700	799100	713000	613100	502500	416200	319000
11	840800	857100	885700	906100	915100	872800	796900	709800	609600	498600	414600	320600
12	841000	857800	887600	906500	916700	870600	794100	707200	606200	494000	412300	321400
13	841200	858600	888000	907300	916700	868300	791700	703700	602700	491000	409200	320800
14	841900	859700	888400	907700	916700	866400	788900	700800	598500	488000	405300	320000
15	842300	860100	888800	908500	916300	863800	785400	697300	595300	484200	401200	319400
16	842600	860800	889900	909300	914700	861500	783000	693500	592500	480100	397700	318800
17	843400	861500	890300	910000	912400	858900	779800	689800	589100	475800	394300	318400
18	844100	862700	891900	910400	910800	857100	777100	686900	585200	473100	391200	317600
19	844500	863400	892600	910800	908900	854100	774000	685100	580900	469300	387500	318200
20	844800	864200	893000	911200	908500	851900	771200	681600	577300	466500	383700	318400
21	845200	865300	893400	912000	906900	850000	768500	677900	573100	463600	379500	318600
22	845600	866400	893800	912400	905000	847100	765700	674200	570000	462100	375300	318800
23	846300	866800	894400	913900	903400	844500	763000	671800	567000	458600	371100	318400
24	846700	867900	894900	914300	901500	841900	760300	669900	563400	455100	368500	318000
25	846700	869100	895300	915100	899600	839300	757600	667200	560400	451700	365900	316900
26	847100	870200	895500	915900	897200	837100	753500	663500	555700	449000	362400	315500
27	847400	872100	895300	916700	895700	834600	751200	661400	551900	446800	358700	312900
28	848200	872800	895300	915900	893800	832000	748100	658400	547800	444100	354400	310700
29	848900	873600	896100	915900	---	829500	745500	654800	544800	441200	350700	308700
30	849300	874300	896900	915100	---	827300	742500	651800	541800	438600	347300	305300
31	849300	---	897600	915100	---	824800	---	647900	---	436900	344600	---
MAX	853000	874300	897600	916700	916700	892600	822200	739500	644900	537200	434700	341800
MIN	840400	849600	875500	898000	893800	824800	742500	647900	541800	436900	344600	305300
(+)	4362.36	4363.70	4364.92	4365.82	4364.72	4361.02	4356.28	4350.28	4342.80	4334.60	4326.42	4322.60
(++)	-4400	+25000	+23300	+17500	-21300	-69000	-82300	-94600	-106100	-104900	-92300	-39300

CAL YR 2001 MAX 1306100 MIN 840400 (++) -387,400  
WTR YR 2002 MAX 916700 MIN 305300 (++) -548,400

(+) Elevation in feet, at end of month.

(++) Change in contents, in acre-ft.

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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

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. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	361	7.0	7.6	324	709	1490	1670	1610	1370	2400	1390	1340
2	364	6.8	7.7	64	709	1490	1680	1610	1380	2410	1630	1350
3	365	6.8	7.8	11	708	1500	1680	1620	1920	2430	1450	1610
4	364	6.8	7.9	249	708	1510	1680	1620	1860	1740	1450	1950
5	617	7.3	7.8	329	706	1510	1620	1490	1910	2240	1520	1990
6	1490	6.8	7.8	332	707	1520	1700	1610	1960	1760	1450	1630
7	1480	7.2	8.2	332	707	1310	1710	1620	1930	1770	1620	1280
8	1470	6.8	8.1	332	708	1530	1710	1620	1420	2200	1850	1350
9	959	6.7	8.6	334	707	1540	1710	1390	1420	2360	1900	1360
10	17	6.8	8.6	341	709	1550	1710	1610	1970	2450	1750	1370
11	16	6.5	11	348	250	1560	1720	1610	1930	2430	1510	910
12	16	6.5	13	350	28	1560	1720	1600	1980	2360	1800	217
13	16	6.5	399	352	472	1570	1730	1610	1960	1670	2290	855
14	16	6.4	298	355	715	1570	1740	1620	1920	1680	2220	1310
15	16	6.4	299	357	1070	1580	1740	2130	1450	2440	2270	1300
16	17	6.4	300	366	1430	1580	1740	1990	1460	2390	2190	1290
17	14	6.6	300	364	1430	1590	1740	1820	2030	2360	2000	1280
18	11	7.1	54	364	1430	1590	1730	1520	2030	2190	1570	1050
19	9.0	7.2	226	365	1450	1600	1720	1520	2050	2200	2250	640
20	e8.8	7.7	305	367	992	1600	1710	2050	2060	1820	2230	629
21	e8.6	7.2	307	369	1200	1610	1700	2070	1710	1810	2210	618
22	e8.4	7.1	310	376	1460	1620	1690	2030	1530	1870	2200	610
23	e8.2	7.1	311	376	1460	1620	1720	1240	1550	2150	2200	604
24	e8.0	7.0	313	376	1470	1630	1740	1010	2100	2150	1530	595
25	e8.0	7.3	314	377	1470	1640	1710	1570	1600	2170	1530	955
26	e7.9	7.1	501	375	1470	1650	1670	e1590	2170	1620	2020	1140
27	e7.8	7.1	667	376	1480	1650	1650	e1750	2220	1620	2030	1750
28	e7.8	7.6	657	541	1480	1660	1640	e1970	2220	1620	2230	1340
29	e7.6	7.5	321	720	---	1660	1630	2020	1660	1900	2010	1340
30	e7.4	7.6	321	706	---	1660	1620	1900	1670	1780	1960	1860
31	e7.4	---	324	710	---	1670	---	1900	---	1440	1870	---
TOTAL	7713.9	208.9	6631.1	11538	27835	48820	50930	52320	54440	63430	58130	35523
MEAN	248.8	6.963	213.9	372.2	994.1	1575	1698	1688	1815	2046	1875	1184
MAX	1490	7.7	667	720	1480	1670	1740	2130	2220	2450	2290	1990
MIN	7.4	6.4	7.6	11	28	1310	1620	1010	1370	1440	1390	217
AC-FT	15300	414	13150	22890	55210	96830	101000	103800	108000	125800	115300	70460

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	335.9	2040	1987	2.41	1986	252.4	2662	1942	1.25	1972	301.0	2110	1987	1.38	1994	328.5	1944	1987	0.000	1918	756.2	3026	1986	16.6	1955	1199	2297	1989	188	1983	1530	2717	1942	8.32	1957	1603	7601	1942	284	1964	1829	6098	1942	673	1964	1413	2623	1924	155	1954	803.6	2169	1939	2.73	1954
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SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1917 - 2002
ANNUAL TOTAL	395642.5	417519.9	
ANNUAL MEAN	1084	1144	1008
HIGHEST ANNUAL MEAN			2665
LOWEST ANNUAL MEAN			253
HIGHEST DAILY MEAN	2440	2450	8220
LOWEST DAILY MEAN	6.4	6.4	0.00
ANNUAL SEVEN-DAY MINIMUM	6.5	6.5	0.00
ANNUAL RUNOFF (AC-FT)	784800	828200	730500
10 PERCENT EXCEEDS	1770	2040	2090
50 PERCENT EXCEEDS	1510	1470	1020
90 PERCENT EXCEEDS	7.8	7.8	5.6

e Estimated

## 08362000 CABALLO RESERVOIR NEAR ARREY, NM

LOCATION.--Lat 32°53'47", long 107°17'30", in SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.19, T.16 S., R.4 W., Sierra County, Hydrologic Unit 13030102, 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

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, 90,760 acre-ft, Mar. 12, gage height, 4,154.44 ft; minimum contents, 4,490 acre-ft, Oct. 6, gage height, 4,126.82 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11220	7760	10410	25740	49630	82230	74680	72030	66780	38640	35980	27860
2	10020	7840	10510	26920	50990	83210	74070	71820	66110	38440	34360	27490
3	8550	7900	10580	27130	52540	84090	73350	71720	65150	38510	32980	27280
4	6960	7990	10680	27390	53950	85090	72740	72030	64110	38370	31810	28020
5	5260	8110	10810	27800	55310	86210	72230	72130	62890	38180	31120	28390
6	4490	8170	10880	28550	56640	87220	72030	72130	62340	37910	29730	28970
7	5000	8290	10980	29240	57820	88020	72130	71930	61870	37520	28600	29300
8	5280	8470	11080	30010	59150	89270	71930	71720	60780	37520	28230	29140
9	6130	8470	11110	30730	60680	89840	71520	70720	59240	36810	28440	29030
10	6180	8560	11180	31750	61780	90300	71020	70020	58620	37260	28490	29570
11	6390	8660	11250	32270	62520	90300	70820	69330	58170	37450	28170	30280
12	6500	8750	11490	32860	62800	90760	70820	69330	57380	37320	27750	29950
13	6450	8870	11590	33760	62890	90190	71120	68730	56250	36110	27700	28760
14	6340	9030	12360	34360	64390	89610	71120	68340	55220	35790	28330	29790
15	6210	9040	13070	35040	65820	88930	71220	69030	53620	35480	28070	30620
16	6130	9150	13870	35850	68340	88130	71620	69620	52040	35790	28390	31240
17	6050	9250	14540	36550	70820	87450	71520	70120	51150	36420	28760	31520
18	6210	9340	15260	37450	73140	86880	71420	70120	50340	36810	28490	31690
19	6310	9440	15500	37980	74580	85760	71320	69820	49310	37520	28600	30280
20	6420	9500	16000	38710	74890	84430	71520	70120	47980	38040	28920	29300
21	6550	9600	16750	39380	75310	83320	71520	70620	46000	38570	29680	28710
22	6710	9660	17430	40050	76450	82550	71720	70920	46230	39310	30060	28120
23	6770	9790	18090	41020	76770	81790	71720	70420	44590	40260	30670	27330
24	6910	9820	18760	41580	77400	81030	71720	68640	43790	41230	30620	26350
25	6990	9920	19440	42210	77930	80060	71720	67950	42350	42000	30060	25190
26	7100	10020	20310	42850	78460	78560	71620	67270	41370	41930	29460	24700
27	7180	10280	21660	43500	79420	77820	71620	66880	40600	41370	29030	24990
28	7330	10310	23060	44220	80810	76870	71820	67170	40050	40810	28760	25850
29	7410	10350	24010	45550	---	76140	72130	67360	39440	40260	28490	26200
30	7520	10380	24750	47060	---	75830	72130	67460	38840	39580	28390	27180
31	7610	---	25490	48600	---	75310	---	67460	---	38370	28230	---
MAX	11220	10380	25490	48600	80810	90760	74680	72130	66780	42000	35980	31690
MIN	4490	7760	10410	25740	49630	75310	70820	66880	38840	35480	27700	24700
(+)	4129.26	4131.04	4138.44	4145.76	4152.66	4151.62	4151.00	4150.06	4143.06	4142.92	4139.50	4139.10
(++)	-4710	+2770	+15110	+23110	+32210	-5500	-3180	-4670	-28620	-470	-10140	-1050
CAL YR 2001	MAX	115100	MIN	4490	(++)	-17360						
WTR YR 2002	MAX	90760	MIN	4490	(++)	+14860						

(+) Elevation, at end of month.  
(++) Change in contents, in acre-feet.

08362500 RIO GRANDE BELOW CABALLO DAM, NM

LOCATION.--Lat 32°53'05", long 107°17'31", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

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 telemetry at station.

COOPERATION.--Records provided by Bureau of Reclamation.

AVERAGE DISCHARGE.--64 years, 941 ft<sup>3</sup>/s, 681,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,650 ft<sup>3</sup>/s, May 20, 1942; minimum daily, 0.1 ft<sup>3</sup>/s, Oct. 31 to Nov. 14, 1954, Nov. 7 to Dec. 31, 1955, Feb. 15-29, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,600 ft<sup>3</sup>/s, June 20; minimum daily 1.0 ft<sup>3</sup>/s, Nov. 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	905	0.60	0.70	3.0	3.0	901	1870	1390	1970	1980	1900	1770
2	957	0.60	0.70	3.0	301	904	1800	1550	2250	2040	1830	1760
3	1030	0.60	0.70	3.0	536	906	1700	1600	2250	2090	1740	1740
4	1020	0.60	0.70	3.0	538	1130	1670	1310	2070	2190	1770	1680
5	1020	0.60	0.70	3.0	420	1260	1680	1160	1940	2140	1770	1710
6	892	0.60	0.70	3.0	302	1160	1670	1170	1980	2210	1820	1710
7	723	0.60	0.70	3.0	303	1090	1620	1320	1990	2210	1870	1460
8	738	0.60	0.70	3.0	304	1120	1620	1480	1980	2210	1980	1350
9	664	0.60	0.70	3.0	303	1350	1530	1660	2030	2190	2070	1340
10	604	0.60	0.70	3.0	304	1530	1550	1750	2030	2180	2110	1340
11	632	0.60	0.70	3.0	305	1520	1610	1640	2130	2350	2000	1410
12	641	0.60	0.90	3.0	305	1580	1560	1640	2240	2350	1850	1550
13	637	0.60	1.2	3.0	305	1620	1290	1650	2410	2350	1650	1440
14	632	0.60	1.2	3.0	306	1970	1120	1480	2520	2420	1600	1150
15	632	0.60	1.2	3.0	307	2320	1120	1180	2400	2420	1720	994
16	709	0.70	1.2	3.0	308	2330	1230	1110	2300	2530	1680	997
17	853	0.70	1.2	3.0	308	2320	1420	1110	2310	2600	1610	1000
18	856	0.70	1.2	3.0	308	2300	1600	1340	2420	2500	1610	920
19	566	0.70	1.6	3.0	308	2300	1670	1510	2470	2400	1710	855
20	35	0.70	1.9	3.0	396	2290	1620	1500	2490	2210	1710	850
21	9.0	0.70	1.9	3.0	489	2240	1620	1680	2420	2020	1790	886
22	9.0	0.70	1.9	3.0	489	2100	1600	1860	2280	2020	1780	926
23	9.0	0.70	1.9	3.0	548	1910	1510	1970	2420	2010	1660	914
24	7.0	0.70	1.9	3.0	607	1820	1310	1850	2420	1900	1650	1030
25	5.0	0.70	1.9	3.0	604	1820	1230	1720	2370	1820	1740	1160
26	5.0	0.70	2.3	3.0	868	1940	1240	1730	2230	1740	1740	1140
27	5.0	0.70	2.7	3.0	996	2020	1190	1720	2100	1710	1870	1050
28	4.0	0.70	2.7	3.0	953	2080	1120	1890	1920	1790	2000	931
29	4.0	0.70	2.7	3.0	---	2140	1140	1990	1860	1790	1990	879
30	4.0	0.70	2.7	3.0	---	1980	1220	2000	1990	1790	1870	878
31	2.0	---	2.7	3.0	---	1840	---	1820	---	1790	1780	---
TOTAL	14809.0	19.50	44.60	93.0	12024.0	53791	44130	48780	66190	65950	55870	36820
MEAN	477.7	0.650	1.439	3.000	429.4	1735	1471	1574	2206	2127	1802	1227
MAX	1030	0.70	2.7	3.0	996	2330	1870	2000	2520	2600	2110	1770
MIN	2.0	0.60	0.70	3.0	3.0	901	1120	1110	1860	1710	1600	850
AC-FT	29370	39	88	184	23850	106700	87530	96760	131300	130800	110800	73030
(+)	32	32	0	0	32	141	126	144	135	89	210	155

CAL YR 2000	TOTAL 378778.10	MEAN 1035	MAX 2470	MIN 0.60	AC-FT 751300
WTR YR 2001	TOTAL 398521.10	MEAN 1092	MAX 2600	MIN 0.60	AC-FT 790500

(+) Diversion, in acre-ft, by Bonita Ditch; diverts directly from Caballo Dam, and this diversion is not included in the river records.

## RIO GRANDE BASIN

08362500 RIO GRANDE BELOW CABALLO DAM, NM--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	977	4.0	1.1	1.8	4.8	758	1800	1590	1910	2490	2310	1920
2	1010	4.0	1.1	1.8	7.8	768	1790	1610	1910	2490	2280	1920
3	1180	4.0	1.1	1.8	7.8	774	1850	1530	2300	2360	2110	1860
4	1300	4.0	1.1	1.8	7.8	780	1890	1460	2530	2270	1960	1850
5	1270	4.0	1.1	1.8	7.8	797	1650	1460	2410	2190	1930	1770
6	1380	4.0	1.1	1.8	7.8	860	1550	1520	2410	2130	1920	1520
7	1440	4.0	1.1	1.8	7.8	789	1550	1680	2340	2120	1930	1410
8	1440	5.0	1.1	1.8	7.8	867	1690	1810	2300	2110	1900	1410
9	1220	7.0	1.1	1.8	7.8	1090	1780	1930	2300	2120	1790	1370
10	749	7.0	1.1	1.8	7.8	1090	1780	1930	2290	2180	1730	1230
11	24	7.0	1.1	1.8	7.8	1260	1630	1810	2260	2220	1730	1210
12	47	7.0	1.1	1.8	7.8	1480	1460	1750	2450	2230	1760	1200
13	161	7.0	1.1	1.8	7.8	1690	1410	1810	2590	2220	1790	1040
14	162	7.0	1.1	1.8	7.8	1730	1420	1760	2540	2210	2040	895
15	163	7.0	1.1	1.8	7.8	1700	1360	1660	2490	2150	2160	895
16	160	7.0	1.1	1.8	7.8	1800	1340	1670	2390	2110	2060	1040
17	133	7.0	1.1	1.8	7.8	1800	1540	1720	2480	2040	1950	1180
18	24	7.0	1.1	1.8	7.8	1920	1560	1780	2470	2000	1950	1300
19	4.0	7.0	1.1	1.8	349	2020	1450	1790	2550	1920	1900	1380
20	4.0	5.0	1.1	1.8	687	2060	1390	1770	2600	1660	1840	1180
21	4.0	4.0	1.4	1.8	656	1940	1370	1830	2570	1570	1880	980
22	4.0	4.0	1.4	1.8	870	1790	1430	1870	1200	1530	1950	972
23	4.0	4.0	1.4	1.8	1090	1730	1560	1800	2520	1510	1900	1050
24	4.0	4.0	1.8	1.8	1090	1730	1600	1820	2510	1630	1860	1180
25	4.0	4.0	1.8	1.8	1020	1820	1600	1860	2380	1720	1860	1280
26	4.0	2.0	1.8	1.8	952	1900	1520	1860	2580	1830	2010	1310
27	4.0	2.0	1.8	1.8	874	2040	1430	1860	2600	1910	2240	1210
28	4.0	1.0	1.8	1.8	766	2020	1420	1820	2560	1900	2320	1150
29	4.0	1.0	1.8	4.8	---	1890	1420	1920	2530	2040	2200	1160
30	4.0	1.0	1.8	4.8	---	1770	1480	2030	2520	2160	2000	1170
31	4.0	---	1.8	4.8	---	1690	---	1970	---	2270	1920	---
TOTAL	12892.0	142.0	40.6	64.8	8491.4	46353	46720	54680	71490	63290	61180	39042
MEAN	415.9	4.733	1.310	2.090	303.3	1495	1557	1764	2383	2042	1974	1301
MAX	1440	7.0	1.8	4.8	1090	2060	1890	2030	2600	2490	2320	1920
MIN	4.0	1.0	1.1	1.8	4.8	758	1340	1460	1200	1510	1730	895
AC-FT	25570	282	81	129	16840	91940	92670	108500	141800	125500	121400	77440
(+)	16	0	70	70	99	126	136	358	127	127	53	258

CAL YR 2001 TOTAL 396722.6 MEAN 1087 MIN 1.0 AC-FT 786900  
WTR YR 2002 TOTAL 404385.8 MEAN 1108 MIN 1.0 AC-FT 802100

(+) Diversion, in acre-ft, by Bonita Ditch; diverts directly from Caballo Dam, and this diversion is not included in the river records.

08364000 RIO GRANDE AT EL PASO, TX

(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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Colorado.

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT DIS FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE DIS IT FIELD (MG/L AS CO3) (00452)	
OCT	25...	0820	242	--	667	7.8	89	8.0	1720	19.0	15.1	248	302	--
NOV	06...	0820	176	--	670	8.2	93	8.2	1840	17.0	15.0	231	276	3
DEC	11...	0810	114	15	659	10.0	92	8.4	1940	7.0	5.5	241	288	3
FEB	07...	0900	82	--	676	8.6	79	8.2	2260	4.0	6.0	244	293	2
APR	03...	0900	770	--	672	8.2	92	8.2	1030	12.5	14.5	172	207	--
MAY	08...	0850	756	--	666	7.9	96	8.4	1040	21.0	18.0	170	202	2
JUN	11...	1010	1280	--	667	7.3	100	8.2	965	33.0	24.0	160	191	2
JUL	10...	1010	1260	--	674	6.4	89	8.4	966	28.0	25.5	156	184	2
AUG	07...	0910	1130	--	672	6.6	90	8.3	1010	31.0	24.5	169	201	2

Date	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SED. SUSP. SIEVE % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	
OCT	25...	186	379	.12	.54	.74	.013	.08	.139	--	62
NOV	06...	215	402	.15	.66	.85	.079	.12	.19	--	33
DEC	11...	249	433	.27	.83	.87	.043	.13	.21	72	53
FEB	07...	302	449	.55	1.2	.90	.162	.26	.36	--	34
APR	03...	99.2	189	.07	.90	.33	.008	.05	.27	63	236
MAY	08...	104	193	E.04	.65	.18	E.005	.04	.20	--	2350
JUN	11...	83.2	171	<.04	.74	.17	E.006	.02	.27	--	317
JUL	10...	85.0	175	<.04	.76	.15	.009	.03	.28	--	1310
AUG	07...	94.1	183	E.03	.88	.41	.010	.05	.39	--	344

## RIO GRANDE BASIN

08364000 RIO GRANDE AT EL PASO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DISS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	
OCT 25...	0820	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	E.003	E.005	E.002	
DEC 11...	0810	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	
FEB 07...	0900	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	.024	<.003	
APR 03...	0900	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	.005	
MAY 08...	0850	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	
JUN 11...	1010	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	
JUL 10...	1010	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	.005	E.005	<.003	
AUG 07...	0910	<.006	<.006	<.004	<.005	E.004n	<.010	<.002	<.041	<.020	<.005	<.018	E.002n	
Date		DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	
OCT 25...		<.006	E.003	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
DEC 11...		<.006	.007	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
FEB 07...		<.006	E.001n	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
APR 03...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
MAY 08...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
JUN 11...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
JUL 10...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
AUG 07...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
Date		METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)
OCT 25...		E.007	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M	<.004	<.010
DEC 11...		<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.01	<.004	<.010
FEB 07...		E.005n	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010
APR 03...		<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010
MAY 08...		E.003n	<.006	<.024	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010
JUN 11...		<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010
JUL 10...		E.003	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010
AUG 07...		E.006n	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01n	<.004	<.010

08364000 RIO GRANDE AT EL PASO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER-BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
OCT 25...	<.011	<.02	<.011	<.02	<.034	<.02	U	<.005	<.002	<.009
DEC 11...	<.011	<.02	<.011	<.02	<.034	<.02	M	<.005	<.002	<.009
FEB 07...	<.011	<.02	<.005	.03	<.034	<.02	U	<.005	<.002	<.009
APR 03...	<.011	<.02	<.005	E.01n	<.034	<.02	--	<.005	<.002	<.009
MAY 08...	<.011	<.02	<.005	<.02	<.034	<.02	--	<.005	<.002	<.009
JUN 11...	<.011	<.02	<.005	<.02	<.034	<.02	--	<.005	<.002	<.009
JUL 10...	<.011	<.02	<.005	<.02	<.034	<.02	--	<.005	<.002	<.009
AUG 07...	<.011	<.02	<.005	E.01n	<.034	<.02	--	<.005	<.002	<.009

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value  
 M -- Presence verified, not quantified  
 U -- Analyzed for, not detected

Value qualifier codes used in this report:  
 n -- Below the laboratory reporting level



08377900 RIO MORA NEAR TERRERO, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-96, September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIR (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	HARD-NESS TOTAL AS (MG/L CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
SEP 11...	1445	20	574	8.1	103	7.9	121	13.0	13.0	59	20.2	2.09	.85
Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
SEP 11...	.1	1.30	55	1.25	6.27	6.8	72	<.015	E.10	.018	<.002	.022	.015
Date	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS-SOLVED (UG/L AS FE) (01046)											
SEP 11...	.066	12											

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value





08380500 GALLINAS CREEK NEAR MONTEZUMA, NM

LOCATION.--Lat 35°39'07", long 105°19'06", San Miguel County, Hydrologic Unit 13060001, in Las Vegas Grant, on left bank 2.4 mi west of Montezuma, 6.9 mi northwest of Las Vegas, and at mile 74.4.

DRAINAGE AREA.--84 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--March to September 1915, June 1916 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1964, published as "Gallinas River near Montezuma."

REVISED RECORDS.--WSP 898: Drainage area. WSP 1562: 1951 (P), 1952 (M), 1955 (P), 1957. WSP 1632: 1931-32, 1933 (M), 1934, 1935 (M), 1938, 1939-40 (M), 1941-42, 1945, 1949-50 (M).

GAGE.--Water-stage recorder 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.

REMARKS.--Records good except for those estimated, which are poor. Diversions for irrigation of about 80 acres, 1959 determination, upstream from station.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	4.3	e3.5	e4.2	e3.2	e4.2	6.8	3.6	1.9	1.7	8.2	2.0
2	5.3	4.2	e4.4	e4.1	e3.6	e3.8	8.0	3.6	1.8	1.6	7.9	2.0
3	4.9	4.3	e5.4	e3.8	e3.8	e3.1	8.4	3.5	1.7	1.7	15	1.9
4	4.9	4.3	e5.2	e3.6	e3.9	e2.9	8.1	3.4	2.0	1.7	11	1.9
5	4.8	4.4	e4.9	e4.0	e3.6	e3.4	7.8	3.3	2.0	1.6	9.5	1.8
6	4.8	4.4	e4.7	e4.1	e3.8	e3.9	7.8	2.9	2.0	1.7	8.0	1.7
7	4.7	4.5	e4.6	e3.7	e4.0	e4.3	8.5	3.0	1.9	1.8	8.0	1.7
8	4.5	4.4	e4.4	e3.9	e4.4	e4.2	8.9	3.0	1.7	1.9	7.5	1.8
9	4.5	4.4	e4.3	e4.0	e4.3	e4.0	7.6	3.0	1.5	2.0	7.0	1.9
10	4.6	4.4	e4.6	e4.1	e4.1	4.8	7.3	3.0	1.4	2.0	6.2	2.7
11	4.7	4.4	e5.4	e4.2	e4.4	5.8	7.1	2.9	1.3	2.1	5.4	e4.8
12	5.2	4.4	e5.0	e4.0	e4.1	4.9	7.1	2.8	1.2	2.3	4.7	e5.9
13	5.6	4.4	e5.8	e3.4	e4.3	5.3	7.0	2.7	1.2	2.5	4.3	4.1
14	5.8	4.5	e6.0	e3.6	e4.2	6.0	6.7	2.7	1.2	3.3	4.1	3.4
15	5.4	8.4	e5.4	e4.2	e4.1	5.4	5.4	2.7	1.2	3.0	3.7	3.1
16	5.2	4.8	e5.2	e2.9	e4.0	5.1	5.5	2.6	1.2	3.4	3.5	3.0
17	5.0	3.3	e5.0	e3.7	e4.2	4.4	5.8	2.6	1.3	3.2	3.2	2.9
18	4.9	2.0	e4.8	e3.4	e4.3	4.8	5.8	2.5	1.2	2.8	3.2	2.8
19	4.7	1.4	e4.7	e3.2	e4.1	5.2	6.2	2.4	1.2	2.6	2.8	3.5
20	4.6	1.1	e5.1	e3.6	e4.0	5.1	6.0	2.3	1.2	2.7	3.2	3.4
21	4.5	9.5	e4.8	e3.4	e3.9	5.2	5.7	2.5	1.3	2.8	2.4	3.2
22	4.6	9.1	e4.4	e3.7	e4.0	5.3	5.4	2.6	1.7	1.5	2.4	3.1
23	4.5	9.3	e4.1	e3.3	e3.7	5.4	5.1	2.4	2.2	4.1	2.4	3.8
24	4.3	7.7	e4.4	e2.9	e3.5	4.3	4.9	2.3	2.4	2.1	2.4	3.2
25	4.2	7.5	e3.8	e3.4	e3.4	5.0	4.7	2.1	1.9	1.7	2.3	3.2
26	4.2	6.2	e4.4	e3.8	e3.5	4.9	4.6	2.2	1.9	2.8	2.3	3.1
27	4.3	e6.6	e4.1	e4.0	e3.7	5.0	4.4	2.0	1.8	2.5	2.2	3.1
28	4.3	e5.2	e4.3	e4.2	e3.9	5.0	4.2	2.1	1.6	1.5	2.3	3.4
29	4.4	e4.7	e4.1	e4.0	---	5.5	4.0	2.1	1.7	1.2	2.3	4.2
30	4.4	e3.8	e4.2	e3.6	---	6.1	3.9	2.0	1.7	1.3	2.1	3.9
31	4.3	---	e4.1	e3.3	---	6.1	---	1.9	---	9.8	2.1	---
TOTAL	147.2	265.3	145.1	115.3	110.0	148.4	188.7	82.7	48.3	245.2	151.6	90.5
MEAN	4.748	8.843	4.681	3.719	3.929	4.787	6.290	2.668	1.610	7.910	4.890	3.017
MAX	5.8	48	6.0	4.2	4.4	6.1	8.9	3.6	2.4	4.1	15	5.9
MIN	4.2	3.8	3.5	2.9	3.2	2.9	3.9	1.9	1.2	1.6	2.1	1.7
AC-FT	292	526	288	229	218	294	374	164	96	486	301	180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 2002, BY WATER YEAR (WY)

MEAN	12.49	10.04	6.765	5.641	5.931	12.88	35.12	54.67	22.59	16.37	32.18	20.62
MAX	108	57.5	21.3	13.7	20.5	64.7	184	380	118	105	225	185
(WY)	1942	1942	1958	1989	1987	1987	1958	1941	1979	1991	1991	1991
MIN	0.38	0.49	0.80	1.83	1.49	2.36	3.11	1.96	0.74	1.24	1.08	0.40
(WY)	1957	1957	1957	1957	1957	1955	1967	1967	1956	1956	1934	1956

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1926 - 2002	
ANNUAL TOTAL	6034.8		1738.3			
ANNUAL MEAN	16.53		4.762		19.70	
HIGHEST ANNUAL MEAN					80.7	
LOWEST ANNUAL MEAN					2.53	
HIGHEST DAILY MEAN	79		48		1580	
LOWEST DAILY MEAN	3.5		1.2		0.20	
ANNUAL SEVEN-DAY MINIMUM	4.1		1.2		0.21	
MAXIMUM PEAK FLOW			153		a7120	
MAXIMUM PEAK STAGE			2.57		b9.70	
INSTANTANEOUS LOW FLOW			1.0		c0.20	
ANNUAL RUNOFF (AC-FT)	11970		3450		14270	
10 PERCENT EXCEEDS	46		7.5		45	
50 PERCENT EXCEEDS	7.8		4.1		7.8	
90 PERCENT EXCEEDS	4.4		1.9		2.8	

e Estimated

a From rating curve extended above 500 ft<sup>3</sup>/s, on basis of slope-area measurements at gage heights 5.25, 8.25, and 9.7 ft.

b From floodmarks.

c Also occurred, Oct. 6-9, 1922, Sept. 21, Oct. 9-14, 1956, and Dec. 13, 1964.

08382500 GALLINAS RIVER NEAR COLONIAS, NM

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 Colonias, and 9.0 mi east of Dilia. Mouth at Pecos River mile 789.2.

DRAINAGE AREA.--610 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,940 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for those estimated, 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about June 1, 1937, reached a stage of about 27.2 ft; discharge determined as 26,700 ft<sup>3</sup>/s by slope-area measurement made in 1951. A flood of about the same magnitude occurred Sept. 29-30, 1904.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	e0.20	e3.2	2.2	2.5	1.4	0.36	0.00	0.00	0.00	12	0.00
2	e0.00	e0.30	e3.00	2.5	2.6	1.5	0.21	0.00	0.00	0.00	7.9	0.00
3	e0.00	e0.40	e2.8	1.8	2.5	1.5	0.17	0.00	0.00	0.00	5.6	0.00
4	e0.00	e0.50	e2.7	1.6	3.3	1.2	0.10	0.00	0.00	0.00	4.4	0.00
5	e0.00	e0.60	2.2	2.4	3.3	1.3	0.05	0.00	0.00	e150	2.9	0.00
6	e0.00	e0.70	2.1	2.3	2.9	1.4	0.45	0.00	0.00	e30	1.7	0.00
7	e0.00	e0.80	2.1	2.3	2.2	1.5	0.67	0.00	0.00	e10	0.93	0.00
8	e0.00	e0.90	2.1	2.0	2.5	1.3	0.34	0.00	0.00	e5.0	0.55	0.00
9	e0.00	e1.0	2.1	2.0	2.3	1.00	0.09	0.00	0.00	e3.0	0.34	0.00
10	e0.00	e0.90	2.0	2.2	2.2	0.96	0.01	0.00	0.00	1.3	e0.20	0.00
11	e0.00	e0.80	2.1	2.3	1.9	0.92	0.00	0.00	0.00	5.1	e0.15	10
12	e0.50	e0.70	2.1	2.2	1.7	0.91	0.00	0.00	0.00	5.2	e0.10	12
13	e3.00	e0.80	2.4	2.0	2.4	0.86	0.00	0.00	0.00	21	e0.50	21
14	e2.5	e2.00	2.8	2.1	2.2	0.70	0.00	0.00	0.00	8.6	e0.00	6.3
15	e2.00	e7.00	2.3	2.0	2.4	0.51	0.00	0.00	0.00	4.9	0.00	2.7
16	e1.5	e6.8	2.2	1.9	2.4	0.49	0.00	0.00	0.00	39	0.00	2.7
17	e1.00	e6.5	2.5	2.0	2.5	0.49	0.00	0.00	0.00	16	0.00	1.7
18	e0.70	e6.2	2.2	2.0	2.3	0.50	0.00	0.00	0.00	7.6	0.00	0.92
19	e0.50	e6.00	2.3	1.9	2.1	0.67	0.00	0.00	0.00	4.7	0.00	0.58
20	e0.30	e5.5	2.2	1.5	2.0	0.74	0.00	0.00	0.00	3.0	0.00	0.38
21	e0.20	e5.4	2.2	1.1	2.0	0.69	0.00	0.00	0.00	46	0.00	0.25
22	e0.10	e5.3	2.2	1.2	1.9	0.59	0.00	0.00	0.00	11	0.00	0.09
23	e0.00	e5.2	1.9	1.7	1.9	0.63	0.00	0.00	0.00	22	0.00	0.03
24	e0.00	e5.3	1.5	2.2	1.8	0.54	0.00	0.00	0.00	13	0.00	0.01
25	e0.00	e5.00	1.6	2.3	1.7	0.42	0.00	0.00	0.00	20	0.00	0.03
26	e0.00	e4.5	1.8	2.00	1.5	0.46	0.00	0.00	0.00	11	0.00	0.01
27	e0.00	e4.2	1.7	1.9	1.6	0.49	0.00	0.00	0.00	7.00	0.00	0.00
28	e0.00	e4.0	1.9	1.9	1.6	0.47	0.00	0.00	0.00	5.00	0.00	0.00
29	e0.00	e3.8	1.9	2.0	---	0.44	0.00	0.00	0.00	29	0.00	0.00
30	e0.00	e3.5	2.2	2.2	---	0.43	0.00	0.00	0.00	103	0.00	0.00
31	e0.00	---	2.3	2.8	---	0.42	---	0.00	---	15	0.00	---
TOTAL	12.30	94.80	68.6	62.5	62.2	25.43	2.45	0.00	0.00	596.4	37.27	58.70
MEAN	0.397	3.160	2.213	2.016	2.221	0.820	0.082	0.000	0.000	19.24	1.202	1.957
MAX	3.0	7.0	3.2	2.8	3.3	1.5	0.67	0.00	0.00	150	12	21
MIN	0.00	0.20	1.5	1.1	1.5	0.42	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	24	188	136	124	123	50	4.9	0.00	0.00	1180	74	116

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

	12.88	6.219	3.975	3.441	4.457	6.044	15.99	17.58	17.84	39.20	59.73	22.65
MEAN	12.88	6.219	3.975	3.441	4.457	6.044	15.99	17.58	17.84	39.20	59.73	22.65
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000
(WY)	1953	1952	1952	1951	1951	1951	1951	1952	1951	1964	2001	1951

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1951 - 2002

ANNUAL TOTAL	3302.34	1020.65	
ANNUAL MEAN	9.048	2.796	17.78
HIGHEST ANNUAL MEAN			66.6
LOWEST ANNUAL MEAN			0.85
HIGHEST DAILY MEAN	410	Mar 9	2640
LOWEST DAILY MEAN	0.00	Aug 2	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 2	0.00
MAXIMUM PEAK FLOW			411
MAXIMUM PEAK STAGE			5.06
INSTANTANEOUS LOW FLOW			0.00
ANNUAL RUNOFF (AC-FT)	6550	2020	12880
10 PERCENT EXCEEDS	19	5.1	27
50 PERCENT EXCEEDS	2.4	0.60	1.4
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

a From rating curve extended above 1,900 ft<sup>3</sup>/s, by slope-area measurements at gage heights 8.64 ft, 12.74 ft, 16.65 ft, and 27.20 ft.

08382600 PECOS RIVER ABOVE CANON DEL UTA NEAR COLONIAS, NM

LOCATION.--Lat 35°05'29", long 104°48'00" in sec.20, 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.

DRAINAGE AREA.--2,330 mi<sup>2</sup>, approximately.

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 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 some days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	1.6	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
2	1.5	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
3	1.2	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
4	1.2	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.98	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49	0.00	0.00
6	0.70	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.00	0.00
7	0.92	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.59	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.59	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.57	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3	0.00	0.09
11	0.56	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
12	3.5	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	64
13	0.55	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	14
14	0.54	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00
15	0.52	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00
16	0.51	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	145	0.00	0.00
17	0.50	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	44	0.00	0.00
18	0.50	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.01	0.00	0.00
19	0.49	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00
20	0.48	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00
21	0.47	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00
22	0.45	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05	0.00	0.00
23	0.43	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	1.7	0.00	0.00
24	0.43	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	21	0.00	0.00
25	0.41	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	55	0.00	0.00
26	0.40	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.66	0.00	0.00
27	0.40	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.11	0.00	0.00
28	0.39	e0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
29	0.38	e0.05	0.00	0.00	---	0.00	0.00	0.00	0.00	0.08	514	23	0.00
30	0.37	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.07	584	0.00	0.00
31	0.36	---	0.00	0.00	---	0.00	---	0.00	---	---	3.5	0.00	---
TOTAL	22.49	6.71	0.00	0.00	0.00	0.00	0.00	0.00	2.40	1425.42	23.0	78.19	
MEAN	0.725	0.224	0.000	0.000	0.000	0.000	0.000	0.000	0.080	45.98	0.742	2.606	
MAX	3.5	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.17	584	23	64	
MIN	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
AC-FT	45	13	0.00	0.00	0.00	0.00	0.00	0.00	4.8	2830	46	155	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2002, BY WATER YEAR (WY)

	24.94	25.49	7.785	4.172	5.504	37.11	99.25	308.6	260.7	102.3	170.4	79.93
MEAN	24.94	25.49	7.785	4.172	5.504	37.11	99.25	308.6	260.7	102.3	170.4	79.93
MAX	139	160	42.0	19.0	73.4	192	382	736	1057	418	1062	660
(WY)	1986	1999	1987	1987	1987	1985	1987	1979	1995	1991	1991	1991
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	3.17	0.74	0.000
(WY)	1978	1977	1977	1976	1976	1976	1976	2002	2002	1980	2002	1978

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1976 - 2002

ANNUAL TOTAL	22345.91	1558.21	
ANNUAL MEAN	61.22	4.269	96.72
HIGHEST ANNUAL MEAN			245 1991
LOWEST ANNUAL MEAN			4.27 2002
HIGHEST DAILY MEAN	861 Aug 15	584 Jul 30	2960 Aug 11 1981
LOWEST DAILY MEAN	0.00 Nov 30	0.00 Nov 30	0.00 Jan 1 1976
ANNUAL SEVEN-DAY MINIMUM	0.00 Nov 30	0.00 Nov 30	0.00 Jan 1 1976
MAXIMUM PEAK FLOW		3650 Jul 29	a12400 Jun 20 1982
MAXIMUM PEAK STAGE		8.72 Jul 29	11.53 Jul 11 1996
INSTANTANEOUS LOW FLOW		0.00 Nov 30	0.00 Jan 1 1976
ANNUAL RUNOFF (AC-FT)	44320	3090	70070
10 PERCENT EXCEEDS	182	0.46	308
50 PERCENT EXCEEDS	2.6	0.00	7.00
90 PERCENT EXCEEDS	0.05	0.00	0.00

e Estimated

a From rating curve extended above 1,200 ft<sup>3</sup>/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<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.25, T.10 N., R.20 E., Guadalupe County, Hydrologic Unit 13060001, at south boundary of 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 mi<sup>2</sup>, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1976 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

REVISED RECORD.--WDR NM-99-1: 1999 (M) (mean daily values).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,760 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except for those estimated, 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	e16	16	14	20	14	8.9	12	7.0	7.5	17	7.8
2	18	17	15	14	20	14	9.8	13	6.7	8.5	e15	6.9
3	19	15	15	14	19	13	10	12	e7.5	8.9	e13	5.6
4	18	15	15	13	20	13	10	11	e10	9.5	e11	6.0
5	20	16	15	13	19	13	10	12	e9.0	60	e10	8.0
6	20	16	15	14	19	12	11	11	e9.5	46	12	7.8
7	17	16	15	14	19	11	11	10	e8.5	10	9.4	8.9
8	17	17	15	13	19	11	11	10	e9.0	8.9	9.1	9.2
9	18	16	15	12	19	12	11	12	e10	7.9	9.1	12
10	18	14	15	14	19	11	9.8	11	e9.0	11	7.9	59
11	17	e15	16	13	19	11	8.9	11	e8.6	7.7	6.7	e12
12	20	e15	16	13	19	12	9.7	11	8.4	6.0	6.3	100
13	19	e16	16	13	19	12	9.9	12	8.7	6.2	8.4	37
14	19	e17	16	14	18	11	11	12	9.2	6.7	8.5	14
15	18	18	16	17	17	13	10	12	8.7	24	8.7	11
16	20	18	15	19	17	12	9.9	11	9.0	262	8.1	8.9
17	20	15	14	18	16	12	9.7	9.2	8.5	99	e7.0	7.9
18	20	15	14	19	15	11	9.4	8.7	8.4	e27	e6.5	8.6
19	19	15	15	19	13	11	10	9.1	8.3	e11	e6.7	8.4
20	19	16	14	20	13	10	11	8.9	9.4	e10	e6.8	7.8
21	18	16	12	21	14	9.8	11	8.2	9.4	e11	e6.5	7.1
22	17	17	12	21	16	11	10	8.0	8.9	e26	e6.3	7.8
23	16	16	12	21	16	10	9.9	8.0	8.9	e36	e6.1	7.9
24	16	17	13	22	14	11	10	8.3	8.8	65	e6.9	7.7
25	e16	17	13	21	14	12	11	9.1	9.4	98	e6.9	6.6
26	e16	17	13	21	15	11	10	10	9.1	40	e6.6	7.0
27	e15	19	13	21	14	9.9	9.7	11	9.1	18	e6.6	8.0
28	e15	18	14	20	14	9.5	12	11	9.2	6.8	46	7.0
29	e15	17	15	19	---	9.9	12	9.9	8.6	727	36	7.1
30	e16	17	15	21	---	9.5	11	8.6	7.3	754	18	6.8
31	e16	---	14	20	---	9.3	---	8.2	---	46	7.3	---
TOTAL	548	489	449	528	476	351.9	308.6	319.2	262.1	2465.6	340.4	419.8
MEAN	17.68	16.30	14.48	17.03	17.00	11.35	10.29	10.30	8.737	79.54	10.98	13.99
MAX	20	19	16	22	20	14	12	13	10	754	46	100
MIN	15	14	12	12	13	9.3	8.9	8.0	6.7	6.0	6.1	5.6
AC-FT	1090	970	891	1050	944	698	612	633	520	4890	675	833

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2002, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	47.59	46.87	25.93	22.85	24.21	54.51	114.7	328.8	280.0	133.7	227.2	111.4															
MAX	147	237	68.7	46.1	106	207	415	768	945	440	1077	683															
(WY)	1986	1999	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	8.74	18.6	11.0	6.12															
(WY)	1979	1982	1978	1978	1978	1978	1978	1978	1981	2002	1980	1978															

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1976 - 2002

ANNUAL TOTAL	31613	6957.6	
ANNUAL MEAN	86.61	19.06	121.3
HIGHEST ANNUAL MEAN			265
LOWEST ANNUAL MEAN			19.1
HIGHEST DAILY MEAN	1200	Aug 15	754 Jul 30
LOWEST DAILY MEAN	12	Sep 19	5.6 Sep 3
ANNUAL SEVEN-DAY MINIMUM	13	Dec 21	6.5 Aug 18
MAXIMUM PEAK FLOW			7450 Jul 29
MAXIMUM PEAK STAGE			11.58 Jul 29
INSTANTANEOUS LOW FLOW			5.6 Sep 3
ANNUAL RUNOFF (AC-FT)	62700	13800	87900
10 PERCENT EXCEEDS	253	20	340
50 PERCENT EXCEEDS	22	12	30
90 PERCENT EXCEEDS	15	7.8	10

e Estimated

a From rating curve extended above 1,500 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2000 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)
DEC 04...	1250	14	.64	1.2	637	8.6	99	8.1	1020	11.5	13.5	560	187
FEB 27...	1310	12	.58	.4	641	9.4	104	8.1	1090	15.0	12.0	590	197
APR 16...	1340	9.5	--	2.0	639	7.4	100	8.2	1180	23.5	21.0	680	229
AUG 22...	1320	3.6	15	13	645	7.0	105	8.1	1310	33.0	27.0	750	254
Date	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
DEC 04...	22.0	1.22	.2	10.9	140	130	157	6.46	.3	11.2	433	749	<.01
FEB 27...	23.7	1.17	.2	11.4	133	136	163	6.61	.3	10.9	481	813	<.01
APR 16...	26.2	1.16	.2	12.0	117	135	161	5.73	.35	11.7	530	896	.01
AUG 22...	27.6	1.42	.2	11.8	127	140	168	6.70	.35	12.0	605	1000	<.01
Date	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, 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)	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)	
DEC 04...	<.20	<.20	.09	.11	<.010	.02	<.01	.02	1	.06	E2	84	<.06
FEB 27...	<.20	<.20	.10	.08	<.010	<.02	<.01	<.02	<1	<.05	<2	74	<.06
APR 16...	<.20	4.2	.02	<.02	<.010	<.02	<.01	<.02	<1	E.04	<2	69	<.06
AUG 22...	<.20	<.20	.05	<.02	<.010	<.02	<.01	.02	1	.07	<2	20	<.06
Date	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)	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)	SELE-NIUM, DIS-SOLVED TOTAL (UG/L AS SE) (01147)
DEC 04...	40	<.04	<.8	.32	1.9	<10	<.08	30.1	<.01	1.3	<.30	E1	E1
FEB 27...	40	<.04	<.8	.43	2.2	<10	E.06	26.8	<.01	<.2	E.05	<2	E2
APR 16...	40	<.04	<.8	.41	2.6	<10	<.08	32.2	<.01	1.4	<.06	E1	<2
AUG 22...	50	<.04	<.8	.15	.7	<10	.09	37.5	<.01	1.6	.73	<2	<14

08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	URANIUM NATURAL DIS-SOLVED (UG/L) (22703)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDEED (MG/L) (80154)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
DEC 04...					<1	2	1.66	96	127						
FEB 27...					<1	2	1.90	89	96						
APR 16...					<1	5	1.88	96	134						
AUG 22...					<1	4	.05	99	412						
AUG 22...	1320	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003		
AUG 22...		DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS, REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	
AUG 22...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	
AUG 22...		METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT (UG/L) (82683)	PER-METHRIN CIS WAT FLT (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	
AUG 22...		<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010	
AUG 22...				PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)			
AUG 22...			<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009				

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

08382810 SANTA ROSA LAKE NEAR SANTA ROSA, NM

LOCATION.--Lat 35°01'47", long 104°41'30", Guadalupe County, Hydrologic Unit 13060001, in Jose Perea Grant, near outlet gates of Santa Rosa Dam on Pecos River, approximately 7.0 mi north of Santa Rosa, and at mile 757.2.

DRAINAGE AREA.--2,430 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--April 1980 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.)

REMARKS.--Lake is formed by earth and rockfill dam on Pecos River. Storage began on Apr. 22, 1980. Capacity, 439,900 acre-ft, from capacity table effective Oct. 1997, between elevations 4,630.0 ft, invert of outlet structure, and 4,797.0 ft, crest of spillway. Capacity by original survey was 447,100 acre-ft. No dead storage. Lake was created primarily for flood, irrigation, and sediment control. U.S. Army Corps of Engineers satellite telemetry at station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 120,481 acre-ft, May 8, 1987, elevation, 4,749.71 ft; no storage for many days, July-Sept., 1980 and June-Aug., 1981.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,160 acre-ft, Mar. 3, elevation, 4,709.16 ft; minimum, 3,260 acre-ft, June 27 and 28, elevation, 4,685.24 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13850	14470	15280	16000	16710	17150	4060	4470	3640	3280	6620	6710
2	13870	14510	15300	16020	16730	17140	4070	4480	3640	3280	6640	6720
3	13890	14540	15340	16040	16760	17160	4080	4490	3650	3290	6650	6720
4	13920	14560	15330	16080	16790	16400	4100	4500	3670	3320	6670	6720
5	13920	14590	15380	16100	16810	14420	4130	4510	3690	3330	6710	6730
6	13940	14620	15390	16100	16820	11890	4150	4520	3700	3430	6290	6720
7	13960	14620	15420	16140	16810	9320	4160	4520	3710	3450	5920	6700
8	13970	14630	15440	16200	16820	7030	4190	4540	3710	3450	5930	6690
9	13980	14660	15460	16230	16850	5370	4200	4540	3720	3450	5940	6710
10	14000	14700	15500	16240	16860	4200	4220	4540	3720	3460	5950	10310
11	14010	14720	15520	16260	16880	3790	4230	4550	3720	3470	5950	10770
12	14060	14740	15540	16270	16890	3660	4250	4560	3720	3480	5950	11360
13	14100	14770	15560	16300	16900	3680	4270	4570	3730	3480	5960	12070
14	14100	14820	15580	16310	16940	3700	4280	4590	3400	3490	5970	12040
15	14120	14930	15600	16360	16960	3710	4300	4610	3410	3570	5970	12040
16	14150	15000	15620	16370	16980	3740	4300	4620	3410	3920	5970	12010
17	14170	15020	15640	16390	17000	3750	4310	4630	3420	4200	5970	11960
18	14190	15040	15650	16410	17010	3780	4330	4640	3440	4260	5970	11950
19	14190	15060	15670	16410	17020	3800	4340	4650	3440	4290	5980	11950
20	14200	15090	15700	16420	17030	3820	4350	4640	3460	4300	5970	11950
21	14240	15100	15720	16470	17050	3840	4360	4650	3470	4310	5970	11940
22	14260	15130	15740	16470	17050	3870	4370	4640	3470	4350	5970	11930
23	14260	15130	15770	16500	17060	3890	4380	4650	3480	4380	5970	11940
24	14270	15160	15800	16510	17070	3910	4400	4670	3480	4470	5700	11930
25	14300	15160	15830	16540	17080	3920	4410	4680	3490	4580	5700	11910
26	14320	15170	15860	16550	17100	3940	4430	4690	3490	4690	5700	11910
27	14350	15220	15880	16570	17120	3960	4430	4700	3260	4730	5700	11910
28	14390	15240	15860	16590	17120	3980	4440	4710	3260	4770	5710	11920
29	14400	15250	15930	16620	---	4000	4450	4720	3270	4870	7080	11930
30	14430	15270	15980	16650	---	4020	4460	4270	3270	6490	6960	11920
31	14450	---	15980	16690	---	4040	---	3640	---	6600	6700	---
MAX	14450	15270	15980	16690	17120	17160	4460	4720	3730	6600	7080	12070
MIN	13850	14470	15280	16000	16710	3660	4060	3640	3260	3280	5700	6690
(+)	4706.34	4707.24	4707.98	4708.70	4709.13	4688.12	4689.51	4686.71	4685.28	4694.98	4695.17	4703.28
(++)	+610	+820	+710	+710	+430	-13080	+420	-820	-370	+3330	+100	+5220
CAL YR 2001	MAX 38000	MIN 3350	(++) +3310									
WTR YR 2002	MAX 17160	MIN 3260	(++) -1920									

(+) Elevation, in feet, at end of month.  
(++) Change in contents, in acre-ft.

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 mi<sup>2</sup>, 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 those below 1.0 ft<sup>3</sup>/s, 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 temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	0.06	0.01	0.03	e0.01	0.01	0.01	0.01	0.02	0.00	0.00	0.02
2	0.01	0.07	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.00	0.00	0.00
3	0.01	0.07	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.08	0.00	0.00
4	0.01	0.08	0.01	0.01	0.01	396	0.01	0.01	0.36	0.02	0.00	0.17
5	0.01	0.04	0.02	0.01	0.01	985	0.01	0.01	0.05	0.01	0.00	0.14
6	0.01	0.02	0.01	0.01	0.01	1160	0.01	0.01	0.02	0.02	222	10
7	0.01	0.02	0.01	0.01	0.01	1130	0.01	0.01	0.01	0.02	203	6.7
8	0.01	0.02	0.01	0.01	0.01	960	0.01	0.01	0.0	0.02	0.16	6.9
9	0.01	0.01	0.01	0.01	0.01	768	0.01	0.01	0.00	0.0	0.12	6.9
10	0.01	0.02	0.01	0.01	0.01	579	0.01	0.01	0.00	0.00	0.12	7.9
11	0.01	0.03	0.02	0.01	0.01	254	0.01	0.01	0.00	0.00	0.09	87
12	0.04	0.02	0.02	0.01	0.01	107	0.01	0.01	0.00	0.00	0.08	81
13	0.06	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.0	0.00	0.05	60
14	0.05	0.10	0.01	0.01	0.01	0.01	0.01	0.01	167	0.00	0.04	58
15	0.04	0.41	0.01	0.01	0.01	0.01	0.01	0.03	0.00	0.56	0.02	24
16	0.02	0.34	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.03	0.0	21
17	0.02	0.12	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	21
18	0.01	0.11	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	11
19	0.02	0.07	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	12
20	0.02	0.07	0.01	0.01	0.01	0.01	0.01	0.01	0.20	0.00	0.00	3.2
21	0.04	0.10	0.01	0.01	0.01	0.01	0.01	0.01	0.63	0.0	0.00	3.0
22	0.04	0.13	0.01	0.01	0.01	0.01	0.01	0.01	0.30	0.01	0.00	2.5
23	0.04	0.11	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	1.4
24	0.03	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	152	4.3
25	0.02	0.06	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.13	5.8
26	0.02	0.02	0.01	0.01	0.01	0.16	0.01	0.01	0.00	0.00	0.13	3.8
27	0.04	0.01	0.02	0.01	0.01	0.01	0.01	0.01	116	0.00	0.08	0.05
28	0.06	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.04
29	0.06	0.01	0.01	0.01	---	0.01	0.01	0.00	0.00	0.00	0.00	0.03
30	0.06	0.01	0.03	0.03	---	0.01	0.01	243	0.00	0.00	114	0.02
31	0.05	---	0.03	0.02	---	0.01	---	332	---	0.00	178	---
TOTAL	0.85	2.22	0.40	0.38	0.28	6339.37	0.30	575.30	284.63	0.77	870.02	437.87
MEAN	0.027	0.074	0.013	0.012	0.010	204.5	0.010	18.56	9.488	0.025	28.07	14.60
MAX	0.06	0.41	0.03	0.03	0.01	1160	0.01	332	167	0.56	222	87
MIN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
AC-FT	1.7	4.4	0.8	0.8	0.6	12570	0.6	1140	565	1.5	1730	869

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	12.43	9.447	8.016	15.17	33.60	56.84	85.77	268.5	258.8	200.0	213.9	130.1												
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	0.018	0.032	0.013	0.012	0.010	0.041	0.010	0.12	0.012	0.025	0.056	0.014												
(WY)	1990	2000	2002	2002	2002	1999	2002	1997	2001	2002	1996	2000												

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1980 - 2002

ANNUAL TOTAL	23441.02	8512.39	
ANNUAL MEAN	64.22	23.32	111.0
HIGHEST ANNUAL MEAN			215
LOWEST ANNUAL MEAN			23.3
HIGHEST DAILY MEAN	1880	1160	2100
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
MAXIMUM PEAK FLOW		1210	1210
MAXIMUM PEAK STAGE		6.28	6.28
INSTANTANEOUS LOW FLOW		0.00	0.00
ANNUAL RUNOFF (AC-FT)	46500	16880	80440
10 PERCENT EXCEEDS	0.16	3.1	469
50 PERCENT EXCEEDS	0.02	0.01	0.45
90 PERCENT EXCEEDS	0.01	0.00	0.02

e Estimated

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM

LOCATION.--Lat 34°43'48", long 104°31'28", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, 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 Negra upstream from station contribute a substantial inflow. Discharge represents inflow to Lake Sumner. Several observations of water temperature and specific conductance 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 ft<sup>3</sup>/s, and peak inflow to Lake Sumner was about 75,000 ft<sup>3</sup>/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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	84	85	87	88	80	86	65	281	68	62	160
2	69	86	85	88	83	79	79	66	86	70	66	76
3	70	85	84	89	84	79	79	66	77	118	74	71
4	71	86	84	87	83	79	80	66	70	160	69	69
5	70	87	84	87	83	646	81	66	70	93	64	67
6	73	89	84	87	82	1320	81	67	69	81	61	65
7	74	87	85	86	82	1370	87	69	66	78	281	63
8	75	86	84	87	81	1390	82	64	66	77	164	62
9	73	86	85	86	80	1020	76	65	63	74	80	71
10	74	84	84	86	80	944	79	66	61	76	72	227
11	76	86	84	87	81	661	74	66	58	71	68	336
12	77	83	85	86	82	229	69	65	62	71	65	171
13	83	84	85	86	82	209	76	66	61	69	61	214
14	79	86	84	84	82	112	74	67	63	64	62	111
15	78	91	84	85	83	102	67	77	181	65	61	98
16	77	104	84	85	83	97	65	77	77	156	61	92
17	76	92	84	86	83	95	65	70	70	120	63	93
18	74	87	84	85	83	93	65	70	66	79	59	102
19	74	86	83	85	81	94	64	68	65	67	59	101
20	75	86	84	84	80	94	65	71	66	64	63	92
21	74	86	84	85	79	92	65	68	72	68	67	85
22	76	85	86	82	80	90	67	66	66	69	62	81
23	81	85	86	85	80	92	67	67	65	103	63	84
24	82	85	86	87	80	88	64	70	66	115	63	80
25	77	85	86	85	79	87	64	69	65	87	145	76
26	82	84	86	84	80	87	65	68	65	73	74	75
27	81	84	86	83	81	88	67	68	68	67	67	77
28	100	86	86	84	81	87	65	67	176	66	66	77
29	88	85	86	83	---	88	64	67	80	63	67	74
30	85	85	89	83	---	90	66	69	68	122	66	73
31	86	---	87	87	---	86	---	309	---	68	117	---
TOTAL	2398	2595	2633	2651	2286	9768	2148	2345	2469	2622	2472	3123
MEAN	77.35	86.50	84.94	85.52	81.64	315.1	71.60	75.65	82.30	84.58	79.74	104.1
MAX	100	104	89	89	88	1390	87	309	281	160	281	336
MIN	68	83	83	82	79	79	64	64	58	63	59	62
AC-FT	4760	5150	5220	5260	4530	19370	4260	4650	4900	5200	4900	6190

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	105.0	94.25	94.89	99.65	114.6	140.8	162.9	339.0	353.7	308.8	325.1	253.1												
MAX	225	232	147	252	306	373	685	744	1211	725	706	948												
(WY)	1986	1987	1987	1996	1994	1998	1989	1989	1995	1983	1994	1988												
MIN	73.1	76.3	73.5	80.9	76.7	73.5	67.9	64.0	66.1	72.9	65.2	66.4												
(WY)	1988	2000	1991	1993	1984	1989	1984	1982	1991	1989	2001	1990												

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1980 - 2002

ANNUAL TOTAL	55756	37510		
ANNUAL MEAN	152.8	102.8		a199.8
HIGHEST ANNUAL MEAN				318
LOWEST ANNUAL MEAN				103
HIGHEST DAILY MEAN	2360	Jul 14	1390	Mar 8
LOWEST DAILY MEAN	52	Aug 2	58	Jun 11
ANNUAL SEVEN-DAY MINIMUM	54	Aug 2	61	Aug 13
MAXIMUM PEAK FLOW			1440	Mar 8
MAXIMUM PEAK STAGE			3.71	Mar 8
INSTANTANEOUS LOW FLOW			56	Jun 11
ANNUAL RUNOFF (AC-FT)	110600	74400	144700	
10 PERCENT EXCEEDS	101	99	576	
50 PERCENT EXCEEDS	85	81	85	
90 PERCENT EXCEEDS	62	65	68	

a Average discharge for 41 years (water years 1939-79), 209 ft<sup>3</sup>/s, 151,400 acre-ft/yr, prior to completion of Santa Rosa Dam.

b From rating curve extended above 7,400 ft<sup>3</sup>/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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)
NOV 26...	1450	87	--	9.6	648	10.1	104	8.0	2960	10.0	9.0	1700	563
MAR 04...	1240	81	--	--	634	10.3	110	7.7	2820	16.0	9.5	1700	563
APR 18...	1020	66	1.1	--	654	8.7	102	8.0	2980	23.5	15.0	1700	567
AUG 23...	1800	63	--	--	653	6.5	99	8.1	2950	32.5	28.5	1800	601

Date	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
NOV 26...	71.2	2.14	1	101	124	121	146	150	.6	13.4	1580	2550	<.01
MAR 04...	68.1	1.96	1	104	110	112	136	141	.7	12.1	1540	2500	.02
APR 18...	70.6	2.00	1	106	106	105	127	143	.73	11.6	1590	2550	<.01
AUG 23...	70.8	2.25	1	103	73	88	105	130	.70	13.3	1600	2570	<.01

Date	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, 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)	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)	
NOV 26...	<.20	<.20	.03	<.02	<.010	.03	<.01	.03	<2	<.10	E1	16	<.10
MAR 04...	<.20	<.20	.02	<.02	<.010	<.02	<.01	<.02	<1	.33	<2	13	<.06
APR 18...	<.20	<.20	.02	<.02	<.010	<.02	<.01	<.02	<2	E.05n	E2	22	<.10
AUG 23...	<.20	<.20	.03	<.02	<.010	<.02	<.01	<.02	<2	.12	<2	43	<.10

Date	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)	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)	SELE-NIUM, DIS-SOLVED TOTAL (UG/L AS SE) (01147)
NOV 26...	110	<.07	E.7	.93	5.7	<30	E.08	6.3	<.01	2.6	3.48	E2	<2
MAR 04...	90	<.04	<.8	.98	5.0	<10	.16	7.6	<.01	3.1	1.12	<2	E2
APR 18...	100	<.07	<.8	1.12	7.6	<30	<.20	3.6	<.01	2.7	1.09	2	E1
AUG 23...	130	<.07	<.8	.27	1.6	<30	E.08n	14.6	<.01	1.8	4.16	<2	<14

## RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDEDE (MG/L) (80154)
NOV 26...	<2	4	1.98	93	26
MAR 04...	<1	6	1.90	97	120
APR 18...	<2	8	1.86	99	257
AUG 23...	<2	<2	.73	98	355

Remark codes used in this report:

< -- Less than  
E -- Estimated value

Value qualifier codes used in this report:

n -- Below the laboratory reporting level

08384000 LAKE SUMNER NEAR FORT SUMNER, NM

LOCATION.--Lat 34°36'30", long 104°23'04", in SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, 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. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Apr. 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, 128,657 acre-ft, from capacity table dated Nov. 2001, (NGDV 1988) between elevation 4,201.89 ft and elevation 4,283.89 ft top of flood pool, 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, 14,230 acre-ft, Feb. 13, elevation, 4,248.52 ft; minimum, e0 acre-ft, May 31, elevation, e4,207.30 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13420	9500	7870	10260	13170	13350	1970	837	239	1140	1290	296
2	13230	9540	7950	10320	13350	13250	1960	789	321	1100	1220	537
3	12890	9560	8030	10430	13350	13150	1920	750	830	1070	1150	555
4	12320	9960	8120	10520	13450	13100	1990	711	848	1100	1120	533
5	11920	9690	8200	10630	13540	13040	1870	668	1220	1410	1060	503
6	11600	9380	8270	10700	13620	12060	1840	628	1200	1420	965	471
7	11470	9510	8340	10740	13700	11860	1840	598	1190	1420	878	417
8	11080	9640	8430	10890	13780	11670	1830	572	1170	1420	933	409
9	10810	9630	8500	11000	13870	11450	1810	537	1140	1410	1290	394
10	10640	9720	8560	11100	13950	10760	1790	515	1100	1390	1310	378
11	10550	9780	8620	11200	14040	9900	1760	495	1050	1380	1270	706
12	10550	9840	8660	11290	14140	8600	1720	460	1000	1370	1220	1610
13	10620	9900	8750	11410	14230	6710	1680	439	975	1350	1160	2120
14	10640	10000	8820	11480	14210	4760	1650	413	940	1310	909	2790
15	10620	9340	8860	11580	14190	3640	1610	390	911	1320	1050	3050
16	10610	8920	8960	11680	14110	2510	1560	385	1060	1260	987	3240
17	10620	8450	9040	11780	14060	2510	1500	338	1080	1280	909	3410
18	10620	8060	9110	11880	13990	2480	1440	337	1050	1380	845	3560
19	10630	7670	9170	11980	13950	2440	1350	338	1020	1500	788	3780
20	10640	7270	8290	12070	13870	2460	1320	333	971	1620	708	3960
21	10650	6780	7330	12160	13800	2420	1260	320	985	1580	630	4100
22	10660	6930	7520	12230	13730	2110	1190	527	1080	1530	582	4220
23	10680	7110	7860	12300	13680	2110	1140	483	1140	1490	519	4230
24	10670	7280	7810	12390	13610	2110	1100	435	1140	1480	456	4190
25	10400	7390	7920	12490	13550	2040	1050	373	1100	1520	393	4160
26	10000	7480	8030	12570	13450	2050	998	323	1060	1520	467	4140
27	9570	7560	8090	12660	13410	2030	1010	302	1040	1480	489	4100
28	9500	7680	8160	12750	13350	2010	964	206	1010	1430	452	4040
29	9500	7720	8250	12810	---	1980	934	134	1130	1380	417	3990
30	9510	7800	8350	12920	---	1980	878	101	1160	1300	383	3940
31	9500	---	8470	13060	---	1970	---	e0.00	---	1320	341	---
MAX	13420	10000	9170	13060	14230	13350	1990	837	1220	1620	1310	4230
MIN	9500	6780	7330	10260	13170	1970	878	0.00	239	1070	341	296
(+)	4242.32	4242.04	4242.94	4247.60	4247.83	4229.84	4225.16	e4207.30	4226.55	4227.29	4221.69	4235.17
(++)	-3980	-1700	+670	+4590	+290	-11380	-1090	-880	+1160	+160	-980	+3600

CAL YR 2001 MAX 39400 MIN 6780 (++) -20140  
WTR YR 2002 MAX 14230 MIN e0.00 (++) -9540

e Estimated

(+) Elevation, in feet, at end of month.  
(++) Change in contents, in acre-ft.



08385000 FORT SUMNER MAIN CANAL NEAR FORT SUMNER, NM

LOCATION.--Lat 34°30'30", long 104°16'40", in SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 those estimated, which are fair. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	21	0.00	0.00	0.00	87	90	81	1.7	60	81	68
2	76	0.02	0.00	0.00	0.00	88	89	81	1.5	60	85	68
3	72	0.01	0.00	0.00	0.00	88	89	82	1.5	63	85	69
4	70	0.00	0.00	0.00	0.00	88	89	82	39	71	83	68
5	74	0.00	0.00	0.00	0.00	90	89	82	55	62	83	69
6	80	0.00	0.00	0.00	0.00	91	90	81	57	69	86	69
7	80	0.00	0.00	0.00	0.00	101	91	75	59	71	86	68
8	79	0.00	0.00	0.00	0.00	100	89	72	65	73	83	58
9	74	0.00	0.00	0.00	0.00	97	89	77	66	69	83	52
10	78	0.00	0.00	0.00	0.00	96	89	85	60	67	84	42
11	78	0.00	0.00	0.00	0.00	95	89	83	57	68	84	1.0
12	77	0.00	0.00	0.00	0.13	93	89	77	57	87	83	0.78
13	76	0.00	0.00	0.00	1.8	90	89	73	59	78	79	0.77
14	75	0.00	0.00	0.00	65	89	89	72	60	72	79	0.67
15	74	0.00	0.00	0.00	90	105	89	73	61	81	78	0.59
16	71	0.00	0.00	0.00	89	89	89	73	59	78	78	0.52
17	74	0.00	0.00	0.00	88	88	89	72	59	79	78	0.44
18	74	0.00	0.00	0.00	88	87	89	72	64	36	78	0.55
19	74	0.00	0.00	0.00	88	87	89	75	66	0.49	77	0.79
20	74	0.00	0.00	0.00	89	39	89	76	68	1.6	77	0.72
21	74	0.00	0.00	0.00	89	2.2	89	79	54	59	76	0.64
22	73	0.00	0.00	0.00	89	2.0	89	81	8.3	86	78	3.5
23	75	0.00	0.00	0.00	89	56	84	80	1.3	86	78	64
24	75	0.00	0.00	0.00	88	96	82	80	46	86	77	95
25	74	0.00	0.00	0.00	88	93	82	82	70	86	77	86
26	80	0.00	0.00	0.00	88	92	83	83	66	85	64	76
27	80	0.00	0.00	0.00	88	91	82	83	68	84	64	85
28	e79	0.00	0.00	0.00	88	90	82	81	61	83	66	97
29	e78	0.00	0.00	0.00	---	90	82	81	61	82	71	97
30	77	0.00	0.00	0.00	---	90	81	80	60	82	69	97
31	77	---	0.00	0.00	---	90	---	49	---	82	69	---
TOTAL	2350	21.03	0.00	0.00	1305.93	2580.2	2620	2403	1511.3	2147.09	2419	1338.97
MEAN	75.81	0.701	0.000	0.000	46.64	83.23	87.33	77.52	50.38	69.26	78.03	44.63
MAX	80	21	0.00	0.00	90	105	91	85	70	87	86	97
MIN	70	0.00	0.00	0.00	0.00	2.0	81	49	1.3	0.49	64	0.44
AC-FT	4660	42	0.00	0.00	2590	5120	5200	4770	3000	4260	4800	2660

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	69.03	98.0	1974	0.000	1942
	0.798	3.57	1983	0.000	1942
	0.377	19.6	1940	0.000	1941
	6.872	43.5	1967	0.000	1940
	7.479	56.4	2000	0.000	1940
	56.98	95.8	1988	0.000	1942
	76.20	98.6	1987	35.4	1942
	78.66	105	1989	0.000	1942
	84.51	108	1973	46.8	1941
	81.45	108	1942	29.6	1972
	79.05	99.9	1955	31.3	1990
	74.16	101	1955	1.33	1942

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1939 - 2002

ANNUAL TOTAL	20450.91	18696.52	
ANNUAL MEAN	56.03	51.22	51.86
HIGHEST ANNUAL MEAN			62.9
LOWEST ANNUAL MEAN			25.3
HIGHEST DAILY MEAN	112	105	174
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
MAXIMUM PEAK FLOW		116	
MAXIMUM PEAK STAGE		5.57	
ANNUAL RUNOFF (AC-FT)	40560	37080	37570
10 PERCENT EXCEEDS	98	89	97
50 PERCENT EXCEEDS	80	71	73
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

RIO GRANDE BASIN

08385500 PECOS RIVER NEAR FORT SUMNER, NM

LOCATION.--Lat 34°28'42", long 104°16'18", in SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, 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 except for those estimated, which are poor. Diversions upstream from station for irrigation of about 6,100 acres (1961 determination), part of which are downstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, probably exceeded 53,000 ft<sup>3</sup>/s, Sept. 30, 1904, gage height, 17.95 ft, from floodmarks, site and datum then in use; minimum daily 0.3 ft<sup>3</sup>/s, Aug. 17, 1922.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	30	21	34	33	15	3.3	e0.65	21	e0.50	e0.64	e0.60
2	37	17	29	34	33	14	3.0	e0.65	8.9	e0.50	e1.2	e0.60
3	39	11	34	34	33	14	2.9	e0.65	5.4	e0.60	10	e0.60
4	39	8.3	34	34	33	14	3.0	e0.65	e2.2	3.2	e5.0	e0.60
5	37	6.6	34	34	33	289	3.0	e0.65	e0.54	8.7	e3.0	e0.60
6	34	5.4	34	34	33	968	3.4	e0.65	e0.52	e1.5	e5.3	e0.60
7	35	4.5	34	34	33	971	4.5	e0.65	e0.50	e1.4	6.9	e0.60
8	32	3.7	34	30	33	1010	3.0	e0.65	e0.48	e1.2	e5.0	e0.60
9	11	3.3	34	30	31	996	2.7	e0.64	e0.46	e1.1	e3.0	e0.60
10	3.4	3.1	34	29	25	979	e2.3	e0.64	e0.44	e1.0	e1.0	110
11	3.9	3.5	35	29	23	976	e2.1	e0.63	e0.42	e0.90	e0.70	72
12	2.6	13	35	29	23	992	e2.0	e0.63	e0.40	10	e0.66	37
13	3.4	15	34	29	16	1000	e1.8	e0.62	e0.38	e1.7	e0.64	45
14	2.9	17	34	29	24	755	e1.6	e0.62	e0.38	e1.0	e0.64	35
15	2.4	20	35	29	18	579	e1.4	e0.61	e0.36	e0.70	e0.62	17
16	5.0	20	34	29	16	97	e1.2	e0.60	e0.35	e0.50	e0.60	12
17	1.7	18	35	29	16	51	e1.0	e0.58	e0.34	e0.60	e0.60	e7.0
18	1.7	18	26	29	16	37	e0.90	e0.56	e0.34	39	e0.60	e14
19	1.7	17	33	28	16	34	e0.80	e0.54	e0.34	23	e0.60	e7.0
20	1.8	17	34	27	16	80	e0.78	e0.52	e0.32	11	e5.0	e5.0
21	1.9	17	34	27	16	91	e0.76	e0.50	e0.32	5.8	e4.0	e4.5
22	1.8	17	34	28	17	82	e0.74	e0.48	e3.0	6.7	e3.0	e4.4
23	5.2	17	34	28	17	34	e0.72	e0.46	13	5.8	e2.0	e4.3
24	8.1	17	34	28	15	15	e0.70	e0.45	e1.5	e5.0	e1.0	e4.2
25	10	17	34	28	14	11	e0.69	e0.44	e1.2	e3.0	e0.90	e4.2
26	5.7	17	34	31	15	6.7	e0.68	e0.43	e1.0	e1.0	e0.90	e4.1
27	6.9	17	34	32	14	5.1	e0.67	e0.42	e0.90	e0.90	e0.80	e4.1
28	8.0	19	34	32	14	4.1	e0.66	e0.41	e0.80	e0.80	e0.80	e3.9
29	8.1	19	34	33	---	3.8	e0.65	e0.40	e0.70	e0.70	e0.70	e3.7
30	6.7	18	35	34	---	4.2	e0.64	e0.40	e0.60	e0.68	e0.70	e3.5
31	8.2	---	34	34	---	3.4	---	20	---	e0.64	e0.60	---
TOTAL	401.1	426.4	1032	949	626	10131.3	51.59	36.78	67.09	139.12	77.90	407.30
MEAN	12.94	14.21	33.29	30.61	22.36	326.8	1.720	1.186	2.236	4.488	2.513	13.58
MAX	39	30	35	34	33	1010	4.5	20	21	39	12	110
MIN	1.7	3.1	21	27	14	3.4	0.64	0.40	0.32	0.50	0.60	0.60
AC-FT	796	846	2050	1880	1240	20100	102	73	133	276	155	808

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	73.64	47.96	16.23	23.30	83.41	158.1	13.50	240.2	353.8
MAX	272	321	48.5	53.6	318	411	51.4	577	888
(WY)	2000	1998	1996	1996	2000	1998	1999	2001	1995
MIN	5.36	3.83	0.85	1.57	2.79	8.53	1.72	1.19	2.24
(WY)	1997	1997	1997	1997	1997	1996	2002	2002	2002

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1994 - 2002
ANNUAL TOTAL	33265.65	14345.58	
ANNUAL MEAN	91.14	39.30	131.7
HIGHEST ANNUAL MEAN			216
LOWEST ANNUAL MEAN			39.3
HIGHEST DAILY MEAN	1290	1010	5050
LOWEST DAILY MEAN	0.65	0.32	0.21
ANNUAL SEVEN-DAY MINIMUM	0.91	0.34	0.34
MAXIMUM PEAK FLOW		1170	5300
MAXIMUM PEAK STAGE		7.00	10.85
INSTANTANEOUS LOW FLOW			0.21
ANNUAL RUNOFF (AC-FT)	65980	28450	95440
10 PERCENT EXCEEDS	59	34	835
50 PERCENT EXCEEDS	11	5.4	12
90 PERCENT EXCEEDS	1.7	0.60	1.4

e Estimated

08385522 PECOS RIVER BELOW TAIBAN CREEK NEAR FORT SUMNER, NM

LOCATION.--Lat 34°19'56", long 104°10'48", NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.11, T.1 N., R.26 E., DeBaca 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.

PERIOD OF RECORD.--August 1992 to current year.

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.--Records good except for those estimated and those above 1,000 ft<sup>3</sup>/s, which are fair. Flow partly regulated by Sumner Dam (station 08384000) 23 mi upstream. Diversion for irrigation of about 19,100 acres (1959 determination) upstream from station. Discharge in general represents return flow from irrigated areas in Fort Sumner Irrigation Project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	68	37	51	48	45	78	23	32	18	29	17
2	59	46	40	51	48	44	67	20	29	19	29	19
3	64	38	45	51	48	45	69	22	25	15	28	21
4	62	37	48	51	47	45	70	e20	19	17	28	20
5	66	34	50	50	46	60	55	e21	15	14	29	19
6	60	31	50	49	45	1030	45	23	11	20	e29	18
7	55	30	51	50	46	1140	54	18	9.8	42	e28	16
8	64	29	51	49	46	1150	45	19	10	19	e27	14
9	54	27	50	46	48	1160	48	17	11	17	e26	17
10	50	25	52	45	45	1160	49	19	11	14	e25	238
11	48	23	52	44	40	1160	47	20	9.3	14	e24	166
12	e42	28	52	44	39	1150	43	18	9.6	13	e23	211
13	e40	35	52	44	39	1130	42	17	9.7	22	e22	79
14	e39	36	51	43	39	1100	38	14	9.0	17	21	74
15	e46	38	51	44	56	546	35	17	9.2	30	21	e61
16	43	41	52	43	41	378	34	16	9.9	33	23	e53
17	49	40	52	43	38	110	38	14	11	20	23	e43
18	60	38	50	43	38	92	37	12	11	20	22	38
19	58	37	45	43	42	99	38	12	8.2	107	25	40
20	67	37	50	44	46	153	38	14	137	44	32	37
21	e70	38	50	44	37	140	38	16	53	34	23	35
22	e68	37	50	43	37	137	38	17	28	39	23	33
23	e60	36	49	43	39	126	e36	15	20	83	19	34
24	e38	36	51	43	39	129	e32	15	22	53	17	62
25	e37	35	50	43	38	123	24	16	17	43	15	58
26	e44	36	50	45	40	89	23	15	19	37	15	42
27	e45	38	50	48	46	91	e28	17	21	35	14	46
28	e50	39	50	48	42	82	23	15	23	33	17	36
29	e52	37	50	47	---	76	e21	18	19	33	21	39
30	e51	37	51	49	---	82	22	19	17	31	20	47
31	e56	---	51	50	---	84	---	17	---	31	17	---
TOTAL	1656	1087	1533	1431	1203	12956	1255	536	635.7	967	715	1633
MEAN	53.42	36.23	49.45	46.16	42.96	417.9	41.83	17.29	21.19	31.19	23.06	54.43
MAX	70	68	52	51	56	1160	78	23	137	107	32	238
MIN	37	23	37	43	37	44	21	12	8.2	13	14	14
AC-FT	3280	2160	3040	2840	2390	25700	2490	1060	1260	1920	1420	3240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2002, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	179.2	68.70	32.76	33.63	100.1	191.4	100.4	260.2	390.9	279.5	341.9	171.2
MAX	370	353	58.9	62.6	355	457	497	655	971	680	884	582
(WY)	1994	1998	1996	1996	2000	1998	1993	2001	1995	1993	1994	1998
MIN	53.4	24.5	18.7	14.7	15.1	33.0	40.1	17.3	21.2	31.2	23.1	54.4
(WY)	2002	1997	1997	1997	1993	2001	2001	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1992 - 2002

ANNUAL TOTAL	45532	25607.7		
ANNUAL MEAN	124.7	70.16	178.9	
HIGHEST ANNUAL MEAN			253	1995
LOWEST ANNUAL MEAN			70.2	2002
HIGHEST DAILY MEAN	1410	May 20	1160	Mar 9
LOWEST DAILY MEAN	17	Mar 6	8.2	Jun 19
ANNUAL SEVEN-DAY MINIMUM	18	Feb 10	9.7	Jun 10
MAXIMUM PEAK FLOW			1210	Mar 11
MAXIMUM PEAK STAGE			5.42	Mar 11
INSTANTANEOUS LOW FLOW			6.9	Jun 19
ANNUAL RUNOFF (AC-FT)	90310	50790	129600	
10 PERCENT EXCEEDS	80	70	899	
50 PERCENT EXCEEDS	42	39	52	
90 PERCENT EXCEEDS	20	16	20	

e Estimated

08385630 PECOS RIVER NEAR DUNLAP, NM

LOCATION.--Lat 34°03'52", long 104°18'22", in SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>, 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, and at mile 638.1

PERIOD OF RECORD.--August 1993 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,760 ft above National Geodetic Vertical Datum of 1929, from river-profile map.

REMARKS.--Records fair. Flow partly regulated by Lake Sumner (station 08384000). Diversion for irrigation of about 19,100 acres (1959 determination) upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	48	38	50	55	41	71	17	13	33	9.2	5.6
2	46	65	35	47	49	43	64	19	11	30	33	4.0
3	44	47	36	47	48	51	e53	17	18	56	14	3.4
4	48	35	42	50	47	51	e54	17	15	439	14	4.4
5	47	29	43	47	46	44	60	17	12	99	15	4.3
6	50	28	42	45	43	257	e52	15	10	42	22	3.1
7	48	27	44	45	45	956	52	17	7.5	156	17	2.8
8	40	25	44	46	42	1070	e50	16	4.6	111	15	1.7
9	45	24	46	46	40	1130	47	14	2.5	32	15	1.5
10	44	24	47	42	41	1010	45	14	1.7	27	17	11
11	51	23	52	42	41	1070	42	14	1.4	23	14	445
12	40	22	56	41	37	1130	42	13	1.2	20	12	504
13	38	21	51	40	35	1220	39	14	0.70	19	10	447
14	37	28	48	38	35	1190	38	12	49	19	11	197
15	36	59	49	39	33	750	33	12	10	62	10	98
16	35	54	49	41	55	676	30	11	5.4	33	9.3	73
17	31	41	48	40	43	259	28	12	1.8	31	9.4	53
18	33	37	48	38	35	150	30	10	0.64	21	9.0	45
19	46	33	46	38	34	141	29	9.3	0.19	20	9.3	42
20	46	33	39	38	33	136	30	7.8	1000	72	272	41
21	55	32	45	38	42	150	27	6.8	512	31	54	35
22	61	32	45	40	37	138	32	6.3	144	25	25	29
23	51	32	46	38	35	131	33	8.3	90	53	16	27
24	48	30	48	37	35	113	32	8.9	68	86	11	26
25	33	31	47	37	34	112	29	13	60	27	8.0	46
26	38	29	49	40	37	104	25	13	51	18	6.2	49
27	41	29	48	39	38	80	22	13	46	15	4.2	37
28	46	31	47	42	45	72	23	12	76	15	3.0	41
29	47	49	47	43	---	67	22	13	49	13	17	34
30	43	48	48	46	---	74	20	12	40	14	10	37
31	38	---	46	55	---	69	---	13	---	12	7.9	---
TOTAL	1351	1046	1419	1315	1140	12485	1154	397.4	2301.63	1654	699.5	2347.8
MEAN	43.58	34.87	45.77	42.42	40.71	402.7	38.47	12.82	76.72	53.35	22.56	78.26
MAX	61	65	56	55	55	1220	71	19	1000	439	272	504
MIN	31	21	35	37	33	41	20	6.3	0.19	12	3.0	1.5
AC-FT	2680	2070	2810	2610	2260	24760	2290	788	4570	3280	1390	4660

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2002, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
MEAN	163.7	72.82	32.76	34.81	95.68	191.6	56.76	260.7	381.1	237.0	341.6	163.1
MAX	369	305	49.5	62.6	315	403	120	728	918	514	837	550
(WY)	1994	1998	1996	1996	2000	2002	1999	2001	1995	1998	1994	1998
MIN	43.6	28.0	13.8	14.3	13.3	41.3	35.0	12.8	50.0	53.4	22.6	46.1
(WY)	2002	1996	1997	1994	1997	2001	1995	2002	2001	2002	2002	2000

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1993 - 2002
ANNUAL TOTAL	48845	27310.33	
ANNUAL MEAN	133.8	74.82	170.3
HIGHEST ANNUAL MEAN			243
LOWEST ANNUAL MEAN			74.8
HIGHEST DAILY MEAN	1690	May 26	1770
LOWEST DAILY MEAN	15	Jul 11	0.19
ANNUAL SEVEN-DAY MINIMUM	17	Feb 12	2.8
MAXIMUM PEAK FLOW			6470
MAXIMUM PEAK STAGE			4.67
INSTANTANEOUS LOW FLOW			0.00
ANNUAL RUNOFF (AC-FT)	96880	54170	123400
10 PERCENT EXCEEDS	82	82	782
50 PERCENT EXCEEDS	37	38	50
90 PERCENT EXCEEDS	21	9.8	18

e Estimated

08385643 PECOS RIVER BELOW SIXMILE DRAW NEAR ROSWELL, NM

LOCATION.--Lat 33°51'11", long 104°17'29", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.23, T.5 S., R.25 E., Chaves County, Hydrologic Unit 13060003, on right bank 1.1 mi downstream from confluence of Sixmile Draw, 35 mi northeast of Roswell, and at mi 626.

PERIOD OF RECORD.--October 2001 to September 2002.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair, except for those estimated, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,010 ft<sup>3</sup>/s, June 14, 2002, gage height, 9.11 ft; minimum 0.00 ft<sup>3</sup>/s, no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,010 ft<sup>3</sup>/s, June 14, gage height, 9.11 ft; minimum, 0.00 ft<sup>3</sup>/s, no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	36	e44	40	49	26	132	17	0.05	18	10	0.00
2	21	39	e47	61	47	27	119	14	0.00	15	12	0.00
3	23	40	e49	46	44	25	113	14	0.00	80	22	0.00
4	26	41	e50	65	41	27	e95	14	0.00	539	12	0.00
5	33	33	52	60	41	30	e88	13	0.34	327	25	0.00
6	34	28	e54	67	39	30	e82	13	0.83	44	55	0.00
7	37	25	e55	64	37	638	e81	11	0.52	93	18	0.00
8	38	22	57	65	38	1060	e76	9.3	0.00	108	14	0.00
9	34	20	49	66	36	1170	e68	8.2	0.00	43	7.8	0.00
10	40	20	44	66	33	1230	e60	8.1	0.00	21	6.0	0.00
11	50	20	52	62	34	1090	e55	7.5	0.00	18	5.9	230
12	42	19	50	60	37	1030	e51	6.4	0.00	21	6.1	459
13	36	19	48	58	e35	914	e50	5.8	0.04	17	4.7	506
14	32	19	48	54	e33	1160	e50	4.9	1130	37	2.4	450
15	32	28	49	52	31	1060	e45	4.7	242	24	0.56	193
16	32	58	50	53	28	640	e41	4.2	68	60	0.01	101
17	33	42	50	53	37	524	e37	3.4	32	25	0.16	74
18	32	33	51	51	32	241	e34	3.0	27	16	0.24	75
19	33	29	51	50	29	163	e33	2.6	28	17	0.15	83
20	40	26	52	48	27	135	e32	2.3	755	19	724	87
21	42	26	51	48	27	119	e32	2.0	1530	e24	219	79
22	48	26	53	48	28	122	e31	1.8	420	28	53	72
23	52	26	46	48	26	122	e31	1.6	129	24	45	79
24	46	25	53	44	23	119	30	1.1	75	54	26	69
25	43	24	38	43	23	113	28	1.0	51	66	13	53
26	33	24	52	42	22	120	28	0.86	41	25	9.5	90
27	35	25	46	43	23	116	25	0.72	33	19	7.4	81
28	38	25	40	44	24	108	21	0.56	39	16	4.9	57
29	41	36	52	45	---	120	20	0.44	49	13	0.00	60
30	38	e40	35	48	---	138	20	0.23	24	12	0.00	57
31	33	---	27	55	---	137	---	0.14	---	12	0.00	---
TOTAL	1121	874	1495	1649	924	12554	1608	176.85	4674.78	1835	1303.82	2955.00
MEAN	36.2	29.1	48.2	53.2	33.0	405	53.6	5.70	156	59.2	42.1	98.5
MAX	52	58	57	67	49	1230	132	17	1530	539	724	506
MIN	21	19	27	40	22	25	20	0.14	0.00	12	0.00	0.00
AC-FT	2220	1730	2970	3270	1830	24900	3190	351	9270	3640	2590	5860

WTR YR 2002 TOTAL 31170.45 MEAN 85.4 MAX 1530 MIN 0.00 AC-FT 61830

e Estimated

08386000 PECOS RIVER NEAR ACME, NM

LOCATION.--Lat 33°32'10", long 104°22'34", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--September 1921 to June 1923, July 1937 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder 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.--Records fair except for those estimated, which are poor. Flow regulated by Lake Summer (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 ft<sup>3</sup>/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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	23	16	41	45	26	77	12	0.00	16	0.00	e0.91
2	9.2	17	26	40	42	26	73	11	0.00	14	0.00	e0.77
3	11	18	25	41	42	28	70	9.7	0.00	14	0.00	0.32
4	14	36	21	41	42	28	65	e8.5	0.00	223	0.00	0.00
5	14	35	18	39	42	29	58	e7.7	0.00	420	0.00	0.00
6	15	28	19	41	38	33	60	7.0	0.00	133	0.0	0.00
7	22	23	21	38	37	178	62	5.4	0.00	38	0.00	0.00
8	24	18	23	38	37	617	57	3.9	0.00	62	e0.45	0.00
9	25	15	24	37	36	854	49	2.5	0.00	55	e1.0	0.00
10	20	14	25	38	32	1010	46	2.9	0.00	36	e0.38	0.00
11	23	12	29	37	31	1050	40	2.7	0.00	29	0.00	5.9
12	36	12	35	36	32	1060	38	2.1	0.00	27	0.00	421
13	33	11	37	34	32	1050	36	1.4	0.00	27	0.00	475
14	25	12	38	32	32	1020	36	0.75	672	26	0.00	519
15	20	20	37	31	30	990	32	0.67	207	26	0.00	142
16	14	39	37	31	28	544	30	0.58	74	25	0.00	78
17	14	42	37	31	27	583	26	0.49	22	28	0.00	68
18	14	41	37	33	33	265	25	0.35	9.9	25	0.00	48
19	12	32	36	32	33	209	23	0.24	6.1	24	0.00	37
20	11	28	36	29	28	173	23	0.10	4.1	22	651	32
21	15	26	35	28	27	142	23	0.00	1830	20	357	28
22	20	22	31	29	25	128	23	0.00	465	20	191	25
23	23	17	32	30	26	118	22	0.00	160	18	54	e21
24	26	14	33	29	30	112	22	0.00	80	13	33	e20
25	23	14	35	28	25	111	21	0.00	52	8.5	21	e21
26	22	13	37	28	24	110	22	0.00	40	5.5	16	e23
27	e22	13	36	28	24	103	21	0.00	32	2.5	16	e25
28	e23	17	39	29	24	87	18	0.00	28	1.1	e7.0	e27
29	22	14	38	30	---	76	15	0.00	27	0.46	e1.1	e30
30	23	16	38	35	---	91	14	0.00	28	0.00	e2.6	e32
31	22	---	37	42	---	90	---	0.00	---	0.00	e2.9	---
TOTAL	602.9	642	968	1056	904	10941	1127	79.98	3737.10	1359.06	1354.43	2079.90
MEAN	19.45	21.40	31.23	34.06	32.29	352.9	37.57	2.580	124.6	43.84	43.69	69.33
MAX	36	42	39	42	45	1060	77	12	1830	420	651	519
MIN	5.7	11	16	28	24	26	14	0.00	0.00	0.00	0.00	0.00
AC-FT	1200	1270	1920	2090	1790	21700	2240	159	7410	2700	2690	4130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2002, BY WATER YEAR (WY)

MEAN	149.0	60.06	27.03	26.39	34.56	169.1	197.5	282.9	310.1	313.3	264.9	286.2
MAX	2200	858	236	190	375	595	1217	2680	2186	1611	813	3527
(WY)	1942	1943	1942	1942	2000	1941	1942	1941	1941	1960	1997	1941
MIN	0.000	0.000	0.000	0.000	0.000	0.16	3.58	1.81	0.000	0.19	0.90	0.000
(WY)	1948	1948	1948	1948	1953	1954	1967	1946	1947	1954	1947	1947

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1938 - 2002

ANNUAL TOTAL	33744.18	24851.37	
ANNUAL MEAN	92.45	68.09	177.4
HIGHEST ANNUAL MEAN			964
LOWEST ANNUAL MEAN			56.8
HIGHEST DAILY MEAN	1200	May 23	29500
LOWEST DAILY MEAN	0.00	Jul 11	0.00
ANNUAL SEVEN-DAY MINIMUM	0.30	Aug 25	0.00
MAXIMUM PEAK FLOW			3540
MAXIMUM PEAK STAGE			7.23
INSTANTANEOUS LOW FLOW			1.3
ANNUAL RUNOFF (AC-FT)	66930	49290	128500
10 PERCENT EXCEEDS	93	96	679
50 PERCENT EXCEEDS	23	25	25
90 PERCENT EXCEEDS	6.6	0.00	1.0

e Estimated

a From rating curve extended above 27,000 ft<sup>3</sup>/s.

08386505 RIO RUIDOSO AT RUIDOSO, NM

LOCATION.--Lat 33°20'12", long 105°43'34", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>, sec.19, T.11 S., R.13 E., Lincoln County, Hydrologic Unit 13060008, on right bank at Village of Ruidoso, 2.6 mi to State Road 48, and 6.2 mi west of U.S. Highway 70.

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are fair .

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117 ft<sup>3</sup>/s, July 7, 2000, gage height, 2.53 ft, minimum 0.14 ft<sup>3</sup>/s, Oct. 29, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 68 ft<sup>3</sup>/s, July 30, gage height, 2.28 ft; minimum, 0.48 ft<sup>3</sup>/s, Jan. 20 and 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	1.1	2.0	1.8	1.4	3.1	8.1	5.5	0.88	0.70	16	2.9
2	3.2	1.2	1.8	1.7	1.3	2.4	8.9	5.2	0.84	0.69	14	2.8
3	3.5	1.3	1.9	1.8	1.3	2.4	9.3	4.8	0.81	0.70	18	3.0
4	3.3	1.3	1.9	1.8	1.4	3.0	9.6	4.4	0.67	0.74	21	2.0
5	2.8	1.4	1.8	1.6	1.3	3.0	10	3.9	0.75	0.69	20	2.1
6	2.6	1.4	1.7	1.6	1.3	3.0	11	3.5	0.75	0.65	17	2.3
7	2.6	1.2	1.7	1.6	1.3	2.8	11	3.0	0.91	0.75	17	1.7
8	2.7	1.2	1.6	1.7	1.4	2.8	12	2.6	0.93	1.1	18	2.6
9	2.5	1.3	1.5	1.9	1.3	2.7	10	2.4	0.81	1.2	24	3.4
10	2.7	1.1	2.0	1.9	1.4	3.0	9.9	2.2	0.78	1.3	34	5.9
11	2.9	1.0	1.8	1.8	1.5	3.6	11	1.8	0.78	1.2	27	6.6
12	2.1	1.2	1.5	1.7	1.6	3.7	11	1.8	0.78	1.2	21	5.4
13	2.0	1.2	2.7	1.8	1.7	4.3	12	1.9	0.77	0.89	15	5.8
14	1.9	1.2	2.9	1.6	1.6	4.9	12	1.8	0.81	0.82	13	5.4
15	1.8	1.5	2.9	1.7	e1.7	4.7	13	1.7	0.87	1.0	11	7.1
16	1.8	1.6	2.2	1.6	e1.9	4.4	13	1.6	0.91	1.0	8.7	6.8
17	1.8	1.4	1.8	1.7	e2.0	4.1	12	1.5	0.90	1.3	8.5	5.8
18	1.6	1.1	1.9	1.2	e2.1	4.2	11	1.3	0.86	1.7	7.9	5.5
19	1.6	1.4	1.8	0.90	e2.2	4.3	10	1.4	0.84	2.6	6.4	7.7
20	1.5	1.6	1.8	0.89	e2.3	4.1	9.6	1.5	0.84	2.0	5.3	5.8
21	1.5	1.5	1.8	1.0	e2.4	4.4	8.8	1.4	1.0	2.0	7.4	5.0
22	1.5	1.5	1.8	1.0	2.5	4.8	8.2	1.3	0.90	2.1	4.9	4.6
23	1.5	1.7	1.9	1.0	2.6	5.6	7.7	1.4	0.70	2.5	4.6	4.4
24	1.5	1.6	1.8	0.97	3.2	6.1	7.2	1.3	0.62	2.7	4.0	2.4
25	1.5	1.7	1.8	0.92	3.4	5.9	7.0	1.3	0.66	3.3	3.5	3.1
26	1.5	1.7	1.9	1.1	3.1	5.8	6.9	1.3	0.71	5.9	3.1	3.4
27	1.5	1.5	2.0	1.2	3.4	5.7	6.9	1.2	0.66	5.5	2.9	4.2
28	1.4	1.6	2.1	1.0	3.2	6.2	6.9	1.1	0.81	5.0	3.0	1.8
29	1.3	2.3	1.8	1.1	---	7.1	6.2	1.1	0.85	5.3	3.8	2.0
30	1.3	2.2	1.7	1.1	---	8.8	5.7	0.94	0.81	29	2.9	2.5
31	1.3	---	1.6	0.95	---	7.8	---	0.91	---	19	2.9	---
TOTAL	63.7	43.0	59.4	43.63	55.8	138.7	285.9	67.05	24.21	104.53	365.8	124.0
MEAN	2.055	1.433	1.916	1.407	1.993	4.474	9.530	2.163	0.807	3.372	11.80	4.133
MAX	3.5	2.3	2.9	1.9	3.4	8.8	13	5.5	1.0	29	34	7.7
MIN	1.3	1.0	1.5	0.89	1.3	2.4	5.7	0.91	0.62	0.65	2.9	1.7
AC-FT	126	85	118	87	111	275	567	133	48	207	726	246

CAL YR 2001 TOTAL 2515.2 MEAN 6.891 MAX 43 MIN 1.0 AC-FT 4990  
WTR YR 2002 TOTAL 1375.72 MEAN 3.769 MAX 34 MIN 0.62 AC-FT 2730

e Estimated

08387000 RIO RUIDOSO AT HOLLYWOOD, NM

LOCATION.--Lat 33°19'36", long 105°37'38", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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, 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 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

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.--Records good. 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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	8.4	8.3	8.5	8.6	9.2	20	21	9.8	5.6	5.7	8.5
2	5.8	8.1	8.4	8.7	8.7	9.6	26	21	9.5	5.0	5.8	8.2
3	5.9	8.0	8.4	8.1	9.1	9.0	32	19	9.4	4.6	7.7	8.6
4	5.9	9.4	8.1	9.1	9.3	8.8	32	17	9.3	5.0	6.8	8.3
5	5.9	12	8.0	9.2	9.6	9.1	26	15	9.2	4.8	6.8	8.2
6	5.9	11	7.9	9.4	9.3	9.9	25	13	9.1	4.4	6.7	7.6
7	6.1	9.8	8.0	9.2	8.8	10	19	11	8.9	4.8	7.8	7.4
8	6.4	15	8.0	8.5	11	13	17	10	8.5	4.7	7.2	7.5
9	6.6	12	7.9	9.2	8.4	10	15	10	8.3	4.7	6.3	8.0
10	6.7	12	7.9	8.9	8.6	12	16	10	7.8	5.4	20	8.2
11	6.4	12	7.6	8.3	8.1	12	16	11	7.3	5.6	9.5	8.2
12	6.8	11	7.9	8.3	8.2	11	16	10	6.8	5.6	8.0	8.4
13	6.7	9.6	9.7	8.8	9.2	9.3	15	12	11	5.0	7.3	23
14	6.7	10	9.0	7.8	9.7	9.2	16	15	9.4	5.8	12	20
15	6.5	10	8.9	8.0	8.9	9.0	20	14	11	5.0	25	41
16	6.6	9.9	8.6	8.2	8.4	9.2	24	14	10	5.0	13	14
17	7.4	9.8	8.7	8.0	9.0	9.3	23	14	10	5.1	15	10
18	7.3	9.8	8.1	7.7	9.2	8.2	27	11	10	5.4	9.5	9.8
19	7.0	9.5	7.6	7.9	9.4	7.8	32	11	8.1	5.8	9.6	11
20	7.3	9.6	9.5	8.3	9.2	7.8	32	13	5.8	6.3	7.8	8.7
21	11	9.9	8.9	8.2	8.5	11	28	15	7.5	5.6	7.6	7.9
22	11	9.7	8.8	8.2	8.9	20	23	13	8.8	5.4	8.7	7.0
23	9.3	10	8.7	8.3	9.4	25	19	13	6.2	11	12	7.3
24	9.7	10	8.5	8.0	9.7	27	17	11	5.6	6.3	10	7.1
25	8.3	11	8.7	8.0	9.4	28	17	12	10	5.6	9.7	7.1
26	7.9	9.9	8.0	8.3	9.6	31	17	12	8.0	5.1	9.4	8.0
27	7.6	10	8.8	8.3	12	32	17	12	6.7	5.0	9.2	7.7
28	11	9.8	8.6	8.6	11	31	17	10	8.7	7.1	8.7	7.3
29	9.9	9.7	8.5	9.0	---	24	18	11	6.4	6.4	8.7	7.3
30	9.2	9.3	8.6	8.7	---	19	20	11	5.8	5.8	8.7	7.1
31	8.5	---	8.7	8.6	---	19	---	10	---	5.6	8.8	---
TOTAL	233.2	306.2	261.3	262.3	259.2	460.4	642	402	252.9	172.5	299.0	308.4
MEAN	7.523	10.21	8.429	8.461	9.257	14.85	21.40	12.97	8.430	5.565	9.645	10.28
MAX	11	15	9.7	9.4	12	32	32	21	11	11	25	41
MIN	5.8	8.0	7.6	7.7	8.1	7.8	15	10	5.6	4.4	5.7	7.0
AC-FT	463	607	518	520	514	913	1270	797	502	342	593	612

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2001, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	19.99	16.56	20.81	16.37	20.00	31.42	40.19	34.92	18.81	18.61	36.26	24.65								
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	7.52	7.43	6.59	7.30	5.81	6.91	6.63	5.81	5.96	5.56	8.25	6.45								
(WY)	2001	1982	1982	2000	2000	2000	2000	2000	1982	2001	1983	2000								

## SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR
ANNUAL TOTAL	3364.5	3859.4						
ANNUAL MEAN	9.193	10.57						
HIGHEST ANNUAL MEAN			24.92					
LOWEST ANNUAL MEAN			49.7					1987
HIGHEST DAILY MEAN			9.37					2000
LOWEST DAILY MEAN	62	41	1130	41	Sep 15	1130	Dec 20	1984
ANNUAL SEVEN-DAY MINIMUM	4.6	4.7	1.9	4.4	Jul 6	1.9	Aug 27	1994
MAXIMUM PEAK FLOW	4.9	4.7	2.4	4.7	Jul 3	2.4	Aug 24	1994
MAXIMUM PEAK STAGE		252	2120	252	Sep 15	2120	Aug 11	1984
INSTANTANEOUS LOW FLOW		2.99	10.05	2.99	Sep 15	10.05	Jun 17	1965
ANNUAL RUNOFF (AC-FT)	6670	7660	0.30	0.30	Jan 1	0.30	Jan 1	1962
10 PERCENT EXCEEDS	11	17	52	17		52		
50 PERCENT EXCEEDS	7.2	8.9	15	8.9		15		
90 PERCENT EXCEEDS	5.8	5.9	7.8	5.9		7.8		

08387000 RIO RUIDOSO AT HOLLYWOOD, NM--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	5.8	6.2	6.9	6.6	5.6	5.2	3.9	3.5	4.6	13	7.3
2	6.7	5.6	6.1	6.4	6.8	6.5	5.7	3.9	3.3	4.0	11	8.4
3	6.3	5.8	6.3	6.2	6.8	6.0	5.9	4.3	3.2	3.7	13	6.4
4	7.0	6.0	6.1	6.7	7.3	7.0	5.9	5.6	3.1	3.4	13	5.7
5	6.2	5.7	5.8	6.7	6.6	7.0	6.5	5.4	3.2	3.2	14	5.6
6	5.9	5.5	5.6	6.5	5.1	6.3	6.3	5.4	3.4	3.1	13	5.6
7	6.1	5.6	5.7	6.4	5.6	4.9	7.5	5.1	3.9	3.1	16	6.0
8	6.1	5.5	5.7	6.2	5.4	4.5	8.0	4.8	4.0	3.3	10	5.4
9	6.0	5.4	5.3	6.5	5.4	5.7	6.2	4.8	3.0	4.1	21	8.9
10	6.2	5.3	5.7	5.9	5.1	6.6	5.2	4.6	3.0	3.9	27	7.7
11	6.7	5.2	6.1	5.9	6.0	6.5	5.3	4.2	2.9	5.4	21	13
12	5.9	5.2	6.0	5.3	5.8	5.2	5.6	4.3	2.9	5.8	15	6.0
13	5.8	5.2	5.8	5.5	5.3	5.6	5.6	4.1	2.8	4.1	10	6.1
14	6.0	5.5	6.1	5.4	5.4	6.0	6.0	4.2	3.4	3.4	7.6	5.4
15	5.7	6.4	6.3	5.6	5.3	4.8	6.6	4.3	3.1	3.3	7.6	8.8
16	5.5	6.6	6.3	5.5	5.4	5.2	6.2	4.3	2.8	4.5	5.4	7.8
17	5.6	6.0	6.0	6.2	5.5	5.3	6.3	4.0	2.8	5.6	6.0	6.1
18	5.6	5.6	6.1	6.7	6.3	5.2	5.3	3.8	2.7	5.6	6.4	6.0
19	5.5	5.5	5.9	5.7	5.9	5.0	5.4	4.0	2.6	9.3	5.5	7.5
20	5.1	5.4	6.0	6.4	5.5	4.9	5.4	4.0	2.6	5.7	6.6	6.2
21	4.8	5.0	6.2	6.3	6.1	5.3	5.6	3.8	3.0	5.7	10	6.0
22	4.8	5.0	6.2	6.5	5.5	6.7	5.5	3.8	2.9	5.1	7.1	5.7
23	4.8	7.6	5.9	6.1	6.2	7.1	5.4	3.6	3.3	5.8	7.8	6.2
24	4.9	6.2	6.5	6.3	6.3	7.8	5.0	3.7	2.9	5.4	7.8	6.6
25	5.0	5.9	6.1	5.7	6.4	7.4	5.3	3.8	2.7	6.8	6.8	6.5
26	5.1	5.9	6.4	6.0	6.5	4.6	5.4	3.8	2.9	7.9	7.0	7.3
27	5.4	5.8	6.5	6.5	7.2	4.5	6.3	3.8	2.8	10	6.5	8.6
28	5.9	5.8	6.4	6.3	6.4	4.4	6.3	3.8	3.9	7.7	7.0	6.7
29	5.7	5.9	6.5	7.1	---	4.6	5.5	3.8	3.8	7.0	7.6	6.8
30	5.8	6.3	6.4	9.1	---	7.9	4.0	3.7	3.2	24	6.6	7.4
31	5.8	---	6.5	7.2	---	5.6	---	3.6	---	17	6.1	---
TOTAL	178.5	172.2	188.7	195.7	167.7	179.7	174.4	130.2	93.6	191.5	322.4	207.7
MEAN	5.758	5.740	6.087	6.313	5.989	5.797	5.813	4.200	3.120	6.177	10.40	6.923
MAX	7.0	7.6	6.5	9.1	7.3	7.9	8.0	5.6	4.0	24	27	13
MIN	4.8	5.0	5.3	5.3	5.1	4.4	4.0	3.6	2.6	3.1	5.4	5.4
AC-FT	354	342	374	388	333	356	346	258	186	380	639	412

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2002, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	19.31	16.04	20.11	15.89	19.34	30.20	38.55	33.45	18.06	18.02	35.03	23.80									
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	1986	1986	1986	1984	1988									
MIN	5.76	5.74	6.09	6.31	5.81	5.80	5.81	4.20	3.12	5.56	8.25	6.45									
(WY)	2002	2002	2002	2002	2000	2002	2002	2002	2002	2001	1983	2000									

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1982 - 2002

ANNUAL TOTAL	3598.1	2202.3	
ANNUAL MEAN	9.858	6.034	24.02
HIGHEST ANNUAL MEAN			49.7 1987
LOWEST ANNUAL MEAN			6.03 2002
HIGHEST DAILY MEAN	41 Sep 15	27 Aug 10	1130 Dec 20 1984
LOWEST DAILY MEAN	4.4 Jul 6	2.6 Jun 19	1.9 Aug 27 1994
ANNUAL SEVEN-DAY MINIMUM	4.7 Jul 3	2.8 Jun 16	2.4 Aug 24 1994
MAXIMUM PEAK FLOW		74 Aug 7	2120 Aug 11 1984
MAXIMUM PEAK STAGE		2.30 Aug 7	10.05 Jun 17 1965
INSTANTANEOUS LOW FLOW			0.30 Jan 1 1962
ANNUAL RUNOFF (AC-FT)	7140	4370	17400
10 PERCENT EXCEEDS	17	7.6	50
50 PERCENT EXCEEDS	8.3	5.8	14
90 PERCENT EXCEEDS	5.5	3.7	7.1

RIO GRANDE BASIN

08387000 RIO RUIDOSO AT HOLLYWOOD, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-67, 1987-97, August 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
AUG 29...	0910	8.9	612	8.5	107	8.2	983	24.0	15.5	<.04	E.10	E.03	<.008

Date	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
AUG 29...	<.06	<.02	<.06

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value



08389055 RIO BONITO NEAR LINCOLN, NM

LOCATION.--Lat 33°31'28", long 105°28'52", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, sec.15, T.9 S., R.15 E., Lincoln County, Hydrologic Unit 13060008, on right bank 1.2 mi downstream from culvert under US Highway 380, 5.0 mi north of Lincoln, and 5.6 mi east of Capitan.

PERIOD OF RECORD.--April 1999 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,977 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for those estimated, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 983 ft<sup>3</sup>/s, June 29, 2000, gage height, 4.68 ft; minimum .08 ft<sup>3</sup>/s, Dec. 19, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 387 ft<sup>3</sup>/s, July 27, gage height, 3.54 ft; minimum, .08 ft<sup>3</sup>/s, Dec. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.14	0.26	0.28	0.17	0.28	0.22	0.17	0.13	0.09	0.10	0.10	0.10
2	0.16	0.24	0.23	0.19	0.29	0.22	0.16	0.11	0.09	0.10	0.11	0.12
3	0.16	0.22	0.28	0.19	0.30	0.22	0.16	0.11	0.09	0.09	0.11	0.11
4	0.16	0.21	0.27	0.23	0.41	0.22	0.16	0.11	0.10	0.10	0.11	0.11
5	0.15	0.19	0.25	0.17	0.50	0.23	0.17	0.11	0.10	0.10	0.12	0.10
6	0.15	0.20	0.25	0.16	0.59	0.23	0.15	0.10	0.10	0.10	0.14	0.10
7	0.15	0.19	0.34	0.15	0.30	0.28	0.15	0.10	0.11	0.11	0.17	0.10
8	0.16	0.18	0.33	0.14	0.20	0.28	0.15	0.10	0.11	0.11	0.17	0.10
9	0.17	0.19	0.49	0.23	e0.24	0.29	0.15	0.11	0.10	0.12	0.17	0.11
10	0.20	0.20	0.36	0.22	e0.26	0.30	0.13	0.11	0.10	0.12	0.14	0.12
11	0.20	0.20	0.19	0.22	e0.30	0.33	0.13	0.10	0.12	0.11	0.14	0.12
12	0.20	0.20	0.23	0.18	e0.31	0.23	0.12	0.09	0.12	0.10	0.13	0.12
13	0.20	0.15	0.20	0.24	e0.34	0.22	0.13	0.09	0.11	0.10	0.13	0.12
14	0.20	0.10	0.19	0.21	0.38	0.21	0.13	0.10	0.12	0.12	0.12	0.11
15	0.24	0.10	0.20	0.27	0.33	0.22	0.14	0.09	0.12	0.14	0.12	0.12
16	0.27	0.11	0.17	0.35	0.25	0.24	0.15	0.09	0.12	0.15	0.10	0.11
17	0.25	0.14	0.14	0.46	0.18	0.24	0.15	0.09	0.12	0.16	0.11	0.10
18	0.23	0.21	0.10	0.45	0.16	0.24	0.15	0.09	0.12	0.17	0.12	0.10
19	0.18	0.22	0.08	0.34	0.15	0.27	0.15	0.09	0.12	0.17	0.13	0.10
20	0.26	0.23	0.22	0.35	0.16	0.30	0.15	0.09	0.13	0.20	0.13	0.10
21	0.31	0.23	0.10	0.32	0.13	0.23	0.15	0.09	0.13	0.21	0.15	0.10
22	0.30	0.21	0.13	0.32	0.10	0.16	0.15	0.09	0.14	0.20	0.14	0.10
23	0.34	0.26	0.25	0.29	0.10	0.15	0.15	0.09	0.12	0.18	0.13	0.10
24	0.33	0.26	0.29	0.31	0.10	0.15	0.16	0.09	0.11	0.66	0.14	0.09
25	0.30	0.30	0.34	0.31	0.10	0.15	0.15	0.09	0.11	0.70	0.13	0.09
26	0.28	0.29	0.29	0.29	0.10	0.15	0.16	0.09	0.11	0.21	0.12	0.09
27	0.25	0.29	0.22	0.25	0.11	0.15	0.15	0.09	0.11	23	0.11	0.10
28	0.28	0.30	0.26	0.24	0.15	0.16	0.15	0.09	0.11	4.2	0.12	0.10
29	0.27	0.30	0.20	0.23	---	0.17	0.14	0.09	0.10	0.11	0.11	0.10
30	0.24	0.29	0.17	0.20	---	0.20	0.13	0.09	0.10	0.73	0.10	0.10
31	0.24	---	0.19	0.18	---	0.17	---	0.10	---	0.10	0.10	---
TOTAL	6.97	6.47	7.24	7.86	6.82	6.83	4.44	3.01	3.33	32.77	3.92	3.14
MEAN	0.22	0.22	0.23	0.25	0.24	0.22	0.15	0.097	0.11	1.06	0.13	0.10
MAX	0.34	0.30	0.49	0.46	0.59	0.33	0.17	0.13	0.14	23	0.17	0.12
MIN	0.14	0.10	0.08	0.14	0.10	0.15	0.12	0.09	0.09	0.09	0.10	0.09
AC-FT	14	13	14	16	14	14	8.8	6.0	6.6	65	7.8	6.2

CAL YR 2001 TOTAL 571.90 MEAN 1.57 MAX 21 MIN 0.08 AC-FT 1130  
WTR YR 2002 TOTAL 92.80 MEAN 0.25 MAX 23 MIN 0.08 AC-FT 184

e Estimated



## 08390600 TWO RIVERS RESERVOIR NEAR ROSWELL, NM

LOCATION.--08390610 Rio Hondo Reservoir: Lat 33°17'55", long 104°43'20", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>; Rio Hondo, 963 mi<sup>2</sup>; Rocky Arroyo, 64 mi<sup>2</sup>.

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 Jan. 1990, between elevations 3,957.0 ft, sill of outlet gate, and 3,980.0 ft. Capacity of Rocky Arroyo Reservoir, 12,860 acre-ft, from capacity table dated January 1990, between elevations 3,945.0 ft, 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.

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 in 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 NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup> (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 fair except for those estimated, 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).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.3
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26	0.00	0.00	16
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31	0.00	0.00	e0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.00	0.00	e0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	e0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.88	0.00	0.00	23.30
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.963	0.000	0.000	0.777
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31	0.00	0.00	16
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	117	0.00	0.00	46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964	1964
MEAN	12.29	10.51	13.77	14.48	12.41	12.89	18.64	14.79	8.146	6.836	22.76	22.65
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1964	1964	1964	1964	1964	1964	1964	1967	1971	1974	1975	1973

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1964 - 2002

ANNUAL TOTAL	113.87	82.18	
ANNUAL MEAN	0.312	0.225	
HIGHEST ANNUAL MEAN			14.19
LOWEST ANNUAL MEAN			0.001
HIGHEST DAILY MEAN	85	Apr 30	31 Jun 15
LOWEST DAILY MEAN	0.00	Jan 1	0.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00 Oct 1
MAXIMUM PEAK FLOW			659 Jul 29 1965
MAXIMUM PEAK STAGE			4.91 Jul 29 1965
INSTANTANEOUS LOW FLOW			0.00 Oct 1 1963
ANNUAL RUNOFF (AC-FT)	226	163	10280
10 PERCENT EXCEEDS	0.00	0.00	49
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

08393610 RIO HONDO NEAR ROSWELL, NM

LOCATION.--Lat 33°24'30", long 104°28'18", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>NM<sup>1</sup>/<sub>4</sub> sec.35, T.10 S., R.24 E., Chaves County, Hydrologic Unit 13060008, on right bank 0.25 mi upstream from Red Bridge Road, 0.60 mi upstream from Berrendo Creek, 1.1 mi north on State Road 265 (intersection of Red Bridge Road and U.S. Highway 380), and at Pecos River mile 588.

DRAINAGE.--2,900 mi<sup>2</sup>, 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 poor. Flow regulated by Two Rivers Reservoir (08390600) 25.0 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, 4,350 ft<sup>3</sup>/s, May 1, 1999, gage height, 15.96 ft; minimum 1.3 ft<sup>3</sup>/s, Feb. 16, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,860 ft<sup>3</sup>/s, June 28, gage height, 13.93 ft; minimum, 2.6 ft<sup>3</sup>/s, July 9, 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	4.0	9.8	11	9.7	5.2	4.0	4.1	3.9	4.8	4.3	8.6
2	4.3	3.1	10	11	9.8	5.4	3.9	4.1	3.8	4.8	4.4	8.6
3	4.4	3.2	10	11	9.7	5.3	3.9	3.9	3.8	7.0	4.5	8.8
4	3.8	19	11	11	9.8	5.2	3.9	3.8	3.8	5.3	4.7	8.5
5	3.1	7.3	12	11	9.8	5.2	3.9	3.8	3.8	4.8	4.8	8.6
6	3.2	7.9	16	11	9.8	5.1	3.9	4.1	3.9	19	4.9	8.8
7	3.2	8.3	11	11	9.7	5.0	3.8	3.9	3.8	4.2	4.9	8.6
8	3.1	7.4	9.3	11	9.6	4.9	3.8	3.9	3.9	3.6	5.1	8.9
9	3.0	8.0	9.4	11	9.8	4.7	3.7	4.0	4.3	2.6	5.1	9.3
10	3.1	8.3	9.7	11	9.5	4.5	3.8	3.9	3.7	2.6	7.6	9.6
11	3.2	8.4	10	11	9.4	4.7	3.8	4.1	2.9	2.7	5.0	23
12	2.9	7.8	10	11	9.6	4.2	3.9	3.8	2.8	2.8	4.7	14
13	2.9	8.5	9.6	10	9.5	4.9	4.1	3.4	2.8	2.8	4.9	9.5
14	2.9	25	11	10	9.5	4.7	4.3	3.3	6.6	2.8	4.9	12
15	3.0	18	11	10	9.5	4.8	4.3	3.4	22	2.8	4.9	8.7
16	3.0	11	11	10	9.3	4.9	4.1	3.3	5.6	2.9	5.0	5.7
17	3.2	9.1	10	10	9.2	4.8	4.3	3.3	3.4	2.9	5.0	5.6
18	3.1	9.2	11	10	6.3	4.8	4.1	3.2	3.3	2.9	5.1	5.5
19	3.1	9.2	11	10	5.0	9.9	4.2	3.2	3.3	3.5	5.2	5.7
20	3.1	9.2	9.5	10	5.1	4.2	4.4	3.3	5.0	3.7	35	5.6
21	3.1	9.2	10	10	5.0	3.9	4.6	3.1	4.1	3.7	10	4.9
22	3.1	9.1	10	10	4.8	3.9	4.7	3.2	3.7	3.8	8.4	4.7
23	3.0	9.3	11	9.9	4.9	4.0	4.6	3.2	3.8	3.9	9.0	4.4
24	3.1	9.2	9.9	7.5	4.9	4.0	4.6	3.2	3.8	3.8	8.4	4.3
25	3.1	9.1	11	7.7	5.0	4.1	4.7	3.2	3.9	3.9	8.3	4.2
26	3.1	9.3	9.9	9.8	5.1	4.0	4.6	3.2	4.2	3.9	8.2	4.2
27	3.1	9.2	10	10	5.1	4.0	4.4	3.1	20	4.0	8.1	3.9
28	3.2	9.7	10	9.8	5.0	4.0	4.5	3.1	89	4.2	8.2	3.7
29	4.8	9.5	11	9.6	---	4.0	4.4	3.5	6.9	4.3	8.4	3.5
30	4.4	9.7	11	22	---	23	4.4	4.2	5.1	4.3	8.3	3.4
31	4.4	---	10	12	---	4.5	---	4.1	---	4.2	8.4	---
TOTAL	104.3	285.2	326.1	330.3	219.4	165.8	125.6	110.9	240.9	132.5	223.7	224.8
MEAN	3.365	9.507	10.52	10.65	7.836	5.348	4.187	3.577	8.030	4.274	7.216	7.493
MAX	4.8	25	16	22	9.8	23	4.7	4.2	89	19	35	23
MIN	2.9	3.1	9.3	7.5	4.8	3.9	3.7	3.1	2.8	2.6	4.3	3.4
AC-FT	207	566	647	655	435	329	249	220	478	263	444	446

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002	1997	1998	1999	2000	2001	2002
MEAN	9.041	8.929	8.657	9.820	6.557	7.173	6.335	9.446	9.014	6.954	7.948	5.371
MAX	13.7	12.2	10.5	10.7	9.52	11.2	7.94	28.0	16.5	13.8	23.1	7.49
(WY)	1999	2001	2002	2002	2001	2001	1998	1999	1997	1999	1997	2002
MIN	3.36	6.04	4.72	8.95	4.23	5.33	4.19	3.58	5.72	4.04	3.24	3.70
(WY)	2002	1999	2000	1999	1999	1998	2002	2002	1998	1998	1999	1998

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR WATER YEARS 1997 - 2002
ANNUAL TOTAL	2647.8	2489.5	
ANNUAL MEAN	7.254	6.821	7.784
HIGHEST ANNUAL MEAN			9.58 1999
LOWEST ANNUAL MEAN			6.66 1998
HIGHEST DAILY MEAN	78 Mar 7	89 Jun 28	516 May 1 1999
LOWEST DAILY MEAN	1.7 May 15	2.6 Jul 9	1.6 Feb 12 1998
ANNUAL SEVEN-DAY MINIMUM	2.6 May 13	2.7 Jul 9	1.7 Aug 26 1999
MAXIMUM PEAK FLOW		1860 Jun 28	6390 May 1 1999
MAXIMUM PEAK STAGE		13.93 Jun 28	15.96 May 1 1999
INSTANTANEOUS LOW FLOW			1.1 Jan 30 1998
ANNUAL RUNOFF (AC-FT)	5250	4940	5640
10 PERCENT EXCEEDS	11	11	11
50 PERCENT EXCEEDS	5.5	4.9	5.4
90 PERCENT EXCEEDS	3.7	3.2	3.2

08395500 PECOS RIVER NEAR LAKE ARTHUR, NM

LOCATION.--Lat 32°59'21", long 104°19'17", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, 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. Flow regulated by Lake Sumner (station 08384000), 180 mi upstream, since Aug. 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1937, reached a stage of 21.77 ft, discharge, 51,500 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	45	72	79	99	81	167	49	17	71	22	16
2	24	45	72	78	94	85	144	47	16	67	20	15
3	23	51	71	81	94	85	125	45	15	63	19	15
4	23	53	74	81	94	84	119	41	17	61	19	15
5	24	56	78	80	97	83	117	39	17	61	18	14
6	26	69	75	80	97	84	107	37	16	304	16	14
7	26	67	74	80	96	85	103	37	16	360	16	13
8	26	62	73	81	94	187	105	36	14	181	17	13
9	26	63	73	81	92	614	105	36	13	115	14	14
10	28	63	75	81	88	827	98	34	13	132	16	14
11	28	62	76	80	87	951	90	33	14	115	18	19
12	30	61	77	80	86	1010	86	32	15	88	15	1170
13	31	63	74	80	85	1030	83	30	14	67	13	2110
14	32	62	75	79	91	1050	79	29	17	53	11	1650
15	37	61	76	78	93	997	79	28	213	49	10	752
16	38	84	77	78	91	959	77	27	175	45	11	340
17	37	86	76	76	91	515	74	26	125	41	9.5	196
18	36	82	77	78	89	539	72	24	75	40	8.7	132
19	38	78	77	79	88	277	69	23	52	39	8.5	102
20	37	80	78	81	85	257	66	22	40	45	8.3	84
21	37	75	79	80	88	240	60	23	37	36	217	68
22	37	73	76	79	84	207	56	22	965	32	135	62
23	37	73	75	78	82	180	57	21	383	31	112	56
24	37	69	73	77	81	185	58	21	274	31	71	51
25	39	68	72	76	79	171	56	21	170	33	46	47
26	42	66	72	75	80	159	54	21	122	30	36	43
27	44	65	70	76	80	156	53	20	97	28	29	40
28	44	68	71	77	78	148	53	19	92	32	24	38
29	45	68	74	79	---	144	51	19	146	30	21	39
30	44	70	74	80	---	144	50	19	90	26	20	47
31	44	---	77	81	---	184	---	19	---	25	17	---
TOTAL	1044	1988	2313	2449	2483	11718	2513	900	3270	2331	1018.0	7189
MEAN	33.68	66.27	74.61	79.00	88.68	378.0	83.77	29.03	109.0	75.19	32.84	239.6
MAX	45	86	79	81	99	1050	167	49	965	360	217	2110
MIN	23	45	70	75	78	81	50	19	13	25	8.3	13
AC-FT	2070	3940	4590	4860	4930	23240	4980	1790	6490	4620	2020	14260

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2002, BY WATER YEAR (WY)

	MEAN	241.4	125.7	95.26	94.51	90.42	184.6	215.3	314.7	325.9	330.8	276.1	355.5
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	0.42	1.30	
(WY)	1965	1968	1967	1965	1965	1967	1967	1975	1977	1954	1964	1964	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1938 - 2002

ANNUAL TOTAL	46496	39216.0	
ANNUAL MEAN	127.4	107.4	221.4
HIGHEST ANNUAL MEAN			1314
LOWEST ANNUAL MEAN			62.2
HIGHEST DAILY MEAN	1250	May 27	2110
LOWEST DAILY MEAN	14	Jul 15	8.3
ANNUAL SEVEN-DAY MINIMUM	17	Jul 9	9.6
MAXIMUM PEAK FLOW			2910
MAXIMUM PEAK STAGE			11.44
INSTANTANEOUS LOW FLOW			21.90
ANNUAL RUNOFF (AC-FT)	92220	77780	160400
10 PERCENT EXCEEDS	164	162	662
50 PERCENT EXCEEDS	69	69	73
90 PERCENT EXCEEDS	24	17	16

a From rating curve extended above 16,000 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 21.77 ft.  
b Also occurred in 1947, 1954, 1962 and 1964.

08396500 PECOS RIVER NEAR ARTESIA, NM

LOCATION.--Lat 32°50'27", long 104°19'23", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, 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 August 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 good except for those estimated, which are fair. Considerable flow regulation by Lake Sumner (station 08384000) since Aug.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.

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 ft<sup>3</sup>/s. The second highest flood occurred July 25, 1905, discharge downstream from Rio Penasco, 50,300 ft<sup>3</sup>/s, based on gain in storage and spill from Lake McMillan. The floods in Aug. 1893 and Oct. 1904 damaged McMillan Dam and washed out Avalon Dam.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	38	e55	80	90	69	172	47	13	65	15	12
2	19	e39	e59	81	106	72	145	46	11	54	13	11
3	17	e40	e60	83	101	74	126	43	9.8	53	13	9.5
4	16	e58	67	85	101	74	123	40	9.8	55	11	9.2
5	16	e60	73	85	103	73	121	35	11	62	11	9.2
6	18	e59	72	85	102	73	115	33	11	129	9.8	9.1
7	20	e67	70	84	101	74	107	32	9.9	285	9.6	9.0
8	21	61	68	85	99	79	106	32	9.9	203	11	9.0
9	22	57	65	86	93	442	110	32	9.2	120	11	9.0
10	23	60	68	86	91	728	103	32	9.0	101	13	9.0
11	24	56	71	86	88	931	95	30	8.9	109	17	9.0
12	24	55	74	86	86	936	89	28	9.2	88	16	224
13	27	56	73	86	83	983	85	27	9.3	63	11	1620
14	27	58	72	85	86	1020	80	26	11	48	10	1510
15	31	54	76	84	93	1020	78	26	74	41	9.5	579
16	35	63	77	83	92	1050	76	25	301	37	9.2	243
17	35	79	78	81	90	629	73	24	163	31	9.3	153
18	35	79	77	83	89	552	71	24	90	27	9.0	106
19	34	73	79	85	84	299	68	21	55	29	8.8	e92
20	36	76	78	86	82	239	65	19	37	30	8.9	e83
21	34	73	76	87	81	229	62	18	35	33	90	e74
22	e33	69	76	86	81	218	56	20	624	26	292	e66
23	31	67	73	84	77	207	55	20	605	21	164	59
24	30	66	72	81	75	201	57	19	274	20	129	53
25	31	62	69	82	72	190	56	17	172	21	78	51
26	34	63	69	79	69	169	56	17	118	26	55	47
27	41	58	69	78	71	163	53	17	90	22	37	44
28	41	e60	68	80	70	151	51	16	78	18	29	41
29	41	e58	73	82	---	148	51	14	104	28	25	40
30	40	e57	74	84	---	146	49	14	95	22	18	40
31	38	---	75	84	---	157	---	13	---	18	17	---
TOTAL	892	1821	2206	2592	2456	11396	2554	807	3057.0	1885	1160.1	5230.0
MEAN	28.77	60.70	71.16	83.61	87.71	367.6	85.13	26.03	101.9	60.81	37.42	174.3
MAX	41	79	79	87	106	1050	172	47	624	285	292	1620
MIN	16	38	55	78	69	69	49	13	8.9	18	8.8	9.0
AC-FT	1770	3610	4380	5140	4870	22600	5070	1600	6060	3740	2300	10370

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2002, BY WATER YEAR (WY)

MEAN	244.9	134.1	105.5	104.7	100.5	189.2	215.0	352.3	371.9	328.0	264.7	352.6
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	0.77	0.065	0.27
(WY)	1965	1968	1967	1965	1972	1981	1967	1975	1977	1954	1964	1964

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR

ANNUAL TOTAL	44742	FOR 2002 WATER YEAR		36056.1	WATER YEARS 1937 - 2002	
ANNUAL MEAN	122.6			98.78	230.8	
HIGHEST ANNUAL MEAN					1378	
LOWEST ANNUAL MEAN					64.8	
HIGHEST DAILY MEAN		1180	May 23	1620	Sep 13	44300
LOWEST DAILY MEAN		12	Jul 15	8.8	Aug 19	0.00
ANNUAL SEVEN-DAY MINIMUM		14	Aug 30	9.0	Sep 5	0.00
MAXIMUM PEAK FLOW				1700	Sep 14	a51500
MAXIMUM PEAK STAGE				10.17	Sep 14	14.70
INSTANTANEOUS LOW FLOW						0.00
ANNUAL RUNOFF (AC-FT)	88750			71520	167200	
10 PERCENT EXCEEDS	170			155	656	
50 PERCENT EXCEEDS	65			65	79	
90 PERCENT EXCEEDS	21			11	17	

e Estimated

a 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
NOV 27...	1115	56	5.8	5.9	678	10.3	99	8.1	7100	4.5	7.5	2000	511	
MAR 05...	0830	73	4.4	3.9	685	10.6	96	8.0	9140	8.0	5.0	2400	639	
JUN 27...	0850	92	1000	610	673	6.7	92	8.0	3700	26.0	24.5	1000	316	
AUG 29...	1430	26	60	58	681	8.3	125	8.3	5110	32.0	29.5	1300	361	
Date	Time	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV 27...	164	6.79	9	875	162	151	181	--	1570	.8	11.8	1590	4820	
MAR 05...	187	6.67	12	1300	151	145	175	--	2160	1.1	10.1	1990	6380	
JUN 27...	58.5	5.92	5	400	154	78	93	--	667	.46	10.0	912	2420	
AUG 29...	90.4	7.39	8	646	74	66	77	1	1040	.71	8.5	1110	3300	
Date	Time	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/100 ML) (31673)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
NOV 27...	.48	.80	.80	.54	1.30	.090	.04	.02	.05	--	E400k	E19k	<3	
MAR 05...	.02	.20	.50	.06	.50	<.010	<.02	<.01	.06	87	E22k	--	<1	
JUN 27...	.03	.40	1.4	.10	.60	.030	.32	<.01	.03	>8000k	170	--	<2	
AUG 29...	.01	.50	.40	.03	<.02	<.010	<.02	<.01	.07	--	--	--	<3	
Date	Time	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)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)
NOV 27...	<.10	E2	29	<.20	340	<.10	1.0	1.03	5.9	<50	E.12	5.1	<.01	
MAR 05...	1.20	<2	23	E.05	370	E.02	<.8	1.33	6.1	E5	1.03	19.6	<.01	
JUN 27...	.26	2	60	<.10	180	<.07	<.8	.52	5.5	<30	<.20	.7	.01	
AUG 29...	.30	<13	136	<.20	310	<.10	<.8	.83	4.4	<10	<.20	3.3	<.01	

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	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)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (MG/L) (70331)	SEDI-MENT, SUS-PENDEED (MG/L) (80154)					
NOV 27...	4.2	<.20	2	<2	<3	6	7.14	77	54					
MAR 05...	6.8	4.41	<2	3	<1	7	7.98	98	385					
JUN 27...	3.0	<.10	2	2	<2	5	2.80	99	725					
AUG 29...	3.6	2.73	<14	<2	<3	9	4.13	99	500					
Date	Time	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (82666)	ACETO-CHLOR, WATER, FLTRD REC (49260)	ALA-CHLOR, DISS, REC (46342)	ALPHA BHC, DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, FLTRD REC (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (82673)	BUTYL-ATE, WATER, DISS, REC (04028)	CAR-BARYL, WATER, FLTRD 0.7 U GF, REC (82680)	CARBO-FURAN, WATER, FLTRD 0.7 U GF, REC (82674)	CHLOR-PYRIFOS, DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (04041)	DCPA, WATER, FLTRD 0.7 U GF, REC (82682)	
MAR 05...	0830	<.006	<.006	<.004	<.005	.009	<.010	<.002	<.041	<.020	<.005	<.018	<.003	
AUG 29...	1430	<.006	<.006	<.004	<.005	E.005n	<.010	<.002	<.041	<.020	<.005	<.018	<.003	
Date	Time	DEETHYL ATRA-ZINE, WATER, DISS, REC (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD 0.7 U GF, REC (82677)	EPTC, WATER, FLTRD 0.7 U GF, REC (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (82663)	ETHO-PROP, WATER, FLTRD 0.7 U GF, REC (82672)	FONOFOFOS, WATER, DISS, REC (04095)	LINDANE, DIS-SOLVED (UG/L) (39341)	LIN-WATER, FLTRD 0.7 U GF, REC (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL-AZIN-PHOS, WAT FLT 0.7 U GF, REC (82686)	METHYL-PARA-THION, WAT FLT 0.7 U GF, REC (82667)
MAR 05...	E.005	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	
AUG 29...	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	.049	<.050	<.006	
Date	Time	METO-LACHLOR, WATER, DISSOLV (UG/L) (39415)	METRI-BUZIN, SENCOR, WATER, DISSOLV (UG/L) (82630)	MOL-INATE, WATER, FLTRD 0.7 U GF, REC (82671)	NAPROP-AMIDE, WATER, FLTRD 0.7 U GF, REC (82684)	SI-MAZINE, WATER, DISS, REC (04035)	TEBU-THIURON, WATER, FLTRD 0.7 U GF, REC (82670)	TER-BACIL, WATER, FLTRD 0.7 U GF, REC (82665)	TER-BUFOS, WATER, FLTRD 0.7 U GF, REC (82675)	TER-BUTHYL-AZINE, WATER, DISS, REC (04022)	THIO-BENCARB, WATER, FLTRD 0.7 U GF, REC (82681)	TRIAL-LATE, WATER, FLTRD 0.7 U GF, REC (82678)	TRI-FLUR-ALIN, WAT FLT 0.7 U GF, REC (82661)	PROPA-CHLOR, WATER, DISS, REC (04024)
MAR 05...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01n	<.004	<.010	
AUG 29...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01n	<.004	<.010	
Date	Time	PRO-PANIL, WATER, FLTRD 0.7 U GF, REC (82679)	PRO-PARGITE, WATER, FLTRD 0.7 U GF, REC (82685)	SI-MAZINE, WATER, DISS, REC (04035)	TEBU-THIURON, WATER, FLTRD 0.7 U GF, REC (82670)	TER-BACIL, WATER, FLTRD 0.7 U GF, REC (82665)	TER-BUFOS, WATER, FLTRD 0.7 U GF, REC (82675)	TER-BUTHYL-AZINE, WATER, DISS, REC (04022)	THIO-BENCARB, WATER, FLTRD 0.7 U GF, REC (82681)	TRIAL-LATE, WATER, FLTRD 0.7 U GF, REC (82678)	TRI-FLUR-ALIN, WAT FLT 0.7 U GF, REC (82661)			
MAR 05...	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009				
AUG 29...	<.011	<.02	<.005	<.02	<.034	<.02	--	<.005	<.002	<.009				

Remark codes used in this report:  
 < -- Less than  
 > -- Greater than  
 E -- Estimated value  
 U -- Analyzed for, not detected

Value qualifier codes used in this report:  
 k -- Counts outside acceptable range  
 n -- Below the laboratory reporting level

08397600 RIO PENASCO NEAR DUNKEN, NM

LOCATION.--Lat 32°52'55", long 105°10'40", in SE 1/4 NE 1/4 sec.35, T.16 S., R. 17 E., Chaves County, Hydrologic Unit 13060010, located on downstream left end of bridge abutment on U.S. Highway 24, 0.1 mi south of U.S. Highway 82, and 5 mi north of Dunken.

DRAINAGE AREA.--583 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1952 to September 1999 (annual maximum only). February 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,290 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,900 ft<sup>3</sup>/s, June 30, 2000, gage height, 13.50 ft; minimum, 1.0 ft<sup>3</sup>/s, July 24, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,140 ft<sup>3</sup>/s, Sept. 12, gage height, 11.91 ft; minimum, 1.3 ft<sup>3</sup>/s, June 28 and 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	23	29	33	20	15	18	7.7	2.7	4.4	7.8	33
2	16	23	28	29	12	10	18	8.7	6.5	3.9	17	29
3	5.9	17	27	26	15	19	14	7.9	13	7.8	52	30
4	9.0	16	27	28	24	21	14	8.8	7.8	23	40	31
5	12	17	27	24	25	21	13	13	12	35	33	32
6	9.7	24	28	22	25	21	12	10	9.7	11	24	34
7	11	23	27	21	25	20	7.1	7.3	7.4	13	30	36
8	12	22	27	20	26	19	7.2	11	7.2	25	19	38
9	12	22	27	20	25	20	7.9	11	7.6	24	25	30
10	15	21	27	21	24	20	8.1	12	5.9	10	34	32
11	13	22	27	22	22	14	7.1	4.8	6.0	9.2	23	116
12	15	21	28	23	18	4.0	3.9	6.0	8.6	7.9	17	393
13	21	22	28	24	7.0	4.8	11	8.4	6.0	6.5	16	177
14	25	23	28	23	9.0	8.9	11	8.1	8.6	6.6	15	28
15	14	26	27	25	17	12	9.1	12	8.6	6.3	15	26
16	14	27	27	25	16	6.5	9.4	7.6	9.5	7.0	16	23
17	29	30	28	25	17	6.8	5.5	8.5	12	2.4	16	20
18	26	28	28	25	18	6.7	5.3	12	11	6.5	17	19
19	22	28	28	25	19	4.2	5.3	16	5.4	5.4	13	20
20	25	29	28	27	21	6.2	5.7	16	13	5.8	8.7	21
21	31	29	28	27	14	6.9	7.3	9.7	33	7.9	7.2	22
22	30	29	29	22	14	5.7	8.5	7.9	17	7.8	11	25
23	28	28	29	19	21	12	12	8.0	15	5.0	11	27
24	24	30	29	25	21	11	13	7.1	14	5.6	12	25
25	23	30	29	25	20	11	12	11	12	5.6	14	17
26	20	30	29	25	13	11	16	14	13	6.4	12	17
27	19	30	30	24	12	12	14	14	6.9	8.5	8.0	14
28	25	31	33	21	17	9.9	8.1	16	4.9	8.7	5.9	13
29	22	30	33	18	---	9.6	7.9	13	2.7	11	6.6	16
30	24	29	32	23	---	13	6.3	9.8	6.1	6.2	73	16
31	22	---	32	22	---	18	---	10	---	8.2	43	---
TOTAL	593.6	760	884	739	517.0	380.2	297.7	317.3	293.1	301.6	642.2	1360
MEAN	19.1	25.3	28.5	23.8	18.5	12.3	9.92	10.2	9.77	9.73	20.7	45.3
MAX	31	31	33	33	26	21	18	16	33	35	73	393
MIN	5.9	16	27	18	7.0	4.0	3.9	4.8	2.7	2.4	5.9	13
AC-FT	1180	1510	1750	1470	1030	754	590	629	581	598	1270	2700

CAL YR 2001 TOTAL 8294.3 MEAN 22.7 MAX 83 MIN 3.2 AC-FT 16450  
WTR YR 2002 TOTAL 7085.7 MEAN 19.4 MAX 393 MIN 2.4 AC-FT 14050

## RIO GRANDE BASIN

08397620 RIO PENASCO NEAR HOPE, NM

LOCATION.--Lat 32°50'12", long 105°03'59", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.11, T.17 S., R. 18 E., Chaves County, Hydrologic Unit 13060010, located 3.0 mi southwest of the intersection of U.S. Highway 13 and Highway 82, on Scharbauer Ranch, and 11 mi above the Hope Retard Dam, near Hope.

DRAINAGE AREA.--675 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--February 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,931 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Small diversions for irrigation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,730 ft<sup>3</sup>/s, June 30, 2000, gage height, 12.86 ft; minimum, 0.0 ft<sup>3</sup>/s, no flow many day.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,980 ft<sup>3</sup>/s, Sept. 12, gage height, 12.26 ft; minimum 0.0 ft<sup>3</sup>/s, no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	4.3	12	17	8.8	3.6	0.00	0.00	0.00	0.00	0.00	4.3
2	2.5	4.7	12	15	5.0	0.96	0.00	0.00	0.00	0.00	3.8	3.1
3	0.14	3.3	11	13	4.5	2.6	0.00	0.00	0.00	0.00	13	1.9
4	0.00	2.6	11	13	8.9	4.6	0.00	0.00	0.00	0.08	11	1.3
5	0.00	2.8	12	11	10	3.9	0.00	0.00	0.00	27	7.9	1.1
6	0.00	4.8	12	9.5	11	4.0	0.00	0.00	0.00	1.5	4.7	1.0
7	0.00	5.2	12	9.5	10	3.4	0.00	0.00	0.00	7.7	5.6	1.0
8	0.00	5.1	12	8.6	9.9	2.8	0.00	0.00	0.00	4.6	2.6	0.77
9	0.00	5.4	13	8.4	9.7	2.5	0.00	0.00	0.00	7.5	3.1	0.99
10	0.09	5.3	13	8.7	9.4	3.1	0.00	0.00	0.00	2.1	5.2	0.08
11	0.67	5.4	13	9.1	7.9	2.7	0.00	0.00	0.00	1.0	5.0	21
12	0.42	5.5	13	9.4	7.8	0.33	0.00	0.00	0.00	0.07	2.3	691
13	2.2	5.3	13	9.8	2.3	0.00	0.00	0.00	0.00	0.00	1.2	543
14	4.1	6.0	14	9.8	1.7	0.00	0.00	0.00	0.00	0.00	0.70	23
15	2.0	8.0	14	10	3.9	0.00	0.00	0.00	0.00	0.00	0.13	19
16	1.6	8.5	13	11	4.7	0.00	0.00	0.00	0.00	0.00	0.10	17
17	4.4	9.5	14	11	4.4	0.00	0.00	0.00	0.00	0.00	0.24	14
18	4.8	8.9	13	11	4.6	0.00	0.00	0.00	0.00	0.00	0.00	12
19	3.7	8.8	14	11	4.4	0.00	0.00	0.00	0.00	0.00	0.00	12
20	3.7	9.9	14	11	5.6	0.00	0.00	0.00	0.00	0.00	0.00	12
21	6.4	10	13	12	3.7	0.00	0.00	0.00	0.00	0.00	0.00	12
22	5.8	10	13	10	2.8	0.00	0.00	0.00	0.00	0.00	0.00	12
23	6.0	9.8	14	7.3	4.0	0.00	0.00	0.00	0.00	0.00	0.00	13
24	4.6	11	14	10	4.6	0.00	0.00	0.00	0.00	0.00	0.00	13
25	4.1	11	14	10	5.1	0.00	0.00	0.00	0.00	0.00	0.00	8.9
26	3.9	12	14	11	2.0	0.00	0.00	0.00	0.00	0.00	0.00	8.6
27	2.4	12	15	10	2.5	0.00	0.00	0.00	0.00	0.00	0.00	7.0
28	6.3	13	16	9.5	2.6	0.00	0.00	0.00	0.00	0.00	0.00	6.2
29	5.1	19	16	6.5	---	0.00	0.00	0.00	0.00	0.00	0.00	6.8
30	4.1	13	15	9.1	---	0.00	0.00	0.00	0.00	0.00	70	7.7
31	5.0	---	16	9.5	---	0.00	---	0.00	---	0.00	19	---
TOTAL	86.72	240.1	415	321.7	161.8	34.49	0.00	0.00	0.00	51.55	155.57	1474.74
MEAN	2.80	8.00	13.4	10.4	5.78	1.11	0.000	0.000	0.000	1.66	5.02	49.2
MAX	6.4	19	16	17	11	4.6	0.00	0.00	0.00	27	70	691
MIN	0.00	2.6	11	6.5	1.7	0.00	0.00	0.00	0.00	0.00	0.00	0.08
AC-FT	172	476	823	638	321	68	0.00	0.00	0.00	102	309	2930
CAL YR 2001	TOTAL 2670.55	MEAN 7.32	MAX 75	MIN 0.00	AC-FT 5300							
WTR YR 2002	TOTAL 2941.67	MEAN 8.06	MAX 691	MIN 0.00	AC-FT 5830							

08398500 RIO PENASCO AT DAYTON, NM

LOCATION.--Lat 32°44'36", long 104°24'49", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--April 1951 to February 2000, May 2000 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. No flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about Sept. 22, 1941, reached a stage of about 9 ft, from floodmark, previous site and datum, discharge not determined. Peak discharge at discontinued station "near Dunken" (station 08397600), about 60 mi upstream, was 70,000 ft<sup>3</sup>/s, determined in 1956, from rating curve extended above a slope-area measurement of 36,000 ft<sup>3</sup>/s, for peak of Oct. 6 or 7, 1954.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.8	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	126	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.5	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.3
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	156.04	5.58	129.35
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.034	0.180	4.312
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	126	5.5	70
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	310	11	257

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

	4.779	1.432	0.000	0.000	0.000	0.000	0.032	1.194	11.62	8.396	14.88	10.12
MEAN	4.779	1.432	0.000	0.000	0.000	0.000	0.032	1.194	11.62	8.396	14.88	10.12
MAX	201	72.8	0.016	0.000	0.000	0.000	0.77	41.0	528	221	328	372
(WY)	1955	1984	1975	1952	1952	1952	1999	1965	1986	1968	1966	1974
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1952	1952	1952	1952	1952	1952	1951	1952	1951	1954	1951	1951

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1951 - 2002

ANNUAL TOTAL	0.00	290.97	
ANNUAL MEAN	0.000	0.797	4.550
HIGHEST ANNUAL MEAN			43.4
LOWEST ANNUAL MEAN			0.000
HIGHEST DAILY MEAN	0.00	Jan 1	126 Jul 6
LOWEST DAILY MEAN	0.00	Jan 1	0.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00 Oct 1
MAXIMUM PEAK FLOW			618 Jul 6
MAXIMUM PEAK STAGE			4.75 Jul 6
INSTANTANEOUS LOW FLOW			0.00 Oct 1
ANNUAL RUNOFF (AC-FT)	0.00	577	3300
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## RIO GRANDE BASIN

08399500 PECOS RIVER (KAISER CHANNEL) NEAR LAKEWOOD, NM

LOCATION.--Lat 32°41'22", long 104°17'53", in NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> 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 Lakewood, 12 mi southeast of Artesia, and at mi 492.1.

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1954, published as "Kaiser Lake-McMillan Channel."

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 poor. Considerable flow regulation by Lake Summer (station 08384000) since Aug. 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 ft<sup>3</sup>/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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	36	69	82	78	65	197	54	11	e80	14	2.6
2	11	39	70	84	107	66	177	53	9.7	51	6.1	e0.56
3	11	43	72	85	102	70	154	50	4.7	47	5.3	e0.29
4	4.8	51	72	90	105	72	140	44	3.5	49	3.2	e0.15
5	3.2	55	77	90	106	73	137	39	4.1	60	3.1	e0.02
6	4.2	56	80	86	105	72	135	33	10	77	3.0	0.00
7	11	75	76	86	104	74	124	29	8.5	304	2.9	0.00
8	13	67	73	86	102	77	122	30	6.1	318	3.0	0.00
9	13	58	70	87	96	477	127	31	5.8	220	3.1	0.00
10	13	62	70	87	90	771	124	33	5.6	168	4.0	0.00
11	14	59	74	85	88	905	118	31	4.0	191	9.9	0.00
12	22	58	75	84	85	948	114	29	3.1	166	12	55
13	24	57	77	83	83	967	110	27	3.1	128	5.2	1120
14	24	61	73	83	81	957	105	23	6.0	101	3.0	1190
15	24	61	76	80	91	946	99	23	10	83	2.9	666
16	40	61	77	79	92	956	97	23	374	72	2.8	309
17	41	97	79	77	90	688	93	22	278	63	2.6	230
18	40	97	77	77	89	538	88	22	177	55	e2.2	174
19	36	88	76	79	84	337	85	20	105	50	e2.0	136
20	37	84	79	79	81	258	81	14	69	52	e1.9	111
21	37	84	83	81	78	243	76	13	58	62	e1.7	98
22	34	77	79	80	81	225	70	13	e580	52	386	83
23	34	73	78	77	75	204	63	16	e560	39	235	e80
24	32	71	75	74	72	192	65	14	287	33	191	74
25	30	67	74	75	70	192	67	13	231	25	125	71
26	35	65	71	73	66	178	67	14	160	38	82	69
27	42	62	71	71	67	172	62	15	e120	36	58	64
28	46	61	69	72	67	167	59	15	e100	29	38	57
29	45	65	71	74	---	165	58	13	e122	27	22	53
30	44	65	75	78	---	168	56	10	e110	42	16	50
31	40	---	74	79	---	170	---	11	---	22	4.8	---
TOTAL	816.2	1955	2312	2503	2435	11393	3070	777	3426.2	2740	1251.7	4693.62
MEAN	26.3	65.2	74.6	80.7	87.0	368	102	25.1	114	88.4	40.4	156
MAX	46	97	83	90	107	967	197	54	580	318	386	1190
MIN	3.2	36	69	71	66	65	56	10	3.1	22	1.7	0.00
AC-FT	1620	3880	4590	4960	4830	22600	6090	1540	6800	5430	2480	9310

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2002, BY WATER YEAR (WY)

MEAN	138	90.9	78.7	80.6	80.5	160	147	249	246	269	246	193
MAX	695	339	272	307	332	417	489	1220	748	886	698	800
(WY)	1955	1998	1987	1987	2000	1987	1987	1973	1995	1960	1994	1988
MIN	0.000	26.1	29.2	31.4	25.3	19.2	8.12	15.3	1.86	0.041	0.000	0.000
(WY)	1965	1968	1965	1965	1972	1971	1967	1964	1977	1990	1964	1964

## SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1950 - 2002

ANNUAL TOTAL	45612.0	37372.72	
ANNUAL MEAN	125	102	165
HIGHEST ANNUAL MEAN			353
LOWEST ANNUAL MEAN			64.1
HIGHEST DAILY MEAN	1190	May 28	2920
LOWEST DAILY MEAN	2.6	Sep 5	0.00
ANNUAL SEVEN-DAY MINIMUM	3.0	Aug 30	0.00
MAXIMUM PEAK FLOW			1460
MAXIMUM PEAK STAGE			11.08
INSTANTANEOUS LOW FLOW			0.00
ANNUAL RUNOFF (AC-FT)	90470	74130	119700
10 PERCENT EXCEEDS	196	183	580
50 PERCENT EXCEEDS	70	70	62
90 PERCENT EXCEEDS	12	5.0	11

e Estimated





08401450 BRANTLEY LAKE NEAR CARLSBAD, NM

LOCATION.--Lat 32°32'48", long 104°22'43", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--August 1988 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,202.5 ft above National Geodetic Vertical Datum (NGVD) of 1929 (levels by Bureau of Reclamation). Sept. 1, 2001, elevations referenced to the NAVD 1988. Elevation of gage as of Sept. 1, 2001, is 3,204.19 ft above NAVD 1988.

REMARKS.--Lake is formed by a concrete and earthfill dam on Pecos River. Storage began August 31, 1988. Capacity, 348,540 acre-ft, from capacity table dated June 2001, between elevations 3,205.0 ft and 3,305.19 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, 30,080 acre-ft, Apr. 13, elevation, 3,251.87 ft; minimum, 6,240 acre-ft, Sept. 8, elevation, 3,235.69 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 0700 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13420	9500	7870	8570	11610	13840	29250	24600	17130	12310	10500	8630
2	13230	9540	7950	8680	11700	13870	29440	24580	17000	11830	10220	8570
3	12900	9560	8030	8820	11840	13840	29540	24560	16920	11490	10080	8500
4	12320	9600	8120	8940	11970	13870	29590	24480	16840	11270	9840	7960
5	11920	9690	8200	9100	12180	13920	29660	24460	16760	11480	9870	7430
6	11600	9380	8270	9180	12240	13990	29760	24390	16670	11790	9850	6950
7	11470	9060	8640	9290	12350	14020	29810	24040	16020	11970	9840	6490
8	11080	9640	8430	9430	12490	14060	29930	23690	15450	12390	9820	6240
9	10810	9630	8500	9550	12600	14100	29910	23240	14920	12720	9790	6290
10	10640	9720	8560	9660	12680	15300	29960	22790	14420	12850	9750	6310
11	10550	9770	8620	9760	12770	16580	29980	22630	14090	12910	9740	6360
12	10550	9840	8660	9860	12900	18040	30060	22410	13790	13020	9710	6310
13	10620	9900	8750	9960	12940	19500	30080	22010	13400	13100	9690	6730
14	10640	10000	8820	10040	13020	21010	29420	21610	13100	13110	9650	9100
15	10620	9340	8860	10160	13110	22510	29100	21080	12770	13070	9350	11350
16	10610	8920	8960	10270	13210	23900	28720	20770	12520	13070	8950	13570
17	10610	8450	9040	10350	13300	25370	28270	20500	12630	13030	8560	13820
18	10620	8060	9110	10420	13370	26160	27780	20020	12560	12980	8310	13860
19	10630	7670	9170	10520	13480	27110	27410	19640	12000	12950	7910	13900
20	10640	7270	8290	10600	13480	27410	26930	19390	11420	12900	7760	13830
21	10650	6900	7510	10660	13670	27540	26720	19040	11540	12860	7800	13790
22	10660	6930	7520	10770	13560	27730	26540	18600	11590	12810	7840	13780
23	10680	7110	7680	10880	13610	27940	26180	18190	12730	12780	8370	13690
24	10670	8280	7810	10960	13650	28130	25580	17910	13570	12710	8590	13640
25	10400	7390	7920	11040	13690	28200	25400	17580	13830	12640	8730	13630
26	10000	7480	8030	11120	13750	28290	25050	17570	13680	12590	8820	13300
27	9570	7560	8090	11190	13730	28460	24900	17500	13460	12570	8800	13020
28	9500	7980	8160	11280	13790	28600	24620	17450	13030	12300	8790	12680
29	9500	7750	8250	11340	---	28670	24650	17390	12670	11810	8760	12300
30	9510	7800	8350	11400	---	28960	24650	17320	12330	11400	8690	11960
31	9500	---	8470	11530	---	29080	---	17180	---	11010	8660	---
MAX	13420	10000	9170	11530	13790	29080	30080	24600	17130	13110	10500	13900
MIN	9500	6900	7510	8570	11610	13840	24620	17180	11420	11010	7760	6240
(+)	3239.50	3237.68	3238.43	3241.37	3243.15	3251.46	3249.50	3245.44	3242.03	3240.92	3238.64	3241.73
(++)	-3980	-1700	+670	+3060	+2260	+15290	-4430	-7470	-4850	-1320	-2350	+3300
CAL YR 2001	MAX 26470	MIN 5510	(++) -8110									
WTR YR 2002	MAX 30080	MIN 6240	(++) -1520									

(+) Elevation in feet, at end of month.  
(++) Change in contents, in acre-ft.





## 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 mi<sup>2</sup>, 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 ft<sup>3</sup>/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 ft<sup>3</sup>/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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	46	28	28	24	29	35	28	33	202	249	22
2	153	25	28	26	24	29	35	29	33	216	166	21
3	250	24	28	27	24	28	35	29	32	251	118	145
4	309	25	28	27	24	28	35	29	31	290	88	287
5	221	95	28	27	24	29	35	28	33	685	24	285
6	162	122	29	28	23	29	35	97	166	341	23	281
7	187	25	29	28	24	28	35	188	309	34	23	226
8	177	24	29	28	24	27	34	208	303	29	23	109
9	152	24	29	27	24	29	35	229	297	29	22	26
10	111	24	28	29	23	29	35	173	237	29	23	25
11	61	24	28	29	24	30	35	118	184	30	23	25
12	28	24	27	28	25	30	35	145	203	29	23	25
13	28	24	28	29	24	30	175	198	222	29	23	27
14	28	179	28	28	24	29	279	249	224	30	71	27
15	28	363	29	28	25	32	238	234	220	29	178	958
16	28	360	28	28	25	33	256	187	219	29	211	121
17	28	355	28	28	24	33	275	178	220	29	210	32
18	28	351	28	27	26	33	272	211	313	29	209	28
19	29	349	280	27	26	35	272	190	394	29	160	29
20	29	344	548	27	26	34	198	180	266	29	78	29
21	29	295	388	27	27	34	128	230	31	29	25	29
22	29	33	30	26	27	34	165	238	27	29	24	29
23	27	27	27	26	27	34	225	197	27	29	24	29
24	71	26	27	26	26	32	246	158	27	29	24	29
25	197	27	27	25	27	34	227	100	100	30	24	95
26	273	27	27	25	28	34	169	27	190	30	24	178
27	215	27	27	25	28	34	128	33	238	100	22	177
28	104	28	26	25	28	34	87	33	266	190	22	202
29	55	27	26	24	---	34	30	33	251	214	22	228
30	55	27	27	25	---	39	29	33	226	237	23	134
31	55	---	27	24	---	35	---	34	---	260	22	---
TOTAL	3206	3351	1995	832	705	982	3818	4044	5322	3575	2201	3858
MEAN	103.4	111.7	64.35	26.84	25.18	31.68	127.3	130.5	177.4	115.3	71.00	128.6
MAX	309	363	548	29	28	39	279	249	394	685	249	958
MIN	27	24	26	24	23	27	29	27	27	29	22	21
AC-FT	6360	6650	3960	1650	1400	1950	7570	8020	10560	7090	4370	7650

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)								
MEAN	200.7	82.95	69.54	59.16	64.95	84.50	249.2	196.3	226.0	253.6	258.4	208.0
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	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98
(WY)	1965	1989	1995	1995	1993	1965	2002	1946	1946	1976	1947	1964

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1939 - 2002

ANNUAL TOTAL	48391	33889		
ANNUAL MEAN	132.6	92.85		
HIGHEST ANNUAL MEAN			163.2	
LOWEST ANNUAL MEAN			395	1955
HIGHEST DAILY MEAN	548	Dec 20	39000	Aug 23 1966
LOWEST DAILY MEAN	21	Jan 29	0.00	Dec 21 1988
ANNUAL SEVEN-DAY MINIMUM	23	Jan 23	0.46	Dec 15 1988
MAXIMUM PEAK FLOW			4200	Sep 15 1966
MAXIMUM PEAK STAGE			7.74	Sep 15 1966
INSTANTANEOUS LOW FLOW			20	Nov 23 1988
ANNUAL RUNOFF (AC-FT)	95980	67220	118200	
10 PERCENT EXCEEDS	318	249	346	
50 PERCENT EXCEEDS	84	29	92	
90 PERCENT EXCEEDS	25	24	22	

a From rating curve extended above 25,000 ft<sup>3</sup>/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<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 and at 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 Mar. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	175	198	0.00
2	212	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	216	144	92
3	271	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	213	116	272
4	263	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69	24	283
5	196	0.00	0.00	0.00	0.00	0.00	0.00	0.00	125	3.9	0.02	272
6	180	0.00	0.00	0.00	0.00	0.00	0.00	104	269	0.00	0.00	187
7	140	0.00	0.00	0.00	0.00	0.00	0.00	213	281	0.00	0.00	130
8	120	0.00	0.00	0.00	0.00	0.00	79	236	245	0.00	0.00	82
9	110	0.00	0.00	0.00	0.00	0.00	222	227	210	0.00	0.00	1.6
10	84	0.00	0.00	0.00	0.00	0.00	282	178	200	0.00	0.00	0.02
11	20	0.00	0.00	0.00	0.00	0.00	291	150	218	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	276	151	230	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	262	231	215	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	211	251	215	0.00	100	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	235	195	207	0.00	213	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	244	183	154	112	211	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	265	192	92	258	192	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	263	210	0.63	268	168	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	253	146	0.00	184	113	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	166	179	0.00	157	20	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	125	211	0.00	55	0.00	107
22	0.00	0.00	0.00	0.00	0.00	0.00	195	190	0.00	0.00	0.00	215
23	0.00	0.00	0.00	0.00	0.00	0.00	197	149	0.00	0.00	0.00	264
24	89	0.00	0.00	0.00	0.00	0.00	218	156	0.00	0.00	0.00	261
25	232	0.00	0.00	0.00	0.00	0.00	178	52	132	101	0.00	273
26	225	0.00	0.00	0.00	0.00	0.00	113	0.02	211	207	0.00	267
27	151	0.00	0.00	0.00	0.00	0.00	104	0.00	270	199	0.00	199
28	82	0.00	0.00	0.00	0.00	0.00	24	0.00	240	209	0.00	189
29	78	0.00	0.00	0.00	---	0.00	0.00	0.00	237	227	0.00	163
30	73	0.00	0.00	0.00	---	0.00	0.00	0.00	192	239	1.2	47
31	41	---	0.00	0.00	---	0.00	---	0.00	---	243	0.01	---
TOTAL	2653.0	0.00	0.00	0.00	0.00	0.00	4203.0	3604.02	3943.63	3135.9	1500.23	3304.62
MEAN	85.58	0.000	0.000	0.000	0.000	0.000	140.1	116.3	131.5	101.2	48.39	110.2
MAX	271	0.00	0.00	0.00	0.00	0.00	291	251	281	268	213	283
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	5260	0.00	0.00	0.00	0.00	0.00	8340	7150	7820	6220	2980	6550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	85.84	3.996	7.092	10.61	21.43	73.20	244.0	137.1	163.5	200.7	200.8	141.4
MEAN	85.84	3.996	7.092	10.61	21.43	73.20	244.0	137.1	163.5	200.7	200.8	141.4
MAX	218	112	172	120	208	227	386	274	297	391	463	298
(WY)	2000	1955	1947	1956	1950	1940	1943	2000	1942	1940	1943	1939
MIN	0.000	0.000	0.000	0.000	0.000	0.000	140	6.58	0.000	0.000	2.81	0.000
(WY)	1953	1942	1941	1942	1941	1948	2002	1953	1953	1976	1981	1964

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1939 - 2002

ANNUAL TOTAL	35984.0	22344.40	
ANNUAL MEAN	98.59	61.22	106.7
HIGHEST ANNUAL MEAN			174
LOWEST ANNUAL MEAN			51.8
HIGHEST DAILY MEAN	394	Jun 3	526
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			356
MAXIMUM PEAK STAGE			3.28
INSTANTANEOUS LOW FLOW			0.00
ANNUAL RUNOFF (AC-FT)	71370	44320	77280
10 PERCENT EXCEEDS	270	223	292
50 PERCENT EXCEEDS	70	0.00	64
90 PERCENT EXCEEDS	0.00	0.00	0.00

08403800 LAKE AVALON NEAR CARLSBAD, NM

LOCATION.--Lat 32°29'27", long 104°15'05", in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, 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 with satellite telemetry. 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 Jan. 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, 3,680 acre-ft, July 7-14, gage height, 19.50 ft; minimum, 619 acre-ft, Nov. 23 and 24, gage height, 15.10 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1400	1460	848	1520	2350	2790	3180	1270	1330	1270	848	1460
2	1270	1520	907	1590	2350	2790	3180	1270	1400	1270	966	1460
3	1090	1590	907	1590	2420	2790	3180	1330	1400	1270	1030	1150
4	1090	1590	1030	1660	2420	2790	3180	1330	1460	1590	1030	966
5	1210	1660	1090	1720	2420	2790	3180	1330	1460	2350	1150	966
6	1150	1860	1150	1720	2420	2790	3270	1400	1210	3430	1150	966
7	1090	1990	1150	1790	2490	2870	3270	1400	1030	3680	1150	1210
8	1150	1990	1210	1790	2490	2870	3350	1210	1030	3680	1210	1330
9	1270	1990	1210	1860	2490	2870	3110	1210	1090	3680	1210	1400
10	1330	1990	1270	1860	2490	2870	2640	1150	1270	3680	1210	1400
11	1330	2060	1270	1860	2570	2870	2130	1090	1270	3680	1210	1400
12	1400	2060	1330	1920	2570	2870	1590	966	1150	3680	1210	1460
13	1700	2060	1400	1920	2570	2870	1090	966	1090	3680	1270	1460
14	1400	2060	1460	1920	2570	2870	1030	848	1090	3680	1270	1520
15	1400	1860	1460	1990	2640	2870	1090	848	1090	3590	1150	1590
16	1460	1720	1520	1990	2640	2950	1030	966	1150	3590	1030	3270
17	1460	1660	1520	1990	2640	2950	1030	907	1270	3180	1030	3350
18	1520	1590	1590	2060	2640	2950	1030	907	1520	2720	1030	3350
19	1520	1520	1590	2060	2720	2950	1030	848	1400	2280	1150	3350
20	1590	1460	1460	2060	2720	3030	1030	848	1400	1990	1210	3350
21	1590	1330	1460	2130	2720	3030	1030	848	1400	1720	1330	3270
22	1660	966	1210	2130	2720	3030	966	848	1400	1720	1330	3030
23	1660	619	1270	2200	2720	3030	907	1030	1400	1720	1330	2570
24	1720	619	1270	2200	2720	3110	907	1030	1400	1720	1330	2060
25	1590	675	1330	2200	2720	3110	966	1030	1400	1720	1400	1590
26	1460	675	1330	2200	2720	3110	1030	1090	1330	1460	1400	1270
27	1590	675	1400	2280	2790	3110	1070	1150	1210	1090	1400	1150
28	1660	732	1400	2280	2790	3110	1150	1150	1150	966	1400	1090
29	1660	732	1460	2280	---	3110	1210	1210	1210	907	1400	1090
30	1590	790	1460	2350	---	3110	1270	1270	1210	848	1400	1270
31	1460	---	1520	2350	---	3180	---	1330	---	848	1460	---
MAX	1720	2060	1590	2350	2790	3180	3350	1400	1520	3680	1460	3350
MIN	1090	619	848	1520	2350	2790	907	848	1030	848	848	966
(+)	3173.50	3172.40	3173.60	3174.80	3175.40	3175.90	3173.20	3173.30	3173.10	3272.50	3173.50	3173.20
(++)	+60	-670	+730	+830	+440	+390	-1910	+60	-120	+362	+612	-190

CAL YR 2001 MAX 3430 MIN 619 (++) -1070  
WTR YR 2002 MAX 3680 MIN 619 (++) -130

(+) Elevation in feet, at end of month.  
(++) Change in contents, in acre-ft.

08404000 PECOS RIVER BELOW AVALON DAM, NM

LOCATION.--Lat 32°28'55", long 104°15'47", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.14, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank 4,800 ft downstream from Avalon Dam, 4.5 mi northwest of Carlsbad, and at mile 466.3.

DRAINAGE AREA.--18,080 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1907 (published as "at Avalon"), June 1951 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,130 ft above National Geodetic Vertical Datum of 1929, from topographic map. Jan. 1906 to Mar. 1907, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--Records good except for those estimated, which are poor. 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 ft<sup>3</sup>/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 ft<sup>3</sup>/s, at site 6.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.61	3.2	3.1	2.6	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.13	3.1	3.5	2.3	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	e3.1	3.4	2.3	0.0	0.0	1.9	0.0	0.0
4	0.0	0.0	0.0	0.0	3.3	3.2	2.1	0.0	0.0	3.3	0.0	0.0
5	0.0	0.0	0.0	0.0	3.1	3.2	1.7	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	3.0	3.2	1.9	0.0	0.0	0.39	0.0	0.0
7	0.0	0.0	0.0	0.0	2.9	3.2	1.8	0.0	0.0	1.3	0.0	0.0
8	0.0	0.0	0.0	0.0	3.0	3.3	1.7	0.0	0.0	1.1	0.0	0.0
9	0.0	0.0	0.0	0.0	3.4	3.4	1.6	0.0	0.0	0.77	0.0	0.0
10	0.0	0.0	0.0	0.0	3.6	3.6	1.3	0.0	0.0	0.69	0.0	0.0
11	0.0	0.0	0.0	0.0	3.5	3.2	0.71	0.0	0.0	1.1	0.0	0.0
12	0.0	0.0	0.0	0.0	3.3	3.4	0.06	0.0	0.0	1.1	0.0	0.0
13	0.0	0.0	0.0	0.0	3.4	3.3	0.0	0.0	0.0	0.96	0.0	0.0
14	0.0	259	0.0	0.0	3.4	3.3	0.0	0.0	0.0	1.0	0.0	0.0
15	0.0	413	0.0	0.0	3.2	3.2	0.0	0.0	0.0	1.1	0.0	0.0
16	0.0	408	0.0	0.0	3.4	3.5	0.0	0.0	0.0	1.1	0.0	0.0
17	0.0	401	0.0	0.0	3.3	3.1	0.0	0.0	0.0	1.1	0.0	0.0
18	0.0	393	0.0	0.0	3.2	2.7	0.0	0.0	229	1.1	0.0	0.0
19	0.0	385	259	0.0	3.0	1.4	0.0	0.0	353	1.0	0.0	0.0
20	0.0	390	517	0.0	3.1	2.9	0.0	0.0	304	0.93	0.0	0.0
21	0.0	401	509	0.0	3.1	2.8	0.0	0.0	3.3	0.74	0.0	0.64
22	0.0	350	34	0.0	3.5	2.7	0.0	0.0	2.2	0.56	0.0	2.4
23	0.0	43	22	0.0	3.2	2.3	0.0	0.0	2.1	0.46	0.0	3.9
24	0.0	12	18	0.0	3.2	2.1	0.0	0.0	1.7	0.45	0.0	3.7
25	0.0	7.2	13	0.0	3.3	2.6	0.0	0.0	0.02	0.37	0.0	3.3
26	0.0	3.5	7.8	0.07	3.5	2.6	0.0	0.0	0.0	0.38	0.0	3.9
27	0.0	0.67	5.0	2.1	3.3	2.3	0.0	0.0	0.0	0.12	0.0	1.4
28	0.0	0.0	2.6	2.8	3.1	2.3	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	1.3	2.9	---	2.3	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.93	3.2	---	3.4	0.0	0.0	0.0	0.0	0.20	0.0
31	0.0	---	0.72	3.1	---	2.9	---	0.0	---	0.0	0.29	---
TOTAL	0.0	3466.37	1390.35	14.91	90.7	91.4	20.07	0.0	895.32	23.02	0.49	19.24
MEAN	0.000	115.5	44.85	0.481	3.239	2.948	0.669	0.000	29.84	0.743	0.016	0.641
MAX	0.00	413	517	3.2	3.6	3.6	2.6	0.00	353	3.3	0.29	3.9
MIN	0.00	0.00	0.00	0.00	2.9	1.4	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	6880	2760	30	180	181	40	0.00	1780	46	1.0	38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

MEAN	101.9	38.09	22.56	9.156	10.36	4.264	1.185	37.14	52.38	37.03	53.39	47.88
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1952	1952	1952	1952	1952	1952	1952	1952	1951	1951	1951	1951

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1951 - 2002

ANNUAL TOTAL	4856.72	6011.87	
ANNUAL MEAN	13.31	16.47	35.11
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			0.000
HIGHEST DAILY MEAN	517	Dec 20	33600
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			a55500
MAXIMUM PEAK STAGE			b26.40
INSTANTANEOUS LOW FLOW			0.00
ANNUAL RUNOFF (AC-FT)	9630	11920	25430
10 PERCENT EXCEEDS	0.00	3.4	1.1
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

a From rating curve extended above 33,000 ft<sup>3</sup>/s, on basis of computation of peak flow over Tansill Dam, 5.8 mi upstream.

b From floodmarks.

08405150 DARK CANYON DRAW AT CARLSBAD, NM

LOCATION.--Lat 32°24'12", long 104°13'46", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.7, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on right bank upstream from San Jose Street, and 1.0 mi upstream from mouth. Mouth at Pecos River mile 459.2.

DRAINAGE AREA.--450 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,129 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. A Natural Resources 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 ft<sup>3</sup>/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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e554	e0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e320	e0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e98	e0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e24	e0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e8.0	e0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.58	e0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.03	e0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	---	e0.00	e0.00	e0.00	e0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	---	e0.00	e0.00	e0.00	e0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	---	e0.00	---	e0.00	---	e0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1004.61	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.41	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	554	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1990	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2002, BY WATER YEAR (WY)

MEAN	6.808	0.680	0.000	0.000	0.000	0.000	0.000	0.373	13.13	1.495	5.617	22.36
MAX	196	19.7	0.000	0.000	0.000	0.000	0.000	8.81	386	32.4	162	331
(WY)	1975	1979	1974	1973	1973	1973	1973	1979	1986	2002	1984	1980
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1974	1974	1974	1973	1973	1973	1973	1973	1973	1973	1973	1973

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1973 - 2002

ANNUAL TOTAL	0.00	1004.61		
ANNUAL MEAN	0.000	2.752	4.306	
HIGHEST ANNUAL MEAN			31.7	1986
LOWEST ANNUAL MEAN			0.000	1976
HIGHEST DAILY MEAN			8750	Sep 26 1980
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Jan 1 1973
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Jan 1 1973
MAXIMUM PEAK FLOW			1070	Jul 4 27000
MAXIMUM PEAK STAGE			5.47	Jul 4 12.53
INSTANTANEOUS LOW FLOW				0.00
ANNUAL RUNOFF (AC-FT)	0.00	1990	3120	Oct 1 1993
10 PERCENT EXCEEDS	0.00	0.00	0.00	
50 PERCENT EXCEEDS	0.00	0.00	0.00	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

e Estimated



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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV 14...	0830	9.2	683	5.3	60	8.1	4810	21.0	15.5	1500	379	132	5.89
JAN 16...	0845	13	684	11.4	120	7.9	5710	19.0	12.0	1500	410	122	5.44
FEB 25...	1000	11	687	10.4	114	7.8	4220	16.0	14.0	1200	312	105	4.84
MAY 07...	0930	11	683	6.2	82	8.3	3720	27.0	23.0	1200	319	108	4.70
JUN 10...	0945	3.7	680	7.1	109	7.9	4150	33.0	31.0	1400	361	127	5.56
AUG 16...	1000	5.3	685	5.7	77	8.2	3980	28.0	24.0	1300	357	107	6.45
AUG 30...	1112	.07	685	8.1	116	7.8	4160	34.0	27.5	1400	367	117	5.95

Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
NOV 14...	5	437	--	768	.7	19.1	1310	--	--	--	--	--	--
JAN 16...	5	466	--	867	.7	11.8	1240	--	--	--	--	--	--
FEB 25...	4	346	--	590	.7	12.6	999	--	--	--	--	--	--
MAY 07...	4	331	--	609	.70	10.8	1040	--	--	--	--	--	--
JUN 10...	5	407	--	687	.69	15.9	1180	--	--	--	--	--	--
AUG 16...	5	407	--	739	.70	13.6	1100	--	--	--	--	--	--
AUG 30...	5	409	134	722	.65	16.8	1140	2860	.11	.33	.73	.13	E.004

Date	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00665)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
NOV 14...	--	--	--	--	--
JAN 16...	--	--	--	--	--
FEB 25...	--	--	--	--	--
MAY 07...	--	--	--	--	--
JUN 10...	--	--	--	--	--
AUG 16...	--	--	--	--	--
AUG 30...	.005	<.02	.038	250	<30

Date	Time	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC, DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
AUG 30...	1112	<.006	<.006	<.004	<.005	E.006n	<.010	<.002	<.041	<.020	<.005	<.018	<.003

08405200 PECOS RIVER BELOW DARK CANYON DRAW, AT CARLSBAD, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN, DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U (UG/L) (82677)	EPTC WATER FLTRD 0.7 U (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U (UG/L) (82666)	METHYL AZIN- PHOS WAT FLT 0.7 U (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U (UG/L) (82667)	
AUG 30...	<.006	.007	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
Date	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U (UG/L) (82664)	PRO- METON, WATER, FLTRD 0.7 U REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U REC (UG/L) (82676)	PROPA- CHLOR, WATER, FLTRD 0.7 U REC (UG/L) (04024)
AUG 30...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	.02	<.004	<.010
Date	PRO- PANIL WATER FLTRD 0.7 U (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U (UG/L) (82685)	SI- MAZINE, WATER, DISS, 0.7 U (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82661)				
AUG 30...		<.011	<.02	<.005	.02	<.034	<.02	<.005	<.002	<.009			

Remark codes used in this report:

- < -- Less than
- E -- Estimated value

Value qualifier codes used in this report:

- n -- Below the laboratory reporting level

## 08405450 BLUE SPRINGS ABOVE DIVERSIONS NEAR WHITES CITY, NM

LOCATION.--Lat 32°11'07", long 104°16'50", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.27, T.24 S., R.26 E., Eddy County, Hydrologic Unit 13060011, upstream from all diversions, and 5.5 mi east of Whites City

PERIOD OF RECORD.--April 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,110 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Station located above all know diversions. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge 21 ft<sup>3</sup>/s, Mar. 30, 2002, minimum daily discharge, 7.4 ft<sup>3</sup>/s, Dec. 29 2001.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge 21 ft<sup>3</sup>/s, Mar. 30; minimum daily discharge, 7.4 ft<sup>3</sup>/s, Dec. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	10	9.1	8.8	11	13	12	11	11	10	8.9	8.6
2	9.7	10	9.2	8.4	11	13	12	11	11	10	20	8.5
3	9.7	10	9.3	8.6	11	13	12	11	11	9.7	8.6	8.5
4	9.7	10	9.7	8.6	11	12	12	11	11	13	8.8	8.5
5	9.7	10	9.7	8.3	11	12	12	11	11	9.6	8.8	8.4
6	9.7	9.9	10	9.0	11	12	12	11	11	9.2	8.8	8.4
7	9.8	9.9	10	9.8	11	12	12	11	11	9.1	8.9	8.4
8	9.8	9.4	9.8	9.7	11	11	12	11	11	8.9	8.8	8.5
9	9.7	9.4	9.7	10	11	11	12	11	11	8.9	8.8	8.4
10	9.7	9.2	9.6	10	11	11	12	11	11	8.8	8.8	8.4
11	9.8	9.0	9.2	10	11	11	12	11	11	8.8	8.8	8.4
12	10	8.9	9.2	10	11	11	12	11	11	8.8	8.8	8.4
13	10	8.6	8.8	10	11	11	12	11	11	8.7	8.8	7.8
14	10	8.6	8.8	10	11	11	12	11	11	8.7	8.8	8.0
15	9.9	8.7	8.5	10	11	11	12	11	11	8.7	8.8	e15
16	9.9	9.0	8.5	10	11	11	12	11	10	8.7	8.8	8.3
17	10	8.7	8.2	10	11	11	12	11	10	8.6	8.8	8.8
18	10	8.5	8.2	10	11	11	12	11	10	16	8.8	8.9
19	9.9	8.4	8.0	10	12	11	12	11	10	7.5	8.7	9.2
20	9.9	8.4	8.0	11	12	11	12	11	10	8.2	8.6	9.2
21	9.9	8.4	8.0	11	12	11	12	11	11	8.4	8.5	9.2
22	9.8	8.4	8.1	11	12	12	12	11	11	8.4	8.6	9.2
23	9.9	8.6	8.0	11	13	12	12	11	10	8.4	8.6	9.1
24	9.9	8.7	7.9	11	13	12	12	11	10	8.4	8.6	8.9
25	9.7	8.7	7.8	11	13	15	12	11	10	8.3	8.7	9.1
26	9.7	8.6	7.8	11	13	e17	12	11	10	8.5	8.5	9.0
27	9.9	8.4	7.7	11	13	e17	11	11	10	8.5	8.5	9.1
28	10	8.8	7.7	11	13	e18	11	11	10	8.6	8.5	9.1
29	10	9.2	7.4	11	---	e18	11	11	9.9	8.8	8.7	9.2
30	11	9.2	7.7	11	---	21	11	11	10	8.8	8.7	9.1
31	10	---	7.9	11	---	12	---	11	---	8.8	8.7	---
TOTAL	306.4	271.6	267.5	313.2	324	395	356	341	316.9	283.8	281.5	267.6
MEAN	9.88	9.05	8.63	10.1	11.6	12.7	11.9	11.0	10.6	9.15	9.08	8.92
MAX	11	10	10	11	13	21	12	11	11	16	20	15
MIN	9.7	8.4	7.4	8.3	11	11	11	11	9.9	7.5	8.5	7.8
AC-FT	608	539	531	621	643	783	706	676	629	563	558	531

CAL YR 2001 TOTAL 3900.9 MEAN 10.7 MAX 18 MIN 7.4 AC-FT 7740  
WTR YR 2002 TOTAL 3724.5 MEAN 10.2 MAX 21 MIN 7.4 AC-FT 7390

e Estimated

08405500 BLACK RIVER ABOVE MALAGA, NM

LOCATION.--Lat 32°13'44", long 104°09'02", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>.

PERIOD OF RECORD.--March to December 1940, December 1946 to current year.

REVISED RECORDS.--WSP 1632: 1948, 1949-50(P).

GAGE.--Water-stage recorder with satellite telemetry 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 fair except for those estimated, which are poor. 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 ft<sup>3</sup>/s, from rating curve extended above 1,400 ft<sup>3</sup>/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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	4.8	5.4	5.6	4.1	7.5	6.6	6.1	4.0	3.6	4.4	4.2
2	4.3	4.9	5.4	5.7	4.1	7.6	6.2	6.0	3.8	3.6	242	4.1
3	4.4	5.0	5.6	5.7	4.1	7.7	5.7	6.0	3.8	5.7	21	4.1
4	4.3	5.0	5.7	5.7	4.5	7.9	5.5	6.0	3.8	18	7.4	4.0
5	4.3	5.2	5.5	5.6	5.3	7.9	5.4	6.0	3.7	11	5.5	4.1
6	4.1	5.2	5.4	5.5	5.3	7.9	5.5	e6.0	3.7	6.8	5.0	4.0
7	4.3	5.2	5.4	5.6	5.1	7.9	6.0	e5.8	3.8	5.2	4.9	3.9
8	4.5	5.2	5.4	5.0	4.7	8.1	6.2	e5.6	3.8	5.0	4.7	3.9
9	4.3	5.2	5.4	4.0	4.7	7.9	6.6	e5.9	3.8	4.5	4.6	4.0
10	4.3	5.2	5.4	3.6	4.7	6.9	6.4	6.0	3.8	4.5	4.5	4.1
11	4.2	5.2	5.5	3.4	5.2	6.5	6.2	6.0	3.8	4.2	4.5	4.1
12	4.3	5.4	5.7	3.2	6.2	6.3	6.1	5.8	3.8	4.1	4.6	4.2
13	4.2	5.4	5.8	3.2	6.5	6.0	6.1	5.4	3.8	4.2	4.5	4.7
14	4.4	5.4	5.7	3.4	6.6	6.0	6.2	5.4	3.9	4.1	4.3	9.2
15	4.5	5.5	5.7	3.4	6.7	5.9	6.0	5.4	4.1	4.1	4.3	454
16	4.5	6.0	5.7	3.2	6.7	5.8	5.9	5.5	3.8	4.1	4.3	66
17	4.5	6.8	5.7	3.2	6.7	6.0	6.0	5.4	3.6	3.8	4.4	15
18	4.5	6.1	5.7	3.2	6.8	6.1	6.1	5.7	3.7	90	4.1	8.6
19	4.6	5.5	5.7	3.1	7.0	8.8	6.2	6.1	3.7	86	4.2	6.5
20	4.7	5.2	5.7	3.1	7.0	8.3	6.2	6.0	3.6	13	4.7	6.0
21	4.7	5.2	5.7	3.0	7.1	6.9	6.2	5.7	3.6	7.0	4.4	5.9
22	4.7	5.2	5.4	3.3	7.3	6.5	6.2	5.7	3.6	5.5	6.3	5.7
23	4.7	5.2	5.4	3.4	7.3	6.3	6.5	5.4	3.5	4.8	5.2	5.7
24	4.7	5.2	5.4	3.4	7.3	6.3	6.7	5.2	3.5	4.9	4.4	5.4
25	4.7	5.2	5.4	3.4	7.3	6.2	6.3	5.2	3.4	4.7	4.3	5.3
26	4.7	5.2	5.4	3.5	7.3	6.2	6.3	5.2	3.4	4.9	4.1	5.2
27	4.7	5.2	5.4	3.6	7.3	6.1	6.4	4.9	3.6	4.5	4.1	5.2
28	4.9	5.4	5.6	3.6	7.3	5.7	6.2	5.2	3.6	4.3	4.1	5.1
29	5.0	5.4	5.4	3.5	---	5.5	6.2	6.0	3.6	4.6	3.9	5.0
30	5.0	5.4	5.4	3.7	---	12	6.2	5.9	3.4	4.4	4.5	5.2
31	5.0	---	5.4	4.1	---	7.6	---	4.6	---	4.3	7.2	---
TOTAL	140.3	160.0	171.4	122.9	170.2	218.3	184.3	175.1	111.0	339.4	400.4	672.4
MEAN	4.526	5.333	5.529	3.965	6.079	7.042	6.143	5.648	3.700	10.95	12.92	22.41
MAX	5.0	6.8	5.8	5.7	7.3	12	6.7	6.1	4.1	90	242	454
MIN	4.1	4.8	5.4	3.0	4.1	5.5	5.4	4.6	3.4	3.6	3.9	3.9
AC-FT	278	317	340	244	338	433	366	347	220	673	794	1330

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2002, BY WATER YEAR (WY)

MEAN	12.89	9.479	9.679	10.51	10.36	7.165	10.50	12.36	15.03	14.56	23.31	19.60
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

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1948 - 2002

ANNUAL TOTAL	2653.5	2865.7										
ANNUAL MEAN		7.270								12.97		
HIGHEST ANNUAL MEAN										58.3		1966
LOWEST ANNUAL MEAN										6.82		1977
HIGHEST DAILY MEAN				150	Sep 21		454	Sep 15		12000	Aug 23	1966
LOWEST DAILY MEAN				3.6	Sep 8		3.0	Jan 21		0.00	Sep 30	1998
ANNUAL SEVEN-DAY MINIMUM				3.7	Sep 7		3.2	Jan 16		1.0	Nov 9	1977
MAXIMUM PEAK FLOW							1930	Aug 2		a74600	Aug 23	1966
MAXIMUM PEAK STAGE							7.12	Aug 2		b21.70	Aug 23	1966
INSTANTANEOUS LOW FLOW										0.00	Sep 30	1998
ANNUAL RUNOFF (AC-FT)	5260					5680			9390			
10 PERCENT EXCEEDS		9.1				7.0			14			
50 PERCENT EXCEEDS		5.7				5.2			8.2			
90 PERCENT EXCEEDS		4.3				3.7			4.2			

e Estimated

a From rating curve extended above 5,900 ft<sup>3</sup>/s, on basis of slope-area measurement at gage heights 12.60 ft and 21.7 ft.

b From floodmarks.

08406000 BLACK RIVER AT MALAGA, NM

LOCATION.--Lat 32°14'58", long 104°03'53", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec 2, T.24 S., R.28 E., Eddy County, Hydrologic Unit 13060011, on left bank of Black River, about 1.3 mi upstream from the mouth of Pecos River.

DRAINAGE AREA.--350 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--February 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,910 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft<sup>3</sup>/s, July 9, 2000, gage height, 15.43 ft, from floodmarks; minimum daily discharge, 1.9 ft<sup>3</sup>/s, July 27, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,740 ft<sup>3</sup>/s, Aug. 2, gage height, 14.60 ft, from floodmarks; minimum daily discharge, 1.9 ft<sup>3</sup>/s, July 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	7.1	e8.2	e8.0	e3.2	e5.4	e4.0	2.5	2.5	3.2	4.0	6.9
2	4.0	11	e8.2	e8.0	e3.2	e3.6	e4.0	2.4	2.7	3.5	238	2.6
3	10	11	e8.2	e8.2	e3.2	e3.4	e3.9	2.4	3.0	3.9	41	2.3
4	14	10	e8.5	e6.0	e3.2	e3.0	e3.1	2.3	2.8	29	11	2.1
5	9.1	e10	e8.2	e6.0	e3.6	e3.0	e3.1	2.2	2.5	13	11	2.1
6	6.0	e10	e8.2	e6.0	e8.9	e2.7	e3.1	2.2	2.5	11	5.1	2.2
7	4.8	e10	e8.0	e5.0	e8.9	e2.7	e2.9	2.0	2.4	5.3	3.7	2.1
8	4.3	e10	e8.0	e4.3	e6.3	e3.0	e2.8	2.0	2.3	3.3	3.5	2.2
9	3.8	e10	e8.0	e4.3	e7.2	e3.2	e4.6	2.1	2.9	2.9	3.3	2.3
10	5.4	e10	e8.0	e4.1	e5.7	e3.2	e18	2.1	3.2	2.8	3.1	3.4
11	5.0	e10	e8.0	e4.1	e3.9	e2.5	e16	2.3	2.9	2.7	3.4	2.7
12	4.4	e9.5	e8.2	e4.1	e3.6	e2.2	e12	2.9	2.8	2.6	3.3	2.9
13	4.8	8.1	e8.2	e4.1	e3.2	e2.0	e3.3	3.3	2.8	2.4	2.9	3.1
14	4.1	8.2	e8.2	e3.6	e3.6	e2.9	e8.0	7.9	2.8	2.4	2.9	3.1
15	3.9	8.4	e8.2	e3.6	e5.7	e2.4	e5.8	3.9	3.2	2.3	2.9	233
16	3.5	8.9	e8.0	e3.6	e5.7	e2.1	e4.0	2.9	3.5	2.2	2.8	73
17	e3.6	8.9	e8.2	e3.6	e6.0	e2.7	e7.7	2.6	3.0	2.3	2.6	21
18	3.6	9.0	e8.2	e5.0	e6.3	e2.5	e4.7	2.5	2.6	4.5	2.6	8.7
19	3.6	e8.9	e8.2	e4.4	e5.7	e2.4	e3.8	2.4	2.4	121	5.5	6.0
20	e3.6	e8.2	e8.2	e4.1	e4.4	e2.3	e3.7	2.4	2.5	27	5.0	4.4
21	e3.6	e8.0	e8.2	e3.6	e3.6	e3.1	e3.1	2.4	2.5	13	3.6	3.8
22	3.7	e8.2	e8.2	e4.5	e3.6	e2.7	e3.0	2.5	2.4	5.4	2.9	3.6
23	3.7	e8.2	e8.0	e4.4	e3.6	e3.3	e3.3	6.3	2.4	3.2	2.5	3.7
24	3.7	e8.2	e8.0	e3.9	e5.4	e3.1	e4.2	3.4	2.5	2.7	2.4	3.7
25	e3.8	e8.2	e8.2	e3.9	e6.0	e2.4	5.1	2.8	2.4	2.5	2.3	3.7
26	e4.6	e8.2	e8.2	e3.6	e4.4	e2.5	4.2	2.5	2.4	2.4	2.2	3.6
27	e7.5	e8.2	e8.2	e3.6	e4.4	e2.5	4.4	2.5	2.5	2.3	2.2	3.7
28	e5.4	e8.2	e8.2	e3.6	e3.9	e2.7	3.2	2.4	2.7	4.0	3.8	4.1
29	4.6	e8.0	e8.2	e3.6	---	e2.6	3.0	2.4	4.7	3.2	4.1	4.8
30	4.7	e8.2	e8.2	e3.6	---	e5.8	2.6	2.4	3.6	2.7	9.7	4.8
31	4.7	---	e8.0	e3.6	---	e8.9	---	2.4	---	2.5	6.2	---
TOTAL	155.4	268.8	252.7	142.0	136.4	96.8	161.3	87.3	83.4	291.2	399.5	425.6
MEAN	5.01	8.96	8.15	4.58	4.87	3.12	5.38	2.82	2.78	9.39	12.9	14.2
MAX	14	11	8.5	8.2	8.9	8.9	18	7.9	4.7	121	238	233
MIN	3.5	7.1	8.0	3.6	3.2	2.0	2.6	2.0	2.3	2.2	2.2	2.1
AC-FT	308	533	501	282	271	192	320	173	165	578	792	844

CAL YR 2001 TOTAL 2956.6 MEAN 8.10 MAX 131 MIN 2.9 AC-FT 5860  
WTR YR 2002 TOTAL 2500.4 MEAN 6.85 MAX 238 MIN 2.0 AC-FT 4960

e Estimated

08406500 PECOS RIVER NEAR MALAGA, NM

LOCATION.--Lat 32°12'30", long 104°01'20", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, 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 with satellite telemetry. 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 fair. 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.

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 ft<sup>3</sup>/s, at Carlsbad, 27 mi upstream. Flood in Sept. 1919 reached a stage of 29.4 ft, present datum, discharge, 40,400 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	42	55	52	41	38	77	30	20	14	23	25
2	26	56	55	53	40	41	50	32	19	13	233	19
3	30	51	54	53	39	39	44	31	19	12	113	18
4	39	49	55	51	42	40	39	30	19	352	49	18
5	40	48	55	49	49	38	37	29	18	358	42	17
6	31	47	54	49	54	39	36	29	19	235	34	15
7	29	48	52	47	58	40	36	29	19	231	26	14
8	34	45	51	45	48	42	36	27	18	106	24	13
9	34	44	50	44	43	43	37	23	17	64	23	13
10	36	46	50	44	43	44	43	19	18	46	22	14
11	38	48	50	44	40	39	50	19	17	35	23	17
12	35	47	55	43	39	39	50	20	15	29	22	18
13	39	50	63	42	37	40	53	25	14	26	21	23
14	33	51	57	41	38	39	43	33	15	27	21	23
15	33	59	52	41	40	38	33	29	15	25	21	203
16	35	347	51	41	41	38	34	24	14	23	20	142
17	36	363	52	41	40	37	42	22	14	22	20	60
18	38	352	52	43	42	37	34	23	17	35	19	35
19	37	345	50	42	41	40	32	21	17	132	20	27
20	37	338	89	40	41	53	31	21	298	63	25	23
21	38	350	453	40	41	55	30	21	331	39	22	21
22	38	359	446	41	38	48	29	20	152	30	21	21
23	39	331	187	40	39	41	29	20	61	25	21	21
24	39	194	71	41	38	39	31	18	34	23	18	19
25	38	87	70	40	38	39	33	17	23	22	16	18
26	37	66	61	41	41	39	31	23	19	21	15	18
27	39	62	57	39	38	36	31	23	17	19	16	18
28	38	60	55	39	39	36	32	23	15	18	17	16
29	38	58	55	41	---	37	32	22	15	18	17	16
30	46	58	53	43	---	50	30	22	15	19	22	17
31	46	---	51	43	---	63	---	21	---	21	23	---
TOTAL	1118	4101	2661	1353	1168	1287	1145	746	1304	2103	1009	922
MEAN	36.06	136.7	85.84	43.65	41.71	41.52	38.17	24.06	43.47	67.84	32.55	30.73
MAX	46	363	453	53	58	63	77	33	331	358	233	203
MIN	22	42	50	39	37	36	29	17	14	12	15	13
AC-FT	2220	8130	5280	2680	2320	2550	2270	1480	2590	4170	2000	1830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2002, BY WATER YEAR (WY)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
MEAN	260.1	151.8	117.9	106.3	91.75	64.80	55.89	203.3	163.2	107.0	142.8	259.0
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

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1938 - 2002
ANNUAL TOTAL	21690	18917	
ANNUAL MEAN	59.42	51.83	a143.9
HIGHEST ANNUAL MEAN			1652
LOWEST ANNUAL MEAN			16.8
HIGHEST DAILY MEAN	453	Dec 21	68000
LOWEST DAILY MEAN	19	Sep 9	3.7
ANNUAL SEVEN-DAY MINIMUM	21	Sep 5	4.5
MAXIMUM PEAK FLOW		1280	Jul 4
MAXIMUM PEAK STAGE		8.10	Jul 4
INSTANTANEOUS LOW FLOW		11	Jul 3
ANNUAL RUNOFF (AC-FT)	43020	37520	104200
10 PERCENT EXCEEDS	84	61	194
50 PERCENT EXCEEDS	45	38	53
90 PERCENT EXCEEDS	28	18	15

a Average discharge, 16 years (water years 1921-36), 274 ft<sup>3</sup>/s, 198,5000 acre-ft/yr, prior to completion of Lake Sumner.  
 b From rating curve extended above 36,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.  
 c From floodmarks.

RIO GRANDE BASIN

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIR (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV 14...	1000	50	688	8.0	92	8.1	7960	20.0	16.0	2300	562	221	10.9
JAN 16...	1030	42	692	10.9	126	7.8	8750	18.0	16.0	2200	578	190	10.7
FEB 25...	1145	38	692	10.3	116	7.9	7750	18.0	15.0	2100	522	203	10.2
MAY 07...	1430	28	685	8.0	130	8.4	7010	36.0	34.0	2200	535	207	12.8
JUN 10...	1130	19	684	8.6	145	8.0	8120	37.0	36.0	2500	609	235	17.0
AUG 13...	1030	21	680	8.1	119	8.4	5530	31.0	28.0	1600	397	137	14.2

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 14...	7	821	1480	.8	13.1	1910
JAN 16...	7	793	1470	.8	11.9	1800
FEB 25...	8	798	1450	.8	13.0	1750
MAY 07...	7	796	1530	.88	11.3	1810
JUN 10...	9	978	1720	.95	16.4	2020
AUG 13...	7	638	1150	.70	13.1	1230



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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV 14...	1115	48	687	8.1	96	8.1	10800	25.0	16.5	2400	574	245	39.8
JAN 16...	1145	38	690	11.5	135	8.0	12400	20.0	16.0	2300	583	210	40.4
FEB 25...	1315	38	690	10.6	131	8.0	11300	22.0	19.0	2300	532	224	43.0
MAY 07...	1200	23	687	8.9	136	8.5	11800	33.0	30.0	2400	563	249	61.0
JUN 10...	1300	16	685	9.1	152	8.2	15900	36.0	34.0	2800	644	297	89.3
AUG 13...	0830	18	680	8.6	124	8.4	11000	28.0	26.0	1500	356	152	72.9
AUG 30...	0810	23	688	6.3	91	8.0	14800	26.5	26.0	2300	528	235	103

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
NOV 14...	13	1420	--	2450	.8	11.3	2020	--	--	--	--	--	--
JAN 16...	13	1390	--	2520	.8	11.4	1830	--	--	--	--	--	--
FEB 25...	14	1470	--	2460	.8	12.6	1800	--	--	--	--	--	--
MAY 07...	16	1830	--	3230	.94	8.9	1940	--	--	--	--	--	--
JUN 10...	21	2620	--	4300	.90	15.9	2220	--	--	--	--	--	--
AUG 13...	19	1730	--	2970	.63	12.7	1260	--	--	--	--	--	--
AUG 30...	22	2390	121	4150	.79	16.5	1860	9350	.34	.31	.54	.12	.010

Date	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	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)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
NOV 14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 16...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 07...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 30...	.006	<.02	.060	<150	730	<.20	8.1	<100	<.50	34.1	<6	18

Remark codes used in this report:  
 < -- Less than

08407500 PECOS RIVER AT RED BLUFF, NM

LOCATION.--Lat 32°04'30", long 104°02'21", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup>, 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.--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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	39	55	55	45	38	60	26	16	16	17	21
2	31	36	58	55	44	37	65	25	15	16	249	20
3	34	44	62	55	45	38	49	25	14	17	216	19
4	37	46	62	55	45	38	44	26	14	22	86	15
5	43	43	61	54	49	37	41	25	15	339	41	15
6	45	41	60	52	49	37	39	24	15	322	32	15
7	40	40	59	51	51	37	38	23	14	236	28	13
8	36	41	58	50	53	38	38	23	14	192	23	12
9	36	39	57	49	47	39	38	23	13	94	20	11
10	36	38	56	49	42	40	38	21	13	60	19	10
11	37	40	56	48	42	40	42	19	12	46	19	19
12	39	41	56	47	41	37	47	17	13	36	18	13
13	37	41	58	46	39	37	48	15	12	32	18	42
14	38	51	61	46	39	37	50	16	12	29	18	36
15	36	57	59	44	39	37	43	22	12	27	17	21
16	33	116	56	45	40	36	36	24	12	26	16	184
17	34	364	54	44	41	37	37	20	12	25	15	111
18	36	380	55	44	41	36	41	17	11	24	15	49
19	37	376	55	46	42	38	38	17	10	62	14	33
20	36	366	54	45	41	42	35	17	19	112	38	25
21	36	368	180	43	42	47	33	16	264	56	21	23
22	36	383	484	43	41	48	32	15	274	39	18	20
23	36	387	446	44	40	45	31	16	120	31	16	19
24	36	339	168	44	40	40	31	15	54	27	15	19
25	35	185	79	44	39	38	31	15	34	24	14	18
26	34	91	66	45	38	38	32	14	26	23	13	17
27	33	66	61	45	38	39	30	15	23	22	11	16
28	34	64	59	44	37	37	28	18	19	23	11	16
29	34	61	58	45	---	37	29	17	18	20	12	16
30	31	53	57	47	---	47	28	17	17	20	39	14
31	37	---	56	47	---	49	---	16	---	21	38	---
TOTAL	1116	4236	2866	1471	1190	1221	1172	599	1117	2039	1127	862
MEAN	36.00	141.2	92.45	47.45	42.50	39.39	39.07	19.32	37.23	65.77	36.35	28.73
MAX	45	387	484	55	53	49	65	26	274	339	249	184
MIN	31	36	54	43	37	36	28	14	10	16	11	10
AC-FT	2210	8400	5680	2920	2360	2420	2320	1190	2220	4040	2240	1710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2002, BY WATER YEAR (WY)

	MEAN	265.0	157.1	122.3	109.8	95.23	69.43	58.00	206.0	174.6	114.8	149.1	266.8
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	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1938 - 2002

ANNUAL TOTAL	22037	19016	
ANNUAL MEAN	60.38	52.10	149.2
HIGHEST ANNUAL MEAN			1655
LOWEST ANNUAL MEAN			19.2
HIGHEST DAILY MEAN	484	Dec 22	50700 Aug 24 1966
LOWEST DAILY MEAN	18	Sep 10	0.22 Aug 1 1966
ANNUAL SEVEN-DAY MINIMUM	19	Sep 7	0.33 Jul 26 1966
MAXIMUM PEAK FLOW		701	Aug 2 a111000 Aug 23 1966
MAXIMUM PEAK STAGE		6.68	Aug 2 33.32 Aug 23 1966
INSTANTANEOUS LOW FLOW			0.19 Aug 1 1966
ANNUAL RUNOFF (AC-FT)	43710	37720	108100
10 PERCENT EXCEEDS	88	62	205
50 PERCENT EXCEEDS	41	38	56
90 PERCENT EXCEEDS	28	15	15

a From rating curve extended above 32,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.



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 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--February 1937 to current year. Monthly contents only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder with satellite telemetry. 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 Sept. 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 provided by Red Bluff Water Power 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, 43,580 acre-ft, Sept. 19, gage height, 2,802.88 ft; minimum observed, 26,740 acre-ft, Nov. 14, gage height, 2,794.41 ft.

Capacity table (gage height, in feet, and total contents, in acre-feet)

2,794.0	26,130	2,798.0	32,770	2,802.0	41,350
2,795.0	27,620	2,799.0	34,720	2,803.0	43,880
2,796.0	29,220	2,800.0	36,780	2,804.0	46,580
2,797.0	30,940	2,801.0	38,980	2,805.0	49,440

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32550	29960	33820	38060	39480	40830	41550	41830	40540	40350	42230	42440
2	32530	29740	33900	38100	39520	40870	41580	41700	40470	40280	42490	42440
3	32550	29440	34000	38190	39620	40900	41600	41680	40400	40240	42840	42360
4	32550	29150	34080	38280	39640	40920	41630	41680	40380	40420	43200	42280
5	32570	28920	34150	38340	39900	40940	41680	41650	40330	40450	43250	42230
6	32590	28660	34250	38410	39980	40940	41700	41630	40210	40990	43250	42440
7	32610	28390	34310	38410	40020	40940	41800	41600	40210	41550	43220	42130
8	32680	28080	34370	38500	40070	40870	41800	41580	40160	41930	43200	42080
9	32700	27790	34430	38560	40140	40870	41800	41550	40090	42360	43170	42080
10	32730	27540	34480	38610	40210	40870	41800	41500	40070	42490	43090	42080
11	32770	27260	34540	38650	40280	40870	41800	41470	40000	42510	43020	42060
12	32790	27020	34620	38740	40350	40870	41780	41420	39950	42510	42940	42030
13	32830	26780	34660	38760	40350	40940	41800	41300	39880	42540	42870	41980
14	32910	26740	34720	38830	40350	40990	41850	41280	39810	42460	42790	42130
15	32930	26860	34800	38830	40380	41020	41930	41230	39950	42440	42710	42310
16	32930	26980	34880	38890	40400	41060	41830	41180	39980	42380	42610	42310
17	32950	27160	34940	38940	40450	41090	41830	41140	39930	42340	42660	43220
18	32980	27870	35010	38980	40480	41140	41830	41110	39830	42280	42590	43470
19	33040	28550	35070	38980	40520	41180	41830	41040	39760	42540	42540	43580
20	33060	29340	35150	38980	40570	41110	41850	40970	39640	42610	42540	43400
21	33080	30100	35230	38940	40640	41090	41850	40870	39550	42740	42510	43370
22	33120	30820	35910	38960	40680	41060	41850	40850	39950	42790	42590	43320
23	32810	31730	36410	39030	40680	41060	41850	40780	40380	42760	42540	43300
24	32510	32280	37130	39050	40710	41090	41830	40710	40520	42740	42510	43270
25	32170	32930	37440	39080	40710	41110	41800	40640	40540	42690	42460	43270
26	31870	33260	37620	39120	40730	41140	41830	40540	40520	42660	42410	43250
27	31560	33490	37700	39170	40780	41180	41830	40710	40540	42590	42360	43220
28	31230	33630	37790	39240	40800	41210	41830	40680	40500	42560	42280	43170
29	30920	33630	37900	39310	---	41250	41830	40640	40470	42490	42210	43120
30	30610	33720	37970	39380	---	41500	41830	40620	40420	42440	42130	43070
31	30300	---	37970	39450	---	41520	---	40590	---	42360	42380	---
MAX	33120	33720	37970	39450	40800	41520	41930	41830	40540	42790	43250	43580
MIN	30300	26740	33820	38060	39480	40830	41550	40540	39550	40240	42130	41980
(+)	2796.63	2798.49	2800.54	2801.20	2801.77	2802.07	2802.19	2801.68	2801.61	2802.40	2802.41	2802.68
(++)	-2286	+3420	+4250	+1480	+1350	+720	+310	-1240	-170	+1940	+20	+690
CAL YR 2001	MAX 75020	MIN 26740	(++) -27,180									
WTR YR 2002	MAX 43580	MIN 26740	(++) +10,450									

(+) Elevation in feet, at end of month.  
(++) Change in contents, in acre-feet.



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, 1,590 microsiemens, June 22, 1999.  
 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, 16,500 microsiemens, July 22; minimum daily, 4,650 microsiemens, July 18.  
 WATER TEMPERATURE: Maximum daily, 32.0 °C, May 29; minimum daily, 3.0 °C, Nov. 29.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	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)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV													
15...	1230	9.7	695	6.5	75	8.1	14500	15.0	15.0	3100	733	305	50.5
JAN													
15...	1415	7.1	692	10.1	123	8.0	12000	19.0	18.0	2600	653	245	36.6
FEB													
27...	1130	7.6	695	11.0	110	7.8	13800	10.0	9.0	2600	640	252	33.6
MAY													
06...	1400	6.9	691	9.0	144	8.4	11900	35.0	33.0	2800	684	262	37.7
JUN													
11...	0915	7.0	688	3.8	54	8.0	12800	30.0	26.0	3100	749	290	46.1
AUG													
14...	1500	35	690	11.8	174	9.2	12900	31.0	28.0	3100	757	295	49.0

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV										
15...	15	1940	105	128	--	3340	1.0	13.7	2710	9160
JAN										
15...	12	1440	122	148	--	2650	.8	7.8	2200	7310
FEB										
27...	13	1570	102	124	--	2590	.9	8.3	2210	7360
MAY										
06...	14	1640	73	80	5	2850	1.02	8.7	2370	7910
JUN										
11...	14	1780	74	90	--	2960	1.05	12.7	2440	8320
AUG										
14...	15	1880	43	27	13	3180	1.04	5.1	2620	8810

## RIO GRANDE BASIN

08412500 PECOS RIVER NEAR ORLA, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	19.0	8.0	5.0	8.0	10.0	---	---	29.0	30.0	27.0	29.0
2	19.0	---	8.0	4.0	8.0	7.5	19.0	19.0	---	---	25.0	---
3	21.0	18.5	---	4.0	8.0	7.5	18.0	22.0	---	---	31.0	27.5
4	24.0	---	---	5.0	7.0	---	17.0	23.0	30.0	29.0	---	27.0
5	20.0	18.5	13.0	5.0	7.0	7.5	18.0	23.0	23.0	29.0	28.0	---
6	17.0	18.0	10.0	5.5	---	9.0	18.0	23.0	24.0	28.0	30.0	27.0
7	19.0	20.0	---	6.0	---	10.0	21.0	24.0	24.0	27.0	31.0	27.0
8	22.0	---	8.5	6.0	9.5	14.0	19.0	24.0	25.5	28.0	---	27.0
9	19.0	15.0	8.0	---	9.5	14.0	---	24.0	25.0	---	28.0	25.0
10	18.0	16.0	7.0	8.0	7.5	14.0	20.0	---	25.0	29.0	---	26.0
11	---	18.0	7.0	11.0	7.5	13.0	21.0	24.0	---	29.0	28.0	---
12	17.0	---	10.0	10.0	8.0	12.5	24.0	24.0	25.0	28.0	28.0	29.0
13	17.0	16.0	8.0	7.0	9.0	17.0	24.0	23.0	25.0	---	28.5	---
14	15.0	15.0	8.5	7.0	8.5	18.0	24.0	23.0	24.0	28.0	27.0	---
15	15.0	16.5	8.5	---	9.0	17.0	23.0	22.0	---	27.5	27.0	23.0
16	14.0	---	7.5	7.0	9.0	15.0	22.0	23.0	26.0	28.0	27.0	23.0
17	14.0	16.0	8.0	8.0	9.0	15.0	---	22.0	26.0	29.0	27.0	23.0
18	---	16.0	8.0	8.5	9.0	---	22.0	23.0	26.0	29.0	---	24.0
19	16.0	15.0	8.5	8.5	9.0	14.0	22.0	23.0	26.0	25.0	26.5	23.0
20	18.0	12.0	8.0	7.0	9.0	14.0	---	25.0	26.0	25.0	---	23.0
21	18.0	11.0	8.5	---	10.0	14.0	23.0	25.0	26.0	25.0	27.0	23.0
22	18.0	---	8.0	7.0	12.5	---	23.0	25.0	26.0	27.0	27.0	23.0
23	18.0	11.0	8.0	8.5	13.0	14.0	24.0	26.0	25.0	---	27.0	---
24	20.0	10.0	---	8.0	13.0	13.0	24.0	26.0	25.0	25.0	27.0	---
25	20.0	---	---	6.0	---	13.0	24.0	25.0	---	26.0	27.0	21.0
26	17.0	12.0	7.0	---	8.0	14.0	24.0	24.0	31.0	27.0	27.0	23.0
27	---	---	4.0	---	---	14.5	22.0	---	31.0	---	27.0	---
28	20.0	4.0	4.0	11.0	10.0	17.0	23.0	24.0	30.0	---	27.0	23.0
29	17.5	3.0	8.0	9.5	---	17.0	---	32.0	---	27.5	27.0	23.0
30	17.0	7.0	7.0	9.0	---	18.0	27.0	---	31.0	27.0	25.0	22.0
31	17.0	---	7.0	9.0	---	18.0	---	---	---	27.0	---	---
MEAN	18.1	14.0	7.9	7.3	9.1	13.6	21.8	23.9	26.4	27.5	27.5	24.6
MAX	24.0	20.0	13.0	11.0	13.0	18.0	27.0	32.0	31.0	30.0	31.0	29.0
MIN	14.0	3.0	4.0	4.0	7.0	7.5	17.0	19.0	23.0	25.0	25.0	21.0

WTR YR 2002 MEAN 18.3 MAX 32.0 MIN 3.0

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	13100	12400	10800	10600	---	---	11800	13000	12800	13400	13600
2	12600	---	12400	10700	10500	---	10900	11600	---	---	13400	---
3	12700	13200	---	10800	10600	10900	11000	11600	---	---	13300	13300
4	13000	---	---	10700	10500	---	10900	11500	12400	12800	---	13400
5	13000	12900	11200	10700	---	10900	10900	11500	12200	12900	12800	---
6	12800	12900	11100	10600	---	10900	10900	11500	12200	12800	13000	13600
7	12900	13000	11000	10700	---	10900	10800	12500	12100	12900	13200	13300
8	12900	---	10900	10700	11500	10600	10900	12500	12300	12700	---	13300
9	12800	12900	11000	---	11500	10700	---	12700	12300	---	13600	13400
10	13000	13000	11000	10500	11600	10700	11100	---	12200	14700	---	13600
11	---	12900	11000	10700	11700	10700	11000	12400	---	13400	13000	---
12	13100	---	10900	10600	11700	10700	11000	12400	8980	13400	12900	13200
13	13300	13000	10900	10700	11500	10900	11000	12200	8960	---	12700	---
14	13200	13000	10900	10600	11500	10800	11000	12400	9100	13500	12900	---
15	13300	13000	11000	---	11500	10800	11200	12400	---	13800	13600	10100
16	13300	---	10900	10800	11400	10900	11100	12700	8960	13500	13400	4870
17	13300	13200	11000	10700	11400	10800	11200	12400	12700	13400	13700	5020
18	---	13100	10900	10800	11400	---	11500	12400	11800	4650	---	5520
19	13400	13100	11000	10800	11600	10600	11300	12400	12800	4750	13400	11100
20	13400	13000	10900	10800	11600	10400	---	12600	12700	16400	---	---
21	13400	13100	11000	---	11700	11100	11500	12700	12900	16400	13300	11100
22	13300	---	10900	10700	11400	---	11300	12700	13000	16500	13300	11100
23	13100	13300	11000	10900	11500	10900	11300	12600	13200	---	13100	---
24	13100	13200	---	10800	11400	10800	11300	12400	13000	15000	13400	---
25	13000	---	---	10700	---	10800	9610	12600	---	14200	13700	12600
26	13000	13100	10900	---	11800	10800	9640	12600	13700	13800	13400	13000
27	---	---	10900	---	---	10900	9880	---	13700	---	13400	---
28	13100	12800	10900	10800	---	10900	9640	12500	13700	---	13500	12900
29	12500	12600	10900	10600	---	10700	---	12800	---	13900	13600	13100
30	13000	12400	10800	10500	---	10900	11600	---	13600	13400	13400	12900
31	13100	---	10800	10500	---	10700	---	---	---	13700	---	---
MEAN	13100	13000	11100	10700	11400	10800	10900	12300	12100	13100	13300	11600
MAX	13400	13300	12400	10900	11800	11100	11600	12800	13700	16500	13700	13600
MIN	12500	12400	10800	10500	10500	10400	9610	11500	8960	4650	12700	4870

WTR YR 2002 MEAN 11900 MAX 16500 MIN 4650

08418010 PECOS RIVER NEAR BARSTOW, TX

LOCATION.--Lat 31°32'49", long 103°29'44", Ward County, Hydrologic Unit 13070001, on left bank 1,500 ft downstream from Ward County Diversion Dam, 8.8 mi northeast of Pecos, TX, and 4.1 mi upstream from bridge on FM Road 3398.

PERIOD OF RECORD.--September 1999 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,590 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for those estimated, which are poor. Flow regulated by Red Bluff Reservoir 50 mi upstream. Diversions by Ward Irrigation District about 1,500 ft upstream from gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 519 ft<sup>3</sup>/s, Apr. 30, 2001, gage height, 4.09 ft; minimum discharge, 0 ft<sup>3</sup>/s, Dec. 9, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 469 ft<sup>3</sup>/s, Sept. 17, gage height, 4.26 ft; minimum discharge, 0 ft<sup>3</sup>/s, Dec. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	114	4.8	1.9	4.2	3.8	7.1	1.4	0.00	0.00	0.00	0.35
2	9.4	117	5.1	3.0	5.1	2.8	7.6	1.6	0.00	0.00	0.41	0.30
3	10	112	6.6	4.3	5.9	2.3	7.2	1.8	0.00	0.00	0.00	0.29
4	9.7	109	6.5	3.5	6.6	2.7	6.4	1.8	0.00	0.44	e40	0.26
5	6.6	106	6.1	3.9	7.8	3.2	6.1	1.8	0.00	2.5	e40	0.18
6	4.9	111	5.8	4.2	7.6	3.3	6.1	1.6	0.00	0.27	e14	0.12
7	4.5	101	7.2	4.1	7.1	4.2	6.0	1.4	0.00	0.00	e7.9	0.08
8	4.2	87	7.3	4.8	7.3	4.4	5.9	1.2	0.00	0.00	e5.2	0.06
9	4.1	72	4.2	5.2	7.1	4.3	5.9	0.98	0.00	0.00	e6.9	0.06
10	4.1	82	5.8	7.8	5.5	6.8	5.6	0.84	0.00	0.00	e6.1	0.05
11	3.9	94	9.6	4.8	3.6	8.4	5.5	0.76	0.00	0.00	e4.5	0.04
12	3.6	104	7.9	3.3	4.0	7.2	4.9	0.74	0.00	0.00	e3.1	0.03
13	3.0	117	7.6	3.6	4.4	7.0	5.0	0.68	0.00	0.00	e1.6	e0.26
14	2.7	101	5.6	3.4	4.3	7.1	5.0	0.60	0.00	0.00	e1.0	e1.5
15	2.9	94	6.1	3.6	4.5	7.0	4.8	0.58	0.00	0.00	0.49	e0.46
16	2.8	37	7.0	5.6	4.7	6.6	4.7	0.56	0.00	0.00	0.48	e154
17	2.7	20	5.3	5.6	4.8	6.6	4.4	0.45	0.61	0.00	0.47	317
18	3.0	15	4.6	5.6	4.9	6.9	4.2	0.25	3.0	3.4	0.45	e26
19	2.8	13	4.4	5.3	4.8	7.0	4.1	0.14	2.5	0.00	0.53	e3.4
20	2.6	9.2	5.9	5.5	4.8	7.4	4.0	0.06	0.98	0.01	1.3	e5.2
21	2.6	8.1	6.4	4.0	4.9	7.2	3.4	0.02	0.33	1.5	1.2	e8.9
22	2.5	9.2	5.3	5.3	4.3	7.4	2.8	0.00	0.01	2.2	52	e7.5
23	2.4	8.5	3.9	5.2	4.5	7.7	2.4	0.00	0.00	3.0	53	e7.0
24	2.1	5.6	3.6	4.9	4.4	7.5	2.1	0.00	0.00	0.00	0.74	e6.0
25	78	5.5	3.7	3.9	4.5	7.1	2.0	0.00	0.00	0.00	0.41	e5.2
26	104	7.1	3.6	4.1	3.0	7.0	2.0	0.06	0.00	0.00	0.57	e3.4
27	108	5.4	3.1	5.1	2.8	6.6	1.9	0.06	0.00	0.00	0.62	e2.8
28	112	0.78	5.7	5.5	3.7	6.5	1.6	0.04	0.00	0.00	0.62	3.0
29	113	4.1	4.8	5.5	---	6.5	1.5	0.00	0.00	0.07	0.54	2.8
30	113	5.6	2.9	5.9	---	6.8	1.5	0.00	0.00	0.00	0.47	2.4
31	111	---	2.7	5.7	---	7.0	---	0.00	---	0.00	0.40	---
TOTAL	845.6	1675.08	169.1	144.1	141.1	186.3	131.7	19.42	7.43	13.39	245.00	558.64
MEAN	27.3	55.8	5.45	4.65	5.04	6.01	4.39	0.63	0.25	0.43	7.90	18.6
MAX	113	117	9.6	7.8	7.8	8.4	7.6	1.8	3.0	3.4	53	317
MIN	2.1	0.78	2.7	1.9	2.8	2.3	1.5	0.00	0.00	0.00	0.00	0.03
AC-FT	1680	3320	335	286	280	370	261	39	15	27	486	1110

CAL YR 2001 TOTAL 15151.71 MEAN 41.5 MAX 417 MIN 0.13 AC-FT 30050  
WTR YR 2002 TOTAL 4136.86 MEAN 11.3 MAX 317 MIN 0.00 AC-FT 8210

e Estimated

## MIMBRES RIVER BASIN

08477110 MIMBRES RIVER AT MIMBRES, NM

LOCATION.--Lat 32°51'17", long 107°58'23", in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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.

DRAINAGE AREA.--216 mi<sup>2</sup> (revised).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1978 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,920 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 17, 1979, at datum 2.29 ft higher.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.5	7.0	4.8	4.7	2.9	3.1	3.3	0.66	0.00	9.4	6.3
2	11	8.3	6.8	6.4	4.8	3.0	3.0	3.1	0.78	0.00	9.0	5.9
3	11	8.0	6.5	8.7	4.8	3.1	2.5	3.6	0.72	0.06	19	9.4
4	11	7.7	6.6	8.0	5.1	3.5	3.2	3.1	0.83	0.20	8.5	9.7
5	11	7.7	6.8	7.6	4.8	3.3	3.4	2.5	1.1	0.40	6.2	8.2
6	10	8.3	6.8	6.8	4.6	3.4	3.2	2.4	0.41	0.45	5.4	7.9
7	9.6	8.4	6.7	6.5	4.2	3.4	2.9	2.1	0.20	0.58	4.5	6.9
8	9.4	8.3	6.5	6.5	4.1	3.3	2.0	1.7	0.20	0.91	4.4	6.6
9	9.2	9.1	6.2	6.4	4.2	3.2	1.8	1.7	0.41	1.1	5.1	6.8
10	8.9	8.6	6.1	5.9	4.2	3.5	2.0	2.0	0.48	4.6	2.8	14
11	8.8	8.6	6.6	5.5	4.3	4.2	1.8	1.8	0.48	2.1	9.1	46
12	8.8	8.2	6.6	5.1	4.2	4.1	1.5	1.6	0.34	1.5	12	14
13	8.7	8.1	6.5	5.0	4.4	3.9	1.6	1.6	0.27	1.5	11	7.7
14	7.9	8.1	6.2	5.9	4.3	1.9	1.8	1.8	0.34	1.4	10	6.1
15	7.1	8.4	6.2	6.4	4.3	0.85	1.9	1.8	0.33	0.46	10	5.1
16	7.3	8.1	6.1	6.6	4.3	0.62	1.4	1.7	0.00	1.3	10	5.0
17	7.4	7.6	5.7	6.4	4.2	0.44	1.8	1.3	0.00	1.4	9.9	7.9
18	7.2	7.5	5.6	6.4	4.2	0.27	1.7	1.4	0.00	3.8	9.7	7.9
19	7.2	7.8	5.2	6.3	4.2	0.44	1.6	1.5	0.00	60	17	7.7
20	6.7	8.0	5.0	6.1	4.2	0.78	2.0	1.4	0.00	18	13	7.6
21	7.1	7.6	4.7	6.0	3.5	1.8	2.5	1.3	0.00	13	11	7.3
22	7.8	7.4	4.4	5.9	2.4	2.1	2.2	1.4	0.00	9.7	10	6.9
23	7.9	7.5	4.3	5.7	2.2	1.9	2.1	1.3	0.00	8.8	10	5.9
24	8.1	7.3	4.5	5.6	2.2	2.0	2.8	0.99	0.00	8.0	9.7	4.8
25	8.3	7.2	4.5	5.5	3.3	1.8	2.7	1.2	0.00	7.6	9.2	3.5
26	7.9	7.8	4.3	5.4	2.9	2.1	2.2	1.2	0.00	7.4	8.1	1.2
27	8.0	7.9	4.3	5.3	2.7	2.6	2.6	1.2	0.00	42	6.9	1.1
28	8.5	7.1	4.4	4.8	2.8	2.6	3.1	1.4	0.00	46	6.4	1.0
29	8.0	7.1	4.5	4.9	---	2.5	3.2	1.4	0.81	33	6.0	1.2
30	8.0	7.3	4.5	5.0	---	3.3	3.4	0.87	0.00	21	5.4	1.3
31	8.1	---	4.8	4.9	---	2.8	---	0.69	---	14	5.3	---
TOTAL	266.9	237.5	174.9	186.3	110.1	75.60	71.0	54.35	8.36	310.26	274.0	230.9
MEAN	8.610	7.917	5.642	6.010	3.932	2.439	2.367	1.753	0.279	10.01	8.839	7.697
MAX	11	9.1	7.0	8.7	5.1	4.2	3.4	3.6	1.1	60	19	46
MIN	6.7	7.1	4.3	4.8	2.2	0.27	1.4	0.69	0.00	0.00	2.8	1.0
AC-FT	529	471	347	370	218	150	141	108	17	615	543	458

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	12.79	12.85	29.89	25.69	25.01	29.56	22.08	14.55	7.626	11.28	31.68	12.95													
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	1.75	0.28	1.64	0.94	0.87													
(WY)	1995	1981	1981	1981	1981	1990	1990	2002	2002	1994	2000	2000													

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1978 - 2002

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1978 - 2002
ANNUAL TOTAL	3726.2	2000.17	
ANNUAL MEAN	10.21	5.480	19.70
HIGHEST ANNUAL MEAN			45.1
LOWEST ANNUAL MEAN			4.73
HIGHEST DAILY MEAN	269	60	2500
LOWEST DAILY MEAN	1.1	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	2.0	0.00	0.00
MAXIMUM PEAK FLOW		735	a6360
MAXIMUM PEAK STAGE		3.48	b8.05
INSTANTANEOUS LOW FLOW		0.00	0.00
ANNUAL RUNOFF (AC-FT)	7390	3970	14270
10 PERCENT EXCEEDS	13	9.4	45
50 PERCENT EXCEEDS	7.3	4.7	8.0
90 PERCENT EXCEEDS	4.3	0.64	2.7

a From rating curve extended above 450 ft<sup>3</sup>/s, on basis of slope-area measurement at gage heights 6.70 ft and 8.05 ft.  
b From floodmarks.

MIMBRES RIVER BASIN

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08477110 MIMBRES RIVER AT MIMBRES, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978-86, November 2001 to August 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV 28...	1530	6.8	614	8.3	100	7.6	241	3.5	14.0	100	30.4	6.33	2.09
MAR 06...	1530	3.5	615	8.6	116	8.4	220	19.0	19.0	92	27.0	5.93	2.67
JUN 26...	0900	.01	615	3.4	44	7.6	319	25.5	17.0	140	43.6	7.30	3.07
AUG 28...	1410	6.0	619	8.0	123	9.0	258	29.5	26.0	110	32.2	7.54	3.39
Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	ALKALINITY TOT IT FIELD (MG/L AS CaCO3) (39086)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)
NOV 28...	.4	9.93	121	112	136	--	3.90	.3	47.6	7.0	175	<.01	<.20
MAR 06...	.5	11.0	115	109	129	2	2.86	.3	45.3	4.9	166	.01	<.20
JUN 26...	.4	11.5	159	146	177	--	4.22	.16	51.1	6.0	214	.01	.30
AUG 28...	.5	12.2	131	127	141	6	3.96	.32	44.3	4.7	184	<.01	.40
Date	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	ALUMINUM, 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)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)
NOV 28...	<.20	.05	.06	<.010	.08	.06	.08	<1	<.05	<2	34	<.06	E10
MAR 06...	<.20	.03	.06	<.010	.06	.05	.07	1	.25	<2	25	<.06	M
JUN 26...	.30	.03	<.02	<.010	.09	.10	.12	<1	.07	<2	42	<.06	20
AUG 28...	.50	.03	<.02	<.010	.06	.04	.07	2	.07	<13	30	<.06	20
Date	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	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, DIS-SOLVED (UG/L AS SE) (01145)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)
NOV 28...	<.04	E.6	.09	1.0	E5	<.08	6.3	<.01	.4	.23	<2	<2	<1
MAR 06...	<.04	<.8	.09	.6	<10	.18	1.7	<.01	.6	.16	<2	<2	<1
JUN 26...	<.04	<.8	.14	.6	E5	<.08	30.0	<.01	.4	<.06	<2	<2	<1
AUG 28...	<.04	<.8	.25	.8	E6	<.08	21.3	<.01	.6	.33	<2	<2	<1

MIMBRES RIVER BASIN

08477110 MIMBRES RIVER AT MIMBRES, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	SED. SUSP.															
		ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (82660)	ACETO-CHLOR, WATER, FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC WATER, DISS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD 0.7 U GF, REC (82680)	CARBO-FURAN WATER, FLTRD 0.7 U GF, REC (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER, FLTRD 0.7 U GF, REC (82682)
NOV	28...	2	.31	25	2.0												
MAR	06...	1	.53	96	26												
JUN	26...	6	.42	84	59												
AUG	28...	4	.53	92	31												
AUG	28...	1410	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003			
AUG	28...		<.006	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006			
AUG	28...		<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010		

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value  
 M -- Presence verified, not quantified

Value qualifier codes used in this report:  
 n -- Below the laboratory reporting level

08480595 SALT CREEK NEAR TULAROSA, NM

LOCATION.--Lat 33°16'32", long 106°23'50", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.16, T.12 S., R.6 E., Sierra County, Hydrologic Unit 13030102, on right bank, 360 ft upstream from Range Road 316, 0.5 mi east of Range Road 7, and about 65 mi north of small missile range on U.S. Highway 70.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1995 to current year. Published as "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 those estimated, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.55	0.52	0.42	1.0	0.77	0.65	0.54	0.34	0.26	0.20	0.24	0.12
2	0.62	0.52	0.42	0.79	0.75	0.63	0.52	0.34	0.25	0.16	0.20	0.11
3	0.63	0.52	0.43	0.71	0.90	0.64	0.52	0.38	0.23	0.14	2.5	0.03
4	0.59	0.51	0.42	0.70	1.8	0.66	0.54	0.38	0.24	0.14	2.3	0.00
5	0.56	0.53	0.52	0.64	1.5	0.71	0.54	0.36	0.26	0.18	0.54	0.00
6	0.54	0.53	0.52	0.62	0.87	0.73	0.53	0.37	0.28	0.22	0.31	0.00
7	0.57	0.54	0.54	0.63	0.74	0.65	0.58	0.34	0.30	0.26	0.28	0.00
8	0.54	0.55	0.51	0.63	0.71	0.66	0.63	0.35	0.31	0.25	0.20	0.00
9	0.54	0.52	0.53	0.65	0.67	0.64	0.59	0.33	0.28	0.23	0.17	0.00
10	0.98	0.58	0.57	0.67	0.59	0.68	0.54	0.30	0.25	0.21	0.15	0.09
11	3.9	0.60	1.0	0.58	0.62	0.65	0.53	0.29	0.25	0.19	0.13	0.20
12	0.81	0.60	1.2	0.61	0.67	0.47	0.51	0.32	0.26	0.19	0.12	9.8
13	0.52	0.59	0.77	0.66	0.67	0.44	0.50	0.28	0.25	0.19	0.01	2.1
14	0.52	0.58	0.60	0.63	0.68	0.42	0.47	0.30	0.25	0.16	0.00	0.72
15	0.51	0.59	0.56	0.67	0.67	0.46	0.42	0.30	0.29	0.23	0.00	0.18
16	0.49	1.2	0.75	0.65	0.66	0.40	0.43	0.28	0.22	0.28	0.00	0.14
17	0.52	1.0	0.59	0.66	0.63	0.46	0.44	0.28	0.22	0.30	0.00	0.13
18	0.53	0.83	0.59	0.64	0.59	0.48	0.42	0.27	0.21	0.24	0.00	0.09
19	0.51	0.78	0.56	0.62	0.67	0.48	0.41	0.59	0.19	0.26	e0.00	0.17
20	0.50	0.71	0.57	0.64	0.61	0.46	0.36	5.5	0.18	0.29	e0.04	0.53
21	0.51	0.80	0.54	0.63	0.65	0.44	0.46	0.87	0.18	0.27	e0.13	0.21
22	0.52	0.84	0.58	0.63	0.59	0.46	0.44	0.38	0.16	2.2	e0.40	0.11
23	0.50	1.5	0.57	0.61	0.66	0.46	0.42	0.29	0.17	0.45	0.25	0.06
24	0.51	2.3	0.59	0.68	0.65	0.45	0.44	0.30	0.18	0.25	0.16	0.10
25	0.49	0.44	0.60	0.63	0.64	0.47	0.46	0.29	0.19	0.21	0.13	0.09
26	0.50	0.40	0.62	0.68	0.58	0.48	0.39	0.28	0.18	0.16	0.09	0.08
27	0.51	0.40	0.65	0.68	0.67	0.50	0.42	0.33	0.18	0.15	0.00	0.07
28	0.54	0.36	0.66	0.65	0.66	0.52	0.43	0.32	0.19	0.21	0.06	0.00
29	0.54	0.37	0.66	0.66	---	0.51	0.38	0.31	0.28	2.1	0.21	0.04
30	0.53	0.42	0.67	0.97	---	0.53	0.38	0.30	0.23	0.59	0.16	0.08
31	0.52	---	0.65	0.90	---	0.54	---	0.28	---	0.31	0.14	---
TOTAL	20.60	20.63	18.86	21.12	20.87	16.73	14.24	15.85	6.92	11.22	8.92	15.25
MEAN	0.665	0.688	0.608	0.681	0.745	0.540	0.475	0.511	0.231	0.362	0.288	0.508
MAX	3.9	2.3	1.2	1.0	1.8	0.73	0.63	5.5	0.31	2.2	2.5	9.8
MIN	0.49	0.36	0.42	0.58	0.58	0.40	0.36	0.27	0.16	0.14	0.00	0.00
AC-FT	41	41	37	42	41	33	28	31	14	22	18	30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2002, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	0.772	0.799	0.796	0.821	0.694	0.708	0.593	0.636
MAX	2.08	1.80	1.17	1.25	1.00	1.14	0.79	1.47
(WY)	2000	1999	1998	2000	2000	2001	2001	1996
MIN	0.13	0.34	0.50	0.55	0.43	0.51	0.39	0.25
(WY)	1996	1996	1996	1998	1998	1996	1996	2002

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1995 - 2002

ANNUAL TOTAL	498.41	191.21	
ANNUAL MEAN	1.366	0.524	1.039
HIGHEST ANNUAL MEAN			1.53 1999
LOWEST ANNUAL MEAN			0.52 2002
HIGHEST DAILY MEAN	100	Sep 16	9.8 Sep 12 100 Sep 16 2001
LOWEST DAILY MEAN	0.17	Jul 15	0.00 Aug 14 0.00 Aug 14 2002
ANNUAL SEVEN-DAY MINIMUM	0.20	Jul 10	0.00 Aug 13 0.00 Aug 13 2002
MAXIMUM PEAK FLOW			42 Sep 12 300 Sep 16 2001
MAXIMUM PEAK STAGE			3.41 Sep 12 7.05 Sep 16 2001
INSTANTANEOUS LOW FLOW			0.00 Aug 13 0.00 Aug 13 2002
ANNUAL RUNOFF (AC-FT)	989	379	752
10 PERCENT EXCEEDS	1.0	0.71	1.0
50 PERCENT EXCEEDS	0.66	0.49	0.52
90 PERCENT EXCEEDS	0.29	0.14	0.23

e Estimated



08480595 SALT CREEK AT TULAROSA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC, DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	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)	LITHIUM, DIS-SOLVED (UG/L AS LI) (01130)
OCT 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 02...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	<.02	<750d	<9d	70.2	<25.0d	1410	<400d	<500d	<650d	<290d	<500d	<2.00d	2160
27...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY, DIS-SOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	SED. SUSP. % FINER THAN .062 MM (70331)	SEDIMENT, SUSPENDED (MG/L) (80154)
OCT 11...	--	--	--	--	--	--	--	--	--	98	--
NOV 02...	--	--	--	--	--	--	--	--	--	95	--
DEC 07...	--	--	--	--	--	--	--	--	--	100	--
JAN 07...	--	--	--	--	--	--	--	--	--	100	--
FEB 05...	--	--	--	--	--	--	--	--	--	100	--
MAR 01...	--	--	--	--	--	--	--	--	--	100	--
APR 08...	--	--	--	--	--	--	--	--	--	71	42
MAY 01...	--	--	--	--	--	--	--	--	--	33	49
JUN 07...	--	--	--	--	--	--	--	--	--	25	57
AUG 13...	577	E.01n	<2300d	<1500d	<10d	<450d	30400	<400d	<1200d	--	--
27...	--	--	--	--	--	--	--	--	--	91	64

Remark codes used in this report:

- < -- Less than
- E -- Estimated value

Value qualifier codes used in this report:

- d -- Diluted sample: method hi range exceeded
- n -- Below the laboratory reporting level

## TULAROSA VALLEY BASIN

08481500 TULAROSA CREEK NEAR BENT, NM

LOCATION.--Lat 33°08'41", long 105°53'50", in SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.32, T.13 S., R.11 E., Otero County, Hydrologic Unit 13044503, on right bank, 45 ft downstream from bridge on old U.S. Highway 70, 2.6 mi west of Bent, 8.5 mi northeast of Tularosa, and at mile 19.4.

DRAINAGE AREA.--120 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--December 1947 to November 1996, April 2002 to September 2002. Prior to October 1982 published as "Rio Tularosa".

REVISED RECORDS.--WSP 1312: 1949 (M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5,450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor. Diversions for irrigation of about 1,000 acres, 1959 determination, upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood probably occurred Sept. 3, 1938, when a peak of 9,640 ft<sup>3</sup>/s was computed for station approximately 6 mi downstream near Tularosa. Another flood may have occurred July 2, 1914.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,635 ft<sup>3</sup>/s, July 22, 2002, gage height 4.91 ft; minimum daily, 1.4 ft<sup>3</sup>/s, Aug. 3, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,635 ft<sup>3</sup>/s, July 22, gage height 4.91 ft; minimum daily, 7.6 ft<sup>3</sup>/s, June 16.

DISCHARGE from dcp, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	15	13	e13	15	18
2	---	---	---	---	---	---	---	15	9.0	13	15	18
3	---	---	---	---	---	---	---	13	9.3	14	15	18
4	---	---	---	---	---	---	---	13	10	14	15	18
5	---	---	---	---	---	---	---	9.7	14	15	15	18
6	---	---	---	---	---	---	---	12	14	14	26	18
7	---	---	---	---	---	---	---	11	14	16	17	19
8	---	---	---	---	---	---	---	14	13	15	15	18
9	---	---	---	---	---	---	---	14	12	15	15	18
10	---	---	---	---	---	---	---	14	12	16	15	18
11	---	---	---	---	---	---	---	14	12	16	15	19
12	---	---	---	---	---	---	---	15	12	16	15	19
13	---	---	---	---	---	---	---	14	12	16	14	18
14	---	---	---	---	---	---	---	14	12	11	15	18
15	---	---	---	---	---	---	---	14	12	15	15	18
16	---	---	---	---	---	---	---	13	7.6	13	15	17
17	---	---	---	---	---	---	---	14	7.6	17	15	17
18	---	---	---	---	---	---	---	14	8.8	16	15	17
19	---	---	---	---	---	---	---	10	12	16	15	18
20	---	---	---	---	---	---	---	13	12	66	15	18
21	---	---	---	---	---	---	---	11	13	17	16	17
22	---	---	---	---	---	---	---	15	14	217	16	16
23	---	---	---	---	---	---	---	15	14	17	16	16
24	---	---	---	---	---	---	16	14	14	16	15	16
25	---	---	---	---	---	---	15	14	14	16	14	16
26	---	---	---	---	---	---	16	14	13	16	15	16
27	---	---	---	---	---	---	15	14	e14	16	14	16
28	---	---	---	---	---	---	15	13	e14	27	15	16
29	---	---	---	---	---	---	14	14	e14	16	16	14
30	---	---	---	---	---	---	15	13	e13	15	16	15
31	---	---	---	---	---	---	---	13	---	15	17	---
TOTAL	---	---	---	---	---	---	---	415.7	365.3	735	482	518
MEAN	---	---	---	---	---	---	---	13.41	12.18	23.71	15.55	17.27
MAX	---	---	---	---	---	---	---	15	14	217	26	19
MIN	---	---	---	---	---	---	---	9.7	7.6	11	14	14
AC-FT	---	---	---	---	---	---	---	825	725	1460	956	1030

e Estimated





09354500 LOS PINOS RIVER AT LA BOCA, CO

LOCATION.--Lat 37°00'34", long 107°35'56", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.22, T.32 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on downstream end of right abutment of the Denver & Rio Grande Western Railroad Co. bridge, at southeast edge of La Boca, 0.5 mi upstream from Spring Creek, and 2 mi upstream from maximum elevation of Navajo Reservoir.

DRAINAGE AREA.--520 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733. Water-quality data available, July 1969 to August 1973, January 1988 to September 1991.

REVISED RECORDS.--WDR CO-00-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,127.21 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Vallecito Reservoir (station 09353000, capacity 125,640 acre-ft.) 24 mi upstream since April 1941. Diversions for irrigation of about 55,000 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood on Oct. 5, 1911 has not yet been exceeded.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	68	e48	e51	e37	37	22	20	68	42	10	11
2	142	62	e48	e51	e36	33	23	29	74	28	11	8.6
3	144	54	e48	e51	e36	32	28	17	73	19	14	10
4	143	51	e48	e51	e36	35	38	11	78	19	25	9.8
5	135	52	e48	e51	e36	e36	29	13	82	21	24	8.5
6	135	52	e48	e51	e35	e36	26	20	83	19	19	8.7
7	142	52	e49	e51	e35	36	28	23	78	18	16	9.1
8	168	51	e49	e51	e34	36	27	18	73	19	19	32
9	281	51	e49	e51	e36	34	23	25	73	18	16	24
10	207	51	48	e51	e36	36	23	23	78	19	15	20
11	168	50	50	e51	e36	36	23	23	71	24	15	114
12	166	49	50	e50	e36	e35	22	23	63	27	15	79
13	166	49	50	e46	e36	e34	22	31	63	23	11	45
14	143	48	50	e45	e37	35	22	33	61	21	13	45
15	141	47	50	e47	e38	e34	22	37	65	19	13	48
16	128	46	50	e44	e39	e34	24	37	65	14	11	45
17	111	46	50	e40	e39	34	25	40	59	9.0	9.6	39
18	93	45	e59	e32	e38	e33	22	38	47	16	9.5	34
19	90	44	e54	e48	e37	33	22	44	38	19	9.7	45
20	128	43	e54	e61	e36	32	21	53	35	13	9.8	42
21	116	43	e53	e57	e37	31	22	49	40	14	12	42
22	93	e44	e51	e61	39	31	22	55	76	38	12	36
23	90	e45	e51	e44	40	32	20	57	60	97	11	39
24	79	e46	e51	e42	40	29	19	59	52	53	9.8	37
25	74	e46	e51	e59	38	30	17	63	43	34	8.2	47
26	71	e47	e51	e50	32	28	19	68	39	24	8.5	28
27	72	e47	e51	e42	38	23	26	74	43	18	6.7	21
28	76	e47	e51	e34	38	22	20	69	37	16	6.6	22
29	78	e48	e51	e37	---	22	12	67	44	14	10	23
30	64	e48	e51	e38	---	22	10	68	64	12	16	29
31	57	---	e51	e39	---	22	---	73	---	11	16	---
TOTAL	3836	1472	1563	1477	1031	983	679	1260	1825	738.0	402.4	1001.7
MEAN	123.7	49.07	50.42	47.65	36.82	31.71	22.63	40.65	60.83	23.81	12.98	33.39
MAX	281	68	59	61	40	37	38	74	83	97	25	114
MIN	57	43	48	32	32	22	10	11	35	9.0	6.6	8.5
AC-FT	7610	2920	3100	2930	2040	1950	1350	2500	3620	1460	798	1990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

MEAN	194.9	133.6	102.0	74.60	96.16	218.3	342.7	424.8	500.8	297.3	236.7	213.7
MAX	672	709	396	182	362	972	1339	1719	1555	1381	1349	725
(WY)	1987	1987	1983	1985	1993	1993	1979	1958	1979	1957	1999	1997
MIN	47.9	32.1	33.8	33.9	36.8	31.7	22.6	40.6	60.8	23.8	13.0	33.4
(WY)	1978	1960	1964	1978	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1951 - 2002

ANNUAL TOTAL	79648	16268.1	
ANNUAL MEAN	218.2	44.57	239.7
HIGHEST ANNUAL MEAN			582
LOWEST ANNUAL MEAN			44.6
HIGHEST DAILY MEAN	1070	Jun 12	4560
LOWEST DAILY MEAN	43	Nov 20	6.1
ANNUAL SEVEN-DAY MINIMUM	44	Nov 17	8.7
MAXIMUM PEAK FLOW			314
MAXIMUM PEAK STAGE			4.48
ANNUAL RUNOFF (AC-FT)	158000	32270	173700
10 PERCENT EXCEEDS	539	74	550
50 PERCENT EXCEEDS	158	38	133
90 PERCENT EXCEEDS	50	14	50

e Estimated.

a From rating curve extended above 5100 ft<sup>3</sup>/s.

b Maximum gage height, 9.00 ft, backwater from ice, sometime during period, Dec 23, 1990 to Jan 17, 1991.

## SAN JUAN RIVER BASIN

09355000 SPRING CREEK AT LA BOCA, CO

LOCATION.--Lat 37°00'40", long 107°35'47", in SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.15, T.32 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on right bank in an excavated channel, 0.2 mi upstream from mouth, and 0.2 mi east of La Boca.

DRAINAGE AREA.--58.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733. Water-quality data available, May 1974, January 1988 to September 1991.

REVISED RECORDS.-- WDR CO-00-02: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,160 ft above sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Part of flow is return waste from irrigation.

Nearly all irrigation in this basin is water diverted from Los Pinos River which causes a considerable change in the annual pattern and natural flow. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	5.7	e7.9	e3.5	e5.6	5.1	1.4	9.0	43	2.8	0.00	0.47
2	44	5.7	e7.4	e3.5	e4.6	6.2	1.2	12	42	2.4	0.08	0.23
3	42	5.6	e5.5	e3.4	e3.7	5.9	1.1	9.2	41	1.8	0.51	0.13
4	41	5.6	e4.5	e3.4	e3.5	5.9	1.1	7.8	45	1.5	0.40	0.20
5	40	5.6	e3.8	e3.4	e3.4	6.5	0.99	6.8	45	0.76	0.24	0.19
6	41	5.7	e3.6	e3.4	e3.4	6.3	0.99	6.6	49	1.4	0.21	0.19
7	43	5.8	e3.4	e3.4	e2.6	4.4	1.7	5.5	45	1.5	0.27	0.28
8	44	5.7	e3.4	e3.4	e1.8	4.5	1.7	5.3	47	7.2	0.42	2.2
9	80	5.7	e3.3	e3.4	e1.9	4.7	1.2	4.1	55	1.4	0.45	1.1
10	45	5.4	e3.2	e3.4	e2.9	4.3	1.3	6.2	61	1.1	0.25	1.0
11	33	5.4	e3.1	e3.4	e3.1	3.4	0.99	8.0	64	1.0	0.15	4.4
12	32	5.2	e3.1	e3.4	e3.1	3.1	0.82	8.2	57	0.96	0.13	3.7
13	33	5.3	e3.1	e3.4	e3.5	3.1	1.0	13	53	0.90	0.02	1.7
14	34	5.3	e3.1	e3.4	e4.0	3.1	0.91	17	52	0.75	0.01	1.0
15	33	5.3	e3.1	e3.4	e4.5	3.1	0.77	18	54	0.48	0.02	0.61
16	33	5.2	e3.1	e3.4	e5.5	2.6	0.85	17	50	0.48	0.04	0.44
17	31	4.8	e3.1	e3.4	e5.9	2.7	0.84	21	46	0.51	0.01	0.41
18	29	4.8	e3.1	e3.4	e5.9	2.5	0.99	26	50	1.4	0.01	0.67
19	28	4.6	e3.2	e3.4	e4.9	2.6	0.75	30	40	1.2	0.13	0.83
20	35	4.7	e3.4	e3.4	e3.3	2.1	0.63	44	27	0.50	0.30	0.71
21	21	5.3	e3.5	e3.3	e3.1	2.3	0.62	25	32	0.40	0.42	0.58
22	9.3	5.4	e3.6	e3.3	e2.8	1.8	0.73	41	38	0.42	0.43	0.49
23	7.2	7.2	e3.7	e3.0	2.3	2.0	0.72	39	28	0.30	0.33	0.58
24	6.0	6.4	e3.7	e2.8	3.1	1.9	0.69	46	28	0.42	0.27	0.51
25	5.1	6.7	e3.7	e2.6	4.0	2.1	0.68	43	27	0.64	0.24	0.56
26	5.0	7.6	e3.7	e2.1	4.6	2.0	7.3	46	25	0.18	0.14	0.55
27	4.9	14	e3.7	e1.8	5.3	1.9	7.4	47	26	0.32	0.15	0.43
28	5.2	e9.3	e3.6	e1.3	6.3	1.6	4.3	52	27	0.20	0.14	0.70
29	5.3	e8.7	e3.6	e1.6	---	1.5	2.9	45	17	0.17	0.07	1.3
30	5.2	e8.2	e3.6	e2.7	---	1.5	3.4	42	7.2	0.05	4.4	1.7
31	5.5	---	e3.5	e4.0	---	1.5	---	47	---	0.01	3.6	---
TOTAL	864.7	185.9	117.3	96.7	108.6	102.2	49.97	747.7	1221.2	33.15	13.84	27.86
MEAN	27.89	6.197	3.784	3.119	3.879	3.297	1.666	24.12	40.71	1.069	0.446	0.929
MAX	80	14	7.9	4.0	6.3	6.5	7.4	52	64	7.2	4.4	4.4
MIN	4.9	4.6	3.1	1.3	1.8	1.5	0.62	4.1	7.2	0.01	0.00	0.13
AC-FT	1720	369	233	192	215	203	99	1480	2420	66	27	55

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

	MEAN	34.74	10.55	5.453	4.808	9.897	18.08	13.01	38.59	57.21	66.30	65.29	57.37
MAX	87.9	29.6	20.4	19.3	54.8	89.7	41.1	64.5	79.3	111	132	92.0	
(WY)	1973	1956	1985	1980	1980	1979	1979	1992	1986	1996	1996	1983	
MIN	5.25	3.68	1.74	2.04	2.06	2.36	1.67	15.7	24.4	1.07	0.45	0.93	
(WY)	1978	1978	1960	1973	2000	1999	2002	1978	1977	2002	2002	2002	

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1951 - 2002

ANNUAL TOTAL	10922.2	3569.12		
ANNUAL MEAN	29.92	9.778	32.15	
HIGHEST ANNUAL MEAN			47.7	1987
LOWEST ANNUAL MEAN			9.78	2002
HIGHEST DAILY MEAN	131	Aug 13	80	Oct 9
LOWEST DAILY MEAN	e3.1	Feb 6	0.00	Aug 1
ANNUAL SEVEN-DAY MINIMUM	3.1	Dec 11	0.03	Aug 12
MAXIMUM PEAK FLOW			101	Oct 9
MAXIMUM PEAK STAGE			2.08	Oct 9
ANNUAL RUNOFF (AC-FT)	21660	7080	23290	
10 PERCENT EXCEEDS	63	41	71	
50 PERCENT EXCEEDS	22	3.4	22	
90 PERCENT EXCEEDS	5.0	0.37	3.1	

e Estimated.

a From rating curve extended above 160 ft<sup>3</sup>/s, on the basis of field estimate of peak flow.

b Maximum gage height, 5.98 ft, Mar 9, 1960, backwater from ice.

SAN JUAN RIVER BASIN

293

09355100 NAVAJO RESERVOIR NEAR ARCHULETA, NM

LOCATION.--Lat 36°48'28", long 107°36'31", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.18, T.30 N., R.7 W., San Juan County, Hydrologic Unit 14080101, in gate shaft of outlet works structure near right abutment of Navajo Dam on San Juan River, 5.5 mi east of Archuleta, 33.0 mi east of Farmington, and at mile 298.6.

DRAINAGE AREA.--3,230 mi<sup>2</sup>, approximately.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1968 dead storage included.

REMARKS.--Reservoir is formed by earth rock-fill dam, completed in June 1963; storage began June 27, 1962. Capacity, 1,708,600 acre-ft between elevation 5,720 ft, upstream toe of dam, and 6,085 ft, crest of spillway. Usable capacity 1,696,000 acre-ft above elevation 5,774.9 ft minimum operating level. Dead storage below elevation 5,774.9 ft is 12,600 acre-ft. Figures given herein are usable contents. Reservoir is used for irrigation storage, river regulation, desilting, flood control, and recreation.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,731,000 acre-ft, July 2-4, 1973, elevation, 6,087.25 ft; minimum contents after June 1964 (initial filling period), 234,300 acre-ft, Mar. 10 and 11, 1965, elevation, 5,906.36 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,407,800 acre-ft, Oct. 1, elevation, 6,064.63 ft; minimum contents, 871,700 acre-ft, Sept. 30, elevation, 6,015.62 ft.

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

6,015	864.5	6,035	1,056.7	6,055	1,281.3	6,075	1,546.2
6,020	910.1	6,040	1,109.4	6,060	1,343.5	6,080	1,619.5
6,025	957.2	6,045	1,164.3	6,065	1,408.3	6,085	1,696.0
6,030	1,006.0	6,050	1,221.6	6,070	1,475.8	6,090	1,775.7

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1407800	1375200	1349900	1333300	1312500	1292600	1268700	1225700	1171500	1096300	1004000	915100
2	1406200	1374300	1349200	1332500	1311700	1291900	1267600	1223800	1169600	1093100	1000900	912500
3	1404700	1373200	1348400	1331700	1311000	1290800	1266400	1221700	1167400	1089900	977900	909700
4	1402700	1372000	1347800	1331000	1310200	1290300	1265400	1219900	1165400	1086700	995100	906900
5	1401100	1370800	1347400	1330600	1309500	1289600	1264700	1218000	1163500	1083500	992100	904600
6	1399900	1369900	1346600	1329900	1309000	1288900	1263800	1216100	1161500	1080400	988800	902600
7	1399100	1369200	1346000	1329100	1308400	1287800	1263300	1214200	1159300	1077700	985700	900900
8	1397500	1368800	1345300	1328600	1307600	1287400	1262600	1212200	1156900	1074700	982700	899500
9	1396900	1368100	1344600	1328000	1306900	1287100	1261500	1210500	1154400	1071700	979600	897900
10	1396100	1367600	1344000	1327200	1306200	1286200	1260400	1208400	1152100	1068700	976500	896300
11	1394800	1366900	1343200	1326800	1305400	1285400	1259300	1206300	1149700	1065700	973200	895300
12	1394000	1366500	1342400	1326300	1304700	1284600	1258500	1204900	1147100	1062700	970100	894300
13	1393100	1365700	1341800	1325600	1303900	1283500	1257300	1203500	1144700	1059800	967000	893600
14	1392000	1365300	1341000	1325000	1303200	1283200	1256100	1201800	1142000	1056900	964000	893000
15	1391000	1364800	1340200	1324200	1302400	1282600	1254600	1200000	1139100	1053900	960800	892000
16	1390100	1363900	1339600	1323600	1301700	1281900	1253500	1198300	1136900	1050800	957500	891000
17	1388600	1363100	1338800	1322800	1301000	1281600	1251700	1196600	1134800	1047700	954200	889600
18	1387300	1362500	1338000	1322100	1300200	1280900	1250200	1195100	1132500	1044900	951300	888100
19	1386200	1361700	1337400	1321300	1299500	1280000	1248900	1193800	1129800	1042100	948500	886800
20	1385100	1361100	1336600	1320700	1298700	1279100	1247100	1192400	1126800	1039000	945400	885700
21	1383900	1360400	1336100	1320000	1298500	1278300	1245700	1190300	1124300	1036300	942500	884600
22	1383400	1359900	1335700	1319200	1297800	1277300	1243900	1188700	1121600	1033100	939800	883500
23	1382600	1359000	1334900	1318600	1297100	1276200	1242500	1186900	1119100	1030400	937300	881900
24	1382400	1358600	1334300	1318100	1296300	1275500	1240300	1185500	1116700	1027800	934900	880500
25	1382000	1357900	1333300	1317300	1295500	1275300	1238200	1184000	1113700	1025100	932500	878900
26	1381100	1357200	1332600	1316700	1294800	1274500	1235900	1182700	1110500	1022100	929600	877200
27	1380200	1356300	1331900	1316000	1294100	1273900	1233700	1181200	1107400	1019000	927200	875700
28	1379300	1355600	1331400	1315200	1293300	1273100	1231900	1179300	1104900	1016000	924700	874500
29	1378400	1354800	1330700	1314600	---	1272000	1229800	1177400	1102300	1013300	922000	873200
30	1377300	1354400	1330200	1313900	---	1270500	1227500	1175500	1099400	1010300	919800	871700
31	1376300	---	1329800	1313200	---	1269800	---	1173600	---	1007200	917300	---
MAX	1407800	1375200	1349900	1333300	1312500	1292600	1268700	1225700	1171500	1096300	1004000	915100
MIN	1376300	1354400	1329800	1313200	1293300	1269800	1227500	1173600	1099400	1007200	917300	871700
(+)	6062.22	6060.52	6058.91	6057.25	6055.64	6053.71	6050.17	6045.50	6038.75	6029.87	6020.59	6015.62
(++)	-32900	-21900	-24600	-16600	-19900	-23500	-42300	-53900	-74200	-92200	-89900	-45600
CAL YR 2001	MAX 1543300	MIN 1258200	(++) +41000									
WTR YR 2002	MAX 1407800	MIN 871700	(++) -537500									

(+) Elevation, in feet, at end of month  
(++) Change in contents, in acre-ft

## SAN JUAN RIVER BASIN

09355500 SAN JUAN RIVER NEAR ARCHULETA, NM

LOCATION.--Lat 36°48'05", long 107°41'51", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.20, T.30 N., R.8 W., San Juan County, Hydrologic Unit 14080101, on left bank 0.5 mi upstream from Gobernador Canyon, 0.8 mi northeast of Archuleta, 7.2 mi downstream from Navajo Dam, and at mile 291.4.

DRAINAGE AREA.--3,260 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1954 to current year.

REVISED RECORDS.--The annual runoff for the 1958 water year as published in table 2, WSP 1733, was 455,000 acre-ft. The correct value is 1,455,000 acre-ft.

GAGE.--Water-stage recorder and crest-stage gage with satellite telemetry. Elevation of gage is 5,653 ft above National Geodetic Vertical Datum of 1929, from river-profile survey. Prior to Dec. 29, 1959, at site 5.0 mi upstream at elevation 55 ft higher. Dec. 29, 1959, to Nov. 15, 1964, at site 0.4 mi upstream at elevation 5 ft higher. Prior to Nov. 28, 1966, at elevation 2.0 ft higher.

REMARKS.--Water-discharge records good except for those estimated, which are poor. Flow completely regulated by Navajo Reservoir (station 09355100) 7.0 mi upstream except for minor inflow from 30 mi<sup>2</sup> intervening drainage area. High-water diversions through Azotea tunnel (station 08284160) into Rio Grande Basin began in Mar. 1971. Diversions for irrigation of about 47,000 acres upstream from station. Releases from Navajo Reservoir, beginning in Jan. 1976, for use on Navajo Indian Irrigation Project bypass gage in tunnel on left bank. See tabulation below for monthly and annual releases as furnished by Bureau of Reclamation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	877	600	498	501	489	e493	e662	900	717	872	821	816
2	871	598	498	500	492	e491	e617	898	714	880	817	813
3	873	599	497	497	497	e491	e609	899	715	880	823	816
4	875	598	497	500	496	e491	e615	900	716	882	823	820
5	874	598	496	501	495	e491	e606	898	716	860	822	775
6	876	543	495	500	495	e492	e600	896	720	836	819	708
7	874	480	493	496	493	e494	e610	896	723	837	816	702
8	870	482	491	496	493	e495	e607	877	717	837	812	712
9	868	483	492	495	494	e495	e607	847	715	831	805	696
10	864	483	496	497	493	e495	e609	833	713	829	802	700
11	861	484	492	495	491	e495	e608	833	736	825	801	707
12	854	484	496	495	489	e495	e609	833	764	826	788	701
13	856	483	494	494	489	e496	e611	832	762	821	785	626
14	854	485	495	493	490	e496	e611	830	766	818	784	532
15	851	487	495	493	494	e493	e657	827	766	824	785	531
16	826	489	495	492	499	e492	e744	824	765	836	785	531
17	809	485	493	493	499	e495	e798	824	762	842	783	533
18	808	484	494	490	498	e495	e792	831	762	856	793	542
19	808	482	492	490	499	e496	e812	827	766	835	801	523
20	798	482	492	491	e500	e496	e876	834	788	832	805	491
21	802	486	494	490	e499	e496	e881	829	846	834	807	488
22	807	492	496	490	e498	e496	e865	818	867	835	802	485
23	700	494	495	491	e498	e498	840	768	870	840	800	485
24	585	496	495	489	e497	e495	858	719	866	847	800	484
25	580	501	495	492	e496	e497	891	715	864	849	799	484
26	578	500	494	494	e495	e495	898	717	865	850	801	487
27	581	499	494	493	e493	e496	905	718	859	847	808	496
28	607	500	491	493	e494	e500	904	718	861	842	808	505
29	605	500	491	491	---	e556	906	717	860	837	808	508
30	605	500	501	493	---	e695	901	718	862	837	814	506
31	602	---	500	490	---	e696	---	718	---	828	813	---
TOTAL	24099	15277	15337	15315	13855	15797	22109	25294	23423	26105	24930	18203
MEAN	777.4	509.2	494.7	494.0	494.8	509.6	737.0	815.9	780.8	842.1	804.2	606.8
MAX	877	600	501	501	500	696	906	900	870	882	823	820
MIN	578	480	491	489	489	491	600	715	713	818	783	484
AC-FT	47800	30300	30420	30380	27480	31330	43850	50170	46460	51780	49450	36110
(+)	5800	0	0	0	0	4000	20100	25900	36500	41000	36800	15900
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)												
MEAN	852.6	861.5	968.0	1015	1019	1098	1340	1767	1886	1200	992.4	948.7
MAX	2131	3018	2886	2768	2382	4216	4768	4962	5169	5126	3508	3241
(WY)	1966	1966	1966	1986	1987	1993	1979	1985	1979	1979	1973	1999
MIN	298	240	162	115	149	207	244	279	300	320	353	338
(WY)	1963	1963	1963	1963	1963	1964	1964	1967	1967	1967	1963	1963
SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1963 - 2002												
ANNUAL TOTAL	346898			239744								
ANNUAL MEAN	950.4			656.8			a1162					
HIGHEST ANNUAL MEAN							2686					
LOWEST ANNUAL MEAN							280					
HIGHEST DAILY MEAN				5010			May 26			906		
LOWEST DAILY MEAN				262			Jul 14			480		
ANNUAL SEVEN-DAY MINIMUM				300			Jul 9			483		
MAXIMUM PEAK FLOW							1100			Jul 18		
MAXIMUM PEAK STAGE							4.00			Jul 18		
INSTANTANEOUS LOW FLOW										8.0		
ANNUAL RUNOFF (AC-FT)	688100			475500			842100					
10 PERCENT EXCEEDS	2240			863			2620					
50 PERCENT EXCEEDS	526			610			647					
90 PERCENT EXCEEDS	487			491			414					

e Estimated

a Average discharge for 7 years (water years 1956-62), 1,304 ft<sup>3</sup>/s, 944,700 acre-ft/yr, prior to closure of Navajo Dam.

b Site and datum then in use.

c Maximum discharge since construction of Navajo Dam in 1962, 6,500 ft<sup>3</sup>/s, June 20, 1965, gage height, 4.75 ft.

(+) Discharge, in acre-ft, through Navajo irrigation tunnel.

09355500 SAN JUAN RIVER NEAR ARCHULETA, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
NOV 13...	1545	483	1.3	2.0	620	12.0	128	8.6	250	15.0	9.0	98	29.6	
MAR 18...	1340	498	7.5	3.7	618	10.8	107	8.2	232	11.0	6.0	91	28.0	
MAY 13...	1420	832	1.8	2.0	628	10.6	114	8.5	227	28.0	10.0	83	25.4	
JUL 17...	1310	840	1.2	1.3	619	11.2	123	8.3	231	35.0	10.0	84	25.6	
Date	Time	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3 CO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV 13...	5.74	1.18	.6	13.2	88	76	89	2	3.04	.2	9.6	44.8	153	
MAR 18...	5.17	1.76	.6	12.3	78	74	89	--	2.19	.2	9.2	37.3	140	
MAY 13...	4.71	1.62	.6	12.2	77	72	87	--	1.76	.20	9.6	34.6	133	
JUL 17...	4.79	1.61	.5	10.8	77	70	84	--	2.42	.18	9.6	33.6	130	
Date	Time	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL./100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	ALUM-INUM, DIS-SOLVED (MG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (MG/L AS SB) (01095)
NOV 13...	.01	.20	.20	.03	<.02	<.010	<.02	.01	<.02	<1k	<1k	1	.08	
MAR 18...	.04	<.20	.20	.05	.02	<.010	<.02	<.01	<.02	<3k	E12k	1	<.05	
MAY 13...	.02	<.20	.30	.04	<.02	<.010	<.02	<.01	<.02	<3k	<3k	1	.08	
JUL 17...	.01	<.20	<.20	.02	<.02	<.010	.03	<.01	.02	--	--	<1	.10	
Date	Time	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)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)
NOV 13...	E2	68	<.06	20	<.04	<.8	.08	1.3	<10	E.04	1.9	<.01	.9	
MAR 18...	M	71	<.06	10	<.04	<.8	.08	1.2	<10	<.08	5.1	<.01	1.1	
MAY 13...	<2	63	<.06	20	<.04	<.8	.08	1.5	<10	<.08	1.8	<.01	.8	
JUL 17...	<2	61	<.06	20	<.04	<.8	.07	1.3	<10	<.08	1.4	<.01	.9	

## SAN JUAN RIVER BASIN

09355500 SAN JUAN RIVER NEAR ARCHULETA, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
NOV 13...	.86	E1	<2	<1	1	.47	83	3.0
MAR 18...	.81	<2	<2	<1	3	.47	93	19
MAY 13...	1.25	<2	<2	<1	3	.44	79	13
JUL 17...	.39	<2	E2	<1	2	.40	93	8.0

Remark codes used in this report:

< -- Less than  
E -- Estimated value  
M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range

09363500 ANIMAS RIVER NEAR CEDAR HILL, NM

LOCATION.--Lat 37°02'17", long 107°52'25", in sec.7, T.32 N., R.9 W., La Plata County, Colorado, Hydrologic Unit 14080104, on right bank 0.8 mi downstream from Florida River, 2.5 mi upstream from Colorado-New Mexico State line, 8.5 mi north of Cedar Hill, and at mile 32.9.

DRAINAGE AREA.--1,090 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for October and November 1933, published in WSP 1313.

REVISED RECORDS.--WSP 1563: 1940 and 1946 (monthly figures only).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,960 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 14, 1937, at datum between 1.52 ft and 1.36 ft higher. Sept. 15, 1937, to Sept. 30, 1946, at datum 1.36 ft higher.

REMARKS.--Water-discharge records good except for those estimated, which are poor. Diversions for irrigation of about 20,000 acres upstream from station. During water years 1944-49, Twin Rocks Canal diverted upstream from station for irrigation downstream. Slight regulation by Lemon Dam about 30 mi upstream on Florida River since Nov. 1963 (capacity, 40,100 acre-ft).

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in October 1911 at this location.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	247	e250	240	e203	185	244	338	738	162	110	117
2	280	251	253	248	e196	183	297	408	713	152	108	108
3	280	246	258	e256	e201	168	356	395	684	151	120	100
4	269	240	e254	268	e191	154	393	339	607	169	128	94
5	268	235	e252	258	e191	177	402	347	527	188	128	98
6	262	258	250	238	e187	186	449	424	497	185	122	92
7	249	296	232	246	e192	189	409	504	506	174	130	105
8	263	297	241	247	209	197	385	563	499	151	132	183
9	330	304	e234	243	206	187	345	532	487	146	147	314
10	324	296	227	247	e178	169	340	455	472	157	165	308
11	327	280	255	242	182	173	328	438	447	173	144	644
12	318	273	268	231	193	187	310	407	389	158	127	1160
13	339	279	e269	210	205	181	309	462	366	150	116	945
14	285	275	e267	204	200	182	279	559	345	131	108	749
15	273	281	270	213	203	187	296	622	324	127	101	591
16	268	270	279	231	198	176	382	631	298	127	102	487
17	262	265	e272	234	180	173	337	635	282	130	102	419
18	254	255	e276	227	176	172	283	698	270	116	104	379
19	256	245	e275	e226	187	169	251	765	250	120	106	344
20	250	245	e276	e233	199	160	261	757	245	114	105	323
21	243	245	273	e237	198	163	273	767	229	107	113	277
22	243	250	279	e227	198	169	232	714	218	163	111	233
23	253	275	e280	241	195	166	227	593	206	140	123	222
24	256	263	e270	e242	186	164	268	532	217	167	104	214
25	251	265	e275	e255	175	161	333	466	217	205	95	197
26	247	253	e280	e221	168	158	415	489	208	173	91	179
27	248	e250	e273	209	175	158	395	524	214	135	89	198
28	240	e252	e266	191	178	162	347	523	199	123	91	201
29	236	255	e269	e196	---	175	291	571	188	116	90	223
30	246	246	243	e193	---	192	295	632	182	114	109	258
31	248	---	223	e195	---	213	---	716	---	110	123	---
TOTAL	8328	7892	8089	7149	5350	5436	9732	16806	11024	4534	3544	9762
MEAN	268.6	263.1	260.9	230.6	191.1	175.4	324.4	542.1	367.5	146.3	114.3	325.4
MAX	339	304	280	268	209	213	449	767	738	205	165	1160
MIN	236	235	223	191	168	154	227	338	182	107	89	92
AC-FT	16520	15650	16040	14180	10610	10780	19300	33330	21870	8990	7030	19360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2002, BY WATER YEAR (WY)

MEAN	468.5	343.7	271.3	247.4	260.5	428.1	1072	2510	2970	1248	637.8	535.1
MAX	2479	1068	555	388	467	1043	2192	5686	6145	3710	2372	1922
(WY)	1942	1942	1987	1973	1987	1993	1985	1941	1957	1957	1999	1970
MIN	169	158	159	169	151	141	273	449	367	146	114	155
(WY)	1957	1934	1957	1954	1964	1977	1977	1977	2002	2002	2002	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1934 - 2002
ANNUAL TOTAL	336110	97646	
ANNUAL MEAN	920.8	267.5	925.0
HIGHEST ANNUAL MEAN			1713
LOWEST ANNUAL MEAN			268
HIGHEST DAILY MEAN	5100	1160	11800
LOWEST DAILY MEAN	214	89	0.00
ANNUAL SEVEN-DAY MINIMUM	241	96	0.00
MAXIMUM PEAK FLOW		1440	13100
MAXIMUM PEAK STAGE		6.31	11.45
INSTANTANEOUS LOW FLOW		84	63
ANNUAL RUNOFF (AC-FT)	666700	193700	670100
10 PERCENT EXCEEDS	2850	468	2430
50 PERCENT EXCEEDS	377	243	412
90 PERCENT EXCEEDS	250	123	210

e Estimated

## SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, NM

LOCATION.--Lat 36°43'17", long 108°12'05", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.15, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080104, in Boyd City Park, on right bank 900 ft upstream from bridge on Miller Ave., 0.4 mi downstream from bridge on U.S. Highway 64 in Farmington, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--1,360 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1904 to October 1905 (published as "near Farmington"), September 1912 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1243: 1931. WSP 1313: 1913.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,280 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 1, 1905, non-recording gage at old bridge 0.1 mi upstream at different datum. Sept. 17, 1912, to Oct. 4, 1938, water-stage recorder at site 0.8 mi downstream at lower datums (datum lowered 2.0 ft Aug. 15, 1927, and raised 0.2 ft Dec. 16, 1929). Oct. 5, 1938, to Nov. 1, 1973, at site 900 ft downstream at datum 1.74 ft lower.

REMARKS.--Water-discharge records good except for those estimated, which are fair. Diversions for irrigation of about 30,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911, when a stage of about 16.5 ft was reached (datum in use Oct. 1938 to Nov. 1973). Flood of Sept. 6, 1909, reached a stage of 11.1 ft, 1904-5 site and datum (discharge, about 19,000 ft<sup>3</sup>/s).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	204	304	256	244	194	98	29	489	9.0	e25	5.1
2	94	206	309	267	227	197	126	100	495	6.4	14	4.1
3	106	221	302	254	240	195	144	137	472	3.3	11	4.1
4	114	227	316	259	211	180	177	133	494	3.1	4.5	4.1
5	112	215	319	275	201	181	190	102	408	5.9	3.1	4.1
6	118	212	300	251	217	200	208	124	335	8.4	3.9	4.3
7	125	215	283	220	219	202	245	202	309	9.0	4.4	5.8
8	115	217	270	226	226	210	223	246	310	12	2.8	19
9	151	224	265	264	223	216	202	312	266	30	2.2	7.2
10	229	234	253	264	219	203	163	245	269	25	2.6	147
11	233	230	265	258	195	187	152	222	249	19	3.0	835
12	221	217	294	251	189	195	144	183	210	9.6	3.1	982
13	220	211	295	245	209	206	100	197	161	5.7	1.9	1060
14	227	210	291	221	216	197	88	230	148	7.1	1.6	783
15	189	214	285	211	215	208	46	361	133	5.9	1.3	561
16	183	230	282	241	221	210	67	334	110	7.8	2.0	439
17	184	221	261	250	216	193	124	369	67	7.4	2.1	356
18	169	229	272	243	191	183	98	345	48	10	1.1	356
19	168	230	290	235	190	179	46	478	21	13	2.3	263
20	166	217	288	264	205	170	22	484	14	14	4.5	222
21	176	209	288	246	213	172	26	454	12	12	4.2	199
22	156	228	289	229	218	168	24	529	7.4	e14	4.4	149
23	148	244	279	246	218	157	12	404	4.6	e16	4.9	135
24	165	247	260	253	220	156	15	338	5.5	7.4	8.9	109
25	175	254	261	249	198	160	19	268	6.1	9.6	7.0	96
26	176	281	287	246	184	155	76	245	11	e23	3.6	66
27	190	294	294	249	177	145	133	276	11	e28	3.6	81
28	195	296	271	228	184	133	120	275	15	e30	4.0	98
29	186	291	281	210	---	110	66	295	22	e32	2.8	98
30	178	305	303	231	---	103	29	332	13	e28	3.0	131
31	189	---	265	238	---	110	---	400	---	e27	2.6	---
TOTAL	5139	7033	8822	7580	5886	5475	3183	8649	5115.6	438.6	145.4	7223.8
MEAN	165.8	234.4	284.6	244.5	210.2	176.6	106.1	279.0	170.5	14.15	4.690	240.8
MAX	233	305	319	275	244	216	245	529	495	32	25	1060
MIN	81	204	253	210	177	103	12	29	4.6	3.1	1.1	4.1
AC-FT	10190	13950	17500	15030	11670	10860	6310	17160	10150	870	288	14330

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2002, BY WATER YEAR (WY)

	MEAN	430.9	354.1	297.1	275.4	297.8	451.7	977.7	2385	2938	1114	510.3	445.6
MAX	2726	1140	609	554	675	1242	2489	6126	6930	3609	2581	2182	
(WY)	1942	1942	1987	1920	1920	1997	1979	1920	1920	1957	1999	1925	
MIN	87.0	152	174	163	162	112	54.1	195	171	11.6	4.11	10.6	
(WY)	1957	1935	1964	1996	1964	1977	1977	1977	2002	2002	2002	1956	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1914 - 2002
ANNUAL TOTAL	271265	64690.4	
ANNUAL MEAN	743.2	177.2	874.1
HIGHEST ANNUAL MEAN			1734
LOWEST ANNUAL MEAN			177
HIGHEST DAILY MEAN	4700	May 17	11000
LOWEST DAILY MEAN	81	Oct 1	0.00
ANNUAL SEVEN-DAY MINIMUM	91	Sep 27	0.00
MAXIMUM PEAK FLOW		1920	a25000
MAXIMUM PEAK STAGE		5.98	9.32
INSTANTANEOUS LOW FLOW		0.86	0.00
ANNUAL RUNOFF (AC-FT)	538100	128300	633200
10 PERCENT EXCEEDS	2220	301	2320
50 PERCENT EXCEEDS	303	195	374
90 PERCENT EXCEEDS	169	5.6	184

e Estimated

a Site and datum then in use, from rating curve extended above 10,000 ft<sup>3</sup>/s.

09364500 ANIMAS RIVER AT FARMINGTON, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1940 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
NOV 15...	0910	211	8.7	12	633	9.9	101	8.2	812	7.0	8.0	330	105	
MAR 19...	1440	176	14	17	630	10.3	108	8.3	734	13.5	9.0	300	94.6	
MAY 14...	0840	242	16	16	631	7.8	94	8.2	709	20.0	15.0	280	90.5	
JUL 18...	1750	8.0	1.8	2.0	626	7.4	127	8.1	1120	32.0	33.0	430	131	
Date		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3 CO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV 15...	16.8	3.55	1	46.1	191	175	210	--	30.1	.5	5.2	206	517	
MAR 19...	15.5	3.37	1	38.4	150	147	176	--	26.2	.4	4.5	196	466	
MAY 14...	12.9	2.96	.9	34.7	155	149	179	1	23.0	.44	3.7	177	435	
JUL 18...	24.9	4.54	2	78.6	130	122	145	--	42.6	.55	2.6	390	746	
Date		NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/100 ML) (31673)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
NOV 15...	.01	<.20	.40	.07	<.02	<.010	<.02	<.01	.02	110	--	150	<1	
MAR 19...	.06	<.20	.50	.07	.16	.010	<.02	<.01	.03	E240k	210	--	6	
MAY 14...	<.01	<.20	.60	.01	<.02	<.010	<.02	<.01	.03	280	190	--	5	
JUL 18...	<.01	.20	.40	.04	<.02	<.010	.02	<.01	.02	--	--	--	2	
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)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)
NOV 15...	.09	E2	78	<.06	100	<.04	<.8	.27	1.3	E7	.08	32.5	<.01	
MAR 19...	<.05	<2	68	<.06	80	.04	E.7	.33	1.5	11	.17	91.2	E.01n	
MAY 14...	.18	<2	63	<.06	70	<.04	<.8	.28	2.0	E8	.11	34.0	<.01	
JUL 18...	.36	E1	90	<.06	150	<.04	10.3	.37	2.9	E8	.09	38.6	E.01	

SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	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)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (MG/L) (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)					
NOV 15...	2.0	1.16	E1	<2	<1	3	2.47	91	43					
MAR 19...	1.9	1.65	<2	<2	<1	6	2.53	93	94					
MAY 14...	1.8	2.19	<2	<2	<1	5	2.12	72	97					
JUL 18...	3.3	1.22	<2	E1	<1	5	3.78	97	138					
Date	Time	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD DISS, REC, (UG/L) (49260)	ALA- CHLOR, WATER, DISS, SOLVED (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	
MAR 19...	1440	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	
Date		DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFO S WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
MAR 19...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
Date		METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER FLTRD DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
MAR 19...		<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	Mn	<.004	<.010
Date		PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER- BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)			
MAR 19...		<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009			

09364500 ANIMAS RIVER AT FARMINGTON, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM WIDTH (FT) (00004)	BED MAT. SIEVE DIAM. (80164)	BED MAT. SIEVE DIAM. (80165)	BED MAT. SIEVE DIAM. (80166)	BED MAT. SIEVE DIAM. (80167)	BED MAT. SIEVE DIAM. (80168)	BED MAT. SIEVE DIAM. (80169)	BED MAT. SIEVE DIAM. (80170)	BED MAT. SIEVE DIAM. (80171)	BED MAT. SIEVE DIAM. (80172)	BED MAT. SIEVE DIAM. (80173)
MAR 19...	1440	176	134	3	14	46	74	80	81	81	81	81	84

BED MAT. SIEVE DIAM. (80174)  
Date

MAR 19... 100

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM WIDTH (FT) (00004)	SED. BEDLOAD SIEVE DIAM. (80226)	SED. BEDLOAD SIEVE DIAM. (80227)	SED. BEDLOAD SIEVE DIAM. (80228)	SED. BEDLOAD SIEVE DIAM. (80229)	SED. BEDLOAD SIEVE DIAM. (80230)	SED. BEDLOAD SIEVE DIAM. (80231)	SED. BEDLOAD SIEVE DIAM. (80232)	SED. BEDLOAD SIEVE DIAM. (80233)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/DAY) (80225)	NUMBER OF SAMPLING POINTS (COUNT) (00063)
NOV 15...	0910	211	130	--	100	--	--	--	--	--	--	--	13
MAR 19...	1440	176	134	4	6	16	58	85	92	100	--	.20	30
MAY 14...	0940	256	131	4	7	19	67	85	93	97	100	.90	30

TIME ON BED FOR BED LOAD SAMPLE (SEC) (04120)  
Date

NOV 15... 120  
MAR 19... 60  
MAY 14... 60

Remark codes used in this report:

- < -- Less than
- E -- Estimated value
- M -- Presence verified, not quantified
- U -- Analyzed for, not detected

Value qualifier codes used in this report:

- k -- Counts outside acceptable range
- n -- Below the laboratory reporting level



09365000 SAN JUAN RIVER AT FARMINGTON, NM

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-82, 2000 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
NOV 15...	1400	644	11	13	632	10.2	107	8.4	499	17.0	9.0	180	56.1	
MAR 19...	0930	637	17	14	634	10.2	94	8.2	452	11.0	4.0	160	50.5	
MAY 14...	1340	881	13	14	630	8.8	106	8.1	416	30.0	15.0	140	44.7	
JUL 19...	0920	913	40	45	627	7.6	96	8.1	332	24.0	17.0	110	35.6	
Date	Time	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV 15...	9.38	2.35	1	35.5	123	105	125	1	12.3	.3	8.8	125	314	
MAR 19...	8.26	2.30	1	30.2	105	99	120	--	9.42	.2	7.9	107	276	
MAY 14...	7.15	2.10	1	26.5	100	96	115	--	7.55	.25	8.1	92.7	247	
JUL 19...	6.05	1.99	.8	19.6	90	86	103	--	5.31	.20	8.6	64.2	193	
Date	Time	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, DIS-AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL./100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL./100 ML) (31673)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
NOV 15...	.08	.40	.60	.16	.26	<.010	.04	.03	.06	320	--	91	2	
MAR 19...	.11	<.20	.50	.17	.25	.020	<.02	.03	.06	310	170	--	3	
MAY 14...	.11	.20	.50	.15	.13	<.010	.02	.01	.06	E120k	E62k	--	3	
JUL 19...	.02	.30	1.5	.06	.13	<.010	.03	.02	.09	--	--	--	2	
Date	Time	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)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)
NOV 15...	.09	<4	73	<.06	50	<.04	<.8	.15	1.4	<10	<.08	7.4	<.01	
MAR 19...	<.05	<2	70	<.06	40	<.04	E.6	.17	1.3	11	E.05	23.3	<.01	
MAY 14...	.10	<2	68	<.06	30	<.04	<.8	.15	1.5	E6	<.08	7.3	<.01	
JUL 19...	.10	<2	66	<.06	30	<.04	<.8	.11	1.3	<10	<.08	4.1	<.01	

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	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)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
NOV 15...	1.4	.94	<4	<2	<1	1	1.25	22	192
MAR 19...	1.4	1.30	<2	<2	<1	3	1.28	22	204
MAY 14...	1.2	1.30	<2	<2	<1	3	1.02	20	284
JUL 19...	1.1	.58	<2	E1	<1	3	.60	35	368

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM WIDTH (FT) (00004)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM (80226)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM (80227)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM (80228)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM (80229)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM (80230)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM (80231)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM (80232)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM (80233)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY) (80225)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)
NOV 15...	1401	644	156	--	0	0	5	84	98	99	100	.30	12
MAR 19...	0930	637	150	--	0	9	88	99	100	--	--	58	30
MAY 14...	1430	873	180	0	1	28	92	100	--	--	--	53	30
JUL 19...	0920	913	181	4	14	44	90	97	98	99	100	20	40

TIME  
ON BED  
FOR  
BED  
LOAD  
SAMPLE  
(SEC)  
(04120)

NOV 15...	120
MAR 19...	60
MAY 14...	60
JUL 19...	60

Remark codes used in this report:  
< -- Less than  
E -- Estimated value

Value qualifier codes used in this report:  
k -- Counts outside acceptable range







SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1941-45, 1951 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	
NOV 14...	1500	734	24	27	638	11.0	120	8.4	652	27.0	11.0	230	70.7	
MAR 20...	1500	699	16	17	645	13.8	150	8.8	565	20.5	11.5	200	60.1	
MAY 15...	1440	639	26	26	637	9.2	122	8.4	563	31.0	20.0	190	58.6	
JUL 18...	1300	299	27	27	637	8.6	126	8.5	503	32.0	25.0	170	51.9	
Date		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
NOV 14...	13.8	2.64	1	48.4	146	125	149	2	19.3	.4	6.6	178	416	
MAR 20...	12.1	2.53	1	43.1	104	108	126	3	14.9	.3	2.9	154	356	
MAY 15...	11.4	2.48	1	38.6	117	110	131	2	12.5	.33	7.0	149	347	
JUL 18...	10.6	2.38	1	33.3	116	105	122	3	8.91	.28	3.3	121	295	
Date		NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00610)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL./100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL./100 ML) (31673)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
NOV 14...	.02	.30	.40	.09	.24	<.010	<.02	.01	.04	20	--	33	2	
MAR 20...	.02	<.20	.70	.03	.10	.010	.04	<.01	.02	>1k	<1k	--	3	
MAY 15...	.01	.30	.70	.05	.23	<.010	<.02	<.01	.07	230	94	--	3	
JUL 18...	<.01	.50	.70	.04	.03	<.010	.03	<.01	.04	--	--	--	3	
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)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)
NOV 14...	.10	<2	75	<.06	80	<.04	<.8	.22	1.6	<10	E.05	11.8	.02	
MAR 20...	<.05	M	64	<.06	70	<.04	E.7	.23	1.5	E10	E.07	19.3	<.01	
MAY 15...	.17	<2	69	<.06	60	<.04	<.8	.23	1.8	<10	E.07	11.7	<.01	
JUL 18...	.15	<2	63	<.06	40	<.04	<.8	.24	1.6	<10	<.08	8.3	<.01	

09368000 SAN JUAN RIVER AT SHIPROCK, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01147)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
NOV 14...	1.9	1.34	<2	E1	<1	2	2.00	86	54
MAR 20...	2.0	1.32	E1	E1	<1	3	2.15	89	57
MAY 15...	1.9	1.44	<2	E1	<1	2	1.85	87	85
JUL 18...	1.6	.92	<2	E2	<1	5	1.47	92	49

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	STREAM WIDTH (FT) (00004)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM (80226)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM (80227)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM (80228)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM (80229)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM (80230)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM (80231)	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM (80232)	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY) (80225)	NUMBER OF SAM- PLING POINTS (COUNT) (00063)	TIME ON BED FOR BED LOAD SAMPLE LOAD (SEC) (04120)
NOV 14...	1501	734	132	0	0	3	59	97	99	100	11	13	60

Remark codes used in this report:

- < -- Less than
- > -- Greater than
- E -- Estimated value
- M -- Presence verified, not quantified

Value qualifier codes used in this report:

- k -- Counts outside acceptable range

## SAN JUAN RIVER BASIN

09371010 SAN JUAN RIVER AT FOUR CORNERS, CO

LOCATION.--Lat 37°00'20", long 109°02'00", SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.21, T.32 N., R.20 W., Montezuma County, Hydrologic Unit 14080201, on left bank 0.1 mi north of New Mexico-Colorado State line, 1,300 ft upstream from bridge on U.S. Highway 160, 1.0 mi east of Four Corners Monument, 3.0 mi downstream from Mancos River, and at mile 187.2.

DRAINAGE AREA.--14,600 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Water-discharge records good except for those estimated, which are fair. Flow partly regulated by Navajo Reservoir (09355100).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	730	896	857	865	782	700	682	544	707	358	380	657
2	749	861	848	860	821	701	647	521	796	408	361	614
3	734	857	853	861	755	698	585	585	786	337	373	566
4	756	867	854	853	747	737	584	662	763	370	455	561
5	779	892	866	857	723	727	592	657	819	402	526	560
6	849	901	870	863	717	717	592	640	713	394	531	518
7	845	867	877	855	719	702	619	695	623	392	749	489
8	846	804	853	843	725	689	655	740	588	360	678	1320
9	775	801	830	850	728	685	653	792	569	363	589	1700
10	834	802	828	874	728	690	608	892	588	383	516	3240
11	882	e810	827	867	783	684	593	718	537	449	438	7880
12	896	e790	836	864	705	651	553	697	496	483	399	8850
13	893	e830	850	e868	698	666	519	654	515	428	377	3810
14	874	e809	863	e860	729	661	502	656	531	449	360	1880
15	884	811	867	e850	741	646	490	668	498	416	365	1290
16	862	819	880	e840	731	670	482	772	478	368	352	1060
17	884	827	872	837	742	689	502	766	462	310	334	929
18	858	827	824	835	747	676	605	809	426	322	333	840
19	871	832	817	818	728	668	651	767	359	373	343	936
20	859	807	829	819	741	662	558	891	300	379	400	906
21	871	791	826	831	750	670	557	899	283	335	612	757
22	879	792	834	850	753	657	572	854	288	328	468	647
23	872	817	834	828	728	650	581	926	346	310	542	549
24	847	834	830	818	718	645	542	780	355	314	556	417
25	765	852	861	821	714	667	509	669	367	680	557	403
26	796	850	853	824	693	634	548	632	347	578	524	373
27	787	852	872	789	680	629	600	608	373	564	513	371
28	801	854	860	787	683	594	667	639	401	535	494	303
29	800	865	834	771	---	548	636	638	350	508	559	414
30	798	859	838	758	---	535	586	645	359	448	612	461
31	818	---	854	757	---	603	---	674	---	389	636	---
TOTAL	25694	25076	26297	25873	20509	20551	17470	22090	15023	12733	14932	43301
MEAN	828.8	835.9	848.3	834.6	732.5	662.9	582.3	712.6	500.8	410.7	481.7	1443
MAX	896	901	880	874	821	737	682	926	819	680	749	8850
MIN	730	790	817	757	680	535	482	521	283	310	333	303
AC-FT	50960	49740	52160	51320	40680	40760	34650	43820	29800	25260	29620	85890

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2002, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
MEAN	1266	1336	1336	1401	1491	1968	2796	4560	5111	2285	1515	1433
MAX	2959	3732	3466	3300	3365	5454	7893	10220	10370	6846	6135	4852
(WY)	1987	1987	1987	1987	1987	1993	1979	1979	1979	1979	1999	1999
MIN	634	836	700	760	695	663	582	713	501	330	259	467
(WY)	1978	2002	1997	1990	1997	2002	2002	2002	2002	2000	1978	1989

## SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1978 - 2002

ANNUAL TOTAL	622557	269549		
ANNUAL MEAN	1706	738.5		
HIGHEST ANNUAL MEAN			4180	1987
LOWEST ANNUAL MEAN			738	2002
HIGHEST DAILY MEAN	8340	May 29	8850	Sep 12
LOWEST DAILY MEAN	372	Aug 31	283	Jun 21
ANNUAL SEVEN-DAY MINIMUM	458	Aug 26	327	Jun 20
MAXIMUM PEAK FLOW			14600	Sep 11
MAXIMUM PEAK STAGE			6.60	Sep 11
INSTANTANEOUS LOW FLOW			258	Jun 21
ANNUAL RUNOFF (AC-FT)	1235000	534700	1600000	
10 PERCENT EXCEEDS	4860	867	5400	
50 PERCENT EXCEEDS	946	707	1320	
90 PERCENT EXCEEDS	660	378	671	

e Estimated

a Maximum gage height, 14.43, Dec. 12, 1978 (backwater from ice.)

09371010 SAN JUAN RIVER AT FOUR CORNERS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978-81, 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	TUR-BID-ITY WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)
NOV 14...	1000	827	26	32	639	10.2	106	8.3	700	12.5	9.0	250	74.3
MAR 20...	1020	658	11	14	652	10.2	99	8.5	616	12.0	7.0	210	61.0
MAY 15...	1030	600	600	29	641	8.4	105	8.4	603	28.0	17.5	200	59.8
JUL 18...	0910	303	300	54	643	6.8	95	8.4	593	26.5	23.0	200	58.7

Date	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
NOV 14...	15.7	2.70	1	51.4	154	133	158	2	19.8	.4	5.5	197	496
MAR 20...	14.0	2.52	1	46.9	113	106	126	1	15.8	.3	1.9	178	415
MAY 15...	12.7	2.51	1	42.8	120	115	137	1	12.9	.33	6.5	164	401
JUL 18...	13.5	2.37	1	42.2	126	112	133	2	10.6	.31	3.4	156	384

Date	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
NOV 14...	446	--	--
MAR 20...	384	79	58
MAY 15...	370	80	108
JUL 18...	354	--	--



09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM

LOCATION.--Lat 35°06'03", long 108°45'03", in NE<sup>1</sup>/<sub>4</sub> sec.17, T.10 N., R.18 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank downstream from highway bridge on State Highway 36, 0.8 mi upstream from flow line of Black Rock Reservoir, 2.3 mi northeast of Black Rock, and 5.9 mi northeast of Zuni Pueblo.

DRAINAGE AREA.--848 mi<sup>2</sup>, of which 13 mi<sup>2</sup> is noncontributing.

PERIOD OF RECORD.--October 1969 to current year. Prior to October 1974 published as "above Zuni Reservoir."

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 6,480 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Several observations of water temperature were made during the year. No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.66	0.23	0.36	0.13	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.57	0.39	0.30	0.16	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.46	0.44	0.25	0.05	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.53	0.51	0.28	0.02	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.33	0.44	0.40	0.02	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.36	0.33	0.26	0.0	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.49	0.37	0.38	0.35	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.64	0.45	0.59	0.68	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.86	0.42	0.64	0.57	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	1.1	0.35	0.63	0.35	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.68	0.36	0.46	0.16	0.00	0.00	0.00	0.00	34
12	0.00	0.00	0.00	0.77	0.47	0.34	0.08	0.00	0.00	0.00	0.00	24
13	0.00	0.00	0.00	0.73	0.80	0.32	0.02	0.00	0.00	0.00	0.00	11
14	0.00	0.00	0.00	0.62	1.1	0.15	0.02	0.00	0.00	0.00	0.00	1.3
15	0.00	0.00	0.00	0.66	1.2	0.04	0.0	0.00	0.00	0.00	0.00	0.12
16	0.00	0.00	0.00	0.93	1.2	0.02	0.00	0.00	0.00	0.00	0.00	0.05
17	0.00	0.00	0.00	0.57	1.2	0.01	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.35	1.1	0.01	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.20	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.27	0.93	0.18	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.29	0.72	0.15	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.12	0.45	0.56	0.18	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.14	0.49	0.49	0.16	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.13	0.17	0.49	0.11	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.15	0.16	0.45	0.17	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.12	0.38	0.31	0.55	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.17	0.45	0.31	0.10	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.22	0.49	0.38	0.05	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.50	0.29	---	0.06	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.69	0.29	---	0.28	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.74	0.22	---	0.14	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	2.98	15.46	16.95	7.62	2.61	0.00	0.00	0.00	0.00	70.47
MEAN	0.000	0.000	0.096	0.499	0.605	0.246	0.087	0.000	0.000	0.000	0.000	2.349
MAX	0.00	0.00	0.74	1.1	1.2	0.64	0.68	0.00	0.00	0.00	0.00	34
MIN	0.00	0.00	0.00	0.16	0.23	0.01	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	5.9	31	34	15	5.2	0.00	0.00	0.00	0.00	140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
MEAN	1.406	1.323	1.224	2.727	9.312	38.76	46.12	4.800	0.160	2.501	5.291	2.269																							
MAX	12.6	13.7	5.87	41.9	73.4	263	308	65.3	1.97	25.6	23.6	17.5																							
(WY)	1984	1984	1984	1993	1980	1985	1973	1973	1979	1977	1977	1984																							
MIN	0.000	0.000	0.013	0.11	0.33	0.25	0.009	0.000	0.000	0.000	0.000	0.000																							
(WY)	1974	1971	1971	1977	1972	2002	1972	1997	1970	1971	1986	1979																							

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL TOTAL	199.82		116.09			
ANNUAL MEAN	0.547		0.318		9.629	
HIGHEST ANNUAL MEAN					46.9	1973
LOWEST ANNUAL MEAN					0.32	2002
HIGHEST DAILY MEAN	23 Aug 12		34 Sep 11		1530	Mar 13 1985
LOWEST DAILY MEAN	0.00 Apr 17		0.00 Oct 1		0.00	May 22 1970
ANNUAL SEVEN-DAY MINIMUM	0.00 Apr 17		0.00 Oct 1		0.00	May 22 1970
MAXIMUM PEAK FLOW			85 Sep 11		a5200	Aug 4 1974
MAXIMUM PEAK STAGE			3.82 Sep 11		6.61	Aug 4 1974
INSTANTANEOUS LOW FLOW					0.00	Oct 1 1995
ANNUAL RUNOFF (AC-FT)	396		230		6980	
10 PERCENT EXCEEDS	1.1		0.50		9.0	
50 PERCENT EXCEEDS	0.00		0.00		0.65	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From rating curve extended above 670 ft<sup>3</sup>/s, on basis of slope-area measurements at gage heights 4.05 ft, 3.95 ft, and 6.61 ft.



09430600 MOGOLLON CREEK NEAR CLIFF, NM

LOCATION.--Lat 33°10'00", long 108°38'57", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.13, T.13 S., R.18 W., Grant County, Hydrologic Unit 15040001, on right bank 0.3 mi downstream from Rain Creek, 0.8 mi downstream from Gila Wilderness boundary, 12 mi upstream from mouth, and 14 mi north of Cliff.

DRAINAGE AREA.--69 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1967 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for those estimated, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	e2.7	2.0	e2.8	e2.4	2.5	2.0	e0.00	e0.00	0.00	12	1.2
2	2.4	e3.1	2.0	e2.6	e2.5	2.4	2.0	e0.00	e0.00	0.00	9.7	1.2
3	3.1	e2.5	2.0	e2.5	e2.6	e2.4	2.0	e0.00	e0.00	0.00	12	1.2
4	3.1	e4.5	2.0	e2.4	e3.2	e2.6	1.8	e0.00	e0.00	0.00	15	1.3
5	2.5	e4.5	2.0	e2.2	e6.3	e2.2	1.6	e0.00	e0.00	e0.00	27	2.5
6	2.4	e7.1	1.9	e2.5	e4.0	e2.2	1.5	e0.00	e0.00	e0.00	16	2.5
7	6.4	e7.5	e1.7	e2.3	e2.6	e2.0	3.3	e0.00	e0.00	e0.00	11	1.6
8	3.8	e6.1	e1.7	e2.1	e2.5	e2.5	3.5	e0.00	e0.00	e0.00	6.8	3.3
9	3.5	e4.4	e1.2	e2.2	e2.6	e2.5	2.6	e0.00	e0.00	e0.00	5.3	19
10	2.9	e4.1	e1.3	e2.3	e2.4	2.1	2.2	e0.00	e0.00	e0.00	12	11
11	2.3	e3.9	e2.5	e2.5	e2.2	2.0	2.0	e0.00	e0.00	e0.00	24	e165
12	2.0	e3.8	e2.8	e2.2	e2.1	2.1	2.1	e0.00	e0.00	e0.00	15	236
13	1.9	e3.5	e2.0	e2.1	e2.0	2.1	2.0	e0.00	e0.00	e0.00	8.1	e20
14	1.9	e2.7	e2.5	e1.9	e2.3	2.1	1.9	e0.00	0.00	e0.00	5.2	e16
15	1.6	1.7	e3.0	e2.0	e2.3	2.3	1.7	e0.00	0.00	e0.00	3.7	e14
16	1.3	2.0	e2.3	e2.0	e2.6	2.2	1.4	e0.00	0.00	e0.00	2.7	e12
17	1.2	2.0	e2.1	e2.0	2.6	2.1	1.4	e0.00	0.00	e0.00	2.1	e11
18	e1.9	2.0	e2.3	e1.9	2.8	2.0	1.3	e0.00	0.00	e0.00	1.7	10
19	e1.8	1.8	e2.5	e1.8	2.8	2.0	1.2	e0.00	0.00	e7.8	6.2	9.4
20	e1.8	1.7	e2.1	e1.8	2.6	2.0	1.0	e0.00	0.00	15	9.5	7.0
21	e1.8	1.9	e2.6	e1.0	2.5	1.9	0.99	e0.00	0.00	9.2	5.2	5.4
22	e2.5	1.9	e1.9	e1.0	2.4	1.8	0.93	e0.00	0.00	8.5	3.3	4.2
23	e2.8	2.4	e1.4	e1.1	2.5	1.7	0.77	e0.00	0.00	15	2.3	3.3
24	e2.7	2.4	e2.3	e1.3	2.5	1.8	0.62	e0.00	0.00	9.4	1.7	2.8
25	e1.7	2.0	e1.4	e1.0	2.6	2.1	0.55	e0.00	0.00	5.1	1.2	2.6
26	e1.6	1.8	e1.6	e1.0	2.6	2.1	0.56	e0.00	0.00	2.6	0.88	2.3
27	e1.8	1.8	e2.0	e1.4	2.5	2.0	0.32	e0.00	0.00	16	0.46	2.1
28	e1.8	1.9	e1.6	e1.6	2.5	2.0	0.36	e0.00	0.00	89	0.56	2.0
29	e1.8	2.0	e2.0	e2.5	---	1.9	e0.30	e0.00	0.00	55	3.0	1.9
30	e2.4	2.1	e2.6	e2.8	---	2.2	e0.10	e0.00	0.00	19	1.6	1.9
31	e2.8	---	e2.3	e2.8	---	2.3	---	e0.00	---	24	1.3	---
TOTAL	73.8	91.8	63.6	61.6	75.5	66.1	44.00	0.00	0.00	275.60	226.50	573.7
MEAN	2.381	3.060	2.052	1.987	2.696	2.132	1.467	0.000	0.000	8.890	7.306	19.12
MAX	6.4	7.5	3.0	2.8	6.3	2.6	3.5	0.00	0.00	89	27	236
MIN	1.2	1.7	1.2	1.0	2.0	1.7	0.10	0.00	0.00	0.00	0.46	1.2
AC-FT	146	182	126	122	150	131	87	0.00	0.00	547	449	1140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002, BY WATER YEAR (WY)

MEAN	24.53	18.83	42.25	34.00	54.33	68.63	51.99	25.95	3.266	7.474	16.95	16.04
MAX	237	166	410	298	211	272	182	160	24.1	57.0	83.7	120
(WY)	1973	1979	1979	1993	1968	1978	1973	1992	1992	1996	1996	1975
MIN	0.14	1.07	1.03	1.14	0.94	1.33	0.90	0.000	0.000	0.000	1.02	0.34
(WY)	1980	1971	1974	1971	2000	1971	1971	2002	1971	1980	1975	1987

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1967 - 2002

ANNUAL TOTAL	5068.73	1552.20	
ANNUAL MEAN	13.89	4.253	30.49
HIGHEST ANNUAL MEAN			97.0 1979
LOWEST ANNUAL MEAN			1.55 2000
HIGHEST DAILY MEAN	82 Aug 14	236 Sep 12	6000 Dec 19 1978
LOWEST DAILY MEAN	0.00 Jun 10	0.00 May 1	0.00 Jun 17 1967
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 10	0.00 May 1	0.00 Jun 23 1967
MAXIMUM PEAK FLOW		919 Sep 11	a10800 Aug 12 1967
MAXIMUM PEAK STAGE		5.33 Sep 11	b13.70 Aug 12 1967
INSTANTANEOUS LOW FLOW		0.00 May 1	0.00 Oct 13 1995
ANNUAL RUNOFF (AC-FT)	10050	3080	22090
10 PERCENT EXCEEDS	41	7.0	81
50 PERCENT EXCEEDS	5.3	2.0	6.2
90 PERCENT EXCEEDS	0.92	0.00	0.32

e Estimated

a From rating curve extended above 220 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

b From floodmarks.

## RIO GRANDE BASIN

09430815 UPPER GILA DITCH NEAR GILA, NM

LOCATION.--Lat 33°01'19", long 108°32'32", in SE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>, sec.12, T.15 S., R.17 W., Catron County, Hydrologic Unit 15040002, on left bank 2,000 ft downstream from ditch heading, 5.5 mi northeast of Cliff, and 5.0 mi from Gila.

PERIOD OF RECORD.--October 1999 to current year (irrigation season only).

GAGE.--Water-stage recorder. Elevation of gage is 4,600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	20	---	---	---	---	20	18	7.6	4.8	22	13
2	20	20	---	---	---	---	20	17	6.8	5.0	22	16
3	20	20	---	---	---	---	20	17	6.3	4.5	20	15
4	21	20	---	---	---	---	20	17	8.1	4.3	24	14
5	20	20	---	---	---	---	20	16	11	5.1	24	14
6	21	20	---	---	---	---	20	15	12	5.9	24	14
7	19	20	---	---	---	---	22	16	13	5.8	23	15
8	19	20	---	---	---	---	22	15	11	7.1	22	14
9	19	20	---	---	---	---	22	15	9.3	9.0	22	17
10	19	20	---	---	---	---	22	15	8.5	11	22	17
11	19	20	---	---	---	---	21	14	8.2	13	25	21
12	19	20	---	---	---	---	20	13	7.9	13	23	8.6
13	19	20	---	---	---	---	20	12	7.6	11	21	7.9
14	18	21	---	---	---	---	20	13	7.2	8.9	18	13
15	18	---	---	---	---	---	24	12	7.2	9.1	15	21
16	18	---	---	---	---	---	27	11	6.2	9.9	14	20
17	19	---	---	---	---	---	26	11	6.4	14	14	18
18	19	---	---	---	---	---	26	11	5.5	16	14	e15
19	19	---	---	---	---	---	26	10	5.2	19	14	14
20	19	---	---	---	---	---	25	10	4.8	20	11	14
21	20	---	---	---	---	---	23	12	4.5	21	14	14
22	20	---	---	---	---	21	23	12	4.4	22	20	14
23	20	---	---	---	---	21	23	12	3.8	21	18	14
24	20	---	---	---	---	21	22	11	3.3	25	17	14
25	20	---	---	---	---	21	22	11	3.1	21	15	14
26	20	---	---	---	---	21	22	11	3.9	20	13	14
27	20	---	---	---	---	21	21	11	3.8	24	11	14
28	20	---	---	---	---	21	20	10	4.0	24	11	15
29	20	---	---	---	---	21	19	9.6	4.3	25	12	15
30	20	---	---	---	---	21	18	9.0	4.5	23	11	16
31	20	---	---	---	---	20	---	8.5	---	22	12	---
TOTAL	605	---	---	---	---	---	656	395.1	199.4	444.4	548	445.5
MEAN	19.52	---	---	---	---	---	21.87	12.75	6.647	14.34	17.68	14.85
MAX	21	---	---	---	---	---	27	18	13	25	25	21
MIN	18	---	---	---	---	---	18	8.5	3.1	4.3	11	7.9
AC-FT	1200	---	---	---	---	---	1300	784	396	881	1090	884

e Estimated

09430820 FORT WEST DITCH NEAR GILA, NM

LOCATION.--Lat 33°00'56", long 108°32'36", in NE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>, sec. 12, T.15 S., R.17 W., Grant County, Hydrologic Unit 15040002, on left bank 4.5 mi east of Gila, and 5.8 mi southeast of Cliff.

PERIOD OF RECORD.--October 1999 to current year (irrigation season only).

GAGE.--Water-stage recorder with Parshall flume. Elevation of gage is 4,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	25	---	---	---	---	15	18	11	6.1	9.4	15
2	25	26	---	---	---	---	15	18	11	6.2	2.6	16
3	26	25	---	---	---	---	15	18	10	5.8	1.6	15
4	26	26	---	---	---	---	15	18	8.8	5.6	9.1	15
5	26	26	---	---	---	---	15	18	6.1	6.2	13	15
6	26	27	---	---	---	---	14	18	6.5	6.8	14	17
7	26	26	---	---	---	---	14	19	7.4	7.8	13	16
8	26	26	---	---	---	---	14	18	8.7	7.5	11	16
9	26	26	---	---	---	---	14	18	7.7	8.5	11	20
10	26	26	---	---	---	---	14	18	7.4	9.5	11	20
11	26	26	---	---	---	---	18	19	7.4	11	11	17
12	26	26	---	---	---	---	21	17	7.1	10	9.7	2.8
13	26	26	---	---	---	---	21	16	6.9	10	8.4	2.6
14	25	26	---	---	---	---	20	17	6.6	9.5	7.5	2.5
15	26	---	---	---	---	---	20	17	6.5	9.4	6.5	2.4
16	26	---	---	---	---	---	21	16	5.9	9.6	5.3	2.3
17	26	---	---	---	---	---	19	16	5.6	12	14	2.3
18	26	---	---	---	---	---	19	16	5.5	13	18	2.3
19	26	---	---	---	---	---	19	16	5.4	15	18	2.3
20	26	---	---	---	---	---	18	15	5.1	15	13	2.3
21	26	---	---	---	---	---	18	14	4.8	17	13	2.3
22	26	---	---	---	---	16	18	14	4.7	18	13	2.3
23	26	---	---	---	---	16	17	14	4.4	21	12	2.1
24	26	---	---	---	---	16	17	14	4.0	21	10	2.1
25	26	---	---	---	---	16	17	14	3.8	19	10	2.1
26	26	---	---	---	---	16	18	13	4.6	19	10	8.5
27	26	---	---	---	---	16	16	14	5.1	23	12	19
28	26	---	---	---	---	16	16	13	5.3	3.5	12	19
29	26	---	---	---	---	16	17	13	5.8	2.7	12	19
30	26	---	---	---	---	16	18	13	6.0	1.8	13	18
31	26	---	---	---	---	16	---	13	---	3.9	14	---
TOTAL	803	---	---	---	---	---	513	495	195.1	334.4	338.1	298.2
MEAN	25.90	---	---	---	---	---	17.10	15.97	6.503	10.79	10.91	9.940
MAX	26	---	---	---	---	---	21	19	11	23	18	20
MIN	25	---	---	---	---	---	14	13	3.8	1.8	1.6	2.1
AC-FT	1590	---	---	---	---	---	1020	982	387	663	671	591

## RIO GRANDE BASIN

09430825 GILA FARMS DITCH NEAR GILA, NM

LOCATION.--Lat 32°59'00", long 108°34'13", in SW<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub>, sec. 23, T.15 S., R.17 W., Grant County, Hydrologic Unit 15040002, on left bank 0.4 mi from State Highway 153 at Dominguez farms, 1.2 mi from Gila, and 2.5 mi from Cliff.

PERIOD OF RECORD.--October 1999 to current year (irrigation season only).

GAGE.--Water-stage recorder. Elevation of gage is 4,550 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	7.9	---	---	---	---	14	12	5.5	2.0	7.8	3.1
2	5.1	8.3	---	---	---	---	12	12	5.3	1.9	7.9	2.7
3	7.2	8.0	---	---	---	---	10	9.7	4.9	1.8	2.7	3.4
4	8.2	7.7	---	---	---	---	7.4	6.7	4.5	1.7	2.4	6.0
5	6.6	7.0	---	---	---	---	4.2	4.7	5.1	1.7	0.92	4.8
6	6.4	8.0	---	---	---	---	3.8	4.4	4.3	1.7	0.74	2.4
7	5.7	9.2	---	---	---	---	2.8	2.6	4.1	1.7	0.70	2.8
8	6.1	11	---	---	---	---	2.6	5.6	3.9	1.8	0.66	4.5
9	6.1	9.3	---	---	---	---	11	11	3.6	2.1	0.53	12
10	6.2	5.3	---	---	---	---	15	11	3.7	2.6	4.6	11
11	5.5	2.6	---	---	---	---	15	9.7	4.1	1.6	13	13
12	5.9	2.2	---	---	---	---	13	9.3	e1.0	1.5	13	9.8
13	8.6	1.8	---	---	---	---	13	8.7	e0.00	2.1	12	7.9
14	9.7	1.7	---	---	---	---	13	7.8	e1.5	2.0	12	6.8
15	5.0	1.6	---	---	---	---	13	7.6	3.4	2.0	10	5.2
16	4.8	---	---	---	---	---	12	7.4	3.0	2.1	8.6	3.8
17	5.0	---	---	---	---	---	12	7.3	2.7	2.2	6.0	2.9
18	7.6	---	---	---	---	---	13	7.2	2.6	2.0	3.6	2.3
19	9.1	---	---	---	---	---	13	7.1	2.5	1.9	3.5	7.4
20	8.6	---	---	---	---	---	12	7.4	2.4	1.1	10	10
21	7.3	---	---	---	---	---	12	7.4	2.2	1.7	9.5	9.9
22	4.2	---	---	---	---	16	11	7.1	2.1	3.4	9.8	9.5
23	5.8	---	---	---	---	17	11	6.6	2.1	3.7	9.4	9.8
24	4.7	---	---	---	---	15	10	6.4	2.1	4.6	6.6	12
25	4.9	---	---	---	---	15	7.9	6.1	2.0	4.3	4.0	11
26	3.3	---	---	---	---	15	5.4	5.8	2.1	7.0	3.4	10
27	1.9	---	---	---	---	15	4.3	5.8	2.0	15	2.5	8.0
28	0.90	---	---	---	---	16	2.9	6.0	2.0	22	2.4	6.7
29	2.3	---	---	---	---	15	8.3	5.9	2.0	16	2.4	5.5
30	5.8	---	---	---	---	15	11	5.7	1.9	9.2	2.5	5.6
31	8.0	---	---	---	---	15	---	5.4	---	8.7	4.2	---
TOTAL	181.40	---	---	---	---	---	295.6	227.4	88.60	133.1	177.35	209.8
MEAN	5.852	---	---	---	---	---	9.853	7.335	2.953	4.294	5.721	6.993
MAX	9.7	---	---	---	---	---	15	12	5.5	22	13	13
MIN	0.90	---	---	---	---	---	2.6	2.6	0.00	1.1	0.53	2.3
AC-FT	360	---	---	---	---	---	586	451	176	264	352	416

e Estimated

09431500 GILA RIVER NEAR REDROCK, NM

LOCATION.--Lat 32°43'37", long 108°40'30", in W<sup>1</sup>/<sub>4</sub> sec.23, T.18 S., R.18 W., Grant County, Hydrologic Unit 15040002, on left bank 0.2 mi downstream from Copper Canyon, 0.2 mi upstream from lower end of box canyon, 4.7 mi northeast of Redrock, 14 mi downstream from Mangas Creek, and at mile 539.2.

DRAINAGE AREA.--2,829 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1904 to February 1905 (gage heights only). May 1905 to December 1906, January to December 1907, and July to October 1908 (gage heights only). November 1908 to December 1910, January 1911 to January 1912, and May to June 1912 (gage heights only). August 1912 to September 1955, October 1962 to current year. Monthly or annual discharge only for some periods, published in WSP 1313. Published as "near Cliff" 1904-7.

REVISED RECORDS.--WSP 1213: 1906, 1911-15, 1931, 1936-37, 1939, 1941, 1944, 1945(P), 1946(M), 1947. WSP 1283: Drainage area. WSP 1926: 1955. WDR NM-78-1: 1977.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,090 ft above National Geodetic Vertical Datum of 1929, from plane table survey. Prior to Dec. 31, 1907, nonrecording gage at site 13.5 mi upstream at different datum. May 14, 1908, to July 16, 1909, nonrecording gage at site 0.2 mi downstream at different datum. June 13, 1980 to Feb. 23, 1983, at site 1,300 ft downstream at same datum.

REMARKS.--Records fair except for those estimated, which are poor. Diversions for irrigation of about 5,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	84	81	85	94	71	65	39	22	4.6	76	67
2	84	84	81	86	94	70	64	40	24	6.8	81	64
3	85	83	77	86	94	73	64	39	21	5.3	99	e59
4	89	78	76	86	97	74	66	40	20	5.7	106	e57
5	86	73	81	86	100	74	65	41	20	e4.8	93	e52
6	88	73	76	86	100	74	67	39	20	e7.8	188	e49
7	82	81	76	85	99	72	66	38	21	5.4	139	42
8	77	83	79	85	98	71	63	39	21	5.6	92	47
9	86	81	83	83	97	71	64	37	19	8.7	87	129
10	88	81	83	83	96	73	58	36	18	6.7	199	91
11	87	81	83	79	95	65	59	37	18	5.5	97	527
12	89	77	87	78	94	66	56	36	17	5.3	97	1600
13	91	75	88	78	93	69	53	35	15	5.3	84	853
14	93	76	88	80	92	68	53	33	10	12	83	478
15	92	77	88	79	92	70	53	33	13	34	76	342
16	91	78	87	79	92	72	53	32	12	32	70	272
17	91	78	86	80	89	74	51	32	11	34	69	226
18	92	78	85	80	89	71	47	32	10	47	67	191
19	95	76	86	81	89	65	51	32	8.4	30	62	160
20	94	76	85	88	89	64	49	25	7.6	28	67	137
21	83	75	85	88	88	66	49	24	7.0	23	71	117
22	81	79	84	83	85	66	48	24	6.7	48	71	101
23	90	80	84	81	82	68	47	24	6.0	26	72	94
24	86	82	85	82	83	68	46	25	5.6	22	72	87
25	84	83	86	83	84	65	46	26	e5.4	17	67	e81
26	85	78	86	84	76	65	47	26	5.1	20	65	e76
27	88	77	86	86	70	64	48	26	5.4	40	64	e71
28	87	80	85	88	68	66	47	24	4.9	198	56	e70
29	83	81	86	88	---	66	44	24	4.7	264	67	e67
30	81	81	85	91	---	66	42	26	4.8	96	57	e67
31	82	---	85	94	---	68	---	25	---	83	57	---
TOTAL	2694	2369	2593	2601	2519	2135	1631	989	383.6	1131.5	2651	6274
MEAN	86.90	78.97	83.65	83.90	89.96	68.87	54.37	31.90	12.79	36.50	85.52	209.1
MAX	95	84	88	94	100	74	67	41	24	264	199	1600
MIN	77	73	76	78	68	64	42	24	4.7	4.6	56	42
AC-FT	5340	4700	5140	5160	5000	4230	3240	1960	761	2240	5260	12440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
MEAN	203.5	165.7	321.9	305.7	395.4	476.4	300.3	185.4	59.47	75.77	210.3	232.1
MAX	1768	912	2200	2987	1692	1438	1155	1068	278	287	1182	1315
(WY)	1973	1995	1979	1993	1993	1978	1973	1992	1992	1986	1988	1975
MIN	27.6	55.1	60.0	64.9	53.8	40.0	41.2	25.1	12.0	15.6	21.6	22.2
(WY)	1974	1974	1981	1971	1971	1971	1971	1996	1974	1978	2000	1978

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1963 - 2002

ANNUAL TOTAL	50806	27971.1	
ANNUAL MEAN	139.2	76.63	243.8
HIGHEST ANNUAL MEAN			664
LOWEST ANNUAL MEAN			57.0
HIGHEST DAILY MEAN	694	Aug 15	1600
LOWEST DAILY MEAN	16	Jun 16	4.6
ANNUAL SEVEN-DAY MINIMUM	24	Jun 11	5.0
MAXIMUM PEAK FLOW			4410
MAXIMUM PEAK STAGE			11.52
INSTANTANEOUS LOW FLOW			4.2
ANNUAL RUNOFF (AC-FT)	100800	55480	176600
10 PERCENT EXCEEDS	303	94	526
50 PERCENT EXCEEDS	95	75	97
90 PERCENT EXCEEDS	43	19	33

e Estimated

a From rating curve extended above 9,500 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

b In gage well and 34.10 ft from floodmarks.

## GILA RIVER BASIN

09431500 GILA RIVER NEAR REDROCK, NM--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-97, water year 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV 28...	0945	79	660	10.6	104	8.2	398	5.0	8.0	140	41.3	8.30	6.78
MAR 06...	1020	74	663	10.6	101	8.1	403	19.0	7.0	140	41.2	8.31	1.84
JUN 25...	1600	5.2	655	8.6	111	8.7	430	42.5	20.0	130	38.6	9.09	2.91
AUG 28...	0900	52	659	8.2	104	8.2	445	27.0	19.5	150	43.5	9.80	2.51
Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	ALKALINITY TOT IT FIELD (MG/L AS CaCO3) (39086)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)
NOV 28...	1	30.7	155	141	170	--	14.2	<.1	35.4	36.2	259	<.01	<.20
MAR 06...	1	32.0	151	143	173	--	14.6	2.1	33.3	37.0	259	<.01	<.20
JUN 25...	1	37.5	137	126	143	4	16.9	1.64	38.6	55.0	275	<.01	.20
AUG 28...	1	35.1	148	142	169	2	16.1	1.92	30.9	50.9	278	.01	<.20
Date	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	ALUMINUM, 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)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)
NOV 28...	<.20	.05	.65	<.010	.04	.02	.06	1	<.05	E1	18	<.06	50
MAR 06...	<.20	.04	.83	<.010	.04	.03	.07	5	.28	E1	16	<.06	40
JUN 25...	.20	.03	<.02	<.010	.03	.03	.03	<1	.11	E1	18	<.06	60
AUG 28...	.30	.03	.63	<.010	<.02	<.01	.06	2	.13	<13	29	<.06	60
Date	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	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, DIS-SOLVED (UG/L AS SE) (01145)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)
NOV 28...	<.04	E.6	.09	1.1	<10	<.08	3.5	<.01	2.4	.17	<2	<2	<1
MAR 06...	<.04	<.8	.10	.7	<10	E.04	4.5	<.01	2.5	.26	<2	<2	<1
JUN 25...	<.04	<.8	.11	2.1	<10	<.08	8.9	<.01	3.3	<.06	<2	<2	<1
AUG 28...	<.04	<.8	.18	2.2	<10	<.08	16.2	<.01	3.7	.48	<2	<2	<1

09431500 GILA RIVER NEAR REDROCK, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC WATER, DISS, SOLVED (UG/L) (34253)	URANIUM NATURAL DIS-SOLVED (UG/L) (22703)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (MG/L) (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	
NOV 28...						2	1.79	79	19							
MAR 06...						1	1.97	94	44							
JUN 25...						4	1.87	85	41							
AUG 28...						3	2.33	98	93							
AUG 28...	0900	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003			
AUG 28...		DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOFOS WATER DISS, REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)		
AUG 28...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006		
AUG 28...		METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE WATER, DISS, REC (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WATER FLTRD 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)		
AUG 28...		<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010		
AUG 28...				PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)				
AUG 28...			<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009					

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

## RIO GRANDE BASIN

09431503 GRANDPA HARPER DITCH NEAR REDROCK, NM

LOCATION.--Lat 32°43'36", long 108°41'15", in SE<sup>1</sup>/<sub>4</sub>,NW<sup>1</sup>/<sub>4</sub>,NW<sup>1</sup>/<sub>4</sub>, sec.22, T.18 S., R.18 W., Grant County, Hydrologic Unit 15040002, on left bank 2 mi northeast of Redrock, 24 mi north of Lordsburg, and 27 mi west of Silver City.

PERIOD OF RECORD.--October 1999 to current year (irrigation season only).

GAGE.--Water-stage recorder with Parshall flume. Elevation of gage is 4,120 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for those estimated, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.52	0.27	---	---	---	---	0.00	8.9	3.8	1.8	e0.00	e0.00
2	0.52	0.20	---	---	---	---	0.00	9.2	9.8	4.0	e0.00	e0.00
3	0.51	0.20	---	---	---	---	0.00	9.3	11	2.4	e0.00	e0.00
4	0.43	0.19	---	---	---	---	0.00	9.8	12	2.6	e0.00	e0.00
5	0.43	0.18	---	---	---	---	2.9	3.5	12	2.3	e0.00	e0.00
6	0.43	0.16	---	---	---	---	12	0.49	12	4.4	e0.00	e0.00
7	0.43	0.14	---	---	---	---	13	0.45	12	2.1	e0.00	e0.00
8	0.43	0.14	---	---	---	---	11	0.42	12	2.3	e0.00	e0.00
9	0.43	0.14	---	---	---	---	12	0.35	11	6.2	e0.00	e0.00
10	0.43	0.13	---	---	---	---	9.6	0.35	11	3.9	e0.00	0.00
11	0.35	0.08	---	---	---	---	11	0.44	10	2.3	e0.00	0.05
12	0.35	0.09	---	---	---	---	3.8	0.43	8.3	2.1	e0.00	0.01
13	0.35	0.06	---	---	---	---	0.02	0.45	0.83	2.1	e0.00	0.00
14	0.35	0.05	---	---	---	---	0.04	0.35	0.71	1.4	e0.00	0.00
15	0.35	---	---	---	---	---	0.00	0.35	0.67	0.11	e0.00	0.00
16	0.35	---	---	---	---	---	0.00	0.36	0.63	0.01	e0.00	0.00
17	0.35	---	---	---	---	---	0.00	0.35	1.6	0.00	e0.00	0.00
18	0.35	---	---	---	---	---	0.02	0.35	7.7	0.00	e0.00	0.00
19	0.27	---	---	---	---	---	0.02	0.35	4.6	0.00	e0.00	0.00
20	0.20	---	---	---	---	---	0.02	0.39	3.4	0.00	e0.00	0.00
21	0.22	---	---	---	---	---	0.05	0.43	2.8	0.00	e0.00	0.00
22	0.23	---	---	---	---	---	0.04	0.43	2.5	0.00	e0.00	0.00
23	0.20	---	---	---	---	---	11	0.05	0.43	2.2	0.00	e0.00
24	0.14	---	---	---	---	---	3.7	0.06	0.43	1.9	0.00	e0.00
25	0.14	---	---	---	---	---	0.00	0.06	0.43	1.8	0.00	e0.00
26	0.14	---	---	---	---	0.00	0.02	0.43	1.5	0.00	e0.00	7.0
27	0.14	---	---	---	---	0.00	0.00	0.43	1.7	0.00	e0.00	12
28	0.18	---	---	---	---	0.00	5.6	0.43	1.5	0.00	e0.00	10
29	7.5	---	---	---	---	0.00	10	0.46	1.6	0.00	e0.00	9.2
30	7.4	---	---	---	---	0.00	9.4	0.52	1.8	0.00	e0.00	8.5
31	5.2	---	---	---	---	0.00	---	0.49	---	0.00	e0.00	---
TOTAL	29.32	---	---	---	---	---	100.70	51.49	164.34	40.02	0.00	46.76
MEAN	0.946	---	---	---	---	---	3.357	1.661	5.478	1.291	0.000	1.559
MAX	7.5	---	---	---	---	---	13	9.8	12	6.2	0.00	12
MIN	0.14	---	---	---	---	---	0.00	0.35	0.63	0.00	0.00	0.00
AC-FT	58	---	---	---	---	---	200	102	326	79	0.00	93

e Estimated



## RIO GRANDE BASIN

09442666 W.S. LANEY DITCH NEAR LUNA, NM

LOCATION.--Lat 33°51'46", long 108°52'24", in SE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, sec. 13, T.5 S., R.20 W., Catron County, Hydrologic Unit 15040004, on right bank 9.0 mi northeast of Luna, and 20 mi north of Reserve.

PERIOD OF RECORD.--October 1999 to current year (irrigation season only).

GAGE.--Water-stage recorder with Parshall flume. Elevation of gage is 6,880 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for those estimated, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.77	1.1	---	---	---	---	1.1	1.1	0.77	0.53	0.38	0.07
2	0.76	1.1	---	---	---	---	1.1	1.1	0.78	0.54	0.27	0.05
3	0.76	1.1	---	---	---	---	1.1	1.1	0.80	0.54	0.00	0.06
4	0.76	1.1	---	---	---	---	1.1	1.1	0.73	0.62	0.38	0.06
5	0.70	1.2	---	---	---	---	0.80	1.1	0.58	0.61	2.2	0.0
6	0.66	1.3	---	---	---	---	0.32	1.1	0.78	0.56	1.5	0.04
7	0.73	---	---	---	---	---	1.2	1.1	1.1	0.56	1.5	0.0
8	0.68	---	---	---	---	---	1.5	1.0	0.89	0.55	1.1	0.29
9	0.62	---	---	---	---	---	1.3	1.1	0.55	0.57	0.89	1.5
10	0.65	---	---	---	---	---	1.2	1.1	0.65	0.61	0.90	2.0
11	0.65	---	---	---	---	---	1.2	1.00	0.68	0.59	0.70	e2.7
12	0.63	---	---	---	---	---	1.1	1.0	0.70	0.56	0.52	0.70
13	0.67	---	---	---	---	---	1.1	1.1	0.67	0.55	0.37	1.0
14	0.61	---	---	---	---	---	1.1	1.1	0.59	0.55	0.31	1.3
15	0.60	---	---	---	---	---	1.1	1.1	0.56	0.51	0.30	1.2
16	0.56	---	---	---	---	---	1.1	0.84	0.64	0.51	0.26	1.1
17	0.58	---	---	---	---	---	1.1	0.28	0.64	0.41	0.27	1.00
18	0.59	---	---	---	---	---	1.1	0.28	0.60	0.26	0.21	0.97
19	0.61	---	---	---	---	---	1.0	0.30	0.60	0.50	0.34	0.92
20	0.62	---	---	---	---	0.22	1.0	0.32	0.59	0.62	0.00	0.85
21	0.59	---	---	---	---	0.21	1.1	0.27	0.57	0.57	0.00	0.90
22	0.58	---	---	---	---	0.22	1.1	0.27	0.58	0.69	0.00	1.2
23	0.61	---	---	---	---	0.22	1.1	0.40	0.54	0.73	0.02	1.3
24	0.62	---	---	---	---	0.22	1.1	0.62	0.55	0.62	0.17	1.3
25	0.74	---	---	---	---	0.19	1.1	0.60	0.58	0.61	0.15	1.3
26	1.0	---	---	---	---	0.63	1.1	0.63	0.60	0.57	0.11	1.3
27	1.1	---	---	---	---	1.1	1.1	0.67	0.67	0.56	0.08	1.3
28	1.2	---	---	---	---	1.1	1.1	0.70	0.64	0.54	0.08	1.3
29	1.1	---	---	---	---	1.2	1.1	0.69	0.59	0.51	0.15	1.3
30	1.1	---	---	---	---	1.3	1.1	0.71	0.56	0.48	0.13	1.1
31	1.1	---	---	---	---	1.2	---	0.76	---	0.48	0.06	---
TOTAL	22.95	---	---	---	---	---	32.62	24.54	19.78	17.11	13.35	28.11
MEAN	0.740	---	---	---	---	---	1.087	0.792	0.659	0.552	0.431	0.937
MAX	1.2	---	---	---	---	---	1.5	1.1	1.1	0.73	2.2	2.7
MIN	0.56	---	---	---	---	---	0.32	0.27	0.54	0.26	0.00	0.00
AC-FT	46	---	---	---	---	---	65	49	39	34	26	56

e Estimated

09442680 SAN FRANCISCO RIVER NEAR RESERVE, NM

LOCATION.--Lat 33°44'12", long 108°46'14", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.35, T.6 S., R.19 W., Catron County, Hydrologic Unit 15040004, on left bank 1,300 ft downstream from Rainbow Bridge Canyon, 1.7 mi northwest of Reserve, and at mile 563.1.

DRAINAGE AREA.--350 mi<sup>2</sup>, approximately.

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

REVISED RECORDS.--WDR NM-78-1: 1977. WDR NM-84-1: 1973, 1979-80.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 15, 1972, at site 1,800 ft upstream at different datum.

REMARKS.--Records poor. Possible minor regulation by Luna Lake, 27 mi upstream. Diversions for irrigation of about 280 acres upstream from station. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 15 ft, as determined in 1962 from old floodmarks. Major floods of Nov. 26, 1905 and Dec. 3, 1906, exceeded 20,000 ft<sup>3</sup>/s at Alma (downstream). See WSP 1313.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	4.9	6.3	7.1	6.6	6.1	4.7	4.3	e1.7	2.4	2.8	2.7
2	3.5	4.6	6.2	6.5	7.0	5.7	4.7	4.2	e1.8	2.4	4.6	2.6
3	e3.7	4.3	6.2	6.4	7.7	5.3	4.6	4.1	e2.1	2.4	3.2	2.6
4	e4.0	4.2	6.3	6.5	7.8	5.4	4.6	4.0	e2.2	2.3	6.1	2.3
5	e4.3	4.2	6.5	6.2	7.9	5.1	4.8	3.8	2.5	2.2	27	1.3
6	4.6	4.4	6.1	5.9	7.9	5.4	4.9	3.6	2.2	2.3	14	1.8
7	4.7	4.4	6.1	6.5	7.7	5.7	5.0	3.3	2.1	2.2	9.6	e2.3
8	5.1	4.6	6.3	5.6	7.8	6.0	5.2	3.4	2.2	2.2	8.1	e4.2
9	5.5	4.1	5.7	3.0	7.8	5.4	4.9	3.2	2.2	2.5	8.0	e6.3
10	5.7	4.3	5.5	2.8	7.4	5.3	2.5	3.2	2.3	e2.2	7.8	e26
11	5.7	4.5	7.2	3.4	7.4	5.3	3.2	3.0	2.2	2.8	7.1	222
12	e5.7	4.9	7.5	3.7	7.5	5.4	4.1	2.4	2.3	2.1	6.2	51
13	e5.5	5.0	6.2	3.5	7.3	5.3	4.4	2.3	2.5	2.5	5.2	24
14	e5.2	5.2	6.6	3.4	7.3	5.2	4.1	2.1	2.3	2.2	4.7	16
15	e5.0	5.1	7.7	3.7	7.4	5.2	4.2	1.8	2.3	1.8	4.2	12
16	e4.7	5.2	7.9	4.1	7.3	4.6	4.6	1.5	2.5	1.6	3.9	11
17	e4.5	5.3	6.8	4.5	7.4	4.5	4.5	1.4	2.5	2.5	3.7	9.3
18	e4.3	5.3	6.2	4.6	6.8	5.0	4.6	1.1	2.4	2.8	3.5	8.3
19	e4.0	5.2	6.3	4.3	6.6	5.5	4.4	1.2	2.5	2.8	4.8	7.8
20	e4.1	5.4	6.5	4.4	6.6	4.5	4.6	1.5	2.4	2.6	5.5	7.3
21	e4.5	5.5	7.5	4.9	6.5	4.6	4.5	1.7	2.5	2.8	6.6	6.8
22	e4.7	5.3	6.6	5.1	6.5	5.6	4.5	1.4	2.5	2.8	4.5	6.0
23	e5.0	6.1	6.3	5.4	6.5	5.4	4.6	1.1	2.5	2.6	3.9	5.6
24	e4.6	6.5	7.6	5.4	6.5	5.3	4.4	1.1	2.5	2.8	3.4	5.0
25	e4.4	6.5	6.2	5.4	6.0	5.3	4.5	e1.1	2.5	2.8	3.0	4.3
26	4.3	6.0	6.2	6.0	6.5	5.3	4.8	e1.3	2.4	2.8	2.7	4.5
27	4.5	6.3	7.0	6.0	5.9	5.2	5.0	e1.5	2.5	2.8	2.5	4.4
28	4.9	5.7	7.0	6.5	6.0	4.7	4.5	e1.4	2.5	2.7	1.7	4.4
29	5.0	6.0	7.5	6.6	---	4.7	4.3	e1.4	2.3	2.8	2.9	4.4
30	4.8	6.5	7.2	7.3	---	4.6	4.3	e1.4	2.3	2.7	2.8	4.2
31	4.9	---	6.8	6.8	---	4.4	---	e1.5	---	2.5	2.8	---
TOTAL	144.8	155.5	206.0	161.5	197.6	161.0	134.0	70.3	69.7	76.9	176.8	470.4
MEAN	4.671	5.183	6.645	5.210	7.057	5.194	4.467	2.268	2.323	2.481	5.703	15.68
MAX	5.7	6.5	7.9	7.3	7.9	6.1	5.2	4.3	2.5	2.8	27	222
MIN	3.4	4.1	5.5	2.8	5.9	4.4	2.5	1.1	1.7	1.6	1.7	1.3
AC-FT	287	308	409	320	392	319	266	139	138	153	351	933

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)								
MEAN	28.27	19.37	19.84	20.40	37.45	73.79	50.69	18.79	6.353	8.229	16.92	19.04
MAX	430	211	159	159	231	336	398	162	39.7	28.3	96.2	172
(WY)	1984	1979	1979	1993	1993	1985	1973	1973	1992	1967	1999	1983
MIN	3.27	5.18	5.11	5.21	5.14	4.04	3.38	2.27	1.39	1.34	3.96	1.75
(WY)	1983	1976	1978	2002	1964	1959	1967	2002	1990	1995	2000	2000

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1959 - 2002

ANNUAL TOTAL	6147.94	2024.5	
ANNUAL MEAN	16.84	5.547	26.84
HIGHEST ANNUAL MEAN			101
LOWEST ANNUAL MEAN			5.55
HIGHEST DAILY MEAN	196	Apr 9	222
LOWEST DAILY MEAN	0.75	Sep 30	1.1
ANNUAL SEVEN-DAY MINIMUM	1.0	Sep 24	1.3
MAXIMUM PEAK FLOW			482
MAXIMUM PEAK STAGE			3.60
INSTANTANEOUS LOW FLOW			1.1
ANNUAL RUNOFF (AC-FT)	12190	4020	19450
10 PERCENT EXCEEDS	42	7.3	52
50 PERCENT EXCEEDS	7.3	4.6	8.3
90 PERCENT EXCEEDS	3.5	2.2	3.5

e Estimated

a From rating curve extended above 1,400 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

b Recorded, 11.30 ft, from floodmarks.

c Recorded gage height.

09442682 KIEHNE DITCH NEAR RESERVE, NM

LOCATION.--Lat 33°42'14", long 108°45'24", in SE<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>, sec.12, T.7 S., R.19 W., Catron County, Hydrologic Unit 15040004, on left bank 0.7 mi southwest of Reserve, and 12.7 mi southwest of Apache Creek

PERIOD OF RECORD.--October 1999 to current year (irrigation season only).

GAGE.--Water-stage recorder with Parshall flume. Elevation of gage is 5,720 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	---	---	---	---	0.00	4.0	e1.5	0.36	4.2	3.2
2	0.00	0.00	---	---	---	---	2.2	3.9	e1.4	0.35	4.7	3.1
3	0.00	0.00	---	---	---	---	5.5	4.0	e1.6	0.38	4.6	3.1
4	0.00	0.00	---	---	---	---	5.5	4.2	e1.6	0.42	4.3	3.3
5	0.00	---	---	---	---	---	5.4	4.2	1.9	0.45	4.2	2.9
6	0.00	---	---	---	---	---	5.7	e4.0	1.7	0.45	4.2	2.9
7	0.00	---	---	---	---	---	6.2	e3.8	1.6	0.39	3.8	2.7
8	0.00	---	---	---	---	---	6.6	e3.6	1.5	0.38	3.9	3.1
9	0.00	---	---	---	---	---	6.2	e3.6	1.4	0.38	3.8	3.1
10	0.00	---	---	---	---	---	5.2	e3.4	1.3	0.50	3.7	5.1
11	0.00	---	---	---	---	---	4.6	e3.0	1.3	0.71	3.5	0.13
12	0.00	---	---	---	---	---	5.1	e3.0	1.2	0.71	3.3	0.00
13	0.00	---	---	---	---	---	5.4	e3.2	1.0	0.65	3.2	0.00
14	0.00	---	---	---	---	---	5.4	e3.1	0.94	0.68	3.3	0.00
15	0.00	---	---	---	---	---	5.1	e2.9	0.87	1.4	3.2	0.03
16	0.00	---	---	---	---	---	5.3	e2.7	0.80	1.5	3.2	0.07
17	0.00	---	---	---	---	---	5.3	e2.6	0.67	1.8	3.2	0.64
18	0.00	---	---	---	---	---	4.6	e2.6	0.63	3.3	3.1	0.96
19	0.00	---	---	---	---	---	2.7	e2.5	0.59	3.3	3.2	1.1
20	0.00	---	---	---	---	0.00	3.2	e2.5	0.49	3.8	3.3	0.82
21	0.00	---	---	---	---	0.00	3.5	e2.4	0.45	3.9	3.2	0.55
22	0.00	---	---	---	---	0.00	3.7	e2.5	0.42	3.8	2.9	1.0
23	0.00	---	---	---	---	0.00	3.9	e2.4	0.39	7.3	2.8	1.9
24	0.00	---	---	---	---	0.00	4.0	e2.2	0.33	5.5	2.7	2.3
25	0.00	---	---	---	---	0.00	4.1	e2.3	0.37	4.8	2.6	1.7
26	0.00	---	---	---	---	0.00	4.2	e2.2	0.42	2.6	2.6	1.4
27	0.00	---	---	---	---	0.00	4.2	e2.0	0.46	2.2	2.5	1.0
28	0.00	---	---	---	---	0.00	4.2	e1.6	0.45	4.7	3.0	0.76
29	0.00	---	---	---	---	0.00	4.1	e1.2	0.41	4.6	3.2	1.0
30	0.00	---	---	---	---	0.00	4.0	e1.0	0.42	3.9	2.9	0.74
31	0.00	---	---	---	---	0.00	---	e1.3	---	3.4	3.1	---
TOTAL	0.00	---	---	---	---	---	135.10	87.9	28.11	68.61	105.4	48.60
MEAN	0.000	---	---	---	---	---	4.503	2.835	0.937	2.213	3.400	1.620
MAX	0.00	---	---	---	---	---	6.6	4.2	1.9	7.3	4.7	5.1
MIN	0.00	---	---	---	---	---	0.00	1.0	0.33	0.35	2.5	0.00
AC-FT	0.00	---	---	---	---	---	268	174	56	136	209	96

e Estimated

09442956 THOMASON FLAT DITCH NEAR GLENWOOD, NM

LOCATION.--Lat 33°25'54", long 108°55'54", in NW<sup>1</sup>/<sub>4</sub>,NW<sup>1</sup>/<sub>4</sub>,NW<sup>1</sup>/<sub>4</sub>, sec.20, T.10 S., R.20 W., Catron County, Hydrologic Unit 15040004, on right bank 3.7 mi northwest of Alma, and 11 mi north of Glenwood.

PERIOD OF RECORD.--October 1999 to current year (irrigation season only).

GAGE.--Water-stage recorder with Parshall flume. Elevation of gage is 4,860 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. No record May 8 to June 4, due to recorder malfunction.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	1.4	---	---	---	---	5.7	0.61	---	1.3	1.3	0.43
2	9.4	1.6	---	---	---	---	5.5	4.4	---	1.4	1.4	0.36
3	9.5	1.3	---	---	---	---	5.1	4.0	---	1.6	0.0	0.38
4	9.9	0.38	---	---	---	---	4.8	3.8	---	1.8	1.6	0.36
5	9.2	0.32	---	---	---	---	4.4	3.4	2.4	1.8	8.2	0.23
6	1.7	0.33	---	---	---	---	4.4	5.4	1.1	1.4	5.6	0.30
7	2.6	0.33	---	---	---	---	3.5	4.8	0.78	1.3	5.5	0.23
8	2.9	0.35	---	---	---	---	1.8	---	0.34	1.8	4.2	1.2
9	2.8	0.43	---	---	---	---	1.4	---	0.69	1.9	3.6	5.3
10	0.02	0.43	---	---	---	---	2.8	---	0.36	2.6	3.6	6.7
11	0.0	0.43	---	---	---	---	4.1	---	1.6	2.4	2.9	0.05
12	0.0	0.49	---	---	---	---	5.3	---	2.1	2.2	2.3	0.01
13	0.0	---	---	---	---	---	4.7	---	0.45	2.0	1.8	0.0
14	0.0	---	---	---	---	---	1.7	---	0.24	3.1	1.5	0.01
15	0.0	---	---	---	---	---	2.2	---	0.19	5.3	1.4	0.01
16	0.0	---	---	---	---	---	3.9	---	0.93	5.3	1.2	0.0
17	0.0	---	---	---	---	---	3.3	---	0.50	5.3	1.2	0.0
18	0.0	---	---	---	---	---	2.5	---	0.18	5.0	0.98	0.0
19	0.0	---	---	---	---	---	2.1	---	0.32	1.1	1.4	0.0
20	0.0	---	---	---	---	---	2.3	---	1.3	6.6	0.0	0.0
21	0.0	---	---	---	---	0.92	2.2	---	0.77	7.5	0.0	0.0
22	0.0	---	---	---	---	2.0	2.1	---	1.0	7.8	0.0	0.0
23	0.0	---	---	---	---	4.5	2.5	---	1.1	7.7	0.15	0.0
24	0.0	---	---	---	---	4.7	2.5	---	0.71	7.8	0.83	0.0
25	0.0	---	---	---	---	4.7	1.9	---	0.51	8.0	0.76	0.0
26	0.0	---	---	---	---	4.7	0.0	---	0.65	8.2	0.57	0.0
27	0.19	---	---	---	---	4.8	0.0	---	0.85	8.1	0.49	0.0
28	6.2	---	---	---	---	5.0	0.0	---	1.1	7.5	0.49	0.0
29	1.7	---	---	---	---	5.5	0.0	---	1.2	1.3	0.74	0.0
30	1.7	---	---	---	---	5.8	0.0	---	1.3	0.51	0.68	0.0
31	1.5	---	---	---	---	5.7	---	---	---	0.90	0.42	---
TOTAL	68.51	---	---	---	---	---	82.7	---	---	120.51	54.81	15.57
MEAN	2.210	---	---	---	---	---	2.757	---	---	3.887	1.768	0.519
MAX	9.9	---	---	---	---	---	5.7	---	---	8.2	8.2	6.7
MIN	0.00	---	---	---	---	---	0.00	---	---	0.51	0.00	0.00
AC-FT	136	---	---	---	---	---	164	---	---	239	109	31

## RIO GRANDE BASIN

09442960 W.S. DITCH NEAR GLENWOOD, NM

LOCATION.--Lat 33°24'40", long 108°54'57", in SE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub>, sec.29, T.10 S., R.20 W., Catron County, Hydrologic Unit 15040004, on left bank 2.0 mi northwest of Alma, and 7.0 mi north of Glenwood.

PERIOD OF RECORD.--October 1999 to current year (irrigation season only).

GAGE.--Water-stage recorder. Elevation of gage is 4,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	14	---	---	---	---	4.2	8.7	e4.2	3.5	8.3	5.5
2	7.1	15	---	---	---	---	4.1	5.5	e4.2	2.9	9.1	6.2
3	7.3	15	---	---	---	---	4.1	5.3	e4.2	4.2	8.8	5.8
4	7.3	16	---	---	---	---	4.3	5.5	e4.3	4.1	7.1	5.5
5	7.5	16	---	---	---	---	4.2	5.4	4.3	2.6	7.7	5.2
6	7.6	13	---	---	---	---	5.0	7.2	4.3	2.8	8.4	4.9
7	7.7	6.0	---	---	---	---	5.5	6.4	4.3	2.7	9.5	4.8
8	7.7	6.8	---	---	---	---	6.6	6.9	4.6	3.0	9.7	4.9
9	7.8	6.0	---	---	---	---	6.4	e6.5	4.6	3.2	9.7	5.1
10	8.0	5.8	---	---	---	---	5.0	e6.4	4.6	3.3	9.8	5.7
11	7.9	5.7	---	---	---	---	5.4	e6.2	4.5	3.3	9.6	7.3
12	8.0	5.4	---	---	---	---	5.5	e6.0	4.3	3.0	9.4	2.4
13	8.0	5.2	---	---	---	---	6.9	e6.0	4.0	3.0	11	2.2
14	8.3	---	---	---	---	---	11	e6.2	3.8	4.6	13	2.1
15	11	---	---	---	---	---	9.0	e5.9	3.5	e4.0	12	1.9
16	14	---	---	---	---	---	9.7	e5.8	2.8	3.7	6.2	1.9
17	15	---	---	---	---	---	10	e5.8	2.8	3.7	5.8	2.0
18	16	---	---	---	---	---	7.1	e5.5	2.9	3.6	5.9	1.9
19	14	---	---	---	---	---	6.2	e5.3	2.8	3.1	7.3	5.0
20	13	---	---	---	---	---	6.3	e5.1	2.7	4.3	7.3	13
21	16	---	---	---	---	5.0	6.6	e4.8	2.8	4.7	6.6	13
22	16	---	---	---	---	5.0	6.3	e4.7	3.0	4.3	6.4	12
23	16	---	---	---	---	5.1	7.3	e4.6	3.1	6.0	7.4	9.0
24	5.8	---	---	---	---	5.1	7.0	e4.5	3.1	5.5	7.2	9.2
25	5.9	---	---	---	---	5.0	7.5	e4.5	3.3	4.8	6.8	12
26	6.0	---	---	---	---	4.7	7.5	e4.3	4.2	5.1	6.1	15
27	6.0	---	---	---	---	4.5	8.6	e4.2	4.2	7.5	5.9	13
28	4.9	---	---	---	---	4.5	8.2	e4.0	3.4	8.6	5.8	10
29	14	---	---	---	---	4.3	7.3	e4.0	3.2	7.0	6.2	10
30	15	---	---	---	---	4.3	8.2	e4.0	3.4	7.1	5.9	11
31	15	---	---	---	---	4.2	---	e4.1	---	9.4	5.6	---
TOTAL	310.3	---	---	---	---	---	201.0	169.3	111.4	138.6	245.5	207.5
MEAN	10.01	---	---	---	---	---	6.700	5.461	3.713	4.471	7.919	6.917
MAX	16	---	---	---	---	---	11	8.7	4.6	9.4	13	15
MIN	4.9	---	---	---	---	---	4.1	4.0	2.7	2.6	5.6	1.9
AC-FT	615	---	---	---	---	---	399	336	221	275	487	412

e Estimated

09443900 FISH POND DITCH ABOVE HATCHERY AT GLENWOOD, NM

LOCATION.--Lat 33°17'36", long 108°53'25", in SE<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>, sec. 34, T.5 S., R.20 W., Catron County, Hydrologic Unit 15040004, on right bank 50 ft from heading gate, on San Francisco River, and 1.5 mi south of Glenwood.

PERIOD OF RECORD.--May 2002 to September 2002 (irrigation season only).

GAGE.--Water-stage recorder. Elevation of gage is 4,710 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	0.12	0.00	0.27	1.1
2	---	---	---	---	---	---	---	---	0.09	0.00	0.36	1.0
3	---	---	---	---	---	---	---	---	0.06	0.00	0.44	0.93
4	---	---	---	---	---	---	---	---	0.04	0.00	0.53	0.90
5	---	---	---	---	---	---	---	---	0.00	0.00	0.64	0.84
6	---	---	---	---	---	---	---	---	0.00	0.00	0.71	0.76
7	---	---	---	---	---	---	---	---	0.00	0.00	0.77	0.64
8	---	---	---	---	---	---	---	---	0.00	0.00	0.85	0.52
9	---	---	---	---	---	---	---	---	0.00	0.00	0.90	0.41
10	---	---	---	---	---	---	---	---	0.00	0.00	0.98	0.36
11	---	---	---	---	---	---	---	---	0.00	0.00	1.0	0.64
12	---	---	---	---	---	---	---	---	0.00	0.00	1.1	1.3
13	---	---	---	---	---	---	---	---	0.00	0.00	1.1	1.7
14	---	---	---	---	---	---	---	---	0.00	0.00	1.1	1.8
15	---	---	---	---	---	---	---	---	0.00	0.00	1.2	2.1
16	---	---	---	---	---	---	---	---	0.00	0.00	1.2	2.4
17	---	---	---	---	---	---	---	---	0.00	0.00	1.3	2.5
18	---	---	---	---	---	---	---	---	0.00	0.00	1.4	2.5
19	---	---	---	---	---	---	---	---	0.00	0.00	1.4	3.0
20	---	---	---	---	---	---	---	---	0.00	0.00	1.4	3.2
21	---	---	---	---	---	---	---	---	0.00	0.00	1.4	3.1
22	---	---	---	---	---	---	---	0.33	0.00	0.00	1.4	3.4
23	---	---	---	---	---	---	---	0.34	0.00	0.00	1.4	3.6
24	---	---	---	---	---	---	---	0.32	0.00	0.00	1.5	3.8
25	---	---	---	---	---	---	---	0.30	0.00	0.00	1.5	3.9
26	---	---	---	---	---	---	---	0.27	0.00	0.00	1.5	4.0
27	---	---	---	---	---	---	---	0.24	0.00	0.00	1.5	4.1
28	---	---	---	---	---	---	---	0.23	0.00	0.00	1.5	4.3
29	---	---	---	---	---	---	---	0.21	0.00	0.00	1.4	4.4
30	---	---	---	---	---	---	---	0.18	0.00	0.00	1.3	4.7
31	---	---	---	---	---	---	---	0.14	---	0.09	1.2	---
TOTAL	---	---	---	---	---	---	---	---	0.31	0.09	34.25	67.90
MEAN	---	---	---	---	---	---	---	---	0.010	0.003	1.105	2.263
MAX	---	---	---	---	---	---	---	---	0.12	0.09	1.5	4.7
MIN	---	---	---	---	---	---	---	---	0.00	0.00	0.27	0.36
AC-FT	---	---	---	---	---	---	---	---	0.6	0.2	68	135

09443938 EAST PLEASANTON DITCH NEAR GLENWOOD, NM

LOCATION.--Lat 33°17'36", long 108°53'25", in SE<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>, sec.34, T.5 S., R.20 W., Catron County, Hydrologic Unit 15040004, on right bank 50 ft from heading gate, on San Francisco River, and 1.5 mi south of Glenwood.

PERIOD OF RECORD.--October 1999 to current year (irrigation season only).

GAGE.--Water-stage recorder. Elevation of gage is 4,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	6.9	---	---	---	---	6.3	5.5	6.7	7.8	5.6	5.7
2	6.9	6.9	---	---	---	---	6.6	5.6	7.1	7.8	5.1	5.7
3	6.8	6.9	---	---	---	---	6.5	5.7	7.1	8.0	5.0	5.6
4	6.7	6.9	---	---	---	---	6.6	5.3	7.0	7.9	5.1	5.6
5	6.6	6.9	---	---	---	---	6.5	5.1	7.0	7.9	5.2	5.7
6	6.5	6.9	---	---	---	---	6.3	5.1	7.1	8.0	5.5	5.7
7	6.3	6.9	---	---	---	---	6.4	6.6	7.1	8.0	6.0	5.7
8	6.3	7.0	---	---	---	---	6.4	7.5	7.1	8.1	5.4	5.8
9	6.1	7.0	---	---	---	---	6.3	7.7	7.1	8.3	5.5	5.9
10	6.2	7.0	---	---	---	---	5.7	7.6	7.2	8.3	5.7	6.4
11	6.1	7.0	---	---	---	---	5.6	7.4	7.3	8.1	5.7	12
12	6.1	7.0	---	---	---	---	5.7	7.4	7.3	7.9	5.4	11
13	6.0	7.0	---	---	---	---	5.7	7.6	7.3	7.7	5.2	6.5
14	6.2	---	---	---	---	---	5.8	7.5	7.3	7.7	5.1	5.1
15	6.2	---	---	---	---	---	5.8	7.2	7.4	7.5	5.3	5.1
16	6.1	---	---	---	---	---	5.6	7.4	7.5	7.6	5.4	5.4
17	6.0	---	---	---	---	---	5.9	7.4	7.6	7.5	5.4	5.2
18	6.0	---	---	---	---	---	7.2	7.0	7.5	7.4	5.4	5.1
19	5.9	---	---	---	---	---	7.3	7.2	7.6	7.1	5.8	5.0
20	6.0	---	---	---	---	---	7.3	7.1	7.6	6.9	6.1	4.9
21	5.9	---	---	---	---	---	7.3	7.0	7.6	6.6	5.3	4.8
22	5.8	---	---	---	---	6.4	7.2	6.9	7.6	6.4	5.2	4.8
23	5.7	---	---	---	---	6.5	7.2	6.9	7.6	6.2	5.2	4.7
24	6.1	---	---	---	---	6.5	7.2	6.5	7.8	6.1	5.2	5.1
25	7.1	---	---	---	---	6.5	7.3	6.5	7.8	5.9	5.3	5.8
26	7.1	---	---	---	---	6.7	7.4	6.7	7.8	5.9	5.2	6.1
27	7.1	---	---	---	---	6.6	7.3	6.5	7.8	5.7	5.2	6.4
28	7.1	---	---	---	---	6.5	7.3	6.4	7.7	5.9	5.3	6.4
29	7.0	---	---	---	---	6.5	6.7	6.5	7.6	6.0	5.5	6.5
30	6.9	---	---	---	---	6.6	6.1	6.7	7.8	5.6	5.5	6.7
31	6.9	---	---	---	---	6.4	---	6.2	---	5.5	5.5	---
TOTAL	198.5	---	---	---	---	---	196.5	207.7	222.0	221.3	167.3	180.4
MEAN	6.403	---	---	---	---	---	6.550	6.700	7.400	7.139	5.397	6.013
MAX	7.1	---	---	---	---	---	7.4	7.7	7.8	8.3	6.1	12
MIN	5.7	---	---	---	---	---	5.6	5.1	6.7	5.5	5.0	4.7
AC-FT	394	---	---	---	---	---	390	412	440	439	332	358

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM

LOCATION.--Lat 33°14'48", long 108°52'47", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.23, T.12 S., R.20 W., Catron County, Hydrologic Unit 15040004, on left bank 0.2 mi upstream from hot springs, 5 mi south of Glenwood, 6 mi downstream from White Water Creek, and at mile 511.5.

DRAINAGE AREA.--1,653 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1931, 1934, 1936-37, 1940-42, 1943-44(M), 1945-47. WSP 1283: Drainage area. WDR NM-78-1: 1977. WDR NM-79-1: 1973, 1975-77(P).

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 4,560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Feb. 15, 1934, at site 4.5 mi upstream at datum 98.82 ft higher.

REMARKS.--Records good except for those estimated, which are fair. Diversions for irrigation of about 2,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred Jan. 19 and Oct. 14, 1916, when discharges of 60,000 ft<sup>3</sup>/s or greater were computed for station at Clifton, AZ. On Nov. 26, 1905, a peak of 25,000 ft<sup>3</sup>/s was measured (by float-area method) at station at Alma (about 12 mi upstream, drainage area, 1,560 mi<sup>2</sup>). A similar measurement of 21,000 ft<sup>3</sup>/s was made at the Alma station for peak of Dec. 3, 1906.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	27	30	33	26	22	18	10	11	26	28
2	21	17	27	30	32	26	21	18	9.9	11	23	30
3	21	16	31	30	33	26	21	18	9.0	11	25	31
4	20	17	32	30	34	27	22	18	9.2	11	23	29
5	21	16	32	31	33	27	22	19	9.6	11	26	27
6	21	19	31	31	33	23	22	18	10	10	29	26
7	21	20	29	31	32	21	21	17	9.7	10	40	27
8	22	23	29	31	30	21	21	15	10	11	28	28
9	23	22	26	31	29	21	21	16	9.7	14	28	30
10	23	24	26	33	29	21	19	16	9.6	13	30	56
11	25	25	32	33	30	22	17	15	10	11	29	3110
12	26	27	32	33	30	23	17	15	9.4	11	27	1530
13	23	28	32	34	29	24	17	16	9.1	12	26	347
14	26	37	32	33	29	25	17	16	9.3	11	23	204
15	24	29	32	e33	29	26	17	15	10	13	21	137
16	22	27	32	34	27	27	17	15	9.4	14	22	94
17	21	27	32	35	26	27	16	14	10	16	22	76
18	21	28	33	34	26	27	14	14	11	17	22	64
19	17	29	33	33	26	26	15	14	11	16	25	55
20	17	29	33	33	26	26	16	15	9.6	17	57	44
21	19	27	33	34	25	25	16	15	9.1	16	30	38
22	21	28	33	33	23	27	16	14	9.8	17	24	34
23	23	26	33	33	23	25	15	14	10	17	24	28
24	24	28	33	33	24	24	15	12	10	16	23	25
25	23	29	32	33	24	23	15	13	10	16	23	24
26	23	31	33	33	24	24	16	13	11	17	24	25
27	23	31	33	33	24	24	17	13	11	17	23	27
28	21	31	32	31	24	23	18	13	11	30	24	28
29	19	30	32	32	---	23	18	11	11	23	25	27
30	17	30	32	32	---	24	19	12	12	21	27	27
31	17	---	30	32	---	23	---	11	---	19	26	---
TOTAL	663	769	969	1002	787	757	540	463	300.4	460	825	6256
MEAN	21.39	25.63	31.26	32.32	28.11	24.42	18.00	14.94	10.01	14.84	26.61	208.5
MAX	26	37	33	35	34	27	22	19	12	30	57	3110
MIN	17	16	26	30	23	21	14	11	9.0	10	21	24
AC-FT	1320	1530	1920	1990	1560	1500	1070	918	596	912	1640	12410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2002, BY WATER YEAR (WY)

MEAN	89.17	53.82	85.02	97.61	124.9	191.8	142.1	74.88	28.26	37.03	76.24	62.03
MAX	2026	520	1068	1568	1034	1036	1049	593	146	108	392	368
(WY)	1984	1979	1979	1993	1993	1985	1973	1973	1992	1930	1957	1988
MIN	9.77	10.8	12.9	13.5	14.9	11.3	10.3	8.65	5.70	13.2	13.7	7.66
(WY)	1966	1957	1954	1956	1956	1959	1957	1956	1956	1963	1960	1956

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1928 - 2002

ANNUAL TOTAL	24374	13791.4										
ANNUAL MEAN	66.78	37.78								88.49		
HIGHEST ANNUAL MEAN										351		1979
LOWEST ANNUAL MEAN										13.9		1956
HIGHEST DAILY MEAN				650	Apr 10		3110	Sep 11		27500	Oct 2	1983
LOWEST DAILY MEAN				14	Sep 29		9.0	Jun 3		2.5	Jun 25	1956
ANNUAL SEVEN-DAY MINIMUM				17	Oct 30		9.5	Jun 10		3.9	Jun 22	1956
MAXIMUM PEAK FLOW							6670	Sep 11		a37100	Oct 2	1983
MAXIMUM PEAK STAGE							10.79	Sep 11		b18.15	Oct 2	1983
INSTANTANEOUS LOW FLOW							8.1	Jun 2		1.5	Dec 3	1906
ANNUAL RUNOFF (AC-FT)	48350	27360								64100		
10 PERCENT EXCEEDS		168					33			171		
50 PERCENT EXCEEDS		33					24			32		
90 PERCENT EXCEEDS		20					11			15		

e Estimated

a From rating curve extended above 4,200 ft<sup>3</sup>/s, on basis of slope-area measurement at gage heights 10.74 ft, 15.60 ft, and 20.80 ft.

b 20.80 ft outside floodmarks.

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-85, water year 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV 29...	0930	30	647	9.0	93	8.2	368	2.5	9.5	150	41.2	11.0	2.82
MAR 07...	0930	21	646	9.0	94	7.8	369	11.5	10.0	150	41.0	11.1	2.34
JUN 25...	0940	11	644	7.5	93	7.9	413	27.5	17.5	170	47.5	11.9	2.16
AUG 27...	1500	23	646	10.8	151	8.5	374	36.0	23.5	160	43.8	11.6	2.16
Date	SODIUM ADSORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	ANC UNFLTRD LAB (MG/L AS CaCO3) (90410)	ALKALINITY TOT IT FIELD (MG/L AS CaCO3) (39086)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)
NOV 29...	.8	21.3	189	177	213	--	6.02	.4	36.4	8.8	234	<.01	<.20
MAR 07...	.8	21.3	187	178	215	--	5.85	.4	35.0	8.7	233	.01	<.20
JUN 25...	.8	22.9	202	186	225	--	7.27	.30	36.9	9.0	249	.01	.40
AUG 27...	.8	21.9	188	184	218	3	6.74	.39	36.6	8.2	242	<.01	<.20
Date	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	ALUMINUM, 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)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)
NOV 29...	<.20	.06	.20	<.010	.06	.03	.10	<1	<.05	E1	12	<.06	20
MAR 07...	<.20	.03	.21	<.010	.05	.04	.06	<1	.14	2	10	<.06	20
JUN 25...	.30	.03	.10	<.010	.03	.03	.05	<1	.08	<2	12	<.06	30
AUG 27...	.20	.05	.08	<.010	.03	.03	.06	1	.09	<13	16	<.06	30
Date	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	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, DIS-SOLVED (UG/L AS SE) (01145)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)
NOV 29...	<.04	E.5	.12	.7	<10	<.08	10.7	<.01	.6	.07	<2	<2	<1
MAR 07...	<.04	<.8	.14	.5	<10	<.08	12.7	E.01n	.6	.66	<2	<2	<1
JUN 25...	<.04	<.8	.12	.4	<10	<.08	16.2	<.01	.5	<.06	<2	<2	<1
AUG 27...	<.04	<.8	.21	.6	<10	<.08	21.7	<.01	.6	.32	<14	<2	<1

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (82660)	ACETO-CHLOR, WATER, FLTRD REC (49260)	ALA-CHLOR, WATER, DISS, REC, (46342)	ALPHA BHC WATER, DISS, SOLVED (34253)	URANIUM NATURAL DIS-SOLVED (UG/L) (22703)	SEDI-SUSP. SIEVE DIAM. % FINER THAN .062 MM (MG/L) (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (MG/L) (80154)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (82673)	BUTYL-ATE, WATER, DISS, REC (04028)	CAR-BARYL WATER, FLTRD 0.7 U GF, REC (82680)	CARBO-FURAN WATER, FLTRD 0.7 U GF, REC (82674)	CHLOR-PYRIFOS DIS-SOLVED (38933)	CYANA-ZINE, WATER, DISS, REC (04041)	DCPA WATER, FLTRD 0.7 U GF, REC (82682)	
NOV 29...						1	2.27	88								9.0
MAR 07...						4	2.26	93								14
JUN 25...						5	2.32	82								40
AUG 27...						4	2.34	99								--
AUG 27...	1500	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003			
AUG 27...		DEETHYL ATRA-ZINE, WATER, DISS, REC (04040)	DI-AZINON, DIS-SOLVED (39572)	DI-ELDRIN, DIS-SOLVED (39381)	DISUL-FOTON WATER, FLTRD 0.7 U GF, REC (82677)	EPTC WATER, FLTRD 0.7 U GF, REC (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (82663)	ETHO-PROP WATER, FLTRD 0.7 U GF, REC (82672)	FONOFOS WATER, DISS, REC (04095)	LINDANE DIS-SOLVED (39341)	LIN-URON WATER, FLTRD 0.7 U GF, REC (82666)	MALA-THION, DIS-SOLVED (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (82667)		
AUG 27...		<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006		
AUG 27...		METO-LACHLOR WATER DISSOLV (39415)	METRI-BUZIN SENCOR WATER DISSOLV (82630)	MOL-INATE WATER, FLTRD 0.7 U GF, REC (82671)	NAPROP-AMIDE WATER, FLTRD 0.7 U GF, REC (82684)	P, P' DDE WATER, DISS, REC (34653)	PARA-THION, DIS-SOLVED (39542)	PEB-ULATE WATER, FILTRD 0.7 U GF, REC (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (82683)	PER-METHRIN CIS WATER, FLTRD 0.7 U GF, REC (82687)	PHORATE WATER, FLTRD 0.7 U GF, REC (82664)	PRO-METON, WATER, DISS, REC (04037)	PRON-AMIDE WATER, FLTRD 0.7 U GF, REC (82676)	PROPA-CHLOR, WATER, DISS, REC (04024)		
AUG 27...		<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010		
AUG 27...				PRO-PANIL WATER, FLTRD 0.7 U GF, REC (82679)	PRO-PARGITE WATER, FLTRD 0.7 U GF, REC (82685)	SI-MAZINE, WATER, DISS, REC (04035)	TEBU-THIURON WATER, FLTRD 0.7 U GF, REC (82670)	TER-BACIL WATER, FLTRD 0.7 U GF, REC (82665)	TER-BUFOS WATER, FLTRD 0.7 U GF, REC (82675)	THIO-BENCARB WATER, FLTRD 0.7 U GF, REC (82681)	TRIAL-LATE WATER, FLTRD 0.7 U GF, REC (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (82661)				
AUG 27...			<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009					

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

Value qualifier codes used in this report:  
 n -- Below the laboratory reporting level

Because 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 2002 maximum		Period of record maximum				
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	
ARKANSAS RIVER BASIN									
Carrizozo Creek near Kenton, OK (07154400)	Lat 36°52'55", long 103°01'05", Union County, Hydrologic Unit 11040001, under bridge on New Mexico State Highway 406, 4 mi southwest of Kenton, OK. Drainage area is 111 mi <sup>2</sup> .	1953-	- -02	<3.81	<900	07-06-58	12.22	15,600	
Raton Creek at Raton (07201000)	Lat 36°55'38", long 104°26'22", Colfax County, Hydrologic Unit 11080001, 60 ft upstream from bridge on State Highway 72 at Raton. Drainage area is 14.4 mi <sup>2</sup> .	1953-96 <sup>g</sup> 1999-	06-14-02	1.77	422	06-17-65	14.80	3,990	
Chicorica Creek tributary near Raton (07201200)	Lat 36°49'41", long 104°19'58", Colfax County, Hydrologic Unit 11080001, upstream from culvert on U.S. Highway 64-87, 7.7 mi southeast of Raton. Drainage area is 5.18 mi <sup>2</sup> .	1971-96 <sup>g</sup> 1997-	09-09-02	4.71	30	08-25-82	18.30	1,340	
Clear Creek near Ute Park (07206400)	Lat 36°31'35", long 105°10'30", Colfax County, Hydrologic Unit 11080002, 0.25 mi upstream from mouth, and 4 mi southwest of Ute Park. Drainage area is 7.44 mi <sup>2</sup> .	1962-67* 1968-96 <sup>g</sup> 1999-	- -02	<1.66	<16	06-18-65	3.05	151	
Dog Creek near Shoemaker (07220900)	Lat 35°49'32", long 104°53'28", Mora County, Hydrologic Unit 11080004, 0.5 mi upstream from Valmora-Shoemaker road, and 1.8 mi northwest of Shoemaker. Drainage area is 18.4 mi <sup>2</sup> .	1954-95 <sup>g</sup> 1999-	06-14-02	11.07	3,500	07-08-82	14.90	7,180	
Lagartija Creek tributary near Sanchez (07221600)	Lat 35°39'21", long 104°24'57", San Miguel County, Hydrologic Unit 11080003, at bridge on State Highway 419, 0.9 mi northeast of Sanchez. Drainage area is 1.19 mi <sup>2</sup> .	1961-96 <sup>g</sup> 1999-	- -02	<1.75	<100	05-11-94	5.83	1,500	
Trementina Creek at Trementina (07222300)	Lat 35°29'28", long 104°24'59", San Miguel County, Hydrologic Unit 11080005, at bridge on State Highway 419; at Trementina. Drainage area is 63.9 mi <sup>2</sup> .	1959-	07-29-02	1.88	235	09-11-65	12.00	14,100	

Station name and number	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
ARKANSAS RIVER BASIN--Continued								
Garita Creek tributary near Variadero (07222800)	Lat 35°20'10", long 104°21'50", San Miguel County, Hydrologic Unit 11080005, 1.2 mi upstream from mouth, and 6.3 mi southeast of Variadero. Drainage area is 12.0 mi <sup>2</sup> .	1971-96 <sup>g</sup> 1999-	09-09-02	13.90	3,670	08-29-77	17.37	7,020
Pajarito Creek at Newkirk, NM (07225000)	Lat 35°04'20", long 104°14'50", Guadalupe County, downstream side of bridge on U.S. Highway 66, 1 mi east of Newkirk. Drainage area is 55.0 mi <sup>2</sup> .	1954-95 <sup>g</sup> 1999-	09-09-02	3.36	747	07-16-81	8.01	3,500
Bluewater Creek near Tucumcari (07225300)	Lat 35°08'31", long 103°47'32", Quay County, in Tucumcari Metropolitan Park, 1,600 ft north of the park's southern boundary, and 4.8 mi south- west of Tucumcari. Drainage area is 15.2 mi <sup>2</sup> .	1971-96 <sup>g</sup> 1999-	07-04-02	8.26	500	08-11-81	12.71	<sup>c</sup> 2,350
Bueyerros Creek at Bueyerros (07226200)	Lat 35°58'10", long 103°41'05", Harding County, on right up- stream wingwall of culvert on State Road 102 at Bueyerros. Drainage area is <sup>a</sup> 34.0 mi <sup>2</sup> .	1957-96 <sup>g</sup> 1999-	09-09-02	4.61	685	08-11-81	3.65	1,150
Carrizo Creek near Roy (07226300)	Lat 36°02'58", long 103°57'48", Harding County, Hydrologic Unit 11080007, 800 ft down- stream from State Highway 120, and 15 mi northeast of Roy. Drainage area is <sup>a</sup> 68 mi <sup>2</sup> .	1954- 1974-	04-07-02	3.98	328	08-11-81	<sup>n</sup> 7.11	<sup>n</sup> 1,800
Plaza Largo Creek tributary near Ragland (07227050)	Lat 34°48'29", long 103°45'35", Quay County, Hydrologic Unit 11080008, at culvert on State Highway 209, 1.2 mi northwest of Ragland. Drainage area is 0.36 mi <sup>2</sup> .	1952-96 <sup>g</sup> 1999-	09-09-02	2.54	172	07-16-58	12.70	1,170
Tramperos Creek near Stead (07227200)	Lat 36°04'15", long 103°12'10", in NW <sup>1</sup> / <sub>2</sub> NW <sup>1</sup> / <sub>2</sub> sec.10, T.21 N., R.35 E., Union County, Hydrologic Unit 11090102, at bridge on State Highway 402, 2.1 mi south of Stead, and 26 mi south of Clayton. Drainage area is <sup>a</sup> 556 mi <sup>2</sup> .	1966-73* 1974-	09-09-02	9.70	3,640	10-17-65	16.5	12,300
Sand Draw near Clayton (07227300)	Lat 36°20'30", long 103°11'30", Union County, Hydrologic Unit 11090103, on downstream side of bridge on State Highway 402, 7.5 mi south of Clayton. Drainage area is <sup>a</sup> 42.0 mi <sup>2</sup> .	1953-96 <sup>g</sup> 1999-	09-09-02	2.78	442	06--53	8.85	10,300
BRAZOS RIVER BASIN								
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 <sup>2</sup> .	1953-56 1957-64* 1965-	07-05-02	2.24	169	07-24-72	---	8,000

Station name and number	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
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 <sup>2</sup> .	1965-	- -02	<2.38	<180	07-07-98 <sup>d</sup>	11.56	4,620
Arroyo Seco tributary near Pojoaque (08293700)	Lat 35°56'33", long 106°01'12", Santa Fe County, Hydrologic Unit 13020101, upstream from culvert on U.S. Highway 84-285, 3.5 mi north of Pojoaque. Drainage area is 0.72 mi <sup>2</sup> .	1971-96 <sup>g</sup> 1999-	09-11-02	8.41	283	07-28-74	10.62	508
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 17.5 mi <sup>2</sup> .	1963-69 1977-	11-05-01	2.39	18	07-21-78	6.34	<sup>g</sup> 3,030
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 <sup>2</sup> .	1962-	- -02	<1.06	<3	<sup>h</sup> 08- -77	<sup>h</sup> 3.73	<sup>h</sup> 300
Galisteo Creek at Canoncito (08317500)	Lat 35°33'02", long 105°49'20", Santa Fe County, Hydrologic Unit 13020201, upstream from railroad bridge, 0.2 mi upstream from Apache Canyon at Canoncito. Drainage area is 11.3 mi <sup>2</sup> .	1955-56 1959-95 <sup>g</sup> 1999-	07-10-02	3.88	286	08-23-66	5.35	2,000
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 <sup>2</sup> .	1955-	07-21-02	6.89	2,260	08-09-99	17.75	13,200
San Pedro Creek near Golden (08318900)	Lat 35°13'45", long 106°18'00", 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 <sup>2</sup> .	1953-	07-29-02	<.19	87	09-24-55	<sup>h</sup> 12.95	10,800
Juan Toro Canyon near Miera (08330400)	Lat 35°00'57", long 106°20'14", Bernalillo County, Hydrologic Unit 13020203, 150 ft east of State Highway 337, 1 mi south-east of Cedro, and 4.5 mi north-west of Miera. Drainage area is 1.57 mi <sup>2</sup> .	1959-96 <sup>g</sup> 1999-	- -02	<.93	<15	07-20-71	1.33	44

Station name and number	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
RIO GRANDE BASIN--Continued								
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 <sup>2</sup> .	1943-48* 1958-	07-10-02	1.99	280	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 <sup>a</sup> 35 mi <sup>2</sup> .	1961-	08-03-02	2.94	631	<sup>n</sup> 07-31-97	<sup>n</sup> 7.47	<sup>n</sup> 5,600
Rio Puerco at Cuba (08332525)	Lat 36°00'38", 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-	09-10-02	6.94	373	06-06-97	11.04	2,730
Pine Canyon near Thoreau (08341370)	Lat 35°18'34", long 108°10'14", McKinley County, Hydrologic Unit 13020207, about 1 mi southwest of the north end of Bluewater Lake, and about 7 mi southeast of Thoreau. Drainage area is 6.09 mi <sup>2</sup> .	1969-96 <sup>g</sup> 1999-	- -02	---	(k)	08-27-93	3.56	195
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 <sup>2</sup> .	1957- 1961-96 <sup>g</sup> 1999-	08-03-02	<sup>d</sup> 7.59	3,840	07-08-98	11.36	4,950
Chupadera Wash tributary at Bingham (08358600)	Lat 33°51'39", long 106°22'06", Socorro County, Hydrologic Unit 13020210, 75 ft upstream from culvert on U.S. Highway 380, and 0.1 mi west of Bingham. Drainage area is 1.29 mi <sup>2</sup> .	1961-96 <sup>g</sup> 1999-	08-02-02	1.33	115	09-10-80	4.75	620
San Jose Arroyo near Monticello (08359300)	Lat 33°28'05", long 107°14'30", Sierra County, Hydrologic Unit 13020211, at head of box canyon just downstream from major tributary, 800 ft down- stream from culvert on old U.S. Highway 85, and 13 mi northeast of Monticello. Drainage area is 26.9 mi <sup>2</sup> .	1959-96 <sup>g</sup> 1999-	- -02	<1.51	<910	06-10-88	6.09	5,070
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 <sup>2</sup> .	1931-42* 1956-58 1958-71* 1973-95 <sup>g</sup> 1997-	09-11-02	7.36	3,090	08-13-64	14.04	10,800

Station name and number	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
RIO GRANDE BASIN--Continued								
Percha Creek near Hillsboro (08361700)	Lat 32°54'55", long 107°36'05", Sierra County, 150 ft south of State Highway 180, and 2 mi west of Hillsboro. Drainage area is 35.4 mi <sup>2</sup> .	1957-78 <sup>g</sup> 1980-	- - 02	<1.31	<45	08-06-99	<sup>d</sup> 14.0	19,900
Aleman Draw at Aleman (08363200)	Lat 33°00'00", long 107°00'20", Sierra County, Hydrologic Unit 13030103, on Santa Fe Railroad bridge, 140 ft up- stream from dip on Engle- Rincon Road, and 0.26 mi west of Aleman. Drainage area is 25.5 mi <sup>2</sup> .	1959-96 <sup>g</sup> 1999-	07-22-02	4.02	447	08-07-67	19.10	16,400
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 <sup>2</sup> .	1954-	09-29-02	3.09	30	<sup>n</sup> 06-01-37	---	<sup>nc</sup> 20,000
Sandoval Canyon at Gallinas (08380300)	Lat 35°41'19", long 105°21'17", San Miguel County, Hydrologic Unit 13060001, about 500 ft upstream from culvert on State Highway 65, at north edge of Gallinas. Drainage area is 7.60 mi <sup>2</sup> .	1957-96 <sup>g</sup> 1999-	07-29-02	1.79	113	08-01-66	5.26	2,530
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 <sup>2</sup> .	1959-86 <sup>g</sup> 1996-	09-09-02	6.55	347	06-26-96	12.97	5,000
Pecos River tributary near Puerto de Luna (08383370)	Lat 34°52'35", long 104°38'15", Guadalupe County, Hydrologic Unit 13060001, 25 ft upstream from culvert on State Highway 91, and 3.1 mi north of Puerto de Luna. Drainage area is 0.37 mi <sup>2</sup> .	1961-96 <sup>g</sup> 1999-	09-09-02	6.56	74	08-23-87	15.89	2,000
Alamosa Creek tributary near Jordan (08385530)	Lat 34°47'44", long 103°58'07", Quay County, Hydrologic Unit 13060004, 500 ft upstream from dip on State Highway 156, and 6.9 mi west of Jordan. Drainage area is 9.71 mi <sup>2</sup> .	1962-96 <sup>g</sup> 1999-	07-04-02	2.68	68	07-11-72	6.86	2,850
Yeso Creek near Fort Sumner (08385600)	Lat 34°16'32", long 104°17'28", DeBaca 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 <sup>2</sup> .	1937-95 <sup>g</sup> 1997-	06-20-02	5.30	3,290	04-30-99	14.24	22,900
Aragon Creek tributary near Encinosa (08385670)	Lat 33°43'35", long 105°31'43", Lincoln County, Hydrologic Unit 13060005, 0.3 mi upstream from wooden bridge on dirt road, 1.2 mi north of State Highway 246, and 4.3 mi west of Encinosa. Drainage area is 6.07 mi <sup>2</sup> .	1961-96 <sup>g</sup> 1999-	07-22-02	4.77	1,210	09-06-61	5.10	1,610

Station name and number	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis-charge (ft <sup>3</sup> /s)
RIO GRANDE BASIN--Continued								
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 <sup>a</sup> 85 mi <sup>2</sup> .	1955-95 1997-	07-22-02	4.21	403	05-17-79	7.20	4,100
Rio Hondo tributary at Tinnie (08390050)	Lat 33°22'36", long 105°13'01", Lincoln County, Hydrologic Unit 13060008, upstream from culvert on U.S. Highway 70-380, 0.5 mi east of junction of U.S. Highway 70-380 and State Highway 368, and at Tinnie. Drainage area is 0.23 mi <sup>2</sup> .	1971-96 <sup>g</sup> 1999-	07-01-02	7.86	230	09-07-72	10.80	420
Gallo Canyon near Picacho (08390150)	Lat 33°17'23", long 105°10'49", Lincoln County, Hydrologic Unit 13060009, 500 ft east of road, 5 mi south of Picacho. Drainage area is 1.32 mi <sup>2</sup> .	1962-96 <sup>g</sup> 1999-	- -02	---	(k)	09-13-96	10.38	3,600
Pancho Canyon near Arabela (08393700)	Lat 33°30'36", long 105°11'38", Lincoln County, Hydrologic Unit 13060008, 200 ft downstream from dip on State Highway 368, and 5.6 mi south of Arabela. Drainage area is 16.7 mi <sup>2</sup> .	1962-96 <sup>g</sup> 1999-	06-14-02	11.81	3,390	06-14-02	11.81	3,390
Eight Mile Draw near Roswell (08393900)	Lat 33°24'05", long 104°37'54", Chaves County, Hydrologic Unit 13060008, 6.5 mi west of Roswell. Drainage area is 397 mi <sup>2</sup> .	1941 1952-	09-30-02	13.08	593	07-13-91	17.80	10,300
Twin Butte Canyon tributary near Roswell (08394300)	Lat 33°10'34", long 104°51'30", Chaves County, Hydrologic Unit 13060009, about 0.1 mi upstream from mouth, and about 22 mi southwest of Roswell. Drainage area is 5.01 mi <sup>2</sup> .	1968-96 <sup>g</sup> 1999-	07-30-02	7.02	2,690	09-08-95	9.60	5,900
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 <sup>2</sup> .	1959-	08-02-02	8.78	4,260	05-30-65	13.70	16,400
Antelope Draw near Jal (08436000)	Lat 32°09'18", long 103°21'51", Lea County, Hydrologic Unit 13070007, 0.4 mi south of State Highway 128, and 10.7 mi west of Jal. Drainage area is <sup>a</sup> 20 mi <sup>2</sup> .	1963-96 <sup>g</sup> 1999-	- -02	<2.18	<161	07-30-94	4.85	530
MIMBRES BASIN								
Pinos Altos Creek at Silver City (08477590)	Lat 32°46'52", long 108°16'04", Grant County, Hydrologic Unit 13030202, downstream from U.S. Highway 180, in Silver City. Drainage area is 4.63 mi <sup>2</sup> .	1958-96 <sup>g</sup> 1999-	- -02	<1.00	<94	09-13-99	5.55	6,500

Station name and number	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
MIMBRES BASIN--Continued								
Cameron Creek at Central (08478000)	Lat 32°47'38", long 108°08'58", Grant County, 0.5 mi up- stream from culvert on U.S. Highway 260, at north edge of Central. Drainage area is 18.8 mi <sup>2</sup> .	1954-95 <sup>g</sup> 1999-	08-02-02	2.74	500	08-29-59	7.30	2,200
Mimbres River at Deming (08478500)	Lat 32°17'00", long 107°45'35", Luna County, Hydrologic Unit 13030202, at culvert on U.S. Highway 180, at north end of Deming. Drainage area is 1,370 mi <sup>2</sup> .	1954-79 1983-	- -02	---	(k)	<sup>n</sup> 12-19-78	<sup>n</sup> 5.91	<sup>n</sup> 2,350
Seventy-Six Draw tributary near Waterloo (08478800)	Lat 31°56'34", long 107°44'38", Luna County, Hydrologic Unit 13030202, upstream from culvert on State Road 11, 3.9 mi south- east of Waterloo, and 7.9 mi north of Columbus. Drainage area is 0.2 mi <sup>2</sup> .	1967-96 <sup>g</sup> 1999-	- -02	<1.24	<14	06-27-00	8.20	290
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 <sup>2</sup> .	1959- 1961-	- -02	<2.47	<900	07-26-59	14.30	7,690
Nogal Creek tributary near Nogal (08480170)	Lat 33°34'54", long 105°41'10", Lincoln County, Hydrologic Unit 13050003, upstream from culvert on U.S. Highway 380, about 2.0 mi west of Indian Divide, 7 mi northwest of Capitan, and 2 mi north of Nogal. Drainage area is 1.94 mi <sup>2</sup> .	1968-96 <sup>g</sup> 1999-	09-13-02	3.24	0.32	08-10-77	8.45	655
Taylor Canyon tributary near Bingham (08480200)	Lat 33°48'11", long 106°12'00", Socorro County, Hydrologic Unit 13050003, 200 ft north of U.S. Highway 380, and 12 mi southeast of Bingham. Drainage area is 2.66 mi <sup>2</sup> .	1961-96 <sup>g</sup> 1999-	- -02	---	(k)	08-12-61	2.39	551
Indian Creek near Three Rivers (08480700)	Lat 33°22'10", long 105°53'25", Otero County, Hydrologic Unit 13050003, 150 ft up- stream from diversion dam, and 12 mi east of Three Rivers. Drainage area is 6.8 mi <sup>2</sup> .	1956-58* 1959-96 <sup>g</sup> 1999-	09-13-02	5.31	152	07-14-91	12.08	3,000
Three Rivers at Three Rivers (08481000)	Lat 33°18'12", long 106°04'20", Otero County, Hydrologic Unit 13050003, downstream side of bridge on State Highway 54, 1.3 mi south of Three Rivers. Drainage area is 96.0 mi <sup>2</sup> .	1956-77 <sup>g</sup> 2000-	07-01-02	5.27	725	08-15-67	<sup>p</sup> 7.50	15,000

Station name and number	Location and drainage area	Period of record	Water year 2002 maximum		Period of record maximum			
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ESTANCIA BASIN								
Juan Tomas Canyon near Edgewood (08488100)	Lat 35°04'35", long 106°13'46", Santa Fe County, Hydrologic Unit 13050001, 140 ft upstream from culvert on Interstate Highway 40, 2.5 mi northwest of Edgewood. Drainage area is <sup>a</sup> 20 mi <sup>2</sup> .	1962-96 <sup>g</sup> 1999-	07-29-02	2.45	145	08-01-89	2.48	150
Canon de Torreon at Torreon (08488500)	Lat 34°43'20", long 106°17'50", Torrance County, Hydrologic Unit 13050001, at culvert on State Highway 55, in Torreon. Drainage area is 18.2 mi <sup>2</sup> .	1954-96 <sup>g</sup> 1999-	08-02-02	2.19	882	08-09-67	4.23	4,310
Big Draw near Mountainair (08489000)	Lat 34°18'45", long 106°11'35", Torrance County, Hydrologic Unit 13050001, 0.25 mi upstream from culvert on State Highway 55, and 8.4 mi south- east of Mountainair. Drainage area is 3.90 mi <sup>2</sup> .	1953-96 <sup>g</sup> 1999-	09-18-02	4.25	61	09-25-54	8.68	1,710
SALT BASIN								
Fleming Draw near Pinon (08492500)	Lat 32°31'01", long 105°20'42", Otero County, Hydrologic Unit 13050004, 0.2 mi upstream from dip in ranch road, and 7.5 mi south of Pinon. Drainage area is 16.6 mi <sup>2</sup> .	1959-96 <sup>g</sup> 1999-	08-02-02	5.25	1,310	- - -69	8.75	5,800
SAN AGUSTIN PLAINS BASIN								
Swingle Canyon near Datil (08500000)	Lat 34°11'17", long 107°53'55", Catron County, Hydrologic Unit 13020208, 0.3 mi up- stream from U.S. Highway 60, and 4.3 mi northwest of Datil. Drainage area is 6.35 mi <sup>2</sup> .	1970-72 1976-96 <sup>g</sup> 1999-	- -02	<3.66	<1	07-16-66	5.73	900
SAN JUAN RIVER BASIN								
Ruben Canyon near Gobernador (09350700)	Lat 36°44'26", long 107°14'33", Rio Arriba County, Hydrologic Unit 14080101, in Carson National Forest, upstream from culvert on U.S. Highway 64, and 6.5 mi east of Gobernador. Drainage area is 5.06 mi <sup>2</sup> .	1970-96 <sup>g</sup> 1999-	- -02	---	(k)	08-17-88	5.89	380
Vaqueros Canyon near Gobernador (09350800)	Lat 36°43'23", long 107°16'47", Rio Arriba County, Hydrologic Unit 14080101, 100 ft east of U.S. Highway 64, and 4.2 mi east of Gobernador. Drainage area is 60.5 mi <sup>2</sup> .	1956-95 <sup>g</sup> 1999-	- -02	<1.64	<44	08-02-65	10.37	2,520

Station name and number	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
SAN JUAN RIVER BASIN--Continued								
Gobernador Canyon near Gobernador (09355700)	Lat 36°41'05", long 107°25'10", Rio Arriba County, Hydro- logic Unit 14080101, 0.2 mi south of U.S. Highway 64, and 4 mi southwest of Gobernador. Drainage area is 19.8 mi <sup>2</sup> .	1956-96 <sup>g</sup> 1999-	09-18-02	1.49	167	08-06-63	9.30	3,450
Burro Canyon near Lindrith (09356520)	Lat 36°16'21", long 107°14'46", Rio Arriba County, Hydrologic Unit 14080103, upstream from culvert on State Highway 537, 11.5 mi west of Lindrith. Drainage area is 9.11 mi <sup>2</sup> .	1970-96 <sup>g</sup> 1999-	09-10-02	12.77	86	06-29-81	10.87	725
Chaco Wash at Chaco Culture National Monument (09367680)	Lat 36°01'43", long 107°55'04", San Juan County, Hydrologic Unit 14080106, on downstream side of center bridge pier, 800 ft downstream from Fajada Wash, and 0.5 mi southwest of Chaco Culture National Historical Park Visitors Center. Drainage area is 578 mi <sup>2</sup> .	1976-90* 1991-	09-10-02	3.75	453	09-02-88	8.55	1,920
Black Springs Wash near Mexican Springs (09367900)	Lat 35°45'40", long 108°49'00", McKinley County, Hydrologic Unit 14080106, 2.5 mi south of Mexican Springs, and 17 mi north of Gallup. Drainage area is 7.05 mi <sup>2</sup> .	1954-78 1979-82* 1983-96 <sup>g</sup> 1999-	07-26-02	2.92	564	01-21-99	--	2,250
Malpais Arroyo near Shiprock (09368020)	Lat 36°55'33", long 108°43'26", San Juan County, Hydrologic Unit 14080105, upstream from culvert on U.S. Highway 666, 8.3 mi north of Shiprock.	1980-96 <sup>g</sup> 1999-	09-10-02	6.19	1,200	09-13-93	2.44	295
LITTLE COLORADO RIVER BASIN								
Largo Creek near Quemado (09386100)	Lat 34°19'25", long 108°31'40", Catron County, Hydrologic Unit 15020003, on downstream side of bridge on ranch road, 2.5 mi southwest of Quemado. Drainage area is 151 mi <sup>2</sup> .	1954-95 <sup>g</sup> 1999-	09-11-02	1.86	214	08-06-54	4.70	1,320
Galestena Canyon tributary near Black Rock (09387050)	Lat 34°58'45", long 108°40'00", McKinley County, Hydrologic Unit 15020004, 100 ft downstream from bridge on State Highway 36, and 10.5 mi southeast of Black Rock. Drainage area is <sup>a</sup> 19 mi <sup>2</sup> .	1957-95 <sup>g</sup> 1999-	07-26-02	1.77	58	09-05-70	6.40	660
Milk Ranch Canyon near Fort Wingate (09395400)	Lat 35°25'55", long 108°33'30", McKinley County, Hydrologic Unit 15020006, 0.5 mi downstream from culvert on secondary road between Fort Wingate and McGaffey, and 3 mi south of Fort Wingate. Drainage area is 14.0 mi <sup>2</sup> .	1949-95 <sup>g</sup> 1999-	- -02	<0.06	<37	- -49	4.20	1,360

Station name and number	Location and drainage area	Period of record	Water year 2002 maximum			Period of record maximum		
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GILA RIVER BASIN								
Duck Creek at Cliff (09430900)	Lat 32°58'03", long 108°36'36", Grant County, Hydrologic Unit 15040002, at Cliff 100 ft downstream from bridge on State Highway 211, and 0.6 mi upstream from mouth. Drainage area is <sup>a</sup> 228 mi <sup>2</sup> .	1957-	09-11-02	7.74	2,750	01-18-93	11.76	7,400
Mangas Creek near Cliff (09431130)	Lat 32°51'39", long 108°34'01", Grant County, Hydrologic Unit 15040002, on right bank, about 0.5 mi upstream from U.S. Forest Service Road 806, in close proximity to Bill Evans Lake, 7 mi south of Cliff.	1986-	07-10-02	8.41	2,790	09-22-97	9.49	3,720
Animas Creek near Cloverdale (09438200)	Lat 31°34'15", long 108°52'30", Hidalgo County, near head of small box canyon 0.1 mi west of State Highway 338, and 11 mi north of Cloverdale. Drainage area is 157 mi <sup>2</sup> .	1959-	- -02	---	0	10-13-74	7.78	3,400
Mail Hollow near Luna (09442630)	Lat 33°47'38", long 108°56'59", Catron County, Hydrologic Unit 15040004, 1,000 ft upstream from culvert on U.S. Highway 180, 2.3 mi south of Luna. Drainage area is 4.20 mi <sup>2</sup> .	1970-96 <sup>g</sup> 1999-	07-27-02	3.07	68	10-02-83	4.35	264
Trout Creek at Luna (09442660)	Lat 33°50'50", long 108°59'38", Catron County, Hydrologic Unit 15040004, 500 ft downstream from bridge on Luna-Red Hill Road, and 2.6 mi north of Luna. Drainage area is 31.9 mi <sup>2</sup> .	1954-95 <sup>g</sup> 1999-	- -02	<0.88	<21	10-02-83	4.93	2,790
Tularosa River near Reserve (09442740)	Lat 33°44'00", long 108°42'10", Catron County, 150 ft west of Eagle Peak Lookout Road and 3.3 mi northeast of Reserve. Drainage area is 426 mi <sup>2</sup> .	1956-86 <sup>g</sup> 1997-	09-11-02	6.70	1,430	10-02-83	9.80	3,020
Steins Creek at Steins (09455800)	Lat 32°13'47", long 109°00'01", Hidalgo County, Hydrologic Unit 15040006, at culvert on Interstate Highway 10, and 0.9 mi west of Steins. Drainage area is 1.26 mi <sup>2</sup> .	1959-96 <sup>g</sup> 1999-	08-05-02	2.49	118	09-03-65	4.80	317

< 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.

o Record not completed for water year.

p Different gage datum.

q Record affected by fire.

Measurements of streamflow at points other than gaging stations are given in the following table.

Discharge Measurements Made at Miscellaneous Sites during Water Year 2001

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
ARKANSAS BASIN						
Conchas Canal 07223300	Canadian River	Lat 35°22'51", long 104°10'58", in San Miguel County, Hydrologic Unit 11080006, in Pablo Montoya Grant, in Conchas Canal Operations building downstream from Conchas Dam, and 21.5 mi north of NewKirk.	---	1997-	04-30-01	315
					07-17-01	369
					10-02-01	262
RIO GRANDE BASIN						
Lea Lake Drain 08394018	Pecos River	Lat 33°18'56", long 104°19'56", in SW <sup>1</sup> /4SE <sup>1</sup> /4SW <sup>1</sup> /4 sec. 34, T. 11 S., R.26 E, Chaves County, Hydrologic Unit 13060007, on downstream side of road crossing at Bottomless Lakes State Park near Roswell.	---	1976-	10-17-00	7.27
					05-14-01	7.70
					08-13-01	7.06
Castle Springs 08405490	Black River	Lat 32°11'59", long 104°15'13", in SW <sup>1</sup> /4SW <sup>1</sup> /4SW <sup>1</sup> /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-	10-17-00	0.921
					01-26-01	2.01
					04-09-01	1.65
					07-30-01	0.52
GILA RIVER BASIN						
Mangas Creek 09431100	Gila River	Lat 32°50'48", long 108°30'57", in NW <sup>1</sup> /4NE <sup>1</sup> /4 sec. 8, T. 17 S., R. 16 W., Grant County, Hydrologic Unit 15040002, 0.4 mi northwest of Mangas Springs.	177	1970	02-11-02	4.41
					03-03-02	3.80
					04-04-02	4.40

Nemexas Drain Seepage Investigation

REACH.--The Nemexas Drain seepage investigation was conducted along the 18.8-mile reach from the head of the drain near Chamberino, New Mexico, to the junction at Montoya Drain, El Paso, Texas. Drain miles are referenced upstream from the junction of the drain, which is designated as drain mile 0.0.

PREVIOUS INVESTIGATIONS.--None.

DATE.--February 12-13 and August 29-30, 2002.

WEATHER.--Weather was favorable with no precipitation during the seepage investigation on February 12-13, 2002. The mean daily temperature at La Union, New Mexico, was 4 degrees Celsius on February 12 and 6 degrees Celsius on February 13, 2002, with a low of -7 degrees Celsius on February 12 and a high of 16 degrees Celsius on February 12. Weather was favorable with no precipitation during the seepage investigation on August 29-30, 2002. The mean daily temperature at La Union, New Mexico, was 19 degrees Celsius on August 29 and 30, 2002, with a low of 16 degrees Celsius on August 29 and a high of 28 degrees Celsius on August 30.

STREAMFLOW.--The seepage investigation on February 12-13, 2002, was conducted during the non-irrigation season. Discharge measurements indicate a net seepage gain of 9.8 ft<sup>3</sup>/s from drain mile 18.8 to drain mile 0.0, with total side-channel inflow of 10.3 ft<sup>3</sup>/s. The seepage investigation on August 29-30, 2002, was conducted during the irrigation season. Discharge measurements indicate a net seepage gain of 32.9 ft<sup>3</sup>/s from drain mile 18.8 to drain mile 0.0, with total side-channel inflow of 41.2 ft<sup>3</sup>/s. 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. Channel gain or loss includes seepage to or from the unlined channel, evaporation from the water surface, and transpiration by vegetation along the channel banks.

REMARKS.--The seepage investigation conducted on February 12-13, 2002, is rated good based upon steady streamflow conditions. Individual discharge measurements were rated good (within 5 percent) throughout the stream reach except for drain mile 15.9, which was rated fair (within 8 percent) due to low stream velocity.

The seepage investigation conducted on August 29-30, 2002, is rated good from drain mile 18.8 to drain mile 4.1 based upon steady streamflow conditions with reported steady stage at drain mile 10.3 at the EBID Gage. The seepage investigation is rated poor from drain mile 4.1 to drain mile 0.0 based upon unsteady streamflow conditions. Discharge measurements at drain mile 4.1 indicate unsteady streamflow at 23.8 ft<sup>3</sup>/s on August 29 at 1544 hours and 20.5 ft<sup>3</sup>/s on August 30 at 0820 hours. Individual discharge measurements were rated good (within 5 percent) throughout the stream reach except for drain mile 15.9, which was rated fair (within 8 percent) due to low stream velocity. Accuracy of discharge measurements needs to be considered when evaluating indicated gains and losses. Cooperation by the local irrigation districts to limit spillway inflows during the seepage investigation is gratefully acknowledged.

Drain mile	Stream	Location	Date	Time	Water temperature (°C)	Specific conductance (S/cm)	Discharge, in ft <sup>3</sup> /s		
							Main stream	Inflow	Gain or loss
18.8	Nemexas Drain	At head near Chamberino, NM Lat 32°03'29", long 106°40'22"	02-12-02	0900	7.0	1280	1/0	--	--
			08-29-02	0750	20.0	1520	1/0	--	--
15.9	Nemexas Drain	At NM186 near Chamberino, NM Lat 32°01'11", long 106°39'38"	02-12-02	1008	9.5	1350	2.34	--	+2.34
			08-29-02	0900	20.0	1240	6.36	--	+6.36
14.6	Spillway 35A Inlet	At Lower Chamberino Lateral near Chamberino, NM Lat 32°00'06", long 106°39'17"	02-12-02	--	--	--	--	2/0	--
			08-29-02	0950	--	--	--	2/0	--
14.5	Spillway 31A Inlet	At La Union West Lateral near Chamberino, NM Lat 32°00'04", long 106°39'15"	02-12-02	--	--	--	--	2/0	--
			08-29-02	1000	--	--	--	2/0	--
11.7	Guadaramma Spur Drain Inlet	At Nemexas Drain near La Union, NM Lat 31°57'47", long 106°38'18"	02-12-02	0935	--	--	--	2/0	--
			08-29-02	0957	21.0	2640	--	1/0.010	--
10.4	Spillway Inlet	At Talbot Lateral near La Union, NM Lat 31°56'59", long 106°37'59"	02-12-02	--	--	--	--	2/0	--
			08-29-02	1040	25.0	860	--	1/0.208	--
10.3	Nemexas Drain	At EBID Gage near La Union, NM Lat 31°56'58", long 106°37'57"	02-12-02	1126	6.0	1440	2.99	--	+0.65
			08-29-02	1205	24.5	1400	10.3	--	+3.7
9.7	Vinton Drain Inlet	At Nemexas Drain near Vinton, TX Lat 31°56'42", long 106°37'11"	02-12-02	1400	11.0	1550	--	1/0	--
			08-29-02	1345	28.0	2500	--	1/0	--
4.4	Duckett North Spur Drain Inlet	At Nemexas Drain near Canutillo, TX Lat 31°52'10", long 106°36'35"	02-12-02	1430	11.0	1880	--	1/0	--
			08-29-02	1430	28.5	1200	--	1/0	--
4.1	Nemexas Drain	At Gomez Rd. near Canutillo, TX Lat 31°51'52", long 106°36'44"	02-12-02	1541	13.0	1920	5.73	--	+2.74
			02-13-02	1022	--	1920	5.64	--	--
			08-29-02	1544	27.0	1540	23.8	--	+13.5
			08-30-02	0820	26.5	1650	20.5	--	--
2.7	West Drain Inlet	At Nemexas Drain near Santa Teresa, NM Lat 31°50'42", long 106°36'44"	02-13-02	1141	11.0	2400	--	10.3	--
			08-30-02	1013	23.0	1760	--	41.0	--
0.5	Spillway 37 Inlet	At Montoya Lateral B, El Paso, TX Lat 31°49'39", long 106°35'24"	02-13-02	--	--	--	--	2/0	--
			08-30-02	1000	--	--	--	2/0	--
0.0	Nemexas Drain Inlet	At Montoya Drain, El Paso, TX Lat 31°49'39", long 106°34'52"	02-13-02	1409	11.0	2320	20.0	--	+4.1
			08-30-02	1227	24.0	1750	70.8	--	+9.3

1/ No flow; ponded  
2/ Dry  
3/ Parshall Flume

## Salt Creek Seepage Investigation

REACH.--The Salt Creek seepage investigation was conducted along the 24.5-mile reach from the Salt Creek Springs on Salt Creek to the mouth of the Creek at Big Salt Lake, on WSMR, NM (330512106222510). Stream miles are referenced upstream from the mouth of the creek, which is designated as stream mile 0.0.

PREVIOUS INVESTIGATIONS.--None.

DATE.--August 12-13, 2002.

WEATHER.--Weather was favorable with no precipitation during the seepage investigation on August 12-13, 2002. The average daily temperature at 08480595 Salt Creek near Tularosa, New Mexico, was 36 degrees Celsius on August 12 and 35 degrees Celsius on August 13, with a low of 19 degrees Celsius on August 12 (lows were obtained from the WSMR, New Mexico, weather service) and a high of 39 degrees Celsius on August 12.

STREAMFLOW.--The seepage investigation on August 12-13, 2002, was conducted during the late hot and dry summer season. Discharge measurements indicate a net seepage loss of 0.097 ft<sup>3</sup>/s from Salt Creek below Salt Springs at stream mile 24.5 to Salt Creek near Tularosa, New Mexico (08480595) at stream mile 17.6. Ponded, no flow condition at stream mile 14.5 was noted. Dry conditions were observed from stream mile 12.5 to the mouth of Salt Creek at stream mile 0.0. No tributary in flow occurred during seepage run. No outflow (diversions) occurred during the investigation. Channel gain or loss includes seepage to or from the unlined channel, evaporation from the water surface, and transpiration by vegetation along the channel banks.

REMARKS.--The seepage investigation conducted on August 12-13, 2002, is rated fair based upon unsteady streamflow conditions. Individual discharge measurements were rated excellent (within 2 percent) throughout the stream reach. All measurements were made using a 3-inch Parshall flume with excellent measuring conditions.

Stream mile	Stream	Location	Date	Time	Water temperature (°C)	Specific conductance (S/cm)	Discharge, in ft <sup>3</sup> /s		
							Main stream	Inflow	Gain or loss
24.5	Salt Creek	Below Salt Creek Springs on WSMR, NM Lat 33°21'39", long 106°21'02"	08-12-02	1200	29.5	29,900	0.111	--	--
23.5	Salt Creek	At Range Road 7 on WSMR, NM Lat 33°20'57", long 106°21'13"	08-12-02	1310	28.5	30,700	0.100	--	-0.011
21.1	Salt Creek	At stream mile 21.1 on WSMR, NM Lat 33°18'45", long 106°22'02"	08-12-02	1535	27.5	18,300	0.228	--	+0.128
18.1	Salt Creek	At stream mile 18.1 on WSMR, NM Lat 33°17'22", long 106°23'19"	08-13-02	1320	27.0	20,700	0.280	--	+0.052
17.6	Salt Creek	Near Tularosa, NM Lat 33°16'32", long 106°23'50"	08-12-02 08-13-02	1730 1110	28.5 24.5	52,200	0.035 0.210	-- --	-0.245
14.5	Salt Creek	At stream mile 14.5 on WSMR, NM Lat 33°14'54", long 106°25'01"	08-13-02	1215	--	--	0	--	-0.021
12.5	Salt Creek	At stream mile 12.5 on WSMR, NM Lat 33°13'46", long 106°26'14"	08-13-02	1245	--	--	0	--	--
10.0	Salt Creek	Near NM50 on WSMR, NM Lat 33°11'58", long 106°26'57"	08-13-02	1320	--	--	0	--	--
8.4	Salt Creek	At stream mile 8.4 on WSMR, NM Lat 33°10'42", long 106°26'07"	08-13-02	1355	--	--	0	--	--
6.4	Salt Creek	At stream mile 6.4 on WSMR, NM Lat 33°09'44", long 106°25'35"	08-13-02	1430	--	--	0	--	--
5.8	Salt Creek	At stream mile 5.8 on WSMR, NM Lat 33°08'47", long 106°24'38"	08-13-02	1510	--	--	0	--	--
3.2	Salt Creek	At Range Road 6 on WSMR, NM Lat 33°07'16", long 106°23'45"	08-13-02	1540	--	--	0	--	--
1.2	Salt Creek	Abv Big Salt Lake at mile 1.2 on WSMR, NM Lat 33°06'08", long 106°22'3857"	08-13-02	1625	--	--	0	--	--
0.0	Salt Creek	At Big Salt Lake on WSMR, NM Lat 33°05'12", long 106°22'25"	08-13-02	1655	--	--	0	--	--

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.

RIO GRANDE BASIN

08330200 SAN JOSE DRAIN AT WOODWARD RD AT ALBQ, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Ending time	DIS-CHARGE, IN CUBIC FEET PER SECOND (00060)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
SEP 10...	1231	--	--	2.6	7.4	198	22.0	--	--	--	--	--	--
SEP 10-10	1301	1616	20	--	7.4	161	22.0	48	16.5	1.57	4.57	.6	9.03
Date	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDEED (MG/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (70301)	NITRO-GEN, AMMONIA + DIS-SOLVED (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	55	7.80	10.3	116	141	86	.28	2.0	.57	.62	.056	.26	.51
Date	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	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)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	34.3	110	5	.97	2	29	<.06	<2	.07	.3	E.6	3.3	.32
Date	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	CYANIDE TOTAL (MG/L AS CN) (00720)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)
SEP 10...	--	--	<.01	--	--	--	--	--	--	--	--	--	--
SEP 10-10	4.9	20.1	--	.88	32	6.5	.03	31.8	2.18	5.0	E1	<1	E.2
Date	THAL-LIUM, TOTAL (UG/L AS TL) (01059)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, TOTAL GREASE, RECOV. METRIC (MG/L) (00556)	OIL AND GREASE, TOTAL RECOV. (00556)	PHENOLS TOTAL (UG/L AS U) (32730)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)						
SEP 10...	--	--	--	<7	<16	--	--						
SEP 10-10	<10	11	130	--	--	.33	--						

RIO GRANDE BASIN

08330200 SAN JOSE DRAIN AT WOODWARD RD AT ALBQ, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Ending time	1,2,5,6-DIBENZ-ANTHRA-CENE TOTAL (UG/L) (34556)	1,2-DI-PHENYL-HYDRA-ZINE WATER TOT.REC (UG/L) (82626)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L) (34621)	2,4-DI-METHYL-PHENOL TOTAL (UG/L) (34606)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L) (34601)	2,4-DI-NITRO-PHENOL TOTAL (UG/L) (34616)	2,4-DI-NITRO-TOLUENE TOTAL (UG/L) (34611)	2,6-DI-NITRO-TOLUENE TOTAL (UG/L) (34626)	2-CHLORO-NAPH-THALENE TOTAL (UG/L) (34581)	2-CHLORO-PHENOL TOTAL (UG/L) (34586)	2-NITRO-PHENOL TOTAL (UG/L) (34591)
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SEP 10...	1231	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	1301	1616	M	<2	<3	<.7	<3	<3	<3	<2	<2	<2	<1

Date	Time	Ending time	3,3'-DI-CHLORO-BENZIDINE TOTAL (UG/L) (34631)	4,6-DINITRO-CRESOL TOTAL (UG/L) (34657)	4-BROMO-PHENYL-PHENYL TOTAL (UG/L) (34636)	4-CHLORO-PHENYL-PHENYL TOTAL (UG/L) (34641)	4-NITRO-PHENOL TOTAL (UG/L) (34646)	ACE-NAPHTH-ENE TOTAL (UG/L) (34205)	ACE-NAPHTH-YLENE TOTAL (UG/L) (34200)	ANTHRA-CENE TOTAL (UG/L) (34220)	BENZENE-NITRO-WATER UNFLTRD RECOVER TOTAL (UG/L) (34447)	BENZO-A-PYRENE TOTAL (UG/L) (39120)	BENZO-B-FLUOR-AN-THENE TOTAL (UG/L) (34230)	BENZO-K-FLUOR-AN-THENE TOTAL (UG/L) (34242)
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SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	<5	<3	<2	<2	<3	<2	<2	M	<2	<40	M	M	M	

Date	Time	Ending time	BENZO-[A]-ANTHRA-CENE WAT UNF (UG/L) (34526)	BENZO-[GHI]-PERY-LENE TOTAL (UG/L) (34521)	BIS(2-CHLORO-ETHOXY) METHANE TOTAL (UG/L) (34278)	BIS(2-CHLORO-ETHYL) ETHER UNFLTRD RECOVER TOTAL (UG/L) (34273)	BIS(2-CHLORO-ISO-PROPYL) ETHER TOTAL (UG/L) (34283)	BIS(2-ETHYL-HEXYL) PHTHAL-ATE TOTAL (UG/L) (39100)	CHRY-SENE TOTAL (UG/L) (34320)	CYCLOPE-NTADIEN-HEXA-CHLORO-UNFLTRD RECOVER TOTAL (UG/L) (34386)	DIETHYL-PHTHAL-ATE TOTAL (UG/L) (34336)	DI-N-BUTYL-PHTHAL-ATE TOTAL (UG/L) (34341)	DI-N-OCTYL-PHTHAL-ATE TOTAL (UG/L) (39110)	DI-N-ANTHENE TOTAL (UG/L) (34596)	FLUOR-ANTHENE TOTAL (UG/L) (34376)
------	------	-------------	--	--	---	--	---	--	--------------------------------	--	---	--	--	-----------------------------------	------------------------------------

SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10-10	<2	M	<3	<2	<2	E7	M	<4	M	<2	M	E2	M		

Date	Time	Ending time	FLUOR-ENE TOTAL (UG/L) (34381)	HEXA-CHLORO-BENZENE TOTAL (UG/L) (39700)	INDENO(1,2,3-CD)PYRENE TOTAL (UG/L) (34403)	ISO-PHORONE TOTAL (UG/L) (34408)	N-BUTYL-PHTHAL-ATE TOTAL (UG/L) (34292)	N-NITRO-METHYL-AMINE TOTAL (UG/L) (34438)	N-NITRO-PROPYL-AMINE TOTAL (UG/L) (34428)	N-NITRO-SODI-N-PHENYL-AMINE TOTAL (UG/L) (34433)	PARA-CHLORO-META-CRESOL TOTAL (UG/L) (34452)	PENTA-CHLORO-PHENOL TOTAL (UG/L) (39032)	PHENAN-THRENE TOTAL (UG/L) (34461)	PHENOL UNFILT. WATER TOTAL (UG/L) (34694)	PHENOLS TOTAL (UG/L) (32730)
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SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<16
SEP 10-10	<2	<2	M	M	<4	<3	<2	<2	<3	M	M	E.4	--		

Date	Time	Ending time	BENZENE 1,2,4-TRI-CHLORO-PYRENE TOTAL (UG/L) (34469)	BENZENE 1,3-DI-WATER UNFLTRD REC (UG/L) (34551)	BENZENE 1,4-DI-WATER UNFLTRD REC (UG/L) (34566)	BENZENE O-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34571)	ETHANE HEXA-CHLORO-WATER UNFLTRD RECOVER TOTAL (UG/L) (34536)	ETHANE HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L) (34396)	HEXA-CHLORO-NAPHTH-ALENE TOTAL (UG/L) (39702)
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SEP 10...	--	--	--	--	--	--	--	--	--
SEP 10-10	M	<2	<2	M	<2	<2	<1	M	

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value  
 M -- Presence verified, not quantified

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). 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.

314939106345210 NEMEXAS DRAIN INLET AT MONTOYA DRAIN, EL PASO, TX

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARDNESS TOTAL AS CACO3 (MG/L) (00900)	CALCIUM DIS-SOLVED AS CA (MG/L) (00915)
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FEB 13...	1345	20	31	674	8.7	90	8.2	2310	15.0	11.0	63	380	106
AUG 30...	1245	71	72	668	6.0	82	8.1	1750	38.0	24.0	70	350	99.7

Date	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM ADSORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB AS CACO3 (90410)	ALKALINITY WAT TOT IT (MG/L AS MG/L AS) (39086)	BICARBONATE DIS IT (MG/L AS) (00453)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED AS (MG/L AS) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
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FEB 13...	27.2	8.03	8	377	318	318	383	.43	266	.9	36.0	514	1540
AUG 30...	24.0	7.17	6	246	293	283	339	.25	169	.85	29.6	370	1150

Date	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHOPHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	BORON, DIS-SOLVED (UG/L AS B) (01020)
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Remark codes used in this report:  
 < -- Less than

## RIO GRANDE BASIN

315042106364410 WEST DRAIN INLET AT NEMEXAS DRAIN NR SANTA TERESA, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
FEB 13...	1115	10	22	674	9.7	100	8.3	2400	12.0	11.0	89	440	122
AUG 30...	0945	41	62	668	5.8	78	8.1	1760	27.5	23.0	64	350	98.4
Date	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS ST02) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
FEB 13...	33.5	7.41	8	386	363	354	426	3	.49	247	.9	35.9	567
AUG 30...	25.9	8.22	6	249	303	292	351	--	.26	157	.84	27.5	372
Date	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BORON, DIS-SOLVED (UG/L AS B) (01020)		
FEB 13...	1640	1620	.16	1.4	.22	.24	.020	.13	.13	.40	540		
AUG 30...	1160	1110	.08	.88	.40	.41	.012	.07	.07	.23	400		

RIO GRANDE BASIN

315152106364410 NEMEXAS DRAIN AT GOMEZ ROAD NEAR CANUTILLO, TX

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
FEB 12...	1515	5.7	19	669	9.5	104	8.2	1920	15.5	13.0	38	330	97.9
AUG 29...	1530	24	39	663	7.3	106	8.1	1540	33.5	27.0	93	330	96.7

Date	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKALINITY WAT TOT IT (MG/L AS CACO3) (39086)	BICARBONATE WATER DIS IT (MG/L AS HCO3) (00453)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
FEB 12...	21.6	5.51	7	286	308	300	360	.30	191	.9	35.1	427	1280
AUG 29...	21.0	7.92	5	205	255	239	286	.20	136	.79	30.0	331	1020

Date	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	BORON, DIS-SOLVED (UG/L AS B) (01020)
FEB 12...	1240	.07	.43	--	.08	E.006	E.06	.03	.07	420
AUG 29...	972	.05	1.0	.51	.54	.025	E.04	.04	.14	300

Remark codes used in this report:  
 E -- Estimated value

## RIO GRANDE BASIN

315658106375710 NEMEXAS DRAIN AT EBID GAGE NEAR LA UNION, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
FEB 12...	1100	3.0	18	670	10.7	98	8.3	1430	8.0	6.0	120	360	106
AUG 29...	1130	10	29	669	8.2	113	8.1	1400	32.5	24.5	120	360	108
Date	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT (MG/L AS CO3) (00452)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS ST02) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
FEB 12...	22.3	5.75	4	169	248	232	280	1	.23	119	.7	25.0	337
AUG 29...	21.2	5.66	4	165	248	241	288	--	.22	115	.68	30.5	303
Date	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BORON, DIS-SOLVED (UG/L AS B) (01020)		
FEB 12...	960	924	.07	.44	--	.18	E.007	E.04	E.01	E.04	250		
AUG 29...	934	893	.12	.62	.51	.54	.030	<.06	.02	.08	240		

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

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 and are in order by ascending site numbers as shown before the site names. 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.

331722106231910 SALT CREEK AT STREAM MILE 18.1 ON WSMR, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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)	
AUG 13...	1320	.28	658	8.4	132	8.0	20700	37.0	27.0	3100	3200	783	307	
Date	Time	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION SOLVED (MG/L AS NA) (00931)	ALKA-LINITY WAT DIS-TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS-TOT IT FIELD (MG/L AS HCO3) (00453)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	
AUG 13...	99.3	25	3270	123	148	1.29	5910	2.86	22.7	3150	14600	13600	<.05	
Date	Time	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, 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)	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)
AUG 13...	<.008	<.02	<300	4	42.8	<10.0	690	<160	<200	<260	<120	<200	<.60	
Date	Time	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCU-RY 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)			
AUG 13...		686	57.7	E.01	<900	<580	E3	<180	14900	<160	<480			

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

TULAROSA VALLEY BASIN

331845106220210 SALT CREEK AT STREAM MILE 21.1 ON WSMR, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	PH SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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)	
AUG 12...	1535	.23	656	7.3	115	8.0	18300	39.0	27.5	2600	2700	694	242	
Date	Time	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS-TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS-TIT FIELD (MG/L AS HCO3) (00453)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
AUG 12...	74.6	25	3060	105	127	1.07	4990	2.59	22.2	2820	12700	12000	E.04	
Date	Time	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, 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)	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)
AUG 12...	<.008	<.02	<300	4	61.3	<10.0	610	<160	<200	<260	8	<200	<.60	
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)			
AUG 12...		685	64.5	<.01	<900	<580	<4	<180	13700	<160	<480			

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

TULAROSA VALLEY BASIN

332057106211310 SALT CREEK 4 AT RANGE ROAD 7 ON WSMR, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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)	
AUG 12...	1315	.10	657	7.7	129	8.0	30700	37.0	28.5	3200	3400	870	287	
Date	Time	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS-TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
AUG 12...	122	42	5590	141	169	1.96	9600	3.94	19.5	2880	20800	19500	<.05	
Date	Time	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, 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)	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)
AUG 12...	<.080	<.18	<300	<5	74.7	<10.0	630	<160	<200	<260	<10	<200	<1.00	
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)			
AUG 12...	1340	88.4	E.01	<900	<580	<6	<180	17600	<160	<480				

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

## TULAROSA VALLEY BASIN

332139106210210 SALT CREEK BELOW SALT SPRING ON WSMR, NM

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	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)	
AUG 12...	1205	.11	657	12.0	204	8.0	29900	33.0	29.5	3300	3400	878	287	
Date	Time	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS-TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
AUG 12...	118	41	5540	139	168	1.97	9160	4.34	21.7	2820	20300	18900	<.05	
Date	Time	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, 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)	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)
AUG 12...	<.080	<.18	<300	E5	50.8	<10.0	630	<160	<200	<260	21	<200	<.90	
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)			
AUG 12...		985	50.2	E.01	<900	<580	<6	<180	17600	<160	<480			

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

BERNALILLO COUNTY  
Albuquerque Area

350256106390801. Local number, 10N.03E.32.314.

LOCATION.--Lat 35°02'56", long 106°39'09", Hydrologic Unit 13020203.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 16 in., depth 764 ft, perforated 188-764 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 4,941 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.07 ft below land-surface datum, Jan. 5, 1987; lowest measured, 45.47 ft below land-surface datum, July 16, 1994.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.11	37.43	36.83	36.33	36.48	34.21	38.00	38.64	39.43	43.52	41.17	41.75
10	38.41	37.81	37.51	35.11	35.31	36.78	37.02	39.16	39.90	41.16	41.05	41.27
15	37.70	37.11	36.83	35.77	35.10	37.43	37.19	39.23	41.36	40.28	41.17	39.47
20	38.12	36.12	36.18	36.25	34.35	37.21	38.24	38.90	40.28	41.67	42.02	39.01
25	37.49	35.64	35.70	36.35	34.41	36.90	37.91	39.60	42.16	41.19	42.13	38.55
EOM	37.10	35.42	35.25	35.88	34.56	37.38	37.73	39.25	43.38	40.83	42.58	38.50
WTR YEAR 2002			HIGHEST	34.21 MAR 4-5			LOWEST	43.85 JUL 1				

351051106395304. Local number, 11N.03E.18.411D.

LOCATION.--Lat 35°10'51", long 106°39'53", Hydrologic Unit 13020203.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled water-table observation well, casing diameter 6 in., with 2 in., P.V.C. piezometer set at 980 ft, casing is screened from 870 to 1,050 ft.

INSTRUMENTATION.--Monthly steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,995 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2-in. P.V.C., 1.80 ft, above land-surface datum.

PERIOD OF RECORD.--1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.29 ft below land-surface datum, Feb. 22, 1984; lowest measured, 46.89 ft below land-surface datum, Sept. 16, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL								
OCT 15	45.92	DEC 20	45.28	MAR 14	43.96	MAY 22	45.72	SEP 16	46.89		
NOV 14	45.47	FEB 14	44.07	APR 18	44.77	JUN 14	46.31				

CHAVES COUNTY  
Roswell Basin

334138104343801 (formerly 334645104344501). Local number, 07S.23E.23.24431.

LOCATION.--Lat 33°41'38", long 104°34'38", Hydrologic Unit 13060005.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian irrigation well, diameter 14 in., depth 436 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,810 ft above National Geodetic Vertical Datum of 1929. Measuring point: Lower outer edge of mouth of discharge pipe, 3.71 ft above land-surface datum.

PERIOD OF RECORD.--May 1951 to Mar. 1960, Jan. 1962 to Jan. 1966, Jan. 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 239.83 ft below land-surface datum, May 26, 1951; lowest measured, 290.80 ft below land-surface datum, Aug. 21, 1978.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 27	PUMPING	AUG 22	264.22

## GROUND-WATER LEVELS

CHAVES COUNTY--Continued  
Roswell Basin

332615104303601. Local number, 10S.24E.21.212222.

LOCATION.--Lat 33°26'15", long 104°30'36", Hydrologic Unit 13060008.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well completed in San Andres Limestone, diameter 10 in., depth 324 ft.

INSTRUMENTATION.--Monthly steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,580.65 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 3.60 ft above land-surface datum.

REMARKS.--Recorder removed Nov. 26, 1990. Monthly steel-tape measurements.

PERIOD OF RECORD.--June 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.06 ft below land-surface datum, Jan. 19, 1946; lowest measured, 74.40 ft below land-surface datum, July 30, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL										
OCT 05	40.10	DEC 05	35.40	FEB 05	33.15	APR 05	36.90	JUN 05	42.20	AUG 05	45.25
15	39.15	14	35.05	15	33.20	15	37.60	14	42.00	15	45.10
25	38.90	24	34.50	25	33.50	25	39.40	25	42.20	26	44.00
NOV 05	37.80	JAN 04	33.90	MAR 05	33.60	MAY 06	38.50	JUL 05	42.85	SEP 05	45.20
15	36.90	15	33.60	15	35.00	15	39.80	15	42.10	16	42.50
26	36.10	25	33.45	25	35.10	24	41.60	25	42.90	25	42.20

WATER YEAR 2002      HIGHEST    33.15    FEB 05, 2002      LOWEST    45.25    AUG 05, 2002

332255104360401. Local number, 11S.23E.03.342223.

LOCATION.--Lat 33°22'55", long 104°36'04", Hydrologic Unit 13060008.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 15 in., depth 478 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,725 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 0.50 ft above land-surface datum.

PERIOD OF RECORD.--Mar. 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 156.97 ft below land-surface datum, Mar. 11, 1952; lowest measured, 198.96 ft below land-surface datum, Oct. 18, 1985.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	172.67	AUG 22	OBSTRUCTION

331914104253701 (formerly 331930104261001). Local number, 11S.25E.29.34333.

LOCATION.--Lat 33°19'14", long 104°25'37", Hydrologic Unit 13060007.

AQUIFER.--Valley Fill

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 160 ft, cased to 160 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,535 ft above National Geodetic Vertical Datum of 1929. Measuring point: Edge of pump base, southeast corner, at land-surface datum.

PERIOD OF RECORD.--Aug. 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.30 ft below land-surface datum, Aug. 19, 1991; lowest measured, 21.72 ft below land-surface datum, Aug. 26, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	18.42	AUG 22	PUMPING

331705104262801 (formerly 332200104270001). Local number, 12S.25E.09.42230.

LOCATION.--Lat 33°17'05", long 104°26'28", Hydrologic Unit 13060007.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 10 in., reported depth 90 ft, cased to 90 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,564 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 3/4 in. collar, 0.62 ft above land-surface datum.

PERIOD OF RECORD.--May 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.64 ft below land-surface datum, Oct. 16, 1941; lowest measured, 83.06 ft below land-surface datum, Aug. 21, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	68.58	AUG 22	70.84

CHAVES COUNTY--Continued  
Roswell Basin

331525104245201 (formerly 331205104245101). Local number, 12S.25E.23.344412.

LOCATION.--Lat 33°15'25", long 104°24'52", Hydrologic Unit 13060007.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 9 to 7 in., depth 930 ft, 9-in. casing 0-304 ft, 7-in. casing 304-714 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 3,540 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.30 ft above land-surface datum.

REMARKS.--Records fair.

PERIOD OF RECORD.--Jan. 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.39 ft below land-surface datum, Mar. 5, 2002; lowest measured, 199.68 ft below land-surface datum, June 20, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	59.78	41.99	24.93	13.37	13.07	1.39	79.63	93.73	123.68	112.93	145.00	99.10
10	57.70	38.55	22.16	14.68	13.71	11.05	93.38	103.05	129.63	114.47	131.25	94.94
15	47.19	35.87	17.83	13.46	15.72	32.94	86.83	93.63	118.37	122.80	124.67	61.03
20	48.94	28.60	16.80	14.06	24.36	26.60	105.85	113.50	134.58	144.08	128.85	52.82
25	48.42	27.31	15.58	17.58	28.45	48.49	103.94	130.05	136.38	152.48	114.11	57.96
EOM	48.60	26.22	14.74	15.33	26.37	66.08	102.08	135.93	133.12	151.53	110.68	61.01
WTR YEAR 2002			HIGHEST	1.39 MAR 5	LOWEST			156.10 JUL 25				

331524104245101. Local number, 12S.25E.23.344234A.

LOCATION.--Lat 33°15'24", long 104°24'51", Hydrologic Unit 13060007.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 7 in., total depth 231 ft, cased to total depth, perforated 105-231 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 3,540 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.40 ft above land-surface datum.

REMARKS.--Records good; several days missing due to recorder malfunction.

PERIOD OF RECORD.--1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 99.32 ft below land-surface datum, Apr. 14, 2000; lowest measured, 110.98 ft below land-surface datum, Oct. 1, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	100.77	100.89	100.90	100.80	100.54	100.35	100.34	100.64	100.84	101.11	101.43	101.83
10	100.71	100.87	100.79	100.72	100.44	100.26	100.34	100.57	100.82	101.16	101.49	101.93
15	100.81	100.94	100.90	100.66	100.45	100.32	100.40	100.58	100.81	---	101.53	102.00
20	100.82	100.72	100.70	100.62	100.50	100.36	100.51	100.71	101.00	---	101.60	102.01
25	100.95	100.88	100.79	100.58	100.66	100.33	100.66	100.73	101.04	101.29	101.70	102.03
EOM	100.84	100.98	100.83	100.63	100.25	100.32	100.58	100.76	101.08	101.37	101.82	102.09
WTR YEAR 2002			HIGHEST	100.12 MAR 23	LOWEST			102.30 SEP 22				

331213104241601 (formerly 331216104241701). Local number, 13S.25E.12.311134.

LOCATION.--Lat 33°12'13", long 104°24'16", Hydrologic Unit 13060007.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 13 in., depth 190 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,506 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.80 ft above land-surface datum.

REMARKS.--"S" indicates nearby well pumping.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.23 ft below land-surface datum, Feb. 3, 1942; lowest measured, 99.21S ft below land-surface datum, Aug. 26, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	85.93	AUG 26	99.21S

## GROUND-WATER LEVELS

CHAVES COUNTY--Continued  
Roswell Basin

331002104254701 (formerly 331002104272001). Local number, 13S.25E.27.211144.

LOCATION.--Lat 33°10'02", long 104°25'47", Hydrologic Unit 13060007.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well completed in San Andres Limestone, diameter 10 in., depth 880 ft.

INSTRUMENTATION.--Monthly steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,523.76 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf 3.59 ft above land-surface datum.

REMARKS.--Recorder removed Nov. 25, 1990. Monthly steel-tape measurements.

PERIOD OF RECORD.--1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, -3.49 ft above land-surface datum, Feb. 5, 1999; lowest measured, 198.30 ft below land-surface datum, July 18, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL										
OCT 05	67.33	DEC 05	19.42	FEB 05	3.31	APR 05	101.41	JUN 05	161.41	AUG 15	150.06
15	48.66	14	12.98	15	10.19	15	106.81	25	162.21	26	141.56
25	46.79	24	9.91	25	24.56	25	131.41	JUL 05	146.50	SEP 05	132.51
NOV 05	41.92	JAN 04	4.35	MAR 05	27.39	MAY 06	125.10	15	148.49	16	70.91
15	40.51	15	5.88	15	69.87	15	114.38	25	178.41		
26	23.81	25	7.53	25	73.41	24	157.18	AUG 05	178.22		

WATER YEAR 2002      HIGHEST      3.31      FEB 05, 2002      LOWEST      178.41      JUL 25, 2002

330702104402401 (formerly 330700104402501). Local number, 14S.23E.08.144344.

LOCATION.--Lat 33°07'02", long 104°40'24", Hydrologic Unit 13060009.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian stock well, diameter 8 in., depth 460 ft, casing information not available.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,844 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 1.00 ft above land-surface datum.

PERIOD OF RECORD.--Apr. 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 257.55 ft below land-surface datum, Feb. 9, 1943; lowest measured, 327.34 ft below land-surface datum, Aug. 27, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 26	298.05	AUG 24	292.35

330646104173301 (formerly 330640104174501). Local number, 14S.26E.12.431331.

LOCATION.--Lat 33°06'46", long 104°17'33", Hydrologic Unit 13060007.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 13 in., depth 125 ft, cased 0-125 ft, perforated 50-115 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,396.4 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--Jan. 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.50 ft below land-surface datum, Jan. 22, 1942; lowest measured, 23.77 ft below land-surface datum, Aug. 25, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	20.33	AUG 26	21.19

330404104221201. Local number, 14S.26E.30.44444.

LOCATION.--Lat 33°04'04", long 104°22'12", Hydrologic Unit 13060007.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 5/8 in., depth 1,150 ft, cased to 740 ft, open hole 740-1,150 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,484 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 58.10 ft below land-surface datum, Feb. 11, 1993; lowest measured, 292.45 ft below land-surface datum, Aug. 5, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	78.54	AUG 26	278.89

CHAVES COUNTY--Continued  
Penasco Valley

325654105180101. Local number, 16S.16E.03.312132.

LOCATION.--Lat 32°56'54", long 105°18'01", Hydrologic Unit 13060010.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, depth 163 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,743.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: End of discharge pipe, 4.53 ft above land surface.

PERIOD OF RECORD.--Aug. 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.19 ft below land-surface datum, Aug. 13, 1987; lowest measured, 38.37 ft below land-surface datum, Jan. 21, 1967.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 25	27.52	AUG 29	OBSTRUCTION

CIBOLA COUNTY  
Grants-Bluewater Area

350346107521201 (formerly 350400107510501). Local number, 10N.10W.26.331.

LOCATION.--Lat 35°03'46", long 107°52'12", Hydrologic Unit 13020207.

AQUIFER.--Glorieta Sandstone of Permian age.

WELL CHARACTERISTICS.--Drilled artesian irrigation well, diameter 16 in., depth 216 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,455 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1/2-in. hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--Feb. 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.18 ft below land-surface datum, Feb. 21, 1952; lowest measured, 34.69 ft below land-surface datum, Jan. 17, 1977.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	31.51	SEP 04	31.17

350923107522701 (formerly 350925107523001). Local number, 11N.10W.27.241.

LOCATION.--Lat 35°09'23", long 107°52'27", Hydrologic Unit 13020207.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 16 to 12 in., depth 158 ft, perforated 50 to 150 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,480 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--Feb. 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.23 ft below land-surface datum, Sept. 29, 1988; lowest measured, 39.52 ft below land-surface datum, Sept. 4, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	33.61	SEP 04	39.52

351304107543701 (formerly 351400107524201). Local number, 12N.10W.29.434.

LOCATION.--Lat 35°13'04", long 107°54'37", Hydrologic Unit 13020207.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian unused well, diameter 18 in., reported depth 205 ft, cased 0-150 ft, perforated 93-130 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,552 ft above National Geodetic Vertical Datum of 1929. Measuring point: Lower edge of hole in north side of casing, 2.20 ft above land-surface datum.

PERIOD OF RECORD.--Oct. 1944, Feb. 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 65.46 ft below land-surface datum, Oct. 14, 1944; lowest measured, 107.61 ft below land-surface datum, Aug. 6, 1975.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	85.82	SEP 04	85.30

## GROUND-WATER LEVELS

CIBOLA COUNTY--Continued  
Grants-Bluewater Area

351651107594501 (formerly 351650107535001). Local number, 12N.11W.09.424.  
 LOCATION.--Lat 35°16'51", long 107°59'45", Hydrologic Unit 13020207.  
 AQUIFER.--San Andres Limestone and Yeso Formation of Permian Age.  
 WELL CHARACTERISTICS.--Drilled artesian unused well, diameter 16 in., reported depth 505 ft, 16-in. casing to 175 ft, 12-in. casing to 325 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 6,642 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 3.05 ft above land-surface datum.  
 PERIOD OF RECORD.--May 1946 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 86.69 ft below land-surface datum, Sept. 29, 1988; lowest measured, 274.81 ft below land-surface datum, Jan. 23, 1984.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	117.68	SEP 04	124.97

351630107572801 (formerly 351637107584501). Local number, 12N.11W.14.213.  
 LOCATION.--Lat 35°16'30", long 107°57'28", Hydrologic Unit 13020207.  
 AQUIFER.--San Andres Limestone and Yeso Formation of Permian Age.  
 WELL CHARACTERISTICS.--Drilled test well, diameter 4 in., depth 130.4 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 6,605 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.70 ft above land-surface datum.  
 PERIOD OF RECORD.--June 1949 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 81.74 ft below land-surface datum, Sept. 25, 1986; lowest measured, 101.39 ft below land-surface datum, June 10, 1954.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	87.95	SEP 04	88.34

COLFAX COUNTY  
Capulin Basin

364522104034501 (formerly 364500104031501). Local number, 29N.27E.16.222.  
 LOCATION.--Lat 36°45'22", long 104°03'45", Hydrologic Unit 11040001.  
 AQUIFER.--Alluvium.  
 WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 8 in., depth 120 ft, cased to 20 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 6,821.5 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.50 ft above land-surface datum.  
 PERIOD OF RECORD.--Feb. 1957 to Feb. 1969, Feb. 1971 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.65 ft below land-surface datum, Feb. 3, 1960; lowest measured, 10.40 ft below land-surface datum, Sept. 11, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 22	8.65	SEP 11	10.40

COSTILLA COUNTY (in Colorado)  
Sunshine Valley

370004105402201 (formerly 370009105410001). Local number, 01N.74W.33.322.  
 LOCATION.--Lat 37°00'04", long 105°40'22", Hydrologic Unit 13020101.  
 AQUIFER.--Santa Fe Group.  
 WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 15 in., depth 232 ft, casing information not available.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 7,495 ft above National Geodetic Vertical Datum of 1929. Measuring point: Edge of hole inside pump base, 2.00 ft above land surface-datum (since 1971).  
 PERIOD OF RECORD.--Feb. 1966 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 101.82 ft below land-surface datum, Aug. 26, 1968; lowest measured, 139.24 ft below land-surface datum, Sept. 2, 1982.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 26	123.57	AUG 22	124.40

## GROUND-WATER LEVELS

363

CURRY COUNTY  
Clovis Area

341836103052001. Local number, 01N.37E.17.113133.

LOCATION.--Lat 34°18'53", long 103°05'26", Hydrologic Unit 12050002.

AQUIFER.--Ogallala.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 16 in., depth 373 ft, screened 293-373 ft.

INSTRUMENTATION.--Digital recorder, 1-hour punch.

DATUM.--Elevation of land-surface datum is 4,113 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelter apron, 3.93 ft above land-surface datum.

REMARKS.--Records fair.

PERIOD OF RECORD.--January 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 158.17 ft below land-surface datum, Jan. 28, 1972; lowest measured, 298.93 ft below land-surface datum, Aug. 29, 2002.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	288.64	290.09	289.54	288.70	288.27	287.78	289.35	291.60	293.63	295.56	298.09	298.33
10	288.97	290.28	289.13	288.44	288.46	288.28	289.59	291.87	293.61	296.02	298.24	298.25
15	289.09	290.69	289.36	288.56	287.94	288.63	289.73	292.07	293.85	296.49	298.40	298.18
20	289.55	290.21	289.27	288.42	287.89	289.08	290.34	292.50	294.44	296.98	298.65	297.82
25	289.42	290.05	289.06	288.69	287.92	288.99	290.96	292.92	294.65	297.14	298.77	297.56
EOM	290.07	289.68	288.88	288.55	287.67	288.25	291.14	293.22	295.08	297.84	298.71	297.83
WTR YEAR 2002			HIGHEST	287.59 FEB 23, 24			LOWEST	298.93 AUG 29				

342358103093601. Local number, 02N.36E.15.11111.

LOCATION.--Lat 34°23'58", long 103°09'36", Hydrologic Unit 12050002.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table irrigation well; diameter, depth, and casing information not available.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,227 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of concrete base 1.20 ft above land-surface datum.

REMARKS.--"R" indicates well recently pumped.

PERIOD OF RECORD.--Jan. 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 266.89 ft below land-surface datum, Jan. 4, 1974; lowest measured, 304.47 ft below land-surface datum, July 31, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL
AUG 13	312.39R

342736103203701 (formerly 342815103270001). Local number, 03N.34E.23.433133.

LOCATION.--Lat 34°27'36", long 103°20'37", Hydrologic Unit 12050001.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 16 in., depth 418 ft, cased to 418 ft, perforated 365-418 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,432 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.40 ft above land-surface datum.

PERIOD OF RECORD.--Apr. 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 340.62 ft below land-surface datum, Mar. 16, 1957; lowest measured, 362.32 ft below land-surface datum, Aug. 14, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 13	360.36	AUG 14	362.32

343347103345001. Local number, 04N.32E.22.111114.

LOCATION.--Lat 34°33'47", long 103°34'50", Hydrologic Unit 12050001.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 16 in., depth 401 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,587 ft above National Geodetic Vertical Datum of 1929. Measuring point: Edge of recorder shelter, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 295.61 ft above land-surface datum, Sept. 7, 2001; lowest measured, 309.92 ft below land-surface datum, Jan. 9, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	295.55	NOV 19	296.01	AUG 14	295.62

## GROUND-WATER LEVELS

CURRY COUNTY--Continued  
Clovis Area

343615103123801. Local number, 05N.35E.35.31324.  
 LOCATION.--Lat 34°36'15", long 103°12'38", Hydrologic Unit 12050005.  
 AQUIFER.--Ogallala Formation.  
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 527 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 4,504 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.50 ft above land-surface datum.  
 PERIOD OF RECORD.--Jan. 1954 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 376.40 ft below land-surface datum, Mar. 26, 1954; lowest measured, 457.79 ft below land-surface datum, Aug. 14, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 01	456.89	AUG 14	457.79

DONA ANA COUNTY  
Rincon and Mesilla Valleys

322203106484101 (formerly 322210106483001). Local number, 22S.01E.26.411.  
 LOCATION.--Lat 32°22'03", long 106°48'41", Hydrologic Unit 13030102.  
 AQUIFER.--Valley fill.  
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 18 in., depth 107 ft, cased to 107 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 3,920 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of east side of casing, 1.50 ft above land-surface datum.  
 PERIOD OF RECORD.--Apr. 1957 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.56 ft below land-surface datum, July 24, 2001; lowest measured, 25.57 ft below land-surface datum, Apr. 25, 1957.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 06	12.25	JUL 24	OBSTRUCTION	JUL 25	OBSTRUCTION

## Tularosa Basin

322323106314701. Local number, 22S.04E.15.331.  
 LOCATION.--Lat 32°23'23", long 106°31'47".  
 AQUIFER.--Bolson fill.  
 WELL CHARACTERISTICS.--4-in.-diameter PVC casing, depth 295 ft, screen interval 125-285 ft.  
 INSTRUMENTATION.--Pressure transducer, 1-hour measurement.  
 DATUM.--Elevation of land-surface datum is 4,622 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 8-in. steel surface casing on north side at 1.65 ft above land-surface datum.  
 REMARKS.--Records good.  
 PERIOD OF RECORD.--December 1998 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 66.40 ft below land-surface datum, Apr. 21, 1999; lowest measured, 69.40 ft below land-surface datum, Sept. 22-24, 2002.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	68.51	68.64	68.66	68.56	68.43	68.40	68.31	68.36	68.73	68.97	69.08	69.25
10	68.51	68.66	68.58	68.52	68.53	68.38	68.29	68.37	68.74	69.04	69.10	69.29
15	68.53	68.59	68.55	68.48	68.45	68.25	68.22	68.46	68.85	69.04	69.08	69.32
20	68.53	68.68	68.65	68.46	68.42	68.32	68.25	68.50	68.87	68.97	69.14	69.29
25	68.57	68.56	68.62	68.53	68.38	68.26	68.31	68.58	68.92	69.06	69.23	69.34
EOM	68.57	68.62	68.54	68.39	68.30	68.28	68.29	68.67	68.96	69.07	69.26	69.35
WTR YEAR 2002		HIGHEST	68.22	APR 15		LOWEST	69.40	SEP 22-24				

## Rincon and Mesilla Valleys

321606106462901 (formerly 321620106461501). Local number, 23S.02E.31.213.  
 LOCATION.--Lat 32°16'06", long 106°46'29", Hydrologic Unit 13030102.  
 AQUIFER.--Valley fill.  
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 14 in., reported depth 70 ft, cased to 70 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 3,880 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 5/8-in. hole in pump base, 1.08 ft above land-surface datum.  
 PERIOD OF RECORD.--Feb. 1948, Apr. 1957 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.13 ft below land-surface datum, Feb. 10, 1948; lowest measured, 29.12 ft below land-surface datum, Jan. 7, 1958.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 06	21.64	JUL 24	21.28

## GROUND-WATER LEVELS

365

EDDY COUNTY  
Roswell Basin

325702104352801 (formerly 325735104360701). Local number, 16S.24E.04.411341.

LOCATION.--Lat 32°57'02", long 104°35'28", Hydrologic Unit 13060007.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian irrigation well, diameter not available, depth 610 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,624 ft above National Geodetic Vertical Datum of 1929. Measuring point: Southwest side of pump, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.48 ft below land-surface datum, Jan. 29, 1996; lowest measured, 100.54 ft below land-surface datum, Aug. 27, 1974.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 25	62.73	AUG 26	PUMPING

325638104274801. Local number, 16S.25E.11.111131A.

LOCATION.--Lat 32°56'38", long 104°27'48", Hydrologic Unit 13060007.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 7 in., depth 171 ft, casing 0-171 ft, perforated 94-170 ft.

INSTRUMENTATION.--Recorder removed Nov. 27, 1990. Monthly steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,450 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.90 ft below land-surface datum, Feb. 18, 1966; lowest measured, 69.73 ft below land-surface datum, June 24, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL										
OCT 01	67.77	DEC 07	67.18	FEB 25	66.90	APR 25	68.48	JUN 24	69.73	AUG 26	69.45
NOV 21	67.50	JAN 23	66.58	MAR 20	67.40	MAY 28	69.17	JUL 22	69.62	SEP 23	69.03

325450104251101 (formerly 325445104253501). Local number, 16S.26E.19.21113.

LOCATION.--Lat 32°54'50", long 104°25'11", Hydrologic Unit 13060007.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 160 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,399 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/2-in. by 3-in. vertical slot under pump base, at land-surface datum.

PERIOD OF RECORD.--Jan. 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.60 ft below land-surface datum, Jan. 16, 1969; lowest measured, 140.89 ft below land-surface datum, Aug. 6, 1992.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 25	107.15	AUG 26	PUMPING

324838104435301 (formerly 324831104435701). Local number, 17S.23E.30.12344.

LOCATION.--Lat 32°48'38", long 104°43'53", Hydrologic Unit 13060007.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian public-supply well, diameter 16 in., depth 600 ft, cased to 558 ft, perforated 498-558 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,085 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2-in. pipe on north side of concrete base, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--Dec. 1968, Jan. 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 508.63 ft below land-surface datum, Jan. 27, 1988; lowest measured, 553.18 ft below land-surface datum, Aug. 11, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 25	514.60	AUG 29	518.32

## GROUND-WATER LEVELS

EDDY COUNTY--Continued  
Roswell Basin

324620104255001 (formerly 324624104244501). Local number, 18S.26E.06.442221A.

LOCATION.--Lat 32°46'20", long 104°25'50", Hydrologic Unit 13060007.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 9 in., depth 1,008 ft, cased to 726 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 3,402.1 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.40 ft above land-surface datum.

REMARKS.--Records good.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.57 ft below land-surface datum, Feb. 20, 1989; lowest measured, 209.15 ft below land-surface datum, July 31-Aug. 2, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	131.85	109.13	97.07	90.76	84.68	88.65	122.68	129.55	153.71	156.78	173.68	167.44
10	129.74	107.48	96.03	89.79	84.23	94.04	127.96	135.51	150.27	152.58	170.51	167.43
15	123.31	104.62	95.67	88.66	85.49	100.24	134.89	140.45	152.82	153.99	166.02	157.77
20	119.23	102.81	94.27	87.87	87.46	104.42	139.68	146.08	157.55	159.44	167.61	149.22
25	115.66	100.77	92.90	87.14	89.89	111.53	143.37	149.99	160.71	162.55	173.89	144.43
EOM	111.65	99.01	92.24	86.29	89.33	114.33	136.69	152.11	159.83	170.80	172.98	142.60
WTR YEAR 2002			HIGHEST 83.43 FEB 12				LOWEST 176.51 AUG 6, 7					

324620104255101. Local number, 18S.26E.06.442212B.

LOCATION.--Lat 32°46'20", long 104°25'51", Hydrologic Unit 13060007.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 7 in., depth 246 ft, casing 0-246 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 3,402 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.70 ft above land-surface datum.

REMARKS.--Records fair.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 106.83 ft below land-surface datum, Jan. 7, 1974; lowest measured, 144.51 ft below land-surface datum, Aug. 29, 2002.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	142.54	138.09	133.63	129.85	126.68	125.08	127.87	133.77	138.02	140.85	142.79	143.97
10	141.95	137.25	132.62	129.21	126.61	124.91	128.96	134.04	138.47	141.20	143.21	143.98
15	141.46	136.51	132.15	128.58	126.01	124.84	129.95	134.57	139.07	141.38	143.53	144.10
20	140.58	135.59	131.66	128.07	125.76	125.42	131.26	135.45	139.56	141.66	143.83	143.66
25	140.12	134.86	131.06	127.77	125.63	125.52	132.50	136.23	139.86	141.85	144.16	143.70
EOM	138.70	134.25	130.39	127.23	125.16	126.98	133.18	137.19	140.35	142.35	144.24	143.40
WTR YEAR 2002			HIGHEST 124.62 MAR 13				LOWEST 144.51 AUG 29					

324325104233001. Local number, 18S.26E.28.122111.

LOCATION.--Lat 32°43'25", long 104°23'30", Hydrologic Unit 13060011.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 8 in., depth 250 ft, cased to 182 ft, casing slotted 92-182 ft.

INSTRUMENTATION.--Monthly steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,403 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.06 ft above land-surface datum.

REMARKS.--Recorder removed Nov. 27, 1990.

PERIOD OF RECORD.--Aug. 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 59.79 ft below land-surface datum, Feb. 5, 1952; lowest measured, 127.10 ft below land-surface datum, Sept. 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL										
OCT 01	126.66	DEC 07	126.64	FEB 25	126.55	APR 25	126.80	JUN 24	126.83	AUG 26	126.68
NOV 21	126.66	JAN 25	126.82	MAR 20	126.82	MAY 28	126.78	JUL 22	126.90	SEP 24	127.10

EDDY COUNTY--Continued  
Roswell Basin

323705104225501. Local number, 19S.26E.33.41224.

LOCATION.--Lat 32°37'05", long 104°22'55", Hydrologic Unit 13060011.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table unused irrigation well, diameter 14 in., depth 225 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,282 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1-in. hole, in north side of pump base, 0.95 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.96 ft below land-surface datum, Feb. 26, 2001; lowest measured, 124.00 ft below land-surface datum, Jan. 9, 1984.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	47.15	AUG 21	48.89

323542104242701 (formerly 323540104232001). Local number, 20S.26E.08.121111.

LOCATION.--Lat 32°35'42", long 104°24'27", Hydrologic Unit 13060011.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 13 in., depth 346 ft, casing information not available.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,286 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of basal flange of pump head, 0.20 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.47 ft below land-surface datum, May 26, 1992; lowest measured, 90.25 ft below land-surface datum, Aug. 8, 1977.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	44.86	AUG 21	39.97

## Carlsbad Area

322637104142301 (formerly 322652104141901). Local number, 21S.26E.36.22110.

LOCATION.--Lat 32°26'37", long 104°14'23", Hydrologic Unit 13060011.

AQUIFER.--Capitan Limestone.

WELL CHARACTERISTICS.--Drilled water-table municipal well, diameter 20 in., depth 327 ft, casing 0-290 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 3,122.10 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 4.26 ft above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--April 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.98 ft below land-surface datum, June 14, 1987; lowest measured, 26.07 ft below land-surface datum, Aug. 2, 1974.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.91	23.55	22.97	22.78	22.75	22.62	22.81	23.28	23.91	23.72	23.48	24.10
10	23.74	23.44	22.83	22.76	22.94	22.68	22.85	23.27	23.85	23.47	23.60	23.99
15	23.64	23.27	22.89	22.77	22.71	22.61	22.75	23.46	23.87	23.40	23.68	23.82
20	23.60	22.99	22.93	22.74	22.69	22.76	23.14	23.58	23.91	23.37	23.56	23.56
25	23.73	22.80	22.80	22.90	22.67	22.59	23.38	23.71	23.91	23.28	23.70	23.59
EOM	23.48	22.92	22.74	22.87	22.55	22.61	23.17	23.76	24.00	23.62	24.08	23.66

WTR YEAR 2002      HIGHEST 22.49 MAR 1      LOWEST 24.26 JUN 14 AND JUL 3

322712104074501 (formerly 322710104073901). Local number, 21S.28E.30.14123.

LOCATION.--Lat 32°27'12", long 104°07'45", Hydrologic Unit 13060011.

AQUIFER.--Capitan Limestone.

WELL CHARACTERISTICS.--Drilled exploration well, diameter 8 5/8 in.-5 1/2 in., reported depth 1,060 ft, plugged back, total depth 906 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 3,181.71 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.27 ft above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.13 ft below land-surface datum, June 29, 1987; lowest measured, 98.68 ft below land-surface datum, Aug. 3, 1974.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	94.46	94.06	93.43	93.21	93.33	93.26	93.21	93.75	94.28	94.50	93.98	94.51
10	94.35	94.02	93.42	93.23	93.30	93.26	93.31	93.82	94.35	94.16	94.03	94.50
15	94.21	93.86	93.38	93.26	93.31	93.16	93.32	93.88	94.54	93.97	94.12	94.40
20	94.18	93.73	93.47	93.25	93.22	93.16	93.43	94.06	94.40	93.96	94.17	94.11
25	94.15	93.40	93.35	93.30	93.24	93.16	93.75	94.13	94.44	93.90	94.16	94.06
EOM	94.10	93.41	93.22	93.30	93.26	93.16	93.71	94.20	94.46	93.88	94.43	94.00

WTR YEAR 2002      HIGHEST 93.12 APR 2      LOWEST 94.55 JUL 4

## GROUND-WATER LEVELS

EDDY COUNTY--Continued  
Carlsbad Area322120104151501. Local number, 22S.26E.25.333333 (formerly 22S.26E.36.111A).  
LOCATION.--Lat 32°21'20", long 104°15'15", Hydrologic Unit 13060011.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 12 in., depth 260 ft, cased to 260 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 3,228.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.40 ft above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--July 1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 131.50 ft below land-surface datum, Oct. 14, 1942; lowest measured, 214.82 ft below land-surface datum, Sept. 15, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	165.78	161.16	157.26	154.56	153.19	152.57	154.21	161.62	166.88	172.51	174.20	172.60
10	164.99	160.67	156.54	154.19	153.34	152.52	154.80	162.93	166.94	171.94	173.78	172.96
15	164.47	159.86	156.02	153.90	152.97	152.59	155.70	163.26	167.95	171.88	173.33	173.14
20	163.51	159.13	155.75	153.58	152.79	153.32	157.25	163.99	169.20	172.27	172.78	171.38
25	162.77	158.29	155.36	153.57	152.73	153.51	158.80	164.63	170.57	173.10	172.88	170.60
EOM	161.79	157.77	154.91	153.29	152.54	153.73	160.25	166.19	171.62	173.44	173.11	170.67
WTR YEAR 2002			HIGHEST	152.35	MAR 8	LOWEST			174.27	AUG 5		

322238104101801 (formerly 322231104131001). Local number, 22S.27E.22.421333.  
LOCATION.--Lat 32°22'38", long 104°10'18", Hydrologic Unit 13060011.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., reported depth 150 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,100 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.20 ft above land-surface datum.

PERIOD OF RECORD.--Sept. 1947 to Aug. 1968, Jan. 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.43 ft below land-surface datum, Sept. 15, 1950; lowest measured, 81.10 ft below land-surface datum, Aug. 8, 1977.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	41.30	AUG 21	49.55

321939104113301 (formerly 321930104113301). Local number, 23S.27E.09.211124.  
LOCATION.--Lat 32°19'39", long 104°11'33", Hydrologic Unit 13060011.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 200 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,143 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, under pump base, 1.25 ft above land-surface datum.

PERIOD OF RECORD.--July 1949 to Nov. 1955, Jan. 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.70 ft below land-surface datum, Sept. 15, 1950; lowest measured, 64.90 ft below land-surface datum, Feb. 22, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	66.35	AUG 21	54.28

320604104284101 (formerly 320602104285201). Local number, 25S.24E.27.421121.  
LOCATION.--Lat 32°06'04", long 104°28'41", Hydrologic Unit 13060011.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 101 ft, uncased.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,701 ft above National Geodetic Vertical Datum of 1929. Measuring point: Northwest corner of pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--Apr. 1952 to Aug. 1967, Jan. 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.12 ft below land-surface datum, Aug. 22, 1988; lowest measured, 85.10 ft below land-surface datum, Aug. 25, 1967.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	61.77	AUG 27	66.85

EDDY COUNTY--Continued  
Carlsbad Area

320316104294301 (formerly 320257104295201). Local number, 26S.24E.09.443111.  
LOCATION.--Lat 32°03'16", long 104°29'43", Hydrologic Unit 13060011.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 12 in., depth 100 ft, cased to 85 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,749.4 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of air-line flange support, 1.40 ft above land-surface datum.

PERIOD OF RECORD.--Apr. 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.31 ft below land-surface datum, Aug. 22, 1988; lowest measured, 54.98 ft below land-surface datum, Sept. 8, 1965.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	OBSTRUCTION	AUG 27	OBSTRUCTION

GRANT COUNTY  
Mimbres Basin

324245108175603. Local number, 18S.14W.28.143B.

LOCATION.--Lat 32°42'45", long 108°17'56", Hydrologic Unit 13030202.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table unused irrigation well, diameter 6 in., depth unknown.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,800 ft above National Geodetic Vertical Datum of 1929. Measuring point: 3/4-in. hole in cover plate, at land-surface datum.

REMARKS.--"S" indicates nearby well pumping.

PERIOD OF RECORD.--Mar. 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 268.84 ft below land-surface datum, Jan. 14, 1986; lowest measured, 404.605 ft below land-surface datum, Jan. 6, 1994.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 01	388.80	JUL 02	391.40

## Silver City Area

324600108222501. Local number, 18S.15W.11.323.

LOCATION.--Lat 32°46'00", long 108°22'25", Hydrologic Unit 15040002.

AQUIFER.--Gila Conglomerate.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 12 in., depth 580 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,845 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 12-in. casing, 1.50 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 262.34 ft below land-surface datum, Mar. 3, 1962; lowest measured, 300.51 ft below land-surface datum, Sept. 24, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	300.50	FEB 01	301.30	JUL 02	294.90

GUADALUPE COUNTY  
Santa Rosa Area

350414104485101. Local number, 10N.20E.28.2241.

LOCATION.--Lat 35°04'14", long 104°48'51", Hydrologic Unit 13060001.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 12 3/4 in., casing 0-514 ft, 10 3/4 in., 505-575 ft, casing perforated 515-575 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 5,162.7 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 1.10 ft above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--May 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 343.67 ft below land-surface datum, July 27, 1992; lowest measured, 362.36 ft below land-surface datum, Apr. 12, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	352.15	353.24	354.22	355.25	355.90	356.58	357.33	358.37	359.25	360.05	359.92	360.76
10	352.47	353.37	354.28	355.23	356.16	356.76	357.61	358.46	359.36	359.93	359.79	360.67
15	352.56	353.62	354.45	355.30	356.23	357.08	357.69	358.23	359.46	360.11	360.01	360.66
20	352.57	353.72	354.95	355.35	356.26	356.95	357.69	358.41	359.74	360.14	360.09	360.76
25	352.92	354.04	354.86	355.61	356.41	357.07	358.00	358.56	359.85	359.88	360.36	360.92
EOM	352.97	354.17	355.04	355.81	356.37	357.20	358.08	359.16	359.96	359.72	360.66	361.08

WTR YEAR 2002

HIGHEST 351.94 OCT 2

LOWEST 361.72 SEP 29

## GROUND-WATER LEVELS

HARDING COUNTY  
Roy Area

355352104054201. Local number, 19N.27E.05.334.

LOCATION.--Lat 35°53'52", long 104°05'42", Hydrologic Unit 11080007.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table municipal well, diameter 10 in., depth 75 ft, cased to 75 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,658 ft above National Geodetic Vertical Datum of 1929. Measuring point: 3/4- in. plugged hole, east side, 1.50 ft above land-surface datum.

REMARKS.--Submersible pump installed in 1984.

PERIOD OF RECORD.--Jan. 1967 to present.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 48.34 ft below land-surface datum, Jan. 18, 1983; lowest measured, 55.76 ft below land-surface datum, Aug. 19, 1987.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 18	49.49	SEP 10	49.93

HIDALGO COUNTY  
Virden Valley

324051108594101 (formerly 324053108594101). Local number, 19S.21W.03.414.

LOCATION.--Lat 32°40'51", long 108°59'41", Hydrologic Unit 15040002.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 20 in., depth 72 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,750 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole inside pump shell, 0.90 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.50 ft below land-surface datum, Jan. 11, 1993; lowest measured, 15.79 ft below land-surface datum, Aug. 4, 1978.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 01	12.70	JUL 11	OBSTRUCTION

## Lordsburg Area

321849108392001 (formerly 321848108391401). Local number, 23S.18W.12.333.

LOCATION.--Lat 32°18'49", long 108°39'20", Hydrologic Unit 15040003.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 12 in., depth 220 ft, perforations 100-220 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,240 ft above National Geodetic Vertical Datum of 1929. Measuring point: End of entry port pipe, 1.50 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 100.02 ft below land-surface datum, Jan. 11, 1958; lowest measured, 190.45 ft below land-surface datum, Aug. 7, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 29	162.94	JUL 11	164.20

321248108331401 (formerly 321257108331201). Local number, 24S.17W.14.442.

LOCATION.--Lat 32°12'48", long 108°33'14", Hydrologic Unit 15040003.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 18 in., depth 420 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,265 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 78.97 ft below land-surface datum, Jan. 7, 1981; lowest measured, 227.25 ft below land-surface datum, July 17, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 29	223.20	JUL 11	DRY

HIDALGO COUNTY--Continued  
Animas Valley

321624108504001 (formerly 321540108514101). Local number, 23S.20W.25.422.

LOCATION.--Lat 32°16'24", long 108°50'40", Hydrologic Unit 15040003.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 150 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,150 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.40 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.36 ft below land-surface datum, May 21, 1948; lowest measured, 56.09 ft below land-surface datum, Jan. 29, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 29	56.09	JUL 11	55.10

315610108483901 (formerly 315645108493501). Local number, 27S.19W.20.343.

LOCATION.--Lat 31°56'10", long 108°48'39", Hydrologic Unit 15040003.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 358 ft, cased to 358 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,414 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top edge of 1 1/4-in. pipe in concrete pump base, 1.25 ft above land-surface datum.

PERIOD OF RECORD.--July 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 131.90 ft below land-surface datum, July 29, 1949; lowest measured, 198.50 ft below land-surface datum, Aug. 1, 1978.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL
JUL 09	PUMPING

## San Simon Valley

315738109004001. Local number, 27S.21W.17.124.

LOCATION.--Lat 31°57'38", long 109°00'40", Hydrologic Unit 15040006.

AQUIFER.--Bolson.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 220 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,020 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in west side of pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1978, Jan. 1980, July 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 120.98 ft above land-surface datum, Jan. 10, 1980; lowest measured, 153.30 ft below land-surface datum, July 9, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04	138.83	JUL 09	153.30

315048109010201 (formerly 315010108570001). Local number, 28S.21W.30.222.

LOCATION.--Lat 31°50'48", long 109°01'02", Hydrologic Unit 15040006.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 8 in., depth 471 ft, cased to 471 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,128 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in west side of casing, 0.70 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 110.88 ft below land-surface datum, Jan. 15, 1969; lowest measured, 128.02 ft below land-surface datum, Jan. 4, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04	128.02	JUL 09	125.10

## GROUND-WATER LEVELS

HIDALGO COUNTY--Continued  
Playas Valley

313502108275001. Local number, 31S.16W.33.233.

LOCATION.--Lat 31°35'02", long 108°27'50", Hydrologic Unit 13030201.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 16 in., depth 654 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,404 ft above National Geodetic Vertical Datum of 1929. Measuring point: Bottom edge of shelf, 4.05 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.66 ft below land-surface datum, Apr. 18-20, 1973; lowest measured, 54.95 ft below land-surface datum, Sept. 4, 1976.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	47.72	SEP 23	47.77

LEA COUNTY  
Tatum-Lovington-Hobbs Area

332115103403301. Local number, 11S.32E.24.113222.

LOCATION.--Lat 33°21'15", long 103°40'33", Hydrologic Unit 12080001.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 4 1/2 in., depth 110 ft.

INSTRUMENTATION.--Digital recorder, 1-hour punch.

DATUM.--Elevation of land-surface datum is 4,336 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter door, 3.43 ft above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--Oct. 1977 to Nov. 1998, July 1999 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 59.74 ft above land-surface datum, Oct. 3, 1993; lowest measured, 62.67 ft below land-surface datum, Apr. 19, 1993.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	59.98	59.97	59.97	59.96	59.96	59.96	59.97	59.94	59.95	59.94	59.93	59.93
10	59.97	59.97	59.96	59.96	59.97	59.96	59.97	59.94	59.93	59.94	59.93	59.93
15	59.98	59.96	59.96	59.95	59.97	59.97	59.97	59.94	59.91	59.93	59.93	59.93
20	59.97	59.97	59.96	59.95	59.96	59.97	59.96	59.96	59.93	59.93	59.93	59.93
25	59.98	59.96	59.96	59.95	59.96	59.98	59.95	59.95	59.94	59.93	59.93	59.91
EOM	59.96	59.97	59.96	59.97	59.96	59.99	59.95	59.94	59.93	59.93	59.94	59.91

WTR YEAR 2002      HIGHEST 59.91 MANY DAYS      LOWEST 60.03 OCT 10, APR 2

331713103283301 (formerly 331740103285001). Local number, 12S.34E.11.42134.

LOCATION.--Lat 33°17'31", long 103°28'33", Hydrologic Unit 12080006.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 15 in., depth 87 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,144 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of concrete pump base, 0.80 ft above land-surface datum.

PERIOD OF RECORD.--May 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.57 ft below land-surface datum, May 24, 1949; lowest measured, 34.14 ft below land-surface datum, Aug. 17, 1983.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05	33.61	AUG 12	32.70

330458103251001 (formerly 330455103251301). Local number, 14S.35E.28.111133.

LOCATION.--Lat 33°04'58", long 103°25'10", Hydrologic Unit 12080003.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 5 in., depth 137 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,031 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.05 ft below land-surface datum, Jan. 5, 1994; lowest measured, 44.73 ft below land-surface datum, Aug. 7, 1996.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	44.21	AUG 12	44.20

## GROUND-WATER LEVELS

373

LEA COUNTY--Continued  
Tatum-Lovington-Hobbs Area

330405103194501 (formerly 330400103193401). Local number, 14S.36E.32.12121.  
LOCATION.--Lat 33°04'05", long 103°19'45", Hydrologic Unit 12080003.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth and casing information not available.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,990 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of concrete pump base, 0.50 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1949 to Jan. 1950, Jan. 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.38 ft below land-surface datum, Jan. 19, 1949; lowest measured, 76.14 ft below land-surface datum, Aug. 19, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	72.95	AUG 12	73.72

325730103213901 (formerly 325703103213201). Local number, 16S.36E.04.32232.

LOCATION.--Lat 32°57'30", long 103°21'39", Hydrologic Unit 12080003.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 13 in., depth 212 ft, perforated 80-208 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 3,926 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 4.25 ft above land-surface datum.

REMARKS.--Records fair. Records for several days missing due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 56.69 ft below land-surface datum, Mar. 26, 1998; lowest measured, 67.11 ft below land-surface datum, Aug. 24, 1971.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	57.63	57.53	57.46	57.39	57.33	57.26	57.23	57.26	57.64	57.65	57.55	---
10	57.61	57.51	57.43	57.37	57.36	57.26	57.22	57.31	57.63	57.67	57.56	---
15	57.59	57.46	57.42	57.35	57.31	57.26	57.20	57.36	57.62	57.61	57.55	---
20	57.55	57.49	57.42	57.34	57.30	57.26	57.23	57.40	57.65	57.56	57.57	---
25	57.57	57.46	57.42	57.35	57.30	57.26	57.23	57.45	57.64	57.51	57.60	58.05
EOM	57.53	57.46	57.40	57.33	57.25	57.23	57.22	57.58	57.66	57.53	---	58.04
WTR YEAR 2002		HIGHEST		57.19 APR 6, 7		LOWEST		58.06 SEP 26				

325658103200001. Local number, 16S.37E.11.11111.

LOCATION.--Lat 32°56'58", long 103°20'00", Hydrologic Unit 12080003.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., reported depth 118 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,900 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1-in. hole in southwest side of pump, 1.34 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.93 ft below land-surface datum, Jan. 23, 1949; lowest measured, 84.40 ft below land-surface datum, Aug. 12, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04	80.46	AUG 12	84.40

325132103112501. Local number, 17S.38E.07.111311.

LOCATION.--Lat 32°51'32", long 103°11'25", Hydrologic Unit 12080003.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., reported depth 125 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,740 ft above National Geodetic Vertical Datum of 1929. Measuring point: Edge of pipe on west side of pump, 0.95 ft above land-surface datum.

REMARKS.--"P" indicates well pumping.

PERIOD OF RECORD.--July 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.59 ft below land-surface datum, Mar. 21, 1952; lowest measured, 82.44P ft below land-surface datum, Aug. 26, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 03	70.47	AUG 12	OBSTRUCTION

## GROUND-WATER LEVELS

LEA COUNTY--Continued  
Tatum-Lovington-Hobbs Area

324745103082001. Local number, 17S.38E.34.113143.  
LOCATION.--Lat 32°47'45", long 103°08'20", Hydrologic Unit 12080003.  
AQUIFER.--Ogallala Formation.  
WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 12 in., depth 125 ft, cased to 90 ft.  
INSTRUMENTATION.--Periodic steel-tape measurements.  
DATUM.--Elevation of land-surface datum is 3,660 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.40 ft above land-surface datum.  
PERIOD OF RECORD.--Nov. 1943 to current year.  
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.78 ft below land-surface datum, Jan. 15, 1944; lowest measured, 78.84 ft below land-surface datum, July 10, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 03	74.43	AUG 12	75.34

LINCOLN COUNTY  
Hondo Valley

333241105341101 (formerly 333242105340701). Local number, 09S.14E.10.13221.  
LOCATION.--Lat 33°32'41", long 105°34'11", Hydrologic Unit 13060008.  
AQUIFER.--Mancos Shale of Late Cretaceous age.  
WELL CHARACTERISTICS.--Drilled water-table municipal well, diameter 8 in., depth 324 ft, cased to 271 ft.  
INSTRUMENTATION.--Periodic steel-tape measurements.  
DATUM.--Elevation of land-surface datum is 6,340 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of breather hole on west side of pump base, 1.00 ft above land-surface datum.  
REMARKS.--"P" indicates well pumping.  
PERIOD OF RECORD.--June 1955 to current year.  
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.02 ft below land-surface datum, Feb. 26, 2001; lowest measured, 69.77 ft below land-surface datum, Nov. 28, 1956.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	36.07	AUG 06	36.23	AUG 22	48.36P

332110105092501 (formerly 332157105094101). Local number, 11S.18E.15.33313.  
LOCATION.--Lat 33°21'10", long 105°09'25", Hydrologic Unit 13060008.  
AQUIFER.--Yeso Formation of Permian age.  
WELL CHARACTERISTICS.--Drilled water-table domestic and stock well, diameter 12 in., depth 125 ft, cased to 110 ft.  
INSTRUMENTATION.--Periodic steel-tape measurements.  
DATUM.--Elevation of land-surface datum is 4,989 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.50 ft above land-surface datum.  
REMARKS.--"P" indicates well pumping.  
PERIOD OF RECORD.--Oct. 1955 to current year.  
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.43 ft below land-surface datum, Aug. 18, 1988; lowest measured, 60.18 ft below land-surface datum, Jan. 15, 1959.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	52.90	AUG 07	50.70P	AUG 22	53.25

LUNA COUNTY  
Nutt-Hockett

322927107220101 (formerly 322930107221001). Local number, 21S.05W.08.444.  
LOCATION.--Lat 32°29'27", long 107°22'01", Hydrologic Unit 13030202.  
AQUIFER.--Valley fill.  
WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 435 ft, cased to 435 ft.  
INSTRUMENTATION.--Periodic steel-tape measurements.  
DATUM.--Elevation of land-surface datum is 4,530 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in northeast side of pump shell, 1.60 ft above land-surface datum.  
PERIOD OF RECORD.--Nov. 1961 to current year.  
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 102.06 ft below land-surface datum, Jan. 17, 1962; lowest measured, 228.70 ft below land-surface datum, Jan. 11, 1999.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	OBSTRUCTION	JUL 12	PUMPING

## GROUND-WATER LEVELS

375

LUNA COUNTY--Continued  
Mimbres Valley

321352107493901. Local number, 24S.10W.12.431.

LOCATION.--Lat 32°13'52", long 107°49'39", Hydrologic Unit 13030202.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Dug and drilled water-table unused well, diameter 36 in., reported depth 132 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,363 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelter shelf, 3.20 ft above land-surface datum.

REMARKS.--Recorder removed.

PERIOD OF RECORD.--Apr. 1939 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 71.61 ft below land-surface datum, May 6-13, 1940; lowest measured, 124.73 ft below land-surface datum, July 24, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL								
OCT 01	110.75	JAN 14	109.93	APR 23	113.83	JUN 26	111.78	SEP 26	112.58
DEC 06	110.57	FEB 25	110.46	MAY 23	111.87	AUG 25	112.63		

321328107565301 (formerly 321415107565501). Local number, 24S.11W.14.122.

LOCATION.--Lat 32°13'28", long 107°56'55", Hydrologic Unit 13030202.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 12 in., reported depth 350 ft, cased to 198 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,405 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1-in. hole in pump base, 0.80 ft above land-surface datum.

PERIOD OF RECORD.--July 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 107.66 ft below land-surface datum, Jan. 23, 1952; lowest measured, 228.00 ft below land-surface datum, May 11, 1956.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 13	171.00	JUL 12	165.85

321010107260201 (formerly 321015107260501). Local number, 25S.06W.02.111.

LOCATION.--Lat 32°10'10", long 107°26'02", Hydrologic Unit 13030202.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled artesian irrigation well, diameter 16 in., depth 235 ft, perforated 180-235 ft, gravel packed.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,090 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.30 ft above land-surface datum.

PERIOD OF RECORD.--May 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.45 ft below land-surface datum, Mar. 14, 1953; lowest measured, 117.66 ft below land-surface datum, Aug. 6, 1980.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 07	15.90	JUL 12	15.50

320918107293301 (formerly 320915104294501). Local number, 25S.06W.07.211.

LOCATION.--Lat 32°09'18", long 107°29'33", Hydrologic Unit 13030202.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 230 ft, cased to 230 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,084.22 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in pump base, 1.20 ft above land-surface datum (since Jan. 15, 1966).

PERIOD OF RECORD.--Jan. 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 65.34 ft below land-surface datum, Mar. 14, 1953; lowest measured, 122.16 ft below land-surface datum, Aug. 13, 1970.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 07	85.16	JUL 12	80.80

## GROUND-WATER LEVELS

LUNA COUNTY--Continued  
Mimbres Valley

320647107490701. Local number, 25S.09W.19.31331.

LOCATION.--Lat 32°26'47", long 107°49'07", Hydrologic Unit 13030202.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table unused irrigation well, diameter 14 in., depth 240 ft, cased to 240 ft, perforated 80-240 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,248 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 150.70 ft below land-surface datum, July 18, 1957; lowest measured, 229.90 ft below land-surface datum, July 5, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 24	201.02	AUG 09	209.65

315517107375001 (formerly 315525107374501). Local number, 27S.08W.35.122.

LOCATION.--Lat 31°55'17", long 107°37'50", Hydrologic Unit 13030202.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled water-table unused irrigation well, diameter 12 to 8 in., depth 550 ft, cased to 550 ft, perforated 155-550 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,070 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.20 ft above land-surface datum.

PERIOD OF RECORD.--July 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.84 ft below land-surface datum, Mar. 16, 1953; lowest measured, 119.34 ft below land-surface datum, Aug. 3, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 17	77.83	JUL 12	76.95

315903107424501 (formerly 315905107425001). Local number, 27S.09W.01.431.

LOCATION.--Lat 31°59'03", long 107°42'45", Hydrologic Unit 13030202.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 62 ft, cased to 62 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,135 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top edge of rectangular hole in pump base, 0.65 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.61 ft below land-surface datum, Jan. 19, 1954; lowest measured, 48.07 ft below land-surface datum, July 11, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 17	44.34	JUL 12	45.74

315009107352401. Local number, 28S.07W.30.443.

LOCATION.--Lat 31°50'09", long 107°35'24", Hydrologic Unit 13030202.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 1,000 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,013 ft above National Geodetic Vertical Datum of 1929. Measuring point: Notch in casing, east side at land surface.

PERIOD OF RECORD.--Feb. 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.20 ft below land-surface datum, Jan. 31, 1992; lowest measured, 22.00 ft below land-surface datum, July 12, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 15	8.10	JUL 12	22.00

MCKINLEY COUNTY  
San Juan Basin

352023107473201. Local number, 13N.09W.21.4123.

LOCATION.--Lat 35°20'23", long 107°47'32", Hydrologic Unit 13020207.

AQUIFER.--Morrison Formation.

WELL CHARACTERISTICS.--Drilled water-table unused stock well, diameter 6 in., depth 155 ft, cased to 155 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,785 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.80 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 58.30 ft below land-surface datum, Feb. 22, 1978; lowest measured, 144.80 ft below land-surface datum, Dec. 8, 1955.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	107.84	SEP 04	109.91

353645108011501. Local number, 16N.11W.17.4322.

LOCATION.--Lat 35°36'45", long 108°01'15", Hydrologic Unit 14080106.

AQUIFER.--Gallup Sandstone.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 5/8 in., depth 570 ft, cased to 570 ft, perforated 470-570 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 7,070 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.53 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 246.27 ft below land-surface datum, Feb. 29, 2000; lowest measured, 318.28 ft below land-surface datum, July 21, 1982.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	284.89	SEP 04	291.66

353521108284901. Local number, 16N.16W.25.142.

LOCATION.--Lat 35°35'21", long 108°28'49", Hydrologic Unit 15020006.

AQUIFER.--Entrada Sandstone.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 8 3/4 in., depth 1,052 ft, cased to 1,052 ft, perforated 628-896, 974-1,033 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 7,115 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in cover plate, 0.80 ft above land-surface datum.

REMARKS.--"P" indicates well pumping; "R" indicates well recently pumped.

PERIOD OF RECORD.--Oct. 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.55 ft below land-surface datum, Feb. 2, 1995; lowest measured, 183.05P ft below land-surface datum, Feb. 25, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	133.24	SEP 04	123.48R

354235108170702. Local number, 17N.14W.13.1144B.

LOCATION.--Lat 35°42'35", long 108°17'07", Hydrologic Unit 14080106.

AQUIFER.--Morrison Sandstone.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 8 5/8 in. 0-2,225 ft, total depth 2,225 ft. Perforated 1,820-2,225 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,757.70 ft above National Geodetic Vertical Datum of 1929. Measuring point: 3/8-in. plug, 1.70 ft above land-surface datum.

PERIOD OF RECORD.--Aug. 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 240.05 ft below land-surface datum, Feb. 29, 2000; lowest measured, 350.38 ft below land-surface datum, Oct. 8, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	240.72	SEP 04	240.18

## GROUND-WATER LEVELS

McKINLEY COUNTY--Continued  
San Juan Basin

354235108170703. Local number, 17N.14W.13.1144C.  
 LOCATION.--Lat 35°42'35", long 108°17'07", Hydrologic Unit 14080106.  
 AQUIFER.--Dakota Sandstone.  
 WELL CHARACTERISTICS.--Drilled water-table well, diameter 8 5/8 in. 0-54 ft, 6 5/8 in. 54-1,728 ft. Perforated 1,587-1,728 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 6,757.70 ft above National Geodetic Vertical Datum of 1929. Measuring point: 3/8-in. plug, 0.80 ft above land-surface datum.  
 PERIOD OF RECORD.--Aug. 1982 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 76.21 ft below land-surface datum, Aug. 4, 1982; lowest measured, 123.93 ft below land-surface datum, Sept. 4, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 22	124.02	SEP 04	123.93

OTERO COUNTY  
Tularosa-Alamogordo Area

330321106011101 (formerly 330324106011201). Local number, 14S.10E.31.144.  
 LOCATION.--Lat 33°03'18", long 106°01'08", Hydrologic Unit 13050003.  
 AQUIFER.--Bolson deposits.  
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, depth 230 ft, diameter 17 in., casing 0-130 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 4,450 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top edge of 1-in. hole in pump base, 0.70 ft above land-surface datum.  
 PERIOD OF RECORD.--Apr. 1952 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 73.75 ft below land-surface datum, Apr. 8, 1952; lowest measured, 134.21 ft below land-surface datum, Aug. 3, 1978.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 07	95.53	JUL 19	102.13

## Penasco Valley

325115105321401. Local number, 17S.14E.08.12111.  
 LOCATION.--Lat 32°51'15", long 105°32'14", Hydrologic Unit 13060010.  
 AQUIFER.--Bolson deposits.  
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 8 in., cased 0-120 ft, perforated 35-120 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 6,850.90 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.50 feet above land surface.  
 PERIOD OF RECORD.--Mar. 1956 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.53 ft below land-surface datum, Aug. 23, 2001; lowest measured, 45.13 ft below land-surface datum, July 22, 1957.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 25	26.10	AUG 29	27.09

Crow Flats Basin  
(Salt Basin)

320657105061501. Local number, 25S.18E.21.233.  
 LOCATION.--Lat 32°06'57", long 105°06'15", Hydrologic Unit 13050004.  
 AQUIFER.--Bolson deposits.  
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth unknown.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 3,690 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.50 ft above land-surface datum.  
 PERIOD OF RECORD.--Apr. 1956 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 68.80 ft below land-surface datum, Apr. 20, 1956; lowest measured, 101.55 ft below land-surface datum, Sept. 15, 1983.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	99.97	AUG 15	98.93

## GROUND-WATER LEVELS

379

OTERO COUNTY--Continued  
Crow Flats Basin  
(Salt Basin)

320138105063101 (formerly 320650105034801). Local number, 26S.18E.21.331.

LOCATION.--Lat 32°01'38", long 105°06'31", Hydrologic Unit 13050004.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 18 in., depth 544 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,655 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.50 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 51.08 ft below land-surface datum, Jan. 8, 1973; lowest measured, 82.94 ft below land-surface datum, Aug. 17, 1978.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	62.78	AUG 15	73.48

320008105064501. Local number, 26S.18E.33.133.

LOCATION.--Lat 32°00'08", long 105°06'45", Hydrologic Unit 13050004.

AQUIFER.--Bone Spring Limestone.

WELL CHARACTERISTICS.--Drilled water-table used irrigation well, diameter 14 in., depth 435 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,620 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.80 ft. above land-surface datum.

PERIOD OF RECORD.--Feb. 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.50 ft below land-surface datum, Feb. 15, 1956; lowest measured, 62.84 ft below land-surface datum, Aug. 20, 1984.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 21	60.08	AUG 15	PUMPING

QUAY COUNTY  
House Area

343848103555801. Local number, 05N.28E.23.222232.

LOCATION.--Lat 34°38'48", long 103°55'58", Hydrologic Unit 13060004.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table stock well, diameter 6 in., depth 93.5 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,788 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, west side, 2.00 ft above land-surface datum.

REMARKS.--"R" indicates well recently pumped.

PERIOD OF RECORD.--Jan. 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 74.50 ft below land-surface datum, Sept. 15, 1994; lowest measured, 84.22R ft below land-surface datum, Feb. 18, 1972.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL
AUG 14	74.89

343855103482901 (formerly 343810103463001). Local number, 05N.30E.18.331311.

LOCATION.--Lat 34°38'55", long 103°48'29", Hydrologic Unit 13060004.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 75 ft, cased to 60 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,630 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of concrete pump base, 0.50 ft above land-surface datum.

PERIOD OF RECORD.--May 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.76 ft below land-surface datum, Mar. 28, 1946; lowest measured, 51.49 ft below land-surface datum, Aug. 11, 1969.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 27	44.81	AUG 14	47.42

## GROUND-WATER LEVELS

QUAY COUNTY--Continued  
House Area

34440610355501. Local number, 06N.28E.13.33333.  
 LOCATION.--Lat 34°44'06", long 103°55'55", Hydrologic Unit 13060004.  
 AQUIFER.--Alluvium.  
 WELL CHARACTERISTICS.--Drilled domestic well, diameter 16 in., depth 131 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 4,816 ft above National Geodetic Vertical Datum of 1929. Measuring point: 3/4-in. hole in cover plate, 0.40 ft above land-surface datum.  
 PERIOD OF RECORD.--Jan. 1948 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 100.47 ft below land-surface datum, Jan. 20, 1948; lowest measured, 120.20 ft below land-surface datum, Sept. 24, 1996.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL
AUG 14	119.65

## Lower Canadian

351040103433602. Local number, 11N.30E.14.144D.  
 LOCATION.--Lat 35°10'40", long 104°43'36", Hydrologic Unit 11080006.  
 AQUIFER.--Alluvium.  
 WELL CHARACTERISTICS.--Drilled water-table unused test well, diameter 6 in., depth 295 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 4,080 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1.5-in. pipe extension, 4.20 ft above land-surface datum.  
 PERIOD OF RECORD.--July 1952 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.20 ft below land-surface datum, Sept. 9, 1963; lowest measured, 137.66 ft below land-surface datum, Dec. 16, 1952.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21	40.40	SEP 10	71.77

## Northern High Plains

353239103111301. Local number, 15N.35E.11.21222.  
 LOCATION.--Lat 35°32'39", long 103°11'13", Hydrologic Unit 11080006.  
 AQUIFER.--Alluvium.  
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 12 in., depth 175 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 4,126 ft above National Geodetic Vertical Datum of 1929. Measuring point: 2 1/2-in. hole, in east side of casing, 1.20 ft above land-surface datum.  
 PERIOD OF RECORD.--July 1971 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.83 ft below land-surface datum, July 26, 1995; lowest measured, 114.67 ft below land-surface datum, Feb. 5, 1974.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21	OBSTRUCTION	SEP 10	91.57

354238103132301. Local number, 17N.35E.16.221.  
 LOCATION.--Lat 35°42'38", long 103°13'23", Hydrologic Unit 11090101.  
 AQUIFER.--Dakota Formation.  
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter unknown, depth 250 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 4,465 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in south side of pump base, 2.00 ft above land-surface datum.  
 PERIOD OF RECORD.--Oct. 1967 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 159.30 ft below land-surface datum, Apr. 10, 1991; lowest measured, 171.59 ft below land-surface datum, Sept. 19, 1988.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21	163.40	SEP 10	162.34

ROOSEVELT COUNTY  
Portales Valley

341014103264401. Local number, 01S.33E.35.434344.

LOCATION.--Lat 34°10'14", long 103°26'44", Hydrologic Unit 12050002.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table unused irrigation well, diameter 16 in., depth 84 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,066 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelter apron, 3.24 ft above land-surface datum.

PERIOD OF RECORD.--Apr. 1996 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 66.37 ft below land-surface datum, Apr. 25, 1996; lowest measured, 68.96 ft below land-surface datum, Mar. 7, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	68.70	MAR 07	68.96	AUG 13	68.88

341037103254501. Local number, 01S.33E.36.231111.

LOCATION.--Lat 34°10'37", long 103°25'45", Hydrologic Unit 12050002.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 18 in., depth 105 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,048 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.95 ft above land-surface datum.

REMARKS.--Recorder removed Apr. 25, 1996.

PERIOD OF RECORD.--Jan. 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.19 ft below land-surface datum, Jan. 25, 1952; lowest measured, 94.70 ft below land-surface datum, Aug. 13, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 06	94.00	AUG 13	94.70

340753103083101. Local number, 02S.36E.14.311111.

LOCATION.--Lat 34°07'53", long 103°08'31", Hydrologic Unit 12050001.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 16 in., depth 151 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,938 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--"R" indicates well recently pumped.

PERIOD OF RECORD.--Jan. 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.37 ft above land-surface datum, Jan. 6, 1975; lowest measured, 124.50R ft below land-surface datum, Aug. 13, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL
AUG 13	124.50R

340844103055001. Local number, 02S.37E.07.432222.

LOCATION.--Lat 34°08'44", long 103°05'50", Hydrologic Unit 12050001.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table unused irrigation well, diameter 13.5 in., depth 204 ft, cased to 204 ft, perforated 151-204 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 3,982 ft above National Geodetic Vertical Datum of 1929. Measuring point: Edge of recorder shelter, 3.00 ft above land-surface datum.

REMARKS.--Records fair. Several days of records lost due to broken float tape.

PERIOD OF RECORD.--June 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 103.78 ft below land-surface datum, June 2, 1992; lowest measured, 144.27 ft below land-surface datum, June 19, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	139.39	134.25	135.46	134.79	134.37	134.38	134.21	134.11	138.87	139.66	140.65	---
10	139.30	133.55	137.71	134.96	134.29	135.07	133.79	136.47	136.94	140.00	140.76	140.55
15	138.80	135.63	135.35	134.58	134.23	134.73	133.96	135.49	139.40	139.50	---	137.38
20	137.83	135.31	135.54	134.60	134.84	134.48	134.64	134.99	139.52	139.47	---	137.19
25	137.71	135.14	135.04	134.96	134.61	134.11	134.42	137.76	137.41	139.82	---	140.48
EOM	136.33	135.16	134.87	134.55	134.08	133.98	134.88	138.47	139.58	140.15	---	139.22
WTR YEAR 2002	HIGHEST			133.38	NOV 12		LOWEST		141.54	SEP 30		

## GROUND-WATER LEVELS

ROOSEVELT COUNTY--Continued  
Causey-Lingo Area

334700103030601 (formerly 335655103032001). Local number, 06S.38E.21.233131.

LOCATION.--Lat 33°47'00", long 103°03'11", Hydrologic Unit 12050001.

AQUIFER.--Undifferentiated Cretaceous rocks.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 140 ft, cased to 140 ft, casing slotted 100-140 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,939 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1-in. hole in north side of pump, 2.10 ft above land-surface datum.

REMARKS.--"P" indicated well pumping; "S" indicates nearby well pumping.

PERIOD OF RECORD.--Jan. 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 87.18 ft below land-surface datum, Jan. 13, 1956; lowest measured, 115.21P ft below land-surface datum, Aug. 11, 1976.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 07	93.59	AUG 13	97.29S

SANDOVAL COUNTY  
Bernalillo Area

352121106285501 (formerly 352235106282401). Local number, 13N.04E.12.112.

LOCATION.--Lat 35°21'21", long 106°28'55", Hydrologic Unit 13020201.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 12 in., depth 50 ft, cased.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,117 ft above National Geodetic Vertical Datum of 1929. Measuring point: Lower inside edge of hole in south side of casing, 0.45 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.57 ft below land-surface datum, July 18, 1991; lowest measured, 25.27 ft below land-surface datum, Jan. 31, 1978.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 07	25.02	AUG 29	23.83

## Corrales Area

351319106373501. Local number, 12N.03E.33.414A.

LOCATION.--Lat 35°13'19", long 106°37'35", Hydrologic Unit 13020204.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled monitoring well, diameter 2 in., depth 60 ft, screened interval 30-50 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,003 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1-in. casing, 0.56 ft below land-surface datum.

PERIOD OF RECORD.--Mar. 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.72 ft below land-surface datum, Nov. 1, 1995; lowest measured, 11.60 ft below land-surface datum, Sept. 5, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 01	10.94	SEP 05	11.60

351319106373502. Local number, 12N.03E.33.414B.

LOCATION.--Lat 35°13'19", long 106°37'35", Hydrologic Unit 13020204.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled monitoring well, diameter 2 in., depth 270 ft, screened interval 220-260 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,003 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1-in. casing, 0.65 ft below land-surface datum.

PERIOD OF RECORD.--Mar. 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.31 ft below land-surface datum, May 5, 1995; lowest measured, 30.63 ft below land-surface datum, Sept. 5, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 01	27.70	SEP 05	30.63

SANDOVAL COUNTY--Continued  
Corrales Area

351319106373503. Local number, 12N.03E.33.414C.

LOCATION.--Lat 35°13'19", long 106°37'35", Hydrologic Unit 13020204.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled monitoring well, diameter 2 in., depth 120 ft, screened interval 90-110 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,003 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of

1-in. casing, 0.47 ft below land-surface datum.

PERIOD OF RECORD.--Mar. 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.10 ft below land-surface datum, Nov. 1, 1995; lowest measured, 15.57 ft below land-surface datum, Sept. 5, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 01	14.45	SEP 05	15.57

351319106373504. Local number, 12N.03E.33.414D.

LOCATION.--Lat 35°13'19", long 106°37'35", Hydrologic Unit 13020204.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled monitoring well, diameter 2 in., depth 400 ft, screened interval 350-390 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,003 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of

1-in. casing, 0.52 ft below land-surface datum.

PERIOD OF RECORD.--Mar. 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.29 ft below land-surface datum, Mar. 31, 1995; lowest measured, 40.12 ft below land-surface datum, Sept. 5, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 01	36.93	SEP 05	40.12

351319106373505. Local number, 12N.03E.33.414E.

LOCATION.--Lat 35°13'19", long 106°37'35", Hydrologic Unit 13020204.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled monitoring well, diameter 2 in., depth 800 ft, screened interval 710-790 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,003 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of

1-in. casing, 0.65 ft below land-surface datum.

PERIOD OF RECORD.--Mar. 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 48.00 ft below land-surface datum, May 5, 1995; lowest measured, 59.37 ft below land-surface datum, Sept. 5, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 01	55.22	SEP 05	59.37

351319106373506. Local number, 12N.03E.33.414F.

LOCATION.--Lat 35°13'19", long 106°37'35", Hydrologic Unit 13020204.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled monitoring well, diameter 2 in., depth 1,470 ft, screened interval 1,360-1,460 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,003 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of

1-in. casing, 0.61 ft below land-surface datum.

PERIOD OF RECORD.--Mar. 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.27 ft below land-surface datum, Mar. 31, 1995; lowest measured, 63.59 ft below land-surface datum, Sept. 5, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 01	59.24	SEP 05	63.59

## GROUND-WATER LEVELS

SAN JUAN COUNTY  
San Juan Basin

364744108225001. Local number, 30N.15W.23.4411.  
 LOCATION.--Lat 36°47'44", long 108°22'50", Hydrologic Unit 14080105.  
 AQUIFER.--Pictured Cliffs Sandstone.  
 WELL CHARACTERISTICS.--Drilled water-table well, diameter 5 in., depth 729.5 ft, cased to 729.5 ft, perforated 613-729.5 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 5,290 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land-surface datum.  
 PERIOD OF RECORD.--Feb. 1978 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 123.75 ft below land-surface datum, Feb. 21, 1978; lowest measured, 178.70 ft below land-surface datum, Sept. 16, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 23	177.15	SEP 16	178.70

SAN MIGUEL COUNTY  
Las Vegas Area

353346105145201. Local number, 15N.16E.04.242.  
 LOCATION.--Lat 35°33'46", long 105°14'52", Hydrologic Unit 13060001.  
 AQUIFER.--Santa Rosa Sandstone.  
 WELL CHARACTERISTICS.--Drilled water-table municipal well, diameter 10 in. 0-612 ft, 7 in. 612-772 ft, depth 815 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 6,462 ft above National Geodetic Vertical Datum of 1929. Measuring point: Entry port, west side of pump base, 1.95 ft above land-surface datum.  
 PERIOD OF RECORD.--Dec. 1999 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.82 ft below land-surface datum, Dec. 15, 1999; lowest measured, 41.43 ft below land-surface datum, Aug. 30, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 05	32.39	AUG 30	41.43

353418105145601. Local number, 16N.16E.33.143.  
 LOCATION.--Lat 35°34'18", long 105°14'56", Hydrologic Unit 13060001.  
 AQUIFER.--Santa Rosa Sandstone.  
 WELL CHARACTERISTICS.--Drilled water-table municipal well, diameter 10 in. 0-596 ft, 8 in. 596-824 ft, depth 829 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 6,477 ft above National Geodetic Vertical Datum of 1929. Measuring point: Entry port, west side of pump base, 1.95 ft above land-surface datum.  
 PERIOD OF RECORD.--Dec. 1999 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 79.81 ft below land-surface datum, July 27, 2001; lowest measured, 102.34 ft below land-surface datum, Aug. 30, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 05	93.91	AUG 30	102.34

SANTA FE COUNTY  
Estancia Valley

350534106024801 (formerly 350525106025001). Local number, 10N.08E.13.1332.  
 LOCATION.--Lat 35°05'34", long 106°02'53", Hydrologic Unit 13050001.  
 AQUIFER.--Valley fill.  
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., reported depth 513 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 6,274 ft above National Geodetic Vertical Datum of 1929. Measuring point: Lower inside edge of hole in south side of casing, 0.45 ft above land-surface datum.  
 REMARKS.--"P" indicates well pumping; "R" indicates well recently pumped.  
 PERIOD OF RECORD.--Feb. 1950 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 86.75 ft below land-surface datum, Feb. 22, 1950; lowest measured, 181.55P ft below land-surface datum, Aug. 4, 1969.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 05	157.70	SEP 06	175.86R

SANTA FE COUNTY--Continued  
Estancia Valley

350344106004601 (formerly 350340106005001). Local number, 10N.09E.29.1334.

LOCATION.--Lat 35°03'45", long 106°00'46", Hydrologic Unit 13050001.

AQUIFER.--Glorieta Sandstone of Permian age.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 14 in., reported depth 200 ft, cased to 140 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,248 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top edge of 3-in. pipe on north side of pump, 1.30 ft above land-surface datum.

REMARKS.--"S" indicates nearby well pumping.

PERIOD OF RECORD.--Feb. 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.00 ft below land-surface datum, May 4, 1949; lowest measured, 142.95 ft below land-surface datum, Sept. 6, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 05	126.55	SEP 06	142.95S

350859106002901. Local number, 11N.09E.29.143.

LOCATION.--Lat 35°08'59", long 106°00'29", Hydrologic Unit 13050001.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table unused irrigation well, diameter 15 in., depth unknown.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,274 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.80 ft above land-surface datum.

PERIOD OF RECORD.--July 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.93 ft below land-surface datum, Apr. 1, 1987; lowest measured, 148.30 ft below land-surface datum, Sept. 6, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 05	147.18	SEP 06	148.30

## Santa Fe Area

353636106021001. Local number, 16N.08E.13.444.

LOCATION.--Lat 35°36'36", long 106°02'10", Hydrologic Unit 13020201.

AQUIFER.--Tesuque Formation of Santa Fe Group.

WELL CHARACTERISTICS.--Drilled domestic well, diameter 6 1/2 in., depth 337 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,400 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.70 ft above land-surface datum.

PERIOD OF RECORD.--Feb. 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 256.04 ft below land-surface datum, Jan. 20, 1982; lowest measured, 264.79 ft below land-surface datum, Aug. 15, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 07	263.85	AUG 30	264.38

353516106035801. Local number, 16N.08E.26.32112.

LOCATION.--Lat 35°35'16", long 106°03'58", Hydrologic Unit 13020201.

AQUIFER.--Tesuque Formation of Santa Fe Group.

WELL CHARACTERISTICS.--Drilled water-table unused irrigation well, diameter 10 in., depth 160 ft, cased to 160 ft, perforated 125-160 ft.

INSTRUMENTATION.--Digital recorder, 1-hour measurement.

DATUM.--Elevation of land-surface datum is 6,285 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.25 ft above land-surface datum.

REMARKS.--Lost records due to recorder malfunction.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.62 ft below land-surface datum, June 11, 1973; lowest measured, 131.72 ft below land-surface datum, Feb. 18 and 19, 2002.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	131.07	131.09	131.35	131.52	131.32	131.11	131.15	131.21	131.30	131.32	131.28	131.12
10	131.04	131.13	131.21	131.54	131.25	131.05	131.14	131.17	131.27	131.31	131.25	131.14
15	131.09	131.18	131.35	131.52	131.23	131.15	131.14	131.22	131.27	131.30	131.21	131.14
20	131.02	131.14	131.36	131.49	131.16	131.15	131.16	131.25	131.32	131.32	131.22	131.11
25	131.08	131.14	131.42	131.43	131.21	131.20	131.18	131.27	131.30	131.28	131.20	131.05
EOM	131.05	131.28	131.44	131.45	131.05	131.15	131.11	131.27	131.30	131.31	131.14	131.02
WTR YEAR 2002	HIGHEST		130.97	OCT 11		LOWEST		131.72	JAN 18, 19			

## GROUND-WATER LEVELS

SANTA FE COUNTY--Continued  
Santa Fe Area

353735105581201 (formerly 353753105580501). Local number, 16N.09E.10.42114.  
LOCATION.--Lat 35°37'53", long 105°58'05", Hydrologic Unit 13020201.  
AQUIFER.--Ancha Formation of Santa Fe Group.  
WELL CHARACTERISTICS.--Drilled domestic well, diameter 6 in., depth 243 ft.  
INSTRUMENTATION.--Periodic steel-tape measurements.  
DATUM.--Elevation of land-surface datum is 6,820 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1/2-in. plug in cover plate, 6.00 ft below land-surface datum.  
PERIOD OF RECORD.--Aug. 1957 to current year.  
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 149.52 ft below land-surface datum, Dec. 11, 1957; lowest measured, 234.57 ft below land-surface datum, Aug. 30, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 07	233.87	AUG 30	234.57

354013105580601 (formerly 354005105574501). Local number, 17N.09E.27.441.  
LOCATION.--Lat 35°40'13", long 105°58'06", Hydrologic Unit 13020201.  
AQUIFER.--Tesuque Formation of Santa Fe Group.  
WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 8 in., depth 989 ft.  
INSTRUMENTATION.--Periodic steel-tape measurements.  
DATUM.--Elevation of land-surface datum is 6,845 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.70 ft below land-surface datum.  
REMARKS.--"R" indicates well recently pumped.  
PERIOD OF RECORD.--Dec. 1951 to current year.  
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 102.33 ft below land-surface datum, Dec. 27, 1951; lowest measured, 249.69R ft below land-surface datum, Aug. 30, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 07	242.24	AUG 30	249.69R

353945105574501. Local number, 17N.09E.35.1314A.  
LOCATION.--Lat 35°39'45", long 105°57'45", Hydrologic Unit 13020201.  
AQUIFER.--Tesuque Formation of Santa Fe Group.  
WELL CHARACTERISTICS.--Drilled monitoring well, diameter 2 in., depth 1,952 ft, screened interval 1,917-1,922 ft.  
INSTRUMENTATION.--Pressure transducer, 1-hour measurement.  
DATUM.--Elevation of land-surface datum is 6,880 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of steel casing, 2.60 ft above land-surface datum.  
REMARKS.--Records good.  
PERIOD OF RECORD.--Oct. 1998 to current year.  
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 86.73 ft below land-surface datum, Nov. 9, 1998; lowest measured, 94.39 ft below land-surface datum, Sept. 29, 2002.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	91.73	91.99	91.99	92.23	92.35	92.48	91.72	92.01	92.59	93.07	93.24	93.38
10	91.78	92.00	91.84	92.21	92.59	92.48	91.73	91.95	92.54	93.17	93.27	93.44
15	91.82	91.96	91.87	92.19	92.49	92.35	91.62	92.12	92.74	93.20	93.23	93.39
20	91.82	92.00	92.16	92.14	92.45	92.57	91.75	92.31	92.80	93.21	93.23	94.00
25	91.96	91.81	92.16	92.35	92.39	92.47	91.90	92.34	92.91	93.30	93.39	94.23
EOM	91.82	91.89	92.10	92.22	92.20	91.71	91.87	92.49	93.02	93.33	93.43	94.24
WTR YEAR 2002		HIGHEST		91.51 APR 7		LOWEST		94.39 SEP 29				

353945105574502. Local number, 17N.09E.35.1314B.  
LOCATION.--Lat 35°39'45", long 105°57'45", Hydrologic Unit 13020201.  
AQUIFER.--Tesuque Formation of Santa Fe Group.  
WELL CHARACTERISTICS.--Drilled monitoring well, diameter 2 in., depth 1,060 ft, screened interval 1,025-1,030 ft.  
INSTRUMENTATION.--Pressure transducer, 1-hour measurement.  
DATUM.--Elevation of land-surface datum is 6,880 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of steel casing, 2.70 ft above land-surface datum.  
REMARKS.--Records good.  
PERIOD OF RECORD.--Oct. 1998 to current year.  
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 187.41 ft below land-surface datum, Mar. 2, 1999; lowest measured, 227.65 ft below land-surface datum, Sept. 22 and 23, 2002.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	217.67	217.50	217.69	218.27	218.71	219.08	218.35	219.82	221.09	222.76	224.26	225.63
10	217.61	217.50	217.88	218.37	218.81	219.20	218.73	220.06	221.36	223.16	224.45	225.76
15	217.57	217.39	217.82	218.45	218.86	219.18	218.97	220.10	221.69	223.15	224.54	225.86
20	217.56	217.44	218.09	218.50	218.79	219.17	219.31	220.60	221.93	223.49	224.87	227.46
25	217.41	217.51	218.12	218.61	219.00	219.40	219.56	220.65	222.23	223.73	224.96	227.47
EOM	217.45	217.59	218.14	218.63	218.93	217.77	219.69	220.97	222.52	223.96	225.22	227.27
WTR YEAR 2002		HIGHEST		217.28 NOV 23		LOWEST		227.65 SEP 22, 23				

## GROUND-WATER LEVELS

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SANTA FE COUNTY--Continued  
Santa Fe Area

353945105574503. Local number, 17N.09E.35.1314C.  
 LOCATION.--Lat 35°39'45", long 105°57'45", Hydrologic Unit 13020201.  
 AQUIFER.--Tesuque Formation of Santa Fe Group.  
 WELL CHARACTERISTICS.--Drilled monitoring well, diameter 2 in., depth 780 ft, screened interval 669-674 ft.  
 INSTRUMENTATION.--Pressure transducer, 1-hour measurement.  
 DATUM.--Elevation of land-surface datum is 6,880 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of steel casing, 3.00 ft above land-surface datum.  
 REMARKS.--Records good.  
 PERIOD OF RECORD.--Oct. 1998 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 240.00 ft below land-surface datum, Oct. 17, 1998; lowest measured, 349.66 ft below land-surface datum, Oct. 24, 25, 26, 2000.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	290.25	290.63	290.80	291.33	291.79	291.95	329.95	342.64	344.28	342.11	344.60	345.74
10	289.99	290.83	290.95	291.43	291.91	291.93	335.38	344.01	343.15	342.13	344.82	345.96
15	289.86	290.96	290.97	291.50	291.99	291.88	337.74	344.62	342.88	342.19	345.04	346.00
20	289.98	291.10	291.08	291.50	291.98	292.19	339.48	344.36	342.32	342.58	345.32	328.83
25	290.13	290.94	291.14	291.61	291.96	292.43	340.59	343.97	342.11	343.62	345.52	311.91
EOM	290.43	290.82	291.23	291.66	291.96	313.61	341.52	344.13	342.14	344.23	345.62	306.16
WTR YEAR 2002			HIGHEST	289.86	OCT 15	LOWEST		346.05	SEP 16			

355000106092802. Local number, 19N.07E.36.3113B.  
 LOCATION.--Lat 35°50'00", long 106°09'28", Hydrologic Unit 13020201.  
 AQUIFER.--Tesuque Formation of Santa Fe Group.  
 WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4.5 in., depth 824 ft, screened 802-812 ft.  
 INSTRUMENTATION.--Transducer and data logger, 1-hour measurements.  
 DATUM.--Elevation of land-surface datum is 5,540 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1.80 ft above land-surface datum.  
 REMARKS.--Records poor, due to transducer malfunction.  
 PERIOD OF RECORD.--Feb. 1999 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 321.57 ft below land-surface datum, Apr. 27, 2000; lowest measured, 519.10 ft below land-surface datum, Nov. 24, 1999.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	452.00	---	445.80	446.41	448.17	462.02	---	450.10	481.54
10	---	---	---	452.04	---	446.29	447.11	448.22	---	---	470.99	483.35
15	---	---	452.25	453.00	444.90	446.21	447.26	441.09	---	---	474.18	468.22
20	---	---	452.95	453.34	447.05	446.94	447.53	454.31	---	---	476.22	481.72
25	---	---	450.41	454.19	447.24	446.94	447.94	457.82	---	---	478.41	483.78
EOM	---	---	452.04	449.23	435.23	433.09	448.10	460.43	---	463.31	480.08	485.31
WTR YEAR 2002			HIGHEST	431.28	MAR 30	LOWEST		485.55	SEP 30			

355000106092803. Local number, 19N.07E.36.3113C.  
 LOCATION.--Lat 35°50'00", long 106°09'28", Hydrologic Unit 13020201.  
 AQUIFER.--Tesuque Formation of Santa Fe Group.  
 WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 4.5 in., depth 356 ft, screened 324-334 ft.  
 INSTRUMENTATION.--Transducer and data logger, 1-hour measurements.  
 DATUM.--Elevation of land-surface datum is 5,540 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1.80 ft above land-surface datum.  
 REMARKS.--Records good.  
 PERIOD OF RECORD.--July 1997 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 214.06 ft below land-surface datum, May 4, 1999; lowest measured, 233.18 ft below land-surface datum, Sept. 12, 2002.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	229.78	230.33	230.26	230.71	231.03	231.22	231.41	231.62	231.84	---	232.30	232.65
10	229.89	230.39	230.24	230.73	231.32	231.28	231.47	231.41	---	---	232.40	232.65
15	230.00	230.21	230.28	230.72	231.08	230.97	231.19	231.47	---	---	232.32	232.80
20	230.08	230.32	230.74	230.65	231.11	231.26	231.36	231.69	---	---	232.33	232.63
25	230.11	229.95	230.74	231.09	231.14	231.10	231.63	231.73	---	---	232.53	232.76
EOM	230.04	230.18	230.64	230.71	230.86	231.25	231.46	231.77	---	232.28	232.59	232.73
WTR YEAR 2002			HIGHEST	229.75	OCT 4	LOWEST		233.18	SEP 12			

## GROUND-WATER LEVELS

SIERRA COUNTY  
Hot Springs Area

331002107150001. Local number, 13S.04W.21.213.

LOCATION.--Lat 33°10'02", long 107°15'00", Hydrologic Unit 13030101.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 13 in., depth unknown.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,355 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1-in. hole in west side of pump base, and 1.50 ft above land-surface datum.

PERIOD OF RECORD.--Feb. 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.54 ft below land-surface datum, Feb. 28, 1997; lowest measured, 65.56 ft below land-surface datum, Feb. 25, 1972.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 05	49.66	JUL 24	49.97

325921107185101 (formerly 325550107184001). Local number, 15S.05W.24.312.

LOCATION.--Lat 32°59'21", long 107°18'51", Hydrologic Unit 13030101.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth and casing information not available.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,279 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.20 ft above land-surface datum.

PERIOD OF RECORD.--May 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.97 ft below land-surface datum, July 27, 1992; lowest measured, 47.49 ft below land-surface datum, July 26, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 05	44.01	JUL 25	45.13

## Rincon Valley

325340107183001 (formerly 325350107175501). Local number, 16S.05W.25.211.

LOCATION.--Lat 32°53'40", long 107°18'30", Hydrologic Unit 13030102.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 10 in., depth 32 ft, cased to 32 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,198 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.29 ft below land-surface datum, Feb. 12, 1987; lowest measured, 25.95 ft below land-surface datum, Jan. 6, 1966.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 05	23.40	JUL 24	24.22

TAOS COUNTY  
Sunshine Valley

365035105360501 (formerly 365036105355301). Local number, 30N.13E.18.1121.

LOCATION.--Lat 36°50'35", long 105°36'05", Hydrologic Unit 13020101.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 10 in., depth 500 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 7,597 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.50 ft below land-surface datum, Jan. 16, 1994; lowest measured, 77.33 ft below land-surface datum, Aug. 9, 1978.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL								
OCT 04	69.66	JAN 15	69.98	FEB 28	69.65	APR 30	69.98	AUG 22	70.35		
NOV 15	69.65	26	69.70	28	69.65	MAY 31	70.16	30	70.46		
DEC 19	69.73	FEB 04	69.76	MAR 30	69.82	JUN 29	70.84	SEP 29	70.32		
19	69.65	13	69.78	30	69.82	JUL 31	70.28				

## GROUND-WATER LEVELS

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TAOS COUNTY--Continued  
Sunshine Valley

365644105363501 (formerly 365650105370001). Local number, 01S.74W.24.244.

LOCATION.--Lat 36°56'44", long 105°36'35", Hydrologic Unit 13020101.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 270 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 7,628 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 182.78 ft below land-surface datum, Jan. 17, 1996; lowest measured, 213.53 ft below land-surface datum, Aug. 10, 1965.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 26	184.89	AUG 22	184.08

TORRANCE COUNTY  
Estancia Valley

343443106024401. Local number, 04N.09E.07.334.

LOCATION.--Lat 34°34'43", long 106°02'44", Hydrologic Unit 13050001.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 16 in., reported depth 163 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,118 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in northwest side of pump base, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--Feb. 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 54.70 ft below land-surface datum, Feb. 10, 1958; lowest measured, 110.90 ft below land-surface datum, Aug. 3, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 05	102.18	SEP 06	PUMPING

344016106070901 (formerly 344016106064701). Local number, 05N.08E.08.424.

LOCATION.--Lat 34°40'16", long 106°07'09", Hydrologic Unit 13050001.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., reported depth 204 ft, cased to 98 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,218 ft above National Geodetic Vertical Datum of 1929. Measuring point: 3/4-in. plug in south side of discharge pipe, 1.80 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.03 ft below land-surface datum, Mar. 23, 1948; lowest measured, 135.70 ft below land-surface datum, July 11, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 05	129.82	SEP 06	PUMPING

344234106070601 (formerly 344234106074901). Local number, 06N.08E.32.212.

LOCATION.--Lat 34°42'34", long 106°07'06", Hydrologic Unit 13050001.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 18 in., reported depth 209 ft, cased to 84 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,174 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1 1/2-in. hole in pump base, 0.04 ft above land-surface datum.

REMARKS.--"R" indicates well recently pumped.

PERIOD OF RECORD.--Feb. 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.22 ft below land-surface datum, Feb. 18, 1947; lowest measured, 94.69R ft below land-surface datum, Aug. 30, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 05	90.01	SEP 06	PUMPING

## GROUND-WATER LEVELS

TORRANCE COUNTY--Continued  
Estancia Valley

344604105574601 (formerly 344622105575501). Local number, 06N.09E.11.211.

LOCATION.--Lat 34°46'04", long 105°57'46", Hydrologic Unit 13050001.

AQUIFER.--Valley fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 18 in., reported depth 148 ft, cased to 140 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,086 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.75 ft above land-surface datum.

PERIOD OF RECORD.--May 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.07 ft below land-surface datum, May 4, 1949; lowest measured, 41.42 ft below land-surface datum, Sept. 6, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 05	22.62	SEP 06	41.42

344842106032701. Local number, 07N.08E.25.121.

LOCATION.--Lat 34°48'43", long 106°03'22", Hydrologic Unit 13050001.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table unused irrigation well, diameter 16 in., depth 200 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,131 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.00 ft above land-surface datum.

PERIOD OF RECORD.--Feb. 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.30 ft below land-surface datum, Feb. 7, 1962; lowest measured, 74.63 ft below land-surface datum, Sept. 6, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 05	64.82	SEP 06	74.63

UNION COUNTY  
Clayton Area

355144103041201 (formerly 360940103083501). Local number, 19N.36E.23.2444.

LOCATION.--Lat 35°51'44", long 103°04'12", Hydrologic Unit 11090102.

AQUIFER.--Dakota and Purgatoire Formations.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 14 in., depth 206 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,326 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft above land-surface datum.

REMARKS.--"S" indicates nearby well pumping.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 145.22 ft below land-surface datum, Mar. 17, 1971; lowest measured, 158.58S ft below land-surface datum, Aug. 19, 1987.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21	151.08	SEP 10	151.13

361847103064701 (formerly 361910103170501). Local number, 24N.36E.17.244.

LOCATION.--Lat 36°18'47", long 103°06'47", Hydrologic Unit 11090103.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 20 in., depth 231 ft.

INSTRUMENTATION.--Continuous strip-chart recorder removed. Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,707 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.95 ft above land-surface datum.

PERIOD OF RECORD.--May 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 81.38 ft below land-surface datum, May 8, 1968; lowest measured, 106.30 ft below land-surface datum, Sept. 10, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	104.84	MAR 22	105.46	SEP 10	106.30

UNION COUNTY--Continued  
Clayton Area

362540103095001. Local number, 25N.35E.02.441.

LOCATION.--Lat 36°25'40", long 103°09'50", Hydrologic Unit 11090103.

AQUIFER.--Ogalalla Formation.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter unknown, depth 185 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,984 ft above National Geodetic Vertical Datum of 1929. Measuring point: Plugged hole in pump base, 1.70 ft above land-surface datum.

PERIOD OF RECORD.--Dec. 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 91.14 ft below land-surface datum, Jan. 9, 1989; lowest measured, 106.85 ft below land-surface datum, Feb. 2, 1971.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 22	94.05	SEP 10	94.15

363410103064801. Local number, 27N.36E.17.434.

LOCATION.--Lat 36°34'10", long 103°06'48", Hydrologic Unit 11100101.

AQUIFER.--Ogalalla Formation.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 200 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,837 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, north side, 1.20 ft above land-surface datum.

PERIOD OF RECORD.--Feb. 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 81.16 ft below land-surface datum, Jan. 21, 1975; lowest measured, 101.20 ft below land-surface datum, Sept. 11, 2002.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 22	100.22	SEP 11	101.20

## Capulin Area

364444104000201 (formerly 364430103595501). Local number, 29N.28E.18.341.

LOCATION.--Lat 36°44'44", long 104°00'02", Hydrologic Unit 11040001.

AQUIFER.--Cinders.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 78 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,820.8 ft above National Geodetic Vertical Datum of 1929. Measuring point: Edge of 2-in. hole in west side of steel plate, at land-surface datum.

REMARKS.--"P" indicates well pumping.

PERIOD OF RECORD.--July 1951, Aug. 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.01 ft below land-surface datum, Feb. 8, 1974; lowest measured, 53.38P ft below land-surface datum, Aug. 7, 1985.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 22	35.26	SEP 11	34.27

## QUALITY OF GROUND WATER

EXPLANATION OF GEOLOGIC UNIT (AQUIFER) CODES (LISTED FROM YOUNGEST TO OLDEST AGE) U-UPPER, M-MIDDLE, L-LOWER:

110 AVMB-Cenozoic, Quaternary, alluvium, bolson deposits and other surface deposits  
 110 BLSN-Cenozoic, Quaternary, bolson fill  
 121 OGLL Cenozoic, Tertiary, Pliocene, Ogallala Formation  
 325 MDER-Paleozoic, Middle Pennsylvanian, Des Moinesian, Madera Limestone  
 400 PCMB-Paleozoic, Precambrian, Precambrian Erathem

LOCAL IDENTIFIER,--Indicates location by New Mexico or Texas local well number, if area not surveyed location by site name.

REMARKS.--Ground water sites in this table are segregated by county, which appear alphabetically. The sites are then listed in ascending well numbers that are explained at the beginning of this report.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

## BERNALLILO COUNTY

LOCAL IDENTIFIER	STATION NUMBER	COUNTY	STATION TYPE	DATE	TIME	GEO-LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)
08N.07E.28.221	345348106122601	001	GW	06-10-02	1500	325MDER	45.0	6660	7.1	780
09N.05E.12.241	350119106210901	001	GW	02-01-02	1430	--	--	7060	--	1250
09N.06E.03.321	350157106172501	001	GW	06-18-02	1100	--	--	7080	7.1	1060
09N.06E.17.411	345948106191701	001	GW	12-21-01	1300	--	--	7680	7.1	920
09N.06E.29.131	345843106191201	001	GW	05-13-02	1800	--	--	7510	7.2	1140
09N.06E.29.244	345833106185101	001	GW	06-14-02	1700	325MDER	315	7420	6.9	1580
09N.06E.30.441	345819106200601	001	GW	06-22-02	1500	325MDER	--	7420	7.2	1120
09N.06E.33.324	345733106181901	001	GW	06-22-02	1630	325MDER	128	7280	7.1	1510
09N.06E.34.242	345754106164601	001	GW	06-26-02	1630	--	--	7220	7.1	1180
09N.06E.34.432	345726106170401	001	GW	06-28-02	1230	--	--	7230	7.0	900
10N.05E.14.312	350531106224301	001	GW	04-19-02	1200	--	160	6540	7.2	1000
10N.05E.14.413A	350522106222501	001	GW	12-18-01	1500	--	73	6400	7.2	1670
10N.05E.19.322	350423106263301	001	GW	01-28-02	1500	110AVMB	146	6255	7.4	570
10N.05E.23.313	350434106225701	001	GW	05-31-02	1300	325MDER	253	6350	7.2	750
10N.06E.05.441	350655106185601	001	GW	04-18-02	1400	--	300	6880	7.1	1900
10N.06E.07.331	350604106205801	001	GW	02-19-02	1400	--	85	6520	--	1730
11N.05E.23.222B	351011106220401	001	GW	02-25-02	1500	--	--	7100	7.0	850
11N.06E.27.342	350840106171601	001	GW	06-30-02	2000	--	320	6780	7.3	1120

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

BERNALILLO COUNTY--Continued

LOCAL IDENTIFIER	DATE	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM ADSORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)
08N.07E.28.221	06-10-02	12.5	350	120	12.4	.62	.7	29.6	239	27.6	.2
09N.05E.12.241	02-01-02	10.6	530	161	30.1	1.95	1	52.3	360	167	.3
09N.06E.03.321	06-18-02	14.0	480	143	29.2	1.92	.7	37.5	275	109	.4
09N.06E.17.411	12-21-01	13.0	340	73.7	37.9	7.92	1	53.2	332	52.5	.6
09N.06E.29.131	05-13-02	14.4	510	152	31.9	3.18	.5	26.7	323	129	.5
09N.06E.29.244	06-14-02	14.5	500	130	42.0	6.52	3	157	373	240	1.3
09N.06E.30.441	06-22-02	15.5	470	130	35.0	3.71	.9	44.8	279	136	.5
09N.06E.33.324	06-22-02	14.5	660	214	30.4	2.30	.8	45.0	274	244	.3
09N.06E.34.242	06-26-02	14.0	520	148	35.5	2.77	.7	37.0	283	130	.4
09N.06E.34.432	06-28-02	13.5	420	130	22.5	2.95	.5	24.7	260	80.9	.7
10N.05E.14.312	04-19-02	14.0	460	144	24.9	1.43	.7	33.1	261	64.2	.3
10N.05E.14.413A	12-18-01	13.0	660	191	44.1	1.94	2	92.7	198	213	.3
10N.05E.19.322	01-28-02	16.4	250	69.6	17.4	3.86	.6	22.4	210	8.22	1.9
10N.05E.23.313	05-31-02	16.0	340	73.4	38.4	2.41	.6	25.1	266	39.4	.5
10N.06E.05.441	04-18-02	15.0	770	213	57.6	3.68	1	69.3	224	365	.1
10N.06E.07.331	02-19-02	13.4	680	192	49.0	2.92	1	84.6	306	328	.2
11N.05E.23.222B	02-25-02	10.4	380	131	13.6	1.04	.7	29.6	260	63.3	.6
11N.06E.27.342	06-30-02	14.5	490	155	26.0	2.24	.5	26.0	173	166	.2

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

BERNALILLO COUNTY--Continued

LOCAL IDENT- I- FIER	DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
08N.07E.28.221	06-10-02	17.0	47.7	407	<.04	E.06	2.11	<.008	.018	.02	1.6
09N.05E.12.241	02-01-02	16.1	52.3	711	<.04	E.10	3.22	<.008	.012	E.01	1.7
09N.06E.03.321	06-18-02	15.1	113	630	<.04	E.08	3.42	<.008	.014	E.01	1.9
09N.06E.17.411	12-21-01	14.1	99.1	540	.14	.25	.40	<.008	.006	<.02	1.3
09N.06E.29.131	05-13-02	13.5	79.4	636	<.04	E.07	1.42	<.008	.019	<.02	1.4
09N.06E.29.244	06-14-02	13.6	144	958	<.02	.18	.06	<.010	.008	<.01	3.8
09N.06E.30.441	06-22-02	12.9	80.8	629	<.04	.14	3.96	<.008	E.003	<.02	2.6
09N.06E.33.324	06-22-02	17.4	90.8	849	<.04	.21	9.06	<.008	.008	<.02	3.4
09N.06E.34.242	06-26-02	17.4	117	671	<.04	.10	2.77	<.008	E.003	<.02	1.4
09N.06E.34.432	06-28-02	16.5	63.4	497	<.04	E.09	<.05	<.008	<.004	<.02	1.4
10N.05E.14.312	04-19-02	18.8	146	589	<.04	E.06	.06	<.008	.006	<.02	1.3
10N.05E.14.413A	12-18-01	20.3	295	986	E.02	E.07	2.25	<.008	.012	<.02	1.0
10N.05E.19.322	01-28-02	18.5	76.5	347	<.04	<.10	.60	<.008	E.003	<.02	E.6n
10N.05E.23.313	05-31-02	16.4	75.5	437	<.04	<.10	1.34	<.008	<.004	<.02	E.5n
10N.06E.05.441	04-18-02	15.4	157	1060	<.04	.25	9.61	<.008	.004	<.02	4.3
10N.06E.07.331	02-19-02	20.1	70.5	970	<.04	.14	8.75	<.008	.033	.02	2.1
11N.05E.23.222B	02-25-02	17.2	35.6	449	<.04	<.10	.17	<.008	E.002	<.02	1.0
11N.06E.27.342	06-30-02	18.7	101	641	<.04	.12	9.36	<.008	.027	.02	2.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

BERNALILLO COUNTY--Continued

LOCAL IDENT- I- FIER	DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
08N.07E.28.221	06-10-02	<2	40	<10	<2.0
09N.05E.12.241	02-01-02	<2	40	16	E2.2b
09N.06E.03.321	06-18-02	E2	50	<10	<2.0
09N.06E.17.411	12-21-01	E1	160	<10	29.2
09N.06E.29.131	05-13-02	<2	60	<10	E.8n
09N.06E.29.244	06-14-02	70	170	<10	28.9
09N.06E.30.441	06-22-02	5	100	<10	E2.7
09N.06E.33.324	06-22-02	E1	50	23	E1.6
09N.06E.34.242	06-26-02	<2	80	151	8.5
09N.06E.34.432	06-28-02	8	70	21	15.5
10N.05E.14.312	04-19-02	<2	30	31	3.5
10N.05E.14.413A	12-18-01	E2	50	<10	<2.0
10N.05E.19.322	01-28-02	<2	40	47	3.5
10N.05E.23.313	05-31-02	M	60	E6	E2.5b
10N.06E.05.441	04-18-02	<2	40	63	E1.1n
10N.06E.07.331	02-19-02	<2	100	<10	<2.0
11N.05E.23.222B	02-25-02	<2	20	<10	<2.0
11N.06E.27.342	06-30-02	<2	60	<10	<2.0

Remark codes used in this report:

- < -- Less than
- E -- Estimated value
- M -- Presence verified, not quantified

Value qualifier codes used in this report:

- b -- Value was extrapolated below lowest calibration standard
- n -- Below the laboratory reporting level

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

CURRY COUNTY

LOCAL IDENTIFIER	STATION NUMBER	COUNTY	STATION TYPE	DATE	TIME	GEO-LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
02N.35E.18.434	342328103182401	009	GW	03-14-02	1300	121OGLL	365.92	4277.04	4.8	7.9
02N.35E.19.222	342321103181001	009	GW	03-14-02	0910	121OGLL	355.35	4262.67	5.3	7.9
02N.35E.19.241	342307103181601	009	GW	03-14-02	1200	121OGLL	371.81	4272.96	3.4	7.9
02N.35E.19.242	342309103180601	009	GW	03-14-02	1040	121OGLL	295	4271.90	4.6	7.8
02N.35E.30.23211	342219103183101	009	GW	03-12-02	1110	121OGLL	294.4	4264.7	7.6	8.0
02N.35E.30.422	342205103181001	009	GW	03-13-02	1150	121OGLL	365	4264	6.7	8.2
02N.35E.30.423	342157103181701	009	GW	03-12-02	1315	121OGLL	354.87	4265	4.7	7.8
02N.35E.30.4242A	342203103181001	009	GW	03-13-02	1030	121OGLL	359.50	4263	6.1	8.1
02N.35E.30.4244	342156103180801	009	GW	03-13-02	0900	121OGLL	359.77	4264	2.7	8.1
02N.35E.30.424E	342157103181101	009	GW	03-13-02	1430	121OGLL	365	4264	5.2	8.1
02N.35E.30.424F	342200103180901	009	GW	03-13-02	1315	121OGLL	365	4264	4.7	8.1

LOCAL IDENTIFIER	DATE	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM ADSORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	ANC WATER UNFLTRD IT FIELD (MG/L AS CaCO3) (00419)
02N.35E.18.434	03-14-02	900	18.4	310	50.1	44.9	7.16	1	58.4	179	173
02N.35E.19.222	03-14-02	826	17.9	320	49.9	45.9	7.21	1	47.7	171	156
02N.35E.19.241	03-14-02	743	17.9	270	43.2	39.5	6.96	1	53.3	185	172
02N.35E.19.242	03-14-02	944	17.8	380	60.5	55.7	8.20	1	52.6	205	176
02N.35E.30.23211	03-12-02	763	18.1	280	44.5	40.4	6.28	1	49.4	155	152
02N.35E.30.422	03-13-02	773	18.3	280	46.0	40.2	6.74	1	53.1	161	146
02N.35E.30.423	03-12-02	582	18.2	220	33.6	32.6	5.96	1	49.0	270	244
02N.35E.30.4242A	03-13-02	762	18.4	270	42.5	39.7	6.42	2	57.5	175	157
02N.35E.30.4244	03-13-02	563	18.3	200	30.5	29.3	5.41	1	47.2	195	182
02N.35E.30.424E	03-13-02	775	18.4	290	45.7	42.7	6.41	1	49.3	167	155
02N.35E.30.424F	03-13-02	845	18.4	320	50.1	46.0	6.85	1	55.4	160	145

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

CURRY COUNTY--Continued

LOCAL IDENTIFIER	DATE	ANC BICARBONATE FIELD MG/L AS HCO3 (00450)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	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)
02N.35E.18.434	03-14-02	211	.31	120	2.2	35.6	87.4	548	513	200	<10
02N.35E.19.222	03-14-02	190	.35	80.7	2.1	34.8	135	558	499	170	<10
02N.35E.19.241	03-14-02	210	.33	48.7	2.3	35.7	125	499	460	190	<10
02N.35E.19.242	03-14-02	215	.36	77.6	1.8	37.8	169	668	572	200	<10
02N.35E.30.23211	03-12-02	185	.52	79.6	2.6	36.9	112	485	465	160	20
02N.35E.30.422	03-13-02	178	.46	64.3	2.6	35.8	141	499	480	190	<10
02N.35E.30.423	03-12-02	298	.17	9.97	2.3	40.4	33.1	350	355	220	<10
02N.35E.30.4242A	03-13-02	192	.39	53.3	2.6	36.3	136	482	471	190	<10
02N.35E.30.4244	03-13-02	222	.20	13.2	2.9	37.0	72.5	393	349	180	<10
02N.35E.30.424E	03-13-02	189	.50	68.9	2.5	36.6	129	494	476	190	<10
02N.35E.30.424F	03-13-02	177	.50	73.7	2.5	36.9	161	539	522	180	10

LOCAL IDENTIFIER	DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)
02N.35E.18.434	03-14-02	94	1930
02N.35E.19.222	03-14-02	86	1540
02N.35E.19.241	03-14-02	84	1460
02N.35E.19.242	03-14-02	106	1970
02N.35E.30.23211	03-12-02	91	1460
02N.35E.30.422	03-13-02	90	1450
02N.35E.30.423	03-12-02	92	1150
02N.35E.30.4242A	03-13-02	88	1370
02N.35E.30.4244	03-13-02	79	1010
02N.35E.30.424E	03-13-02	92	1430
02N.35E.30.424F (C	03-13-02	94	1580

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value  
 M -- Presence verified, not quantified

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

## DONA ANA COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	STATION TYPE	DATE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	DEPTH OF WELL, TOTAL (FEET) (72008)
18S.04W.08.342	324510107162601	013	GW	05-22-02	0950	110ALVM	9.54	18	8.4	18.35	
19S.02W.17.1414	323930107041401	013	GW	05-21-02	0930	110ALVM	11.79	23	13	23.25	
19S.04W.01.214	324122107120801	013	GW	05-22-02	1410	110ALVM	11.80	21	12	22.04	
20S.02W.02.1444	323601107010001	013	GW	05-21-02	1330	110ALVM	6.31	14	4.9	14.89	
21S.04E.10.233	322947106311101	013	GW	10-03-01 01-08-02 04-04-02 07-11-02	1310 1420 1425 1232	400PCMB 400PCMB 400PCMB 400PCMB	-- -- -- --	-- -- -- --	-- -- -- --	163 163 163 163	
21S.04E.10.321	322943106312801	013	GW	01-03-02 07-11-02	1600 0930	400PCMB 400PCMB	-- --	-- --	-- --	103 103	
21S.04E.10.322A	322943106312301	013	GW	10-03-01 01-08-02 04-03-02 07-10-02	1007 1000 1010 1657	400PCMB 400PCMB 400PCMB 400PCMB	-- -- -- --	-- -- -- --	-- -- -- --	155 155 155 155	
21S.04E.10.324	322935106311801	013	GW	10-03-01 01-10-02 04-04-02 07-11-02	1005 1025 1120 1440	400PCMB 400PCMB 400PCMB 400PCMB	-- -- -- --	-- -- -- --	-- -- -- --	135 135 135 135	
21S.04E.10.411B	322941106311301	013	GW	10-03-01 01-08-02 04-03-02 07-10-02	1429 1300 1240 1321	400PCMB 400PCMB 400PCMB 400PCMB	-- -- -- --	-- -- -- --	-- -- -- --	85 85 85 85	
21S.04E.10.411C	322941106311502	013	GW	10-03-01 01-08-02 04-03-02 07-10-02	1539 1355 1345 1408	400PCMB 400PCMB 400PCMB 400PCMB	-- -- -- --	-- -- -- --	-- -- -- --	80 80 80 80	
21S.04E.10.411D	322939106311701	013	GW	10-03-01 01-08-02 04-03-02 07-10-02	1323 1210 1155 1454	400PCMB 400PCMB 400PCMB 400PCMB	-- -- -- --	-- -- -- --	-- -- -- --	110 110 110 110	
21S.04E.10.411E	322943106311401	013	GW	10-03-01 01-08-02 04-04-02 07-11-02	1055 1235 1315 1105	400PCMB 400PCMB 400PCMB 400PCMB	-- -- -- --	-- -- -- --	-- -- -- --	100 100 100 100	
21S.04E.10.411G	322944106311601	013	GW	10-03-01 01-08-02 04-04-02 07-11-02	1145 1145 1230 1016	400PCMB 400PCMB 400PCMB 400PCMB	-- -- -- --	-- -- -- --	-- -- -- --	158 158 158 158	
21S.04E.10.412	322943106310501	013	GW	10-03-01 01-08-02 04-04-02 07-11-02	1400 1510 1520 1318	400PCMB 400PCMB 400PCMB 400PCMB	-- -- -- --	-- -- -- --	-- -- -- --	120 120 120 120	
21S.04E.10.413A	322938106311601	013	GW	10-03-01 01-08-02 04-03-02 07-10-02	1155 1115 1110 1547	400PCMB 400PCMB 400PCMB 400PCMB	-- -- -- --	-- -- -- --	-- -- -- --	120 120 120 120	

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENTIFIER	DATE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)
18S.04W.08.342	05-22-02	4104.	653	.7	8	7.4	1460	17.8	14.5	8	320
19S.02W.17.1414	05-21-02	4030.	655	<.1	--	7.3	1320	--	19.0	170	420
19S.04W.01.214	05-22-02	4062.	653	2.5	32	7.2	1340	20.9	19.5	120	380
20S.02W.02.1444	05-21-02	4008.	654	.5	7	7.6	1400	32.2	20.6	170	390
21S.04E.10.233	10-03-01 01-08-02 04-04-02 07-11-02	5691.94 5691.94 5691.94 5691.94	-- -- -- --	.2 .2 .2 .8	-- -- -- --	7.4 7.3 7.2 7.4	997 -- 961 991	-- -- -- --	22.0 19.6 20.0 20.1	-- -- -- --	400 390 -- --
21S.04E.10.321	01-03-02 07-11-02	5794.94 5794.94	-- --	2.7 3.0	-- --	7.6 7.4	-- 855	-- --	18.4 21.8	-- --	370 --
21S.04E.10.322A	10-03-01 01-08-02 04-03-02 07-10-02	5755.18 5755.18 5755.18 5755.18	-- -- -- --	2.0 1.9 1.7 1.7	-- -- -- --	7.2 6.9 7.1 7.0	977 936 975 967	-- -- -- --	19.9 19.5 19.2 19.8	-- -- -- --	400 400 -- --
21S.04E.10.324	10-03-01 01-10-02 04-04-02 07-11-02	5679.70 5679.70 5679.70 5679.70	-- -- -- --	.6 .7 1.5 .9	-- -- -- --	7.3 7.2 7.2 7.1	704 -- 688 712	-- -- -- --	20.7 18.6 20.3 20.8	-- -- -- --	280 270 -- --
21S.04E.10.411B	10-03-01 01-08-02 04-03-02 07-10-02	5691.25 5691.25 5691.25 5691.25	-- -- -- --	4.9 5.3 3.5 4.7	-- -- -- --	7.3 7.2 7.2 7.2	960 920 928 941	-- -- -- --	20.1 19.7 19.5 20.1	-- -- -- --	390 390 -- --
21S.04E.10.411C	10-03-01 01-08-02 04-03-02 07-10-02	5687.96 5687.96 5687.96 5687.96	-- -- -- --	3.9 4.4 1.1 1.8	-- -- -- --	7.4 7.2 7.5 7.5	917 880 899 903	-- -- -- --	19.9 19.6 19.3 20.2	-- -- -- --	360 360 -- --
21S.04E.10.411D	10-03-01 01-08-02 04-03-02 07-10-02	5695.75 5695.75 5695.75 5695.75	-- -- -- --	5.3 5.1 3.2 4.2	-- -- -- --	7.3 7.2 7.2 7.2	903 865 882 890	-- -- -- --	20.3 19.8 19.5 20.2	-- -- -- --	360 350 -- --
21S.04E.10.411E	10-03-01 01-08-02 04-04-02 07-11-02	5699.34 5699.34 5699.34 5699.34	-- -- -- --	4.8 4.2 4.9 4.9	-- -- -- --	7.3 7.2 7.1 7.1	1000 -- 966 999	-- -- -- --	20.9 20.0 19.8 19.9	-- -- -- --	400 390 -- --
21S.04E.10.411G	10-03-01 01-08-02 04-04-02 07-11-02	5723.32 5723.32 5723.32 5723.32	-- -- -- --	.2 .3 .3 .4	-- -- -- --	7.3 7.2 7.2 7.2	1010 -- 976 1010	-- -- -- --	21.5 20.2 20.2 20.2	-- -- -- --	390 390 -- --
21S.04E.10.412	10-03-01 01-08-02 04-04-02 07-11-02	5643.55 5643.55 5643.55 5643.55	-- -- -- --	.5 .5 .9 .3	-- -- -- --	7.3 7.2 7.1 7.0	977 -- 955 985	-- -- -- --	21.5 19.9 19.9 20.1	-- -- -- --	380 370 -- --
21S.04E.10.413A	10-03-01 01-08-02 04-03-02 07-10-02	5689.92 5689.92 5689.92 5689.92	-- -- -- --	5.7 5.3 7.1 5.5	-- -- -- --	7.5 7.2 7.3 7.3	874 839 855 853	-- -- -- --	20.2 19.8 19.5 20.4	-- -- -- --	350 350 -- --

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

## DONA ANA COUNTY--Continued

LOCAL IDENT- I- FIER	DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ANC BICAR- BONATE IT FIELD MG/L AS HCO3 (00450)
18S.04W.08.342	05-22-02	91.3	21.3	10.2	5	189	--	308	--	376	--
19S.02W.17.1414	05-21-02	133	20.0	7.10	3	131	--	246	--	300	--
19S.04W.01.214	05-22-02	120	19.9	7.51	3	140	--	266	--	324	--
20S.02W.02.1444	05-21-02	115	25.4	8.90	3	131	--	225	--	274	--
21S.04E.10.233	10-03-01 01-08-02 04-04-02 07-11-02	113 111 -- --	29.1 28.1 -- --	1.84 1.92 -- --	1 1 -- --	67.7 66.3 -- --	273 263 -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.321	01-03-02 07-11-02	99.9 --	29.4 --	8.20 --	1 --	58.2 --	276 --	-- --	262 --	-- --	319 --
21S.04E.10.322A	10-03-01 01-08-02 04-03-02 07-10-02	112 112 -- --	29.1 28.4 -- --	1.23 1.20 -- --	1 1 -- --	64.2 63.6 -- --	279 268 -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.324	10-03-01 01-10-02 04-04-02 07-11-02	79.5 77.5 -- --	19.2 18.5 -- --	3.30 2.87 -- --	1 1 -- --	45.0 44.5 -- --	221 214 -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411B	10-03-01 01-08-02 04-03-02 07-10-02	108 108 -- --	29.3 28.3 -- --	.96 .95 -- --	1 1 -- --	62.2 61.2 -- --	264 254 -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411C	10-03-01 01-08-02 04-03-02 07-10-02	100 100 -- --	27.0 26.5 -- --	1.20 1.14 -- --	1 1 -- --	58.5 58.3 -- --	252 241 -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411D	10-03-01 01-08-02 04-03-02 07-10-02	97.1 95.8 -- --	27.6 27.3 -- --	1.30 1.29 -- --	1 1 -- --	57.5 57.5 -- --	230 221 -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411E	10-03-01 01-08-02 04-04-02 07-11-02	113 113 -- --	28.3 27.3 -- --	1.05 .96 -- --	1 1 -- --	64.3 61.8 -- --	255 245 -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411G	10-03-01 01-08-02 04-04-02 07-11-02	112 112 -- --	26.9 26.5 -- --	1.36 1.42 -- --	2 2 -- --	75.0 73.2 -- --	292 280 -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.412	10-03-01 01-08-02 04-04-02 07-11-02	109 108 -- --	26.4 25.6 -- --	2.43 2.60 -- --	1 1 -- --	66.0 64.6 -- --	243 235 -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.413A	10-03-01 01-08-02 04-03-02 07-10-02	96.4 96.4 -- --	25.9 25.6 -- --	1.43 1.43 -- --	1 1 -- --	53.4 52.2 -- --	237 228 -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENTIFIER	DATE	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SI02) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
18S.04W.08.342	05-22-02	.19	122	2.3	26.5	267	956	920	E.02	.21	.48
19S.02W.17.1414	05-21-02	.22	107	1.3	24.9	277	908	866	<.04	.24	3.41
19S.04W.01.214	05-22-02	.22	98.5	1.0	17.8	282	875	851	<.04	.17	.58
20S.02W.02.1444	05-21-02	.19	123	.6	17.3	293	936	872	.05	.43	4.59
21S.04E.10.233	10-03-01 01-08-02 04-04-02 07-11-02	.28 .28 -- --	34.6 33.5 -- --	4.5 4.4 -- --	24.5 24.1 -- --	206 207 -- --	670 636 -- --	646 635 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.321	01-03-02 07-11-02	.27 --	30.0 --	4.4 --	24.6 --	169 --	612 --	582 --	-- --	-- --	-- --
21S.04E.10.322A	10-03-01 01-08-02 04-03-02 07-10-02	.28 .27 -- --	30.7 29.5 -- --	4.7 5.4 -- --	23.5 23.9 -- --	197 198 -- --	656 648 -- --	630 623 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.324	10-03-01 01-10-02 04-04-02 07-11-02	.18 .19 -- --	25.2 24.1 -- --	5.1 5.5 -- --	23.8 24.3 -- --	108 107 -- --	446 446 -- --	442 433 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411B	10-03-01 01-08-02 04-03-02 07-10-02	.30 .28 -- --	30.6 29.6 -- --	5.4 4.6 -- --	24.8 24.7 -- --	171 173 -- --	626 630 -- --	591 583 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411C	10-03-01 01-08-02 04-03-02 07-10-02	.28 .26 -- --	28.8 28.2 -- --	5.3 5.3 -- --	24.4 24.6 -- --	156 156 -- --	604 602 -- --	553 546 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411D	10-03-01 01-08-02 04-03-02 07-10-02	.21 .19 -- --	36.5 34.8 -- --	4.9 5.1 -- --	22.8 22.7 -- --	150 151 -- --	594 586 -- --	536 529 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411E	10-03-01 01-08-02 04-04-02 07-11-02	.26 .26 -- --	43.7 40.7 -- --	4.8 5.3 -- --	23.3 24.2 -- --	174 175 -- --	678 674 -- --	606 596 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411G	10-03-01 01-08-02 04-04-02 07-11-02	.27 .29 -- --	32.3 31.8 -- --	4.5 5.0 -- --	24.3 23.9 -- --	208 209 -- --	662 670 -- --	660 652 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.412	10-03-01 01-08-02 04-04-02 07-11-02	.29 .28 -- --	40.9 38.7 -- --	4.2 4.5 -- --	21.8 20.9 -- --	188 187 -- --	656 646 -- --	604 593 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.413A	10-03-01 01-08-02 04-03-02 07-10-02	.25 .24 -- --	33.3 32.2 -- --	4.3 3.5 -- --	22.9 23.1 -- --	147 146 -- --	564 562 -- --	528 518 -- --	-- -- -- --	-- -- -- --	-- -- -- --

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENT- I- FIER	DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, 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)	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)
18S.04W.08.342	05-22-02	.023	.08	<1	3.6	90	<.06	287	.09	<.8	.92
19S.02W.17.1414	05-21-02	.073	.02	<1	1.6	67	<.06	219	.05	<.8	.49
19S.04W.01.214	05-22-02	E.006	<.02	1	.9	57	<.06	239	.04	<.8	.31
20S.02W.02.1444	05-21-02	E.006	.05	<1	3.2	106	<.06	175	E.02	<.8	.57
21S.04E.10.233	10-03-01 01-08-02 04-04-02 07-11-02	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	40 40 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.321	01-03-02 07-11-02	-- --	-- --	-- --	-- --	-- --	-- --	50 --	-- --	-- --	-- --
21S.04E.10.322A	10-03-01 01-08-02 04-03-02 07-10-02	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	40 40 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.324	10-03-01 01-10-02 04-04-02 07-11-02	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	30 30 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411B	10-03-01 01-08-02 04-03-02 07-10-02	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	50 50 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411C	10-03-01 01-08-02 04-03-02 07-10-02	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	70 70 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411D	10-03-01 01-08-02 04-03-02 07-10-02	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	120 120 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411E	10-03-01 01-08-02 04-04-02 07-11-02	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	40 40 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.411G	10-03-01 01-08-02 04-04-02 07-11-02	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	40 40 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.412	10-03-01 01-08-02 04-04-02 07-11-02	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	50 40 -- --	-- -- -- --	-- -- -- --	-- -- -- --
21S.04E.10.413A	10-03-01 01-08-02 04-03-02 07-10-02	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	40 30 -- --	-- -- -- --	-- -- -- --	-- -- -- --



QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENT- I- FIER	DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
18S.04W.08.342	05-22-02	3.9	<1
19S.02W.17.1414	05-21-02	2.6	1
19S.04W.01.214	05-22-02	1.7	2
20S.02W.02.1444	05-21-02	2.2	1
21S.04E.10.233	10-03-01 01-08-02 04-04-02 07-11-02	-- -- -- --	-- -- -- --
21S.04E.10.321	01-03-02 07-11-02	-- --	-- --
21S.04E.10.322A	10-03-01 01-08-02 04-03-02 07-10-02	-- -- -- --	-- -- -- --
21S.04E.10.324	10-03-01 01-10-02 04-04-02 07-11-02	-- -- -- --	-- -- -- --
21S.04E.10.411B	10-03-01 01-08-02 04-03-02 07-10-02	-- -- -- --	-- -- -- --
21S.04E.10.411C	10-03-01 01-08-02 04-03-02 07-10-02	-- -- -- --	-- -- -- --
21S.04E.10.411D	10-03-01 01-08-02 04-03-02 07-10-02	-- -- -- --	-- -- -- --
21S.04E.10.411E	10-03-01 01-08-02 04-04-02 07-11-02	-- -- -- --	-- -- -- --
21S.04E.10.411G	10-03-01 01-08-02 04-04-02 07-11-02	-- -- -- --	-- -- -- --
21S.04E.10.412	10-03-01 01-08-02 04-04-02 07-11-02	-- -- -- --	-- -- -- --
21S.04E.10.413A	10-03-01 01-08-02 04-03-02 07-10-02	-- -- -- --	-- -- -- --

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENTIFIER	STATION NUMBER	COUNTY	STATION TYPE	DATE	TIME	GEO-LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
21S.04E.10.413B	322933106310901	013	GW	10-04-01	1015	400PCMB	110	5619.35	.2	7.4
				01-08-02	1045	400PCMB	110	5619.35	.5	7.3
				04-03-02	1540	400PCMB	110	5619.35	.4	7.4
				07-11-02	1725	400PCMB	110	5619.35	.5	7.3
21S.04E.10.414A	322938106310801	013	GW	10-04-01	1009	400PCMB	102	5642.92	3.8	7.3
				01-10-02	1245	400PCMB	102	5642.92	4.1	7.0
				04-03-02	1640	400PCMB	102	5642.92	3.4	7.3
				07-10-02	0954	400PCMB	102	5642.92	4.8	7.3
21S.04E.10.414B	322937106310901	013	GW	10-04-01	1156	400PCMB	103	5641.18	4.1	7.5
				01-10-02	1330	400PCMB	103	5641.18	3.0	6.9
				04-03-02	1500	400PCMB	103	5641.18	4.1	7.4
				07-10-02	1044	400PCMB	103	5641.18	5.6	7.4
21S.04E.10.414C	322936106311001	013	GW	10-03-01	1631	400PCMB	110	5641.49	4.2	7.4
				01-08-02	1445	400PCMB	110	5641.49	4.9	7.1
				04-03-02	1420	400PCMB	110	5641.49	3.2	--
				07-10-02	1228	400PCMB	110	5641.49	4.5	7.3
21S.04E.10.414D	322937106310902	013	GW	10-04-01	1103	400PCMB	159	5637.96	3.0	7.2
				01-10-02	1410	400PCMB	159	5637.96	4.8	7.1
				04-03-02	1545	400PCMB	159	5637.96	2.6	7.2
				07-10-02	1136	400PCMB	159	5637.96	3.7	7.2
21S.04E.10.421	322939106305701	013	GW	10-05-01	0904	400PCMB	200	5568.09	6.9	7.5
				01-10-02	1335	400PCMB	200	5568.09	7.1	7.7
				04-03-02	1300	400PCMB	200	5568.09	6.8	7.5
				07-11-02	1115	400PCMB	200	5568.09	5.9	7.6
21S.04E.10.422	322940106305101	013	GW	10-03-01	1510	400PCMB	200	5531.54	.3	7.4
				01-10-02	1145	400PCMB	200	5531.54	.3	7.3
				04-04-02	0950	400PCMB	200	5531.54	.3	7.3
				07-12-02	1005	400PCMB	200	5531.54	.3	7.3
21S.04E.10.423	322935106310301	013	GW	10-04-01	1248	400PCMB	147	5594.83	3.5	7.2
				01-08-02	1535	400PCMB	147	5594.83	5.5	7.2
				04-04-02	1315	400PCMB	147	5594.83	5.5	7.2
				07-11-02	1537	400PCMB	147	5594.83	5.9	7.2
21S.04E.10.434	322924106310501	013	GW	10-03-01	1610	400PCMB	110	5557.15	4.5	7.3
				01-08-02	0950	400PCMB	110	5557.15	4.0	7.2
				04-04-02	1000	400PCMB	110	5557.15	4.8	7.2
				07-11-02	1622	400PCMB	110	5557.15	4.8	7.1
21S.04E.10.441	322932106305601	013	GW	10-04-01	1450	400PCMB	130	5536.59	--	7.3
				01-10-02	1100	400PCMB	130	5536.59	4.8	6.9
				04-04-02	1235	400PCMB	130	5536.59	6.1	7.2
				07-12-02	1110	400PCMB	130	5536.59	3.9	7.3
21S.04E.10.442	322927106305101	013	GW	10-04-01	1240	400PCMB	179	5494.5	M	7.8
				01-10-02	1340	400PCMB	179	5494.5	.3	7.4
				04-04-02	1155	400PCMB	179	5494.5	.2	7.3
				07-12-02	1155	400PCMB	179	5494.5	.2	7.2
21S.04E.11.333	322923106304601	013	GW	10-04-01	1330	400PCMB	145	5451.22	7.1	7.3
				01-10-02	1445	400PCMB	145	5451.22	5.0	7.3
				04-04-02	1035	400PCMB	145	5451.22	4.8	7.2
				07-12-02	1015	400PCMB	145	5451.22	3.3	7.3





QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENT- I- FIER	STATION NUMBER	COUNTY	STATION TYPE	DATE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS- SOLVED (MG/L) (00300)
21S.04E.11.343	322924106302601	013	GW	01-04-02	0900	400PCMB	75	5343.77	--	--
				07-10-02	1115	400PCMB	75	5343.77	--	8.3
21S.04E.13.143	322857106292801	013	GW	01-05-02	1600	400PCMB	99	4956.87	--	6.2
				07-10-02	1400	400PCMB	99	4956.87	--	7.1
21S.04E.13.331	322837106294301	013	GW	01-05-02	1330	400PCMB	136.8	4993.49	--	6.1
21S.04E.14.114	322910106303601	013	GW	10-04-01	1355	400PCMB	161	5355.16	--	3.1
				01-10-02	0940	400PCMB	161	5355.16	--	3.5
				04-04-02	1400	400PCMB	161	5355.16	--	4.4
				07-12-02	1205	400PCMB	161	5355.16	--	3.3
21S.04E.14.122	322913106301801	013	GW	04-05-02	1150	110BLSN	72	5269	.6	3.4
				07-10-02	1245	400PCMB	72	5269	--	4.8
21S.04E.14.142	322902106302201	013	GW	01-03-02	1335	400PCMB	85	5251.66	--	2.9
				07-10-02	1010	400PCMB	85	5251.66	--	2.1
21S.04E.14.223	322906106300301	013	GW	01-05-02	1500	400PCMB	145	5159.15	--	5.7
21S.04E.15.422	322848106305501	013	GW	01-04-02	1130	400PCMB	107	5368.81	--	--
				07-11-02	1220	400PCMB	107	5368.81	--	.5
21S.04E.22.222	322310106305101	013	GW	10-04-01	1600	400PCMB	--	5212.82	--	1.2
				01-10-02	1125	400PCMB	--	5212.82	--	1.2
				04-03-02	1030	400PCMB	--	5212.82	--	6.9
				07-11-02	1320	400PCMB	--	5212.82	--	5.2
21S.04E.22.411	322756106311601	013	GW	04-02-02	1630	400PCMB	--	5360	35	.7
21S.04E.23.233A	322801106300801	013	GW	10-05-01	0945	400PCMB	250	5018.21	--	2.4
21S.04E.23.233B	322804106301701	013	GW	10-05-01	1035	400PCMB	180	5043.16	--	6.4
				01-10-02	1030	400PCMB	180	5043.16	--	6.5
				04-03-02	1120	400PCMB	180	5043.16	--	6.4
21S.04E.23.233C	322800106300901	013	GW	10-05-01	1115	400PCMB	100	4993.99	--	5.9
				01-10-02	0940	400PCMB	100	4993.99	--	6.2
				04-03-02	1200	400PCMB	100	4993.99	--	6.3
				07-11-02	1420	400PCMB	100	4993.99	--	5.3
21S.04E.23.432	322745106300201	013	GW	01-04-02	1340	400PCMB	139	4938.28	--	--
21S.04E.25.311	322702106294401	013	GW	01-09-02	1305	400PCMB	97	4798.49	--	5.4
21S.04E.25.412	322704106290601	013	GW	01-09-02	1515	400PCMB	159	4618.42	--	2.1
21S.04E.35.222	322639106294701	013	GW	01-09-02	1205	400PCMB	138	4695.93	--	5.0
21S.04E.35.232	322624106300201	013	GW	01-09-02	1004	400PCMB	119	4723.95	--	4.1
21S.04E.35.422	322612106294901	013	GW	01-05-02	1210	400PCMB	149	4649.42	--	5.5

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENTIFIER	DATE	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM ADSORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)
21S.04E.11.343	01-04-02 07-10-02	7.3 7.3	816 849	18.9 21.3	320 --	94.8 --	19.7 --	1.03 --	2 --	61.8 --	200 --
21S.04E.13.143	01-05-02 07-10-02	7.5 7.3	893 881	19.7 22.4	340 --	96.9 --	24.0 --	1.32 --	2 --	66.5 --	220 --
21S.04E.13.331	01-05-02	7.5	766	20.4	290	92.3	13.9	2.01	1	55.8	196
21S.04E.14.114	10-04-01 01-10-02 04-04-02 07-12-02	7.1 7.0 7.2 7.1	720 758 756 793	20.7 18.8 20.0 20.4	300 300 -- --	86.5 87.9 -- --	20.0 19.8 -- --	.75 .88 -- --	1 1 -- --	58.8 59.4 -- --	235 225 -- --
21S.04E.14.122	04-05-02 07-10-02	7.0 7.0	826 819	20.9 21.2	310 --	88.9 --	20.5 --	.92 --	2 --	60.5 --	222 --
21S.04E.14.142	01-03-02 07-10-02	7.4 7.2	-- 887	18.9 21.2	310 --	87.2 --	21.2 --	1.90 --	2 --	65.3 --	198 --
21S.04E.14.223	01-05-02	7.6	942	19.5	350	99.3	24.8	2.14	2	74.3	241
21S.04E.15.422	01-04-02 07-11-02	7.3 7.3	808 840	19.7 22.5	330 --	95.8 --	22.2 --	3.86 --	1 --	56.9 --	250 --
21S.04E.22.222	10-04-01 01-10-02 04-03-02 07-11-02	7.1 6.8 7.1 7.2	621 648 663 647	20.3 20.6 20.4 21.3	250 240 -- --	76.9 72.6 -- --	13.9 13.1 -- --	1.72 1.63 -- --	1 1 -- --	49.6 48.4 -- --	185 173 -- --
21S.04E.22.411	04-02-02	6.9	1420	20.9	700	219	37.8	3.45	1	59.3	271
21S.04E.23.233A	10-05-01	7.3	711	21.4	260	82.4	13.5	1.70	1	51.9	183
21S.04E.23.233B	10-05-01 01-10-02 04-03-02	7.2 7.2 7.3	723 711 724	22.2 22.0 22.4	270 260 --	84.2 82.8 --	13.7 13.4 --	1.62 1.81 --	1 1 --	52.6 51.8 --	186 179 --
21S.04E.23.233C	10-05-01 01-10-02 04-03-02 07-11-02	7.2 7.2 7.3 7.5	749 740 758 742	21.8 21.4 21.9 22.5	270 270 -- --	86.6 86.2 -- --	14.2 13.9 -- --	2.13 1.91 -- --	1 1 -- --	53.7 53.0 -- --	183 176 -- --
21S.04E.23.432	01-04-02	7.2	688	20.1	260	83.2	13.5	1.93	1	52.1	189
21S.04E.25.311	01-09-02	7.4	664	22.3	270	84.9	13.7	3.01	1	40.2	191
21S.04E.25.412	01-09-02	7.2	802	22.7	310	98.6	15.7	3.57	1	52.7	193
21S.04E.35.222	01-09-02	7.3	615	24.1	240	75.0	11.6	2.88	1	38.6	183
21S.04E.35.232	01-09-02	6.8	583	25.0	220	70.5	11.5	1.70	1	40.0	186
21S.04E.35.422	01-05-02	7.6	718	19.5	260	84.8	11.8	3.09	1	50.6	165

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENT- I- FIER	DATE	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	ANC BICAR- BONATE IT FIELD MG/L AS HCO3 (00450)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)
21S.04E.11.343	01-04-02 07-10-02	193 --	235 --	.25 --	36.7 --	4.7 --	23.7 --	152 --	572 --	510 --	50 --
21S.04E.13.143	01-05-02 07-10-02	208 --	252 --	.26 --	37.7 --	3.9 --	25.5 --	176 --	598 --	557 --	50 --
21S.04E.13.331	01-05-02	184	224	.19	27.1	3.7	30.0	140	520	476	50
21S.04E.14.114	10-04-01 01-10-02 04-04-02 07-12-02	-- -- -- --	-- -- -- --	.21 .20 -- --	27.8 26.6 -- --	5.8 6.2 -- --	24.7 24.7 -- --	132 131 -- --	514 512 -- --	498 492 -- --	30 30 -- --
21S.04E.14.122	04-05-02 07-10-02	216 --	264 --	.22 --	31.2 --	6.0 --	24.5 --	146 --	534 --	509 --	30 --
21S.04E.14.142	01-03-02 07-10-02	186 --	227 --	.36 --	37.4 --	4.8 --	19.8 --	177 --	564 --	529 --	40 --
21S.04E.14.223	01-05-02	227	275	.29	41.6	4.8	26.9	177	628	587	40
21S.04E.15.422	01-04-02 07-11-02	240 --	292 --	.26 --	29.3 --	4.3 --	26.0 --	143 --	558 --	527 --	30 --
21S.04E.22.222	10-04-01 01-10-02 04-03-02 07-11-02	-- -- -- --	-- -- -- --	.20 .19 -- --	26.9 25.6 -- --	4.0 4.6 -- --	31.2 30.2 -- --	126 121 -- --	446 424 -- --	442 421 -- --	30 30 -- --
21S.04E.22.411	04-02-02	267	326	.35	42.6	2.3	23.1	490	1110	1040	30
21S.04E.23.233A	10-05-01	--	--	.21	27.9	4.4	29.5	131	478	453	40
21S.04E.23.233B	10-05-01 01-10-02 04-03-02	-- -- --	-- -- --	.20 .20 --	27.3 25.9 --	3.6 4.6 --	32.6 32.1 --	132 130 --	484 482 --	460 450 --	40 30 --
21S.04E.23.233C	10-05-01 01-10-02 04-03-02 07-11-02	-- -- -- --	-- -- -- --	.22 .22 -- --	31.5 30.9 -- --	4.2 4.6 -- --	30.2 31.2 -- --	142 141 -- --	502 500 -- --	475 469 -- --	30 30 -- --
21S.04E.23.432	01-04-02	182	222	.21	25.6	4.1	27.6	131	476	448	40
21S.04E.25.311	01-09-02	175	213	.14	17.2	4.3	28.4	114	448	411	40
21S.04E.25.412	01-09-02	177	216	.23	33.1	3.7	31.7	164	552	510	50
21S.04E.35.222	01-09-02	169	206	.14	18.2	4.0	32.7	84.2	408	369	30
21S.04E.35.232	01-09-02	171	209	.13	14.7	4.8	40.4	79.2	394	366	30
21S.04E.35.422	01-05-02	157	190	.32	34.8	3.2	32.7	124	480	439	40

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENT- I- FIER	DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)
21S.04E.11.343	01-04-02 07-10-02	<10 --	15 --	225 --
21S.04E.13.143	01-05-02 07-10-02	<10 --	18 --	260 --
21S.04E.13.331	01-05-02	<10	31	301
21S.04E.14.114	10-04-01 01-10-02 04-04-02 07-12-02	<10 E6 -- --	24 23 -- --	257 253 -- --
21S.04E.14.122	04-05-02 07-10-02	<10 --	19 --	258 --
21S.04E.14.142	01-03-02 07-10-02	1530 --	22 --	272 --
21S.04E.14.223	01-05-02	<10	27	335
21S.04E.15.422	01-04-02 07-11-02	<10 --	26 --	335 --
21S.04E.22.222	10-04-01 01-10-02 04-03-02 07-11-02	<10 11 -- --	24 24 -- --	312 291 -- --
21S.04E.22.411	04-02-02	150	43	571
21S.04E.23.233A	10-05-01	11	21	324
21S.04E.23.233B	10-05-01 01-10-02 04-03-02	<10 38 --	21 19 --	333 322 --
21S.04E.23.233C	10-05-01 01-10-02 04-03-02 07-11-02	<10 <10 -- --	20 20 -- --	337 329 -- --
21S.04E.23.432	01-04-02	<10	24	338
21S.04E.25.311	01-09-02	<10	21	321
21S.04E.25.412	01-09-02	<10	30	469
21S.04E.35.222	01-09-02	<10	27	321
21S.04E.35.232	01-09-02	<10	21	309
21S.04E.35.422	01-05-02	<10	18	355

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENTIFIER	STATION NUMBER	COUNTY	STATION TYPE	DATE	TIME	GEO-LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	TURBIDITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	
21S.04E.36.411	322609106291401	013	GW	01-05-02	1010	400PCMB	199	4513.63	--	2.5	
21S.05E.16.232	322902106263201	013	GW	04-02-02	1315	110BLSN	--	4173.84	--	6.2	
21S.05E.17.334	322834106273201	013	GW	01-16-02	1120	110BLSN	516	4366.45	--	6.4	
21S.05E.17.424	322838106264401	013	GW	04-02-02	1210	110BLSN	747	4196	4.7	4.3	
21S.05E.18.443	322828106275301	013	GW	01-09-02	1635	400PCMB	159	4457.84	--	6.2	
21S.05E.19.112	322823106283501	013	GW	01-04-02 07-10-02	1620 1540	400PCMB 400PCMB	139 139	4637.73 4637.73	-- --	-- .8	
21S.05E.20.434	322735106271301	013	GW	04-01-02	1550	110BLSN	580	4161.83	11	1.0	
21S.05E.30.122	322731106281901	013	GW	01-04-02	1510	400PCMB	125	4502.11	--	--	
22S.04E.01.223	322538106285701	013	GW	01-03-02	1135	400PCMB	159	4406.41	--	5.5	
22S.04E.01.431	322508106291001	013	GW	01-03-02	0945	400PCMB	419	4411.85	--	3.9	
LOCAL IDENTIFIER	DATE	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM ADSORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)
21S.04E.36.411	01-05-02	7.4	722	21.1	280	89.2	12.7	3.00	1	51.2	228
21S.05E.16.232	04-02-02	7.0	866	27.5	370	72.6	44.6	2.00	.6	26.8	244
21S.05E.17.334	01-16-02	7.5	770	24.4	280	78.8	19.6	2.38	1	56.1	170
21S.05E.17.424	04-02-02	7.1	--	27.2	360	89.1	34.1	1.79	.7	31.2	226
21S.05E.18.443	01-09-02	7.4	712	22.6	290	89.5	15.3	3.94	1	38.5	168
21S.05E.19.112	01-04-02 07-10-02	7.3 7.2	701 733	20.4 23.2	270 --	85.2 --	13.8 --	2.83 --	1 --	50.3 --	168 --
21S.05E.20.434	04-01-02	9.2	346	26.1	33	6.58	3.89	2.89	4	53.0	42
21S.05E.30.122	01-04-02	7.1	738	20.1	300	94.4	14.9	2.02	1	51.5	199
22S.04E.01.223	01-03-02	7.2	--	22.9	320	108	11.2	2.80	2	63.1	287
22S.04E.01.431	01-03-02	7.4	--	22.0	370	114	21.3	5.69	2	67.6	108

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

LOCAL IDENTIFIER	DATE	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	ANC BICARBONATE IT FIELD MG/L AS HCO3 (00450)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	BORON, DIS-SOLVED (UG/L AS B) (01020)
21S.04E.36.411	01-05-02	215	261	.21	25.8	2.9	25.5	110	476	450	50
21S.05E.16.232	04-02-02	236	288	.14	24.0	1.0	28.8	146	516	488	30
21S.05E.17.334	01-16-02	157	190	.20	31.5	2.6	33.6	151	524	471	40
21S.05E.17.424	04-02-02	222	271	.15	25.9	1.9	35.8	167	549	520	30
21S.05E.18.443	01-09-02	153	186	.16	24.9	3.5	32.4	133	496	433	60
21S.05E.19.112	01-04-02 07-10-02	160 --	195 --	.17 --	25.6 --	4.2 --	33.2 --	136 --	498 --	448 --	50 --
21S.05E.20.434	04-01-02	41	38	.20	35.3	2.0	1.1	55.1	183	185	20
21S.05E.30.122	01-04-02	194	236	.19	27.5	4.0	34.8	131	522	477	50
22S.04E.01.223	01-03-02	272	331	.20	21.9	3.9	38.3	110	562	523	50
22S.04E.01.431	01-03-02	102	124	.49	106	2.4	33.4	205	692	619	50

LOCAL IDENTIFIER	DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)
21S.04E.36.411	01-05-02	<10	40	394
21S.05E.16.232	04-02-02	15	6	361
21S.05E.17.334	01-16-02	<10	17	359
21S.05E.17.424	04-02-02	20	13	415
21S.05E.18.443	01-09-02	<10	24	376
21S.05E.19.112	01-04-02 07-10-02	<10 --	24 --	336 --
21S.05E.20.434	04-01-02	18	21	213
21S.05E.30.122	01-04-02	<10	26	375
22S.04E.01.223	01-03-02	<10	24	368
22S.04E.01.431	01-03-02	<10	24	950

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value  
 M -- Presence verified, not quantified

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DONA ANA COUNTY--Continued

ORGANIC COMPOUND DATA

LOCAL IDENT- I- FIER	DATE	TIME	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
18S.04W.08.342	05-22-02	0950	<.050
19S.02W.17.1414	05-21-02	0930	<.050
19S.04W.01.214	05-22-02	1410	<.050
20S.02W.02.1444	05-21-02	1330	<.050

Remark codes used in this report:  
< -- Less than

ROOSEVELT COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	COUNTY	STATION TYPE	DATE	TIME	GEO-LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)
01N.29E.01.222122	342046103503501	041	GW	06-04-02	1420	110AVMB	101	4257.70	5.8	7.4
				08-27-02	1400	110AVMB	101	4257.70	4.5	7.5
01N.30E.03.213334	342031103464701	041	GW	06-04-02	1050	110AVMB	103	4228.00	5.9	7.6
				08-27-02	1135	110AVMB	103	4228.00	4.4	7.4
01N.30E.05.112	342048103492701	041	GW	06-04-02	1310	121OGLL	--	4271	5.5	7.5
				08-27-02	1500	121OGLL	--	4271	4.4	7.6
01N.30E.13.414424	341820103442601	041	GW	06-03-02	1550	110AVMB	165	4269.00	6.8	7.7
				08-26-02	1515	110AVMB	165	4269.00	2.9	7.6
01N.30E.15.324	341825103470301	041	GW	06-07-02	1130	121OGLL	181	4321.94	5.2	7.5
				08-29-02	1440	121OGLL	181	4321.94	3.5	7.6
01N.30E.16.233	341845103475801	041	GW	06-07-02	1000	121OGLL	160	4342.33	7.8	7.7
				08-30-02	0930	121OGLL	160	4342.33	4.5	7.8
01N.30E.19.43441	341720103494701	041	GW	06-05-02	1000	110AVMB	--	4464.90	2.3	7.6
				08-28-02	1115	110AVMB	--	4464.90	2.5	7.5
01N.30E.22.321	341743103470801	041	GW	06-06-02	1520	121OGLL	181.6	4350	.2	7.7
				08-29-02	1550	121OGLL	181.6	4350	.6	7.6
01N.30E.25.222	341714103442502	041	GW	06-04-02	1445	121OGLL	245	4292	--	--
				08-26-02	1405	121OGLL	245	4292	1.3	7.9
01N.30E.27.324	341640103470501	041	GW	06-07-02	1300	121OGLL	--	4377	1.5	7.8
				08-30-02	1045	121OGLL	--	4377	3.0	7.8
01N.30E.32.344413	341533103485801	041	GW	06-05-02	1135	110AVMB	60	4486.40	.3	7.9
				08-28-02	0950	110AVMB	60	4486.40	.2	7.1
01S.29E.12.222222	341954103503101	041	GW	06-05-02	1325	110AVMB	60	4638.20	8.9	7.2
				08-28-02	1305	110AVMB	60	4638.20	4.4	7.2
01S.30E.14.32131	341828103460001	041	GW	06-06-02	1315	110AVMB	--	4403.00	6.6	7.4
				08-29-02	1045	110AVMB	--	4403.00	4.0	7.4
01S.30E.18.2211	341345103494301	041	GW	06-05-02	1425	121OGLL	--	4661	4.8	7.7
				08-28-02	1400	121OGLL	--	4661	2.3	7.4
01S.31E.04.444	341440103411101	041	GW	06-06-02	1010	121OGLL	165	4280	5.2	7.8
				08-29-02	1240	121OGLL	165	4280	3.3	7.8
02N.30E.25.414	342152103444201	041	GW	06-04-02	0925	121OGLL	--	4200	6.7	7.3
				08-27-02	1020	121OGLL	--	4200	8.1	7.4

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

ROOSEVELT COUNTY--Continued

LOCAL IDENTIFIER	DATE	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
01N.29E.01.222122	06-04-02 08-27-02	764 756	18.8 18.6	.46 .35	50 69	149 170	480 520	E.05 .28	E.69 E.61	<100 E36	<15.0 E5.0
01N.30E.03.213334	06-04-02 08-27-02	665 631	18.0 17.8	.26 .26	23 21	102 95	452 430	E.03 .12	E.92 E.67	<100 <100	<15.0 E7.0
01N.30E.05.112	06-04-02 08-27-02	577 559	18.5 18.5	.48 E.19	17 16	87 83	379 390	E.03 .31	E.66 E.51	<100 <100	E3.8 E7.1
01N.30E.13.414424	06-03-02 08-26-02	792 803	19.1 19.2	.44 .50	59 61	132 140	502 470	E.04 .06	E.57 E.69	<100 E22	E4.8 E13.0
01N.30E.15.324	06-07-02 08-29-02	13800 11100	23.5 23.0	10.70 8.70	3630 3200	2020 1700	1870 7400	E.03 <.05	E.50 E.72	<100 E75	<15.0 <15.0
01N.30E.16.233	06-07-02 08-30-02	1900 2740	21.1 22.0	1.90 2.40	469 560	614 640	6710 1800	E.04 .12	E.76 E.74	2150 5900	<15.0 <15.0
01N.30E.19.43441	06-05-02 08-28-02	3380 3200	19.4 20.3	2.40 4.00	403 560	492 720	1560 2000	.87 .10	1.90 1.80	8540 1300	<15.0 <15.0
01N.30E.22.321	06-06-02 08-29-02	8700 7330	22.8 20.8	11.10 11.00	1520 1500	1790 1800	5000 5000	<.05 .08	6.40 6.50	243 1100	<15.0 <15.0
01N.30E.25.222	06-04-02 08-26-02	-- 10700	-- 23.0	7.40 14.00	2550 2900	1050 1200	5260 6600	E.04 .38	E.76 1.90	1580 9200	<15.0 <15.0
01N.30E.27.324	06-07-02 08-30-02	3880 3680	19.8 20.5	4.30 5.30	543 610	882 980	2380 2500	E.04 .07	E.67 E.90	828 460	<15.0 <15.0
01N.30E.32.344413	06-05-02 08-28-02	1030 1060	17.3 16.6	.25 .44	24 26	20 8	545 550	2.50 2.70	11.30 16.00	<100 110	<15.0 <15.0
01S.29E.12.222222	06-05-02 08-28-02	602 618	19.6 18.7	E.17 .25	14 18	35 37	378 380	E.03 .13	1.30 E.51	<100 <100	<15.0 E3.8
01S.30E.14.32131	06-06-02 08-29-02	1330 1210	-- 19.9	.59 .68	87 100	252 310	797 880	E.02 E.04	1.50 1.30	114 110	<15.0 <15.0
01S.30E.18.2211	06-05-02 08-28-02	949 1070	19.7 19.1	.50 .86	71 120	105 150	545 640	E.04 .09	E.66 E.69	<100 20	<15.0 <15.0
01S.31E.04.444	06-06-02 08-29-02	1450 1410	21.9 21.0	1.20 1.50	214 230	156 160	807 800	E.04 .11	1.10 E.77	203 280	E8.2 E9.2
02N.30E.25.414	06-04-02 08-27-02	599 572	16.0 16.9	.26 .25	20 18	56 57	371 370	E.03 .44	3.00 E.44	<100 <100	<15.0 E5.4

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

## ROOSEVELT COUNTY--Continued

LOCAL IDENT- I- FIER	DATE	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)
01N.29E.01.222122	06-04-02 08-27-02	28.8 32.0	<5.0 <5.0	E1.1 E6.4	<10.0 <10.0	E28 E69	<3.0 <3.0	E.37 E1.1	<.20 <.20	E7.6 E8.5	<10.0 <10.0
01N.30E.03.213334	06-04-02 08-27-02	29.9 31.0	<5.0 <5.0	<10.0 E1.1	<10.0 E.99	<100 <100	<3.0 <3.0	<10.0 <10.0	<.20 <.20	E5.8 E6.4	<10.0 <10.0
01N.30E.05.112	06-04-02 08-27-02	32.8 33.0	<5.0 <5.0	E3.4 E1.1	<10.0 <10.0	211 <100	<3.0 <3.0	E4.0 <10.0	<.20 <.20	<15.0 E6.4	<10.0 <10.0
01N.30E.13.414424	06-03-02 08-26-02	26.3 32.0	<5.0 <5.0	E1.1 E4.0	<10.0 E1.3	<100 E16	<3.0 <3.0	<10.0 E.98	<.20 <.20	<15.0 E11.0	<10.0 <10.0
01N.30E.15.324	06-07-02 08-29-02	19.0 24.0	<5.0 <5.0	E4.7 E6.4	<10.0 E4.2	E50 120	<3.0 <3.0	E3.9 E7.0	<.20 <.20	24.9 24.0	<10.0 E3.5
01N.30E.16.233	06-07-02 08-30-02	63.8 100.0	<5.0 <5.0	12.2 19.0	<10.0 E4.5	1580 4200	3.6 E2.2	92.6 160.0	<.20 <.20	<15.0 E6.0	<10.0 <10.0
01N.30E.19.43441	06-05-02 08-28-02	75.3 17.0	<5.0 <5.0	24.2 E1.9	24.0 E5.2	6970 900	15.0 <3.0	303.0 20.0	<.20 <.20	<15.0 <15.0	E.95 <10.0
01N.30E.22.321	06-06-02 08-29-02	11.4 19.0	<5.0 <5.0	E2.6 20.0	E2.2 E5.1	176 950	<3.0 <3.0	67.7 72.0	<.20 <.20	120.0 160.0	<10.0 E2.0
01N.30E.25.222	06-04-02 08-26-02	114.0 130.0	<5.0 <5.0	12.4 20.0	E3.9 13.0	1090 7000	3.2 8.8	280.0 500.0	<.20 <.20	E5.8 E5.9	<10.0 <10.0
01N.30E.27.324	06-07-02 08-30-02	37.8 18.0	<5.0 <5.0	29.2 E5.0	E3.2 E1.9	1080 340	E2.2 <3.0	80.7 E8.6	<.20 <.20	24.7 26.0	<10.0 <10.0
01N.30E.32.344413	06-05-02 08-28-02	126.0 140.0	<5.0 <5.0	E1.4 E5.1	<10.0 E1.5	154 190	<3.0 <3.0	720.0 820.0	<.20 <.20	<15.0 <15.0	<10.0 <10.0
01S.29E.12.222222	06-05-02 08-28-02	130.0 130.0	<5.0 <5.0	E.88 <10.0	<10.0 E1.1	<100 <100	<3.0 <3.0	E.85 E1.1	<.20 <.20	<15.0 <15.0	<10.0 <10.0
01S.30E.14.32131	06-06-02 08-29-02	42.6 43.0	<5.0 <5.0	E4.6 E2.5	E4.1 E5.8	2870 2500	<3.0 <3.0	13.9 13.0	<.20 <.20	35.3 43.0	<10.0 <10.0
01S.30E.18.2211	06-05-02 08-28-02	16.5 33.0	<5.0 <5.0	E1.1 E.89	<10.0 E2.9	E49 E57	<3.0 <3.0	E1.9 E.78	<.20 <.20	E12.9 22.0	<10.0 <10.0
01S.31E.04.444	06-06-02 08-29-02	51.6 52.0	<5.0 <5.0	E4.9 E7.9	18.2 18.0	4720 3200	3.9 E2.5	164.0 130.0	E.03 <.20	E13.5 15.0	<10.0 <10.0
02N.30E.25.414	06-04-02 08-27-02	46.3 44.0	<5.0 <5.0	<10.0 E.90	<10.0 E3.9	<100 <100	<3.0 <3.0	<10.0 E.67	<.20 <.20	<15.0 E5.8	<10.0 <10.0

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

ROOSEVELT COUNTY--Continued

LOCAL IDENT- I- FIER	DATE	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
01N.29E.01.222122	06-04-02 08-27-02	<20.0 E10.0
01N.30E.03.213334	06-04-02 08-27-02	E7.3 26.0
01N.30E.05.112	06-04-02 08-27-02	120.0 29.0
01N.30E.13.414424	06-03-02 08-26-02	<20.0 <20.0
01N.30E.15.324	06-07-02 08-29-02	E8.5 E18.0
01N.30E.16.233	06-07-02 08-30-02	E9.7 E18.0
01N.30E.19.43441	06-05-02 08-28-02	385.0 81.0
01N.30E.22.321	06-06-02 08-29-02	<20.0 20.0
01N.30E.25.222	06-04-02 08-26-02	36.9 120.0
01N.30E.27.324	06-07-02 08-30-02	E19.7 E15.0
01N.30E.32.344413	06-05-02 08-28-02	<20.0 E10.0
01S.29E.12.222222	06-05-02 08-28-02	E7.6 45.0
01S.30E.14.32131	06-06-02 08-29-02	31.5 46.0
01S.30E.18.2211	06-05-02 08-28-02	21.8 E19.0
01S.31E.04.444	06-06-02 08-29-02	115.0 110.0
02N.30E.25.414	06-04-02 08-27-02	E11.2 E19.0

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value



QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

ROOSEVELT COUNTY--Continued

ORGANIC COMPOUND DATA

LOCAL IDENTIFIER	DATE	BOLSTAR WATER WHOLE TOTAL (UG/L) (38715)	CHLOR-DANE CIS WATER WHOLE TOTAL (UG/L) (39062)	CHLOR-DANE TRANS WATER WHOLE TOTAL (UG/L) (39065)	CHLOR-PYRIFOS TOTAL RECOVER (UG/L) (38932)	COUMA-PHOS WATER WHOLE TOTAL (UG/L) (39005)	DELTA BENZENE HEXA-CHLORIDE TOTAL (UG/L) (34259)	DEMETON WAT, WH REC (UG/L) (39560)	DI-AZINON, TOTAL (UG/L) (39570)	DICHLOR VOS WAT, WH REC (UG/L) (30218)	DI-ELDRIN TOTAL (UG/L) (39380)
01N.29E.01.222122	06-04-02 08-27-02	-- <.50	-- <.1	-- <.1	-- <.50	-- <.50	-- <.05	-- <1.0	-- <.50	-- <.50	-- <.050
01N.30E.03.213334	06-04-02 08-27-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01N.30E.05.112	06-04-02 08-27-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01N.30E.13.414424	06-03-02 08-26-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	E.016 --
01N.30E.15.324	06-07-02 08-29-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01N.30E.16.233	06-07-02 08-30-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01N.30E.19.43441	06-05-02 08-28-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01N.30E.22.321	06-06-02 08-29-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01N.30E.25.222	06-04-02 08-26-02	<.77 --	<.5 --	<.5 --	<.77 --	<.77 --	<.50 --	<1.5 --	<.77 --	<.77 --	<.50 --
01N.30E.27.324	06-07-02 08-30-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01N.30E.32.344413	06-05-02 08-28-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01S.29E.12.222222	06-05-02 08-28-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01S.30E.14.32131	06-06-02 08-29-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01S.30E.18.2211	06-05-02 08-28-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
01S.31E.04.444	06-06-02 08-29-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --
02N.30E.25.414	06-04-02 08-27-02	<.50 --	<.1 --	<.1 --	<.50 --	<.50 --	<.05 --	<1.0 --	<.50 --	<.50 --	<.050 --

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

ROOSEVELT COUNTY--Continued

## ORGANIC COMPOUND DATA

LOCAL IDENT- I- FIER	DATE	DIMETH- OATE WATER WHOLE TOTAL (UG/L) (39009)	DISUL- FOTON UNFILT RECOVER (UG/L) (39011)	ENDO- SULFAN- I WATER WHOLE REC (UG/L) (34361)	ENDO- SULFAN II TOTAL (UG/L) (34356)	ENDO- SULFAN SULFATE TOTAL (UG/L) (34351)	ENDRIN ALDE- HYDE TOTAL (UG/L) (34366)	ENDRIN KETONE WATER WHOLE TOTAL (UG/L) (78008)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	EPN WATER WHOLE TOTAL (UG/L) (81290)	ETHO- PROP WAT, WH REC (UG/L) (81758)
01N.29E.01.222122	06-04-02 08-27-02	-- <.50	-- <.50	-- <.1	-- <.05	-- <.1	-- <.1	-- <.05	-- <.050	-- <.50	-- <.50
01N.30E.03.213334	06-04-02 08-27-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01N.30E.05.112	06-04-02 08-27-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01N.30E.13.414424	06-03-02 08-26-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01N.30E.15.324	06-07-02 08-29-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01N.30E.16.233	06-07-02 08-30-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01N.30E.19.43441	06-05-02 08-28-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01N.30E.22.321	06-06-02 08-29-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01N.30E.25.222	06-04-02 08-26-02	<.77 --	<.77 --	<.5 --	<.50 --	<.5 --	<.5 --	<.50 --	<.50 --	<.77 --	<.77 --
01N.30E.27.324	06-07-02 08-30-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01N.30E.32.344413	06-05-02 08-28-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01S.29E.12.222222	06-05-02 08-28-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01S.30E.14.32131	06-06-02 08-29-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01S.30E.18.2211	06-05-02 08-28-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
01S.31E.04.444	06-06-02 08-29-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --
02N.30E.25.414	06-04-02 08-27-02	<.50 --	<.50 --	<.1 --	<.05 --	<.1 --	<.1 --	<.05 --	<.050 --	<.50 --	<.50 --

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

ROOSEVELT COUNTY--Continued

ORGANIC COMPOUND DATA

LOCAL IDENT- I- FIER	DATE	FAMPHUR WATER UNFLTRD REC (UG/L) (38462)	FEN- SULFO- THION WATER WHOLE RECOVER (UG/L) (30004)	FEN- THION WATER WHOLE RECOVER (UG/L) (30006)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HMX, WATER, FLTRD, GF 0.7U REC (UG/L) (49234)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	MERPHOS WAT, WH REC (UG/L) (30009)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)
01N.29E.01.222122	06-04-02 08-27-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01N.30E.03.213334	06-04-02 08-27-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01N.30E.05.112	06-04-02 08-27-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01N.30E.13.414424	06-03-02 08-26-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01N.30E.15.324	06-07-02 08-29-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01N.30E.16.233	06-07-02 08-30-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01N.30E.19.43441	06-05-02 08-28-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01N.30E.22.321	06-06-02 08-29-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01N.30E.25.222	06-04-02 08-26-02	-- <1.5	-- <3.8	-- <.77	-- <.50	-- <.50	-- <.25	-- <.50	-- <1.8	-- <7.7	-- <1.0
01N.30E.27.324	06-07-02 08-30-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01N.30E.32.344413	06-05-02 08-28-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01S.29E.12.222222	06-05-02 08-28-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01S.30E.14.32131	06-06-02 08-29-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01S.30E.18.2211	06-05-02 08-28-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
01S.31E.04.444	06-06-02 08-29-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10
02N.30E.25.414	06-04-02 08-27-02	-- <1.0	-- <2.5	-- <.50	-- <.050	-- <.050	-- <.25	-- <.050	-- <1.2	-- <5.0	-- <.10

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

ROOSEVELT COUNTY--Continued

ORGANIC COMPOUND DATA

LOCAL IDENT- I- FIER	DATE	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION, TOTAL (UG/L) (39600)	NALED WATER WHOLE TOTAL (UG/L) (38855)	P, P' DDD, TOTAL (UG/L) (39310)	P, P' DDE, TOTAL (UG/L) (39320)	P, P' DDT, TOTAL (UG/L) (39300)	PARA- THION, TOTAL (UG/L) (39540)	PERCHL- ORATE, WATER, UNFLT REC (MG/L) (62171)	PHOS- DRIN, TOTAL (UG/L) (39610)	PHOS- DRIN, TOTAL (UG/L) (39610)
01N.29E.01.222122	06-04-02 08-27-02	-- <2.5	-- <.50	-- <10	-- <.1	-- <.05	-- <.1	-- <.50	<20 --	-- <.50	-- <6.2
01N.30E.03.213334	06-04-02 08-27-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<20 --	<.50 --	<6.2 --
01N.30E.05.112	06-04-02 08-27-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<20 --	<.50 --	<6.2 --
01N.30E.13.414424	06-03-02 08-26-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<20 --	<.50 --	<6.2 --
01N.30E.15.324	06-07-02 08-29-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<200 --	<.50 --	<6.2 --
01N.30E.16.233	06-07-02 08-30-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<40 --	<.50 --	<6.2 --
01N.30E.19.43441	06-05-02 08-28-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<40 --	<.50 --	<6.2 --
01N.30E.22.321	06-06-02 08-29-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<100 --	<.50 --	<6.2 --
01N.30E.25.222	06-04-02 08-26-02	<3.8 --	<.77 --	<15 --	<.5 --	<.50 --	<.5 --	<.77 --	<200 --	<.77 --	<9.5 --
01N.30E.27.324	06-07-02 08-30-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<40 --	<.50 --	<6.2 --
01N.30E.32.344413	06-05-02 08-28-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	E.011 --	<.50 --	<20 --	<.50 --	<6.2 --
01S.29E.12.222222	06-05-02 08-28-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<20 --	<.50 --	<6.2 --
01S.30E.14.32131	06-06-02 08-29-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<20 --	<.50 --	<6.2 --
01S.30E.18.2211	06-05-02 08-28-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<20 --	<.50 --	<6.2 --
01S.31E.04.444	06-06-02 08-29-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<20 --	<.50 --	<6.2 --
02N.30E.25.414	06-04-02 08-27-02	<2.5 --	<.50 --	<10 --	<.1 --	<.05 --	<.1 --	<.50 --	<20 --	<.50 --	<6.2 --

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

ROOSEVELT COUNTY--Continued

ORGANIC COMPOUND DATA

LOCAL IDENT- I- FIER	DATE	RDX, WATER, FLTRD, GF 0.7U REC (UG/L) (49233)	RONNEL WATER WHOLE TOTAL (UG/L) (39357)	SULFO- TEPP WATER WHOLE TOTAL (UG/L) (82201)	TETRYL, WATER, UNFLT REC (UG/L) (62226)	THION- AZIN, WATER, FLTRD, GF 0.7U REC (UG/L) (62782)	TOKU- THION WATER WHOLE TOTAL (UG/L) (38564)	TOLUENE 246-TRI NITRO- WAT,FLT GF 0.7U REC (UG/L) (49226)	TOLUENE 2,4-DI- NITRO- WAT,FLT GF 0.7U REC (UG/L) (49228)	TOLUENE 2,6-DI- NITRO- WAT,FLT GF 0.7U REC (UG/L) (49227)	TOLUENE M-NITRO WATER, FLTRD, GF 0.7U REC (UG/L) (49221)
01N.29E.01.222122	06-04-02 08-27-02	-- <.25	-- <10	-- <.50	-- <.50	-- <.5	-- <.50	-- <.25	-- <.25	-- <.25	-- <.25
01N.30E.03.213334	06-04-02 08-27-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01N.30E.05.112	06-04-02 08-27-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01N.30E.13.414424	06-03-02 08-26-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01N.30E.15.324	06-07-02 08-29-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01N.30E.16.233	06-07-02 08-30-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01N.30E.19.43441	06-05-02 08-28-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01N.30E.22.321	06-06-02 08-29-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01N.30E.25.222	06-04-02 08-26-02	<.25 --	<15 --	<.77 --	<.50 --	<.8 --	<.77 --	<.25 --	<.25 --	<.25 --	<.25 --
01N.30E.27.324	06-07-02 08-30-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01N.30E.32.344413	06-05-02 08-28-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01S.29E.12.222222	06-05-02 08-28-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01S.30E.14.32131	06-06-02 08-29-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01S.30E.18.2211	06-05-02 08-28-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
01S.31E.04.444	06-06-02 08-29-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --
02N.30E.25.414	06-04-02 08-27-02	<.25 --	<10 --	<.50 --	<.50 --	<.5 --	<.50 --	<.25 --	<.25 --	<.25 --	<.25 --

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

ROOSEVELT COUNTY--Continued

## ORGANIC COMPOUND DATA

LOCAL IDENT- I- FIER	DATE	TOLUENE O-NITRO WATER, FLTRD, GF 0.7U REC (UG/L) (49223)	TOLUENE P-NITRO WATER, FLTRD, GF 0.7U REC (UG/L) (49222)	TOX- APHENE, TOTAL (UG/L) (39400)	TRI- CHLORO- NATE WATER WHOLE TOTAL (UG/L) (38897)	CYANIDE UNFLTRD TOT REC EPA- CON- TRACT (MG/L) (99896)
01N.29E.01.222122	06-04-02 08-27-02	-- <.25	-- <.25	-- <5	-- <.50	E.0040 E.0021
01N.30E.03.213334	06-04-02 08-27-02	<.25 --	<.25 --	<5 --	<.50 --	E.0050 E.0031
01N.30E.05.112	06-04-02 08-27-02	<.25 --	<.25 --	<5 --	<.50 --	E.0040 E.0053
01N.30E.13.414424	06-03-02 08-26-02	<.25 --	<.25 --	<5 --	<.50 --	E.0028 E.0026
01N.30E.15.324	06-07-02 08-29-02	<.25 --	<.25 --	<5 --	<.50 --	E.0042 <.010
01N.30E.16.233	06-07-02 08-30-02	<.25 --	<.25 --	<5 --	<.50 --	E.0035 E.0023
01N.30E.19.43441	06-05-02 08-28-02	<.25 --	<.25 --	<5 --	<.50 --	E.0037 E.0038
01N.30E.22.321	06-06-02 08-29-02	<.25 --	<.25 --	<5 --	<.50 --	E.0050 E.0022
01N.30E.25.222	06-04-02 08-26-02	<.25 --	<.25 --	<50 --	<.77 --	E.0043 E.0029
01N.30E.27.324	06-07-02 08-30-02	<.25 --	<.25 --	<5 --	<.50 --	<.010 E.0044
01N.30E.32.344413	06-05-02 08-28-02	<.25 --	<.25 --	<5 --	<.50 --	E.0094 <.010
01S.29E.12.222222	06-05-02 08-28-02	<.25 --	<.25 --	<5 --	<.50 --	E.0026 E.0023
01S.30E.14.32131	06-06-02 08-29-02	<.25 --	<.25 --	<5 --	<.50 --	E.0025 E.0021
01S.30E.18.2211	06-05-02 08-28-02	<.25 --	<.25 --	<5 --	<.50 --	<.010 E.0036
01S.31E.04.444	06-06-02 08-29-02	<.25 --	<.25 --	<5 --	<.50 --	E.0035 E.0024
02N.30E.25.414	06-04-02 08-27-02	<.25 --	<.25 --	<5 --	<.50 --	E.0042 E.0022

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

SIERRA COUNTY

LOCAL IDENTIFIER	STATION NUMBER	COUNTY	STATION TYPE	DATE	TIME	GEO-LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTERVAL (FT) (72015)	DEPTH OF WELL, TOTAL (FEET) (72008)	
17S.05W.1.4244	325123107175701	051	GW	05-20-02	1730	110ALVM	7.83	21	12	21.83	
LOCAL IDENTIFIER	DATE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (00904)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
17S.05W.1.4244	05-20-02	4140.	652	.1	1	7.3	1550	19.0	110	430	135
LOCAL IDENTIFIER	DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SODIUM AD-SORP-TION RATIO	SODIUM, DIS-SOLVED (MG/L AS NA)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	BICAR-BONATE DIS IT FIELD (MG/L AS HCO3)	BROMIDE DIS-SOLVED (MG/L AS BR)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
17S.05W.1.4244	05-20-02	22.2	6.79	3	163	323	394	.28	117	.7	20.9
LOCAL IDENTIFIER	DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (MG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
17S.05W.1.4244	05-20-02	334	1040	997	E.04	.18	.12	<.008	E.01	<1	.8
LOCAL IDENTIFIER	DATE	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01020)	BORON, DIS-SOLVED (UG/L AS B) (01025)	CADMIUM DIS-SOLVED (UG/L AS CD) (01030)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01035)	COBALT, DIS-SOLVED (UG/L AS CO) (01040)	COPPER, DIS-SOLVED (UG/L AS CU) (01046)	IRON, DIS-SOLVED (UG/L AS FE) (01049)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)
17S.05W.1.4244	05-20-02	66	<.06	224	E.02	<.8	.35	1.8	855	<.08	119
LOCAL IDENTIFIER	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)	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)		
17S.05W.1.4244	05-20-02	1330	6.5	1.38	.5	<1	888	.3	2		

ORGANIC COMPOUND DATA

LOCAL IDENTIFIER	DATE	TIME	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
17S.05W.1.4244	05-20-02	1730	<.050

Remark codes used in this report:  
 < -- Less than  
 E -- Estimated value

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

## EL PASO COUNTY, TEXAS

LOCAL IDENTIFIER	STATION NUMBER	COUNTY	STATION TYPE	DATE	TIME	GEO-LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTERVAL (FT) (72015)	DEPTH OF WELL, TOTAL (FEET) (72008)
JL-49-21-318	314421106233403	141	GW	07-09-02	1545	112HCBL	95.14	358	348	363.00
JL-49-21-319	314421106233404	141	GW	07-09-02	1230	111RGRD	47.98	191	181	196.00
JL-49-21-320	314421106233405	141	GW	07-09-02	0915	111RGRD	38.20	124	114	129.00
JL-49-21-322	314421106233407	141	GW	07-11-02	1515	112HCBL	112.09	669	659	674.00
JL-49-21-323	314421106233408	141	GW	07-11-02	1145	112HCBL	109.68	576	566	581.00
JL-49-21-324	314421106233409	141	GW	07-08-02	1200	111RGRD	23.08	38	28	38.00

LOCAL IDENTIFIER	DATE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	FLOW RATE (G/M) (00059)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN) (72004)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	HARDNESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)
JL-49-21-318	07-09-02	3683	3.3	85	7.6	3740	33.0	22.0	490	660	159
JL-49-21-319	07-09-02	3683	3.0	65	7.9	1750	31.5	21.0	23	220	54.2
JL-49-21-320	07-09-02	3683	3.8	35	7.8	1390	25.5	21.5	--	190	43.8
JL-49-21-322	07-11-02	3683	3.0	105	8.1	1210	35.5	24.5	15	100	31.6
JL-49-21-323	07-11-02	3683	3.0	171	7.7	5030	32.5	23.5	1100	1100	340
JL-49-21-324	07-08-02	3684	2.0	45	7.3	1690	--	22.5	240	450	135

LOCAL IDENTIFIER	DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	SODIUM ADSORPTION RATIO (00931)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CAC03) (90410)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CAC03 HCO3) (39086)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)
JL-49-21-318	07-09-02	63.8	16.1	9	516	181	178	216	953	.47	30.5
JL-49-21-319	07-09-02	19.7	8.68	8	283	201	196	236	263	.42	34.6
JL-49-21-320	07-09-02	18.2	8.17	8	251	211	209	252	154	.61	37.2
JL-49-21-322	07-11-02	5.59	3.59	9	203	87	88	105	284	.75	31.6
JL-49-21-323	07-11-02	69.5	12.1	7	555	64	59	71	1610	.33	30.2
JL-49-21-324	07-08-02	27.8	13.1	4	176	219	217	264	199	.72	22.0

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

EL PASO COUNTY, TEXAS--Continued

LOCAL IDENTIFIER	DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106)
JL-49-21-318	07-09-02	332	2350	2180	<.04	E.07	<.05	<.008	<.022	<.02	<20
JL-49-21-319	07-09-02	262	1070	1040	<.04	.11	<.05	<.008	.021	E.02	<20
JL-49-21-320	07-09-02	250	883	890	<.04	E.12	<.05	<.008	.014	E.01	<40
JL-49-21-322	07-11-02	58.7	680	673	E.03	<.10	<.05	<.008	.007	<.02	<20
JL-49-21-323	07-11-02	116	3290	2780	.10	E.10	<.05	<.008	<.022	<.02	<40
JL-49-21-324	07-08-02	357	1120	1070	.93	1.2	E.03	<.008	.103	.12	<20

LOCAL IDENTIFIER	DATE	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	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)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)
JL-49-21-318	07-09-02	2	78.1	230	<.1	<.8	<1.0	<10	<1	189	78.1
JL-49-21-319	07-09-02	4	30.4	240	<.1	<1.6	1.5	<10	<1	129	31.5
JL-49-21-320	07-09-02	5	32.9	250	<.1	<.8	<1.0	<30	<1	109	60.2
JL-49-21-322	07-11-02	18	72.6	100	<.1	<.8	E.7	<10	<1	108	8.1
JL-49-21-323	07-11-02	16	602	90	<.1	<.8	<1.0	<30	<1	367	90.6
JL-49-21-324	07-08-02	E2	109	240	<.1	<.8	<1.0	583	<1	153	1080

LOCAL IDENTIFIER	DATE	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
JL-49-21-318	07-09-02	<.01	<2.0	<2	<.1	4980	<24
JL-49-21-319	07-09-02	<.01	2.7	<2	<.2	1410	<24
JL-49-21-320	07-09-02	<.01	2.0	<2	<.2	1120	<72
JL-49-21-322	07-11-02	<.01	<2.0	<2	<.1	920	<24
JL-49-21-323	07-11-02	<.01	<2.0	<2	<.1	9640	<72
JL-49-21-324	07-08-02	<.01	<2.0	<2	<.2	1570	<24

Remark codes used in this report:  
 < -- Less than  
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# CONVERSION FACTORS

<b>Multiply</b>	<b>By</b>	<b>To obtain</b>
<b><i>Length</i></b>		
inch (in.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<b><i>Area</i></b>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<b><i>Volume</i></b>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<b><i>Flow</i></b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<b><i>Mass</i></b>		
ton (short)	$9.072 \times 10^{-1}$	megagram or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$\text{°F} = (1.8 \times \text{°C}) + 32$$

**U.S. DEPARTMENT OF THE INTERIOR**  
**U.S. Geological Survey**  
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