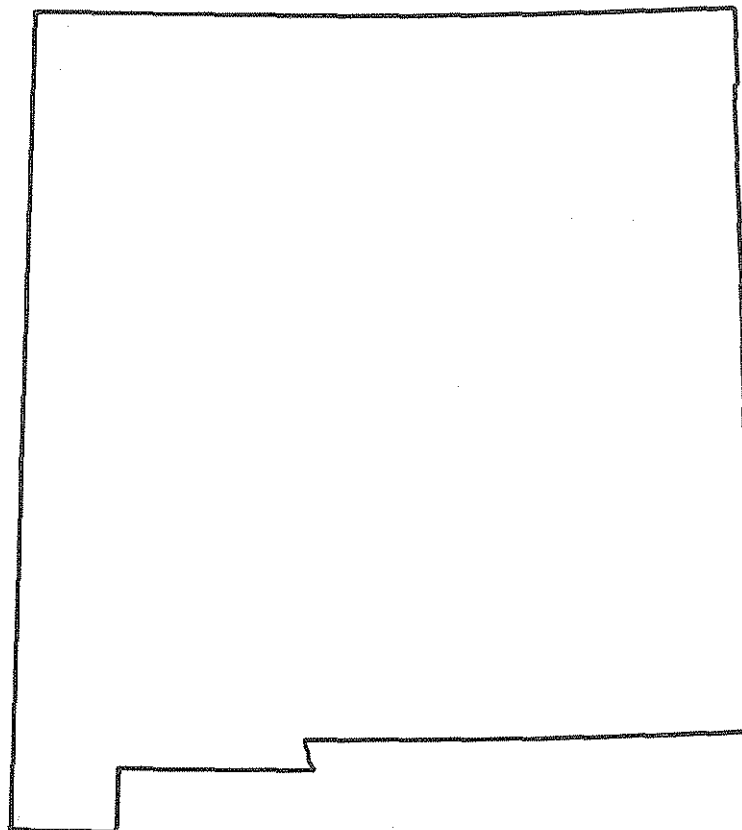




Water Resources Data New Mexico Water Year 1988



U.S. GEOLOGICAL SURVEY WATER -DATA REPORT NM-88-1
Prepared in cooperation with the State of New Mexico
and with other agencies

CALENDAR FOR WATER YEAR 1988

1987

OCTOBER

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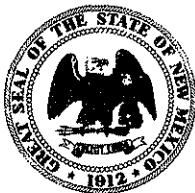
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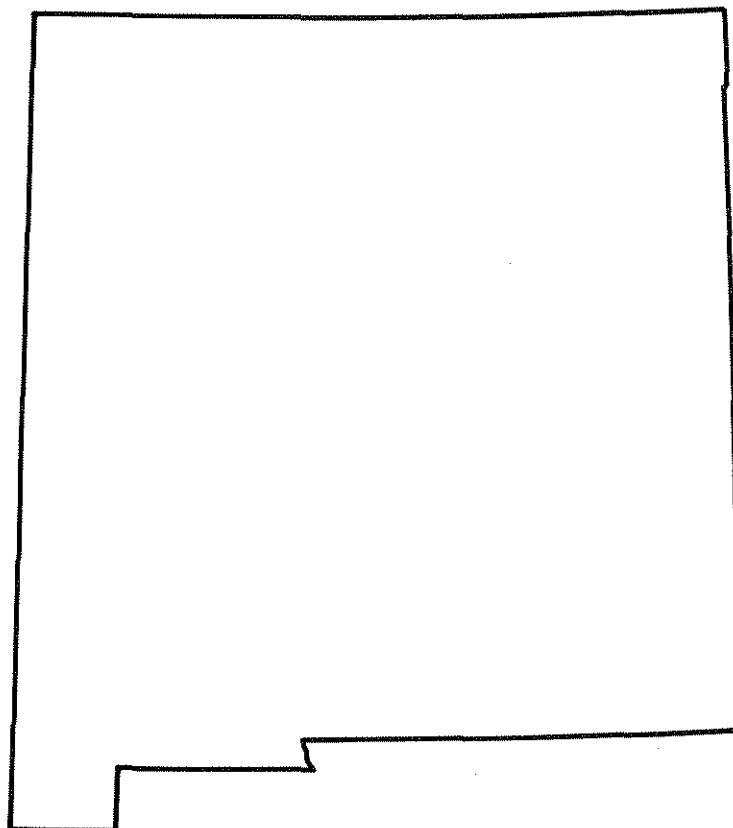
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Water Resources Data New Mexico Water Year 1988

by John P. Borland and Linda V. Beal



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NM-88-1
Prepared in cooperation with the State of New Mexico
and with other agencies

DEPARTMENT OF THE INTERIOR
MANUEL LUJAN, JR., Secretary
U.S. GEOLOGICAL SURVEY
Dallas L. Peck, Director

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Albuquerque, New Mexico 87110

PREFACE

This report was prepared by personnel of the New Mexico District of the Water Resources Division of the U.S. Geological Survey under the supervision of Robert L. Knutilla, District Chief, and James F. Blakey, Regional Hydrologist, Central Region. It was done in cooperation with various water agencies in the State of New Mexico.

This report is one of a series issued for each State. General direction for the series is by Philip Cohen, Chief Hydrologist, U.S. Geological Survey, and James F. Daniel, Assistant Chief Hydrologist for Scientific Information Management.

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Well 325638104274801	Local number	16S.25E.11.111A.....	453
Well 325445104253501	Local number	16S.26E.19.211.....	453
Well 324831104435701	Local number	17S.23E.30.13244.....	453
Well 324620104255001	(formerly 324624104244501)	Local number 18S.26E.06.442A..	453
Well 324620104255101	Local number	18S.26E.06.442B.....	454
Well 324325104233001	Local number	18S.26E.28.122.....	454
Well 323540104232001	Local number	20S.26E.08.121.....	454
Well 322637104142301	(formerly 322652104141901)	Local number 21S.26E.36.221...	455
Well 322640104165801	Local number	21S.27E.32.112.....	455
Well 322712104074501	(formerly 322710104073901)	Local number 21S.28E.30.141...	455
Well 322120104151501	Local number	22S.26E.25.3333 (formerly 22S.26E.36.111A).	456
Well 322231104131001	Local number	22S.27E.22.421.....	456
Well 321741104204901	(formerly 321721104204801)	Local number 23S.25E.24.213...	456
Well 321930104113301	Local number	23S.27E.09.211.....	457
Well 320602104285201	Local number	25S.24E.27.421.....	457
Well 320257104295201	Local number	26S.24E.09.441.....	457
<u>GRANT COUNTY</u>			
Well 324600108222501	Local number	18S.15W.11.323.....	457
<u>GUADALUPE COUNTY</u>			
Well 350414104485101	Local number	10N.20E.28.2214.....	458
<u>HARDING COUNTY</u>			
Well 355352104054201	Local number	19N.27E.05.334.....	458
Well 360340104085001	Local number	21N.26E.03.4443.....	458
<u>HIDALGO COUNTY</u>			
Well 324053108594101	Local number	19S.21W.03.414.....	458
Well 321848108391401	Local number	23S.18W.12.333.....	459
Well 321540108514101	Local number	23S.20W.25.422.....	459
Well 321257108331201	Local number	24S.17W.14.442.....	459
Well 315645108493501	Local number	27S.19W.20.343.....	459
Well 315010108570001	Local number	28S.21W.30.222.....	460
Well 313502108275001	Local number	31S.16W.33.233.....	460
Well 312938108302301	Local number	32S.16W.30.134.....	460
<u>LEA COUNTY</u>			
Well 331740103285001	Local number	12S.34E.11.421.....	460
Well 330400103193401	Local number	14S.36E.32.121.....	461
Well 325730103213901	(formerly 325703103213201)	Local number 16S.36E.04.322...	461
Well 325658103200001	Local number	16S.37E.11.111.....	461
Well 324947103371001	Local number	17S.33E.13.341.....	461
Well 325132103112501	Local number	17S.38E.07.111A.....	462
Well 324745103082001	Local number	17S.38E.34.113.....	462
<u>LINCOLN COUNTY</u>			
Well 333242105340701	Local number	09S.14E.10.132.....	462
Well 332145105333001	Local number	11S.14E.15.432.....	462
Well 332157105094101	Local number	11S.18E.15.333.....	463

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<u>LUNA COUNTY</u>			
Well 322930107221001	Local number	21S.05W.08.444.....	463
Well 321352107493901	Local number	24S.10W.12.431.....	463
Well 321415107565501	Local number	24S.11W.14.122.....	463
Well 321015107260501	Local number	25S.06W.02.111.....	464
Well 320915104294501	Local number	25S.06W.07.211.....	464
Well 315525107374501	Local number	27S.08W.35.122.....	464
Well 315905107425001	Local number	27S.09W.01.431.....	464
Well 314938107371401	Local number	28S.08W.36.411.....	465
<u>MORA COUNTY</u>			
Well 354840104590301	Local number	18N.18E.01.333.....	465
<u>OTERO COUNTY</u>			
Well 330324106011201	Local number	14S.10E.31.144.....	465
Well 320657105061501	Local number	25S.18E.21.233.....	466
Well 320650105034801	Local number	26S.18E.21.331.....	466
<u>QUAY COUNTY</u>			
Well 343810103463001	Local number	05N.30E.18.331.....	466
Well 344350103553001	Local number	06N.28E.24.233.....	466
<u>ROOSEVELT COUNTY</u>			
Well 341852103090701	Local number	01N.36E.21.213.....	467
Well 341037103254501	Local number	01S.33E.36.23111.....	467
Well 340740103145501	Local number	02S.35E.23.111.....	467
Well 335655103032001	Local number	06S.38E.21.233.....	467
<u>SANDOVAL COUNTY</u>			
Well 352235106282401	Local number	13N.04E.12.112.....	468
<u>SANTA FE COUNTY</u>			
Well 350525106025001	Local number	10N.08E.13.133.....	468
Well 350340106005001	Local number	10N.09E.29.133.....	468
Well 354005105574501	Local number	17N.09E.27.441.....	469
<u>SIERRA COUNTY</u>			
Well 331002107150001	Local number	13S.04W.21.213.....	469
Well 325550107184001	Local number	15S.05W.24.312.....	469
Well 325350107175501	Local number	16S.05W.25.211.....	469
<u>TAOS COUNTY</u>			
Well 365036105355301	Local number	30N.13E.18.1121.....	470
Well 365650105370001	Local number	01S.74W.24.244.....	470
Well 365410105354501	Local number	02S.73W.05.222.....	470
<u>TORRANCE COUNTY</u>			
Well 343443106024401	Local number	04N.09E.07.334.....	470
Well 344016106064701	Local number	05N.08E.08.424.....	471
Well 344234106074901	Local number	06N.08E.32.212.....	471
Well 344622105575501	Local number	06N.09E.11.211.....	471
Well 345900106034301	Local number	09N.08E.24.334.....	471
<u>UNION COUNTY</u>			
Well 360940103083501	Local number	19N.36E.23.244.....	472
Well 361015103075201	Local number	22N.36E.05.131.....	472
Well 361910103170501	Local number	24N.36E.17.244.....	472
Well 364430103595501	Local number	29N.28E.18.341.....	472

INTRODUCTION

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."

Water-resources data for water year 1988 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 of ground water. This report contains discharge records for 165 gaging stations (2 of which measure only low flow); stage and contents for 26 lakes and reservoirs; water quality for 64 gaging stations, 21 partial-record stations, 2 reservoirs, 30 miscellaneous sampling sites, and 76 wells; and water levels at 105 observation wells. Also included are 108 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. One seepage investigation was 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.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs 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; thereafter they were published in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperature, and suspended sediment were published from 1941 to 1970 in an annual series of Water-Supply Papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of Water-Supply Papers entitled "Ground-Water Levels in the United States." Water-Supply Papers generally are available in the libraries of the principal cities of the United States or may be purchased from U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 810, Box 25425, Denver, Colorado 80225.

For water years 1961 through 1974, streamflow data were released by the U.S. Geological Survey in annual reports for each State. Water-quality records for water years 1964 through 1974 were similarly released in separate reports. Beginning with water year 1975, data for streamflow, water quality, and ground water were combined in reports published annually for each State. These reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NM-88-1." These Water-Data Reports are for sale by the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22151.

COOPERATION

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

New Mexico State Engineer Office, S.E. Reynolds, State Engineer.

New Mexico Interstate Stream Commission, S.E. Reynolds, Secretary.

Pecos River Commission, W.E. Hale, Federal representative and Chairman;
Walter Gerrells, Commissioner for New Mexico;
B.L. Moody, Commissioner for Texas.

New Mexico State Highway and Transportation Department, Dewey Lonsberry, Secretary.

Costilla Creek Compact Commission, S.E. Reynolds, Commissioner for New Mexico;
J.A. Danielson, Commissioner for Colorado.

Albuquerque Metropolitan Arroyo Flood Control Authority, L.A. Blair,
Executive Engineer.

City of Gallup, Edward Munoz, Mayor.

City of Raton, M.A. Baker, Mayor.

City of Alamogordo, Dan Malone, City Manager.

Financial assistance for the collection of water-resources data published in this report was provided by the Corps of Engineers, U.S. Army, for 23 gaging stations; by the Bureau of Reclamation, U.S. Department of Interior, for 9 gaging stations; by the Bureau of Indian Affairs, U.S. Department of Interior, for 17 gaging stations; and by the Bureau of Land Management, U.S. Department of Interior, for 1 gaging station.

Assistance in the form of services was provided by the Carlsbad Irrigation District.

Some data have been collected by contractors in accordance with U.S. Geological Survey specifications and under Geological Survey quality control. Organizations that provided data are identified 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. Several reaches of the Pecos River south of Santa Rosa have perennial flow that is maintained by relatively large discharges from springs. Large discharges in perennial streams may last several months and normally result from spring snowmelt in the mountains.

Ephemeral streams are present in the remainder of the State. Some of these streams, such as the Rio Puerco, have deeply incised channels; others, especially those on the eastern plains, are swales 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 discharge usually lasts for only a few hours.

Hydrologic conditions during the 1988 water year were a study in contrasts. Although most of the Nation suffered through a catastrophic drought, streamflow in New Mexico was much greater than normal for most of the year. In several areas of the State major flooding was reported.

Streamflow within New Mexico has been near or greater than normal since 1979. At the beginning of the 1988 water year, recorded discharges in the State's streams were near normal. Discharges recorded in October on the Pecos and Animas Rivers were 124 and 85 percent of normal, respectively. These conditions of streamflow continued through the winter months. During that time mountain snowpack, a major contributor to springtime streamflow, was generally near or less than normal. This led forecasters to predict that streamflows would remain near normal during most of the water year. Beginning in July, however, rainfall was much greater than normal across the State, with the greatest amounts occurring in the northeast and central areas. The increased precipitation produced larger than normal streamflows and localized flooding. The most dramatic flooding happened in Albuquerque in early July when an 8-inch rainfall in the Sandia Mountain foothills resulted in a flood that killed one person and caused more than \$1 1/2 million in damage. The Gila River in the southwestern part of the State also experienced a dramatic increase in discharge, from 161 percent of normal in July to 1,070 percent of normal in August to 1,580 percent of normal in September. Most other streams experienced sustained increases in flows from August until the end of the water year.

As in 1987, reservoir storage of the State's surface waters remained large throughout the 1988 water year. The recorded storage at three of the State's reservoirs, Elephant Butte, Caballo, and Conchas, reflects this trend. The combined storage of Elephant Butte and Caballo Reservoirs was 89 percent of capacity in October. Storage remained at this level or greater for the rest of the water year. At the end of the water year storage was 85 percent of capacity. In like manner, storage at Conchas Reservoir was 92 percent of capacity in October and 88 percent of capacity at the end of the water year.

Discharge for water year 1988 at four index streamflow-gaging stations compared to median annual discharge for water years 1951-80 at the same stations is listed below:

Station number	Station name	Median annual discharge for water years 1951-80, in acre-feet	Discharge for water year 1988, in acre-feet	1988 discharge as a percentage of median
08276500	Rio Grande below Taos Junction Bridge	388,700	345,500	89
09430500	Gila River near Gila	79,950	199,900	250
08378500	Pecos River near Pecos	56,090	74,940	134
08408500	Delaware River near Red Bluff	7,570	3,770	50

The combined storage of 12 major reservoirs in the State increased by 64,700 acre-feet since the end of the 1987 water year totaling 5,133,000 acre-feet by September 30, 1988. The total combined capacity of these reservoirs is 7,619,000 acre-feet.

Water-Quality Conditions

Dissolved-solids concentrations in water at selected streamflow-gaging stations were near normal throughout the State during the water year. Median values of specific conductance for water year 1988 at selected daily stations compared to median values of specific conductance for water years 1978-87 at the same stations are listed below:

Station number	Station name	Median specific conductance, in microsiemens per centimeter at 25°Celsius, for water years 1978-87	Median specific conductance, in microsiemens per centimeter at 25°Celsius, for water year 1988	1988 median as a percentage of 1978-87 median
08313000	Rio Grande at Otowi Bridge	320	353	110
08330000	Rio Grande at Albuquerque	405	406	100
08358300	Rio Grande CC at San Marcial	987	832	84
08358400	Rio Grande FW at San Marcial	620	590	95
08396500	Pecos River near Artesia	7,420	7,210	97
09364500	Animas River at Farmington	606	589	97

Suspended-sediment loads for water year 1988 at four index stations compared to median suspended-sediment loads for water years 1974-83 at the same stations are listed below:

Station number	Station name	Suspended-sediment load for water year 1988, in tons	Median suspended-sediment load for water years 1974-83, in tons	Percentage of median
08313000	Rio Grande at Otowi	567,516	1,497,000	38
08330000	Rio Grande at Albuquerque	369,377	949,500	39
08396500	Pecos River near Artesia	376,928	333,100	113

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 to be measured 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. Seventeen 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. The wells in Luna, Union, and Chaves Counties are in areas of intensive irrigation. The water level in the recorder well in Luna County (Mimbres Valley) remained about the same as in the previous year, but continued to be higher than the average of 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 the Roswell artesian basin. The water levels in the vicinity of this well have increased 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 Bench-Mark Network includes 57 stations in small drainage basins around the country whose purpose is to provide hydrologic data for basins in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station, streamflow and water quality, may be used to separate effects of the natural from human-induced changes in other basins that have been developed, and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin. Included in this program are stations 08377900 (Rio Mora near Terrero), and 09430600 (Mogollon Creek near Cliff).

National Stream-Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in national or regional water-quality planning and management. The 500 or so stations in NASQAN generally are located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey in consultation with the Water Resources Council. The objectives of NASQAN are: (1) To obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting; (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs; (3) to detect changes or trends with time in the pattern of occurrence of water-quality characteristics; and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research. Included in this network are stations 07221500 (Canadian River near Sanchez), 08251500 (Rio Grande near Lobatos, Colo.), 08313000 (Rio Grande at Otowi Bridge, near San Ildefonso), 08358300 (Rio Grande Conveyance Channel at San Marcial), 08358400 (Rio Grande Floodway at San Marcial), 08364000 (Rio Grande at El Paso, Tex.), 08370500 (Rio Grande below Old Fort Quitman, Tex.), 08382650 (Pecos River above Santa Rosa Reservoir), 08407500 (Pecos River near Red Bluff), 08481500 (Tularosa Creek near Bent), 09364500 (Animas River at Farmington), 09368000 (San Juan River at Shiprock), and 09431500 (Gila River near Redrock).

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States. Included in this program are stations 08313000 (Rio Grande at Otowi Bridge, near San Ildefonso), 08358300 (Rio Grande Conveyance Channel at San Marcial), 08358400 (Rio Grande Floodway at San Marcial), 08377900 (Rio Mora near Terrero), 09368000 (San Juan River at Shiprock), 09430600 (Mogollon Creek near Cliff), and 09431500 (Gila River near Redrock).

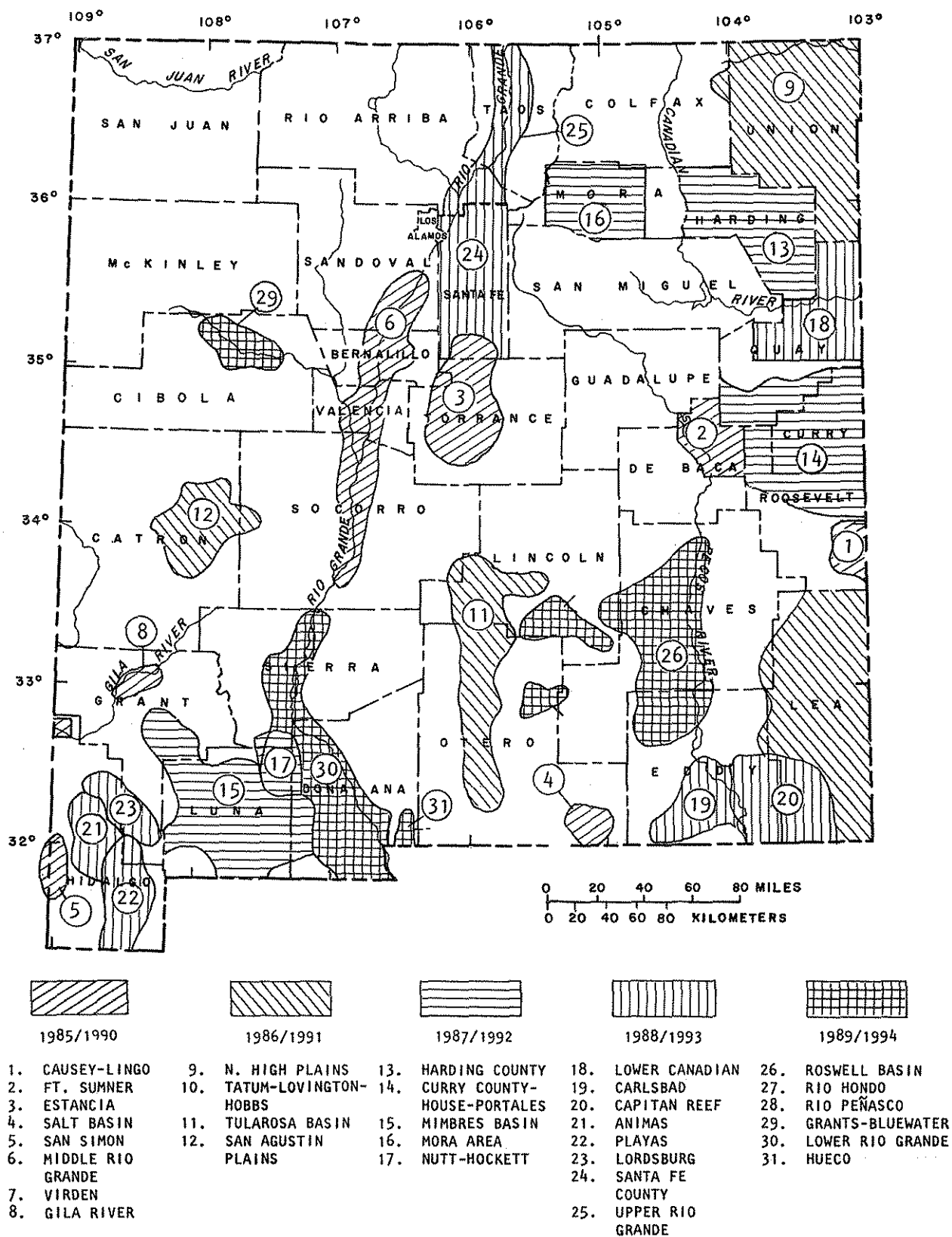


Figure 1.--Areas of 5-year ground-water-level monitoring and years measured or scheduled for measurement.

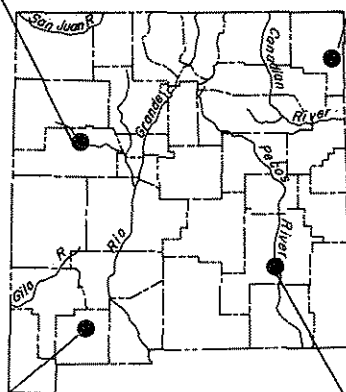
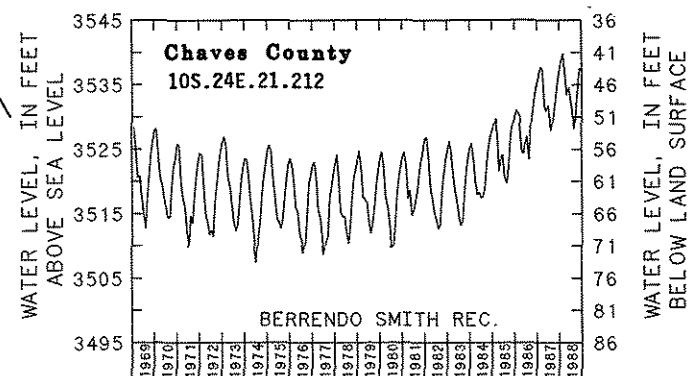
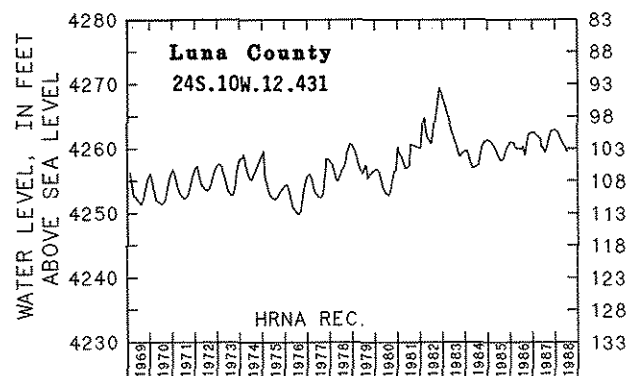
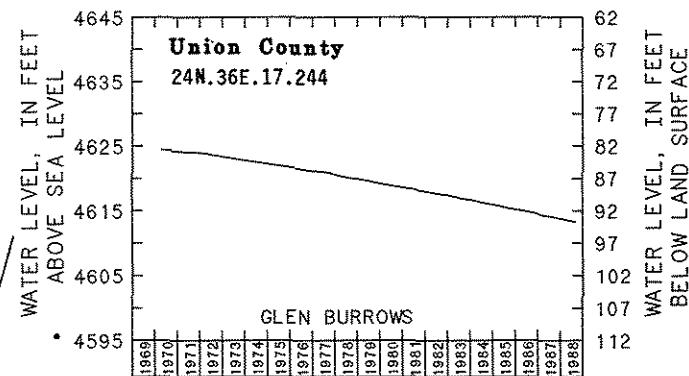
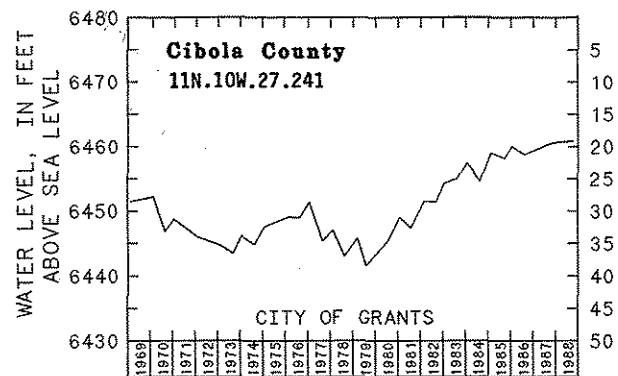


Figure 2.--Ground-water-level trends for the last 20 years or period of record.

Surveillance network stations are surface-water stations selected for water-quality examinations for water-quality control purposes. These stations are usually located at key regulatory streamflow gaging stations or near the state lines. Data for major inorganic constituents, nutrients, dissolved oxygen, and bacteria are collected at all these stations. Data for trace elements, radiochemicals, and pesticides are collected at some of these stations. Included in this network are stations 07221500, Canadian River near Sanchez; 08276500, Rio Grande below Taos Junction Bridge, near Taos; 08313000, Rio Grande at Otowi Bridge, near San Ildefonso; 08319000, Rio Grande at San Felipe; 08331000, Rio Grande at Isleta; 08354800, Rio Grande Conveyance Channel at San Acacia; 08354900, Rio Grande Floodway at San Acacia; 08358300, Rio Grande Conveyance Channel at San Marcial; 08358400, Rio Grande Floodway at San Marcial; 08383500, Pecos River near Puerto de Luna; 08386000, Pecos River near Acme; 08396500, Pecos River near Artesia; and 09368000, San Juan River at Shiprock.

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 are also obtained at a number of precipitation stations. The purpose of the 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 the 1988 water year which began October 1, 1987, and ended September 30, 1988. 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 locations of the stations and wells where the data were collected are shown in figures 5 and 6. 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, whether stream site or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. 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. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and 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 on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indentation on a list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show 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 according to 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 both 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. Records in this report are in Part 07 (Lower Mississippi River Basin), Part 08 (Western Gulf of Mexico Basin), and Part 09 (Colorado River Basin).

Latitude-Longitude System

The identification numbers for wells, springs, and miscellaneous sites are assigned according to the grid system of latitude and longitude. The system provides the geographic location of the well, spring, or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 3 below.

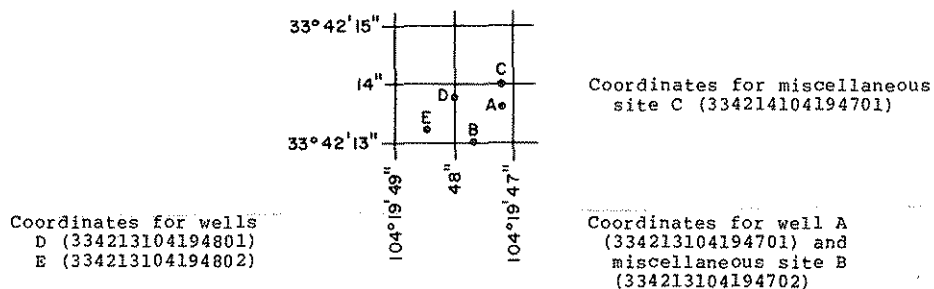


Figure 3.--System for numbering wells, springs, and miscellaneous sites.

Local Well Numbers

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 can locate a well or spring to the nearest 10-acre tract, while six digits will locate a site to the nearest 0.16-acre tract. This numbering system is illustrated in WDR NM-75-1 and WSP 1855. In the Navajo Reservation, where public land surveys have not been made, the local identifier is based on a different system of letters and numbers. In the example NR032.0156x0736, the first two letters indicate that the well is in the Navajo Reservation. The three-digit number to the left of the decimal indicates one of a series of special quadrangle maps on which the well is located. The two numbers to the right of the decimal separated by the letter x are the coordinates of the well in hundredths of a mile from the northeast corner of the area on the map. The first coordinate indicates the distance west; the second, the distance south. The above well is located on map No. 032, 1.56 miles west and 7.36 miles south of the northeast corner.

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 mean discharges 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 the table title "Crest-stage partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all partial-record stations for which data are given in this report is shown in figure 7.

Data Collection and Computation

The data obtained at a complete-record gaging station consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Continuous records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations, or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using methods adapted 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.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. 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 computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by the personnel making the measurements are applied to the gage heights before discharges are determined from the curves or tables. This shifting-control method is also used if the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control. At some northern stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes of observations, and comparable records of discharge for other stations in the same or nearby basins for comparable periods of time.

In computing records of lake or reservoir contents, it is necessary to have curves or tables available from surveys. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes in contents are determined.

If the stage-capacity curve changes because of deposition of sediment in a lake or reservoir, periodic resurveys of the reservoir may be necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty 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 on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, prior and subsequent records, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts; the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage 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, given for only a few stations, 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.

PERIOD OF RECORD.--This indicates the period for which there are published records 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 records from it can reasonably be considered equivalent with records from the present station.

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

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

REMARKS.--All periods of estimated daily-discharge record are identified by date in this paragraph of the station description for water-discharge records. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, and possibly 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 Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

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.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

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 to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month may also be 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 are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years.

Footnotes to the table of daily discharge are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, indefinite stage-relations, or any other unusual conditions at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs, the data presented comprise a description of the station and a table showing daily contents or stage. For some reservoirs a monthly summary table of stage and contents is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given, or if daily stage is published.

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record discharge stations are presented in a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations (miscellaneous sites). Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified 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 interpretations 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 the true value; "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 of less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to three significant figures above 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made. 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 Data Available

Information of a more detailed nature than that published for most of the gaging stations, such as observations of water temperatures, discharge measurements, gage-height records and rating tables, is on file in the District office. Most gaging-station records are also available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the District office.

Records of Surface-Water Quality

Surface-water quality samples usually are collected at or near gaging stations, because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

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 limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records of surface-water quality appear in this report are shown in figure 5.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references appear on the list of publications following this section. Detailed information on collecting, treating, and shipping samples may also be obtained from the Geological Survey 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 definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

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 the 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 chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the District office whose address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have small diurnal temperature changes; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may be 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 has been computed by the subdivided-day method. For periods when no samples are collected, daily discharges of suspended sediment are 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 are 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 quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

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

Laboratory Measurements

Microbiological data on coliform and streptococcal bacteria appear in this report. Methods for the collection and analysis of aquatic biological and aquatic microbiological samples are described by Slack and others (1973). (See reference 5-A4.)

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

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, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of daily values of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-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 record, sediment 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 year.

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

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

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 acceptance 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

Records of Ground-Water Levels

Only water-level data from a national 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 Nation's most important aquifers. Locations of the observation wells in this network in New Mexico are shown in figure 8.

Data Collection and Computation

Measurements of water levels are made in many types of wells, under varying conditions of access and at different temperatures, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used are those that will ensure 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. 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 with a steel tape or from the graph or punched tape of a water-stage recorder. Water-level measurements in this report are given in feet with reference to either mean sea level (msl) or land-surface datum (lsd). Mean sea level is the datum plane on which the national network of precise levels is based; 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 above mean sea level 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 in 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 only to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of two parts, the station description and the 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; the hydrologic unit number; the distance and direction from a geographic point of reference; and the owner's name.

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) 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 lows are listed for every fifth day and at 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.

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 titled 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 WATSTORE DATA

The National Water Data Storage and Retrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's District offices. (See address given on the back of the title page.)

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
MS 437 National Center
Reston, Virginia 22092

Parameter Codes

The five-digit codes shown in parentheses in the column headings of the tables in this report are parameter codes that uniquely identify a specific constituent. These are standard codes used to identify the data stored in the files of WATSTORE. These codes are identical to those used in the U.S. Environmental Protection Agency (EPA) data system, STORET. The EPA assigns and approves all requests for new codes.

DEFINITION OF TERMS

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

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or 325,851 gallons or 1,233.49 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

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.

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

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

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which 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 \pm 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, coccal bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C \pm 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.

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

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 the mass per unit area or volume of habitat.

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. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m³), and periphyton and benthic organisms in grams per square meter (g/m²).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, 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.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which 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, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by the 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 2,445 cubic meters.

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 natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll *a* and *b* are the two most common green pigments in plants.

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

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.

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

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 salt water.

Cubic feet per second per square mile [(ft³/s)/mi²] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (FT³/S, ft³/s, cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

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

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

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

Discharge-weighted average: See Weighted average.

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

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

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

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO₃).

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

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

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

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.

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) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element sorbed per unit mass (gram) of material analyzed.

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

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

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

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area habitat, usually square meters (m^2), acres, or hectares. 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 milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

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

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) 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 used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

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

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

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

Periphyton are the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control the growth of undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

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

Plankton are the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton are 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 are commonly known as algae.

Blue-green algae 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.

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.

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.

Zooplankton are the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often 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.

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.

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 by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m².time)] for periphyton and macrophytes and [mg C/(m³.time)] for phytoplankton are the units for expressing primary productivity. They define 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 in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O/(m².time)] for periphyton and macrophytes and [mg O/(m³.time)] for phytoplankton are the units for expressing primary productivity. They define 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.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only 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.

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

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

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

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

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is a general term referring to material in suspension. It is not synonymous with either discharge or concentration.

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

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

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

Solute is any substance that is dissolved in water.

Solution is the homogeneous mixture of solutes and water. The solutes usually comprise a very small fraction of the total weight of the mixture. For this reason, the terms "solution" and "water" are used interchangeably.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 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.

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

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

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emerged or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which 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 taken. 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.

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

Surficial bed material is that part (0.1 to 0.2 ft) 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 associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um 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 would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

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.....Hexagenia
Species.....Hexagenia limbata

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature, whether on a chart, 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 that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

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

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

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

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

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

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

Water year in Geological Survey 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, 1980 is called the "1980 water year."

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.

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).

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

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

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. Water temperature--influential factors, field measurement, and data presentation, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. General field and office procedures for indirect discharge measurements, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. Measurement of peak discharge at width contractions by indirect methods, by H. J. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. General procedure for gaging streams, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. Measurement of time of travel and dispersion in streams by dye tracing, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.
- 3-A10. Discharge ratings at gaging stations, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. Fluorometric procedures for dye tracing, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.
- 3-A13. Computation of continuous records of streamflow, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. Use of flumes in measuring discharge, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. Computation of water-surface profiles in open channels, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. Measurement of discharge using tracers, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. Acoustic velocity meter systems, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-B1. Aquifer-test design, observation, and data analysis, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

- 3-B2. Introduction to ground-water hydraulics, a programed test for self-instruction, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. Type curves for selected problems of flow to wells in confined aquifers, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
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- 8-A1. Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. Installation and service manual for U.S. Geological Survey manometers, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
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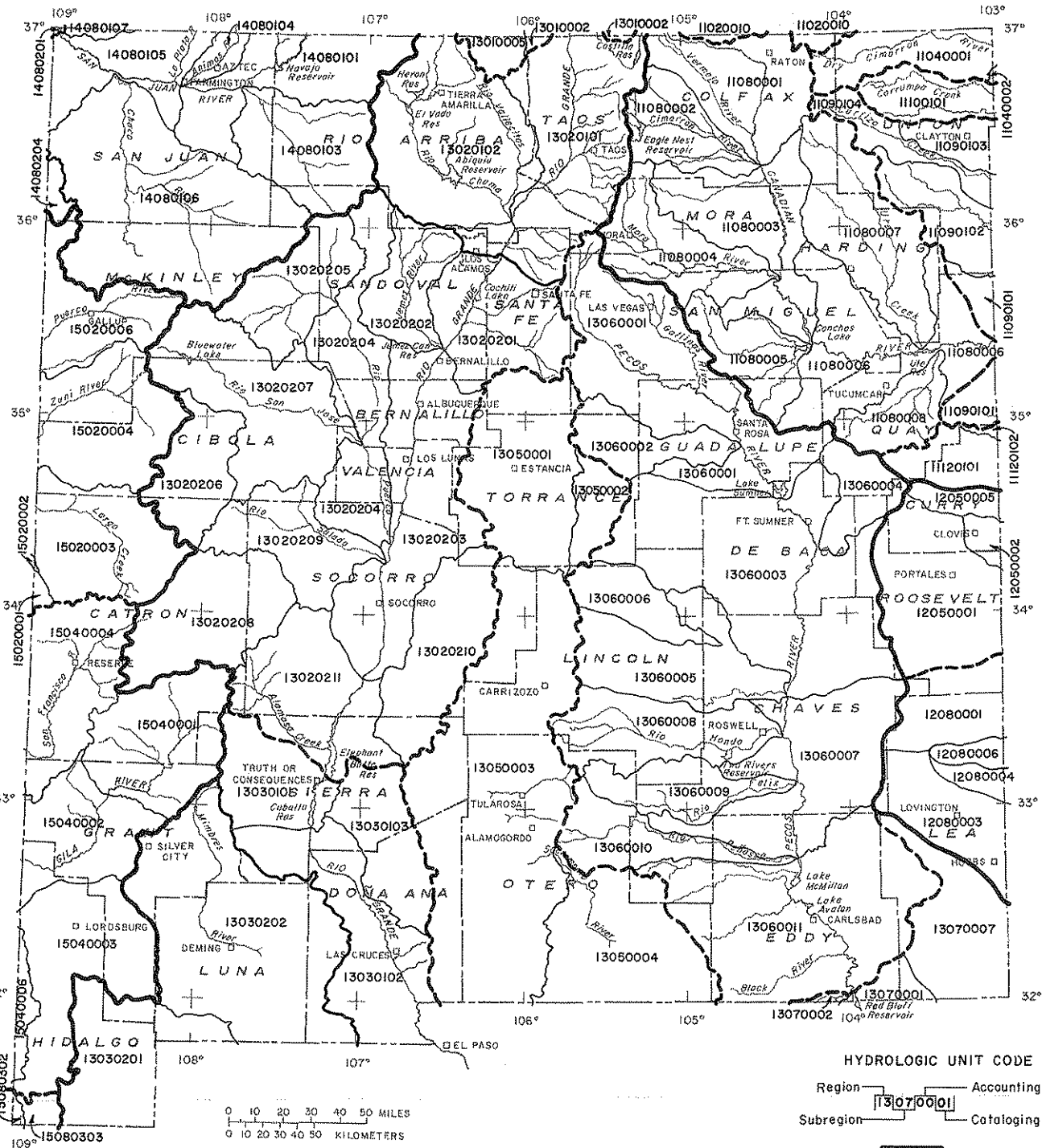


Figure 4.--Location of hydrologic units.

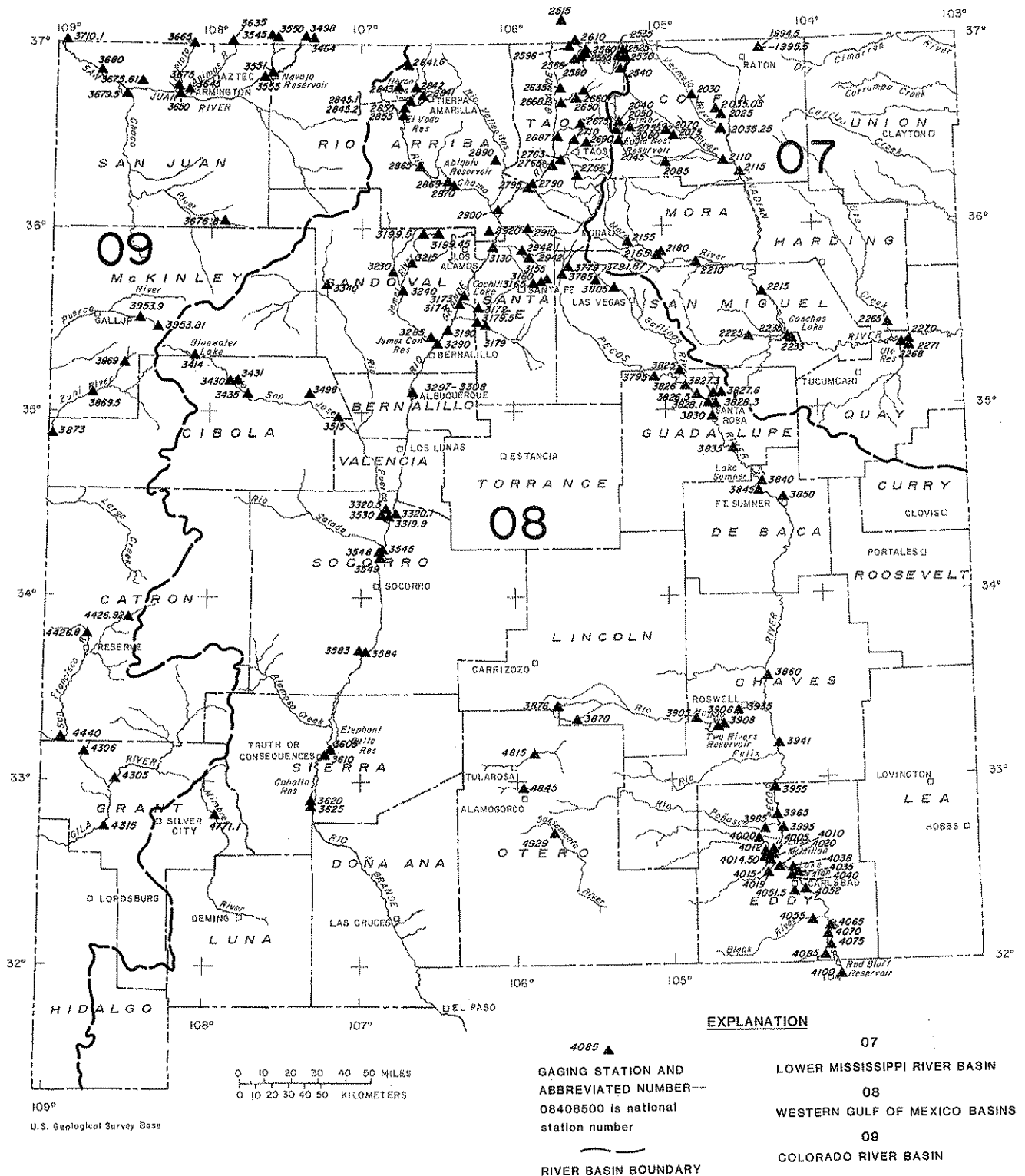


Figure 5.--Location of surface-water gaging stations.

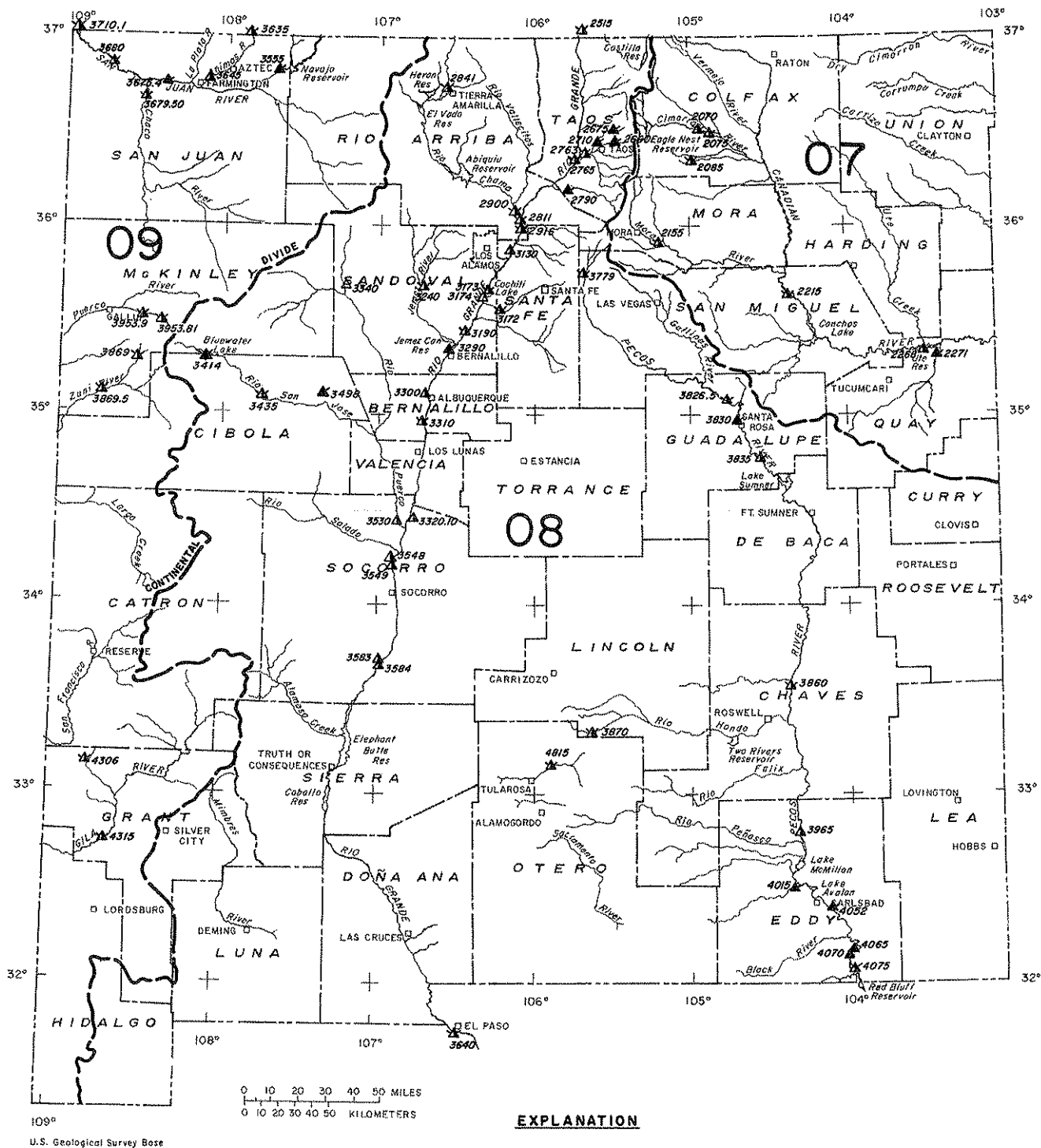


Figure 6.--Location of water-quality gaging stations.

LOWER MISSISSIPPI RIVER BASIN

ARKANSAS RIVER BASIN

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 mi².

PERIOD OF RECORD.--May 1975 to September 1987 (monthend contents only), October 1987 to September 1988.

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

REMARKS.--Records good. 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-feet, from Lake Maloya and Lake Alice for municipal supply for city of Raton.

COOPERATION.--Diversion and spillage 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, 7,512.18 ft, Apr. 30, 1987; minimum observed, 911 acre-ft, Feb. 28, 1979, elevation, 7,479.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,830 acre-ft, May 24, elevation, 7,512.13 ft; minimum contents, 3,430 acre-ft, several days, elevation, 7,508.81 ft.

07199550 LAKE ALICE NEAR RATON, NM

LOCATION.--Lat 36°57'15", long 104°23'06", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, near spillway of dam on Chicorica Creek, 4.4 mi northeast of Raton, and at mile 19.2.

DRAINAGE AREA.--29.4 mi².

PERIOD OF RECORD.--May 1975 to current year.

GAGE.--Nonrecording gage. Elevation of gage is National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Reservoir is formed by an earthfill dam, completed in 1892; capacity 100 acre-ft, spillway elevation, 7,078.0 ft. Reservoir rehabilitated in 1941; capacity, 71 acre-ft, spillway elevation, 7,089.6 ft. Elevation of lowest outlet, 7,064.1 ft. No dead storage. Water is for municipal use of city of Raton. See table below for total monthly diversion, in acre-feet, from Lake Maloya and Lake Alice for municipal supply for city of Raton.

COOPERATION.--Monthend elevations and contents provided by city of Raton.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 73 acre-ft, Apr. 30, May 31, 1983, elevation, 7,090 ft; minimum observed, 40 acre-ft, May 31, 1978, elevation, 7,083.27 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 71 acre-ft all year, elevation, 7,089.60 ft; minimum observed, 71 acre-ft all year.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3500	3440	3470	3530	3540	3610	3720	3710	3740	3710	3660	3600
2	3490	3440	3470	3530	3540	3610	3720	3720	3740	3710	3660	3610
3	3490	3440	3470	3530	3540	3620	3720	3720	3730	3700	3660	3610
4	3480	3430	3480	3530	3550	3630	3730	3730	3730	3700	3660	3610
5	3480	3430	3480	3530	3550	3630	3730	3750	3780	3700	3660	3610
6	3480	3430	3480	3530	3550	3640	3730	3740	3750	3700	3660	3600
7	3470	3430	3490	3530	3550	3640	3740	3730	3740	3700	3660	3600
8	3470	3430	3480	3540	3550	3650	3730	3730	3730	3700	3660	3600
9	3470	3430	3480	3540	3560	3660	3720	3720	3730	3700	3660	3590
10	3460	3430	3490	3540	3560	3660	3710	3720	3730	3700	3660	3590
11	3460	3430	3490	3550	3560	3660	3710	3720	3730	3700	3660	3580
12	3460	3430	3490	3540	3560	3660	3710	3720	3720	3700	3660	3580
13	3460	3430	3500	3540	3560	3660	3710	3720	3720	3700	3660	3590
14	3460	3430	3490	3540	3560	3670	3710	3720	3730	3700	3650	3590
15	3460	3440	3490	3540	3560	3670	3720	3720	3720	3700	3650	3590
16	3460	3440	3490	3540	3560	3680	3730	3720	3720	3700	3640	3590
17	3460	3450	3510	3540	3570	3680	3730	3710	3720	3690	3640	3590
18	3460	3450	3510	3540	3570	3680	3740	3710	3720	3690	3630	3580
19	3460	3450	3520	3530	3570	3690	3740	3730	3720	3690	3630	3580
20	3450	3450	3510	3510	3570	3690	3740	3760	3710	3690	3620	3570
21	3450	3450	3520	3510	3570	3700	3730	3770	3710	3690	3620	3570
22	3450	3460	3520	3520	3580	3710	3730	3780	3710	3690	3610	3560
23	3450	3460	3520	3520	3580	3710	3720	3810	3710	3680	3610	3570
24	3450	3460	3520	3520	3580	3700	3720	3830	3700	3680	3610	3570
25	3450	3460	3520	3520	3580	3710	3720	3810	3700	3670	3610	3570
26	3440	3470	3520	3520	3570	3710	3720	3800	3700	3670	3600	3560
27	3440	3460	3520	3530	3600	3710	3720	3780	3710	3660	3600	3560
28	3440	3460	3520	3530	3600	3710	3720	3770	3710	3670	3600	3560
29	3440	3460	3530	3530	3600	3720	3720	3760	3710	3670	3600	3560
30	3440	3470	3530	3540	---	3720	3720	3750	3720	3670	3600	3560
31	3440	---	3530	3540	---	3710	---	3750	---	3660	3600	---
MAX	3500	3470	3530	3550	3600	3720	3740	3830	3780	3710	3660	3610
MIN	3440	3430	3470	3510	3540	3610	3710	3710	3700	3660	3600	3560
(+)	7508.91	7509.13	7509.70	7509.71	7510.29	7511.20	7511.24	7511.49	7511.22	7510.79	7510.23	7509.93
(++)	-60	+30	+60	+10	+60	+110	+10	+30	-30	-60	-60	-40
(+++)	138	136	121	174	125	153	120	109	186	232	209	170

CAL YR 1987 MAX --- MIN --- (++) -130

WTR YR 1988 MAX 3830 MIN 3430 (++) +60 (++) 1873

4911 Ac-Ft - Total spillage from Lake Maloya.

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

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

(+++ DIVERSION FROM LAKE MALOYA, IN ACRE-FEET

ARKANSAS RIVER BASIN

07202500 EAGLE TAIL DITCH NEAR MAXWELL, NM

LOCATION.--Lat 36°38'55", long 104°33'31", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, on left bank 25 ft upstream from concrete drop structure, 300 ft upstream from Crow Creek, and 7.5 mi north of Maxwell.

PERIOD OF RECORD.--December 1944 to July 1950 (monthly discharge only October 1945 to July 1950), May 1975 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,110 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 1975, at site about 200 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 14 to Feb. 23. Records fair except for estimated daily discharges, which are poor. Eagle Tail ditch diverts water from Chicorica Creek for use near Maxwell. No diversions upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1946-49, 1976-88), 7.08 ft³/s, 5,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 217 ft³/s, Aug. 27, 1946, from rating curve extended above 85 ft³/s; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 109 ft³/s, July 29, gage height, 3.26 ft; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	3.8	4.6	.50	2.0	2.8	2.9	5.6	63	12	4.1	2.7
2	5.2	3.6	4.4	.50	1.5	2.9	3.1	5.4	51	14	4.2	8.8
3	4.0	3.5	4.8	.50	1.5	2.6	2.6	13	39	10	6.5	8.6
4	4.0	3.6	4.8	.50	1.5	2.4	2.3	14	31	7.5	3.9	3.7
5	4.9	3.5	4.9	.50	1.5	2.4	3.0	22	28	6.2	21	2.2
6	4.4	3.6	4.8	.50	1.5	2.5	2.7	50	54	9.1	6.7	1.8
7	4.3	3.7	4.9	.50	1.0	2.5	12	45	68	7.3	5.3	1.7
8	3.2	3.9	5.2	.50	1.0	2.2	48	32	66	32	4.4	1.4
9	2.6	3.6	5.1	.50	1.0	2.2	26	24	52	50	4.8	1.2
10	2.3	3.5	4.9	.50	1.0	2.2	24	20	37	45	21	.94
11	2.5	3.7	4.8	.50	1.0	2.3	16	16	34	36	11	.76
12	2.8	3.5	3.8	1.0	1.0	2.0	12	10	27	12	5.8	.91
13	2.9	3.5	2.8	1.5	1.0	2.1	10	7.8	35	6.5	5.2	5.6
14	3.1	3.5	2.0	1.5	1.0	2.0	12	6.0	38	10	4.5	15
15	3.4	3.8	1.0	2.0	1.0	2.2	12	4.8	47	4.7	3.3	34
16	3.7	4.0	1.0	1.5	.50	2.2	13	4.7	52	5.2	2.8	32
17	3.5	4.1	1.0	1.0	.50	2.2	26	4.5	49	13	2.8	16
18	2.9	4.0	1.5	1.0	.50	2.1	28	6.9	37	8.3	3.8	7.8
19	2.5	4.0	1.5	.50	.50	2.3	32	22	20	36	5.4	5.8
20	2.5	4.1	2.0	.50	.50	2.3	38	59	15	39	2.9	5.1
21	3.0	4.0	1.5	.50	1.0	2.3	27	83	13	35	2.0	5.1
22	3.5	4.1	1.5	.50	2.0	2.2	21	90	11	20	1.7	4.0
23	3.5	4.2	2.0	.50	4.0	1.3	17	86	9.7	6.7	32	4.7
24	4.1	4.3	1.5	1.0	6.4	.10	15	86	8.6	4.9	33	5.8
25	4.8	4.0	.50	1.0	3.8	.04	13	85	7.8	4.5	11	4.5
26	6.1	3.8	.50	1.0	3.4	.02	10	83	9.5	4.5	3.7	3.7
27	9.3	4.2	.50	1.5	3.1	.00	8.4	82	8.7	10	3.1	3.6
28	9.9	3.9	.50	2.0	3.1	.00	7.1	80	16	7.3	3.6	3.4
29	7.1	4.3	1.0	2.0	2.8	.00	6.3	79	13	20	3.0	5.7
30	5.7	4.5	1.0	2.0	---	2.4	6.8	78	8.4	19	2.7	5.7
31	4.6	---	.50	2.0	---	3.5	---	72	---	5.0	2.7	---
TOTAL	131.5	115.8	80.80	30.00	50.60	58.26	457.2	1276.7	948.7	500.7	227.9	202.21
MEAN	4.24	3.86	2.61	.97	1.74	1.88	15.2	41.2	31.6	16.2	7.35	6.74
MAX	9.9	4.5	5.2	2.0	6.4	3.5	48	90	68	50	33	34
MIN	2.3	3.5	.50	.50	.50	.00	2.3	4.5	7.8	4.5	1.7	.76
AC-FT	261	230	160	60	100	116	907	2530	1880	993	452	401
CAL YR 1987	TOTAL	4029.01		MEAN	11.0	MAX	139	MIN	.00	AC-FT	7990	
WTR YR 1988	TOTAL	4080.37		MEAN	11.1	MAX	90	MIN	.00	AC-FT	8090	

07203000 VERMEJO RIVER NEAR DAWSON, NM

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

DRAINAGE AREA.--301 mi².

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

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

GAGE.--Water-stage recorder. Elevation of gage is 6,360 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1311 or 1731 for history of changes prior to Sept. 24, 1953.

REMARKS.--Estimated daily discharges: Nov. 12, 16-18, Nov. 27 to Dec. 2, Jan. 14, Feb. 25 to Mar. 12, June 11-28, July 12 to Aug. 2, Aug. 8-17, 19-23, and Aug. 25 to Sept. 20. Records poor. Diversions for irrigation of small acreage and mountain meadows upstream from station.

AVERAGE DISCHARGE.--64 years (water years 1916-17, 1920, 1928-88), 18.5 ft³/s, 13,400 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 9	1845	*10,400	*14.23	Aug. 7	1715	2,000	7.12
July 9	1715	1,120	6.02				

Minimum discharge, 1.4 ft³/s, May 14, 15, but may have been less during estimated period.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	7.4	6.0	3.0	5.5	6.0	10	4.6	8.8	36	14	18
2	9.3	7.6	6.3	3.0	5.5	6.0	7.0	4.8	8.5	42	13	25
3	8.5	7.1	7.9	3.0	5.5	6.0	7.0	5.8	7.8	29	15	22
4	8.6	7.5	9.1	3.0	5.5	5.5	7.0	6.0	8.1	27	54	18
5	8.5	7.5	6.6	3.0	5.0	7.0	6.4	6.0	12	31	69	15
6	7.6	7.3	5.8	3.0	5.0	7.0	6.4	6.8	13	33	51	13
7	7.1	7.2	7.0	3.0	5.0	7.0	6.4	6.6	11	22	142	12
8	7.5	7.6	7.0	3.0	6.0	6.5	6.8	6.4	8.8	34	60	11
9	7.4	8.0	6.0	3.0	6.0	7.5	7.5	6.7	934	98	50	11
10	7.2	7.6	6.0	3.5	5.0	7.5	7.0	6.2	100	56	45	10
11	7.3	7.4	7.0	4.0	5.0	7.0	6.1	6.1	30	60	40	10
12	7.1	6.0	6.0	3.5	5.5	7.0	6.1	4.6	40	50	30	15
13	7.2	7.1	5.0	3.0	6.0	6.7	6.2	2.6	25	45	20	21
14	7.4	7.5	4.5	3.5	5.5	10	6.1	1.8	38	37	15	24
15	7.3	8.0	4.5	5.0	6.0	7.5	6.4	4.3	25	26	11	21
16	7.0	6.0	4.5	4.0	6.0	8.0	8.3	5.6	80	23	11	18
17	7.3	6.0	4.5	3.5	6.0	13	11	5.3	30	20	21	16
18	7.4	6.0	5.0	3.0	6.0	14	10	6.5	16	19	35	14
19	7.2	8.2	6.0	3.0	6.0	10	9.2	9.7	15	18	23	13
20	7.2	8.8	6.0	3.0	6.0	7.9	8.1	11	15	21	20	11
21	7.3	11	5.0	3.0	6.5	6.7	8.2	12	15	19	12	10
22	7.4	8.2	5.5	3.0	7.0	6.4	8.2	10	12	17	12	8.5
23	7.1	9.3	5.5	3.0	6.0	6.2	8.6	10	10	16	15	11
24	7.2	8.3	4.5	3.0	6.5	6.0	8.8	9.1	14	15	40	11
25	7.6	9.0	4.0	3.0	6.5	5.8	9.3	9.7	80	13	24	9.2
26	7.4	7.8	3.5	3.0	7.0	5.4	7.5	9.1	150	11	18	8.1
27	7.3	7.0	3.5	4.5	7.0	6.1	4.0	8.6	30	9.6	15	7.5
28	7.2	6.0	3.0	5.0	7.0	6.2	1.9	8.4	33	10	26	7.4
29	7.2	6.0	3.0	5.5	7.0	6.3	3.9	8.4	30	13	23	7.1
30	7.2	7.0	3.5	5.5	---	5.8	3.8	8.0	51	17	21	7.5
31	7.3	---	3.5	5.5	---	9.2	---	7.3	---	15	19	---
TOTAL	234.2	225.4	165.2	110.0	172.5	227.2	213.2	218.0	1851.0	882.6	964	405.3
MEAN	7.55	7.51	5.33	3.55	5.95	7.33	7.11	7.03	61.7	28.5	31.1	13.5
MAX	9.9	11	9.1	5.5	7.0	14	11	12	934	98	142	25
MIN	7.0	6.0	3.0	3.0	5.0	5.4	1.9	1.8	7.8	9.6	11	7.1
AC-FT	465	447	328	218	342	451	423	432	3670	1750	1910	804

CAL YR 1987	TOTAL	13872.1	MEAN	38.0	MAX	196	MIN	3.0	AC-FT	27520
WTR YR 1988	TOTAL	5668.6	MEAN	15.5	MAX	934	MIN	1.8	AC-FT	11240

ARKANSAS RIVER BASIN

07203505 VERMEJO DITCH NEAR COLFAX, NM

LOCATION.--Lat 36°34'18", long 104°41'53", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, on right bank 2.0 mi southeast of Colfax, and 4.9 mi downstream from head.

PERIOD OF RECORD.--December 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,160 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 19, 1985 at site 0.8 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 10 to Feb. 27, Mar. 4, Mar. 10-19, June 16-25, July 13 to Aug. 2, and Aug. 7 to Sept. 22. Records poor. Vermejo ditch diverts water from Vermejo River for use on the Vermejo Project. Three small diversions from Vermejo ditch upstream from gage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years, 17.4 ft³/s, 12,610 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 229 ft³/s, June 8, 1986; no flow several days most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 161 ft³/s, Aug. 5; minimum daily, 0.45 ft³/s, Dec. 11-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	4.1	.50	.90	.90	5.5	5.1	2.8	5.6	47	13	9.0
2	9.6	4.9	.50	.90	.90	5.1	6.0	3.0	6.2	58	13	15
3	9.4	4.7	.50	.90	.90	4.4	6.1	3.3	5.3	30	17	13
4	9.2	5.0	.50	.80	.90	3.7	6.0	3.2	5.2	24	84	11
5	9.0	5.1	.50	.80	.80	4.5	5.8	3.1	8.2	38	161	10
6	8.6	5.1	.50	1.0	.80	4.9	4.5	3.3	9.3	36	127	9.0
7	7.4	5.0	.50	1.0	.75	5.2	3.0	3.1	8.9	69	100	8.0
8	5.7	5.1	.50	.70	.70	4.7	3.5	2.9	6.3	44	90	7.0
9	5.4	5.5	.50	.70	.70	4.4	4.5	2.8	34	74	55	7.0
10	5.3	4.5	.50	.70	.65	3.5	4.0	2.8	146	91	40	6.5
11	5.4	4.5	.45	.80	.65	3.7	4.0	2.7	51	86	20	6.0
12	5.4	4.5	.45	.80	.60	3.5	4.3	2.5	35	46	15	6.0
13	5.1	4.5	.45	.90	.65	3.7	3.6	2.4	42	40	13	14
14	5.2	4.5	.50	.90	.75	3.7	3.5	2.1	26	30	10	15
15	5.4	4.5	.50	.90	.90	3.5	5.1	2.1	102	25	9.0	9.0
16	4.8	4.0	.50	.90	.90	3.7	5.5	2.3	37	15	8.0	8.0
17	4.8	4.0	.50	.90	1.0	3.5	7.4	2.5	20	25	7.5	7.0
18	4.9	4.0	.50	.90	.90	4.1	6.7	3.7	15	20	20	6.5
19	4.8	3.0	.55	.90	.90	4.8	6.2	5.7	12	15	15	6.0
20	4.5	3.0	.55	.90	.90	5.6	5.2	7.5	11	17	10	6.0
21	4.5	3.0	.60	.90	.90	6.0	5.8	7.3	10	16	9.0	8.0
22	4.5	3.0	.60	.80	.90	5.5	5.8	6.8	10	15	8.5	6.0
23	4.6	3.5	.70	.80	.90	5.1	6.1	5.9	9.0	12	8.0	21
24	4.5	3.5	.80	1.0	.90	4.5	6.4	11	8.0	11	15	13
25	4.8	3.0	.90	.80	.90	4.1	6.7	8.2	8.0	10	12	10
26	4.7	2.5	.90	.80	2.5	4.2	6.2	7.6	43	20	11	8.2
27	4.7	2.0	.90	.80	4.6	3.9	4.8	6.9	36	9.0	10	7.3
28	4.5	2.0	.90	.85	6.0	4.2	3.4	6.6	51	7.0	15	6.8
29	4.5	1.5	.90	.90	5.3	4.0	3.2	6.3	38	9.0	12	6.9
30	4.4	.70	.90	.80	---	4.5	3.0	5.8	79	12	11	6.9
31	4.3	---	.90	1.0	---	4.6	---	5.1	---	14	10	---
TOTAL	179.7	114.20	18.95	26.65	39.05	136.3	151.4	141.3	878.0	965.0	949.0	273.1
MEAN	5.80	3.81	.61	.86	1.35	4.40	5.05	4.56	29.3	31.1	30.6	9.10
MAX	9.8	5.5	.90	1.0	6.0	6.0	7.4	11	146	91	161	21
MIN	4.3	.70	.45	.70	.60	3.5	3.0	2.1	5.2	7.0	7.5	6.0
AC-FT	356	227	38	53	77	270	300	280	1740	1910	1880	542
CAL YR 1987	TOTAL	8993.35		MEAN	24.6	MAX	186	MIN	.00	AC-FT	17840	
WTR YR 1988	TOTAL	3872.65		MEAN	10.6	MAX	161	MIN	.45	AC-FT	7680	

ARKANSAS RIVER BASIN

29

07203525 VERMEJO RIVER NEAR MAXWELL, NM

LOCATION.--Lat 36°29'48", long 104°34'15", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, on right bank 30 ft upstream from bridge on Interstate Highway 25, 3.6 mi southwest of Maxwell, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--486 mi².

PERIOD OF RECORD.--November 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,880 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. Diversions for irrigation above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s, June 10, 1988, gage height, 9.49 ft, from rating curve extended above 120 ft³/s on basis of step-backwater analysis of channel; minimum discharge, 0.06 ft³/s, Aug. 28, 1986.

EXTREMES FOR NOVEMBER 1983 TO SEPTEMBER 30, 1984.--Maximum discharge, 994 ft³/s, Aug. 24, gage height, 6.35 ft, from rating curve extended above 120 ft³/s on basis of step-backwater analysis of channel; minimum discharge, 0.24 ft³/s, July 25.

EXTREMES FOR 1985 WATER YEAR.--Maximum discharge, 445 ft³/s, Sept. 12, gage height, 5.52 ft, from rating curve extended above 120 ft³/s on basis of step-backwater analysis of channel; minimum discharge, 0.30 ft³/s, Sept. 14.

EXTREMES FOR 1986 WATER YEAR.--Maximum discharge, 995 ft³/s, June 9, gage height, 7.37 ft, from rating curve extended above 120 ft³/s on basis of step-backwater analysis of channel; minimum discharge, 0.06 ft³/s, Aug. 28.

EXTREMES FOR 1987 WATER YEAR.--Maximum discharge, 1,050 ft³/s, June 26, gage height, 7.57 ft, from rating curve extended above 120 ft³/s on basis of step-backwater analysis of channel; minimum discharge, 0.55 ft³/s, Oct. 2, 16.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,300 ft³/s, June 10, gage height, 9.49 ft, from rating curve extended above 120 ft³/s on basis of step-backwater analysis of channel; minimum discharge, 0.60 ft³/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	2.9	e1.3	e1.3	1.8	2.6	2.3	1.6	.85	2.2	1.6
2	---	---	2.3	e1.4	e1.1	2.0	2.1	2.6	2.3	2.0	4.0	2.2
3	---	---	2.5	e1.5	e1.2	1.7	2.0	2.5	1.7	2.6	1.7	2.4
4	---	---	2.5	e1.5	e1.3	1.4	2.1	2.6	1.9	3.2	1.4	1.9
5	---	---	2.4	e1.8	e1.5	1.2	2.2	2.6	2.3	3.0	1.2	1.7
6	---	---	3.0	e1.4	e1.5	1.5	2.6	2.6	2.2	2.0	2.0	1.4
7	---	---	2.2	e1.3	e1.6	1.8	2.8	2.5	2.1	1.3	3.5	1.1
8	---	---	2.2	e1.3	e1.6	1.7	2.8	2.3	1.6	.85	2.1	.84
9	---	---	2.2	e1.3	e1.7	1.7	2.7	2.6	1.6	.87	2.1	.72
10	---	---	2.2	e1.4	e1.7	1.6	2.8	2.6	1.5	.84	2.7	.68
11	---	---	2.1	e1.4	1.6	1.9	2.8	2.5	1.4	.66	2.9	.62
12	---	---	2.1	e1.3	1.2	1.8	2.7	2.5	1.6	.57	2.7	.55
13	---	---	2.1	e1.2	1.4	2.0	2.6	2.5	1.6	.42	2.0	.58
14	---	---	2.5	e1.1	1.6	2.1	2.4	2.5	2.8	.35	1.8	.65
15	---	---	e2.2	e.98	1.8	2.3	2.2	2.4	2.9	.75	1.9	.68
16	---	---	e2.1	e.96	1.4	2.2	1.9	3.3	2.4	.79	1.9	2.4
17	---	---	2.5	e.98	1.5	2.0	2.0	3.2	2.6	.82	1.5	13
18	---	---	2.2	e1.1	1.3	e1.7	1.9	3.0	1.9	.78	2.1	4.5
19	---	---	2.3	e1.2	1.0	e1.6	1.8	2.9	2.0	.70	76	3.0
20	---	---	2.4	e1.3	1.3	e1.5	1.9	2.4	1.9	.62	11	2.3
21	---	---	e2.2	e1.4	1.7	e1.7	1.9	2.3	1.6	.43	4.1	2.6
22	---	---	e1.9	e1.5	1.7	e1.9	1.8	2.0	1.3	.35	3.1	2.6
23	---	---	e1.8	e1.4	1.9	2.1	1.8	1.9	1.1	.32	2.2	2.6
24	---	---	e1.7	e1.2	1.7	2.6	2.1	1.9	1.1	.33	147	2.7
25	---	2.6	e1.6	e1.3	1.8	3.1	2.1	1.8	1.1	.33	9.7	2.3
26	---	2.4	e1.4	e1.3	1.6	2.4	1.9	1.7	.93	.62	5.0	2.2
27	---	2.3	e1.3	e1.3	1.5	3.1	1.9	1.7	1.1	.48	4.4	2.5
28	---	2.4	e1.2	e1.4	1.6	2.8	2.4	1.6	.99	2.4	3.5	3.7
29	---	2.7	e1.1	e1.5	1.8	2.5	2.3	1.6	.88	.88	2.7	4.7
30	---	2.2	e1.1	e1.5	---	2.5	2.4	1.7	.80	.82	2.3	4.4
31	---	---	e1.2	e1.4	---	2.2	---	1.7	---	.81	1.9	---
TOTAL	---	---	63.4	40.92	43.9	62.4	67.5	72.3	50.80	31.74	312.6	73.12
MEAN	---	---	2.05	1.32	1.51	2.01	2.25	2.33	1.69	1.02	10.1	2.44
MAX	---	---	3.0	1.8	1.9	3.1	2.8	3.3	2.9	3.2	147	13
MIN	---	---	1.1	.96	1.0	1.2	1.8	1.6	.80	.32	1.2	.55
AC-FT	---	---	126	81	87	124	134	143	101	63	620	145

e Estimated

ARKANSAS RIVER BASIN
07203525 VERMEJO RIVER NEAR MAXWELL, NM -- Continued
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	3.4	8.0	5.1	3.9	3.9	3.1	4.4	77	16	2.5	1.2
2	3.9	3.4	7.9	5.0	3.0	3.7	3.2	3.1	24	16	3.2	1.2
3	4.8	3.5	7.5	4.0	3.5	3.6	2.9	3.0	15	16	3.0	1.2
4	6.9	3.2	6.8	4.0	4.0	3.7	2.9	2.8	15	14	4.2	1.1
5	5.3	3.3	6.3	3.6	4.5	3.6	2.6	2.5	20	12	5.4	1.1
6	4.9	3.3	5.9	3.9	4.9	3.7	2.5	2.3	7.1	11	5.9	.89
7	4.3	3.5	5.4	4.0	5.6	3.6	2.4	2.2	8.1	10	5.8	.71
8	3.9	3.5	5.2	3.9	5.7	3.4	2.4	1.9	8.1	10	4.6	.59
9	4.1	3.4	4.9	3.8	6.2	3.4	2.6	2.4	5.7	7.2	4.4	.46
10	3.9	3.2	4.7	3.6	7.5	3.6	2.8	18	4.0	4.1	5.4	.44
11	6.2	3.2	4.8	3.9	7.7	3.8	2.8	148	3.2	3.3	6.5	1.1
12	4.1	3.4	4.7	4.0	9.5	6.3	2.7	81	5.3	2.6	6.8	62
13	2.5	3.6	5.3	3.9	6.3	5.9	2.7	129	4.5	2.3	6.1	1.8
14	2.3	3.6	5.0	3.8	5.7	4.7	2.7	128	3.3	2.3	5.4	.74
15	3.1	3.3	5.2	3.5	5.7	4.1	2.3	78	2.6	2.2	5.3	4.2
16	4.4	3.3	5.0	3.3	5.5	4.5	2.4	72	2.2	3.8	5.2	1.5
17	5.3	3.5	4.7	3.5	5.2	4.5	3.0	12	3.0	2.3	4.3	1.1
18	4.3	3.6	4.8	3.6	4.9	4.1	2.9	6.7	3.9	2.0	4.0	1.3
19	3.9	3.6	4.9	3.8	4.6	4.1	2.9	6.1	26	2.1	3.9	1.3
20	3.7	3.6	4.7	3.5	4.6	4.2	2.6	7.5	65	1.7	3.5	1.5
21	4.0	3.6	4.7	3.3	4.7	4.0	2.6	12	47	1.6	3.4	1.8
22	4.3	4.3	4.3	3.7	4.6	3.6	2.8	128	43	1.5	3.3	1.7
23	4.6	8.1	4.2	3.6	4.5	3.4	2.9	246	40	1.5	2.0	1.6
24	4.6	9.8	4.5	3.3	4.3	3.1	2.8	221	30	3.1	2.3	1.6
25	4.8	12	4.8	3.6	4.1	3.1	2.8	243	26	6.0	3.1	1.4
26	4.6	11	4.5	4.4	4.0	2.8	3.5	221	25	2.8	2.6	1.7
27	4.2	9.9	4.0	4.7	4.0	2.7	6.2	206	21	2.4	2.3	1.5
28	3.8	9.3	4.8	4.7	4.0	2.6	5.0	175	19	2.3	2.0	1.5
29	3.7	8.8	5.2	4.6	---	2.6	6.9	114	16	3.1	1.8	1.8
30	3.5	8.3	4.6	4.9	---	2.8	6.0	98	14	2.6	1.5	2.2
31	3.5	---	4.4	4.8	---	3.1	---	84	---	2.6	1.5	---
TOTAL	131.7	153.5	161.7	123.3	142.7	116.2	95.9	2458.9	584.0	170.4	121.2	102.23
MEAN	4.25	5.12	5.22	3.98	5.10	3.75	3.20	79.3	19.5	5.50	3.91	3.41
MAX	6.9	12	8.0	5.1	9.5	6.3	6.9	246	77	16	6.8	62
MIN	2.3	3.2	4.0	3.3	3.0	2.6	2.3	1.9	2.2	1.5	1.5	.44
AC-FT	261	304	321	245	283	230	190	4880	1160	338	240	203
CAL YR 1984	TOTAL 1202.18 MEAN 3.28 MAX 147 MIN .32 AC-FT 2380											
WTR YR 1985	TOTAL 4361.73 MEAN 11.9 MAX 246 MIN .44 AC-FT 8650											

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	4.3	3.0	e2.3	2.4	2.0	2.5	1.7	5.3	e6.9	e.30	.32
2	2.6	4.3	3.0	e2.3	2.3	2.1	2.4	1.7	4.1	e4.4	e.32	.37
3	2.3	4.3	2.9	e2.3	2.3	2.1	2.6	1.6	3.3	e4.8	e.33	.52
4	2.4	4.2	2.7	e2.2	e2.2	2.1	2.5	1.6	2.7	e5.1	e.35	.35
5	2.6	4.2	2.5	e2.1	e2.1	2.2	2.3	1.5	2.7	e2.5	e.31	.32
6	2.8	4.3	2.4	e2.1	e1.9	2.3	2.2	1.5	2.4	e1.7	e.29	.35
7	3.1	4.4	2.4	1.9	1.8	2.3	2.1	1.5	2.3	e1.0	e.28	2.5
8	2.9	4.5	2.4	e2.0	e1.8	2.4	2.2	1.7	4.7	5.6	e.27	2.7
9	3.3	4.7	1.9	e2.1	e1.7	2.7	2.1	1.6	157	2.4	e.26	1.0
10	3.7	4.7	1.1	2.5	e1.7	2.8	2.0	1.6	7.1	1.2	e.26	.44
11	5.0	4.4	2.4	2.6	e1.6	2.9	1.9	1.5	3.3	.95	e6.0	.25
12	4.1	4.8	2.1	2.6	e2.0	3.1	1.8	1.5	e4.4	1.2	e3.5	.23
13	4.0	4.7	2.1	2.7	2.5	3.4	1.7	1.4	3.7	.74	e4.2	.29
14	3.8	4.7	2.1	2.7	3.0	3.4	1.7	1.6	3.7	1.7	e1.5	.50
15	3.6	4.8	2.2	2.6	3.0	3.3	1.8	1.6	3.6	.74	e.80	.25
16	3.8	4.7	2.0	2.4	2.7	3.1	1.8	1.6	3.4	.95	e.51	.24
17	4.2	4.6	2.0	2.5	2.7	3.1	1.8	1.5	e4.4	.95	e.38	.27
18	3.6	4.5	1.7	2.4	2.4	3.1	1.8	1.4	e5.0	.60	e.28	.29
19	3.5	4.3	2.2	2.7	2.4	3.2	1.8	1.4	e4.5	.50	.19	.33
20	3.9	4.2	2.3	e2.4	2.4	3.2	1.9	1.3	e4.0	.82	.23	.40
21	4.0	4.1	2.5	e2.4	2.4	3.2	1.8	1.3	e3.8	2.4	.23	.42
22	4.0	4.1	2.5	e2.4	2.4	3.1	1.8	1.4	e3.6	2.4	1.2	.55
23	4.0	4.0	2.4	e2.4	2.4	3.3	1.8	1.2	e7.3	1.0	1.2	.62
24	4.2	3.9	2.4	2.4	2.5	3.1	1.7	1.2	e14	.50	.80	.66
25	4.2	3.8	2.4	2.4	2.4	3.2	1.6	1.2	e11	.40	.33	.70
26	4.4	3.7	2.5	2.7	2.2	3.0	1.5	2.6	e8.0	e.38	.19	.70
27	4.7	3.5	2.5	2.7	1.8	3.2	1.5	2.2	e6.5	e.36	.14	.71
28	4.8	3.5	2.5	2.7	2.1	3.0	1.5	2.0	e5.5	e.35	.09	.75
29	5.0	3.5	2.5	2.7	---	2.9	1.5	2.3	e6.5	e.33	.14	.73
30	4.7	3.2	e2.4	2.7	---	2.6	1.5	2.2	e8.0	e.32	.17	.76
31	4.2	---	2.3	2.5	---	2.8	---	2.1	---	e.31	.28	---
TOTAL	115.8	126.9	72.3	75.4	63.1	88.2	57.1	50.5	305.8	53.50	25.33	18.52
MEAN	3.74	4.23	2.33	2.43	2.25	2.85	1.90	1.63	10.2	1.73	.82	.62
MAX	5.0	4.8	3.0	2.7	3.0	3.4	2.6	2.6	157	6.9	6.0	2.7
MIN	2.3	3.2	1.1	1.9	1.6	2.0	1.5	1.2	2.3	.31	.09	.23
AC-FT	230	252	143	150	125	175	113	100	607	106	50	37
CAL YR 1985	TOTAL 4229.83 MEAN 11.6 MAX 246 MIN .44 AC-FT 8390											
WTR YR 1986	TOTAL 1052.45 MEAN 2.88 MAX 157 MIN .09 AC-FT 2090											

e Estimated

ARKANSAS RIVER BASIN
07203525 VERMEJO RIVER NEAR MAXWELL, NM -- Continued
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	3.3	3.3	2.2	3.4	4.8	4.9	3.4	81	68	8.2	6.2
2	.71	3.6	3.2	2.0	3.6	4.4	4.8	3.6	79	64	8.0	5.9
3	.72	4.0	3.0	2.0	3.6	4.2	4.8	3.6	75	48	8.5	5.4
4	.75	4.5	3.3	2.1	3.6	4.7	4.7	3.6	74	38	8.9	4.9
5	.78	4.3	3.2	2.0	3.6	4.3	4.6	98	74	36	8.4	4.6
6	.83	3.7	3.4	2.1	3.6	4.3	5.0	105	73	36	7.9	4.2
7	.91	3.6	3.2	2.1	3.7	4.4	4.9	104	74	34	7.5	4.0
8	.99	3.6	3.1	2.1	3.6	4.3	4.8	108	73	33	7.4	3.8
9	1.2	3.7	3.1	2.0	3.7	5.0	4.7	108	74	33	8.2	3.6
10	1.2	3.7	3.0	2.1	3.8	5.2	4.6	111	69	32	9.5	3.2
11	1.3	3.7	3.0	2.1	3.9	5.0	4.4	98	74	32	10	2.9
12	1.3	3.7	2.9	2.2	3.9	4.8	4.3	73	74	31	10	2.8
13	1.5	3.7	2.9	2.3	4.0	4.6	4.2	73	73	31	9.9	2.8
14	1.6	3.8	2.8	2.3	4.2	5.0	4.2	76	73	18	9.0	2.7
15	1.6	3.8	2.7	2.3	4.0	4.9	4.3	119	77	15	8.3	2.8
16	1.7	3.8	2.7	2.3	4.2	4.9	4.3	108	80	11	7.8	3.5
17	1.8	3.9	2.7	2.3	4.2	5.1	4.3	115	78	19	7.4	3.4
18	1.9	3.9	2.7	2.3	4.3	5.4	4.2	117	75	15	7.3	3.3
19	2.1	4.0	2.7	2.3	4.6	5.5	4.2	119	75	11	6.9	3.1
20	7.9	3.7	2.6	2.4	4.5	5.3	4.1	123	77	9.8	7.0	3.0
21	5.9	3.8	2.5	2.4	4.4	5.2	4.0	118	73	9.9	6.7	3.2
22	4.1	3.9	2.5	2.5	4.4	5.2	3.9	114	74	9.6	32	3.3
23	3.0	4.0	2.5	2.6	4.4	5.1	3.9	111	73	9.9	30	3.0
24	3.1	3.9	2.4	2.7	4.6	5.3	3.9	110	73	9.2	9.1	2.7
25	2.6	3.9	2.4	2.7	4.6	5.6	3.8	109	74	9.0	8.7	2.6
26	2.6	3.8	2.4	2.9	5.5	5.6	3.8	109	192	8.7	10	2.6
27	2.7	3.8	2.3	3.0	5.5	5.2	3.9	101	72	8.5	16	2.5
28	2.8	3.7	2.2	3.0	5.1	5.0	3.8	86	68	8.3	11	2.5
29	2.8	3.7	2.3	3.1	---	4.8	3.8	87	66	8.2	8.0	2.4
30	2.9	3.6	2.1	3.0	---	4.9	3.7	85	70	8.1	7.4	2.5
31	3.0	---	2.2	3.1	---	4.8	---	87	---	7.9	6.6	---
TOTAL	67.69	114.1	85.3	74.5	116.5	152.8	128.8	2786.2	2337	712.1	311.6	103.4
MEAN	2.18	3.80	2.75	2.40	4.16	4.93	4.29	89.9	77.9	23.0	10.1	3.45
MAX	7.9	4.5	3.4	3.1	5.5	5.6	5.0	123	192	68	32	6.2
MIN	.71	3.3	2.1	2.0	3.4	4.2	3.7	3.4	66	7.9	6.6	2.4
AC-FT	134	226	169	148	231	303	255	5530	4640	1410	618	205

CAL YR 1986 TOTAL 1004.54 MEAN 2.75 MAX 157 MIN .09 AC-FT 1990
WTR YR 1987 TOTAL 6989.99 MEAN 19.2 MAX 192 MIN .71 AC-FT 13860

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.4	3.3	2.1	e2.8	1.9	1.9	e1.6	1.9	4.9	1.4	1.5
2	2.5	3.5	3.4	2.1	e2.7	1.8	1.9	e1.8	1.8	3.7	1.2	1.5
3	2.4	3.5	3.5	e2.3	e2.5	1.9	1.9	e1.9	1.8	2.9	1.2	1.4
4	2.4	3.5	3.7	e2.5	e2.5	1.9	2.0	e2.0	1.7	2.6	22	1.2
5	2.7	3.4	3.7	e2.5	e2.6	1.8	1.9	e2.4	1.8	2.4	31	1.0
6	2.5	3.5	3.7	e2.1	e2.7	1.8	2.0	e3.1	1.8	2.4	6.5	1.1
7	2.7	3.5	3.7	e1.9	e2.7	1.9	2.0	e2.3	1.8	21	4.0	.96
8	2.6	3.4	3.7	e2.1	e2.7	1.0	2.1	e2.2	1.7	5.7	30	.99
9	2.5	3.5	3.7	e2.2	e2.7	.88	2.1	e2.0	1.7	2.5	3.3	.91
10	2.5	3.5	3.7	e2.2	e2.7	.92	2.2	e2.1	1060	13	3.1	.96
11	2.5	3.5	2.9	e2.3	e2.6	.95	2.2	e2.1	12	2.9	3.5	.99
12	2.7	3.4	2.3	e2.5	e2.5	.97	2.3	e2.0	6.7	2.2	2.2	1.2
13	2.8	3.6	e2.3	e2.7	e2.5	1.0	1.9	e2.0	11	1.6	2.0	1.9
14	2.8	3.7	e2.2	e2.7	e2.5	1.0	1.5	e2.0	6.2	1.4	1.7	2.1
15	2.9	3.7	2.3	e2.6	e2.4	1.0	1.6	e1.9	5.6	2.0	1.5	2.9
16	2.9	3.6	2.4	e2.5	e2.4	1.1	e1.7	e1.9	4.8	2.0	1.6	2.4
17	2.9	3.6	2.5	e2.2	e2.4	1.1	e1.9	e2.0	4.4	1.6	1.8	1.9
18	2.9	3.6	2.6	e2.2	e2.3	1.1	e2.1	e2.3	3.8	12	1.9	1.4
19	2.8	3.6	2.8	e2.1	e2.3	1.1	e2.3	e2.6	4.5	2.7	8.3	1.5
20	2.7	3.6	2.7	e2.3	e2.3	1.1	e2.2	e4.0	4.8	2.5	3.8	1.4
21	2.8	3.4	e2.5	e2.6	e2.2	1.1	e2.1	e3.4	5.3	3.4	2.0	1.4
22	2.7	3.5	e2.4	e2.1	e2.2	1.2	e2.0	e2.8	5.7	3.3	1.6	1.3
23	2.8	3.5	e2.5	e2.3	e2.2	1.2	e2.0	e2.5	5.4	3.1	1.5	2.9
24	2.9	3.4	e2.6	e2.4	e2.2	1.8	e2.0	2.5	5.1	2.9	2.8	3.8
25	3.2	3.2	e2.6	e2.5	e2.1	1.7	e1.9	2.4	5.0	2.5	1.6	2.1
26	3.5	3.3	e2.7	e2.6	e2.1	1.1	e1.7	3.1	6.5	3.4	1.5	2.0
27	3.4	3.5	2.8	e2.7	2.1	1.1	e1.6	2.6	5.9	9.0	1.7	1.9
28	3.5	3.6	3.0	e2.7	2.1	1.2	e1.5	2.3	5.5	2.8	1.8	1.7
29	3.5	3.3	2.8	e2.9	1.8	1.4	e1.5	2.2	4.8	2.3	1.7	2.0
30	3.5	3.2	2.9	e2.9	---	1.5	e1.5	2.0	5.0	2.0	1.7	1.9
31	3.4	---	2.8	e2.9	---	1.7	---	1.9	---	1.7	1.6	---
TOTAL	88.9	104.5	90.7	74.7	69.8	41.22	57.5	71.9	1194.0	128.4	151.5	50.21
MEAN	2.87	3.48	2.93	2.41	2.41	1.33	1.92	2.32	39.8	4.14	4.89	1.67
MAX	3.5	3.7	3.7	2.9	2.8	1.9	2.3	4.0	1060	21	31	3.8
MIN	2.4	3.2	2.2	1.9	1.8	.88	1.5	1.6	1.7	1.4	1.2	.91
AC-FT	176	207	180	148	138	82	114	143	2370	255	301	100

CAL YR 1987 TOTAL 7007.0 MEAN 19.2 MAX 192 MIN 2.0 AC-FT 13900
WTR YR 1988 TOTAL 2123.33 MEAN 5.80 MAX 1060 MIN .88 AC-FT 4210

e Estimated

ARKANSAS RIVER BASIN

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 mi².

PERIOD OF RECORD.--April 1928 to October 1955 and June 1964 to current year (no winter 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.--Estimated daily discharges: Apr. 1-3. Records good. Diversions for irrigation of about 1,200 acres upstream from station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 240 ft³/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.--Peak discharges greater than base discharge of 35 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 9	2245	*7.9	*1.93				

Minimum discharge determined, 0.94 ft³/s, Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							3.8	3.2	2.4	2.5	2.3	1.9
2							4.0	3.1	2.3	2.5	2.2	2.1
3							5.0	3.3	2.2	2.3	2.2	1.8
4							6.4	3.1	2.5	2.0	2.2	1.5
5							6.2	3.0	2.7	2.0	2.6	1.3
6							5.0	3.1	2.5	2.1	3.0	1.3
7							5.1	2.9	2.2	1.9	2.6	1.2
8							5.1	2.8	1.9	2.3	2.5	1.1
9							4.8	2.8	1.5	2.3	2.4	1.0
10							4.5	2.8	1.6	2.8	2.5	1.0
11							3.9	2.8	2.5	2.5	2.4	1.0
12							3.9	2.7	3.7	2.1	2.4	1.7
13							4.0	2.6	2.6	1.9	1.9	4.7
14							3.9	2.2	2.3	1.7	1.5	3.9
15							3.7	2.1	2.2	2.0	1.3	3.1
16							4.4	2.2	2.2	2.2	1.2	2.6
17							5.4	2.3	2.0	2.2	1.6	2.3
18							5.4	2.9	1.7	2.1	1.8	2.2
19							4.9	3.3	1.6	2.1	2.2	2.0
20							4.2	4.9	1.5	2.3	1.6	1.9
21							4.0	4.3	1.6	2.1	1.4	1.8
22							4.0	3.7	1.6	1.7	1.5	2.1
23							4.2	3.5	2.2	1.4	1.5	2.4
24							4.0	3.4	2.0	1.4	1.8	2.2
25							3.8	3.4	1.9	1.4	2.0	2.0
26							3.4	3.4	3.1	1.5	1.7	1.8
27							3.2	3.2	3.8	1.6	2.0	1.7
28							3.2	3.1	3.4	1.8	2.6	1.6
29							3.4	2.9	2.9	2.8	2.2	1.6
30							3.5	2.6	2.7	3.8	2.6	1.7
31							---	2.5	---	2.7	2.0	---
TOTAL							130.3	94.1	69.3	66.0	63.7	58.5
MEAN							4.34	3.04	2.31	2.13	2.05	1.95
MAX							6.4	4.9	3.8	3.8	3.0	4.7
MIN							3.2	2.1	1.5	1.4	1.2	1.0
AC-FT							258	187	137	131	126	116

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 mi².

PERIOD OF RECORD.--April 1928 to September 1955 and June 1964 to current year (no winter 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.--Estimated daily discharges: Apr. 1-3. Records good. 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 ft³/s, June 16, 1965, gage height, 5.61 ft, from rating curve extended above 110 ft³/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 26	2315	*22	*3.14				

Minimum discharge determined, 1.4 ft³/s, June 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							4.0	5.2	3.1	5.3	3.2	5.5
2							4.0	5.0	2.9	6.7	3.0	7.6
3							5.0	4.8	2.6	4.9	7.0	6.1
4							6.1	4.3	2.8	4.1	6.0	4.9
5							5.3	4.0	3.4	3.7	8.8	4.4
6							5.8	4.0	3.4	3.8	9.1	4.3
7							9.8	3.5	2.9	3.8	7.4	3.7
8							11	3.4	1.9	4.6	6.8	3.1
9							8.6	3.3	1.8	5.7	5.6	2.7
10							7.2	3.1	3.1	5.7	6.5	2.6
11							6.2	3.0	7.4	6.5	5.8	2.5
12							6.2	2.8	11	4.2	6.9	3.8
13							6.2	2.7	6.1	3.6	4.4	9.6
14							6.2	2.7	5.6	3.0	3.7	9.9
15							6.3	2.6	5.5	2.3	3.2	6.3
16							9.2	2.6	6.6	2.4	2.9	4.9
17							12	2.9	8.0	4.6	4.0	4.1
18							9.2	6.0	5.1	9.0	6.5	3.7
19							8.7	5.3	4.2	5.0	9.9	3.3
20							10	6.9	4.2	5.7	5.4	3.2
21							10	5.9	3.6	9.7	4.2	3.4
22							8.3	4.6	3.5	5.4	4.1	4.1
23							8.1	4.0	3.8	4.1	10	5.0
24							7.2	3.6	4.6	3.8	7.7	4.1
25							6.6	3.4	6.0	3.8	7.4	3.5
26							5.9	3.3	8.2	2.7	5.9	3.3
27							5.5	3.0	15	2.2	6.9	3.0
28							5.4	3.2	9.3	2.7	14	2.7
29							5.2	2.8	7.2	4.7	9.2	2.7
30							5.3	2.3	6.1	5.4	6.9	2.7
31							---	2.4	---	4.2	5.7	---
TOTAL							214.5	116.6	158.9	143.3	198.1	130.7
MEAN							7.15	3.76	5.30	4.62	6.39	4.36
MAX							12	6.9	15	9.7	14	9.9
MIN							4.0	2.3	1.8	2.2	2.9	2.5
AC-FT							425	231	315	284	393	259

ARKANSAS RIVER BASIN

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 mi².

PERIOD OF RECORD.--April 1928 to September 1955 (no winter records in water years 1929-31, 1933-55), July 1958 to current year (no winter 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.--Estimated daily discharges: Apr. 1-10, 21-23. Records good. 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 ft³/s, 1,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1930-55 and SINCE 1957).--Maximum discharge, 128 ft³/s, Aug. 5, 1969, gage height, 2.86 ft, from rating curve extended above 32 ft³/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.--Peak discharges greater than base discharge of 15 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 8	1545	*8.6	*0.95				

Minimum discharge determined, 0.15 ft³/s, June 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							1.0	1.7	.42	1.9	.93	1.9
2							1.0	1.8	.39	1.8	.91	1.9
3							1.2	1.7	.34	1.6	.89	1.8
4							1.2	1.4	.56	1.2	.91	1.6
5							1.4	1.2	.53	.92	1.5	1.6
6							1.4	1.2	.37	.93	1.5	1.6
7							1.6	1.0	.30	.87	1.2	1.5
8							1.6	.99	.25	2.3	1.6	1.3
9							1.8	.88	.23	1.6	2.8	1.3
10							1.8	.82	.27	1.3	2.3	1.3
11							1.7	.79	.90	1.3	2.4	1.4
12							1.6	.72	1.1	1.0	2.2	1.9
13							1.7	.64	.55	.91	2.0	3.0
14							1.8	.62	.41	.93	1.8	2.1
15							1.9	.55	.49	.90	1.7	1.8
16							2.4	.56	.45	.73	1.7	1.7
17							2.3	.62	.40	.90	2.0	1.8
18							2.0	1.1	.40	.87	2.5	1.7
19							1.8	1.1	.67	.98	2.2	1.6
20							1.7	1.6	.59	.98	1.8	1.5
21							1.6	1.1	.55	1.4	1.6	1.6
22							1.6	.88	.46	1.1	2.0	1.8
23							1.6	.83	.50	.93	2.3	1.9
24							1.8	.76	.54	.79	2.1	1.7
25							1.6	.73	.58	.84	2.0	1.6
26							1.4	.65	2.2	.92	1.9	1.6
27							1.4	.56	3.1	.94	2.6	1.6
28							1.5	.57	2.8	1.5	2.8	1.6
29							1.6	.50	2.3	1.7	2.3	1.6
30							1.7	.45	2.0	1.5	2.1	1.6
31							---	.42	---	1.2	2.0	---
TOTAL							48.7	28.44	24.65	36.74	58.54	50.9
MEAN							1.62	.92	.82	1.19	1.89	1.70
MAX							2.4	1.8	3.1	2.3	2.8	3.0
MIN							1.0	.42	.23	.73	.89	1.3
AC-FT							97	56	49	73	116	101

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 mi².

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 (water-stage recorder). Prior to January 1972 published as Eagle Nest Reservoir.

REVISED RECORDS.--WSP 1281: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,056.8 ft above 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 observed, 78,800 acre-ft, May 31, 1942, gage height, 136.9 ft; minimum observed, 635 acre-ft, Dec. 14, 1954, gage height, 61.33 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 73,250 acre-ft, Apr. 18, gage height, 134.51 ft; minimum, 66,930 acre-ft, Sept. 29, gage height, 131.68 ft.

Capacity table (gage height in feet, and contents, in acre-feet)
(Based on data provided by New Mexico State Engineer Office in 1950)

125	53,050	135	74,350
130	63,170	140	86,590

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72560	70910	70640	70860	71510	72360	73090	72560	70120	69450	67870	67490
2	72580	70880	70640	e70970	71640	e72150	e73140	72430	70030	69450	67840	67380
3	72540	70860	70550	e70960	71690	e72180	e73160	72360	69920	69450	67800	67310
4	72430	70880	70680	70970	71640	e72200	73180	72310	69880	69450	67820	67290
5	72360	70880	70590	71040	71690	e72220	e73210	72230	69770	69480	67930	67260
6	72360	70930	70570	71110	e71710	e72240	e73230	72160	69680	69500	67960	67240
7	72310	70770	70880	71170	e71750	e72270	e73230	71980	69520	69480	67960	67130
8	72140	70770	70640	71220	e71820	e72270	e73250	71800	69520	69520	67930	67200
9	72000	70750	70820	71200	e71860	e72290	72980	71670	69390	69520	67960	67150
10	72020	70750	70770	71290	e71890	e72290	73010	71580	69360	69500	67980	67110
11	71870	70680	70660	71350	e71910	e72530	73050	71510	69430	69450	67980	67040
12	71850	70730	70530	e71130	e71930	e72560	73070	71420	69430	69410	67980	67150
13	71760	70700	70610	71220	e71950	e72560	73120	71260	69340	69390	67980	67220
14	71600	70730	70570	71150	e71980	e72580	73050	71150	69300	69270	67960	67260
15	71580	70610	70530	71240	e72000	72600	73100	71080	69250	69160	67910	67220
16	71440	70680	70590	71200	e72020	e72650	73120	70930	69300	69100	67800	67220
17	71670	70640	70730	71260	e72040	e72690	73190	70930	69320	69010	67800	67240
18	71350	70500	70730	71290	e72070	e72740	73250	70910	69360	68920	67820	67200
19	71240	70590	70770	71280	e72070	e72780	73210	70820	69430	68780	67780	67130
20	71290	70610	70700	71280	e72090	e72830	73250	70820	69390	68670	67710	67130
21	71150	70840	71040	71290	e72110	e72850	73190	70790	69390	68600	67640	67110
22	71130	70770	70930	71370	e72110	72870	73120	70700	69320	68490	67670	67150
23	71060	70700	70840	71380	e72130	e72910	73100	70700	69320	68360	67670	67200
24	71080	70530	70770	e71370	72150	e72960	73030	70590	69270	68220	67620	67170
25	71150	70570	e70810	71440	e72180	e72980	73030	70530	69320	68220	67550	67220
26	71040	70480	e70860	e71440	e72240	e72980	72920	70500	69480	68110	67490	67130
27	70990	70460	70910	71400	e72290	e73010	72900	70550	69450	68070	67490	67220
28	71040	70530	70860	71510	e72330	73030	72870	70390	69450	68000	67490	67000
29	70970	70530	71020	71640	e72360	e73050	72830	70390	69430	67980	67510	66930
30	70970	70530	71060	71510	---	e73070	72810	70320	69480	67960	67510	66950
31	70930	---	70770	71600	---	e73090	---	70170	---	67910	67470	---
MAX	72580	70930	71060	71640	72360	73090	73250	72560	70120	69520	67980	67490
MIN	70930	70460	70530	70860	71510	72150	72810	70170	69250	67910	67470	66930
(+)	133.47	133.29	133.40	133.77	134.11	134.44	134.31	133.13	132.82	132.12	131.92	131.69
(++)	-1580	-400	+240	+830	+760	+730	-280	-2640	-690	-1570	-440	-520
CAL YR 1987	MAX	-----	MIN	-----	(++)	-5350						
WTR YR 1988	MAX	73250	MIN	66930	(++)	-5560						

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

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

e Estimated

ARKANSAS RIVER BASIN

07206000 CIMARRON RIVER BELOW EAGLE NEST DAM, NM

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

DRAINAGE AREA.--167 mi².

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

REVISED RECORDS.--WSP 1281: Drainage area.

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

REMARKS.--Estimated daily discharges: Nov. 29 to Feb. 24. Records good except for estimated daily discharges, which are poor. Flow regulated by Eagle Nest Lake (station 07205500) 300 ft upstream. Diversions for irrigation of 2,500 acres upstream from station.

AVERAGE DISCHARGE.--38 years, 14.4 ft³/s, 10,430 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 60 ft³/s, May 9-14, minimum daily, 0.11 ft³/s, Sept. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	15	.30	.14	.14	.33	15	46	44	.33	21	17
2	15	5.5	.25	.14	.14	.33	15	51	55	.33	21	10
3	15	5.0	.20	.14	.14	.33	13	51	55	.33	21	1.8
4	24	5.7	.20	.14	.20	.35	12	51	55	.33	21	1.8
5	31	9.4	.17	.14	.23	.42	12	51	55	.33	15	1.8
6	31	12	.15	.14	.23	.42	12	52	55	.33	8.7	5.9
7	30	12	.15	.14	.23	.55	12	51	47	.33	6.4	9.8
8	31	12	.15	.14	.23	.63	12	56	40	.33	6.4	11
9	31	7.9	.15	.14	.23	.63	13	60	40	.33	3.9	12
10	31	7.8	.15	.14	.23	1.2	15	60	40	24	1.6	12
11	31	8.1	.15	.14	.24	2.6	15	60	40	29	1.6	12
12	31	7.8	.14	.14	.25	2.6	15	60	36	23	1.6	9.6
13	32	7.5	.14	.14	.25	10	15	60	27	23	1.6	.98
14	32	7.8	.14	.14	.29	19	16	60	27	34	4.9	.90
15	32	7.6	.14	.14	.32	16	17	56	26	45	9.4	.90
16	25	7.5	.14	.14	.32	8.8	17	52	21	46	21	.90
17	9.8	7.5	.14	.14	.30	8.5	17	52	1.0	51	22	.90
18	29	7.5	.14	.14	.30	8.2	17	53	.90	55	31	.84
19	30	5.0	.14	.14	.30	8.2	19	53	5.0	55	31	.52
20	30	1.1	.14	.14	.30	7.9	20	33	23	55	31	.23
21	30	1.1	.14	.14	.30	7.8	20	19	23	55	31	.14
22	24	1.1	.14	.14	.30	7.3	20	34	23	49	31	.11
23	16	1.1	.14	.14	.30	6.7	20	45	23	45	31	.11
24	17	1.1	.14	.14	.33	6.2	27	45	23	41	31	.11
25	21	1.1	.14	.14	.32	5.7	32	39	23	28	31	9.0
26	21	.92	.14	.14	.33	5.7	35	36	23	28	31	6.8
27	21	.70	.14	.14	.33	5.4	38	36	19	28	31	6.8
28	19	.60	.14	.14	.33	10	38	24	8.5	28	25	6.8
29	16	.50	.14	.14	.33	15	38	15	.66	28	17	6.9
30	16	.40	.14	.14	---	15	38	23	.44	23	17	7.1
31	16	---	.14	.14	---	15	---	31	---	21	17	---
TOTAL	749.8	168.32	4.82	4.34	7.74	196.79	605	1415	859.50	816.97	574.1	154.74
MEAN	24.2	5.61	.16	.14	.27	6.35	20.2	45.6	28.6	26.4	18.5	5.16
MAX	32	15	.30	.14	.33	19	38	60	55	55	31	17
MIN	9.8	.40	.14	.14	.14	.33	12	15	.44	.33	1.6	.11
AC-FT	1490	334	9.6	8.6	15	390	1200	2810	1700	1620	1140	307
CAL YR 1987	TOTAL	16069.67		MEAN	44.0	MAX	167	MIN	.10	AC-FT	31870	
WTR YR 1988	TOTAL	5557.12		MEAN	15.2	MAX	60	MIN	.11	AC-FT	11020	

07207000 CIMARRON RIVER NEAR CIMARRON, NM

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

DRAINAGE AREA.--294 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1281: Drainage area.

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

REMARKS.--Estimated daily discharges: Dec. 9 to Jan. 13, Jan. 15 to Feb. 1, and Feb. 4-8, 10-12, 15. Water-discharge records good except for estimated daily discharges, 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, flumes under river 0.9 mi upstream and bypasses station for off-channel storage and irrigation downstream; Cimarron Diversion pipeline 300 ft upstream from station for city of Raton Water Supply started June, 1983. See tabulation below for monthly diversions.

AVERAGE DISCHARGE.--38 years, 21.8 ft³/s, 15,790 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 870 ft³/s, at 2015 hours June 9, gage height, 4.30 ft; minimum daily, 0.19 ft³/s, Mar. 1-2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	3.5	20	12	.50	1.4	.19	7.7	39	35	23	19	25		
2	4.6	19	7.8	.70	.35	.19	10	45	50	21	19	24		
3	6.4	11	2.8	.90	.94	.29	8.0	43	50	19	19	16		
4	7.7	11	2.1	1.0	.90	.24	6.8	43	52	16	21	12		
5	7.6	12	1.6	1.5	.80	.34	5.7	42	53	14	23	11		
6	12	15	1.5	1.5	.80	.26	4.2	41	52	14	19	10		
7	12	17	1.1	1.0	.90	.23	4.5	41	49	15	15	13		
8	13	17	.75	1.0	1.0	1.3	5.2	43	41	12	10	14		
9	24	16	.90	1.0	1.0	2.5	5.0	47	96	10	9.6	16		
10	24	13	.90	1.0	1.0	3.0	6.6	48	49	14	11	16		
11	24	13	.95	1.5	.80	3.6	7.9	48	45	32	12	15		
12	24	13	.90	3.0	.80	4.8	8.1	49	48	28	12	18		
13	25	14	.80	1.5	.32	4.5	8.4	49	36	28	10	16		
14	25	14	.70	1.5	.84	7.5	9.0	48	32	29	9.0	9.9		
15	25	14	.60	1.5	1.0	28	16	48	32	45	11	8.2		
16	25	13	.70	1.5	1.4	12	20	45	32	52	18	7.3		
17	12	14	.80	2.0	.55	9.9	21	44	20	48	24	7.0		
18	17	14	.95	2.0	1.8	11	19	47	13	53	31	6.7		
19	25	17	.80	1.5	2.5	13	20	48	12	50	36	5.8		
20	26	12	.80	1.0	2.8	6.3	22	44	18	51	35	5.5		
21	27	9.6	.60	1.0	2.2	5.9	22	23	25	49	34	5.3		
22	33	8.6	.60	1.0	1.3	5.8	22	23	25	47	35	5.3		
23	23	5.8	.70	1.0	2.0	5.4	22	39	26	41	37	5.3		
24	22	5.3	.70	1.0	2.4	4.8	23	39	26	41	37	5.2		
25	24	7.7	.60	.90	2.4	4.6	30	35	25	28	37	5.5		
26	25	7.4	.55	1.0	.84	4.5	31	30	37	25	36	8.6		
27	25	7.0	.50	1.2	.29	4.4	35	31	53	25	40	8.3		
28	24	8.8	.50	1.5	.23	4.2	35	29	41	24	41	8.2		
29	20	14	.50	1.5	.23	4.9	37	17	29	25	26	8.5		
30	20	15	.50	2.5	---	6.5	37	16	28	24	25	8.7		
31	20	---	.50	2.0	---	7.7	---	29	---	19	25	---		
TOTAL	605.8	378.2	45.70	41.70	33.79	167.84	509.1	1213	1130	922	736.6	325.3		
MEAN	19.5	12.6	1.47	1.35	1.17	5.41	17.0	39.1	37.7	29.7	23.8	10.8		
MAX	33	20	12	3.0	2.8	28	37	49	96	53	41	25		
MIN	3.5	5.3	.50	.50	.23	.19	4.2	16	12	10	9.0	5.2		
AC-FT	1200	750	91	83	67	333	1010	2410	2240	1830	1460	645		
(+)	---	---	---	---	---	---	---	300	---	133	88	---		
(++)	---	---	---	---	---	---	---	---	---	---	---	---		
CAL YR 1987	TOTAL	20932.70	MEAN	57.3	MAX	287	MIN	.50	AC-FT	41520	(+)	603	(++)	986
WTR YR 1988	TOTAL	6109.03	MEAN	16.7	MAX	96	MIN	.19	AC-FT	12120	(+)	521	(++)	

(+) DIVERSION, IN ACRE-FEET, BY PHILMONT DITCH, DATA FURNISHED BY CIMARRON RIVER WATERMASTER

(++) DIVERSION, IN ACRE-FEET, RATON DIVERSION, DATA FURNISHED BY CIMARRON RIVER WATERMASTER

ARKANSAS RIVER BASIN

07207000 CIMARRON RIVER NEAR CIMARRON, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
OCT 22...	1400	33	342	330	--	8.70	24.0	13.5	9.0	--	140
DEC 03...	1100	2.2	--	--	--	--	8.0	0.5	--	22	--
FEB 25...	1200	1.5	434	426	8.70	8.40	5.0	1.0	--	--	180
APR 15...	1000	16	300	--	9.20	--	10.0	4.0	10.2	--	--
JUN 30...	1500	26	220	239	8.50	8.50	24.0	18.0	6.8	<10	99

DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 22...	4	43	8.4	13	0.5	2.1	138	22	15	0.40
DEC 03...	--	--	--	--	--	--	--	--	--	--
FEB 25...	29	54	10	18	0.6	1.3	147	62	9.7	0.30
APR 15...	--	--	--	--	--	--	--	--	--	--
JUN 30...	7	29	6.5	10	0.5	1.4	92	29	4.5	0.20

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC TOTAL (UG/L AS AS) (01002)
OCT 22...	6.2	193	--	--	--	--	--	--	--	--
DEC 03...	--	--	<0.100	<0.100	0.050	0.35	0.010	<0.010	1.4	1
FEB 25...	12	255	--	--	--	--	--	--	--	--
APR 15...	--	--	--	--	--	--	--	--	--	--
JUN 30...	11	147	<0.100	<0.100	0.050	--	0.030	0.010	4.4	--

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)
OCT 22...	--	20	--	--	--	--	--	--	4	--
DEC 03...	1	--	<1	1	<1	<1	2	4	--	<5
FEB 25...	--	20	--	--	--	--	--	--	21	--
APR 15...	--	--	--	--	--	--	--	--	--	--
JUN 30...	--	20	--	--	--	--	--	--	84	--

ARKANSAS RIVER BASIN

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07207000 CIMARRON RIVER NEAR CIMARRON, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, DIS- SOLVED (MG/L) (80154)	SEDI- MENT, DIS- SOLVED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 22...	--	--	--	--	--	--	--	75	6.8	25
DEC 03...	<5	<0.10	<0.1	2	2	<10	<10	--	--	--
FEB 25...	--	--	--	--	--	--	--	--	--	--
APR 15...	--	--	--	--	--	--	--	--	--	--
JUN 30...	--	--	--	--	--	--	--	121	8.5	90

ARKANSAS RIVER BASIN

07207500 PONIL CREEK NEAR CIMARRON, NM

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

DRAINAGE AREA.--171 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Estimated daily discharges: Dec. 13 to Feb. 26. Water-discharge records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 250 acres from station. Diversions 1,000 ft downstream from station for irrigation of about 300 acres.

AVERAGE DISCHARGE.--49 years (water years 1916-25, 1928, 1951-88), 11.4 ft³/s, 8,260 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 9	1845	*323	*3.36	No other peak greater than base discharge.			
Minimum discharge, 0.56 ft ³ /s, Dec. 8, 9, but may have been less during period of ice effect.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	1.8	2.2	1.0	1.2	1.8	2.6	9.6	6.4	17	8.6	10
2	2.7	1.8	2.8	1.0	1.2	1.8	2.8	9.9	5.4	14	8.2	9.2
3	2.7	1.8	2.2	.98	1.2	1.8	4.1	10	4.8	11	9.4	9.4
4	2.2	1.8	2.0	.98	1.2	1.7	5.6	9.3	4.3	8.9	13	7.8
5	2.0	1.8	1.7	1.0	1.2	1.8	5.3	8.5	6.6	9.2	38	6.9
6	2.0	1.8	1.7	1.0	1.2	1.7	5.3	8.0	7.0	8.3	46	6.3
7	2.3	2.0	1.8	1.0	1.2	1.9	6.8	7.3	4.5	9.3	37	5.5
8	2.5	2.0	1.5	1.0	1.2	1.7	9.0	6.9	3.3	10	64	4.9
9	2.3	1.8	1.5	1.0	1.2	1.6	9.8	6.7	27	8.4	44	4.7
10	2.3	2.0	2.2	1.1	1.2	1.8	8.3	6.2	11	8.6	38	4.5
11	2.3	1.8	1.4	1.1	1.2	1.7	8.4	5.8	6.7	6.7	23	4.0
12	2.3	1.7	1.3	1.1	1.3	1.7	7.6	5.3	8.5	5.4	18	6.0
13	2.3	1.6	1.5	1.2	1.3	3.4	7.6	4.9	7.1	4.3	14	26
14	2.2	1.7	1.4	1.2	1.3	3.1	8.6	4.7	6.9	3.8	11	27
15	2.1	1.9	1.3	1.3	1.4	2.7	9.5	4.5	7.8	4.3	9.1	19
16	2.1	1.9	1.4	1.4	1.5	2.2	13	4.5	14	4.0	9.9	15
17	2.1	1.8	1.4	1.3	1.5	2.3	14	4.8	9.4	4.2	14	13
18	2.1	1.7	1.4	1.2	1.5	2.2	13	5.5	6.5	3.8	20	11
19	1.8	1.9	1.4	1.1	1.5	2.4	13	8.2	5.1	4.4	18	9.8
20	1.7	2.6	1.4	1.0	1.5	1.9	14	10	5.1	5.9	13	8.9
21	1.7	2.5	1.4	1.0	1.5	1.7	15	10	4.7	5.1	9.7	8.1
22	1.7	2.0	1.4	.96	1.5	1.8	15	11	4.2	3.5	10	8.1
23	1.7	1.8	1.4	.96	1.5	1.9	14	11	3.8	2.5	12	9.0
24	1.8	2.1	1.3	.96	1.5	1.8	13	11	4.8	2.2	18	8.2
25	2.0	2.0	1.3	1.0	1.6	1.9	12	11	3.8	2.1	22	6.8
26	1.8	3.1	1.2	1.0	1.6	1.9	10	11	6.5	2.0	16	6.3
27	1.8	1.7	1.2	1.1	1.7	2.1	9.2	9.7	12	4.4	14	5.7
28	1.8	2.2	1.2	1.2	1.8	2.5	8.8	8.8	21	4.0	19	5.4
29	2.0	2.6	1.1	1.2	1.8	2.6	9.1	8.6	19	7.0	15	5.2
30	1.8	2.3	1.1	1.1	---	2.5	9.4	7.0	18	11	12	5.3
31	1.8	---	1.1	1.1	---	3.3	---	6.5	---	10	10	---
TOTAL	65.2	59.5	47.2	33.54	40.5	65.2	283.8	246.2	255.2	205.3	613.9	277.0
MEAN	2.10	1.98	1.52	1.08	1.40	2.10	9.46	7.94	8.51	6.62	19.8	9.23
MAX	3.3	3.1	2.8	1.4	1.8	3.4	15	11	27	17	64	27
MIN	1.7	1.6	1.1	.96	1.2	1.6	2.6	4.5	3.3	2.0	8.2	4.0
AC-FT	129	118	94	67	80	129	563	488	506	407	1220	549
CAL YR 1987	TOTAL	9993.7		MEAN	27.4	MAX	246	MIN	1.1	AC-FT	19820	
WTR YR 1988	TOTAL	2192.54		MEAN	5.99	MAX	64	MIN	.96	AC-FT	4350	

ARKANSAS RIVER BASIN

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07207500 PONIL CREEK NEAR CIMARRON, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT 21...	1530	1.7	273	276	--	8.40	24.0	13.5	7.0
FEB 25...	1015	1.7	236	254	--	8.20	4.0	0.0	--
APR 13...	1200	7.9	231	--	--	--	16.0	4.0	10.4
JUN 29...	1330	18	175	192	8.50	8.30	28.0	23.0	8.4
DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT 21...	120	4	32	8.7	15	0.6	1.3	112	25
FEB 25...	100	5	29	7.4	13	0.6	0.70	98	29
APR 13...	--	--	--	--	--	--	--	--	--
JUN 29...	85	7	24	6.2	8.8	0.4	1.2	79	19
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 21...	3.5	0.30	12	165	20	20	2	0.01	96
FEB 25...	3.9	0.30	8.1	150	<10	11	10	0.04	6
APR 13...	--	--	--	--	--	--	19	0.41	94
JUN 29...	2.2	0.30	12	121	20	250	100	4.9	89

07208500 RAYADO CREEK AT SAUBLE RANCH, NEAR CIMARRON, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT 22...	1130	4.8	164	171	--	8.30	16.0	10.5	8.0
FEB 25...	1400	3.3	176	--	8.40	8.20	10.0	4.0	--
APR 13...	1500	8.0	131	--	9.10	--	16.0	4.0	10.6
JUN 29...	1545	18	121	119	8.10	8.10	28.0	24.0	9.2
DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT 22...	73	0	19	6.1	6.2	0.3	1.6	73	12
FEB 25...	81	0	22	6.4	7.2	0.4	1.2	81	13
APR 13...	--	--	--	--	--	--	--	--	--
JUN 29...	53	1	14	4.3	5.0	0.3	1.2	52	7.6
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 22...	1.2	0.30	21	111	<10	23	1	0.01	83
FEB 25...	1.8	0.30	20	121	<10	33	8	0.07	95
APR 13...	--	--	--	--	--	--	26	0.56	98
JUN 29...	0.90	0.30	19	84	10	190	82	3.9	73

ARKANSAS RIVER BASIN

07211000 CIMARRON RIVER AT SPRINGER, NM

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

DRAINAGE AREA.--1,032 mi².

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

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

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

REMARKS.--Estimated daily discharges: Nov. 27-30 and Dec. 13 to Feb. 13. Records good. Flow partly regulated by Eagle Nest Lake (station 07205500). Diversions for irrigation of about 23,000 acres upstream from station and a few hundred acres between station and mouth. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--64 years (water years 1921, 1925, 1927-88), 19.1 ft³/s, 13,840 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 5	0600	*253	*4.98				

Minimum discharge, 0.24 ft³/s, July 17, 18 and Aug. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	4.3	5.7	3.5	6.0	4.9	6.7	5.2	1.1	1.1	.62	2.0
2	2.5	4.1	5.7	3.5	6.0	5.2	7.6	7.1	1.1	1.2	.40	2.3
3	2.5	5.3	5.6	4.0	6.5	5.7	9.2	4.3	1.4	.71	.34	1.2
4	2.3	5.9	5.9	4.0	6.0	5.4	8.8	4.3	1.5	.52	1.1	.90
5	2.1	4.8	6.2	4.5	5.0	5.4	6.6	5.4	2.2	.37	.54	.67
6	2.1	4.9	5.6	4.5	5.5	5.6	5.4	7.1	1.7	.57	8.7	.64
7	2.2	4.4	5.4	4.0	5.5	6.2	4.3	6.6	1.2	.64	5.0	1.2
8	2.3	4.8	5.0	4.0	5.5	5.7	3.9	5.0	1.2	.45	2.3	1.0
9	2.1	5.0	4.8	4.0	5.5	5.8	3.3	4.2	1.1	.76	1.5	.81
10	2.0	6.9	4.7	4.0	5.0	5.3	3.3	4.4	3.5	.75	1.2	.72
11	2.0	6.9	4.7	4.5	4.0	4.8	3.3	4.5	6.8	.57	1.2	.68
12	2.3	6.8	5.5	5.5	5.5	4.8	3.5	3.2	4.8	.40	1.2	1.4
13	2.4	6.6	6.0	5.0	5.0	5.0	3.7	2.3	4.4	.32	.41	3.0
14	3.1	7.8	3.5	5.0	5.0	5.6	3.6	1.8	14	.30	.33	2.3
15	2.8	9.2	3.5	5.5	5.2	5.3	5.6	1.2	8.1	.29	.30	1.7
16	3.6	10	4.0	5.0	5.0	5.1	7.7	1.0	4.5	.40	.27	1.0
17	4.1	10	4.5	5.0	5.2	4.9	14	1.2	5.2	.29	.33	.91
18	3.9	7.8	5.0	5.5	5.3	5.3	15	4.1	3.2	1.3	.30	.90
19	4.1	6.7	5.0	5.5	5.4	5.7	9.5	7.4	1.9	1.4	.32	.84
20	4.8	6.7	5.0	4.5	5.3	5.4	7.4	7.0	1.0	.68	.30	.86
21	5.0	6.9	5.0	4.5	5.2	5.8	9.8	15	.62	.63	.34	.84
22	5.1	6.6	5.5	5.0	5.1	5.7	6.1	6.0	.58	.37	.50	.82
23	4.9	5.8	6.5	5.0	5.4	5.0	5.1	4.0	.48	.40	.92	5.1
24	5.8	5.2	6.0	4.5	5.4	4.5	5.1	4.1	.47	1.4	1.4	8.4
25	6.5	5.1	5.5	3.5	5.3	3.9	4.9	7.4	.40	3.2	1.2	3.8
26	11	5.8	5.0	4.5	5.4	4.0	5.1	4.4	1.8	1.9	.83	3.4
27	9.4	5.0	3.5	5.0	5.4	4.1	5.9	3.0	5.1	1.1	1.2	2.9
28	6.3	4.5	3.5	5.0	5.4	4.3	4.6	2.9	4.2	.82	1.0	2.6
29	6.8	5.0	3.5	5.0	5.0	4.0	5.9	2.6	2.3	.62	.80	3.4
30	7.4	5.2	4.5	6.5	---	4.0	4.0	2.3	1.8	1.6	.70	2.8
31	4.9	---	4.0	6.0	---	4.3	---	1.6	---	.80	.60	---
TOTAL	128.9	184.0	153.8	145.5	155.0	156.7	188.9	140.6	87.65	25.86	89.61	59.09
MEAN	4.16	6.13	4.96	4.69	5.34	5.05	6.30	4.54	2.92	.83	2.89	1.97
MAX	11	10	6.5	6.5	6.5	6.2	15	15	14	3.2	54	8.4
MIN	2.0	4.1	3.5	3.5	4.0	3.9	3.3	1.0	.40	.29	.27	.64
AC-FT	256	365	305	289	307	311	375	279	174	51	178	117

CAL YR 1987	TOTAL	43097.39	MEAN	118	MAX	941	MIN	.26	AC-FT	85480
WTR YR 1988	TOTAL	1515.61	MEAN	4.14	MAX	54	MIN	.27	AC-FT	3010

07211500 CANADIAN RIVER NEAR TAYLOR SPRINGS, NM

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

DRAINAGE AREA.--2,850 mi².

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

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

GAGE.--Water-stage recorder. Elevation of gage is 5,640 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 10, 1964, water-stage recorder at site 1.7 mi downstream at different datum; operated as crest-stage gage at that site and datum during water years 1959-64.

REMARKS.--Estimated daily discharges: Dec. 13 to Feb. 23 and July 1-12. Records fair. Diversions for irrigation of about 30,000 acres upstream from station. Several observations of water temperature were made during the year. Satellite telemeter available at gage.

AVERAGE DISCHARGE.--43 years (water years 1940-58, 1965-88), 80.8 ft³/s, 58,540 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 10	1145	*3,030	*5.12	No other peak greater than base discharge.			
Minimum discharge, 3.1 ft ³ /s, Sept. 11.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	19	24	12	21	21	15	8.3	13	55	12	7.8
2	27	20	27	12	21	21	18	10	25	55	29	64
3	26	20	27	12	22	21	19	9.6	17	50	28	13
4	26	22	27	13	20	20	19	10	14	40	15	7.8
5	22	23	26	15	18	19	21	12	12	80	169	6.5
6	19	23	26	14	19	19	21	17	17	70	79	5.6
7	17	23	24	13	19	18	20	14	32	150	80	5.2
8	17	25	23	13	19	18	19	10	26	90	60	5.1
9	16	27	21	13	19	17	18	8.3	11	50	30	4.3
10	18	30	22	13	18	17	13	8.6	866	70	41	3.9
11	19	30	23	16	13	15	12	8.6	99	20	40	3.4
12	20	29	19	18	19	15	12	8.1	58	8.5	92	6.0
13	21	27	13	15	19	16	11	6.8	37	8.2	20	18
14	24	29	12	16	20	18	11	7.0	71	5.8	13	18
15	26	30	11	17	18	18	11	7.1	99	34	9.3	39
16	22	30	12	17	19	18	17	6.8	180	16	7.4	23
17	19	35	16	18	22	16	24	7.7	89	7.9	7.2	12
18	19	36	16	19	22	16	23	11	45	14	7.2	8.1
19	18	31	17	19	22	18	19	21	23	32	6.1	6.1
20	16	31	20	15	22	16	16	23	27	53	16	5.1
21	17	25	17	15	23	16	15	26	22	23	8.4	4.5
22	17	23	18	16	26	15	13	17	24	14	5.6	4.4
23	18	22	21	16	25	15	12	22	16	9.7	5.6	43
24	18	22	18	15	23	14	12	41	22	13	11	31
25	19	20	17	12	22	13	15	127	20	13	56	21
26	21	23	17	16	22	13	14	106	18	64	9.1	14
27	23	24	13	17	23	12	15	75	18	154	7.7	9.7
28	19	24	13	16	22	12	13	51	43	341	9.2	8.3
29	19	25	13	18	21	12	10	34	56	43	8.3	8.4
30	21	26	14	22	---	12	11	24	80	120	7.0	8.3
31	20	---	13	20	---	12	---	16	---	24	6.1	---
TOTAL	636	774	580	483	599	503	469	753.9	2080	1728.1	895.2	414.5
MEAN	20.5	25.8	18.7	15.6	20.7	16.2	15.6	24.3	69.3	55.7	28.9	13.8
MAX	32	36	27	22	26	21	24	127	866	341	169	64
MIN	16	19	11	12	13	12	10	6.8	11	5.8	5.6	3.4
AC-FT	1260	1540	1150	958	1190	998	930	1500	4130	3430	1780	822
CAL YR 1987	TOTAL	87040.0		MEAN	238	MAX	2810	MIN	9.0	AC-FT	172600	
WTR YR 1988	TOTAL	9915.7		MEAN	27.1	MAX	866	MIN	3.4	AC-FT	19670	

ARKANSAS RIVER BASIN

07215500 MORA RIVER AT LA CUEVA, NM

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

DRAINAGE AREA.--173 mi².

WATER-DISCHARGE RECORDS

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.--Estimated daily discharges: Nov. 14-16, Nov. 23 to Jan. 13, Jan. 19-26, and Feb. 9. Water-discharge records good except for estimated daily discharges, which are fair. 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.

AVERAGE DISCHARGE.--61 years (water years 1907-10, 1932-88), 28.6 ft³/s, 20,720 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 4	1330	*236	*3.33				

Minimum discharge, 1.1 ft³/s, Feb. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	15	3.4	1.5	14	6.3	4.5	2.7	13	127	62	98
2	17	14	20	1.5	9.1	6.5	8.2	2.0	13	124	69	137
3	17	14	16	1.4	17	5.0	8.1	1.9	13	110	58	110
4	14	14	16	1.5	13	3.7	9.1	1.8	13	104	112	96
5	15	14	14	1.4	14	3.6	10	1.9	14	100	114	87
6	16	14	13	1.3	13	4.3	10	2.4	14	129	111	82
7	16	12	11	1.3	10	5.5	10	2.1	14	105	95	76
8	13	8.7	11	1.5	9.3	5.4	10	2.1	15	101	84	69
9	9.1	8.0	11	3.0	7.0	5.2	11	2.1	20	111	85	65
10	13	4.9	12	4.5	3.6	5.3	9.8	1.9	56	119	88	62
11	15	11	5.2	8.3	2.4	5.4	7.2	1.9	72	128	78	59
12	15	14	2.3	14	2.0	5.6	6.5	1.9	80	105	75	72
13	16	14	1.9	26	2.2	5.4	2.7	2.0	77	97	69	130
14	19	15	1.8	22	2.2	5.4	1.8	3.2	65	91	63	153
15	19	17	1.6	23	1.7	10	1.8	6.5	62	87	63	117
16	18	19	1.6	16	1.7	15	4.4	6.8	75	84	74	101
17	18	22	1.7	17	1.6	14	4.6	7.4	46	132	101	93
18	13	24	1.8	17	1.5	16	2.5	11	38	113	99	87
19	3.7	24	2.0	16	1.5	17	2.5	11	31	103	92	81
20	4.8	13	2.3	16	2.0	16	2.4	11	26	110	81	78
21	8.7	3.5	2.0	14	2.9	14	4.6	11	20	117	71	77
22	16	3.2	1.7	17	1.5	14	9.4	11	24	97	64	79
23	10	3.3	1.5	24	1.6	14	10	10	24	86	76	76
24	10	3.1	1.3	21	1.6	12	9.6	9.3	26	77	86	68
25	9.0	2.9	1.3	27	1.5	13	9.1	9.3	41	76	102	63
26	8.8	2.7	1.3	20	1.4	9.8	6.0	11	78	64	85	59
27	8.4	2.7	1.3	16	4.0	6.6	2.6	11	125	62	91	55
28	8.4	2.7	1.3	17	6.2	3.3	2.6	11	130	63	127	45
29	8.4	2.6	1.5	18	6.3	2.9	2.8	11	113	72	107	44
30	8.5	2.6	1.8	19	---	2.2	2.8	12	133	83	97	44
31	12	---	1.6	18	---	2.0	---	12	---	73	92	---
TOTAL	398.8	320.9	166.2	405.2	155.8	254.4	186.6	202.2	1471	3050	2671	2463
MEAN	12.9	10.7	5.36	13.1	5.37	8.21	6.22	6.52	49.0	98.4	86.2	82.1
MAX	19	24	20	27	17	17	11	12	133	132	127	153
MIN	3.7	2.6	1.3	1.3	1.4	2.0	1.8	1.8	13	62	58	44
AC-FT	791	637	330	804	309	505	370	401	2920	6050	5300	4890
(†)	277	436	284	40	830	278	160	266	173	136	236	170

CAL YR 1987 TOTAL	21381.5	MEAN	58.6	MAX	311	MIN	1.3	AC-FT	42410	(†)	3945
WTR YR 1988 TOTAL	11745.1	MEAN	32.1	MAX	153	MIN	1.3	AC-FT	23300	(†)	3286
(†) DIVERSION, IN ACRE-FEET, BY LA CUEVA CANAL											

ARKANSAS RIVER BASIN

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07215500 MORA RIVER AT LA CUEVA, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS	SPE- CIFIC CON- DUCT- ANCE	SPE- CIFIC CON- DUCT- ANCE	PH (STAND- ARD	PH LAB (STAND- ARD	TEMPER- ATURE AIR	TEMPER- ATURE WATER	OXYGEN, DIS- SOLVED
		(CFS) (00061)	(US/CM) (00095)	(US/CM) (90095)	UNITS) (00400)	UNITS) (00403)	(DEG C) (00020)	(DEG C) (00010)	(MG/L) (00300)
OCT 27...	1345	8.5	470	501	8.20	8.30	18.5	15.5	8.6
JAN 13...	1300	19	450	--	8.90	--	5.0	0.0	12.5
FEB 25...	1000	1.6	--	538	8.10	8.20	6.0	1.0	11.6
APR 06...	1115	9.9	--	491	--	8.10	17.5	10.0	9.2
MAY 17...	1115	7.4	465	527	8.20	8.30	22.0	15.0	8.7
AUG 11...	1200	79	359	373	8.20	8.40	22.0	14.0	8.9
DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT 27...	250	99	75	15	12	0.3	1.2	150	71
JAN 13...	--	--	--	--	--	--	--	--	--
FEB 25...	270	62	80	17	16	0.4	1.3	208	87
APR 06...	250	68	75	15	14	0.4	1.0	181	70
MAY 17...	260	50	79	15	16	0.5	1.3	209	73
AUG 11...	180	35	54	11	6.3	0.2	0.90	145	47
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 27...	5.0	0.40	9.4	279	40	6	352	8.1	99
JAN 13...	--	--	--	--	--	--	138	7.0	63
FEB 25...	10	0.50	9.7	346	50	9	8	0.03	72
APR 06...	6.5	0.70	8.6	299	30	11	52	1.4	94
MAY 17...	6.8	0.70	11	328	30	18	83	1.7	64
AUG 11...	2.7	0.20	7.9	217	20	25	49	10	66

ARKANSAS RIVER BASIN

07216500 MORA RIVER NEAR GOLONDRINAS, NM

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

DRAINAGE AREA.--267 mi².

PERIOD OF RECORD.--March 1915 to May 1921, October 1921 to March 1922, May, August, September 1922, July 1923 to July 1924, December 1924 to September 1986, March to September 1988. Monthly discharge only 1915-30, published in WSP 1311.

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

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

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of about 12,000 acres upstream from station. Off-channel lakes make it possible to divert and store water during non-irrigation season. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--69 years (water years 1916-20, 1922, 1924-86), 34.0 ft³/s, 24,630 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s during period March to September and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 10	0115	*450	*3.09	No other peak greater than base discharge.			

Minimum discharge recorded, 1.6 ft³/s, May 1, 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	5.2	1.8	7.2	163	61	134
2						---	7.5	1.8	6.7	152	59	294
3						---	11	1.7	6.8	131	54	190
4						---	13	1.8	6.5	159	111	148
5						---	11	1.9	6.9	143	170	122
6						---	8.5	1.9	7.2	163	153	113
7						---	8.0	2.1	7.1	115	127	109
8						---	8.2	2.3	6.8	102	105	106
9						---	9.1	2.1	7.9	132	103	104
10						11	11	2.8	60	133	119	99
11						5.7	10	2.2	82	150	99	88
12						5.7	7.7	2.6	63	117	87	105
13						6.0	6.7	3.5	76	105	68	227
14						6.6	4.9	2.5	61	97	59	264
15						6.6	4.6	2.9	62	90	52	181
16						14	6.9	2.9	55	81	74	145
17						14	18	3.0	90	154	116	124
18						15	8.6	5.2	33	134	135	114
19						17	5.4	5.9	27	110	120	110
20						17	5.8	6.2	22	125	94	108
21						14	4.4	9.3	17	146	79	105
22						14	3.2	7.0	13	105	69	106
23						13	4.8	7.3	15	86	86	105
24						13	3.7	4.9	14	66	113	98
25						12	5.4	4.8	20	66	146	84
26						11	2.6	5.5	36	52	111	75
27						8.8	2.9	4.1	128	47	109	68
28						6.8	2.4	4.8	175	52	199	51
29						5.2	2.8	5.8	149	61	169	45
30						4.3	2.3	5.0	159	85	146	45
31						4.1	---	7.0	---	77	130	---
TOTAL						---	205.6	122.6	1420.1	3399	3323	3667
MEAN						---	6.85	3.95	47.3	110	107	122
MAX						---	18	9.3	175	163	199	294
MIN						---	2.3	1.7	6.5	47	52	45
AC-FT						---	408	243	2820	6740	6590	7270

ARKANSAS RIVER BASIN

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07218000 COYOTE CREEK NEAR GOLONDRINAS, NM

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

DRAINAGE AREA.--215 mi².

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

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

GAGE.--Water-stage recorder. Elevation of gage is 6,780 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 26, 1938, at site 0.4 mi downstream at different datum (nonrecording gage prior to Apr. 20, 1929). Apr. 26, 1938 to Sept. 25, 1946, at site 139 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 14-19, Nov. 21 to Dec. 2, Dec. 11 to Feb. 4, and Feb. 8-20. Records fair except those for estimated daily discharges, which are poor. Diversions (including off-channel storage) for irrigation of about 4,000 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--60 years, 12.4 ft³/s, 8,980 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 4	1830	483	4.43	Aug. 7	0445	*631	*4.81

Minimum discharge, 1.7 ft³/s, June 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	9.6	12	8.3	12	11	3.8	2.4	2.2	35	4.7	10
2	7.5	12	16	7.5	9.4	12	3.9	2.7	2.4	37	5.6	20
3	8.1	13	19	6.8	8.5	13	3.7	3.2	2.5	28	9.7	15
4	7.7	12	19	8.7	11	13	3.6	2.7	2.7	29	48	12
5	7.5	12	21	8.1	14	11	3.5	2.2	2.8	28	54	11
6	8.1	14	19	7.5	14	10	3.2	2.4	2.7	18	17	12
7	7.6	14	20	7.2	12	7.8	3.1	2.2	2.4	13	207	7.1
8	7.6	13	19	8.9	12	7.0	3.1	2.1	1.9	13	55	6.6
9	6.8	14	17	11	12	6.2	3.1	2.1	1.9	14	38	7.1
10	6.6	14	17	13	11	5.9	3.0	2.0	2.7	11	62	6.5
11	6.7	13	14	12	11	5.7	2.9	2.0	3.4	11	32	6.3
12	6.7	13	12	11	10	5.5	2.9	1.9	2.7	8.1	27	9.2
13	6.5	13	10	11	10	5.4	3.0	1.9	2.7	7.7	19	60
14	5.6	12	8.8	10	10	6.1	2.8	1.9	3.2	5.3	16	127
15	6.1	11	8.0	10	10	6.3	2.8	1.9	7.3	5.0	9.5	76
16	5.5	11	9.0	10	11	6.2	5.4	2.2	12	4.4	8.7	54
17	5.2	11	10	9.5	11	5.7	5.1	3.0	19	8.4	13	44
18	6.6	11	9.1	9.1	10	6.0	3.7	4.2	8.7	4.7	19	36
19	6.3	11	8.9	8.6	10	7.0	3.6	3.5	7.4	5.9	13	21
20	6.6	13	8.6	8.6	10	6.4	3.9	4.1	5.9	6.3	11	19
21	7.0	12	8.1	10	12	5.0	3.2	3.8	5.3	6.2	11	16
22	7.1	12	7.6	14	12	4.7	3.0	3.4	5.2	5.6	9.4	16
23	7.1	12	7.3	12	12	6.0	3.0	3.0	5.2	5.0	16	19
24	7.5	13	7.0	14	12	4.0	2.9	3.0	5.1	5.4	16	22
25	7.7	12	6.6	16	12	4.1	3.0	3.2	5.2	5.1	11	20
26	8.0	11	6.6	15	12	3.6	3.1	3.2	13	3.7	7.8	20
27	8.6	10	6.4	14	12	3.4	3.9	2.8	71	4.1	7.7	19
28	8.7	9.4	6.2	13	11	3.2	2.9	2.8	92	4.1	17	17
29	9.2	8.7	8.5	14	11	3.2	2.9	2.7	54	3.8	14	12
30	9.3	9.4	10	16	---	3.2	2.8	2.5	47	6.0	11	11
31	9.5	---	9.3	15	---	3.4	---	2.3	---	5.0	11	---
TOTAL	227.1	356.1	361.0	339.8	324.9	201.0	100.8	83.3	399.5	346.8	801.1	731.8
MEAN	7.33	11.9	11.6	11.0	11.2	6.48	3.36	2.69	13.3	11.2	25.8	24.4
MAX	9.5	14	21	16	14	13	5.4	4.2	92	37	207	127
MIN	5.2	8.7	6.2	6.8	8.5	3.2	2.8	1.9	1.9	3.7	4.7	6.3
AC-FT	450	706	716	674	644	399	200	165	792	688	1590	1450
CAL YR 1987	TOTAL	15281.2		MEAN	41.9	MAX	360	MIN	2.5	AC-FT	30310	
WTR YR 1988	TOTAL	4273.2		MEAN	11.7	MAX	207	MIN	1.9	AC-FT	8480	

ARKANSAS RIVER BASIN

07221000 MORA RIVER NEAR SHOEMAKER, NM

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

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

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

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

GAGE.--Water-stage recorder. Elevation of gage is 6,140 above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 10, 1934, at site 2,000 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 12 to Feb. 14. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 26,000 acres upstream from station. Off-channel lakes make it possible to divert and store water during non-irrigation season. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--70 years (water years 1915-18, 1920-24, 1928-88), 58.1 ft³/s, 42,090 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 9	1800	*1,060	*4.23	No other peak greater than base discharge.			

Minimum discharge, 3.2 ft³/s, June 6-9, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	12	38	18	22	12	14	4.9	4.3	175	79	270
2	15	11	37	18	25	12	12	4.5	4.4	156	66	461
3	14	13	49	18	26	13	8.3	4.8	4.4	114	56	530
4	12	17	50	19	27	11	8.2	4.8	4.1	98	54	367
5	15	19	47	20	27	9.2	7.2	4.8	3.7	166	181	289
6	16	13	48	21	28	8.7	7.1	4.7	3.5	145	144	248
7	14	18	42	22	30	8.4	7.1	4.4	3.3	161	201	204
8	14	19	41	21	30	8.1	6.8	4.2	3.2	127	189	170
9	14	18	41	21	31	8.0	6.4	4.3	3.2	259	154	154
10	14	21	43	20	32	7.7	6.6	4.5	4.4	256	220	144
11	7.8	14	42	20	28	7.8	6.4	4.3	5.5	167	196	130
12	7.7	14	37	20	27	9.8	6.3	4.3	38	164	200	141
13	7.6	25	36	22	27	11	6.2	4.3	22	127	165	299
14	7.7	30	34	23	24	12	5.6	4.4	26	113	129	521
15	7.8	34	34	23	28	9.5	5.8	4.0	43	101	110	478
16	7.3	38	34	23	18	9.1	7.8	4.0	48	94	101	327
17	7.5	40	34	23	20	10	7.9	4.1	46	104	112	269
18	7.5	38	33	24	19	13	6.3	5.7	41	161	157	231
19	7.5	41	32	24	15	11	6.7	5.4	16	127	215	188
20	8.1	36	31	24	15	11	7.6	5.2	11	120	144	160
21	8.3	46	30	25	12	11	6.1	4.8	7.5	133	120	148
22	8.5	41	28	25	13	11	5.3	4.4	6.2	128	101	151
23	8.3	40	25	24	14	11	5.2	4.7	5.7	99	96	160
24	8.4	40	24	23	13	10	5.2	4.9	5.6	82	304	148
25	8.2	39	24	22	12	8.2	5.3	5.0	5.1	75	273	134
26	12	40	23	21	13	9.1	5.3	4.9	5.1	62	235	121
27	14	40	22	20	13	12	5.5	4.6	27	46	257	114
28	12	41	22	19	14	9.2	5.2	4.3	165	47	373	110
29	12	40	21	18	13	9.1	4.9	4.3	175	52	478	98
30	13	36	20	17	---	9.6	5.0	4.5	137	78	363	91
31	12	---	19	20	---	9.2	---	4.3	---	88	306	---
TOTAL	341.2	874	1041	658	616	311.7	203.3	142.3	874.2	3825	5779	6856
MEAN	11.0	29.1	33.6	21.2	21.2	10.1	6.78	4.59	29.1	123	186	229
MAX	20	46	50	25	32	13	14	5.7	175	259	478	530
MIN	7.3	11	19	17	12	7.7	4.9	4.0	3.2	46	54	91
AC-FT	677	1730	2060	1310	1220	618	403	282	1730	7590	11460	13600
CAL YR 1987	TOTAL	59750.0		MEAN	164	MAX	948	MIN	6.8	AC-FT	118500	
WTR YR 1988	TOTAL	21521.7		MEAN	58.8	MAX	530	MIN	3.2	AC-FT	42690	

ARKANSAS RIVER BASIN

51

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

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

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

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Elevation of gage is 4,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 2121 for history of changes prior to November 1966.

REMARKS.--No estimated daily discharges. Water-discharge records good. Diversions for irrigation of about 56,000 acres upstream from station. Satellite telemetry available at station.

AVERAGE DISCHARGE.--55 years (water years 1913-14, 1936-88), 186 ft³/s, 134,800 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 7	2245	*1,910	*6.19				

Minimum discharge, 3.4 ft³/s, Jan. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	28	61	63	83	39	28	18	40	189	112	285
2	38	26	59	61	86	41	30	17	32	198	165	274
3	37	25	64	55	95	42	30	18	24	197	126	433
4	36	24	68	52	98	42	32	17	20	171	224	437
5	34	24	70	50	100	38	30	15	17	275	347	340
6	29	26	79	47	104	38	28	13	14	189	228	283
7	25	27	78	44	103	38	30	11	12	303	296	251
8	25	29	76	50	96	37	29	12	12	425	264	222
9	22	37	72	50	93	34	26	12	9.0	188	281	197
10	24	32	69	44	89	31	28	12	7.9	321	233	183
11	25	30	68	49	92	27	29	12	112	253	238	172
12	23	31	67	52	91	27	27	15	196	195	242	189
13	23	33	73	51	83	28	27	13	100	184	238	223
14	24	38	63	57	81	29	26	12	87	216	237	446
15	24	36	54	57	80	27	22	9.6	213	161	189	500
16	22	36	53	60	79	27	25	10	141	136	211	401
17	22	48	47	58	72	27	33	9.5	132	125	151	313
18	22	54	52	73	68	27	33	11	159	117	146	278
19	24	62	71	57	68	28	32	20	126	192	169	250
20	25	64	71	63	66	30	32	18	110	176	208	223
21	23	69	66	90	61	29	33	17	76	150	175	201
22	22	67	72	74	57	28	34	15	53	153	149	189
23	21	68	67	74	49	28	28	18	39	168	203	191
24	21	71	72	73	46	29	25	22	35	137	179	206
25	20	68	59	51	45	27	23	26	27	113	257	191
26	19	68	71	76	42	27	20	25	25	96	287	197
27	19	68	61	67	42	26	18	33	48	90	280	179
28	20	67	55	74	41	25	16	100	36	182	272	165
29	21	62	47	81	39	23	17	81	76	131	334	156
30	22	61	72	81	---	22	17	65	220	159	378	147
31	25	---	68	82	---	21	---	50	---	117	313	---
TOTAL	781	1379	2025	1916	2149	942	808	727.1	2198.9	5707	7132	7722
MEAN	25.2	46.0	65.3	61.8	74.1	30.4	26.9	23.5	73.3	184	230	257
MAX	44	71	79	90	104	42	34	100	220	425	378	500
MIN	19	24	47	44	39	21	16	9.5	7.9	90	112	147
AC-FT	1550	2740	4020	3800	4260	1870	1600	1440	4360	11320	14150	15320
CAL YR 1987	TOTAL	155823.7		MEAN	427	MAX	3470	MIN	8.2	AC-FT	309100	
WTR YR 1988	TOTAL	33487.0		MEAN	91.5	MAX	500	MIN	7.9	AC-FT	66420	

ARKANSAS RIVER BASIN

07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
OCT												
28...	1045	21	--	1660	8.40	8.00	18.5	13.0	3.6	8.3	10	630
JAN												
14...	1100	74	--	1430	7.02	8.20	2.0	0.0	4.2	11.6	--	580
FEB												
22...	1315	60	--	1540	8.60	8.30	22.0	10.0	220	9.4	--	650
MAY												
18...	1330	10	2200	2290	8.50	8.20	22.0	12.0	6.3	9.2	180	900
JUN												
09...	1145	8.6	690	--	--	--	--	23.0	--	--	--	--
27...	1430	56	1310	1380	8.10	8.00	24.0	24.0	48	7.2	14	510
AUG												
09...	1145	297	700	728	8.30	8.30	27.0	23.0	180	7.5	21	290
DATE		HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER WH IT FIELD HCO3 (00450)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER WH IT FIELD CO3 (00447)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	ALKA- LITY WAT WH TOT IT MG/L AS CACO3 (00419)
OCT												
28...		480	120	79	140	2	3.6	134	--	30	--	160
JAN												
14...		360	120	68	110	2	2.8	--	239	--	0	--
FEB												
22...		470	130	78	130	2	2.8	--	67	--	0	--
MAY												
18...		740	160	120	210	3	5.2	--	164	--	12	--
JUN												
09...		--	--	--	--	--	--	--	--	--	--	--
27...		380	100	63	110	2	4.0	--	167	--	0	--
AUG												
09...		140	70	27	47	1	2.6	--	169	--	2	--
DATE		ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT												
28...		--	150	760	29	0.40	3.1	1320	1230	--	<0.010	<0.100
JAN												
14...		196	216	540	21	0.40	17	1030	1010	--	<0.010	<0.100
FEB												
22...		55	179	680	25	0.40	5.2	1240	1160	--	<0.010	<0.100
MAY												
18...		154	161	1200	43	0.50	5.9	1890	1840	--	<0.010	<0.100
JUN												
09...		--	--	--	--	--	--	--	--	--	--	--
27...		137	136	600	20	0.50	9.5	1090	990	--	<0.010	<0.100
AUG												
09...		143	151	220	11	0.30	12	504	483	0.170	0.010	0.180

ARKANSAS RIVER BASIN

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07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO- GEN, AMMONIA (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
OCT 28...	0.030	0.040	0.37	<0.010	<0.010	3.8	<10	<1	95	<0.5	1
JAN 14...	0.020	<0.010	0.28	0.020	<0.010	--	--	--	--	--	--
FEB 22...	0.020	0.030	0.18	0.010	<0.010	--	--	--	--	--	--
MAY 18...	0.020	0.050	0.18	0.020	<0.010	4.8	10	1	74	<1	<2
JUN 09...	--	--	--	--	--	--	--	--	--	--	--
27...	0.040	0.030	0.46	0.130	<0.010	6.2	<10	1	190	0.7	<1
AUG 09...	0.020	0.040	2.0	0.040	0.030	15	150	1	120	<0.5	1

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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)
OCT 28...	1	<3	2	4	<5	61	7	<0.1	<10	<1	<1
JAN 14...	--	--	--	--	--	--	--	--	--	--	--
FEB 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	<1	<6	7	23	<5	90	22	0.2	<20	6	1
JUN 09...	--	--	--	--	--	--	--	--	--	--	--
27...	<1	<3	31	7	<5	43	7	<0.1	<10	3	<1
AUG 09...	<1	<3	2	120	<5	25	9	<0.1	<10	2	<1

DATE	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)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)
OCT 28...	1.0	2000	<6	9	15	6.2	360	6	1	10	50
JAN 14...	--	--	--	--	--	--	--	--	--	--	--
FEB 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	<1.0	2800	<12	15	--	--	--	--	--	--	--
JUN 09...	--	--	--	--	--	--	--	--	--	--	--
27...	1.0	1600	<6	9	--	--	--	--	--	--	--
AUG 09...	<1.0	790	<6	10	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 28...	10	5000	10	520	0.10	30	93	5.2	99	K9	K6
JAN 14...	--	--	--	--	--	--	79	16	99	<1	K2
FEB 22...	--	--	--	--	--	--	107	17	93	70	46
MAY 18...	--	--	--	--	--	--	195	5.5	96	K800	K110
JUN 09...	--	--	--	--	--	--	582	14	99	--	--
27...	--	--	--	--	--	--	156	24	97	460	650
AUG 09...	--	--	--	--	--	--	--	--	--	700	950

07222500 CONCHAS RIVER AT VARIADERO, NM

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

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

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

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

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

REMARKS.--Estimated daily discharges: July 18-20. Records fair. Diversions for irrigation of about 300 acres upstream from station. Several observations of water temperature were made during the year. Satellite telemetry available at station.

AVERAGE DISCHARGE.--52 years, 13.9 ft³/s, 10,070 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 15	1015	*2,510	*5.64	No other peak greater than base discharge.			
No flow at times.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	.60	1.1	1.3	1.0	1.0	.83	.25	1.0	1.7	1.4	2.6
2	4.5	.68	1.1	1.3	1.0	1.0	.84	.14	.69	1.2	.78	3.7
3	2.8	.73	1.1	1.2	1.1	1.0	.79	.14	.38	.78	.61	2.4
4	2.0	.73	1.1	1.2	1.1	1.1	.72	.14	.29	.55	.28	2.2
5	1.5	.73	1.1	1.2	1.0	1.0	.62	.13	.31	.37	5.5	1.8
6	1.2	1.6	1.1	1.3	1.0	1.0	.56	.20	.21	17	5.1	1.4
7	1.1	2.9	.98	1.3	1.0	.93	.50	.12	.13	47	4.0	1.1
8	.86	3.4	.96	1.2	1.0	.86	.48	.09	.04	54	2.5	.88
9	.70	3.4	.92	1.3	1.1	.91	.39	.09	.00	16	1.4	.79
10	.61	2.1	.84	1.3	1.0	.90	.39	.06	.00	7.9	.85	.78
11	.61	1.6	.84	1.4	.98	.80	.39	.05	.00	4.8	.57	.62
12	.64	1.2	.83	1.5	1.0	.78	.39	.07	.00	3.2	.37	1.7
13	.62	1.1	1.4	1.3	1.1	.79	.40	.04	.06	2.2	5.5	55
14	.62	.99	1.9	1.2	1.0	.89	.33	.03	6.9	1.5	2.6	47
15	.69	.96	2.0	1.1	1.0	.84	.34	.02	752	1.0	3.5	23
16	.65	.98	1.8	1.1	1.1	.73	1.2	.02	69	.95	1.4	7.5
17	.65	.99	1.8	1.1	1.1	.73	1.7	.02	29	1.4	.87	4.1
18	.71	.94	1.8	1.0	1.1	.76	1.6	4.3	14	1.4	19	2.6
19	.72	1.0	1.8	.96	1.2	.82	2.0	48	8.1	10	20	1.8
20	.68	.93	1.8	.91	1.2	.84	1.6	37	5.4	4.7	5.3	1.3
21	.63	.89	1.8	.90	1.2	.83	1.3	6.4	4.2	3.1	2.6	1.3
22	.63	.82	1.8	.94	1.1	.79	.91	3.2	3.4	2.1	1.5	1.5
23	.61	.79	1.8	.91	1.1	.78	.73	1.9	2.7	1.2	50	1.0
24	.59	.82	1.6	.93	1.1	.70	.61	1.3	2.2	.71	45	.84
25	.66	.83	1.7	.95	1.1	.59	.54	.93	1.8	.46	25	.73
26	.59	.91	1.8	.93	1.1	.58	.44	1.2	1.6	.30	139	.68
27	.66	.98	1.6	.96	1.1	.53	.42	22	1.9	.29	22	.57
28	.70	1.1	1.6	1.0	1.1	.43	.39	8.8	1.7	.91	10	.43
29	.71	1.1	1.5	1.0	.99	.44	.35	3.8	.95	11	5.9	.35
30	.67	1.1	1.5	1.0	---	.41	.36	2.4	.46	4.6	4.3	.31
31	.58	---	1.5	1.0	---	.35	---	1.5	---	3.1	3.3	---
TOTAL	38.19	36.90	44.47	34.69	30.97	24.11	22.12	144.34	908.42	205.42	390.13	169.98
MEAN	1.23	1.23	1.43	1.12	1.07	.78	.74	4.66	30.3	6.63	12.6	5.67
MAX	9.3	3.4	2.0	1.5	1.2	1.1	2.0	48	752	54	139	55
MIN	.58	.60	.83	.90	.98	.35	.33	.02	.00	.29	.28	.31
AC-FT	76	73	88	69	61	48	44	286	1800	407	774	337
CAL YR 1987	TOTAL	4620.41		MEAN	12.7	MAX	771	MIN	.03	AC-FT	9160	
WTR YR 1988	TOTAL	2049.74		MEAN	5.60	MAX	752	MIN	.00	AC-FT	4070	

ARKANSAS RIVER BASIN

07223300 CONCHAS CANAL BELOW CONCHAS DAM, NM

LOCATION.--Lat 35°22'51", long 104°10'58", 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.

PERIOD OF RECORD.--September 1945 to June 1949, April 1954 to June 1955, September 1961 to October 1982, October 1984 to current year.

REMARKS.--Water is diverted from Conchas Lake for irrigation of about 35,000 acres on Tucumcari Project (1966 conditions).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 751 ft³/s, Aug. 31, 1961; no flow many days each year.

MONTHLY DIVERSION, IN ACRE-FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

Month	Mean	Diversion in acre-feet
October.....	159	9,750
November.....	26.4	1,570
December.....	0	0
January.....	-	0
February.....	-	0
March.....	24.3	1,500
April.....	121	7,220
May.....	163	10,040
June.....	113	6,730
July.....	170	10,470
August.....	218	13,380
September.....	81.3	4,840
WTR YR 1988.....	90.2	65,480

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 mi north of Newkirk, and at mile 746.0.

DRAINAGE AREA.--7,409 mi², of which 433 mi², is probably 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. 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, 330,100 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. Satellite telemetry available 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, 314,910 acre-ft, Oct. 1, elevation, 4,199.40 ft; minimum, 265,370 acre-ft, Aug. 22, 23, elevation, 4,195.39 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on Survey by U.S. Army Corps of Engineers in 1970)

4,180	173,900
4,190	237,100
4,200	320,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	314910	301450	299840	287730	289710	291780	289620	280920	269230	271440	269660	267970
2	314540	300910	299840	287730	289800	292050	289530	280220	268810	271520	269060	268640
3	314540	300820	300020	287730	289980	292140	289710	279520	268470	271610	268640	269060
4	313890	300640	300110	287820	290160	292140	289710	279000	268140	271690	268220	269740
5	313330	300290	300200	287820	290250	292140	289530	278650	268390	272460	268140	270160
6	313050	300820	300290	288000	290340	292230	289440	278050	268140	272370	268140	270670
7	312400	300290	300290	288090	290430	292050	289170	277180	267880	273480	268050	270420
8	311850	300380	300380	288090	290610	292050	288900	276660	267460	274080	267880	270330
9	311200	300290	300380	288180	290700	292050	288270	276060	266960	274510	267880	270250
10	310650	300460	300380	288180	290790	292050	287820	275540	266630	274940	267800	269990
11	310180	300200	300380	288360	290970	291690	287290	275020	266370	275370	267720	269570
12	309910	300290	300640	288270	290970	291780	287020	274510	266370	275630	267550	269910
13	309360	300200	300820	288360	291060	291780	286660	273910	267130	275970	267380	270500
14	308900	300020	301000	288450	291150	291780	286130	273400	268390	275880	267130	272460
15	308530	299930	300910	288540	291240	291600	285510	272630	272540	275800	266960	273650
16	308070	299930	300910	288540	291240	291510	286490	271180	272970	275710	266710	274510
17	307800	299840	301000	288630	291330	291510	286400	271350	273310	275540	266370	275110
18	307250	299750	301090	288720	291510	291420	285690	271100	273400	276060	266210	275540
19	306610	299750	301180	288720	291600	291330	284970	271520	273400	276060	266040	275800
20	306060	299750	301180	288720	291690	291330	285510	271610	273310	275880	265790	276060
21	305700	299660	301270	288810	291780	291330	285420	271610	273220	275630	265700	276570
22	305340	299660	301270	288810	291870	291150	284710	271440	272880	275110	265370	277010
23	305060	299660	301360	288990	291780	291240	284350	271350	272460	274590	265370	277090
24	304610	299570	301360	288990	291690	291330	284090	271350	271950	274170	265450	277350
25	304160	299660	301450	289080	291690	291060	283470	271010	271440	273650	265700	277530
26	303800	299750	301630	289170	291690	291060	282940	270670	271350	273050	266370	277700
27	303340	299750	301630	289260	291690	291240	282590	270330	271780	272460	266460	277700
28	302980	299750	301810	289350	291780	290790	282240	270160	271690	272030	266790	277440
29	302620	299840	301990	289440	291780	290430	281970	270080	271440	271610	267040	277270
30	302170	299840	301900	289530	---	289530	281450	269910	271100	270930	267460	277180
31	301900	---	301900	289710	---	289530	---	269660	---	270250	267800	---
MAX	314910	301450	301990	289710	291870	292230	289710	280920	273400	276060	269660	277700
MIN	301900	299570	299840	287730	289710	289530	281450	269660	266370	270250	265370	267970
(+)	4197.98	4197.75	4197.98	4198.20	4198.43	4198.18	4197.27	4195.90	4196.07	4195.97	4195.68	4196.78
(++)	-13380	-2060	+2060	-12190	+2070	-2250	-8080	-11790	+1440	-850	-2450	+9380

CAL YR 1987 MAX 335190 MIN 299570 (++) -15260
WTR YR 1988 MAX 314910 MIN 265370 (++) -38100

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

ARKANSAS RIVER BASIN

07226500 UTE CREEK NEAR LOGAN, NM

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

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

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

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

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

REMARKS.--Estimated daily discharges: Oct. 1-28, Dec. 28 to Jan. 15, Jan. 20-23, June 21-26, July 22 to Aug. 3, Aug. 7-9, Aug. 28 to Sept. 1, and Sept. 16-20. Records poor. Diversions for irrigation of a few hundred acres upstream from station. One observation of water temperature was made during the year.

AVERAGE DISCHARGE.--46 years, 22.8 ft³/s, 16,520 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 13	2215	*2,540	*4.11				

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	3.6	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	3.3	.02	.22	.00	.00	.00	.00	253
3	.00	.00	.00	.00	3.1	.57	1.5	.00	.00	.00	.00	251
4	.00	.00	.00	.00	1.3	.76	8.6	.00	.00	.00	8.5	109
5	.00	.00	.00	.00	1.1	.53	4.3	.00	33	.00	299	50
6	.00	.00	.00	.00	.94	.18	.49	.00	18	.00	112	30
7	.00	.00	.00	.00	1.1	.06	.01	.00	1.7	39	27	12
8	.00	.00	.00	.00	1.6	.00	.00	.00	.04	23	15	6.0
9	.00	.00	.00	.00	.93	.00	.00	.00	.00	42	9.0	4.0
10	.00	.00	.00	.00	.95	.00	.00	.00	.00	20	3.1	2.0
11	.00	.00	.00	.00	1.1	.00	.00	.00	4.4	2.3	.76	.95
12	.00	.00	.00	.00	1.6	.00	.00	.00	62	5.2	.02	.00
13	.00	.00	.00	.00	1.6	.00	.00	.00	309	2.4	.00	.00
14	.00	.00	.00	.00	.42	.00	.00	.00	563	1.6	.00	458
15	.00	.00	.00	.00	.16	.00	.00	.00	78	1.6	.00	85
16	.00	.00	.00	.00	.50	.00	.00	.00	58	1.6	.00	45
17	.00	.00	.00	.00	.10	.00	.00	.00	32	101	20	18
18	.00	.00	.00	.40	.05	.06	.00	13	11	88	25	10
19	.00	.00	.00	27	.03	.13	.00	1.3	7.3	243	.45	6.0
20	.00	.00	.00	10	.03	.01	.01	.00	6.7	130	31	3.5
21	.00	.00	.00	6.5	.02	.00	.00	.00	4.0	41	13	1.7
22	.00	.00	.00	5.0	.00	.00	.00	.00	2.1	25	7.0	2.3
23	.00	.00	.00	5.9	.00	.00	.00	.00	1.1	15	39	2.7
24	.00	.00	.00	1.6	.00	.00	.00	.00	.55	6.5	9.1	.93
25	.00	.00	.00	.57	.00	.00	.00	.00	.00	4.0	10	.36
26	.00	.00	.00	.68	.00	.00	.00	5.5	.00	2.0	122	.03
27	.00	.00	.00	.78	.00	.00	.00	33	23	1.0	28	.00
28	.00	.00	.00	.78	.00	.00	.00	75	5.4	.00	14	.00
29	.00	.00	.00	1.4	.00	.00	.00	13	4.3	.00	7.0	.00
30	.00	.00	.00	5.7	---	.00	.00	.47	.04	.00	4.0	.00
31	.00	---	.00	5.5	---	.00	---	.02	---	.00	.60	---
TOTAL	.00	.00	.00	71.81	23.53	2.32	15.13	141.29	1224.63	795.20	804.53	1351.47
MEAN	.00	.00	.00	2.32	.81	.07	.50	4.56	40.8	25.7	26.0	45.0
MAX	.00	.00	.00	27	3.6	.76	8.6	75	563	243	299	458
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	142	47	4.6	30	280	2430	1580	1600	2680
CAL YR 1987	TOTAL	4363.85		MEAN	12.0	MAX	400	MIN	.00	AC-FT	8660	
WTR YR 1988	TOTAL	4429.91		MEAN	12.1	MAX	563	MIN	.00	AC-FT	8790	

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LOCATION.--Lat 35°20'35", long 103°26'37", in NW¼ 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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. 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.---No estimated daily capacity. 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 of 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, 246,620 acre-ft at elevation 3,787.0 ft, crest of labyrinth spillway. Top of dam is at elevation 3,812.0 ft. Maximum design capacity of 440,250 acre-ft at elevation 3,806.0 ft, 19.0 ft above crest of spillway, allows 193,600 acre-ft of capacity for protection of the structure. Dead storage, 10,900 acre-ft at elevation 3,725.0 ft, sill of outlet intake tower; inactive pool of 25,140 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 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 September 1965, 31,320 acre-ft, June 6, 1984, elevation, 3,739.10 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 239,500 acre-ft, Sept. 22, elevation, 3,786.10 ft; minimum, 220,700 acre-ft, May 16, elevation, 3,783.63 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Geological Surveys and New Mexico Interstate Stream Commission 1983)

3,744	41,110	3,780	195,000
3,760	89,600	3,788	255,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	230400	227300	224900	224100	223800	223600	223200	222400	222500	232300	234200	232700
2	230300	227200	224900	224200	224000	223700	223400	222000	222400	232200	234100	233200
3	230300	227100	225000	224200	223800	224000	223500	221900	222400	232100	234100	233800
4	230100	227000	225200	224100	223800	223800	223700	222000	222300	232000	234100	233800
5	230000	227000	225000	224000	223600	224000	223500	222000	222800	231900	234400	233800
6	230000	227000	225100	223900	224000	224100	223500	221700	222800	231900	234600	233700
7	229900	226800	225300	224000	224000	224000	223600	221600	222800	233100	234500	233700
8	229600	226600	224900	224000	224000	224000	223500	221400	222600	234000	234100	233300
9	229400	226500	224700	224000	224200	224000	223100	221100	222500	235100	234000	233300
10	229100	226500	224700	224200	223700	223900	223200	221100	222500	235400	233700	233100
11	229000	226400	224600	224400	223900	223800	223200	221100	222400	235600	233700	232800
12	229100	226500	224300	224200	223900	223600	223300	221000	222600	235500	233600	232300
13	229000	226200	224600	224300	224000	223500	223200	221200	223400	235400	233600	234100
14	228900	226300	224500	224200	223900	223500	222900	221000	227800	235400	233300	238100
15	228900	226100	224400	224400	224000	223200	223000	220800	230600	235100	233000	239000
16	228600	226000	224500	224200	223500	223200	223200	220700	231700	234900	232700	239400
17	228500	226000	224600	224300	223600	223200	223400	220800	232000	235100	232600	239200
18	228400	225800	224600	224100	223700	223300	223500	222000	232100	234900	232800	239200
19	228200	225600	224700	224000	223700	223400	223600	222100	232000	235100	232600	239000
20	228200	225900	224600	224000	223700	223500	223500	222300	231900	235400	232600	239000
21	228200	225800	224700	224000	224000	223500	223600	222400	231700	235300	232500	239400
22	228000	225600	225000	224100	223600	223400	223100	222100	231700	235300	232800	239500
23	228000	225400	224700	224100	223600	223400	223000	222200	231500	235200	232900	239200
24	227800	225400	224400	224100	223600	223200	222900	222400	231200	235100	232900	239300
25	227900	225100	224200	224000	223700	222900	222900	222400	231300	235100	233400	239200
26	227800	225100	224300	224100	223700	223200	222500	222400	230200	235100	233600	239200
27	227500	225200	224300	224200	223800	223200	222500	222400	231500	234800	233400	239200
28	227000	225000	224400	224200	223600	222800	222600	222600	232200	234700	233300	238800
29	227700	225000	224300	224200	223600	222800	222400	222600	232300	234700	233100	238600
30	227400	225000	224400	224200	---	223200	222500	222900	232200	234600	233100	238500
31	227400	---	224200	224100	---	222800	---	222900	---	234400	232800	---
MAX	230400	227300	225300	224400	224200	224100	223700	222900	232300	235600	234600	239500
MIN	227000	225000	224200	223900	223500	222800	222400	220700	222300	231900	232500	232300
(+)	3784.52	3784.20	3784.10	3784.09	3784.02	3783.90	3783.87	3783.88	3785.15	3785.44	3785.22	3785.98
(++)	-3000	-2400	-800	-100	-500	-800	-300	+400	+9300	+2200	-1600	+5700
CAL YR 1987	MAX	249800		MIN	109800	(++)	+114300					
WTR YR 1988	MAX	239500		MIN	220700	(++)	+8100					
(+)	ELEVATION, IN FEET, AT END OF MONTH											
(++)	CHANGE IN CONTENTS, IN ACRE-FEET											

ARKANSAS RIVER BASIN

07226800 UTE RESERVOIR NEAR LOGAN, NM -- Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected in Ute Reservoir impounded by Ute Dam on the Canadian River.

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

REMARKS.--Samples for chemical analyses are collected annually at Site B which is located 0.6 mi upstream from Ute Dam. Samples are collected 5 feet from the bottom of the reservoir.

07226560 - UTE RE AT SITE B, 0.6 MILES AB UTE DAM, NM (LAT 35°20'32" LONG 103°27'16")

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
SEP												
08...	1015	77.0	82.0	960	875	7.67	8.10	25.0	16.0	1.4	17	280
08...	1016	75.0	82.0	--	--	--	--	--	16.5	1.5	--	--
08...	1017	70.0	82.0	--	--	--	--	--	17.0	1.6	--	--
08...	1018	65.0	82.0	--	--	--	--	--	17.0	1.5	--	--
08...	1019	60.0	82.0	--	--	--	--	--	17.0	1.5	--	--
08...	1020	55.0	82.0	--	--	--	--	--	18.0	1.5	--	--
08...	1021	50.0	82.0	--	--	--	--	--	21.0	6.7	--	--
08...	1022	45.0	82.0	--	--	--	--	--	21.0	8.2	--	--
08...	1023	40.0	82.0	920	--	8.22	--	--	21.0	8.9	--	--
08...	1024	35.0	82.0	--	--	--	--	--	21.0	9.3	--	--
08...	1025	30.0	82.0	--	--	--	--	--	21.5	9.5	--	--
08...	1026	25.0	82.0	--	--	--	--	--	21.5	10.0	--	--
08...	1027	20.0	82.0	--	--	--	--	--	21.5	10.2	--	--
08...	1028	15.0	82.0	--	--	--	--	--	21.5	10.2	--	--
08...	1029	10.0	82.0	--	--	--	--	--	21.5	11.0	--	--
08...	1030	5.00	82.0	--	--	--	--	--	21.5	12.2	--	--
08...	1031	1.00	82.0	920	--	8.33	--	--	21.5	12.0	--	--
DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
SEP												
08...	86	61	31	92	2	4.9	229	0	188	194	240	33
DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
SEP												
08...	0.40	3.9	583	<0.100	<0.100	0.080	0.32	0.020	0.010	4.1	2	2
DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
SEP												
08...	120	1	2	<1	<1	4	<1	45	<5	<5	<0.10	0.1

ARKANSAS RIVER BASIN

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07226800 UTE RESERVOIR NEAR LOGAN, NM -- Continued

WATER-QUALITY RECORDS

07226560 - UTE RE AT SITE B, 0.6 MILES AB UTE DAM, NM (LAT 35°20'32" LONG 103°27'16")

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)
SEP 08...	<1	<1	<10	10	<2.0	73	520	5	<10	10	<50

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN (T/DAY) (80155)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	
SEP 08...	20	24000	<100	590	0.02	40	34	0.0	93	K3	<1

ARKANSAS RIVER BASIN

07227000 CANADIAN RIVER AT LOGAN, NM

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

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

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

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

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

REMARKS.--Estimated daily discharges: Mar. 22 to Apr. 6, July 11-26, July 30 to Aug. 2, and Aug. 5-9. Records poor. Flow regulated by Conchas Lake, 45 mi upstream (station 07223500) and Ute Reservoir, 2 mi upstream (station 07226800). Diversions for irrigation of about 90,000 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years (water years 1909, 1912-13, 1927-38), 392 ft³/s, 284,000 acre-ft/yr, prior to completion of Conchas dam.
24 years (water years 1939-62), 257 ft³/s, 186,200 acre-ft/yr, prior to completion of Ute Dam.
26 years (water years 1963-88), 37.8 ft³/s, 27,390 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 179 ft³/s, Sept. 22, gage height, 2.89; minimum daily, 1.8 ft³/s, May 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	4.0	3.5	6.5	5.4	4.7	5.1	3.2	2.8	4.3	3.4	4.3
2	2.8	4.2	3.5	6.6	5.1	4.9	5.1	4.2	2.6	3.8	3.4	6.7
3	2.8	4.1	3.5	6.7	4.3	5.0	5.1	3.7	2.6	3.7	3.8	4.3
4	3.0	4.5	3.8	6.7	4.0	4.8	5.0	3.6	2.6	3.7	16	5.2
5	3.0	3.8	4.1	6.7	3.6	4.8	5.0	3.7	3.7	4.0	3.7	5.8
6	3.0	4.2	4.4	6.2	3.7	4.8	5.0	3.7	3.1	5.0	3.7	5.8
7	3.1	4.3	4.6	6.2	3.7	5.0	4.9	4.0	2.8	3.9	3.7	5.9
8	3.2	4.2	5.3	6.2	3.8	5.2	4.9	4.0	3.1	4.1	3.7	8.6
9	3.3	4.2	4.7	6.2	3.7	3.8	4.9	3.4	2.6	4.5	3.7	8.9
10	3.2	4.2	5.8	6.2	3.7	3.8	4.7	4.7	2.6	4.6	3.7	7.8
11	3.3	4.3	6.4	6.3	3.6	3.9	4.6	3.7	3.0	4.2	3.4	7.4
12	3.3	4.3	6.4	6.2	3.7	4.1	4.4	2.8	6.4	4.2	3.5	8.8
13	3.3	4.4	6.0	6.1	4.1	4.1	4.5	2.5	3.7	4.2	3.2	10
14	3.4	4.7	5.9	6.1	4.0	4.4	4.0	2.4	3.7	4.0	3.2	29
15	3.4	4.2	5.9	6.0	3.8	4.8	3.8	3.1	3.6	4.0	3.1	6.2
16	3.4	4.0	5.9	6.0	3.7	4.8	3.6	1.8	3.6	4.2	3.0	6.9
17	3.4	4.0	5.9	6.0	3.6	4.8	3.4	1.9	3.6	4.2	2.9	7.2
18	3.5	3.7	5.9	6.0	3.7	4.9	3.1	11	3.6	4.0	3.2	7.6
19	3.5	3.1	6.1	6.0	3.7	5.1	3.2	6.0	3.6	3.8	2.9	8.2
20	3.5	3.6	6.1	5.9	3.8	5.3	3.1	2.8	3.7	4.0	3.0	7.1
21	3.6	4.3	6.2	5.9	4.4	5.3	3.2	2.6	3.7	4.2	2.9	15
22	3.6	4.6	6.2	5.8	4.5	5.3	4.8	2.8	3.7	4.2	2.9	24
23	3.6	4.5	6.3	5.6	4.5	5.3	3.7	3.0	3.7	4.0	3.7	9.4
24	3.7	4.5	6.4	5.5	4.7	5.2	3.9	3.0	3.7	3.8	3.0	6.4
25	3.8	4.6	6.5	5.5	4.7	5.2	3.6	3.1	3.7	3.8	3.0	5.7
26	3.8	4.5	6.5	5.5	4.5	5.2	3.1	2.8	3.7	3.8	7.3	5.8
27	3.8	4.4	6.6	5.5	4.5	5.2	2.9	3.0	3.8	5.0	2.8	6.5
28	3.9	4.1	6.5	5.6	4.6	5.2	3.0	2.8	3.9	4.3	3.5	7.0
29	3.9	3.8	6.5	5.6	4.6	5.1	3.1	4.0	3.9	4.3	3.5	6.4
30	4.0	3.6	6.6	5.5	---	5.1	3.1	2.6	4.2	3.7	3.8	6.8
31	4.2	---	6.6	5.6	---	5.1	---	2.5	---	3.4	3.7	---
TOTAL	106.1	124.9	174.6	186.4	119.7	150.2	121.8	108.4	105.0	126.9	120.3	254.7
MEAN	3.42	4.16	5.63	6.01	4.13	4.85	4.06	3.50	3.50	4.09	3.88	8.49
MAX	4.2	4.7	6.6	6.7	5.4	5.3	5.1	11	6.4	5.0	16	29
MIN	2.8	3.1	3.5	5.5	3.6	3.8	2.9	1.8	2.6	3.4	2.8	4.3
AC-FT	210	248	346	370	237	298	242	215	208	252	239	505
CAL YR 1987	TOTAL	50562.99		MEAN	139	MAX	1890	MIN	.46	AC-FT	100300	
WTR YR 1988	TOTAL	1699.0		MEAN	4.64	MAX	29	MIN	1.8	AC-FT	3370	

07227100 REVUELTO CREEK NEAR LOGAN, NM

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

DRAINAGE AREA.--786 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. 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.--Estimated daily discharges: Dec. 18 to Jan. 7 and May 25 to June 1. Water-discharge records poor. Low flows supplemented by surface and ground-water return from irrigation in vicinity of Tucumcari. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years, 44.9 ft³/s, 32,530 acre-ft/yr.

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

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 14	0315	*18,000	*12.84	Sept. 14	1030	10,600	9.83
Aug. 26	0430	5,420	7.23				

Minimum discharge, 0.12 ft³/s, Mar. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	9.5	3.6	2.7	1.5	.91	51	4.4	1.5	448	21	3.4
2	15	8.9	3.8	2.4	1.4	2.4	388	2.3	1.4	202	22	25
3	13	7.9	4.4	2.2	1.9	13	356	4.7	.30	134	18	90
4	16	14	4.4	2.0	1.8	35	197	5.9	.51	83	11	158
5	19	14	3.2	1.9	1.8	11	65	5.5	59	77	25	50
6	20	15	2.8	3.4	1.5	5.3	28	8.8	76	528	47	24
7	15	16	2.8	5.4	1.6	2.8	12	12	10	554	38	11
8	13	13	2.4	10	2.5	1.8	7.1	12	9.4	436	28	5.8
9	16	11	2.2	11	2.3	1.7	4.3	12	6.9	280	23	4.6
10	18	14	2.4	11	1.6	1.4	3.3	11	4.0	661	24	3.9
11	16	11	2.5	13	1.8	.88	9.3	14	4.8	189	30	2.5
12	17	9.8	2.5	17	2.2	.81	30	18	304	73	24	4.1
13	16	8.0	3.0	32	2.6	.95	23	11	889	37	21	6.4
14	16	6.0	4.9	18	1.6	1.2	29	9.9	6780	23	19	5100
15	18	6.7	5.1	9.7	1.4	1.4	21	7.6	458	11	17	1540
16	18	9.9	6.2	4.1	1.6	1.1	17	7.4	220	7.9	11	265
17	16	7.1	5.4	2.5	1.4	1.1	116	7.7	162	5.1	13	146
18	13	5.5	5.4	2.9	1.5	1.4	66	338	87	65	420	76
19	13	5.2	5.2	1.9	1.7	2.2	46	620	43	35	204	37
20	18	5.2	5.0	1.4	1.7	1.5	33	211	29	20	67	23
21	16	5.1	5.0	1.8	1.7	1.1	23	103	20	11	59	24
22	13	4.8	4.8	1.9	1.4	.85	12	47	14	6.7	71	225
23	11	4.5	4.6	4.5	.90	.62	9.9	21	11	5.2	322	57
24	12	4.1	4.5	2.8	.87	.43	11	2.3	9.3	4.5	186	52
25	9.8	3.1	5.4	1.8	1.1	.42	11	1.4	7.9	4.0	194	27
26	9.7	3.1	5.0	2.4	1.3	.37	5.5	1.6	24	5.0	1170	16
27	8.4	4.1	4.8	2.6	1.2	.35	7.2	1.7	457	6.7	210	17
28	9.4	3.3	4.5	2.4	1.1	.29	10	1.6	482	9.3	106	12
29	10	3.6	4.0	2.6	.86	.38	9.3	1.6	226	11	35	8.3
30	13	3.8	3.5	2.0	---	.33	8.3	1.5	133	18	15	7.7
31	10	---	3.0	1.5	---	.56	---	1.5	---	21	6.0	---
TOTAL	447.3	237.2	126.3	180.8	45.83	93.55	1609.2	1507.4	10530.01	3971.4	3457.0	8021.7
MEAN	14.4	7.91	4.07	5.83	1.58	3.02	53.6	48.6	351	128	112	267
MAX	20	16	6.2	32	2.6	35	388	620	6780	661	1170	5100
MIN	8.4	3.1	2.2	1.4	.86	.29	3.3	1.4	.30	4.0	6.0	2.5
AC-FT	887	470	251	359	91	186	3190	2990	20890	7880	6860	15910
CAL YR 1987	TOTAL	13201.65		MEAN	36.2	MAX	1290	MIN	.47	AC-FT	26190	
WTR YR 1988	TOTAL	30227.69		MEAN	82.6	MAX	6780	MIN	.29	AC-FT	59960	

ARKANSAS RIVER BASIN

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 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 29...	1100	10	1400	1490	8.60	8.40	27.0	13.0	8.5	350	140	69
JAN 15...	1100	19	1020	--	8.50	--	5.0	0.0	12.2	--	--	--
FEB 23...	1400	0.87	--	2870	8.40	8.40	13.0	16.0	8.6	430	160	74
MAY 19...	1400	483	--	987	8.00	8.00	16.0	12.0	9.4	130	0	30
JUN 28...	0900	415	500	546	8.80	8.40	27.0	21.0	7.4	25	0	6.4
AUG 10...	1350	20	1100	--	8.20	--	35.0	33.0	6.3	--	--	--

[illegible]

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO
(National stream-quality accounting network station)

LOCATION.--Lat 37°04'42", long 105°45'22", in sec.22, T.33 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on right bank at highway bridge, 6 mi north of Colorado-New Mexico State line, 7 mi downstream from Culebra Creek, 10 mi east of Lobatos, and 14 mi east of Antonito.

DRAINAGE AREA.--7,700 mi², approximately, including 2,940 mi² in closed basin in northern part of San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1899 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "at Cenicero" 1899-1901, and as "near Cenicero" 1902-04.

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

GAGE.--Water-stage recorder. Datum of gage is 7,427.63 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 8, 1910, nonrecording gages at same site and datum.

REMARKS.--Estimated daily discharges: Nov. 23 to Mar. 3 and Mar. 4-19. Water-discharge records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--31 years (water years 1900-30), 846 ft³/s, 612,900 acre-ft/yr, includes period of extensive development for irrigation.
58 years (water years 1931-1988), 455 ft³/s, 329,600 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 13,200 ft³/s, June 8, 1905, gage height, 9.1 ft, from rating curve extended above 8,000 ft³/s; no flow at times in 1950-51, 1956.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 848 ft³/s at 0930 Apr. 10, gage height, 2.21 ft, maximum gage height, 3.71 ft at 1200 Mar. 5 (backwater from ice); minimum daily, 29 ft³/s, Aug. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	125	265	340	320	520	676	153	167	242	38	53
2	50	130	270	335	315	535	609	170	144	222	41	44
3	58	167	310	330	315	570	598	176	125	224	50	46
4	56	286	415	325	320	600	580	187	116	203	45	44
5	55	355	460	320	330	620	565	161	124	188	53	43
6	56	385	440	320	330	640	583	150	124	165	56	42
7	55	385	430	315	335	670	638	157	122	132	47	39
8	53	410	450	315	340	700	676	153	130	116	47	40
9	55	466	410	315	345	665	755	138	131	102	42	42
10	55	490	440	310	345	640	822	141	133	101	47	46
11	55	460	440	310	345	630	786	118	141	102	47	49
12	53	445	400	305	355	625	734	112	157	92	42	51
13	51	440	370	300	360	590	663	105	178	83	38	56
14	56	435	280	300	365	565	589	95	181	70	31	59
15	58	430	360	290	375	595	565	82	182	63	29	57
16	55	440	425	290	380	610	513	73	186	65	32	72
17	53	455	390	290	400	560	465	73	179	50	37	77
18	56	450	445	290	410	560	438	76	175	53	42	70
19	65	420	395	290	420	620	393	92	164	50	40	53
20	71	405	450	290	445	615	355	189	152	47	41	68
21	76	395	460	295	445	608	355	250	143	48	53	80
22	85	415	465	295	460	636	356	244	153	43	47	87
23	92	435	475	300	465	664	320	212	153	37	43	80
24	108	435	465	300	470	685	277	182	151	34	40	69
25	115	430	395	300	470	657	266	156	146	33	40	57
26	115	425	435	295	470	657	247	141	155	33	44	65
27	118	360	415	295	485	678	227	140	173	32	49	57
28	122	310	395	300	540	713	205	159	203	32	44	53
29	133	274	425	310	490	776	174	154	193	34	50	56
30	130	300	445	310	---	792	157	171	206	48	50	49
31	125	---	400	320	---	713	---	175	---	45	55	---
TOTAL	2338	11358	12620	9500	11445	19709	14587	4585	4687	2789	1360	1704
MEAN	75.4	379	407	306	395	636	486	148	156	90.0	43.9	56.8
MAX	133	490	475	340	540	792	822	250	206	242	56	87
MIN	50	125	265	290	315	520	157	73	116	32	29	39
AC-FT	4640	22530	25030	18840	22700	39090	28930	9090	9300	5530	2700	3380
CAL YR 1987	TOTAL	420173	MEAN	1151	MAX	6660	MIN	50	AC-FT	833400		
WTR YR 1988	TOTAL	96682	MEAN	264	MAX	822	MIN	29	AC-FT	191800		

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

REMARKS.--Replaces station 08249200 Rio Grande above Culebra Creek, near Lobatos, Colo., which was discontinued July 1969. This station operated by the Colorado District.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (FTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)
OCT										
14...	1130	E59	526	8.4	11.0	2.9	8.8	48	K12	170
DEC										
15...	1200	E360	273	8.2	0.0	6.3	11.8	K5	340	84
FEB										
24...	1130	E470	381	8.2	0.0	3.3	9.7	<2	150	76
APR										
21...	0900	E360	639	8.6	11.5	12	9.4	K4	K15	150
JUN										
29...	0930	187	585	8.5	20.5	13	8.6	29	K14	160
AUG										
25...	1000	40	482	8.6	21.0	26	9.50	23	K3	130

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT										
14...	52	10	47	6.0	--	--	140	100	12	0.8
DEC										
15...	26	4.6	15	3.0	--	--	85	30	4.5	0.3
FEB										
24...	23	4.5	48	9.7	157	0	128	40	18	0.4
APR										
21...	44	9.5	78	10	--	--	173	110	25	0.8
JUN										
29...	47	10	62	10	180	10	160	120	15	0.6
AUG										
25...	39	8.9	50	6.8	176	5	153	61	13	<0.1

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)
OCT 1987									
14...	29	349	340	<0.10	0.02	0.03	0.7	0.05	0.04
DEC									
15...	31	169	167	0.23	0.02	0.03	<0.2	0.08	0.06
FEB 1988									
24...	30	251	249	0.14	0.01	0.01	0.3	0.09	<0.06
APR									
21...	26	411	408	<0.10	0.03	0.04	0.8	0.15	0.09
JUN									
29...	25	397	386	<0.10	0.03	0.04	0.9	0.13	0.07
AUG									
25...	26	--	301	<0.10	0.02	0.03	0.4	0.18	0.04

RIO GRANDE BASIN

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08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 14...	1130	40	4	41	<0.5	<1	<1	<3	6	29	<5
DEC 15...	1200	--	--	--	--	--	--	--	--	--	--
FEB 24...	1130	30	3	32	<0.5	1	<1	<3	2	64	<5
APR 21...	0900	--	--	--	--	--	--	--	--	--	--
JUN 29...	0930	10	4	40	<0.5	<1	<1	<3	2	39	<5
AUG 25...	1000	20	4	46	<0.5	<1	<1	<3	4	20	<5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 14...	14	11	1.3	<10	<3	<1	1.0	450	<6	14
DEC 15...	--	--	--	--	--	--	--	--	--	--
FEB 24...	6	9	<0.1	<10	<1	<1	<1.0	180	<6	17
APR 21...	--	--	--	--	--	--	--	--	--	--
JUN 29...	11	25	0.1	<10	1	<1	<1.0	440	<6	4
AUG 25...	10	10	<0.1	<10	1	<1	<1.0	370	7	<3

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)
JUN 29...	0930	187	30	15
AUG 25...	1000	40	52	5.6

08252500 COSTILLA CREEK ABOVE COSTILLA DAM, NM

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

DRAINAGE AREA.--25.1 mi².

PERIOD OF RECORD.--April 1937 to current year (no winter records). Monthly discharge only for some periods, published in WSP 1312 and 1732. Prior to October 1951, published as "above reservoir, near Costilla."

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

GAGE.--Water-stage recorder. Concrete control since Sept. 17, 1965. Elevation of gage is 9,430 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1923 for history of changes prior to Sept. 17, 1965.

REMARKS.--No estimated daily discharges. Records good. Natural flow may be augmented by transbasin diversions or irrigation returns from about 1,300 acres irrigated from Casias Creek (station 08253000). Several observations of water temperature were made during the year.

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

A portion of this flow may have originated in Casias Creek basin (see REMARKS).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 22	1530	41	2.62	June 29	1845	*56	*2.77

Minimum recorded, 2.0 ft³/s, May 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2						---	8.0	9.2	9.5	4.3	3.4
2	4.1						---	7.4	8.6	9.1	4.1	3.3
3	4.1						---	9.5	8.3	8.6	3.7	3.2
4	4.0						---	8.0	8.8	8.3	4.9	3.0
5	4.0						---	8.4	9.8	7.7	5.5	3.0
6	4.0						---	9.5	9.4	7.0	4.5	3.0
7	4.1						---	8.5	8.6	7.6	4.0	2.9
8	4.0						---	7.5	8.1	7.7	3.6	2.9
9	4.0						---	7.5	8.1	6.7	3.5	3.0
10	4.0						---	7.9	9.8	6.9	3.3	2.9
11	3.9						---	8.4	11	6.4	3.4	4.4
12	4.0						---	8.7	10	5.3	3.2	9.3
13	4.2						---	9.4	8.6	5.3	2.8	12
14	4.3						---	10	8.1	5.1	2.6	8.7
15	---						---	10	7.7	6.5	2.7	4.9
16	---						---	11	6.9	7.5	3.4	4.4
17	---						---	11	6.4	7.0	3.9	4.1
18	---						---	16	6.1	5.8	4.3	3.9
19	---						---	19	5.9	6.2	3.4	3.6
20	---						---	17	5.8	7.5	3.0	3.6
21	---						---	14	5.6	5.2	2.8	3.8
22	---						---	12	9.6	4.4	2.9	4.1
23	---						---	11	7.4	4.0	4.0	4.2
24	---						---	11	6.7	4.2	4.4	3.8
25	---						---	11	10	4.0	4.0	3.6
26	---						---	11	13	4.2	3.3	3.5
27	---						---	6.1	11	12	3.9	3.6
28	---						---	5.8	10	8.8	4.2	3.3
29	---						---	6.3	10	18	5.0	3.4
30	---						---	7.2	9.9	15	5.8	3.5
31	---						---	10	---	6.7	3.3	---
TOTAL	---						---	323.6	271.3	193.3	115.3	126.3
MEAN	---						---	10.4	9.04	6.24	3.72	4.21
MAX	---						---	19	18	9.5	5.5	12
MIN	---						---	7.4	5.6	3.9	2.6	2.9
AC-FT	---						---	642	538	383	229	251

08253000 CASIAS CREEK NEAR COSTILLA, NM

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

DRAINAGE AREA.--16.6 mi².

PERIOD OF RECORD.--April 1937 to current year (no winter 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. See also PERIOD OF RECORD.

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

REMARKS.--No estimated daily discharges. 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 ft³/s, July 20, 1971, gage height, 2.07 ft, from rating curve extended above 85 ft³/s; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 22	2030	40	1.05	Sept. 12	2400	*41	*1.07

Minimum recorded, 2.2 ft³/s, May 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9						---	6.8	15	13	6.8	7.6
2	3.9						---	6.5	14	12	7.1	7.3
3	3.8						---	6.6	14	11	6.8	7.0
4	3.8						---	6.5	14	11	9.6	6.7
5	3.7						---	7.0	15	11	9.7	6.5
6	3.6						---	7.7	16	9.6	8.1	6.2
7	3.7						---	7.1	16	11	7.4	6.0
8	3.6						---	7.0	17	11	6.8	5.7
9	3.5						---	7.0	17	10	6.6	5.7
10	3.5						---	7.2	18	11	6.2	5.6
11	3.4						---	7.6	20	10	6.4	8.5
12	3.4						---	8.4	19	9.0	6.1	13
13	3.5						---	9.4	17	8.5	5.4	20
14	3.6						---	10	16	8.6	5.4	15
15	---						---	11	16	8.6	5.4	11
16	---						---	12	14	9.9	6.7	11
17	---						---	13	14	8.9	7.7	10
18	---						---	18	14	8.5	9.3	9.8
19	---						---	20	13	9.5	8.2	9.5
20	---						---	19	13	10	6.6	9.8
21	---						---	16	13	7.7	6.2	10
22	---						---	13	16	7.1	6.2	9.9
23	---						---	12	13	6.7	7.5	9.7
24	---						---	12	12	6.6	7.8	9.0
25	---						---	13	14	6.5	8.0	8.7
26	---						---	12	16	7.2	7.0	8.4
27	---						---	5.3	13	16	6.5	8.4
28	---						---	5.4	14	13	7.9	7.9
29	---						---	5.7	15	18	8.0	7.6
30	---						---	6.3	16	16	8.5	7.5
31	---						---	16	---	8.5	8.0	---
TOTAL	---						---	349.8	459	283.3	227.7	269.0
MEAN	---						---	11.3	15.3	9.14	7.35	8.97
MAX	---						---	20	20	13	9.7	20
MIN	---						---	6.5	12	6.5	5.4	5.6
AC-FT	---						---	694	910	562	452	534

RIO GRANDE BASIN

08253500 SANTISTEVAN CREEK NEAR COSTILLA, NM

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

DRAINAGE AREA.--2.15 mi².

PERIOD OF RECORD.--April 1937 to current year (no winter records). Monthly discharge only for some periods, published in WSP 1312 and 1732.

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 9,490 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.--No estimated daily discharges. Records good. No diversions upstream from station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18 ft³/s, Aug. 11, 1941, July 12, 1957; maximum gage height, 1.73 ft, Aug. 11, 1941; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6.0 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 12	2300	*4.2	*0.57				

Minimum recorded, 0.49 ft³/s, May 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3						---	1.1	1.8	2.3	1.7	1.4
2	1.2						---	1.1	2.0	2.3	1.7	1.4
3	1.1						---	1.1	2.2	2.2	1.6	1.3
4	1.1						---	1.1	2.3	2.2	2.0	1.3
5	1.1						---	1.2	2.3	2.2	1.9	1.3
6	1.1						---	1.2	2.3	2.2	1.8	1.3
7	1.1						---	1.1	2.3	2.3	1.7	1.2
8	1.1						---	1.1	2.3	2.3	1.6	1.2
9	.00						---	1.1	2.3	2.3	1.6	1.1
10	1.0						---	1.2	2.3	2.3	1.6	1.1
11	1.0						---	1.2	2.6	2.1	1.5	1.5
12	.99						---	1.3	2.5	1.9	1.5	1.9
13	.89						---	1.3	2.4	1.9	1.4	2.4
14	.88						---	1.4	2.3	1.8	1.4	1.9
15	---						---	1.5	2.4	1.8	1.4	1.7
16	---						---	1.6	2.2	2.0	1.7	1.7
17	---						---	1.6	2.2	1.9	1.7	1.6
18	---						---	1.9	2.2	1.9	1.8	1.6
19	---						---	1.8	2.2	2.0	1.6	1.5
20	---						---	1.6	2.2	2.0	1.5	1.5
21	---						---	1.6	2.3	1.7	1.5	1.5
22	---						---	1.6	2.3	1.6	1.5	1.6
23	---						---	1.5	1.9	1.6	1.5	1.6
24	---						---	1.8	1.6	1.6	1.6	1.5
25	---						---	1.7	1.6	1.5	1.6	1.5
26	---						---	1.7	1.6	1.4	1.4	1.5
27	---						---	1.7	1.5	1.2	1.6	1.5
28	---						1.1	1.8	2.1	1.5	1.5	1.5
29	---						1.0	1.8	2.2	2.0	1.8	1.5
30	---						1.1	1.8	2.2	2.0	1.6	1.5
31	---						---	1.8	---	1.9	1.5	---
TOTAL	---						---	45.3	64.6	59.9	49.8	45.1
MEAN	---						---	1.46	2.15	1.93	1.61	1.50
MAX	---						---	1.9	2.6	2.3	2.0	2.4
MIN	---						---	1.1	1.5	1.2	1.4	1.1
AC-FT	---						---	90	128	119	99	89

08254000 COSTILLA CREEK BELOW COSTILLA DAM, NM

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

DRAINAGE AREA.--54.6 mi².

PERIOD OF RECORD.--April 1937 to current year (no winter records 1937-44, 1947-49, 1988). Monthly discharge only for some periods, published in WSP 1312. Prior to October 1951, published as "below reservoir near Costilla."

REVISED RECORDS.--WSP 1923: Drainage area.

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

REMARKS.--Estimated daily discharges: Oct. 14 to Dec. 31. Records good except for estimated daily discharges, which are poor. Flow regulated by Costilla Reservoir (station 08253900). Diversions for irrigation of about 1,300 acres upstream from Reservoir. Several observations of water temperature were made during the year.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 108 ft³/s, July 26, 27; minimum daily, 0.03 ft³/s, many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.03	.03					.05	72	32	79	18
2	.11	.03	.03					.05	72	18	78	14
3	.10	.03	.03					.05	41	17	77	13
4	.10	.03	.03					.05	26	25	78	13
5	.10	.03	.03					.05	40	44	34	13
6	.10	.03	.03					.05	84	44	9.8	13
7	.10	.03	.03					.05	83	44	28	13
8	.10	.03	.03					.05	83	24	72	13
9	.06	.03	.03					.06	83	14	72	13
10	.03	.03	.03					.08	44	26	72	13
11	.03	.03	.03					.08	21	57	71	35
12	.03	.03	.03					.07	43	64	32	63
13	.04	.03	.03					.07	96	74	11	63
14	.04	.03	.03					.08	95	73	32	54
15	.04	.03	.03					14	96	33	84	38
16	.04	.03	.03					43	95	11	84	18
17	.04	.03	.03					55	50	31	83	14
18	.04	.03	.03					50	25	95	83	14
19	.04	.03	.03					44	43	101	38	6.0
20	.04	.03	.03					33	94	101	15	.12
21	.04	.03	.03					26	94	100	25	.12
22	.04	.03	.03					29	94	42	54	.11
23	.03	.03	.03					37	93	15	57	.10
24	.03	.03	.03					43	41	42	57	.10
25	.03	.03	.03					52	16	107	57	.10
26	.03	.03	.03					52	24	108	31	.10
27	.03	.03	.03					32	44	108	10	.09
28	.03	.03	.03					21	43	107	21	.09
29	.03	.03	.03					21	49	39	42	.09
30	.03	.03	.03					34	57	7.7	28	.37
31	.03	---	.03					72	---	29	18	---
TOTAL	1.65	.90	.93					658.84	1841	1632.7	1532.8	442.39
MEAN	.05	.03	.03					21.3	61.4	52.7	49.4	14.7
MAX	.12	.03	.03					72	96	108	84	63
MIN	.03	.03	.03					.05	16	7.7	9.8	.09
AC-FT	3.3	1.8	1.8					1310	3650	3240	3040	877
CAL YR 1987	TOTAL	14601.04		MEAN	40.0	MAX	163	MIN	.03	AC-FT	28960	

RIO GRANDE BASIN

08255500 COSTILLA CREEK NEAR COSTILLA, NM

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

DRAINAGE AREA.--195 mi².

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

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

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

REMARKS.--Estimated daily discharges: Oct. 1-15, Nov. 27 to Dec. 3, Dec. 9, 10, 12, 14-16, and Dec. 19 to Mar. 9. Records good except for estimated daily discharges, 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.

AVERAGE DISCHARGE.--47 years (water years 1942-88), 44.5 ft³/s, 32,240 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 178 ft³/s, Aug. 24, gage height, 3.13 ft; minimum daily 4.0 ft³/s many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	12	8.0	4.0	8.0	12	12	34	87	73	71	43
2	14	14	8.0	4.0	9.0	12	18	34	86	51	82	39
3	12	14	10	4.0	10	12	20	33	74	48	85	33
4	12	13	12	4.5	7.0	12	22	33	52	46	95	32
5	12	12	12	5.5	6.5	11	24	33	54	63	89	31
6	11	12	11	5.5	6.5	12	23	35	90	64	43	30
7	11	14	11	5.5	6.5	17	31	32	93	62	34	29
8	11	14	9.1	5.5	7.0	15	37	30	94	59	69	27
9	10	11	9.0	5.5	7.0	18	31	29	97	37	78	26
10	10	9.9	9.0	5.5	8.0	30	25	29	86	37	79	26
11	10	12	9.7	6.0	7.5	22	24	29	60	65	80	33
12	10	10	7.0	6.5	8.0	28	27	29	56	69	71	75
13	10	10	4.1	5.0	8.5	26	30	31	101	76	32	138
14	10	13	4.5	6.5	9.5	30	31	30	104	78	26	126
15	10	13	4.5	6.0	8.0	21	29	31	107	68	73	85
16	9.9	12	5.0	8.0	9.5	11	33	55	109	32	89	71
17	10	11	8.1	7.5	10	14	31	70	92	31	96	52
18	10	12	9.7	7.5	9.0	14	31	84	48	76	98	47
19	10	12	8.5	5.0	9.0	13	34	86	44	102	84	44
20	10	14	7.5	4.0	9.0	14	31	91	95	113	37	35
21	10	15	5.0	4.0	9.5	15	31	72	101	108	30	31
22	11	15	5.5	4.0	11	17	31	69	108	86	53	32
23	11	15	6.0	5.5	11	18	29	70	115	33	69	30
24	11	15	8.0	5.0	10	18	28	69	90	31	73	28
25	12	14	6.0	4.0	10	16	25	77	53	93	72	26
26	14	14	5.0	5.0	12	20	26	78	57	109	66	26
27	12	10	5.0	5.0	12	25	26	73	71	112	36	25
28	11	8.0	5.0	5.0	14	29	27	56	70	110	37	23
29	11	8.0	4.5	6.5	12	24	30	53	67	93	58	23
30	12	8.0	6.5	8.0	---	20	31	49	91	39	63	23
31	13	---	4.5	6.0	---	20	---	82	---	38	42	---
TOTAL	347.9	366.9	228.7	169.5	265.0	566	828	1606	2452	2102	2010	1289
MEAN	11.2	12.2	7.38	5.47	9.14	18.3	27.6	51.8	81.7	67.8	64.8	43.0
MAX	17	15	12	8.0	14	30	37	91	115	113	98	138
MIN	9.9	8.0	4.1	4.0	6.5	11	12	29	44	31	26	23
AC-FT	690	728	454	336	526	1120	1640	3190	4860	4170	3990	2560
CAL YR 1987	TOTAL	29731.5	MEAN	81.5	MAX	383	MIN	3.5	AC-FT	58970		
WTR YR 1988	TOTAL	12231.0	MEAN	33.4	MAX	138	MIN	4.0	AC-FT	24260		

08261000 COSTILLA CREEK AT GARCIA, CO

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

DRAINAGE AREA.--200 mi², approximately.

PERIOD OF RECORD.--June 1944 to current year (no winter records).

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

REMARKS.--No estimated daily discharges. Records good. Flow partly regulated by Costilla Reservoir (station 08253900) 22 mi upstream. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 500 ft³/s, June 1, 1983, gage height, 4.91 ft; no flow for many days most years.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 108 ft³/s, Sept. 13, gage height, 3.64 ft; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01						---	.10	.00	11	.00	3.1
2	.01						---	.21	.06	13	.00	.00
3	.01						---	.00	.00	.00	.00	.00
4	.00						---	.00	.00	.00	2.6	.00
5	.00						---	.00	.00	.29	13	.00
6	.00						---	.21	.00	.22	16	.00
7	.00						---	.00	.00	.10	.25	.35
8	.00						---	.00	.00	.25	.00	1.1
9	.38						---	.00	.00	.03	.00	1.1
10	.35						---	.00	3.7	.35	.00	.83
11	.01						---	.00	1.6	.59	.00	.00
12	.45						---	.00	.00	.00	1.2	.91
13	.01						---	.00	.85	.00	.79	70
14	---						---	.00	.00	.00	.15	68
15	---						---	.00	.00	.24	.13	23
16	---						---	.00	.00	.12	.15	11
17	---						---	.00	.86	.38	.39	.09
18	---						---	.00	.01	.63	.00	4.5
19	---						---	.00	.00	.00	12	3.2
20	---						---	13	.03	.39	12	2.7
21	---						---	19	.00	.00	.36	2.3
22	---						---	.20	.00	6.5	.00	2.3
23	---						---	.93	3.9	8.2	.00	2.1
24	---						---	1.5	4.0	.00	.42	1.7
25	---						---	.00	5.1	.02	.06	1.4
26	---						---	.03	.00	.12	2.8	1.4
27	---						---	2.3	.00	.00	.28	.64
28	---						---	5.5	.00	.00	.00	.16
29	---						---	.30	1.8	.00	.00	.00
30	---						---	.06	.07	1.6	.00	.00
31	---						---	1.6	---	.00	3.5	---
TOTAL	---						---	46.45	21.71	42.43	68.08	201.88
MEAN	---						---	1.50	.72	1.37	2.20	6.73
MAX	---						---	19	5.1	13	16	70
MIN	---						---	.00	.00	.00	.00	.00
AC-FT	---						---	92	43	84	135	400

PRINCIPAL DIVERSIONS FROM COSTILLA CREEK, NEW MEXICO-COLORADO

Records of discharge are collected at 4 gaging stations on 2 diversions from Costilla Creek. Water diverted is used for irrigation in the Sangre de Cristo Grant in New Mexico and Colorado downstream from the gaging station on Costilla Creek near Costilla, NM (station 08255500). Records collected during irrigation season only. Several observations of water temperature were made at each site during the year.

08256000 ACEQUIA MADRE AT COSTILLA, NM.--Lat 36°58'03", long 105°30'57", Taos County, Hydrologic Unit 13020101, on right bank 135 ft downstream from new diversion dam, and 1.2 mi southeast of the intersection of State Highways 3 and 196 at Costilla. PERIOD OF RECORD, May 1944 to current year. GAGE, water-stage recorder and Parshall flume. Elevation of gage is 7,870 ft above National Geodetic Vertical Datum of 1929, from topographic map. Acequia diverts from right bank of Costilla Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 50 ft³/s, June 25, 1944, July 31, 1945; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 23 ft³/s, July 20-21; minimum daily, 0.44 ft³/s, May 8.

08258000 CERRO CANAL AT COSTILLA, NM.--Lat 36°57'56", long 105°31'07", Taos County, Hydrologic Unit 13020101, on right bank 1,350 ft downstream from new diversion dam, and 1.2 mi southeast of the intersection of State Highways 3 and 196 at Costilla. PERIOD OF RECORD, April 1944 to current year. GAGE, water-stage recorder and Parshall flume. Elevation of gage is 7,870 ft above National Geodetic Vertical Datum of 1929, from topographic map. Canal diverts from left bank of Costilla Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 164 ft³/s, June 9, 1985; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 94 ft³/s, July 28; minimum daily, 5.0 ft³/s, Oct. 11-14.

08258600 CERRO CANAL BELOW ASSOCIATION DITCH AT COSTILLA, NM.--Lat 36°57'41", long 105°32'05", Taos County, Hydrologic Unit 13020101, on left bank 220 ft downstream from Association ditch, and 1.2 mi south of the intersection of State Highway 3 and 196 at Costilla. PERIOD OF RECORD, May 1972 to current year. GAGE, water-stage recorder and Parshall flume. Elevation of gage is 7,820 ft above National Geodetic Vertical Datum of 1929, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 85 ft³/s, July 8, 1987; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 49 ft³/s, Sept. 15; minimum daily, 0.69 ft³/s, Oct. 12.

08259600 CERRO CANAL AT STATE LINE NEAR JAROSO, CO.--Lat 36°59'41", long 105°34'36", Taos County, Hydrologic Unit 13020101, on right bank 780 ft downstream from head of N. Mex. branch Cerro Canal, and 2.7 mi east of Jaroso. PERIOD OF RECORD, April 1973 to current year. GAGE, water-stage recorder and Parshall flume. Elevation of gage is 7,680 ft above National Geodetic Vertical Datum of 1929, from topographic map. Flow measured is delivered to Colorado.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 72 ft³/s, July 10, 1986; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 44 ft³/s, Sept. 15; minimum daily, 0.12 ft³/s, Oct. 12.

MONTHLY DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

	08256000 Acequia Madre	08258000 Cerro Canal at Costilla	08258600 Cerro Canal below Association ditch	08259600 Cerro Canal at State line nr Jaroso
October	-	-	-	-
November	-	-	-	-
December	-	-	-	-
January	-	-	-	-
February	-	-	-	-
March	-	-	-	-
April	-	-	-	-
May	543	2180	1340	1160
June	920	3610	1350	1070
July	916	3080	1520	1170
August	731	3280	1290	1060
September	570	1590	992	886

08263500 RIO GRANDE NEAR CERRO, NM

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

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

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

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

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

REMARKS.--Estimated daily discharges: Dec. 19 to Mar. 9 and Sept. 26-30. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 7,000 acres in New Mexico.

AVERAGE DISCHARGE.--40 years, 463 ft³/s, 335,400 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 10	2215	*936	*6.00				

Minimum discharge, 77 ft³/s, Dec. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	160	277	400	380	570	734	166	203	223	123	103
2	122	162	297	390	380	600	747	156	198	260	124	103
3	119	164	301	385	373	615	695	179	172	244	123	104
4	121	192	338	380	377	650	668	184	151	244	123	103
5	124	233	451	377	380	680	655	194	137	220	154	103
6	121	304	495	370	390	700	641	169	142	206	119	103
7	120	339	476	370	390	720	687	143	151	188	117	104
8	119	346	468	365	395	750	748	161	143	157	114	103
9	115	372	489	365	400	780	792	167	152	146	114	104
10	116	544	446	365	405	745	875	154	155	145	114	104
11	117	591	479	360	405	719	899	157	157	145	114	107
12	117	584	474	360	415	710	846	139	164	142	111	109
13	115	537	435	356	425	707	788	131	180	140	112	107
14	112	526	408	352	430	670	705	128	201	136	112	106
15	115	499	314	352	435	646	628	124	209	135	113	105
16	116	503	394	350	445	677	629	116	210	135	112	105
17	114	506	460	350	450	689	541	111	214	134	112	105
18	111	512	457	350	470	638	526	113	206	132	112	109
19	110	490	480	352	480	642	475	117	196	139	112	110
20	117	436	455	352	490	701	421	136	187	156	111	107
21	120	421	450	352	513	743	381	251	173	131	111	108
22	123	434	450	354	517	712	374	334	163	130	111	112
23	129	447	450	355	528	731	379	305	170	130	112	120
24	135	453	450	360	536	758	337	263	172	130	113	119
25	144	453	441	360	538	755	300	222	172	129	113	112
26	151	454	430	360	538	748	281	193	166	128	111	109
27	155	410	422	355	541	744	263	173	176	127	107	103
28	156	331	415	355	553	755	246	170	189	126	105	98
29	164	320	410	358	621	827	221	190	216	124	104	96
30	172	259	405	370	---	876	189	177	205	123	103	95
31	166	---	400	370	---	861	---	194	---	123	104	---
TOTAL	3959	11982	13117	11250	13200	22119	16671	5417	5330	4828	3540	3176
MEAN	128	399	423	363	455	714	556	175	178	156	114	106
MAX	172	591	495	400	621	876	899	334	216	260	154	120
MIN	110	160	277	350	373	570	189	111	137	123	103	95
AC-FT	7850	23770	26020	22310	26180	43870	33070	10740	10570	9580	7020	6300
CAL YR 1987 TOTAL		417431		MEAN	1144	MAX	6370	MIN	96	AC-FT	828000	
WTR YR 1988 TOTAL		114589		MEAN	313	MAX	899	MIN	95	AC-FT	227300	

RIO GRANDE BASIN

08265000 RED RIVER NEAR QUESTA, NM

LOCATION.--Lat 36°42'12", long 105°34'04", in NE¼SE¼ sec.32, T.29 N., R.13 E. (projected), Taos County, Hydrologic Unit 13020101, in Carson National Forest, on left bank 1.3 mi upstream from Cabresto Creek, 1.5 mi east of Questa, and at mile 9.0.

DRAINAGE AREA.--113 mi².

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

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

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

REMARKS.--Estimated daily discharges: Dec. 14, 15, Dec. 31 to Jan. 5, and Jan. 16-19, 21-24. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of a few hundred acres upstream from station. Figures of discharge do not include flow in South ditch which diverts from left bank 1,500 ft upstream and bypasses gage for irrigation and stock water downstream.

Since January 1966 surface and ground-water diversions by Molybdenum Corp. of America (Molycorp) refinery 5.5 mi upstream bypass gage in tailings pipelines on left bank and discharge into settling pond 3 mi downstream. Effluent from this pond enters Red River as surface water and is included in discharge at Red River below Fish Hatchery, near Questa (station 08266820). No tabulation of bypass flow, data not provided.

AVERAGE DISCHARGE.--52 years (water years 1913-25, 1927-65), 55.9 ft³/s, 40,500 acre-ft/yr, prior to extensive upstream diversions by Molycorp.
23 years (water years 1966-88), 40.0 ft³/s, 28,980 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 13	0115	*160	*3.54				

Minimum discharge, 7.7 ft³/s, Dec. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	27	16	10	22	25	20	36	61	73	36	48
2	23	29	17	9.0	22	25	20	37	57	72	39	43
3	23	27	18	8.5	23	25	20	35	57	68	42	41
4	23	26	19	8.2	21	24	20	35	60	64	40	39
5	24	26	19	19	20	23	20	35	66	60	45	37
6	24	27	19	27	21	23	20	36	74	57	47	35
7	24	27	19	26	24	24	22	35	79	55	43	34
8	23	25	18	23	24	21	26	34	79	55	42	32
9	23	23	16	22	22	21	28	32	78	55	38	30
10	23	22	16	24	23	23	26	32	82	56	38	30
11	23	23	17	27	24	21	26	33	98	51	37	38
12	21	21	16	25	24	21	26	36	101	48	41	53
13	21	22	13	20	22	22	28	39	93	45	36	138
14	25	23	12	23	23	21	31	43	84	43	33	109
15	25	24	11	25	23	22	31	47	80	42	32	87
16	25	22	11	23	23	22	33	51	76	46	32	79
17	24	22	14	21	23	19	31	56	72	46	33	72
18	24	20	18	20	22	20	30	79	68	44	35	66
19	23	18	19	18	22	20	31	90	69	50	38	61
20	23	19	18	16	23	21	31	84	68	47	32	57
21	24	19	13	16	22	22	33	76	70	44	30	58
22	25	19	15	17	22	22	34	69	69	40	29	62
23	24	19	16	17	21	21	29	64	69	38	30	57
24	24	19	15	18	26	22	27	61	68	38	37	53
25	30	18	13	19	24	21	25	59	68	38	48	50
26	29	19	11	21	23	22	25	56	85	37	41	47
27	27	18	11	22	23	26	25	58	86	37	46	46
28	26	18	10	23	24	25	27	60	80	38	48	45
29	26	19	11	24	25	24	31	62	78	42	48	43
30	28	19	12	23	---	24	31	66	78	42	47	43
31	27	---	11	22	---	22	---	64	---	40	45	---
TOTAL	757	660	464	616.7	661	694	807	1600	2253	1511	1208	1633
MEAN	24.4	22.0	15.0	19.9	22.8	22.4	26.9	51.6	75.1	48.7	39.0	54.4
MAX	30	29	19	27	26	26	34	90	101	73	48	138
MIN	21	18	10	8.2	20	19	20	32	57	37	29	30
AC-FT	1500	1310	920	1220	1310	1380	1600	3170	4470	3000	2400	3240
CAL YR 1987 TOTAL	20989			MEAN	57.5	MAX	277	MIN	10	AC-FT	41630	
WTR YR 1988 TOTAL	12864.7			MEAN	35.1	MAX	138	MIN	8.2	AC-FT	25520	

08266000 CABRESTO CREEK NEAR QUESTA, NM

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

DRAINAGE AREA.--36.7 mi².

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

REVISED RECORDS.--WSP 1712: Drainage area.

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

REMARKS.--Estimated daily discharges: Jan. 2-4. Records good. Llano ditch (station 08265500), the only diversion upstream from station, diverts from right bank 900 ft upstream from gage for irrigation of about 800 acres downstream. See tabulation below for monthly diversion of Llano ditch (records of daily discharge available in District files). Flow regulated by Cabresto Reservoir (capacity, 732 acre-feet, after reconstruction in 1928) on Lake Fork 1 mi upstream from mouth. Present capacity of Cabresto Reservoir is 1,100 acre-feet after further rehabilitation between 1959 and 1961.

AVERAGE DISCHARGE.--45 years, 10.4 ft³/s, 7,530 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30 ft³/s, Sept. 13, gage height, 1.80 ft; minimum, 0.78 ft³/s, Dec. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	10	6.5	5.0	6.7	6.8	7.3	14	11	11	10	12
2	6.1	9.6	7.1	4.8	6.5	6.7	7.5	13	11	12	12	11
3	5.9	7.9	7.0	4.6	6.7	6.7	7.6	12	11	12	12	11
4	5.9	6.2	5.9	4.3	6.6	6.4	7.9	12	11	12	11	10
5	5.9	5.9	5.5	5.5	6.5	6.3	8.0	12	11	12	14	10
6	6.0	6.0	3.4	6.0	6.5	6.4	8.0	12	11	12	12	9.9
7	6.1	6.2	3.3	6.0	6.7	6.6	8.9	12	11	12	12	9.9
8	6.1	6.0	5.3	6.0	6.8	6.0	9.6	11	11	12	11	9.6
9	6.1	5.7	4.6	6.0	6.9	5.9	9.6	11	11	12	11	9.5
10	6.1	5.7	4.0	6.3	6.9	6.4	9.3	11	11	12	11	9.3
11	6.0	6.0	8.1	6.4	6.8	5.5	9.5	11	12	12	10	11
12	6.2	5.7	7.6	6.3	6.8	5.5	11	12	12	11	10	13
13	6.4	7.8	7.8	6.2	6.7	6.3	12	11	11	11	9.7	23
14	8.5	18	7.8	6.4	6.8	5.6	13	11	11	10	9.6	19
15	9.4	14	6.1	6.6	6.5	6.2	13	11	11	10	9.5	17
16	7.5	8.9	6.3	6.4	6.8	6.2	13	11	11	11	9.5	17
17	15	6.1	10	6.3	6.8	5.7	12	11	11	11	9.5	16
18	7.3	5.2	12	6.1	6.7	5.8	12	12	11	16	9.9	16
19	4.9	4.9	8.8	6.2	6.6	6.1	12	11	11	15	9.8	16
20	5.2	5.6	6.5	5.7	6.6	5.9	12	11	11	27	9.4	16
21	4.9	6.7	4.8	6.5	6.7	5.3	13	11	11	25	9.2	16
22	4.7	9.8	5.3	6.8	6.8	5.5	13	11	11	15	9.4	15
23	5.0	9.7	5.9	6.9	6.6	6.7	12	11	12	11	9.5	15
24	10	9.5	5.8	6.9	6.6	6.6	12	11	11	11	9.5	15
25	10	8.7	5.3	6.7	6.6	5.1	11	11	11	11	9.9	15
26	8.2	8.8	5.1	6.9	6.7	5.4	12	11	13	10	9.7	14
27	5.7	8.2	4.9	6.8	6.7	7.9	12	11	11	9.9	10	14
28	5.3	6.7	4.6	6.8	6.8	8.4	13	11	11	10	11	14
29	5.1	7.4	5.0	6.7	6.8	7.8	13	11	11	11	10	14
30	6.4	7.3	5.5	6.7	---	7.7	14	11	11	11	10	14
31	13	---	5.3	6.6	---	8.1	---	11	---	10	10	---
TOTAL	215.0	234.2	191.1	191.4	194.2	197.5	328.2	353	335	387.9	321.1	412.2
MEAN	6.94	7.81	6.16	6.17	6.70	6.37	10.9	11.4	11.2	12.5	10.4	13.7
MAX	15	18	12	6.9	6.9	8.4	14	14	13	27	14	23
MIN	4.7	4.9	3.3	4.3	6.5	5.1	7.3	11	11	9.9	9.2	9.3
AC-FT	426	465	379	380	385	392	651	700	664	769	637	818
(†)	0	0	0	0	0	11	6.4	264	228	63	0	5.9
CAL YR 1987	TOTAL	4823.2	MEAN	13.2	MAX	79	MIN	3.3	AC-FT	9570		
WTR YR 1988	TOTAL	3360.8	MEAN	9.18	MAX	27	MIN	3.3	AC-FT	6670		

(†) DIVERSION, IN ACRE-FEET, BY LLANO DITCH

08266820 RED RIVER BELOW FISH HATCHERY, NEAR QUESTA, NM

LOCATION.--Lat 36°40'54", long 105°39'21", in NW¼NW¼ sec.10, T.28 N., R.12 E., Taos County, Hydrologic Unit 13020101, on right bank 0.3 mi downstream from State Fish Hatchery, 3.5 mi upstream from mouth, and 3.7 mi southwest of Questa.

DRAINAGE AREA.--185 mi².

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

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

REMARKS.--Estimated daily discharges: Feb. 27 to Mar. 6 and Mar. 11 to Apr. 19. Records good. Diversions for irrigation of about 3,000 acres upstream from station.

AVERAGE DISCHARGE.--10 years (water years 1979-88), 88.3 ft³/s, 63,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 755 ft³/s, June 8, 1979, gage height, 5.30 ft, site and datum then in use; minimum, 21 ft³/s, Dec. 14, 1986, from construction work on hatchery ponds.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 165 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 13	1045	*162	*2.85				
Minimum discharge, 31 ft ³ /s, Dec. 16.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	54	41	45	52	48	41	55	82	98	66	70
2	50	55	42	45	52	49	38	52	77	93	61	64
3	50	54	43	46	53	48	39	50	75	93	66	62
4	50	52	44	49	52	45	41	51	75	89	64	60
5	50	51	43	52	50	45	43	52	78	92	70	59
6	50	52	43	52	48	45	44	54	89	81	72	58
7	51	53	43	52	48	43	47	55	92	78	71	57
8	49	52	44	48	47	41	50	55	96	78	70	56
9	49	49	44	46	46	42	54	52	97	76	66	55
10	48	48	43	46	47	48	52	52	102	79	66	54
11	48	48	44	49	46	48	48	53	115	77	64	59
12	45	47	44	49	46	46	50	53	120	74	67	68
13	46	47	42	43	46	44	52	56	116	73	62	149
14	50	46	39	44	46	43	54	61	110	72	61	143
15	50	49	37	47	45	43	55	66	105	66	60	118
16	50	48	36	48	46	42	60	70	102	68	59	104
17	51	48	39	48	45	42	57	72	95	70	60	96
18	50	47	43	49	45	40	55	88	92	70	61	89
19	50	45	46	49	45	39	54	108	91	76	64	83
20	49	47	46	43	43	40	53	113	89	84	58	80
21	50	47	42	42	42	41	54	106	89	78	55	80
22	52	48	43	45	43	40	56	95	84	70	55	85
23	50	48	46	46	44	40	54	91	90	67	56	81
24	49	48	46	47	43	42	53	87	87	64	57	76
25	54	45	47	47	44	41	50	78	93	64	67	73
26	54	45	47	48	44	40	49	70	102	63	62	70
27	50	45	46	50	46	44	49	68	110	63	65	67
28	49	42	42	50	46	46	51	71	105	60	70	66
29	49	43	44	50	47	48	53	76	101	63	69	65
30	52	43	47	52	---	46	55	79	102	75	68	64
31	53	---	47	52	---	44	---	84	---	73	65	---
TOTAL	1548	1446	1343	1479	1347	1353	1511	2173	2861	2327	1977	2311
MEAN	49.9	48.2	43.3	47.7	46.4	43.6	50.4	70.1	95.4	75.1	63.8	77.0
MAX	54	55	47	52	53	49	60	113	120	98	72	149
MIN	45	42	36	42	42	39	38	50	75	60	55	54
AC-FT	3070	2870	2660	2930	2670	2680	3000	4310	5670	4620	3920	4580
CAL YR 1987 TOTAL		34069		MEAN	93.3	MAX	376	MIN	35	AC-FT	67580	
WTR YR 1988 TOTAL		21676		MEAN	59.2	MAX	149	MIN	36	AC-FT	42990	

08267500 RIO HONDO NEAR VALDEZ, NM

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

DRAINAGE AREA.--36.2 mi².

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.--Estimated daily discharges: Nov. 28 to Dec. 2 and Dec. 13 to Feb. 2. Water-discharge records fair. No diversions upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--54 years, 34.9 ft³/s, 25,280 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 2	----	ice jam	*4.10	June 11	2300	*102	2.45
May 18	2330	91	2.38	Sept. 13	0100	90	2.37

Minimum discharge, 8.5 ft³/s, Feb. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	13	12	9.5	12	12	31	60	58	24	27
2	16	17	13	12	9.5	12	13	32	58	58	27	25
3	15	16	13	12	9.7	12	13	30	58	54	25	26
4	16	16	13	12	9.6	11	14	29	61	50	24	26
5	16	16	12	12	9.7	11	14	29	66	47	26	26
6	16	17	12	13	11	11	14	31	69	44	26	26
7	15	16	12	13	11	11	16	32	72	41	26	26
8	15	16	12	13	10	12	19	32	74	39	25	25
9	15	15	12	13	10	14	20	30	74	39	24	25
10	15	15	12	14	9.8	12	18	30	78	37	22	24
11	15	15	12	14	13	14	18	31	88	35	23	27
12	15	14	12	14	9.8	13	18	32	89	33	23	35
13	15	14	12	13	9.6	11	19	36	84	31	22	72
14	16	14	12	12	9.6	11	21	41	80	29	21	60
15	16	15	11	12	11	11	21	46	80	29	21	50
16	15	14	11	13	10	10	24	52	77	29	21	44
17	15	14	11	13	10	10	22	59	74	30	21	40
18	15	14	11	14	10	10	21	75	69	28	22	38
19	15	14	11	14	10	10	20	85	67	28	21	37
20	14	14	11	13	10	10	22	81	64	28	21	38
21	14	14	10	13	10	10	23	72	61	28	20	43
22	14	14	9.5	12	10	10	25	66	62	26	20	42
23	14	14	10	11	10	11	22	64	59	25	21	41
24	14	14	10	11	10	12	21	63	55	25	29	39
25	22	13	11	11	10	12	20	62	52	24	29	37
26	16	13	10	12	10	12	19	61	65	25	25	36
27	15	13	10	11	11	14	19	64	60	24	29	35
28	15	12	10	11	11	15	20	67	59	24	27	34
29	15	12	10	9.5	11	16	23	68	58	25	27	33
30	16	12	10	9.5	---	14	26	70	60	24	27	33
31	15	---	11	9.5	---	14	---	66	---	23	27	---
TOTAL	477	433	349.5	378.5	295.8	368	577	1567	2033	1040	746	1070
MEAN	15.4	14.4	11.3	12.2	10.2	11.9	19.2	50.5	67.8	33.5	24.1	35.7
MAX	22	17	13	14	13	16	26	85	89	58	29	72
MIN	14	12	9.5	9.5	9.5	10	12	29	52	23	20	24
AC-FT	946	859	693	751	587	730	1140	3110	4030	2060	1480	2120

CAL YR 1987	TOTAL	13958.5	MEAN	38.2	MAX	182	MIN	9.5	AC-FT	27690
WTR YR 1988	TOTAL	9334.8	MEAN	25.5	MAX	89	MIN	9.5	AC-FT	18520

RIO GRANDE BASIN

08267500 RIO HONDO NEAR VALDEZ, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
OCT 14...	1130	13	--	585	8.31	8.30	7.5	2.5	9.6	--	260
JAN 27...	0930	11	115	--	--	--	0.0	2.0	10.2	--	--
MAR 29...	1100	19	150	166	--	8.10	2.0	0.0	11.7	--	70
MAY 23...	1615	64	110	121	8.20	8.20	21.0	8.5	8.6	13	53
JUL 06...	1630	41	113	124	7.70	8.20	28.5	12.5	8.4	<10	55
AUG 23...	1145	21	584	--	7.90	--	23.0	9.0	8.8	--	--
SEP 06...	1245	26	130	--	7.90	--	21.0	10.0	8.6	<10	--

DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER WH IT FIELD MG/L AS CO3 (00447)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)
OCT 14...	180	75	17	28	0.8	2.8	35	--	25	--	71
JAN 27...	--	--	--	--	--	--	--	--	--	--	--
MAR 29...	11	24	2.5	4.0	0.2	0.90	--	61	--	0	--
MAY 23...	8	18	1.9	2.3	0.1	1.3	--	56	--	0	--
JUL 06...	8	19	1.9	2.0	0.1	0.70	--	56	--	0	--
AUG 23...	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	--	--	--	--	--	--	--	--	--	--	--

DATE	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS (39086)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS (00410)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
OCT 14...	--	76	213	86	14	0.60	17	287	0.200	0.170	0.080
JAN 27...	--	--	--	--	--	--	--	--	0.400	0.390	0.030
MAR 29...	50	--	59	18	3.9	0.20	7.5	98	0.400	0.320	0.030
MAY 23...	46	--	45	11	1.8	0.30	9.2	74	0.200	0.180	0.100
JUL 06...	46	--	47	12	1.0	0.30	6.5	72	0.100	0.150	0.030
AUG 23...	--	--	--	--	--	--	--	--	0.100	0.130	0.060
SEP 06...	--	--	--	--	--	--	--	--	0.200	0.180	<0.010

RIO GRANDE BASIN

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08267500 RIO HONDO NEAR VALDEZ, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 14...	0.52	0.80	0.100	0.060	1.2	60	10	1	0.03	80
JAN 27...	--	--	<0.010	<0.010	--	--	--	5	0.15	87
MAR 29...	--	--	0.010	<0.010	1.1	<10	8	3	0.15	83
MAY 23...	--	--	0.020	<0.010	1.8	20	25	13	2.2	81
JUL 06...	--	--	<0.010	<0.010	1.0	<10	<3	11	1.2	60
AUG 23...	0.24	0.40	0.080	0.030	--	--	--	5	0.28	73
SEP 06...	--	--	<0.010	<0.010	0.7	--	--	--	--	--

08268700 RIO GRANDE NEAR ARROYO HONDO, NM

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

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

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

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

REMARKS.--Estimated daily discharges: Nov. 26, 27, Nov. 29 to Dec. 14, Dec. 16 to Jan. 24, and Jan. 26-29. Records good. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 15,000 acres in New Mexico. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 704 ft³/s, 510,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,550 ft³/s, May 19, 1987, gage height, 8.52 ft; minimum, 136 ft³/s, Aug. 2, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 11	0315	*1,020	*2.81				
Minimum discharge, 196 ft ³ /s, Aug. 16, 17.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	287	400	455	501	621	845	370	391	433	240	248
2	222	289	390	440	506	645	814	324	380	486	240	235
3	222	289	404	440	524	677	780	333	351	466	226	227
4	220	310	470	440	521	714	763	353	324	458	294	216
5	210	453	484	435	527	754	745	351	309	436	320	217
6	228	539	500	430	528	781	733	349	323	407	249	214
7	227	570	545	440	528	811	759	319	339	389	253	211
8	225	577	580	440	521	798	816	325	336	352	247	208
9	221	600	585	438	511	786	851	334	343	328	232	204
10	219	664	580	442	516	828	933	325	364	313	227	203
11	222	683	576	440	512	811	969	322	403	304	221	216
12	222	635	576	440	519	791	914	313	415	301	228	243
13	223	612	560	440	523	801	869	302	420	290	223	385
14	229	609	450	437	525	768	804	302	433	281	214	384
15	224	603	340	448	525	731	738	303	448	264	208	336
16	220	608	425	445	532	773	736	299	445	260	201	315
17	220	617	490	450	533	757	681	296	437	262	205	302
18	218	603	500	450	534	714	641	328	425	251	218	314
19	216	574	520	450	542	721	623	363	410	248	228	307
20	219	568	520	442	552	794	620	386	394	326	216	281
21	225	585	505	444	564	832	580	437	381	256	207	274
22	231	625	512	432	566	798	560	500	356	238	211	304
23	236	613	520	440	572	808	540	503	366	233	223	312
24	243	618	520	436	577	830	500	457	381	225	217	306
25	255	514	517	440	578	837	490	413	391	220	225	289
26	268	500	502	440	572	825	480	377	408	216	219	270
27	267	480	485	450	584	827	440	352	419	214	225	262
28	269	460	474	460	600	827	420	341	416	212	235	265
29	276	423	475	475	608	874	410	372	443	215	239	253
30	292	414	470	494	---	934	400	358	437	228	227	252
31	290	---	455	497	---	933	---	384	---	231	234	---
TOTAL	7281	15922	15330	13850	15701	24401	20454	11091	11688	9343	7152	8053
MEAN	235	531	495	447	541	787	682	358	390	301	231	268
MAX	292	683	585	497	608	934	969	503	448	486	320	385
MIN	210	287	340	430	501	621	400	296	309	212	201	203
AC-FT	14440	31580	30410	27470	31140	48400	40570	22000	23180	18530	14190	15970
CAL YR 1987	TOTAL	507234		MEAN	1390	MAX	7290	MIN	210	AC-FT	1006000	
WTR YR 1988	TOTAL	160266		MEAN	438	MAX	969	MIN	201	AC-FT	317900	

08269000 RIO PUEBLO DE TAOS NEAR TAOS, NM

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

DRAINAGE AREA.--66.6 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Estimated daily discharges: Dec. 12, Dec. 25 to Jan. 6, Jan. 9-26, and Feb. 11-23. Water-discharge records good. No diversions upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years (water years 1911-16, 1941-51, 1963-88), 30.1 ft³/s, 21,810 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 20	0030	*65	*1.30	No other peak greater than base discharge.			

Minimum discharge, 4.9 ft³/s, Feb. 24, but may have been less during periods of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	11	11	10	9.4	8.0	10	33	33	24	14	13
2	8.0	13	12	10	8.7	8.6	11	34	31	24	13	12
3	7.9	11	12	10	8.6	8.6	11	31	30	22	13	12
4	7.8	11	13	10	9.0	8.6	12	29	29	20	14	11
5	7.7	10	13	10	8.7	8.5	13	29	29	18	18	11
6	7.7	10	12	10	8.6	9.0	14	30	30	18	23	11
7	7.7	11	12	11	8.8	9.9	17	31	30	17	22	10
8	7.7	11	12	11	9.0	8.2	21	29	31	18	21	9.8
9	7.6	10	11	10	9.0	9.2	21	27	31	20	18	9.6
10	7.6	10	13	9.6	8.9	9.9	19	26	30	17	17	9.3
11	7.6	11	13	9.6	8.6	7.3	18	27	37	18	16	10
12	7.6	10	12	9.6	8.4	10	19	29	41	16	17	14
13	7.7	11	12	9.6	8.3	9.0	20	32	34	14	15	26
14	8.4	11	14	9.6	8.2	11	24	36	31	13	13	22
15	8.1	12	13	9.7	8.1	11	25	39	30	12	13	18
16	8.2	11	15	9.5	8.0	8.9	28	41	29	12	13	16
17	8.2	11	16	9.4	7.9	8.9	26	43	26	14	13	15
18	8.2	9.8	15	9.4	7.8	8.9	25	57	24	13	13	14
19	8.6	9.3	12	9.4	7.7	8.2	24	59	26	12	12	13
20	8.6	11	12	9.4	7.5	8.2	25	59	24	14	11	13
21	8.6	11	12	9.4	7.4	8.8	27	51	23	17	11	14
22	8.5	12	12	9.4	7.4	9.5	30	45	24	14	9.9	17
23	8.4	11	12	9.4	7.4	9.6	27	40	24	13	10	15
24	8.6	12	11	9.3	7.5	10	25	38	22	12	11	14
25	15	10	11	9.5	7.4	10	24	36	21	12	12	13
26	13	12	11	9.8	7.5	11	23	35	27	12	9.8	12
27	11	11	11	9.8	7.5	12	23	35	33	13	13	12
28	10	10	11	9.8	7.6	14	23	38	30	12	17	11
29	9.8	12	11	9.8	7.9	13	25	37	27	19	14	11
30	12	11	11	9.7	---	12	27	37	26	19	15	11
31	11	---	10	9.4	---	12	---	36	---	16	13	---
TOTAL	274.9	327.1	378	302.1	236.8	301.8	637	1149	863	495	444.7	399.7
MEAN	8.87	10.9	12.2	9.75	8.17	9.74	21.2	37.1	28.8	16.0	14.3	13.3
MAX	15	13	16	11	9.4	14	30	59	41	24	23	26
MIN	7.6	9.3	10	9.3	7.4	7.3	10	26	21	12	9.8	9.3
AC-FT	545	649	750	599	470	599	1260	2280	1710	982	882	793
CAL YR 1987	TOTAL	12789.4		MEAN	35.0	MAX	223	MIN	7.5	AC-FT	25370	
WTR YR 1988	TOTAL	5809.1		MEAN	15.9	MAX	59	MIN	7.3	AC-FT	11520	

RIO GRANDE BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT												
15...	1030	6.8	230	264	8.68	8.00	12.5	8.0	6.8	140	27	43
JAN												
26...	1300	16	210	258	8.60	8.30	4.0	0.0	11.0	120	13	37
MAR												
29...	1345	9.0	205	215	8.20	8.20	9.0	5.0	10.5	110	16	34
MAY												
24...	1100	37	130	150	8.60	8.20	21.0	8.0	9.2	70	8	22
JUL												
06...	1215	18	180	194	7.80	8.20	27.0	17.0	8.1	92	9	29
AUG												
23...	1500	10	200	205	8.30	8.40	20.0	15.0	7.9	110	14	33

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER WH IT MG/L AS HCO3 (00450)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER WH IT FIELD MG/L AS CO3 (00447)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT												
15...	7.2	4.3	0.2	0.80	60	--	36	--	109	--	110	27
JAN												
26...	6.7	3.5	0.1	0.70	--	122	--	0	--	100	107	26
MAR												
29...	6.4	3.7	0.2	0.70	--	95	--	0	--	78	95	24
MAY												
24...	3.7	2.3	0.1	0.60	--	71	--	7	--	70	62	13
JUL												
06...	4.8	2.8	0.1	0.60	--	100	--	0	--	82	83	16
AUG												
23...	5.5	3.1	0.1	0.70	--	122	--	0	--	100	91	16

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
OCT											
15...	1.1	0.20	8.2	158	<1	<1	<10	<1	<1	10	10
JAN											
26...	1.1	0.20	9.9	149	<1	<1	<10	2	1	2	<1
MAR											
29...	0.80	0.10	7.2	134	<1	<1	<10	<1	<1	3	<1
MAY											
24...	0.70	0.20	8.7	88	<1	<1	<10	1	<1	3	1
JUL											
06...	0.50	0.20	8.4	112	<1	<1	<10	<1	1	<1	1
AUG											
23...	0.70	0.10	7.7	121	<1	3	10	<1	1	<1	3

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

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 15...	4	1	16	<5	<5	<0.10	<0.1	<1	<1	20	3
JAN 26...	4	2	<10	<5	<5	--	--	<1	<1	10	10
MAR 29...	2	<1	8	<5	<5	0.20	<0.1	<1	<1	<10	3
MAY 24...	4	1	32	9	<5	<0.10	<0.1	<1	<1	10	14
JUL 06...	4	3	7	<5	<5	--	--	<1	<1	10	12
AUG 23...	2	2	12	9	<5	0.10	0.2	<1	<1	30	47

RIO GRANDE BASIN

08271000 RIO LUCERO NEAR ARROYO SECO, NM

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

DRAINAGE AREA.--16.6 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Estimated daily discharges: Oct. 1-15, Nov. 11 to Dec. 18, Dec. 22-30, Jan. 6-8, Jan. 14 to Feb. 12, and Feb. 17-25. Water-discharge records good. No diversion upstream from station. Several observations of water temperature were made the year.

AVERAGE DISCHARGE.--49 years (water years 1911-15, 1934-51, 1963-88), 17.1 ft³/s, 15,940 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	2115	*64	*1.52				

Minimum daily discharge, 4.5 ft³/s, Feb. 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	10	8.9	7.0	4.5	6.5	8.7	20	40	39	17	21
2	8.9	11	8.9	7.2	4.5	6.5	9.2	20	38	38	18	21
3	8.6	9.8	9.0	7.3	4.5	6.4	8.7	18	39	36	18	20
4	8.6	9.9	9.4	7.4	4.6	6.2	9.1	17	41	34	17	19
5	8.6	9.4	9.5	7.1	6.5	6.1	9.8	18	43	32	20	18
6	8.6	10	9.4	7.7	5.8	6.0	11	19	46	31	22	18
7	8.6	9.2	9.4	7.4	5.8	6.0	13	20	49	29	20	17
8	8.6	8.5	8.8	7.2	6.2	7.0	15	19	52	28	20	17
9	8.3	8.7	8.3	7.1	6.4	11	14	18	51	27	19	16
10	8.3	8.2	9.5	6.8	6.2	7.1	13	19	52	27	18	16
11	8.3	8.3	9.0	6.8	6.0	9.0	13	20	59	25	17	17
12	8.1	7.8	8.9	6.7	5.9	9.3	14	23	59	23	17	21
13	8.3	8.2	8.7	6.5	5.8	8.6	14	28	55	23	16	37
14	8.4	9.0	8.5	6.4	5.8	9.0	15	34	51	22	16	36
15	8.9	9.0	8.5	6.4	5.8	8.7	15	39	48	22	16	34
16	8.9	8.1	8.5	6.2	5.7	8.1	16	43	46	21	16	32
17	8.7	7.8	8.2	6.1	5.5	8.0	14	46	43	22	16	30
18	9.0	7.8	8.0	5.9	5.4	8.0	14	61	41	20	16	28
19	8.9	7.9	7.8	5.8	5.2	7.7	14	62	40	20	17	26
20	8.5	8.8	7.6	5.6	5.2	7.6	15	61	39	21	16	24
21	8.5	8.8	7.5	5.5	5.0	7.6	17	54	39	20	15	26
22	8.6	8.8	7.2	5.3	5.0	7.7	17	49	42	19	15	27
23	8.5	8.7	7.0	5.1	5.1	8.1	16	42	41	18	15	26
24	9.0	8.6	6.8	5.0	5.2	8.6	15	44	39	18	17	25
25	12	7.7	6.7	4.9	5.3	8.6	14	42	38	18	17	24
26	9.7	9.2	6.7	4.9	5.7	9.0	13	41	48	18	16	23
27	9.4	8.6	6.6	4.8	5.8	11	13	43	50	18	19	22
28	9.2	8.2	6.5	4.7	6.1	12	14	47	49	20	19	21
29	8.9	9.2	6.5	4.7	6.3	11	15	48	47	19	20	20
30	9.9	9.2	6.6	4.6	---	10	18	49	44	18	22	20
31	9.4	---	6.8	4.6	---	9.7	---	45	---	18	22	---
TOTAL	275.1	264.4	249.7	188.7	160.8	256.1	407.5	1109	1369	744	549	702
MEAN	8.87	8.81	8.05	6.09	5.54	8.26	13.6	35.8	45.6	24.0	17.7	23.4
MAX	12	11	9.5	7.7	6.5	12	18	62	59	39	22	37
MIN	8.1	7.7	6.5	4.6	4.5	6.0	8.7	17	38	18	15	16
AC-FT	546	524	495	374	319	508	808	2200	2720	1480	1090	1390
CAL YR 1987 TOTAL	7710.3			MEAN	21.1	MAX	105	MIN	6.0	AC-FT	15290	
WTR YR 1988 TOTAL	6275.3			MEAN	17.1	MAX	62	MIN	4.5	AC-FT	12450	

RIO GRANDE BASIN

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08271000 RIO LUCERO NEAR ARROYO SECO, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCAB WH WAT TOT FLD MG/L AS CACO3 (00902)
OCT 15...	1230	9.3	112	--	7.80	--	12.0	8.0	7.1	--	--
JAN 26...	1445	12	110	126	--	8.20	4.5	3.5	10.6	52	0
MAR 30...	1030	10	75	83	7.40	8.00	10.0	1.0	10.6	41	3
MAY 23...	1830	45	70	76	7.40	7.60	18.0	9.0	9.0	34	4
JUL 06...	1430	30	100	106	7.60	8.20	21.0	12.0	8.3	51	3
AUG 23...	1730	16	115	114	7.80	8.30	17.0	13.0	8.4	54	4

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 15...	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	18	1.6	1.5	0.1	0.70	76	0	62	53	8.7	0.40
MAR 30...	14	1.4	2.1	0.1	0.70	56	0	46	38	8.4	0.10
MAY 23...	12	1.1	1.6	0.1	0.70	33	0	27	31	6.7	0.40
JUL 06...	18	1.4	1.2	0.1	0.50	54	0	44	48	5.0	0.30
AUG 23...	19	1.5	1.4	0.1	0.70	83	0	68	50	7.5	0.30

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
OCT 15...	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	0.20	9.6	72	<1	<1	<10	1	<1	1	1	3
MAR 30...	0.20	8.1	58	<1	<1	<10	<1	<1	3	1	5
MAY 23...	0.20	8.3	50	<1	<1	<10	1	<1	2	<1	6
JUL 06...	0.20	8.6	109	<1	1	<10	<1	1	<1	3	4
AUG 23...	0.10	6.5	67	<1	<1	10	2	2	<1	<1	7

RIO GRANDE BASIN

08271000 RIO LUCERO NEAR ARROYO SECO, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 15...	--	--	--	--	--	--	--	--	--	--
JAN 26...	3	<10	<5	<5	--	--	<1	<1	<10	10
MAR 30...	1	64	<5	<5	<0.10	1.6	<1	<1	<10	7
MAY 23...	3	70	8	<5	<0.10	<0.1	<1	<1	20	15
JUL 06...	1	7	<5	<5	--	--	<1	<1	20	<3
AUG 23...	2	15	<5	<5	<0.10	<0.1	--	<1	30	20

08275500 RIO GRANDE DEL RANCHO NEAR TALPA, NM

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

DRAINAGE AREA.--83 mi², approximately.

PERIOD OF RECORD.--October 1952 to September 1982, October 1983 to September 1985 (annual maximum only), October 1985 to current year. Prior to October 1955, published as Rio Grande del Rancho nr Taos and October 1955 to September 1960 as Rio Grande de Ranchos nr Talpa.

GAGE.--Water-stage recorder. Elevation of gage is 7,240 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 11, 1952, nonrecording gage at site 1,035 ft downstream at lower datum. Nov. 11, 1952 to Nov. 5, 1968, water-stage recorder at site 1,000 ft downstream at lower datum. Nov. 6, 1968 to Aug. 28, 1980, water-stage recorder at present site on left bank at same datum.

REMARKS.--Estimated daily discharges: Oct. 6, 7, 26, 31 and Nov. 3, 6, 8. Records good except for estimated daily discharges, which are fair. Minor diversions for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years (water years 1953-1982, 1986-88) 20.3 ft³/s, 14,710 acre-feet/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 18	1345	*97	*1.89	No other peak greater than base discharge.			
Minimum discharge, 3.3 ft ³ /s, Feb. 19.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	11	9.4	9.2	5.8	7.4	8.8	21	31	22	10	11
2	7.5	12	10	9.1	5.9	7.4	9.8	22	29	23	9.4	11
3	7.4	11	10	9.0	6.4	7.4	10	21	27	22	9.1	10
4	7.5	10	9.9	8.8	6.2	6.9	10	20	26	21	11	9.8
5	7.6	9.8	9.6	8.9	5.7	6.9	9.9	20	25	20	8.8	9.6
6	7.8	10	9.9	8.8	4.8	6.9	11	21	25	19	8.9	9.4
7	7.8	10	10	8.4	5.5	7.0	12	22	24	18	9.7	9.3
8	7.6	10	10	8.1	6.5	6.2	14	22	24	18	9.8	8.8
9	7.5	9.8	9.3	8.3	6.6	7.1	14	21	23	18	8.9	8.4
10	7.5	9.5	9.9	8.4	6.8	7.9	13	21	23	17	9.3	8.4
11	7.5	9.5	10	8.2	6.0	6.6	13	22	29	17	9.9	8.5
12	7.5	9.3	9.7	7.9	6.0	6.7	13	23	26	15	10	9.7
13	7.7	9.1	9.1	7.7	6.3	6.8	14	25	24	15	9.7	12
14	8.6	9.3	9.1	7.8	6.5	7.0	15	28	24	14	9.3	12
15	8.6	9.7	9.4	7.7	5.1	9.0	16	32	23	13	9.0	11
16	8.5	10	9.5	7.7	6.0	7.8	19	35	24	13	9.4	10
17	8.4	9.5	11	7.5	6.6	8.1	17	39	23	13	11	9.8
18	8.2	8.8	11	7.3	6.1	7.7	16	50	22	13	11	9.8
19	8.2	7.1	9.9	7.0	5.4	8.0	15	51	21	13	11	9.5
20	8.2	8.8	9.2	6.7	5.2	7.9	15	51	21	13	9.8	9.5
21	8.2	9.3	8.6	6.7	5.6	8.1	17	46	20	13	9.3	10
22	8.3	9.5	10	6.5	6.3	8.3	18	42	19	11	8.7	11
23	8.5	9.9	10	6.7	6.2	8.5	17	39	19	11	8.9	11
24	8.7	9.9	9.9	6.7	6.1	8.6	16	36	18	10	8.8	11
25	9.5	9.1	9.6	6.7	6.2	8.4	15	35	18	9.8	9.5	10
26	9.5	9.9	9.7	6.4	6.7	9.0	15	34	20	9.7	9.2	9.8
27	9.1	9.3	9.7	6.3	7.0	9.7	16	33	21	10	11	9.7
28	8.9	7.1	9.7	6.7	7.1	10	16	33	20	12	12	9.5
29	8.7	8.6	9.8	6.9	7.2	10	17	34	21	11	11	9.5
30	10	9.7	9.9	6.5	---	9.8	18	33	22	11	11	9.4
31	10	---	9.5	6.0	---	10	---	33	---	11	11	---
TOTAL	256.7	286.5	302.3	234.6	177.8	247.1	430.5	965	692	456.5	305.4	298.4
MEAN	8.28	9.55	9.75	7.57	6.13	7.97	14.3	31.1	23.1	14.7	9.85	9.95
MAX	10	12	11	9.2	7.2	10	19	51	31	23	12	12
MIN	7.4	7.1	8.6	6.0	4.8	6.2	8.8	20	18	9.7	8.7	8.4
AC-FT	509	568	600	465	353	490	854	1910	1370	905	606	592
CAL YR 1987	TOTAL	11599.2		MEAN	31.8	MAX	250	MIN	5.3	AC-FT	23010	
WTR YR 1988	TOTAL	4652.8		MEAN	12.7	MAX	51	MIN	4.8	AC-FT	9230	

08276300 RIO PUEBLO DE TAOS BELOW LOS CORDOVAS, NM

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

DRAINAGE AREA.--380 mi².

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

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

GAGE.--Water-stage recorder. Elevation of gage is 6,650 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 4, 1984 at site 700 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Oct. 6 to Dec. 17 and Dec. 26 to Jan. 29. Water-discharge records fair. Diversions for irrigation of about 12,000 acres upstream from station, of which about 1,700 acres are irrigated by water from Rio Hondo. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 61.8 ft³/s, 44,770 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 24	1730	*563	*6.22	No other peak greater than base discharge.			
Minimum discharge, 11 ft ³ /s, July 16.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	34	36	43	45	56	49	27	27	21	17	23
2	21	38	37	39	46	56	51	29	24	19	19	23
3	22	37	40	34	83	55	52	31	21	18	18	23
4	21	35	42	32	55	54	49	28	19	17	81	21
5	23	34	44	36	51	54	47	27	20	18	27	19
6	22	33	42	44	48	55	48	28	20	16	16	19
7	22	33	40	39	52	55	49	27	20	15	20	19
8	22	33	37	35	54	53	51	24	18	20	25	20
9	24	32	35	37	54	50	50	22	16	14	19	20
10	24	30	39	39	54	52	48	22	17	13	17	20
11	24	32	38	38	50	52	46	20	34	14	17	21
12	25	31	37	37	52	47	46	16	30	13	17	30
13	27	30	35	36	53	50	46	15	24	13	18	51
14	28	33	40	35	51	45	49	14	23	13	16	39
15	28	35	42	34	48	49	48	19	23	12	15	30
16	29	32	41	33	54	54	56	20	29	11	16	28
17	29	31	45	35	53	47	59	24	25	13	18	27
18	29	30	44	40	51	52	52	39	22	12	20	27
19	29	28	43	47	49	49	48	61	19	14	19	26
20	29	31	43	41	49	49	46	72	16	15	20	24
21	29	32	43	35	51	48	46	64	16	14	19	31
22	29	32	52	31	54	48	44	56	14	13	19	31
23	28	33	50	37	52	49	44	48	15	12	19	30
24	28	34	48	33	52	47	40	44	18	12	43	28
25	45	32	48	30	53	49	36	41	20	12	22	29
26	41	36	44	40	55	50	31	38	26	16	20	32
27	35	39	40	52	56	51	31	36	25	16	26	32
28	32	34	34	68	57	53	29	35	22	16	32	33
29	30	37	38	58	57	51	28	34	21	16	26	33
30	40	35	44	48	---	49	28	31	21	17	24	30
31	37	---	49	48	---	50	---	31	---	18	24	---
TOTAL	873	996	1290	1234	1539	1579	1347	1023	645	463	709	819
MEAN	28.2	33.2	41.6	39.8	53.1	50.9	44.9	33.0	21.5	14.9	22.9	27.3
MAX	45	39	52	68	83	56	59	72	34	21	81	51
MIN	21	28	34	30	45	45	28	14	14	11	15	19
AC-FT	1730	1980	2560	2450	3050	3130	2670	2030	1280	918	1410	1620
CAL YR 1987 TOTAL	35720		MEAN		97.9	MAX	564	MIN	15	AC-FT	70850	
WTR YR 1988 TOTAL	12517		MEAN		34.2	MAX	83	MIN	11	AC-FT	24830	

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

WATER-QUALITY RECORDS

PERIOD OF RECORD 1986 to current year.--Water years 1981, 1986 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
OCT 14...	1345	24	522	--	8.69	--	13.0	8.0	8.2	--
JAN 26...	1100	40	430	--	--	--	0.0	3.0	11.0	--
MAR 30...	1330	48	--	460	8.20	8.40	13.0	9.5	8.9	--
MAY 24...	0900	43	400	443	8.50	8.10	14.0	10.5	9.7	14
JUL 07...	0900	15	540	573	--	8.20	22.5	18.0	8.5	<10
AUG 23...	0930	19	995	--	8.30	--	20.0	8.5	9.3	--
SEP 06...	1100	19	995	--	8.30	--	20.0	15.0	8.3	15

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WAT WH TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) AS K) (00935)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	CAR- BONATE WATER WH IT FIELD MG/L AS CO3 (00447)	ALKA- LINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)
OCT 14...	--	--	--	--	--	--	--	207	30	220
JAN 26...	--	--	--	--	--	--	--	--	--	--
MAR 30...	200	26	62	12	17	0.5	1.4	--	--	--
MAY 24...	180	6	53	12	15	0.5	1.3	--	--	--
JUL 07...	260	27	75	18	26	0.7	1.6	--	--	--
AUG 23...	--	--	--	--	--	--	--	--	--	--
SEP 06...	--	--	--	--	--	--	--	--	--	--

DATE	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
OCT 14...	226	--	--	--	--	--	--	--	--	--
JAN 26...	--	--	--	--	--	--	--	0.500	0.510	0.350
MAR 30...	--	179	55	8.3	0.40	12	277	0.300	0.290	0.220
MAY 24...	--	176	48	6.2	0.50	18	260	0.100	0.110	0.200
JUL 07...	--	235	62	8.5	0.50	20	354	0.200	0.250	0.050
AUG 23...	--	--	--	--	--	--	--	--	--	--
SEP 06...	--	--	--	--	--	--	--	0.100	0.110	0.220

RIO GRANDE BASIN

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

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 14...	--	--	--	--	--	--	--	22	1.4	74
JAN 26...	0.35	1.2	0.230	0.120	--	--	--	81	8.7	67
MAR 30...	0.28	0.80	0.140	0.070	2.5	30	8	29	3.8	98
MAY 24...	--	--	0.060	0.060	4.3	40	24	33	3.8	82
JUL 07...	0.25	0.50	0.200	0.170	4.7	60	29	68	2.7	61
AUG 23...	--	--	--	--	--	--	--	46	2.3	76
SEP 06...	0.18	0.50	0.200	0.150	2.1	--	--	--	--	--

RIO GRANDE BASIN

93

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

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

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

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Estimated daily discharges: Dec. 17 and Jan. 2-4, 11, 12, 15-25. Water-discharge records good. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 30,000 acres in New Mexico.

AVERAGE DISCHARGE.--63 years, 763 ft³/s, 552,800 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 11	0815	*1,070	*4.74				

Minimum discharge, 225 ft³/s, Aug. 16, 17, 22, Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	267	341	435	492	540	647	919	389	427	436	265	276
2	270	351	515	490	543	666	856	363	415	473	264	264
3	270	342	532	490	609	695	844	362	396	470	273	261
4	268	345	538	493	574	733	819	387	363	457	293	248
5	273	447	583	499	566	771	795	378	346	444	436	242
6	275	557	630	499	563	804	784	393	351	412	293	240
7	275	593	643	495	567	835	803	359	363	397	276	238
8	274	593	645	491	562	829	858	341	363	374	287	236
9	272	608	648	493	547	790	895	350	364	352	267	231
10	268	654	637	502	553	861	979	350	381	333	255	231
11	270	695	637	490	539	838	1040	335	430	320	249	238
12	271	656	649	490	552	807	996	332	444	316	249	267
13	272	631	624	492	556	831	950	313	440	309	252	409
14	281	621	511	494	557	793	893	310	447	301	239	425
15	275	622	350	500	549	753	827	309	477	290	235	358
16	280	617	452	495	564	802	811	310	473	278	230	336
17	280	624	500	490	564	779	797	310	451	278	227	322
18	278	632	534	495	561	769	727	343	446	279	252	323
19	276	621	566	490	566	740	703	426	426	266	244	324
20	277	594	564	490	576	810	650	474	407	338	252	306
21	284	570	579	490	593	858	615	502	393	285	237	301
22	287	580	585	488	596	831	595	571	371	272	232	319
23	292	600	594	490	600	833	597	598	373	263	261	330
24	300	633	594	490	606	860	577	532	384	255	273	325
25	310	623	579	490	606	874	538	485	394	250	264	317
26	328	620	537	513	604	863	498	441	429	246	248	307
27	328	614	559	521	609	866	485	409	429	249	257	290
28	328	489	543	522	629	860	463	394	422	245	276	300
29	331	461	525	525	635	902	447	412	444	246	272	291
30	351	439	521	534	---	967	418	407	444	255	260	290
31	348	---	506	535	---	988	---	421	---	261	258	---
TOTAL	8959	16773	17315	15468	16686	25255	22179	12306	12293	9950	8176	8845
MEAN	289	559	559	499	575	815	739	397	410	321	264	295
MAX	351	695	649	535	635	988	1040	598	477	473	436	425
MIN	267	341	350	488	539	647	418	309	346	245	227	231
AC-FT	17770	33270	34340	30680	33100	50090	43990	24410	24380	19740	16220	17540
CAL YR 1987	TOTAL	553118		MEAN	1515	MAX	8120	MIN	266	AC-FT	1097000	
WTR YR 1988	TOTAL	174205		MEAN	476	MAX	1040	MIN	227	AC-FT	345500	

RIO GRANDE BASIN

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV 24...	1100	624	260	303	--	8.30	16.0	6.5	3.7	9.8	13	110
MAR 04...	0945	723	290	323	8.40	8.20	5.0	4.0	--	10.3	18	90
JUN 01...	1045	423	--	462	8.60	8.40	21.5	13.5	--	9.8	--	140
AUG 30...	1145	260	315	338	8.50	8.30	23.0	9.0	17	10.2	<10	130
DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 24...	10	32	6.5	18	0.8	3.3	--	--	--	97	41	5.7
MAR 04...	0	27	5.5	30	1	5.8	124	0	102	105	38	11
JUN 01...	19	41	9.2	39	1	5.6	--	--	--	121	92	11
AUG 30...	18	37	8.9	26	1	3.2	105	16	112	111	59	8.9
DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)
NOV 24...	0.40	29	196	0.400	0.300	0.020	0.18	0.60	0.060	0.030	1.8	<0.010
MAR 04...	0.50	26	208	0.300	0.240	0.040	0.16	0.50	0.070	0.040	3.6	--
JUN 01...	0.70	24	296	0.200	0.110	0.050	0.35	0.60	0.030	0.020	5.7	--
AUG 30...	0.70	30	249	0.300	1.90	--	--	--	0.070	--	3.3	<0.010
DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 24...	--	2	40	--	<1	--	4	--	2	22	--	<5
MAR 04...	--	--	40	--	--	--	--	--	--	25	--	--
JUN 01...	--	--	70	--	--	--	--	--	--	22	--	--
AUG 30...	2	2	60	<1	1	3	5	7	3	620	<5	<5

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

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)
NOV 24...	--	--	--	--	2	--	7	470	6	1	10	<50
MAR 04...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 01...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 30...	0.10	<0.1	10	<1	<1	10	<3	--	--	--	--	--
DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	
NOV 24...	20	12000	10	430	<0.10	80	15	25	92	K79	K15	
MAR 04...	--	--	--	--	--	--	21	41	88	K17	74	
JUN 01...	--	--	--	--	--	--	16	18	93	48	81	
AUG 30...	--	--	--	--	--	--	78	55	89	33	56	

RIO GRANDE BASIN

08279000 EMBUDO CREEK AT DIXON, NM

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

DRAINAGE AREA.--305 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Estimated daily discharges: Nov. 26, 27, 29, 30, Dec. 25, and Dec. 27 to Jan. 8. Water-discharge records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 6,600 acres, a small part of which are downstream from gage.

AVERAGE DISCHARGE.--57 years (water years 1924-25, 1927-55, 1963-88), 81.9 ft³/s, 59,340 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 4	2115	*1,300	*4.85	No other peak greater than base discharge.			
Minimum discharge, 9.6 ft ³ /s, Dec. 14.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	34	33	24	30	38	30	59	79	132	93	177
2	25	40	37	22	31	38	28	63	70	129	92	183
3	25	37	41	21	34	36	38	67	65	127	92	164
4	20	35	45	20	32	34	38	52	67	101	179	149
5	20	35	48	25	31	32	34	50	69	89	128	139
6	18	39	44	29	27	31	33	56	71	132	104	130
7	19	42	39	29	26	33	34	61	70	96	120	114
8	20	41	38	25	30	26	40	59	69	121	98	99
9	18	37	31	32	31	25	42	53	65	137	85	91
10	18	36	36	30	32	32	36	44	59	129	85	83
11	17	37	39	30	27	27	34	43	162	124	114	83
12	18	35	34	30	31	21	35	40	163	105	108	129
13	22	35	27	28	32	30	36	52	136	99	85	236
14	24	38	20	31	32	24	41	62	121	96	81	199
15	23	40	25	29	29	29	50	74	103	94	80	164
16	25	39	24	31	34	29	59	98	111	92	84	144
17	26	37	38	31	34	24	65	117	94	92	117	134
18	25	37	43	31	32	27	56	210	86	90	112	125
19	27	31	42	31	28	25	56	235	71	90	103	117
20	28	37	38	27	29	26	55	227	69	92	96	106
21	29	39	28	33	32	27	55	191	55	90	93	118
22	30	39	29	33	33	29	60	157	46	90	93	148
23	29	38	33	32	32	29	59	135	49	88	106	140
24	28	41	37	27	32	28	58	114	45	88	135	124
25	28	35	28	29	32	27	51	100	53	87	123	112
26	28	34	27	29	34	29	45	93	74	87	103	102
27	29	33	25	28	35	29	46	87	144	87	146	96
28	28	31	25	28	36	34	42	87	161	85	283	89
29	28	32	24	28	37	32	43	84	153	95	207	84
30	32	32	26	30	---	32	47	89	147	97	183	81
31	35	---	26	29	---	34	---	94	---	95	185	---
TOTAL	766	1096	1030	882	915	917	1346	2953	2727	3156	3713	3860
MEAN	24.7	36.5	33.2	28.5	31.6	29.6	44.9	95.3	90.9	102	120	129
MAX	35	42	48	33	37	38	65	235	163	137	283	236
MIN	17	31	20	20	26	21	28	40	45	85	80	81
AC-FT	1520	2170	2040	1750	1810	1820	2670	5860	5410	6260	7360	7660
CAL YR 1987 TOTAL	45077			MEAN	123	MAX	831	MIN	17	AC-FT	89410	
WTR YR 1988 TOTAL	23361			MEAN	63.8	MAX	283	MIN	17	AC-FT	46340	

08279500 RIO GRANDE AT EMBUDO, NM

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

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

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

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

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

REMARKS.--Estimated daily discharges: Jan. 3-5, 10-12, 15-19. Records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 40,000 acres in New Mexico. Several observations of water temperature were made during the year. National Weather Service gage-height telemeter and satellite telemetry available at station.

AVERAGE DISCHARGE.--41 years (water years 1890-1930), 1,238 ft³/s, 896,900 acre-ft/yr.
58 years (water years 1931-88), 831 ft³/s, 602,100 acre-ft/yr, subsequent to upstream development.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 11	1015	*1,110	*4.53				

Minimum discharge, 265 ft³/s, Oct. 4, 5, 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	271	371	463	510	584	686	969	439	518	580	314	458
2	274	390	536	506	585	701	887	424	500	593	321	461
3	276	376	571	525	639	724	888	421	480	607	332	429
4	268	374	572	525	634	764	854	426	451	564	382	402
5	269	436	624	540	608	802	826	418	437	544	597	384
6	275	567	666	558	598	831	815	443	440	556	433	374
7	275	622	687	552	596	863	825	417	453	504	399	356
8	276	619	678	539	600	860	889	395	456	495	393	342
9	273	631	673	540	589	805	935	402	452	535	357	333
10	267	661	678	540	593	897	993	390	462	494	341	323
11	268	708	667	540	575	879	1050	375	605	472	354	324
12	270	681	682	540	584	827	1020	370	630	440	355	400
13	274	657	658	540	595	861	978	363	603	410	323	658
14	287	652	566	538	598	828	949	372	595	375	301	669
15	284	657	423	540	583	786	888	389	590	359	295	548
16	287	653	416	540	599	840	864	419	631	340	304	500
17	289	654	615	540	605	811	872	435	568	343	345	468
18	288	656	583	540	598	812	768	528	551	341	357	453
19	288	649	607	540	598	764	750	641	514	327	343	446
20	288	626	597	541	606	825	694	687	494	414	338	429
21	294	611	604	529	625	865	657	668	461	385	316	438
22	300	616	611	556	631	857	640	717	431	342	306	478
23	308	631	622	572	631	855	641	739	432	315	406	483
24	310	667	632	569	635	883	623	656	436	304	377	459
25	320	663	618	543	636	897	575	604	459	293	420	440
26	337	654	564	554	635	885	524	550	512	281	366	422
27	344	661	589	561	640	897	509	512	586	287	411	399
28	342	538	575	564	660	892	487	492	600	280	559	398
29	344	513	570	568	670	924	473	500	603	301	485	385
30	363	478	558	580	---	996	452	510	601	331	449	377
31	377	---	539	578	---	1030	---	524	---	329	450	---
TOTAL	9186	17672	18444	16908	17730	26147	23295	15226	15551	12741	11729	13036
MEAN	296	589	595	545	611	843	777	491	518	411	378	435
MAX	377	708	687	580	670	1030	1050	739	631	607	597	669
MIN	267	371	416	506	575	686	452	363	431	280	295	323
AC-FT	18220	35050	36580	33540	35170	51860	46210	30200	30850	25270	23260	25860
CAL YR 1987	TOTAL	598601		MEAN	1640	MAX	9120	MIN	267	AC-FT	1187000	
WTR YR 1988	TOTAL	197665		MEAN	540	MAX	1050	MIN	267	AC-FT	392100	

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 18...	1345	650	278	303	8.50	8.30	6.5	6.0	13.6	110	9
FEB 16...	1130	600	250	281	8.50	8.20	11.5	3.5	11.8	99	0
MAY 11...	1130	380	394	427	8.60	8.60	22.0	15.0	9.2	130	4
SEP 01...	0930	460	297	310	8.40	8.80	24.0	19.0	7.9	120	9

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 18...	34	6.5	18	0.8	2.8	119	4	104	103	40	8.1
FEB 16...	30	5.9	17	0.8	3.3	112	5	99	100	33	5.5
MAY 11...	39	8.3	36	1	4.7	130	12	128	128	66	11
SEP 01...	37	6.9	16	0.7	2.2	123	6	111	112	36	5.2

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL REC OV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL REC OV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL REC OV- ERABLE (UG/L AS CU) (01042)	
	NOV 18...	0.50	26	198	2	2	40	<1	<1	2	2	5
	FEB 16...	0.40	28	183	--	--	20	--	--	--	--	--
	MAY 11...	0.60	23	265	--	--	60	--	--	--	--	--
SEP 01...	0.50	18	189	--	--	30	--	--	--	--	--	

[illegible]

RIO GRANDE BASIN

08281100 RIO GRANDE ABOVE SAN JUAN PUEBLO, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)
NOV 18...	65	97	K35	K84	<0.1	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
FEB 16...	9.6	80	K1	K6	--	--	--	--	--	--	--
MAY 11...	53	78	21	92	--	--	--	--	--	--	--
SEP 01...	150	98	--	--	<0.1	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01

DATE	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)
NOV 18...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01
FEB 16...	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--	--
SEP 01...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01

DATE	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
NOV 18...	<0.01	<0.01	<1	<0.01	--	--	--	<0.1	<0.10	<0.01
FEB 16...	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	<0.01	<0.01	<0.01	--	--	--
SEP 01...	<0.01	<0.01	<1	<0.01	<0.01	<0.01	<0.01	<0.1	<0.10	<0.01

08284100 RIO CHAMA NEAR LA PUENTE, NM

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

DRAINAGE AREA.--480 mi², approximately.

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Estimated daily discharges: Nov. 29 to Dec. 4 and Dec. 13 to Feb. 28. Water-discharge records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 10,300 acres upstream from station (1962 determination). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 283 ft³/s, 255,700 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 1	0030	*2,380	*4.67	No other peak greater than base discharge.			
Minimum discharge, 34 ft ³ /s, Nov. 28.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	104	64	63	80	319	279	1800	649	173	103	146
2	46	186	64	65	82	328	271	1140	517	164	91	118
3	50	154	68	68	86	295	290	1030	445	156	102	100
4	50	136	70	68	84	265	340	1260	526	151	92	89
5	49	127	73	71	84	223	430	1640	572	135	333	84
6	49	146	76	72	82	218	540	1650	642	134	188	80
7	50	180	80	72	82	222	800	1180	557	113	188	75
8	49	140	79	72	82	197	960	931	509	99	131	70
9	48	126	66	72	82	190	811	914	456	110	106	65
10	50	115	70	74	82	196	726	1150	440	111	93	62
11	44	112	74	80	82	176	763	1290	532	133	86	111
12	37	98	69	87	82	170	903	1480	496	128	81	173
13	36	97	70	92	82	169	1110	1630	420	110	76	272
14	53	103	65	97	82	160	1170	1660	345	93	66	232
15	62	108	62	94	82	163	1170	1670	419	82	64	149
16	51	105	64	94	82	164	1310	1530	448	77	65	117
17	44	92	68	93	82	145	991	1370	362	76	87	104
18	43	82	74	91	82	149	764	1570	308	79	100	101
19	47	60	76	88	86	149	667	1570	294	75	96	103
20	48	86	80	88	90	160	803	1520	257	75	81	87
21	48	87	80	86	101	181	1020	1370	213	117	68	84
22	47	86	80	76	120	212	854	1170	196	85	91	95
23	48	80	80	68	140	245	689	982	212	76	74	109
24	52	84	76	66	160	266	639	873	254	68	106	91
25	99	75	74	64	190	258	558	864	207	67	108	81
26	138	83	70	64	230	284	557	808	207	66	92	76
27	89	75	68	64	310	352	567	810	195	66	471	71
28	76	72	68	64	310	562	701	760	296	66	274	67
29	70	66	68	66	315	443	886	742	251	71	297	63
30	82	65	62	70	---	394	1380	771	207	112	195	63
31	93	---	62	76	---	361	---	780	---	118	152	---
TOTAL	1790	3130	2200	2365	3534	7616	22949	37915	11432	3186	4157	3138
MEAN	57.7	104	71.0	76.3	122	246	765	1223	381	103	134	105
MAX	138	186	80	97	315	562	1380	1800	649	173	471	272
MIN	36	60	62	63	80	145	271	742	195	66	64	62
AC-FT	3550	6210	4360	4690	7010	15110	45520	75200	22680	6320	8250	6220
CAL YR 1987	TOTAL	149534		MEAN	410	MAX	3360	MIN	36	AC-FT	296600	
WTR YR 1988	TOTAL	103412		MEAN	283	MAX	1800	MIN	36	AC-FT	205100	

RIO GRANDE BASIN

08284100 RIO CHAMA NEAR LA PUENTE, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV 19...	1220	57	262	289	8.50	8.40	10.0	2.5	12.2	<10
JAN 14...	1230	97	178	--	7.70	--	-5.0	0.5	--	<10
FEB 18...	1200	49	162	183	7.90	8.00	3.5	0.0	11.8	23
MAY 13...	1115	1350	68	75	7.20	7.80	24.0	8.0	9.6	21
JUN 15...	1115	323	160	151	8.10	7.70	25.0	17.0	7.6	52
AUG 31...	1045	152	133	--	8.10	--	19.0	16.0	7.8	<10

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
NOV 19...	120	20	35	8.0	11	0.5	1.8	115	4	101
JAN 14...	--	--	--	--	--	--	--	--	--	--
FEB 18...	75	7	23	4.3	6.1	0.3	1.6	83	0	68
MAY 13...	29	1	8.7	1.8	2.7	0.2	0.90	34	0	28
JUN 15...	63	4	19	3.8	7.0	0.4	1.5	70	0	57
AUG 31...	--	--	--	--	--	--	--	--	--	--

DATE	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 19...	101	41	4.5	0.20	20	182	<0.100	<0.100	0.020
JAN 14...	--	--	--	--	--	--	0.100	0.140	0.020
FEB 18...	68	20	1.7	0.20	20	118	0.200	0.120	0.030
MAY 13...	28	11	0.70	0.20	14	57	<0.100	<0.100	0.020
JUN 15...	59	17	0.90	0.20	20	105	<0.100	<0.100	0.010
AUG 31...	--	--	--	--	--	--	<0.100	<0.100	<0.010

08284100 RIO CHAMA NEAR LA PUENTE, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 19...	--	0.040	0.020	2.6	20	32	27	4.2	96
JAN 14...	--	0.040	0.030	1.2	--	--	17	4.5	71
FEB 18...	--	0.050	0.010	1.6	<10	18	12	1.6	59
MAY 13...	--	0.050	<0.010	5.6	<10	65	67	244	79
JUN 15...	0.29	0.040	0.020	4.0	10	47	24	21	15
AUG 31...	--	0.090	0.030	3.9	--	--	61	25	79

RIO GRANDE BASIN

08284160 AZOTEA TUNNEL AT OUTLET, NEAR CHAMA, NM

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

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

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

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

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

AVERAGE DISCHARGE.--18 years, 133 ft³/s, 96,360 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 724 ft³/s, May 18, gage height, 6.11 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	319	288	196	88	60
2	.00	.00	.00	.00	.00	.00	.00	200	288	176	84	39
3	.00	.00	.00	.00	.00	.00	.00	184	322	160	63	26
4	.00	.00	.00	.00	.00	.00	.00	185	464	149	43	12
5	.00	.00	.00	.00	.00	.00	.00	216	567	126	43	12
6	.00	.00	.00	.00	.00	.00	.00	229	601	127	73	13
7	.00	.00	.00	.00	.00	.00	.00	188	669	105	66	8.4
8	.00	.00	.00	.00	.00	.00	.00	160	634	90	33	7.7
9	.00	.00	.00	.00	.00	.00	.00	140	582	84	19	4.8
10	.00	.00	.00	.00	.00	.00	.00	167	593	98	13	4.6
11	.00	.00	.00	.00	.00	.00	61	205	586	110	13	56
12	.00	.00	.00	.00	.00	.00	198	324	504	76	11	88
13	.00	.00	.00	.00	.00	.00	336	437	448	62	8.0	81
14	.00	.00	.00	.00	.00	.00	332	516	375	50	4.3	71
15	.00	.00	.00	.00	.00	.00	327	598	394	39	2.5	40
16	.00	.00	.00	.00	.00	.00	339	601	379	36	5.1	29
17	.00	.00	.00	.00	.00	.00	280	631	360	60	67	21
18	.00	.00	.00	.00	.00	.00	216	724	339	64	57	22
19	.00	.00	.00	.00	.00	.00	187	595	373	39	56	12
20	.00	.00	.00	.00	.00	.00	188	490	396	54	20	9.5
21	.00	.00	.00	.00	.00	.00	199	369	349	45	16	8.4
22	.00	.00	.00	.00	.00	.00	185	270	309	58	9.1	15
23	.00	.00	.00	.00	.00	.00	165	242	270	43	27	13
24	.00	.00	.00	.00	.00	.00	149	300	280	36	69	8.7
25	.00	.00	.00	.00	.00	.00	132	326	382	28	53	7.0
26	.00	.00	.00	.00	.00	.00	131	335	256	28	25	5.1
27	.00	.00	.00	.00	.00	.00	149	404	221	21	272	4.3
28	.00	.00	.00	.00	.00	.00	182	441	286	23	136	3.5
29	.00	.00	.00	.00	.00	.00	193	460	300	38	155	2.8
30	.00	.00	.00	.00	---	.00	220	477	222	58	96	2.3
31	.00	---	.00	.00	---	.00	---	358	---	64	74	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	4169.00	11091	12037	2343	1701.0	687.1
MEAN	.00	.00	.00	.00	.00	.00	139	358	401	75.6	54.9	22.9
MAX	.00	.00	.00	.00	.00	.00	339	724	669	196	272	88
MIN	.00	.00	.00	.00	.00	.00	.00	140	221	21	2.5	2.3
AC-FT	.0	.0	.0	.0	.0	.0	8270	22000	23880	4650	3370	1360

CAL YR 1987 TOTAL 41869.30 MEAN 115 MAX 1000 MIN .00 AC-FT 83050
WTR YR 1988 TOTAL 32028.10 MEAN 87.5 MAX 724 MIN .00 AC-FT 63530

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

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

DRAINAGE AREA.--112 mi².

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

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

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

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

AVERAGE DISCHARGE.--8 years (water years 1963-70), 10.5 ft³/s, 7,610 acre-ft/yr, prior to completion of Azotea tunnel.
18 years (water years 1971-88), 148 ft³/s, 107,200 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 700 ft³/s, May 18, gage height, 4.24 ft; minimum daily, 0.11 ft³/s, Oct. 2-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.80	3.2	.24	1.1	23	38	297	292	186	112	93
2	.11	5.4	.27	.27	.88	12	32	212	282	166	84	46
3	.11	3.2	.27	.24	.72	17	53	193	339	154	38	30
4	.11	1.7	.27	.30	.76	23	60	196	485	138	55	16
5	.11	.96	.30	.29	.80	18	62	233	563	130	48	14
6	.11	.96	.34	.29	.80	27	55	233	623	128	84	13
7	.11	1.6	.36	.29	.80	24	59	193	659	103	75	9.5
8	.11	2.8	.38	.30	.96	12	53	163	613	91	38	7.0
9	.11	1.8	.36	.32	.96	12	46	150	573	82	22	4.6
10	.11	1.2	.34	.56	1.0	12	28	183	583	113	14	3.7
11	.11	.80	.32	.80	.96	7.0	86	231	563	106	10	80
12	.11	.63	.30	.88	1.0	5.8	236	345	490	77	9.2	123
13	.12	.49	.32	.96	1.1	4.6	352	443	429	62	8.6	98
14	.22	.42	.29	.96	1.2	4.8	332	553	372	49	4.6	82
15	.20	.52	.26	.96	1.2	4.5	339	548	407	37	2.9	46
16	.15	.96	.22	.80	1.4	6.2	391	593	378	37	2.0	32
17	.16	.80	.24	.80	1.4	4.1	302	638	345	60	74	23
18	.18	.67	.27	.96	1.3	4.1	249	700	339	64	65	22
19	.16	.52	.32	1.1	1.4	5.0	221	588	402	38	59	12
20	.15	.49	.38	1.1	1.5	12	212	480	385	57	22	9.0
21	.13	.42	.40	1.1	1.4	43	212	345	307	46	12	7.8
22	.13	.36	.36	1.1	1.8	70	208	272	282	61	9.0	13
23	.12	.34	.34	1.0	2.0	88	193	262	279	45	30	13
24	.15	.32	.34	1.0	2.5	93	176	292	307	38	89	8.2
25	.22	.32	.36	.96	2.9	77	157	307	345	27	64	6.2
26	.29	.36	.42	.96	3.6	113	150	332	252	28	33	4.5
27	.27	.38	.45	.96	4.1	191	172	407	231	21	343	3.7
28	.23	.36	.49	.88	8.6	137	196	443	322	22	202	3.1
29	.23	.32	.36	.88	12	49	221	457	275	43	188	2.2
30	.30	.30	.34	.96	---	34	266	452	212	68	116	1.6
31	.40	---	.26	1.0	---	29	---	332	---	72	143	---
TOTAL	5.14	30.20	13.13	23.22	60.14	1162.1	5157	11073	11934	2349	2056.3	827.1
MEAN	.17	1.01	.42	.75	2.07	37.5	172	357	398	75.8	66.3	27.6
MAX	.40	5.4	3.2	1.1	12	191	391	700	659	186	343	123
MIN	.11	.30	.22	.24	.72	4.1	28	150	212	21	2.0	1.6
AC-FT	10	60	26	46	119	2310	10230	21960	23670	4660	4080	1640

CAL YR 1987 TOTAL 49770.47 MEAN 136 MAX 1020 MIN .11 AC-FT 98720
WTR YR 1988 TOTAL 34690.33 MEAN 94.8 MAX 700 MIN .11 AC-FT 68810

RIO GRANDE BASIN

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

LOCATION.--Lat 36°42'24", long 106°44'42", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on right bank 3.7 mi northwest of Heron Dam, 7.8 mi downstream from Horse Lake, and 9.9 mi west of Los Ojos.

DRAINAGE AREA.--45 mi², approximately.

PERIOD OF RECORD.--October and November 1962 (monthly discharge only), December 1962 to current year. No winter records subsequent to 1973. Published as "near Park View" prior to 1976.

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

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

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 28 ft³/s, Aug. 25, no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.3	---	---	---	15	3.7	1.6	.81	.05	24	2.0
2	1.3	5.4	---	---	---	15	7.3	1.6	.57	.04	2.0	1.1
3	1.2	3.2	---	---	---	15	7.5	1.5	.48	.04	3.0	.61
4	1.1	1.7	---	---	---	18	6.0	1.4	.42	.03	.26	.33
5	1.0	.96	---	---	---	13	4.9	1.4	.39	.05	.06	.22
6	.92	.96	---	---	---	13	3.9	1.4	.39	.04	.26	.18
7	.92	1.6	---	---	---	17	3.7	1.3	.30	.02	.76	.14
8	.84	2.8	---	---	---	11	3.4	1.2	.20	.02	.20	.12
9	.76	1.8	---	---	---	6.2	2.8	1.2	.33	.04	.06	.11
10	.72	1.2	---	---	---	7.3	2.5	1.2	.10	.03	.05	.10
11	.68	.80	---	---	---	4.9	2.2	1.1	.10	.02	.05	.86
12	.64	.63	---	---	---	4.0	2.2	1.0	.14	.02	.05	3.1
13	.68	.49	---	---	---	3.3	2.1	.96	.14	.01	.05	2.9
14	.92	.42	---	---	---	3.3	2.0	.92	.10	.00	.04	1.7
15	1.0	.52	---	---	---	3.8	2.5	.88	.09	.00	.04	.54
16	.92	.96	---	---	---	3.8	5.1	.80	.36	.00	.06	.26
17	.72	.80	---	---	---	3.5	6.4	.96	.33	.00	.06	.18
18	.64	.67	---	---	---	3.6	4.0	1.4	.16	.00	.05	.16
19	.61	.52	---	---	---	6.3	3.4	1.6	.09	.00	.04	.11
20	.61	.49	---	---	---	11	2.8	1.4	.06	.00	.03	.10
21	.54	.42	---	---	---	16	2.5	1.8	.06	.02	.04	.10
22	.51	.36	---	---	---	21	3.3	1.2	.05	.01	.03	.11
23	.51	.34	---	---	---	21	5.0	1.0	.05	.00	.04	.11
24	.51	.32	---	---	---	18	5.5	.84	.06	.00	.76	.09
25	.88	.32	---	---	---	11	3.5	.76	.06	.01	28	.08
26	1.0	.36	---	---	---	20	2.5	.76	.05	.00	6.1	.06
27	.68	.38	---	---	---	21	2.1	.68	.06	.00	25	.06
28	.54	.36	---	---	---	13	2.0	.57	.08	.00	4.6	.05
29	.54	.32	---	---	---	5.9	2.0	.51	.07	.00	5.2	.05
30	1.0	.30	---	---	---	5.0	1.8	.61	.06	.00	23	.05
31	1.2	---	---	---	---	4.5	---	1.0	---	1.1	21	---
TOTAL	25.39	30.70	---	---	---	334.4	108.6	34.55	6.16	1.55	144.89	15.58
MEAN	.82	1.02	---	---	---	10.8	3.62	1.11	.21	.050	4.67	.52
MAX	1.3	5.4	---	---	---	21	7.5	1.8	.81	1.1	28	3.1
MIN	.51	.30	---	---	---	3.3	1.8	.51	.05	.00	.03	.05
AC-FT	50	61	---	---	---	663	215	69	12	3.1	287	31

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 mi².

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. 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 U.S. 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, 396,100 acre-ft, Aug. 30 to Sept. 1, elevation, 7,185.23 ft; minimum, 345,900 acre-ft, Apr. 29, elevation, 7,176.28 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by U.S. Bureau of Reclamation in 1971)

7,170	312,600
7,180	366,200
7,190	424,700

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	395200	393900	393400	393000	393500	390900	385100	346700	367000	389700	392900	396100
2	395100	394100	393300	392900	393700	390800	384800	346900	367600	390000	393300	396000
3	395200	394100	393300	392900	393800	390800	384200	347200	368100	390300	393300	395900
4	395000	394000	393300	392900	393600	390800	383300	347600	369000	390600	393400	395700
5	394900	394000	393300	393100	393300	390800	381400	347800	370100	391000	393500	395600
6	394900	394000	393300	393300	393200	390700	379600	348100	371200	391100	393700	395400
7	394800	394100	393200	393200	393100	390700	377800	348400	372300	391200	393800	395300
8	394700	394000	393200	393300	392900	390500	375800	348700	373600	391400	393800	395200
9	394500	394000	393100	393300	392800	390500	373400	348900	374700	391500	393900	395200
10	394500	393900	393100	393300	392600	390300	371100	349200	375800	391500	393800	395100
11	394300	393900	393100	393200	392500	390100	368900	349500	377000	391800	393600	395400
12	394300	393900	393100	393200	392400	390000	367100	350100	378000	392000	393400	395600
13	394300	393800	393100	393200	392200	389900	365600	350900	378800	392100	393300	395700
14	394200	393800	393000	393200	392100	389600	364000	351800	379500	392100	393200	395800
15	394200	393900	393000	393100	391900	389400	362400	353000	380200	392100	393100	395800
16	394200	393900	392900	393200	391800	389000	361000	354200	381000	392100	393100	395800
17	394100	393800	393100	393300	391900	388600	359500	355300	381600	392100	393300	395800
18	394000	393600	393100	393500	391800	388400	357700	356900	382300	392100	393300	395700
19	394000	393600	393100	393500	391600	388200	355900	358200	383000	392100	393400	395600
20	394000	393600	393100	393400	391500	387900	354400	359300	383700	392400	393400	395500
21	393800	393500	393100	393400	391400	387800	353300	360000	384300	392400	393300	395500
22	393700	393500	393000	393400	391300	387800	352800	360500	384800	392400	393300	395300
23	393600	393500	393000	393400	391200	387600	352400	361000	385600	392400	393400	395200
24	393600	393500	393100	393300	391100	387400	352100	361600	386100	392400	393700	395200
25	393700	393500	393200	393300	391100	387100	351200	362200	386800	392300	394200	395100
26	393600	393500	393200	393300	391100	387000	349800	362800	387300	392300	394300	395000
27	393600	393500	393200	393300	391000	387100	348300	363500	387700	392300	395500	394900
28	393500	393400	393100	393300	391000	386700	346500	364300	388500	392400	395800	394900
29	393500	393400	393100	393300	391000	386300	345900	365100	389000	392000	396000	394800
30	393500	393400	393100	393400	---	385900	346300	365900	389500	392000	396100	394800
31	393500	---	393000	393500	---	385600	---	366600	---	392500	396100	---
MAX	395200	394100	393400	393500	393800	390900	385100	366600	389500	392500	396100	396100
MIN	393500	393400	392900	392900	391000	385600	345900	346700	367000	389700	392900	394800
(+)	7184.77	7184.75	7184.68	7184.76	7184.33	7183.40	7176.38	7180.07	7184.08	7184.60	7185.21	7184.98
(++)	-1800	-100	-400	+500	-2500	-5400	-39300	+20300	+22900	+3000	+3600	-1300
CAL YR 1987	MAX 400400	MIN 333500	(++)	-6200								
WTR YR 1988	MAX 396100	MIN 345900	(++)	-500								

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

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

RIO GRANDE BASIN

08284520 WILLOW CREEK BELOW HERON DAM, NM

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

DRAINAGE AREA.--193 mi².

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

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

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

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

AVERAGE DISCHARGE.--17 years, 121 ft³/s, 87,660 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,190 ft³/s, April 9-12; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	30	62	283	42	.00	.00	.00	89
2	.00	.00	.00	.00	73	62	281	42	.00	.00	.00	44
3	.00	.00	.00	.00	73	62	281	42	.00	.00	.00	30
4	.00	.00	.00	.00	74	62	643	42	.00	.00	.00	30
5	.00	.00	.00	.00	74	62	970	42	.00	.00	.00	30
6	.00	.00	.00	.00	75	62	992	22	.00	.00	.00	13
7	.00	.00	.00	.00	75	82	988	6.0	.00	.00	.00	.00
8	.00	.00	.00	.00	75	100	1110	5.5	.00	.00	.00	.00
9	.00	.00	.00	.00	75	100	1190	5.5	.00	.00	32	.00
10	.00	.00	.00	.00	68	100	1190	6.0	.00	.00	55	.00
11	.00	.00	.00	.00	62	100	1190	3.0	.00	.00	55	.00
12	.00	.00	.00	.00	62	100	1190	.00	.00	.00	23	.00
13	.00	.00	.00	.00	63	100	1170	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	63	127	1150	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	63	150	1150	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	64	198	1150	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	62	193	1150	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	64	154	1150	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	64	154	1150	.00	.00	.00	.00	15
20	.00	.00	.00	.00	64	154	942	.00	.00	.00	.00	30
21	.00	.00	.00	.00	64	154	694	.00	.00	.00	.00	30
22	.00	.00	.00	.00	64	154	494	.00	.00	.00	.00	12
23	.00	.00	.00	.00	64	196	399	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	64	228	399	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	64	228	613	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	63	227	818	.00	.00	.00	5.5	.00
27	.00	.00	.00	.00	62	227	914	.00	.00	.00	9.6	.00
28	.00	.00	.00	.00	62	227	1060	.00	.00	78	9.6	.00
29	.00	.00	.00	.00	62	260	507	.00	.00	53	62	.00
30	.00	.00	.00	.00	---	285	42	.00	.00	.00	126	.00
31	.00	---	.00	.00	---	284	---	.00	---	.00	126	---
TOTAL	0.00	0.00	0.00	0.00	1892	4654	25260	258.00	0.00	131.00	503.70	323.00
MEAN	.00	.00	.00	.00	65.2	150	842	8.32	.00	4.23	16.2	10.8
MAX	.00	.00	.00	.00	75	285	1190	42	.00	78	126	89
MIN	.00	.00	.00	.00	30	62	42	.00	.00	.00	.00	.00
AC-FT	.0	.0	.0	.0	3750	9230	50100	512	.0	260	999	641

CAL YR 1987 TOTAL 47457.00 MEAN 130 MAX 944 MIN .00 AC-FT 94130
WTR YR 1988 TOTAL 33021.70 MEAN 90.2 MAX 1190 MIN .00 AC-FT 65500

08285000 EL VADO RESERVOIR NEAR TIERRA AMARILLA, NM

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

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

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 204,900 acre-ft, of which 7,400 acre-ft was uncontrolled storage, June 4, 5, 1948, gage height, 6,904.2 ft; no storage at times prior to December 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 179,820 acre-ft, June 12, elevation, 6,899.99 ft minimum, 117,340 acre-ft, Mar. 16, elevation, 6,877.68 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by U.S. Bureau of Reclamation in 1984)

6,885	135,900
6,895	164,400
6,900	179,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137610	129560	127660	122100	118400	118930	120010	170990	178580	179470	163780	159380
2	137090	129790	127460	121900	118500	119050	120030	169580	178990	179370	163330	159410
3	136340	129840	127300	121700	118640	119130	120150	168410	179150	179310	162880	158290
4	135600	129870	127150	121530	118690	119150	120940	168160	179180	179280	162400	156520
5	134880	129870	127000	121450	118690	119080	122620	168320	179280	179280	162700	155550
6	134120	129890	126790	121430	118690	118960	124570	168160	179440	179310	162970	155380
7	133460	130000	126670	121310	118710	118860	126690	167460	179410	179280	163150	155230
8	132990	130020	126490	121180	118690	118760	129560	166880	179370	179180	163210	155080
9	132620	130020	126290	121060	118710	118640	132670	166790	179310	179180	163240	154730
10	132360	130000	126060	120940	118760	118520	135300	167340	179370	179220	163330	154090
11	132120	129970	125910	120810	118710	118450	137840	168130	179720	179180	163360	153630
12	131810	129940	125780	120690	118760	118130	141300	169240	179820	179220	163270	153430
13	131600	129870	125530	120570	118760	117890	144280	170410	179630	179220	162130	153800
14	131390	129840	125270	120420	118760	117700	146800	170960	179530	179220	161290	153980
15	131290	129790	125070	120270	118760	117440	149120	171580	179600	179220	160960	154010
16	131080	129710	124870	120200	118760	117340	151690	172950	179750	178020	160360	153950
17	130930	129610	124750	120130	118740	117480	153690	174690	179690	177040	159650	153860
18	130770	129450	124620	120080	118710	117650	155380	175780	179560	176820	159090	153720
19	130540	129330	124440	120030	118710	117820	157160	177230	179530	176470	159000	153660
20	130360	129220	124290	119880	118710	118010	158940	178110	179530	175910	158880	153430
21	130180	129150	124070	119760	118690	118260	160750	178360	179470	175310	158700	152990
22	130020	129040	123870	119640	118690	118570	162130	177950	179410	174560	158520	152640
23	129920	128940	123690	119520	118690	118980	162820	177610	179500	173600	157430	152640
24	129790	128840	123590	119400	118670	119490	163450	177480	179600	172450	158610	152470
25	129710	128710	123440	119220	118640	119810	164480	177670	179500	171460	158610	152380
26	129760	128610	123270	119100	118640	120010	165720	178110	179370	170380	158610	152180
27	129740	128450	123090	118960	118670	120370	167190	178300	179340	169110	158490	152070
28	129610	128220	122920	118840	118710	120740	169240	177830	179720	167950	158140	151920
29	129530	128020	122690	118710	118810	120620	170350	177260	179660	167060	158550	151840
30	129480	127840	122490	118590	---	120370	170750	177320	179630	165660	158910	151690
31	129400	---	122320	118470	---	120180	---	178140	---	164480	159140	---
MAX	137610	130020	127660	122100	118810	120740	170750	178360	179820	179470	163780	159410
MIN	129400	127840	122320	118470	118400	117340	120010	166790	178580	164480	157430	151690
(+)	6882.52	6881.91	6879.72	6878.15	6878.29	6878.62	6897.08	6899.46	6899.93	6895.04	6893.26	6890.71
(++)	-9200	-1560	-5520	-3850	+340	+1370	+50570	+7420	+1490	-15150	-5340	-7450

CAL YR 1987 MAX 173800 MIN 122320 (++) -54080

WTR YR 1988 MAX 179820 MIN 117340 (++) +13090

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

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

08285500 RIO CHAMA BELOW EL VADO DAM, NM

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

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

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

REVISED RECORDS.--WSP 1312: 1914, 1949. WSP 1392: 1949.

GAGE.--Water-stage recorder. Datum of gage is 6,696.12 ft above National Geodetic Vertical Datum of 1929. Prior to October 1935, at site 1.5 mi upstream at different datum. October 1935 to September 1938 at site 1.1 mi upstream at datum 30.34 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by El Vado Reservoir (station 08285000) since 1935. Flow affected by release of transmountain water from Heron Reservoir (station 08284510) since May 1971. Diversions for irrigation of about 10,600 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--5 years (water years 1914-15, 1921-23), 448 ft³/s, 324,600 acre-ft/yr, prior to completion of El Vado Dam.
35 years (water years 1936-70), 373 ft³/s, 270,200 acre-ft/yr, prior to release of transmountain water.
18 years (water years 1971-88), 478 ft³/s, 346,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft³/s, May 22, 1920, gage height, 12 ft, site and datum then in use, from rating curve extended above 3,500 ft³/s; no flow Mar. 25, 26, 31, 1955.
Maximum discharge since construction of El Vado Dam in 1935, 6,610 ft³/s, May 7, 1985, gage height, 7.08 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4 or 5, 1911, was greater than floods in September 1904 and May 1920, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,030 ft³/s, May 5, gage height, 4.58 ft; minimum daily, 74 ft³/s, Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	423	115	150	153	133	149	522	1510	335	254	509	175
2	423	114	146	153	133	161	428	1790	275	232	456	159
3	423	113	152	153	133	215	428	1670	343	206	366	752
4	415	113	156	149	133	257	426	1380	480	188	298	915
5	412	113	156	137	133	272	423	1500	470	173	155	519
6	412	113	156	126	133	271	423	1690	521	148	106	131
7	364	113	156	130	133	271	398	1560	565	144	107	130
8	324	116	156	130	133	267	368	1270	526	140	105	122
9	228	116	156	130	134	280	369	939	458	127	104	210
10	159	116	156	130	133	299	368	850	388	124	104	339
11	159	116	156	130	133	299	370	830	354	119	115	337
12	159	117	156	130	133	299	435	841	456	120	133	258
13	159	118	156	130	133	299	644	925	517	121	648	134
14	140	118	156	130	133	337	902	1220	462	121	498	127
15	119	118	156	130	133	374	1030	1230	434	121	231	122
16	116	118	156	130	133	305	1060	690	393	701	380	121
17	116	118	156	130	133	197	1050	369	435	536	467	120
18	116	120	156	130	134	164	1010	934	421	153	390	119
19	116	121	156	130	142	163	861	662	335	248	143	119
20	116	122	156	130	143	165	812	804	299	387	145	191
21	116	121	156	130	143	170	753	1310	269	388	149	259
22	116	121	157	130	143	170	682	1350	240	442	154	258
23	116	121	159	130	143	193	673	1120	208	552	140	174
24	116	121	159	130	143	211	672	872	212	598	179	102
25	116	135	159	130	143	262	675	704	304	562	140	91
26	113	146	159	132	143	339	682	568	323	585	160	91
27	113	148	159	132	143	347	684	695	231	718	686	90
28	113	154	158	133	143	427	644	992	163	694	573	82
29	113	156	153	133	143	574	736	987	205	545	187	74
30	113	156	153	133	---	637	1050	645	272	813	195	74
31	113	---	153	133	---	637	---	281	---	755	200	---
TOTAL	6157	3707	4825	4137	3968	9011	19578	32188	10894	11015	8223	6395
MEAN	199	124	156	133	137	291	653	1038	363	355	265	213
MAX	423	156	159	153	143	637	1060	1790	565	813	686	915
MIN	113	113	146	126	133	149	368	281	163	119	104	74
AC-FT	12210	7350	9570	8210	7870	17870	38830	63840	21610	21850	16310	12680
CAL YR 1987 TOTAL	218163			MEAN	598	MAX	3320	MIN	81	AC-FT	432700	
WTR YR 1988 TOTAL	120098			MEAN	328	MAX	1790	MIN	74	AC-FT	238200	

08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, NM

LOCATION.--Lat 36°19'06", long 106°35'50", Rio Arriba County, Hydrologic Unit 13020102, on left bank 40 ft downstream from site of former bridge, 7.7 mi downstream from Rio Gallina, 9 mi northwest of Youngsville, 15.6 mi upstream from Abiquiu Dam, 30.3 mi downstream from El Vado Dam, and at mile 47.4.

DRAINAGE AREA.--1,600 mi², of which about 100 mi² is probably noncontributing.

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

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

REMARKS.--Estimated daily discharge: Dec. 13-16 and Dec. 24 to Feb. 14. Records good except for estimated daily discharges, which are poor. 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. Satellite telemetry available at station.

AVERAGE DISCHARGE.--9 years (water years 1962-70), 358 ft³/s, 259,400 acre-ft/yr, prior to release of transmountain water.

18 years (water years 1971-88), 508 ft³/s, 368,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,680 ft³/s, May 8, 1985, gage height, 7.67 ft; maximum gage height, 8.70 ft, May 20, 1973; minimum, 7.5 ft³/s, Oct. 17, 18, 1963.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,550 ft³/s, Aug. 24, gage height, 5.91 ft; minimum daily, 106 ft³/s, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	470	147	147	130	127	349	632	1480	321	293	564	161
2	407	249	146	120	127	338	441	1980	362	243	618	164
3	406	141	147	120	127	271	448	1850	302	263	477	410
4	407	131	149	120	126	299	448	1510	468	194	350	964
5	407	127	150	120	127	335	450	1360	476	196	241	860
6	405	131	153	115	129	321	454	1810	491	165	218	177
7	394	134	151	121	127	336	452	1610	561	152	224	158
8	316	135	150	122	127	279	411	1450	547	158	137	150
9	308	127	147	123	127	274	415	1030	470	134	126	148
10	175	125	147	122	127	303	413	881	408	171	123	331
11	170	124	149	122	128	298	409	839	357	124	119	437
12	168	121	148	122	130	296	423	848	371	117	136	396
13	169	121	145	122	132	293	594	858	509	113	331	255
14	173	124	140	122	140	297	904	1270	488	112	767	248
15	141	127	140	122	144	365	1100	1290	424	110	137	187
16	129	123	145	120	144	365	1180	1090	407	340	363	152
17	127	119	148	122	145	227	1200	327	430	861	422	149
18	126	119	150	122	143	173	1160	826	446	142	720	149
19	126	117	147	123	143	170	966	959	383	163	198	145
20	127	117	148	123	145	175	875	651	297	358	150	146
21	126	117	147	122	148	194	854	1340	294	435	149	272
22	127	117	147	122	149	187	741	1480	239	396	151	279
23	126	116	147	123	153	180	744	1260	230	516	172	274
24	128	116	140	122	158	219	739	1010	185	591	312	145
25	131	114	140	122	169	218	742	785	271	587	351	127
26	128	145	140	124	188	334	736	672	375	528	233	125
27	127	145	140	127	231	351	735	571	321	647	624	123
28	126	147	140	129	301	378	724	1020	195	780	847	121
29	127	148	140	129	396	546	708	1020	279	552	377	109
30	138	148	140	129	---	660	1010	936	270	668	172	106
31	134	---	135	128	---	669	---	334	---	935	167	---
TOTAL	6569	3972	4503	3810	4558	9700	21108	34347	11177	11044	9976	7468
MEAN	212	132	145	123	157	313	704	1108	373	356	322	249
MAX	470	249	153	130	396	669	1200	1980	561	935	847	964
MIN	126	114	135	115	126	170	409	327	185	110	119	106
AC-FT	13030	7880	8930	7560	9040	19240	41870	68130	22170	21910	19790	14810
CAL YR 1987	TOTAL	227237	MEAN	623	MAX	3650	MIN	82	AC-FT	450700		
WTR YR 1988	TOTAL	128232	MEAN	350	MAX	1980	MIN	106	AC-FT	254300		

RIO GRANDE BASIN

08286900 ABIQUIU RESERVOIR NEAR ABIQUIU, NM

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

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

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

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

REMARKS.--Reservoir is formed by earthfill dam, completed Feb. 5, 1963. Capacity, 1,201,000 acre-ft between elevations 6,060 ft, invert of outlet tunnel, and 6,350 ft, crest of spillway, based on capacity table effective Jan. 1, 1980. No dead storage. Reservoir is used for flood control and, since March 1976, for recreation. A desilting pool of about 2,000 acre-ft was maintained from May 1968 to 1974, when it was increased to 4,000 acre-ft and continued until December 1975. Satellite telemetry available 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, 262,160 acre-ft, Oct. 1, elevation, 6,235.74 ft; minimum, 168,390 acre-ft, Nov. 20, elevation, 6,214.28 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by U.S. Army Corps of Engineers in 1984)

6,200	116,838	6,240	282,538
6,220	191,312	6,250	337,187
6,230	234,826	6,260	395,757

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	262160	197710	170300	177370	183470	191310	183960	184650	186640	181010	181940	184280
2	260300	195450	170540	177530	183720	191930	183760	186560	185220	180970	182500	184320
3	258590	193050	170810	177690	184000	192140	183550	187950	184690	180930	182420	184530
4	256740	190370	171120	177970	184240	192340	183310	188720	184610	180770	182660	186110
5	255040	187910	171360	178210	184490	192720	183310	189300	184040	180690	182540	187330
6	253160	185580	171630	178610	184690	193130	183390	190610	183310	180610	182300	187370
7	251230	182950	172030	178770	184890	193540	183590	191310	182750	180450	181620	187170
8	249750	180490	172180	178810	185180	193750	183720	191760	182380	180450	181380	186800
9	247170	178010	172380	178970	185420	194080	183680	191930	182260	180450	181290	186560
10	244900	175660	172620	179130	185620	194370	183550	191560	182220	180410	181170	186720
11	242600	173480	172850	179330	185830	194370	183350	191190	182260	180370	181210	187010
12	240350	171590	173090	179530	186030	194290	183190	190690	182260	180370	181170	187090
13	238070	170460	173210	179650	186230	194080	183110	190280	182100	180330	181420	186720
14	235750	169870	173400	179810	186400	194080	182990	190490	181860	180290	182500	186560
15	233540	169330	173560	179970	186600	194370	183110	190980	181820	180210	183030	186520
16	231380	168670	173800	180170	186890	194460	183640	191020	181820	180490	182870	186480
17	230280	168470	174070	180250	187090	194000	183960	190490	181700	181940	183030	186480
18	229230	168430	174430	180450	187370	192630	184410	190530	181540	182060	183230	186520
19	228370	168430	174630	180850	187620	190980	184360	190820	181460	181860	183390	186480
20	226460	168390	174830	181130	187860	189380	184120	190490	181460	181900	183350	186440
21	223580	168430	175060	181250	188030	187820	184120	191930	181500	182060	183310	186640
22	221750	168550	175300	181540	188270	186230	184000	192260	181460	181940	183640	186680
23	220230	168550	175540	181700	188520	184690	183390	193000	181290	182140	183510	186560
24	217710	168700	175820	181820	188720	183720	182660	192880	181460	182260	183270	186400
25	215290	168860	176050	181940	188930	183430	182660	192300	181250	182140	182910	186400
26	212770	169170	176250	182060	189300	183470	182870	191350	180930	181460	182750	186400
27	210000	169370	176410	182260	189630	183590	182950	190410	181130	181050	183960	186480
28	207560	169560	176570	182460	190080	183550	182990	190240	181170	180890	185300	186440
29	204870	169830	176810	182790	190860	183390	182990	190080	181290	180890	185580	186320
30	202420	170110	176970	183030	---	183550	183390	189710	181130	181130	184770	186190
31	199810	---	177210	183230	---	183760	---	188110	---	181820	184320	---
MAX	262160	197710	177210	183230	190860	194460	184410	193000	186640	182260	185580	187370
MIN	199810	168390	170300	177370	183470	183390	182660	184650	180930	180210	181170	184280
(+)	6222.04	6214.72	6216.52	6218.02	6219.89	6218.15	6218.06	6219.22	6217.50	6217.67	6218.29	6218.75
(++)	-63530	-29700	+7100	+6020	+7630	-7100	-370	+4720	-6980	+690	+2500	+1870

CAL YR 1987 MAX 402260 MIN 168390 (++) -174630
WTR YR 1988 MAX 262160 MIN 168390 (++) -77150

(+) 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 SE¼SE¼ sec.8, T.23 N., R.5 E., Rio Arriba County, Hydrologic Unit 13020102, on right bank 0.8 mi downstream from Abiquiu Dam, 5.9 mi northwest of Abiquiu, and at mile 31.3.

DRAINAGE AREA.--2,147 mi², of which about 100 mi² is probably noncontributing.

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

GAGE.--Water-stage recorder. Concrete control since Jan. 25, 1966. Elevation of gage is 6,040 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 25, 1966, at datum 1.60 ft lower.

REMARKS.--Estimated daily discharge: Jan. 11. Records good. Flow controlled by El Vado Reservoir (station 08285000) 46.4 mi upstream and Abiquiu Reservoir (station 08286900) 0.8 mi upstream. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 54.5 mi upstream. Diversions for irrigation of about 17,600 acres upstream from station. U.S. Army Corps of Engineers gage-height telemeter and satellite telemetry available at station.

AVERAGE DISCHARGE.--9 years (water years 1962-70), 384 ft³/s, 278,200 acre-ft/yr, prior to release of transmountain water.

18 years (water years 1971-88), 530 ft³/s, 384,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft³/s, July 1, 1965, gage height, 6.69 ft, datum then in use; maximum gage height, 7.29 ft, Jan. 14, 1967 (backwater from ice); minimum discharge, about 0.5 ft³/s, Mar. 17, 1966, Jan. 28, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft³/s, Oct. 20, gage height, 4.54 ft; minimum daily, 42 ft³/s, Dec. 3, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	1460	45	48	48	97	679	889	1120	338	557	234
2	1350	1450	46	46	49	153	631	1070	1120	258	548	234
3	1330	1450	42	51	47	178	631	1190	619	258	669	236
4	1350	1450	43	53	46	178	583	1190	581	230	525	238
5	1320	1450	42	54	49	179	539	1190	806	197	431	238
6	1390	1440	50	56	48	177	520	1170	829	196	537	197
7	1370	1430	49	55	50	153	520	1110	854	169	548	269
8	1310	1430	47	51	48	147	565	1100	722	129	226	332
9	1330	1430	47	52	50	155	619	1100	534	116	127	246
10	1350	1350	49	53	49	155	617	1110	419	118	123	267
11	1340	1200	54	54	49	247	608	1110	323	112	115	384
12	1350	1110	52	51	49	375	649	1110	339	99	120	465
13	1340	718	46	53	49	378	807	1110	570	99	133	526
14	1340	460	53	51	49	302	1060	1110	613	107	133	315
15	1330	459	47	50	49	260	1160	1110	431	111	221	172
16	1020	459	54	48	49	264	1150	1110	406	98	352	136
17	644	285	55	47	49	483	1150	668	486	99	303	136
18	644	201	52	47	49	940	1150	776	540	99	346	135
19	641	146	52	47	44	1030	1150	927	403	208	231	133
20	1090	147	52	47	46	1010	1150	923	265	303	180	133
21	1560	109	55	47	46	1000	959	921	250	375	189	181
22	1160	110	50	47	46	1000	843	915	237	419	182	295
23	924	89	53	47	46	1000	1160	1000	248	415	276	309
24	1400	74	53	47	45	750	1150	1130	225	451	404	222
25	1400	66	53	47	46	345	839	1120	380	643	532	169
26	1430	45	54	48	46	323	695	1130	477	838	413	98
27	1460	46	56	50	46	338	759	1130	252	884	215	50
28	1460	46	55	51	47	454	759	1130	168	836	236	101
29	1460	46	56	50	49	574	793	1130	262	655	332	158
30	1460	47	56	50	---	608	848	1120	345	567	641	133
31	1470	---	51	49	---	681	---	1120	---	566	506	---
TOTAL	39093	20203	1569	1547	1383	13934	24743	32919	14824	9993	10351	6742
MEAN	1261	673	50.6	49.9	47.7	449	825	1062	494	322	334	225
MAX	1560	1460	56	56	50	1030	1160	1190	1120	884	669	526
MIN	641	45	42	46	44	97	520	668	168	98	115	50
AC-FT	77540	40070	3110	3070	2740	27640	49080	65290	29400	19820	20530	13370
CAL YR 1987 TOTAL	342969			MEAN	940	MAX	1970	MIN	39	AC-FT	680300	
WTR YR 1988 TOTAL	177301			MEAN	484	MAX	1560	MIN	42	AC-FT	351700	

08289000 RIO OJO CALIENTE AT LA MADERA, NM

LOCATION.--Lat 36°20'59", long 106°02'37", in NW¼NE¼ sec.1, T.24 N., R.8 E., Rio Arriba County, Hydrologic Unit 13020102, on left bank 400 ft upstream from bridge on State Highway 96, 2.4 mi south of La Madera, 2.6 mi downstream from confluence of Rio Vallecitos and Rio Tusas, 3.1 mi north of Ojo Caliente, and at mile 19.9.

DRAINAGE AREA.--419 mi².

PERIOD OF RECORD.--April 1932 to current year.

REVISED RECORDS.--WSP 1712: 1959.

GAGE.--Water-stage recorder. Datum of gage is 6,358.84 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 23, 1934, at site about 2.6 mi upstream at different datum. Apr. 23, 1934 to Apr. 21, 1936, at datum 12.58 ft lower and Apr. 22, 1936 to Oct. 26, 1956, at datum 13.84 ft lower, both at site 1,400 ft downstream.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 3, Dec. 23-31, and Jan. 5, 6. Records good except for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of about 3,500 acres (1962 determination). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--56 years, 69.8 ft³/s, 50,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,140 ft³/s, Apr. 21, 1958, gage height, 6.42 ft, from rating curve extended above 1,300 ft³/s; maximum gage height, 7.25 ft, from floodmarks, June 19, 1966; minimum discharge, 0.2 ft³/s, Aug. 17, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Apr. 21, 1958, may have been exceeded by a flood in May 1920, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 3	2330	994	5.63	Aug. 5	0515	*1,110	*5.78

Minimum discharge, 5.9 ft³/s, Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	30	18	20	15	35	45	359	49	18	15	37
2	7.9	37	19	19	16	36	54	212	42	16	14	34
3	8.3	32	20	19	23	35	58	164	37	15	76	29
4	7.6	28	23	19	21	31	65	174	30	15	69	25
5	7.8	27	24	20	19	32	81	198	33	15	287	23
6	9.0	28	23	21	18	32	95	214	35	14	151	22
7	9.7	34	21	21	18	34	133	149	32	12	94	21
8	9.5	29	23	21	20	30	178	111	29	13	61	20
9	9.4	26	18	21	20	27	199	89	25	15	47	19
10	8.9	23	18	21	20	31	175	94	24	13	39	17
11	10	22	23	21	20	26	170	101	36	12	35	20
12	12	23	19	21	20	24	216	114	38	13	30	49
13	12	21	17	20	21	28	258	121	29	11	26	72
14	14	21	16	20	20	21	287	113	26	10	22	69
15	16	24	17	21	20	25	291	109	23	9.9	20	46
16	16	24	20	21	21	30	333	105	30	9.2	21	35
17	15	23	22	22	19	21	237	92	33	8.3	22	31
18	14	21	23	22	20	23	185	140	26	7.5	27	29
19	14	20	23	22	19	26	169	170	22	7.5	28	26
20	14	19	22	20	20	27	211	168	20	8.5	23	25
21	14	20	18	18	20	29	280	184	17	8.9	20	25
22	14	20	19	19	21	33	233	157	14	8.2	19	26
23	14	20	18	18	21	40	167	107	14	7.3	20	27
24	14	20	18	18	22	45	148	88	16	7.3	23	26
25	14	20	18	18	23	49	123	82	16	6.7	33	24
26	29	20	18	18	24	56	127	80	16	6.2	25	22
27	22	19	18	18	26	67	119	75	18	6.2	58	21
28	20	18	18	18	30	87	148	70	21	8.1	82	20
29	18	18	18	19	29	62	205	64	23	17	79	20
30	17	18	18	20	---	57	294	57	25	15	46	20
31	18	---	19	19	---	54	---	55	---	14	40	---
TOTAL	416.7	705	609	615	606	1153	5284	4016	799	347.8	1552	880
MEAN	13.4	23.5	19.6	19.8	20.9	37.2	176	130	26.6	11.2	50.1	29.3
MAX	29	37	24	22	30	87	333	359	49	18	287	72
MIN	7.6	18	16	18	15	21	45	55	14	6.2	14	17
AC-FT	827	1400	1210	1220	1200	2290	10480	7970	1580	690	3080	1750
CAL YR 1987	TOTAL	36679.4		MEAN	100	MAX	1030	MIN	4.2	AC-FT	72750	
WTR YR 1988	TOTAL	16983.5		MEAN	46.4	MAX	359	MIN	6.2	AC-FT	33690	

08290000 RIO CHAMA NEAR CHAMITA, NM

LOCATION.--Lat 36°04'26", long 106°06'40", in NE¼NE¼ sec.8, T.21 N., R.8 E., Rio Arriba County, Hydrologic Unit 13020102, in San Juan Pueblo Grant, at downstream end of pier nearest left bank of bridge on U.S. Highway 285, 0.5 mi west of Chamita, 2.5 mi northwest of San Juan Pueblo, and at mile 2.8.

DRAINAGE AREA.--3,144 mi², of which about 100 mi² is probably noncontributing.

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. 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.--Estimated daily discharges: Nov. 17, 18, Dec. 10-13, 24, 25, Jan. 1-7, 22-24, Aug. 27, and Sept. 1-7. Water-discharge records good except for estimated daily discharges, 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) and Abiquiu Reservoir (station 08286900), 74.9 mi and 29.3 mi upstream respectively. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 83.0 mi upstream. National Weather Service gage-height telemeter and satellite telemetry available at station.

AVERAGE DISCHARGE.--58 years (water years 1913-70), 541 ft³/s, 392,000 acre-ft/yr, prior to release of transmountain water.
18 years (water years 1971-88), 586 ft³/s, 424,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s, May 22, 1920, from rating curve extended above 2,300 ft³/s; maximum gage height, 10.45 ft, Aug. 22, 1961; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The floods of Sept. 29, 1904, and Oct. 4 or 5, 1911, probably exceeded 15,000 ft³/s. Another major flood occurred in 1884, from newspaper accounts.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,270 ft³/s, Nov. 2, gage height, 5.53 ft; minimum daily, 54 ft³/s, July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	1620	82	76	90	90	753	1240	1200	320	474	313
2	1230	1710	79	70	90	146	673	1160	1200	244	441	246
3	1270	1600	80	70	98	187	679	1290	994	232	496	230
4	1300	1580	79	72	95	193	675	1280	368	229	756	212
5	1300	1560	81	74	86	191	639	1290	784	178	792	200
6	1320	1580	81	78	86	192	617	1350	784	193	770	200
7	1340	1570	82	80	84	190	644	1280	812	173	678	200
8	1340	1570	77	80	85	164	719	1220	769	140	384	278
9	1350	1560	75	84	86	178	833	1190	518	156	180	257
10	1370	1540	76	87	87	181	802	1170	447	105	156	150
11	1370	1300	74	91	83	180	787	1190	352	104	143	306
12	1380	1270	74	86	85	342	815	1200	352	80	137	581
13	1380	908	76	86	85	359	935	1240	419	59	135	624
14	1400	477	74	90	84	341	1380	1200	662	54	135	555
15	1400	467	83	88	80	268	1590	1180	448	64	135	263
16	1290	467	86	98	83	276	1780	1200	376	62	288	194
17	575	400	95	88	86	304	1620	988	410	57	322	173
18	559	246	98	92	84	813	1500	675	486	56	321	160
19	557	207	92	88	82	999	1430	1090	466	57	311	151
20	754	175	88	85	80	1020	1450	1120	246	218	193	150
21	1610	150	84	63	81	1010	1480	1170	206	289	189	173
22	1500	142	89	64	82	1030	952	1120	184	331	186	274
23	637	139	89	64	81	1030	1430	1070	193	322	384	321
24	1450	118	88	64	82	996	1390	1250	184	336	467	297
25	1470	111	86	66	82	456	1140	1230	166	427	432	185
26	1490	110	84	74	83	380	691	1230	417	648	527	100
27	1560	92	84	80	84	399	775	1200	332	755	357	70
28	1560	83	89	86	86	439	768	1220	159	752	351	58
29	1550	82	86	89	88	678	840	1220	182	682	344	116
30	1560	82	87	93	---	629	1060	1220	283	507	517	114
31	1570	---	78	99	---	719	---	1230	---	493	665	---
TOTAL	39462	22916	2576	2505	2468	14380	30847	36713	14399	8323	11666	7151
MEAN	1273	764	83.1	80.8	85.1	464	1028	1184	480	268	376	238
MAX	1610	1710	98	99	98	1030	1780	1350	1200	755	792	624
MIN	557	82	74	63	80	90	617	675	159	54	135	58
AC-FT	78270	45450	5110	4970	4900	28520	61190	72820	28560	16510	23140	14180
CAL YR 1987 TOTAL	364690			MEAN	999	MAX	3100	MIN	45	AC-FT	723400	
WTR YR 1988 TOTAL	193406			MEAN	528	MAX	1780	MIN	54	AC-FT	383600	

08290000 RIO CHAMA NEAR CHAMITA, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 18...	1045	218	425	448	8.40	8.30	6.0	7.0	11.8	170	43
FEB 16...	1350	88	530	551	8.40	8.40	12.5	8.0	14.0	200	29
MAY 12...	1245	1180	355	389	7.90	8.30	24.0	14.0	9.1	150	52
AUG 31...	1345	688	372	385	7.90	8.40	23.0	17.5	7.7	150	43
DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 18...	49	11	27	0.9	2.5	--	146	5	128	125	93
FEB 16...	55	14	43	1	3.6	185	--	6	161	166	97
MAY 12...	42	10	20	0.7	1.8	--	112	0	92	94	86
AUG 31...	42	10	25	0.9	2.4	--	99	0	81	103	78
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 18...	11	0.30	16	285	2	2	50	<1	<1	2	1
FEB 16...	16	0.40	18	347	--	--	70	--	--	--	--
MAY 12...	4.5	0.30	14	235	--	--	30	--	--	--	--
AUG 31...	4.7	0.20	14	238	--	--	30	--	--	--	--
DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 18...	4	5	8	<5	<5	0.10	<0.1	<1	<1	10	5
FEB 16...	--	--	6	--	--	--	--	--	--	--	--
MAY 12...	--	--	15	--	--	--	--	--	--	--	--
AUG 31...	--	--	<3	--	--	--	--	--	--	--	--

08290000 RIO CHAMA NEAR CHAMITA, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)
NOV 18...	48	28	98	<3	K80	<0.1	<0.010	<0.1	<0.010	<0.010	<0.010
FEB 16...	35	8.3	97	<1	5	--	--	--	--	--	--
MAY 12...	87	277	72	34	50	--	--	--	--	--	--
AUG 31...	4180	7760	59	--	--	<0.1	<0.010	<0.1	<0.010	<0.010	<0.010

DATE	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)
NOV 18...	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01
FEB 16...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	--	--	--	--	--	--	--	--	--	--	--
AUG 31...	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01

DATE	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
NOV 18...	<0.01	<0.01	<1	<0.01	--	--	--	<0.1	<0.10	<0.01
FEB 16...	--	--	--	--	--	--	--	--	--	--
MAY 12...	--	--	--	--	<0.01	<0.01	<0.01	--	--	--
AUG 31...	<0.01	<0.01	<1	<0.01	<0.01	<0.01	<0.01	<0.1	<0.10	<0.01

08291000 SANTA CRUZ RIVER AT CUNDIYO, NM

LOCATION.--Lat 35°57'53", long 105°54'14", in SE¼NW¼ sec.17, T.20 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, on left bank 135 ft downstream from bridge on State Highway 4, 200 ft downstream from confluence of Rio Medio and Rio Frijoles, 0.6 mi northwest of Cundiyo, 1.8 mi upstream from Santa Cruz Dam, and at mile 11.9.

DRAINAGE AREA.--86 mi², approximately.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only from some periods, published in WSP 1312. Prior to October 1953, published as Rio Santa Cruz at Cundiyo.

REVISED RECORDS.--WSP 1392: 1931(M), 1932-33, 1934-39(M), 1942, 1943(M).

GAGE.--Water-stage recorder. Concrete control since Jan. 3, 1954. Elevation of gage is 6,460 ft above National Geodetic Vertical Datum of 1929, from topographic map. Sept. 1, 1930 to Aug. 12, 1932, water-stage recorder at site about 1 mi downstream at different datum. Aug. 13, 1932 to Oct. 29, 1934, water-stage recorder at site 35 ft upstream at datum 0.42 ft higher. Oct. 30, 1934 to Jan. 2, 1954, water-stage recorder at present site at datum 0.64 ft lower.

REMARKS.--Estimated daily discharges: Dec. 14-18 and Dec. 26 to Feb. 2. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 1,000 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--58 years, 31.0 ft³/s, 22,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft³/s, Sept. 24, 1931, gage height, 7.80 ft, site and datum then in use, from rating curve extended above 170 ft³/s; minimum, 0.19 ft³/s, Mar. 13, 1954, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 18	0445	106	2.45	Aug. 31	0415	*952	*4.44
June 26	1515	502	3.56	Sept. 12	2115	262	2.99
July 29	1615	220	2.87	Sept. 21	2230	108	2.46

Minimum discharge, 2.3 ft³/s, Nov. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	20	19	7.8	7.6	14	13	39	50	32	28	156
2	13	20	16	7.8	8.0	13	15	37	49	33	29	121
3	13	17	14	7.8	9.2	13	14	34	49	30	27	108
4	12	15	13	8.0	9.1	12	15	32	48	25	31	98
5	12	14	11	8.4	7.1	11	15	34	49	25	31	89
6	12	17	11	8.4	6.1	11	17	38	48	48	31	81
7	13	17	11	8.0	7.8	12	22	38	47	35	30	74
8	13	14	9.5	7.8	8.8	7.5	26	34	43	31	26	67
9	12	13	11	7.8	8.7	10	25	35	40	39	32	61
10	11	12	15	7.8	8.5	12	22	36	41	36	36	57
11	12	13	9.9	7.8	9.2	8.1	20	37	70	44	31	58
12	12	10	11	7.8	10	10	21	40	58	36	36	80
13	13	12	9.3	7.8	9.5	9.7	23	45	50	31	32	101
14	16	13	10	8.0	8.3	13	25	51	46	27	28	126
15	14	13	12	8.2	11	13	26	52	44	28	30	94
16	14	11	14	8.2	11	11	34	60	40	29	28	85
17	13	11	11	8.0	9.3	11	28	71	40	46	39	74
18	13	8.4	10	7.0	9.2	10	25	88	37	38	41	67
19	13	7.2	9.6	6.6	9.2	10	25	93	34	36	40	61
20	13	14	9.1	6.6	11	10	27	92	32	38	36	57
21	13	15	12	6.6	11	11	33	81	29	34	33	70
22	12	13	11	6.6	9.1	12	32	74	29	31	32	71
23	12	13	9.8	6.6	10	12	29	70	29	29	37	81
24	13	12	9.3	6.6	11	14	27	65	33	27	34	75
25	13	12	8.9	6.6	11	13	26	62	38	27	34	68
26	12	11	8.4	6.8	11	14	26	58	48	26	39	63
27	11	9.9	8.4	7.0	12	16	27	58	36	27	53	59
28	12	17	8.0	7.0	13	19	28	61	38	25	70	55
29	11	21	7.8	7.0	13	16	31	57	34	37	65	52
30	15	21	7.8	7.2	---	16	33	55	30	37	64	50
31	15	---	7.8	7.4	---	16	---	52	---	30	256	---
TOTAL	396	416.5	335.6	231.0	279.7	380.3	730	1679	1259	1017	1359	2359
MEAN	12.8	13.9	10.8	7.45	9.64	12.3	24.3	54.2	42.0	32.8	43.8	78.6
MAX	16	21	19	8.4	13	19	34	93	70	48	256	156
MIN	11	7.2	7.8	6.6	6.1	7.5	13	32	29	25	26	50
AC-FT	785	826	666	458	555	754	1450	3330	2500	2020	2700	4680
CAL YR 1987	TOTAL	18945.1		MEAN	51.9	MAX	266	MIN	7.2	AC-FT	37580	
WTR YR 1988	TOTAL	10442.1		MEAN	28.5	MAX	256	MIN	6.1	AC-FT	20710	

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

[illegible]

RIO GRANDE BASIN

08291600 RIO GRANDE AT SANTA CLARA, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)
NOV 17...	20	94	K12	K110	<0.1	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01
FEB 17...	95	97	<1	K5	--	--	--	--	--	--	--
MAY 11...	303	79	18	63	--	--	--	--	--	--	--
SEP 01...	539	95	--	--	<0.1	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01

DATE	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)
NOV 17...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01
FEB 17...	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--	--
SEP 01...	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01

DATE	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
NOV 17...	<0.01	<0.01	<1	<0.01	--	--	--	<0.1	<0.10	<0.01
FEB 17...	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	<0.01	<0.01	<0.01	--	--	--
SEP 01...	<0.01	<0.01	<1	<0.01	<0.01	<0.01	<0.01	<0.1	<0.10	<0.01

08292000 SANTA CLARA CREEK NEAR ESPANOLA, NM

LOCATION.--Lat 35°58'40", long 106°10'20", in SW¼SW¼ sec.11, T.20 N., R.7 E., Rio Arriba County, Hydrologic Unit 13020101, in Santa Clara Indian Reservation, on right bank 5.5 mi upstream from mouth, and 5.5 mi southwest of Espanola.

DRAINAGE AREA.--34.5 mi².

PERIOD OF RECORD.--February 1936 to September 1941, August 1949 to October 1950, April 1984 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,120 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-21, Dec. 12-24, Dec. 27 to Feb. 2, and Aug. 2-16. Records good except for estimated daily discharges, which are poor. Several observations of water temperature were made during year. Two small diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--10 years (1937-1941) 1950, 1985-1988) 4.78 ft³/s, 3,460 ac-ft/year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 970 ft³/s, Sept. 22, 1941, from rating curve extended above 35 ft³/s on basis of slope-area determination, gage height, 5.65 ft; no flow Aug. 8-13, 1984 possibly from extreme diversion.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
July 30	1415	16	2.10	Sept. 12	2030	32	2.42
July 31	1330	*174	*3.56				

Minimum discharge, 1.5 ft³/s, Dec. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	4.3	3.7	2.8	3.8	4.7	5.1	7.0	4.4	3.4	5.3	4.6
2	4.1	4.9	3.5	2.8	4.0	4.7	4.9	7.2	4.2	3.3	4.7	4.3
3	4.0	3.9	2.9	2.8	4.0	4.6	5.0	7.2	4.1	3.6	4.2	4.1
4	3.9	3.6	3.1	3.3	3.9	4.6	5.1	7.0	4.1	3.2	3.7	4.1
5	3.7	3.5	4.3	4.3	3.9	4.6	5.0	6.7	4.3	3.2	3.7	4.1
6	3.7	5.0	4.5	3.9	4.3	4.6	4.9	6.6	4.2	3.2	3.9	4.2
7	3.7	4.7	4.3	3.0	4.9	4.6	5.0	6.6	4.1	3.0	3.6	4.2
8	3.7	4.4	4.2	3.0	5.7	4.4	5.0	6.7	3.8	3.0	3.8	3.9
9	3.7	4.4	4.2	3.0	5.5	5.1	5.0	6.7	3.7	3.1	3.2	3.8
10	3.6	4.3	4.4	3.1	5.6	4.8	4.6	6.6	3.7	3.0	3.2	3.8
11	3.6	4.3	4.2	3.0	5.8	4.9	4.4	6.2	4.2	3.0	3.0	4.0
12	3.7	4.3	4.1	2.8	5.4	4.9	4.7	5.8	3.9	2.9	2.9	6.4
13	4.2	4.4	3.3	2.8	5.1	5.2	4.8	5.6	3.6	2.9	2.8	7.0
14	4.7	4.4	3.5	2.9	5.0	5.1	5.0	5.5	3.5	2.9	2.7	5.1
15	4.5	4.6	4.0	3.1	5.3	5.7	5.1	5.2	3.6	3.0	2.6	4.4
16	4.3	4.6	4.5	3.3	5.4	5.8	7.2	5.2	3.6	3.2	2.5	4.2
17	4.1	4.7	5.6	3.0	4.6	5.1	8.3	5.3	3.5	3.9	2.4	3.9
18	3.9	4.7	4.3	2.8	4.8	5.7	7.4	5.8	3.5	4.6	2.8	3.7
19	3.7	5.8	4.0	2.7	5.0	6.1	7.1	6.0	3.4	3.4	2.8	3.5
20	3.5	6.1	4.0	2.6	5.4	5.7	6.7	5.7	3.3	3.1	2.4	3.5
21	3.5	4.9	4.1	2.6	5.4	5.2	6.5	5.6	3.2	2.8	2.2	4.2
22	3.4	4.0	4.3	2.8	5.1	5.3	6.6	5.3	3.2	2.7	2.2	4.3
23	3.4	3.9	5.2	3.0	5.0	5.2	7.1	5.0	4.0	2.7	2.7	4.0
24	3.4	3.8	4.5	3.0	5.1	5.2	7.0	5.0	3.5	2.7	3.9	3.6
25	3.5	4.1	3.6	3.0	4.9	4.9	6.8	5.1	3.3	2.6	3.6	3.5
26	3.4	4.0	3.6	3.1	4.8	5.0	6.5	5.0	3.6	2.4	4.5	3.3
27	3.4	4.2	3.3	3.2	5.0	5.2	6.4	4.9	3.6	2.6	5.3	3.2
28	3.4	4.2	3.0	3.3	5.3	5.1	6.4	4.8	3.7	2.8	8.0	3.2
29	3.4	4.5	2.8	3.4	5.0	4.8	6.5	4.5	3.6	4.8	5.6	3.2
30	3.9	3.7	2.8	3.5	---	4.8	6.7	4.3	3.5	4.1	4.8	3.2
31	3.8	---	2.8	3.5	---	5.0	---	4.5	---	11	4.9	---
TOTAL	116.9	132.2	120.6	95.4	143.0	156.6	176.8	178.6	111.9	106.1	113.9	122.5
MEAN	3.77	4.41	3.89	3.08	4.93	5.05	5.89	5.76	3.73	3.42	3.67	4.08
MAX	4.7	6.1	5.6	4.3	5.8	6.1	8.3	7.2	4.4	11	8.0	7.0
MIN	3.4	3.5	2.8	2.6	3.8	4.4	4.4	4.3	3.2	2.4	2.2	3.2
AC-FT	232	262	239	189	284	311	351	354	222	210	226	243
CAL YR 1987	TOTAL	2177.4		MEAN	5.97	MAX	28	MIN	2.1	AC-FT	4320	
WTR YR 1988	TOTAL	1574.5		MEAN	4.30	MAX	11	MIN	2.2	AC-FT	3120	

08294200 NAMBE FALLS RESERVOIR NEAR NAMBE, NM

LOCATION.--Lat 35°50'46", long 105°54'17", in NE¼SW¼, 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 mi².

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

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

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

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,030 acre-ft, many days, elevation, 6,826.75 ft; minimum, 1,420 acre-ft, Oct. 26-29, elevation 6,814.93 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Bureau of Reclamation in 1976)

6,815	1,420	6,825	1,930
6,820	1,660	6,830	2,230

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1570	1450	1630	1870	1940	1940	2020	2020	2020	2020	2020	2030
2	1570	1450	1640	1880	1940	1950	2020	2020	2020	2020	2020	2030
3	1560	1460	1650	1880	1940	1960	2020	2020	2020	2020	2020	2030
4	1560	1470	1660	1880	1940	1960	2020	2020	2020	2020	2020	2030
5	1550	1470	1670	1880	1940	1970	2020	2020	2020	2030	2020	2030
6	1540	1480	1680	1880	1930	1980	2020	2010	2020	2020	2020	2030
7	1540	1490	1680	1870	1930	1990	2020	1990	2020	2020	2020	2020
8	1540	1490	1690	1870	1930	1990	2020	1990	2020	2020	2020	2020
9	1530	1500	1700	1880	1930	2000	2020	1950	2020	2030	2030	2020
10	1530	1500	1710	1880	1930	2000	2020	1920	2020	2020	2030	2020
11	1520	1510	1710	1890	1930	2010	2020	1900	2030	2020	2030	2020
12	1500	1510	1720	1890	1930	2010	2020	1900	2030	2020	2030	2030
13	1490	1510	1730	1890	1930	2020	2020	1900	2020	2020	2030	2030
14	1490	1510	1740	1900	1930	2020	2020	1900	2020	2020	2020	2030
15	1490	1520	1740	1900	1930	2020	2020	1910	2020	2020	2020	2030
16	1500	1520	1750	1900	1930	2020	2020	1930	2020	2020	2020	2030
17	1490	1530	1760	1910	1930	2020	2020	1960	2020	2020	2020	2030
18	1480	1530	1770	1910	1930	2020	2020	2020	2020	2020	2020	2030
19	1480	1540	1780	1910	1930	2020	2020	2030	2020	2020	2020	2030
20	1470	1550	1790	1920	1930	2020	2020	2030	2020	2020	2020	2030
21	1460	1560	1790	1920	1930	2020	2020	2030	2020	2020	2020	2030
22	1450	1560	1800	1920	1930	2020	2020	2020	2020	2020	2020	2030
23	1440	1570	1810	1930	1930	2020	2020	2020	2020	2020	2020	2030
24	1440	1580	1810	1930	1930	2020	2020	2020	2020	2020	2020	2030
25	1430	1590	1820	1930	1930	2020	2020	2020	2020	2020	2020	2030
26	1420	1600	1830	1940	1930	2020	2020	2020	2020	2020	2020	2020
27	1420	1610	1840	1940	1930	2020	2020	2020	2020	2020	2030	2020
28	1420	1610	1840	1940	1930	2020	2020	2030	2020	2020	2020	2020
29	1420	1620	1850	1940	1930	2020	2020	2020	2020	2020	2020	2020
30	1430	1630	1860	1940	---	2020	2020	2020	2020	2020	2020	2020
31	1440	---	1860	1940	---	2020	---	2020	---	2020	2030	---
MAX	1570	1630	1860	1940	1940	2020	2020	2030	2030	2030	2030	2030
MIN	1420	1450	1630	1870	1930	1940	2020	1900	2020	2020	2020	2020
(†)	6815.30	6819.32	6823.81	6825.11	6825.02	6826.54	6826.55	6826.62	6826.53	6826.52	6826.70	6826.61
(††)	-140	+190	+230	+80	-10	+90	0	0	0	0	+10	-10
CAL YR 1987	MAX 2050	MIN 1420	(††) -70									
WTR YR 1988	MAX 2030	MIN 1420	(††) +440									

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

RIO GRANDE BASIN

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 35°52'29", long 106°08'30", in SW¼SW¼ sec.18, T.19 N., R.8 E., Santa Fe County, Hydrologic Unit 13020101, on San Ildefonso Pueblo Grant, near right bank on downstream end of pier of former railway bridge, 400 ft downstream from bridge on State Highway 502, 1.8 mi southwest of San Ildefonso Pueblo, 2.5 mi downstream from Pojoaque River, 6.8 mi west of Pojoaque, and at mile 1,614.2.

DRAINAGE AREA.--14,300 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1895 to December 1905, June 1909 to current year. Monthly discharge only for some periods, published in WSP 1312. In early reports this record was published as "at Water Tank," as "at Rio Grande," and as "near Buckman."

REVISED RECORDS.--WSP 828: Drainage area. WSP 1512: 1895-99, 1904-6, 1911-12, 1914, 1931(M), 1935. WSP 1712: 1904(M).

GAGE.--Water-stage recorder. Datum of gage is 5,488.48 ft above National Geodetic Vertical Datum of 1929. See WSP 1312, 1732, or 1923 for history of changes prior to June 1, 1910.

REMARKS.--Estimated daily discharges: July 7, 8, 10, 11, 13, 14, Aug. 8-16, and Sept. 16-18. Water-discharge records good. Considerable regulation by Heron Reservoir (station 08284510), El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900) on Rio Chama, which can contribute a major portion of the total flow. Flow affected by release of transmountain water from Heron Reservoir since May 1971. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 75,000 acres in New Mexico. Gage height telemeter and satellite telemeter available at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft³/s, May 23, 1920; maximum gage height, 14.5 ft, Sept. 29, 1904, present site and datum; minimum daily discharge, 60 ft³/s, July 4, 5, 1902.

EXTREMES OUTSIDE PERIOD OF RECORD.--The 1920 flood is greatest since at least 1884 and probably since 1741; information from W. H. Yeo's file on floods.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 12	2400	*3,720	*5.78				

Minimum discharge, 360 ft³/s, Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1270	1890	642	641	736	912	1930	1660	1780	981	959	1050
2	1480	2030	679	613	737	977	1770	1600	1740	880	901	916
3	1570	1920	745	625	769	1040	1770	1690	1660	875	1040	823
4	1570	1890	744	673	817	1090	1720	1690	949	811	1230	724
5	1570	1900	773	778	760	1130	1630	1700	1360	891	1560	674
6	1580	2050	817	771	754	1150	1600	1730	1400	775	1380	627
7	1570	2120	866	744	753	1170	1600	1690	1370	720	1260	549
8	1570	2130	843	700	755	1180	1700	1620	1390	710	990	631
9	1560	2120	847	688	752	1160	1890	1610	1110	830	828	620
10	1580	2150	861	698	749	1200	1930	1580	1010	710	659	489
11	1600	2010	832	716	744	1230	1950	1580	1070	640	500	635
12	1610	1980	850	726	743	1330	1940	1570	1160	550	480	1060
13	1600	1740	858	688	756	1400	2000	1580	1120	470	450	1760
14	1640	1260	754	669	759	1400	2240	1570	1350	440	420	1680
15	1640	1240	617	691	748	1270	2420	1570	1150	427	410	1050
16	1630	1230	497	736	752	1270	2530	1650	1090	421	600	884
17	1060	1210	787	730	768	1280	2570	1620	1040	446	702	811
18	1000	993	803	742	763	1690	2330	1200	1140	419	805	740
19	989	977	783	745	756	1940	2240	1800	1070	437	769	674
20	1010	910	779	698	760	1990	2190	1920	853	575	580	638
21	1790	884	770	646	779	2070	2200	1990	811	746	524	701
22	1850	849	771	640	796	2100	1790	1970	761	735	503	850
23	1080	859	783	695	799	2090	2060	1960	681	698	589	963
24	1660	876	815	724	806	2110	2060	2020	616	686	1140	904
25	1720	875	813	675	808	1620	1930	1980	623	739	1080	723
26	1750	870	749	684	809	1440	1420	1900	971	988	1060	669
27	1830	857	727	701	807	1440	1460	1830	1000	1130	719	588
28	1840	781	735	713	824	1470	1430	1810	1020	1160	986	650
29	1850	701	695	717	842	1730	1440	1790	863	1200	890	565
30	1850	667	726	732	---	1760	1570	1800	924	1060	1000	584
31	1870	---	692	731	---	1920	---	1810	---	1080	1450	---
TOTAL	48189	41969	23653	21730	22401	45559	57310	53490	33082	23230	26464	24232
MEAN	1554	1399	763	701	722	1470	1910	1725	1103	749	854	808
MAX	1870	2150	866	778	842	2110	2570	2020	1780	1200	1560	1760
MIN	989	667	497	613	736	912	1420	1200	616	419	410	489
AC-FT	95580	83250	46920	43100	44430	90370	113700	106100	65620	46080	52490	48060
CAL YR 1987	TOTAL	969216		MEAN	2655	MAX	9280	MIN	497	AC-FT	1922000	
WTR YR 1988	TOTAL	421309		MEAN	1151	MAX	2570	MIN	410	AC-FT	835700	

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1946 to current year.

WATER TEMPERATURES: October 1948 to current year.

SUSPENDED-SEDIMENT DISCHARGES: October 1947 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,310 microsiemens, Aug. 5, 1963; minimum daily, 88 microsiemens, May 12, 1984.

WATER TEMPERATURES: Maximum, 31.0°C, Aug. 4, 5, 1954; minimum, 0.0°C on many days during winter periods each year.

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

SEDIMENT LOADS: Maximum daily, 366,000 tons, Aug. 23, 1961; minimum daily, 3 tons, July 27, 1963.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 455 microsiemens, July 5; minimum daily, 280 microsiemens, Aug. 9.

WATER TEMPERATURES: Maximum daily, 26.0°C, July 4; minimum daily, 0.0°C on several days during December and January.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7,550 mg/L, Sept. 13; minimum daily mean, 19 mg/L, Jan. 17, Feb. 7.

SEDIMENT LOADS: Maximum daily, 35,900 tons, Sept. 13; minimum daily, 37 tons, Jan. 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV 17...	1030	1220	330	352	8.50	8.50	5.5	6.5	23	11.4	130
JAN 11...	1415	758	300	341	8.40	8.50	5.5	1.5	5.5	12.8	110
FEB 17...	1145	787	295	324	8.30	8.40	6.5	5.0	2.8	12.6	110
MAY 12...	1445	1580	385	412	7.90	8.20	28.0	17.0	23	8.6	150
JUN 14...	1345	1370	420	--	8.40	--	28.5	20.0	--	8.7	--
JUL 12...	1045	545	388	405	8.30	8.00	30.0	22.0	140	7.5	150
AUG 08...	1245	990	355	394	8.20	7.80	30.0	22.0	150	7.5	160

DATE	HARD- NESS NONCARB WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
NOV 17...	26	40	8.1	20	0.8	2.6	120	5	107	108
JAN 11...	0	34	6.8	21	0.9	3.2	130	5	115	118
FEB 17...	0	34	6.6	20	0.9	3.2	127	2	107	114
MAY 12...	40	43	9.7	24	0.9	2.6	112	0	92	108
JUN 14...	--	--	--	--	--	--	123	3	106	--
JUL 12...	20	48	8.4	26	0.9	3.3	164	3	139	135
AUG 08...	43	48	8.6	22	0.8	2.5	146	0	119	113

RIO GRANDE BASIN

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

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 17...	45	32	0.90	21	--	235	--	<0.010	0.110	0.020
JAN 11...	42	6.9	0.10	26	250	212	0.210	0.020	0.230	<0.010
FEB 17...	38	7.1	0.40	25	212	203	--	<0.010	0.120	<0.010
MAY 12...	89	6.2	0.30	18	257	258	--	<0.010	<0.100	0.020
JUN 14...	--	--	--	--	--	--	--	0.010	<0.100	0.020
JUL 12...	56	8.1	0.50	23	327	256	--	--	--	--
AUG 08...	63	6.2	0.30	20	242	240	--	<0.010	0.150	0.030

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L (00605)	PHOS- PHOROUS TOTAL (MG/L (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L (00671)	CYANIDE TOTAL (MG/L (00720)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER (31673)	BORON, DIS- SOLVED (UG/L (01020)	IRON, DIS- SOLVED (UG/L (01046)	MANGA- NESE, DIS- SOLVED (UG/L (01056)
NOV 17...	<0.010	0.28	0.030	0.030	--	K9	K92	40	<10	10
JAN 11...	0.020	--	0.050	<0.010	--	K4	K12	30	20	--
FEB 17...	<0.010	--	0.040	0.010	--	K9	K14	30	30	--
MAY 12...	0.020	0.18	0.030	<0.010	--	24	35	30	<21	7
JUN 14...	0.030	0.38	0.030	0.010	<0.010	47	180	40	--	--
JUL 12...	--	--	--	--	<0.010	--	--	50	440	59
AUG 08...	0.030	0.37	0.300	0.030	--	340	950	40	40	14

DATE	TIME	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)	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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 17...	1030	20	2	67	<0.5	<1	1	<3	2	<5
MAY 12...	1445	30	1	65	<0.5	<1	2	<3	5	<5
JUL 12...	1045	470	3	110	<0.5	<1	1	<3	4	<5
AUG 08...	1245	40	2	92	<0.5	<1	1	<3	3	<5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	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)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)
NOV 17...	16	<0.1	<4	1	<1	<1.0	320	<6	6	2.0
MAY 12...	20	<0.1	<4	4	<1	<1.0	360	<6	11	--
JUL 12...	22	<0.1	<2	5	<1	<1.0	370	<6	6	--
AUG 08...	20	<0.1	<5	3	<1	<1.0	370	<6	65	--

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

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TIERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TIERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TIERIAL (UG/G) (01053)
NOV 17...	4.0	120	1	<1	<10	<50	<1	10	<10	35
DATE	MERCURY RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS ZN) (01093)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 17...	<0.10	<10	4.8	0.5	3.0	2.5	2.2	2.4	0.08	2.5
MAY 12...	--	--	2.6	1.3	3.9	2.2	2.8	2.0	0.07	1.6
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)			
NOV 17...	1030	1220	330	6.5	76	250	90			
NOV 28...	0630	835	--	9.0	2750	6200	--			
JAN 11...	1415	758	300	1.5	40	82	61			
FEB 17...	1145	787	295	5.0	31	66	74			
APR 08...	0635	1650	--	--	188	838	59			
MAY 12...	1445	1580	385	17.0	90	384	35			
JUN 12...	0710	1170	--	--	666	2100	73			
JUN 14...	1345	1370	420	20.0	226	836	27			
JUL 09...	0745	564	--	19.0	4320	6580	--			
JUL 12...	1045	545	388	22.0	1720	2530	36			
AUG 08...	1245	990	355	22.0	1470	3930	--			
AUG 24...	0630	1380	--	18.5	13200	49200	--			
DATE	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)			
NOV 17...	--	--	--	--	--	--	--			
NOV 28...	42	50	69	82	93	99	100			
JAN 11...	--	--	--	--	--	--	--			
FEB 17...	--	--	--	--	--	--	--			
APR 08...	--	--	--	--	--	--	--			
MAY 12...	--	--	--	--	--	--	--			
JUN 12...	--	--	--	--	--	--	--			
JUN 14...	--	--	--	--	--	--	--			
JUL 09...	40	50	64	76	98	100	--			
JUL 12...	--	--	--	--	--	--	--			
AUG 08...	12	16	25	60	93	99	100			
AUG 24...	48	53	71	86	97	100	--			

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

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	338	374	373	359	319	363	310	404	412	431	295	309
2	353	---	365	379	320	341	316	389	413	440	380	312
3	343	373	362	384	319	370	320	398	403	426	380	322
4	339	377	374	372	322	374	335	403	431	439	380	334
5	334	342	373	356	324	356	329	404	421	455	412	337
6	335	341	354	342	324	359	345	407	412	433	327	337
7	340	354	350	336	323	355	348	394	404	424	355	337
8	332	351	342	326	330	352	---	402	396	398	309	361
9	333	333	325	336	332	360	359	400	399	---	280	320
10	341	333	325	342	335	359	361	411	414	394	368	367
11	333	334	327	332	294	367	343	408	415	---	381	294
12	332	343	322	327	322	364	342	407	---	394	391	363
13	336	344	319	324	322	377	333	402	399	398	380	338
14	330	342	314	327	331	386	326	384	386	409	390	343
15	331	344	326	325	327	383	343	378	385	420	391	342
16	337	350	365	310	323	385	344	385	399	424	296	319
17	353	348	344	329	322	387	353	378	412	397	310	327
18	353	347	339	330	318	378	370	394	403	417	390	349
19	359	357	328	323	318	371	370	360	402	418	390	343
20	354	338	335	321	318	368	377	364	409	417	297	348
21	331	332	346	322	301	361	380	364	425	394	322	337
22	332	352	338	322	312	353	377	363	422	403	295	348
23	356	350	334	346	319	361	392	379	424	403	385	356
24	336	342	329	332	342	356	416	425	426	386	---	354
25	355	351	327	314	338	352	423	397	431	392	333	341
26	353	347	329	314	383	342	432	396	438	398	365	343
27	356	338	340	310	387	339	422	394	413	394	374	348
28	367	342	336	311	381	330	426	402	408	381	322	344
29	366	323	316	310	373	329	423	403	420	382	330	334
30	367	368	328	320	---	329	420	408	423	319	337	368
31	369	---	345	321	---	332	---	414	---	383	340	---
MEAN	345	347	340	332	330	359	367	394	412	406	350	339
WTR YR 1988		MEAN	360	MAX	455	MIN	280					

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	10.0	1.0	.0	5.0	7.5	6.0	13.0	12.0	25.5	15.0	15.0
2	9.0	---	2.0	.0	6.0	7.5	6.5	9.5	13.5	24.0	16.0	15.0
3	10.0	8.0	3.0	.0	7.0	7.0	8.5	9.0	15.0	25.0	17.0	18.0
4	11.5	8.0	3.5	.0	5.5	6.0	13.0	11.0	15.0	26.0	18.0	19.0
5	8.5	8.0	2.0	.5	5.5	6.0	12.0	12.0	16.0	24.0	15.5	12.0
6	9.0	9.0	1.0	1.0	3.0	6.0	10.5	12.0	15.0	19.5	19.0	13.0
7	8.0	8.0	4.0	2.0	4.0	7.5	11.0	10.0	16.0	20.0	18.5	11.5
8	8.5	5.5	3.0	3.0	5.0	5.5	---	13.0	16.0	21.0	15.0	13.0
9	9.0	5.0	2.5	2.0	6.5	7.0	11.0	10.5	16.0	19.0	15.5	13.0
10	10.0	5.0	3.0	1.0	6.5	5.0	10.0	11.5	17.0	19.0	15.5	15.0
11	11.0	8.5	3.5	3.0	6.5	6.5	14.0	13.0	17.0	18.0	18.0	15.0
12	9.5	5.0	.5	3.5	5.0	5.0	10.0	13.5	17.0	19.0	17.0	12.0
13	10.5	8.0	.0	3.0	6.0	4.0	11.0	14.0	17.0	20.0	17.0	14.5
14	13.0	5.0	.0	3.0	6.0	7.5	12.0	14.0	16.0	22.0	18.0	14.0
15	12.0	4.5	.0	3.0	5.5	9.0	10.0	14.5	17.0	21.0	19.0	9.0
16	12.0	4.0	.0	4.0	8.0	5.5	11.0	15.5	16.0	22.0	18.0	10.0
17	10.0	5.0	1.0	2.0	6.5	4.5	8.5	13.0	18.0	21.0	20.0	10.0
18	8.0	4.0	1.5	3.0	7.0	8.0	9.0	15.0	23.0	22.0	17.0	12.0
19	7.0	1.0	1.0	4.0	8.0	5.5	10.0	14.5	23.0	21.0	17.0	10.0
20	8.0	4.0	2.0	3.0	3.5	6.0	10.5	13.0	21.0	20.0	17.0	10.0
21	8.0	4.0	2.0	.5	5.0	10.0	11.0	11.0	20.0	19.0	21.5	12.5
22	8.0	5.0	2.0	1.5	9.0	11.0	9.0	11.0	25.0	20.0	19.0	9.0
23	10.5	4.5	1.5	.5	10.5	8.0	9.5	12.0	25.5	18.0	19.0	10.0
24	10.5	5.0	1.0	1.5	10.0	8.5	9.0	14.0	23.0	17.0	18.5	8.0
25	10.5	4.0	.5	2.0	10.0	7.0	8.0	13.0	22.0	15.0	18.0	16.0
26	10.0	.5	.5	3.0	10.5	9.0	9.5	13.0	21.0	18.0	17.0	17.0
27	10.0	1.0	.0	3.5	7.5	10.0	10.0	14.5	21.5	16.0	16.5	17.0
28	10.5	2.0	.0	4.0	9.0	10.0	12.0	15.0	21.0	14.0	17.5	9.0
29	9.0	1.0	.0	5.0	7.0	7.5	12.0	14.0	23.0	14.0	15.0	14.0
30	10.0	1.5	.5	3.0	---	7.0	12.0	13.0	23.0	15.0	16.0	7.5
31	8.0	---	.0	3.0	---	9.0	---	11.0	---	14.0	15.5	---
MEAN	9.5	5.0	1.5	2.0	6.5	7.0	10.0	12.5	18.5	19.5	17.5	12.5
WTR YR 1988		MEAN	10.5	MAX	26.0	MIN	.0					

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

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	191	655	309	1580	44	76	43	74	33	66	61	150
2	155	619	530	2900	54	99	47	78	34	68	77	203
3	130	551	418	2170	63	127	69	116	26	54	128	359
4	366	1550	273	1390	46	92	60	109	38	84	118	347
5	188	797	230	1180	57	119	111	233	27	55	104	317
6	195	832	327	1810	56	124	119	248	21	43	120	373
7	209	886	360	2060	57	133	75	151	19	39	123	389
8	192	814	417	2400	43	98	63	119	26	53	108	344
9	229	965	868	4970	40	91	31	58	38	77	98	307
10	202	862	257	1490	43	100	36	68	21	42	94	305
11	238	1030	267	1450	38	85	35	68	34	68	94	312
12	210	913	283	1510	37	85	35	69	40	80	142	510
13	260	1120	215	1010	40	93	34	63	30	61	142	537
14	271	1200	162	551	61	124	48	87	34	70	126	476
15	251	1110	144	482	208	347	41	76	90	182	91	312
16	228	1000	131	435	140	188	31	62	72	146	79	271
17	160	458	112	366	168	357	19	37	69	143	84	290
18	133	359	103	276	105	228	25	50	35	72	362	1650
19	124	331	80	211	90	190	53	107	28	57	349	1830
20	131	357	76	187	68	143	99	187	25	51	290	1560
21	502	2430	74	177	50	104	73	127	34	72	306	1710
22	383	1910	52	119	44	92	119	206	36	77	286	1620
23	255	744	59	137	43	91	139	261	55	119	276	1560
24	426	1910	47	111	49	108	125	244	51	111	270	1540
25	110	511	52	123	46	101	116	211	56	122	180	787
26	103	487	49	115	34	69	66	122	55	120	182	708
27	128	632	70	162	43	84	58	110	44	96	154	599
28	128	636	56	118	55	109	36	69	44	98	161	639
29	409	2040	42	79	65	122	50	97	59	134	260	1210
30	412	2060	44	79	61	120	30	59	---	---	194	922
31	295	1490	---	---	48	90	30	59	---	---	231	1200
TOTAL	---	31259	---	29648	---	3989	---	3625	---	2460	---	23337

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	222	1160	251	1120	147	706	341	903	1850	4790	1660	4710
2	154	736	234	1010	83	390	601	1430	1490	3620	1160	2870
3	157	750	313	1430	118	529	191	451	3560	10000	1010	2240
4	159	738	248	1130	74	190	372	815	1870	6210	626	1220
5	169	744	254	1170	159	584	715	1720	7420	31300	724	1320
6	188	812	945	4410	153	578	535	1120	2870	10700	158	267
7	176	760	1210	5520	142	525	1360	2640	2090	7110	434	643
8	195	895	240	1050	163	612	987	1890	1160	3100	703	1200
9	251	1280	187	813	95	285	1870	4190	2130	4760	568	951
10	260	1350	198	845	93	254	1550	2970	1780	3170	320	422
11	262	1380	192	819	100	289	1290	2230	1220	1650	1460	2500
12	227	1190	160	678	257	805	1000	1490	1910	2480	4380	12500
13	303	1640	190	811	232	702	692	878	1030	1250	7550	35900
14	401	2430	132	560	207	755	433	514	542	615	5320	24100
15	368	2400	144	610	78	242	402	463	513	568	3760	10700
16	349	2380	127	566	118	347	649	738	2190	3550	1410	3370
17	399	2770	48	210	85	239	2740	3300	2310	4380	1170	2560
18	326	2050	182	590	58	179	407	460	2840	6170	1010	2020
19	289	1750	196	953	32	92	376	444	3330	6910	945	1720
20	237	1400	256	1330	76	175	1010	1570	531	832	606	1040
21	215	1280	239	1280	39	85	1080	2180	424	600	651	1230
22	200	967	176	936	46	95	939	1860	495	672	1180	2710
23	206	1150	225	1190	42	77	736	1390	835	1330	981	2550
24	201	1120	239	1300	81	135	596	1100	3720	11500	939	2290
25	207	1080	206	1100	96	161	674	1340	4100	12000	637	1240
26	215	824	190	975	593	1550	1520	4050	3590	10300	711	1280
27	257	1010	127	628	492	1330	1820	5550	2360	4580	609	967
28	220	849	136	665	449	1240	1430	4480	3130	8330	485	851
29	322	1250	185	894	241	562	2380	7710	1920	4610	459	700
30	236	1000	151	734	235	586	1760	5040	2330	6290	457	721
31	---	---	158	772	---	---	1840	5370	3380	13200	---	---
TOTAL	---	39145	---	36099	---	14299	---	70286	---	186577	---	126792
TOTAL LOAD FOR YEAR:			567516	TONS.								

08315500 MCCLURE RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'18", long 105°50'06", in NE¼SW¼, sec.24, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, at McClure Dam on Santa Fe River, 2.1 mi upstream from Nichols Reservoir, 5.8 mi east of Santa Fe, and at mile 37.1.

DRAINAGE AREA.--17.4 mi².

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

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

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

COOPERATION.--Capacity table provided by Public Service Co. of New Mexico.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,140 acre-ft, June 25, 1960, gage height, 103.7 ft; no contents Jan. 25 to May 8, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,570 acre-ft; Sept. 12, gage height, 80.30 ft; minimum, 550 acre-ft, Feb. 9, 10, gage height, 56.25.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Public Service Co. of New Mexico in 1947)

55	519	70	1,050
60	668	75	1,280
65	846	80	1,550

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	947	1010	750	e570	e630	771	786	e1240	e1270	1250	e1460
2	1280	952	1020	743	e560	e630	774	787	e1260	e1260	e1260	e1470
3	1270	956	1020	736	e560	e640	775	786	1280	e1250	e1260	e1480
4	1250	958	1020	730	e560	e640	777	786	e1290	e1230	e1270	e1490
5	1240	961	1020	724	e560	e650	779	787	e1300	1220	e1280	1500
6	1220	965	1020	719	e560	e660	781	787	1320	e1220	e1280	e1520
7	1210	968	1020	713	e560	e660	781	789	e1320	e1220	e1290	1530
8	1190	971	1030	707	e560	e660	782	790	e1340	e1230	e1300	e1540
9	1170	973	1030	701	e550	e670	784	795	e1340	e1230	e1300	e1550
10	1160	976	1030	695	550	e680	785	805	1360	e1230	e1310	e1550
11	1140	977	1020	693	e560	684	786	817	e1380	1230	e1320	e1560
12	1130	979	999	690	e560	687	787	829	e1400	1230	e1330	1570
13	1110	982	977	686	e560	691	789	843	1420	e1230	e1340	e1510
14	1100	983	957	682	e560	695	788	860	e1410	e1230	e1340	1520
15	1080	985	937	677	e560	698	786	883	e1400	e1230	1340	e1520
16	1070	988	918	e670	e560	703	793	900	e1400	e1230	e1330	e1520
17	1050	988	899	e660	e570	706	797	e920	e1390	e1230	1320	e1530
18	1040	990	881	e660	e570	710	798	e950	e1380	1230	e1310	e1530
19	1020	992	862	e660	570	714	799	e980	e1380	e1240	e1310	1550
20	1010	995	842	e650	e580	718	800	e1010	1370	e1240	e1300	e1530
21	994	996	829	e640	e580	722	802	e1040	e1370	e1240	e1300	e1530
22	979	998	822	e640	e590	726	803	e1070	e1370	e1240	1290	e1530
23	965	999	816	e640	e600	731	803	1100	e1380	e1250	e1310	1530
24	951	1000	808	e630	e600	736	803	1120	1380	e1250	e1330	e1530
25	937	1000	801	e620	e600	741	801	e1130	e1360	1250	e1350	e1520
26	930	1000	793	620	e610	747	798	e1150	e1330	e1240	e1370	1520
27	931	1010	787	e610	e620	754	795	e1170	1320	1220	e1390	e1530
28	933	1010	780	e600	e620	761	791	e1180	e1300	e1230	e1410	1540
29	936	1010	772	e590	e620	764	788	e1200	e1290	e1230	1430	e1540
30	940	1010	765	e580	---	767	787	1220	e1280	e1240	e1440	e1530
31	942	---	758	e570	---	769	---	e1230	---	e1240	e1450	---
MAX	1300	1010	1030	750	620	769	803	1230	1420	1270	1450	1570
MIN	930	947	758	570	550	630	771	786	1240	1220	1250	1460
(+)	67.38	69.18	62.73	56.70	58.60	62.92	63.45	73.93	74.42	74.07	78.08	78.80
(++)	-368	-42	-252	-188	+50	+149	+18	+443	+50	-40	+210	+80

CAL YR 1987 MAX 2680 MIN 758 (++) -1872
WTR YR 1988 MAX 1570 MIN 550 (++) +220

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

e Estimated

08316000 SANTA FE RIVER NEAR SANTA FE, NM

LOCATION.--Lat 35°41'12", long 105°50'35", in NE¼SE¼ sec.23, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, on left bank 0.4 mi downstream from McClure Dam, 5.3 mi east of Santa Fe, and at mile 36.6.

DRAINAGE AREA.--18.2 mi².

PERIOD OF RECORD.--June 1910, January 1913 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1953, published as Santa Fe Creek near Santa Fe.

REVISED RECORDS.--WSP 1512: 1933, 1936-37(M), 1942, drainage area. WSP 1732: 1923, 1925. WDR NM-75-1: 1927.

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

REMARKS.--No estimated daily discharges. Records good. Flow regulated by McClure Reservoir (station 08315500), completed in 1926, raised in 1935 and again in 1947. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--75 years, 8.11 ft³/s, 5,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft³/s, Aug. 14, 1921, gage height, 5.17 ft, site and datum then in use, from rating curve extended above 150 ft³/s; minimum, 0.05 ft³/s, Apr. 7, 8, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 1,000 ft³/s occurred Aug. 19, 1872, and Sept. 29 or 30, 1904. Without regulation the flood of Sept. 23, 1929, might have exceeded 1,500 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 45 ft³/s, Aug. 29, gage height, 2.54 ft; minimum daily, 0.36 ft³/s many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	.85	.91	4.9	4.2	.36	2.4	8.0	4.0	9.6	7.4	13
2	9.6	.89	.91	4.9	4.2	.36	2.4	8.0	4.0	3.3	1.5	21
3	9.6	.82	.91	4.9	4.2	.36	2.4	8.0	4.0	3.3	1.5	30
4	9.6	.82	.91	4.9	4.2	.36	2.4	8.0	4.0	3.2	1.7	29
5	9.6	.82	.91	4.9	4.0	.36	2.4	8.0	4.0	3.1	1.6	17
6	9.3	.86	.91	4.9	4.0	.36	3.4	8.0	4.0	3.2	1.6	9.2
7	9.3	.91	.91	4.9	4.0	.36	4.6	8.0	4.0	3.1	1.6	9.3
8	9.3	.91	.91	4.9	4.0	.36	4.6	8.0	3.8	3.1	1.7	9.3
9	9.3	.91	.91	4.9	4.0	.36	4.6	5.5	3.9	3.1	1.8	10
10	9.3	.91	.91	4.9	4.0	.36	4.6	3.4	4.1	3.1	5.5	11
11	9.3	.91	6.7	4.9	4.0	.36	4.6	3.5	4.2	3.1	9.3	11
12	9.3	.91	11	4.8	2.0	.39	4.8	3.5	4.0	3.1	13	17
13	9.3	.91	11	4.7	.46	.42	4.9	3.5	4.0	2.8	16	30
14	9.3	.91	11	4.7	.37	.47	6.8	3.5	11	2.8	16	44
15	9.1	.91	11	4.6	.47	.42	8.0	3.5	16	2.8	17	24
16	9.0	.91	11	4.4	.48	.43	8.2	3.6	16	2.9	17	9.4
17	9.0	.91	11	4.4	.46	.48	8.3	3.8	8.1	3.1	17	9.6
18	9.0	.91	11	4.4	.42	.48	8.3	4.0	3.3	3.2	17	13
19	8.8	.91	11	4.4	.42	.48	8.3	4.0	3.3	3.1	17	15
20	8.9	.91	11	4.4	.42	.48	8.3	4.0	3.3	3.1	17	15
21	8.9	.91	7.8	4.4	.42	.48	8.2	4.0	3.3	3.0	17	19
22	8.7	.95	5.4	4.4	.42	.48	8.0	4.0	3.3	2.9	11	20
23	8.6	.95	5.4	4.4	.38	.48	8.0	4.0	3.3	2.9	6.0	16
24	8.6	.91	5.4	4.4	.36	.48	8.0	4.0	7.2	2.9	6.0	15
25	8.3	.91	5.4	4.4	.36	.48	8.0	4.0	15	2.9	13	15
26	4.0	.91	5.4	4.3	.36	.48	8.0	4.0	16	11	19	10
27	.73	.91	5.4	4.2	.36	.46	8.0	4.0	15	16	25	7.0
28	.73	.91	5.4	4.2	.36	1.0	8.0	4.0	15	16	39	7.0
29	.73	.91	4.9	4.2	.36	2.2	8.0	4.0	15	16	45	6.8
30	.81	.91	4.9	4.2	---	1.9	8.0	3.9	15	16	34	10
31	.82	---	4.9	4.2	---	2.4	---	3.9	---	16	13	---
TOTAL	236.42	26.98	175.10	142.0	53.68	18.85	184.5	153.6	221.1	173.7	410.2	472.6
MEAN	7.63	.90	5.65	4.58	1.85	.61	6.15	4.95	7.37	5.60	13.2	15.8
MAX	9.6	.95	11	4.9	4.2	2.4	8.3	8.0	16	16	45	44
MIN	.73	.82	.91	4.2	.36	.36	2.4	3.4	3.3	2.8	1.5	6.8
AC-FT	469	54	347	282	106	37	366	305	439	345	814	937
CAL YR 1987	TOTAL	4925.70		MEAN	13.5	MAX	98	MIN	.73	AC-FT	9770	
WTR YR 1988	TOTAL	2268.73		MEAN	6.20	MAX	45	MIN	.36	AC-FT	4500	

RIO GRANDE BASIN

08316500 NICHOLS RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'24", long 105°52'46", in SE¼NE¼ sec.21, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, at Nichols Dam on Santa Fe River, 0.6 mi east of Twomile Reservoir, 3.3 mi east of Santa Fe, and at mile 34.4.

DRAINAGE AREA.--22.8 mi².

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

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

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

COOPERATION.--Survey to compute capacity table 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, 571 acre-ft, Sept. 15, gage height, 162.98 ft; minimum, 92 acre-ft, Dec. 9, gage height, 135.30.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Public Service Co. of New Mexico in 1943)

135	89	155	375
140	139	160	491
145	202	165	625
150	279	170	776

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	438	317	122	e302	333	259	118	251	e232	e278	333	e525
2	435	301	118	e304	329	256	117	259	e229	e274	e336	e530
3	432	284	114	e307	325	255	116	268	226	e269	342	e535
4	433	274	109	e309	323	253	115	276	e224	e265	e349	e540
5	434	271	104	e312	322	252	114	285	e222	259	e356	544
6	429	269	e104	e314	320	250	111	293	220	e257	e362	e537
7	429	269	e100	e316	323	247	109	301	e222	e255	e368	529
8	429	266	e96	e318	325	244	110	310	e223	e254	e374	e525
9	430	254	e92	e320	321	241	109	310	e224	e252	e382	e520
10	427	240	e93	e322	316	238	108	296	225	e250	e391	e519
11	422	231	e98	e324	317	234	107	290	e226	248	e398	e512
12	413	232	e116	e325	317	231	106	281	e227	249	e407	507
13	406	e229	e128	e329	314	227	105	272	228	e236	e415	e528
14	407	e227	e146	e336	308	224	108	263	e230	e223	e423	569
15	411	e224	e164	e340	304	221	117	254	e232	e208	431	e571
16	413	e222	e180	e340	299	218	127	248	e235	e196	e455	e569
17	413	e219	e196	e341	294	214	136	e247	e237	e184	479	e562
18	416	e216	e213	e342	289	211	146	e246	e239	174	e496	e552
19	417	e214	e230	e344	284	208	156	e245	e242	e174	e510	546
20	417	e211	e244	e343	280	204	165	e243	243	e174	e523	e551
21	416	e209	e257	e344	277	201	173	e242	e240	e174	e536	e550
22	413	e206	e262	e346	274	197	183	e240	e237	e175	560	e554
23	409	e204	e268	e348	272	188	192	239	e234	e175	e559	e556
24	409	e201	e272	e349	269	179	200	240	231	e175	e547	e555
25	411	e198	e274	e350	267	170	210	e246	e253	175	e539	e557
26	401	e195	e276	345	265	161	219	e240	e275	e181	e528	558
27	380	e193	e277	341	263	153	227	e239	302	188	e523	e550
28	366	e190	e280	336	261	139	229	e238	e296	e212	e518	534
29	355	e188	e283	331	260	132	235	e238	e290	e239	510	e534
30	341	186	e286	330	---	126	243	237	e285	e266	e514	e534
31	329	---	e294	333	---	120	---	e234	---	e297	e520	---
MAX	438	317	294	350	333	259	243	310	302	297	560	571
MIN	329	186	92	302	260	120	105	234	220	174	333	507
(↑)	152.89	143.75	150.79	152.71	148.84	138.45	147.45	147.12	150.28	150.95	161.09	161.61
(↑↑)	-111	-143	+108	+39	-73	-140	+123	-9	+51	+12	+223	+14
CAL YR 1987	MAX 712	MIN 92	(↑↑) -253									
WTR YR 1988	MAX 571	MIN 92	(↑↑) +94									

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

e Estimated

08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM

LOCATION.--Lat 35°32'49", long 106°13'41", in NW¼ sec.8, T.15 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201 in Mesita de Juana Lopez Grant, on right bank at foot of La Bajada Hill, 5.0 mi upstream from Cochiti Dam, 6.3 mi east of Pena Blanca, and at mile 7.9.

DRAINAGE AREA.--231 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5,505 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 13-17, Dec. 25 to Jan. 3, Jan. 8-10, 13-15, 20 Jan. 22 to Feb. 29, and Aug. 30 to Sept. 22. Water-discharge records fair. Surface and ground- water diversions and returns for municipal supply of city of Santa Fe in upper part of basin. Diversions for irrigation of about 400 acres upstream from station.

AVERAGE DISCHARGE.--18 years, 9.76 ft³/s, 7,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s, July 26, 1971, gage height, 9.58 ft, from rating curve extended above 160 ft³/s on basis of slope-area measurements at gage heights 5.69 ft and 9.58 ft; no flow July 16-18, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	2345	465	3.20	July 9	0015	*845	*3.71
June 25	1730	366	2.87				

Minimum daily, 2.3 ft³/s, June 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	8.0	13	9.5	9.5	8.5	9.3	8.8	4.9	6.9	4.9	9.0
2	8.2	9.7	9.2	8.0	10	8.1	9.4	8.7	4.2	5.8	11	8.5
3	6.9	8.1	12	7.5	10	8.1	7.7	8.6	4.2	6.3	8.7	8.5
4	7.5	8.7	11	8.3	9.5	7.8	7.7	9.5	4.8	5.7	6.6	9.0
5	7.9	9.4	12	8.6	10	8.0	6.2	11	5.5	5.5	7.0	9.5
6	7.5	9.6	12	9.4	9.5	8.7	6.6	12	5.8	8.4	6.0	10
7	5.5	9.4	12	8.0	9.0	8.7	6.5	12	4.6	5.8	6.2	10
8	8.1	9.5	11	8.5	9.0	8.1	6.1	10	4.8	15	11	10
9	7.3	9.4	9.7	9.5	9.5	9.0	5.7	5.7	5.2	52	9.0	9.5
10	6.5	9.2	9.3	8.5	9.5	8.5	4.8	5.5	4.9	8.7	17	9.0
11	7.4	9.7	9.6	8.1	10	8.5	4.2	5.4	18	8.7	7.6	9.0
12	6.8	10	9.6	7.8	10	8.4	4.8	5.9	19	8.9	5.9	8.5
13	4.8	9.4	9.5	8.0	9.5	8.9	5.0	6.2	4.8	7.6	6.0	8.5
14	6.7	9.6	9.0	7.5	9.0	8.2	5.1	5.9	3.9	6.2	5.6	10
15	8.3	10	9.0	7.0	9.0	8.5	3.7	6.1	4.3	5.5	18	9.5
16	7.8	11	9.5	7.0	9.5	8.9	12	5.3	3.3	8.1	25	9.5
17	6.4	9.8	10	7.2	10	8.2	10	6.5	2.6	11	33	9.0
18	7.5	9.7	11	7.2	10	8.8	8.7	7.3	2.3	5.4	21	8.5
19	7.5	9.7	10	7.3	10	8.8	9.4	6.2	2.5	4.0	13	8.5
20	7.6	10	9.9	8.0	10	8.1	9.0	8.0	2.4	4.9	8.8	8.0
21	7.2	10	10	9.5	9.5	8.6	8.4	10	2.5	5.4	11	15
22	7.1	11	10	9.5	9.5	7.8	8.4	6.0	2.5	4.4	8.4	15
23	6.4	11	9.9	9.0	9.0	7.4	8.7	5.9	2.5	3.7	11	20
24	7.6	11	9.9	9.0	9.0	7.4	9.3	5.8	2.7	3.7	21	14
25	7.7	12	9.5	8.5	8.5	9.9	8.8	5.6	37	3.7	16	11
26	7.3	12	10	9.0	8.5	7.7	8.8	5.7	25	3.7	8.1	11
27	5.8	11	10	9.0	8.0	7.6	8.1	5.1	12	3.7	16	9.6
28	6.3	11	10	8.5	8.0	7.1	6.5	5.5	10	3.7	24	8.9
29	7.2	12	10	9.0	8.5	6.5	7.1	5.8	12	8.5	12	8.5
30	7.5	12	10	9.0	---	8.8	6.9	5.8	9.3	10	10	9.6
31	7.4	---	11	9.5	---	9.2	---	6.2	---	6.1	9.5	---
TOTAL	221.8	302.9	318.6	260.4	271.0	256.8	222.9	222.0	227.5	247.0	378.3	304.6
MEAN	7.15	10.1	10.3	8.40	9.34	8.28	7.43	7.16	7.58	7.97	12.2	10.2
MAX	8.3	12	13	9.5	10	9.9	12	12	37	52	33	20
MIN	4.8	8.0	9.0	7.0	8.0	6.5	3.7	5.1	2.3	3.7	4.9	8.0
AC-FT	440	601	632	517	538	509	442	440	451	490	750	604
CAL YR 1987	TOTAL	4374.3		MEAN	12.0	MAX	72	MIN	1.4	AC-FT	8680	
WTR YR 1988	TOTAL	3233.8		MEAN	8.84	MAX	52	MIN	2.3	AC-FT	6410	

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 16...	1300	11	515	533	9.00	8.80	11.0	10.0	10.6	43	130	0
MAR 03...	1520	6.5	620	602	8.30	8.00	13.0	11.0	9.2	--	150	0
MAY 09...	1130	6.8	725	671	9.00	8.70	19.5	15.0	9.6	--	150	0
JUL 06...	0930	8.0	--	475	8.30	7.90	24.0	21.0	7.4	--	120	0
DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
NOV 16...	43	6.7	59	2	7.4	164	340	--	0.10	21	--	1.90
MAR 03...	48	6.5	71	3	6.9	201	45	32	1.0	25	356	--
MAY 09...	49	7.8	91	3	6.7	253	49	37	0.90	26	419	--
JUL 06...	39	5.8	45	2	6.6	181	26	18	0.50	26	277	--
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 16...	1.80	0.020	0.68	2.6	3.50	3.40	6.2	120	16	103	3.1	25
MAR 03...	--	--	--	--	--	--	--	130	22	--	--	--
MAY 09...	--	--	--	--	--	--	--	180	11	--	--	--
JUL 06...	--	--	--	--	--	--	--	90	1400	--	--	--

08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM

LOCATION.--Lat 35°37'01", long 106°18'58", in NW¼SW¼ sec.16, T.16 N., R.6 E., Sandoval County, Hydrologic Unit 13020201, in Pueblo de Cochiti Grant, in control tower at Cochiti Dam, 1.7 mi northeast of Cochiti Pueblo, and at mile 1,588.1.

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

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. 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, 1988, 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, 282,110 acre-ft, Nov. 14-17 elevation, 5,330.63 ft; minimum, 48,240 acre-ft, July 31, elevation, 5,328.63 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Corps of Engineers in 1988)

5,325	42,250	5,385	166,390
5,345	68,010	5,395	201,410
5,355	86,140	5,405	241,230
5,365	108,740	5,415	286,210
5,375	135,480	5,435	395,540

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218210	262060	272330	247650	220070	172010	120100	83480	54990	48950	48460	59700
2	219220	264240	271610	246570	217930	169630	116690	82540	53940	48860	48590	60690
3	220080	265850	270750	245280	215810	167480	113100	81370	53150	48580	48630	61290
4	221950	267510	269980	244730	213740	164840	109680	79640	51490	48630	48800	61710
5	223130	269120	269300	244210	211760	162230	106110	79150	50260	48870	48930	62040
6	224430	270980	268630	243870	209990	159650	102470	78370	49620	49210	48540	62570
7	225740	272740	268090	243400	208190	156990	98920	77660	49400	48800	48250	62520
8	227140	274700	267460	242810	206520	154150	96110	76960	49420	48800	48710	62100
9	228540	276120	266880	242210	204930	151250	94470	75880	49440	49150	50610	60360
10	229750	278090	266340	241570	203160	148350	93000	74570	49600	48920	50850	56510
11	231120	279520	265850	240940	201480	146710	91500	73690	49690	48530	50880	52620
12	232590	281050	265180	240340	199810	147190	90580	73010	49690	48600	50740	50730
13	233930	282070	264510	239620	198080	147770	90240	71660	49320	48750	50350	51660
14	235290	282110	263840	238870	196390	148450	90130	70390	49250	48750	49900	51680
15	236900	282110	262860	238070	194860	148870	90520	68800	49180	48600	49390	50540
16	238300	282110	261530	237180	193010	149180	91220	67530	49120	48510	49080	50170
17	238680	282110	260910	236260	191350	149430	91980	66250	49070	48520	49300	50260
18	238850	281420	260560	235430	189810	150170	91870	65750	49160	48600	49750	50150
19	238970	280950	260070	234590	188270	151900	91550	64670	49250	48680	48930	49970
20	239090	280400	259330	233470	186430	153520	91630	63370	49080	48740	50230	50010
21	240930	279750	258620	232440	184950	154210	91700	63280	48900	48850	50070	50080
22	243030	279010	257920	231280	183330	154180	91240	63030	48970	48690	49900	50070
23	243830	278370	257350	230380	181800	152810	90900	62100	49050	48570	49810	50340
24	245400	278050	256820	229560	180380	150600	90770	61850	49130	48370	50770	50070
25	247530	277310	256340	228650	178930	147130	90500	61230	49080	48320	51610	50820
26	249370	276710	255690	227680	177410	142730	89230	60520	49230	48460	52760	49900
27	251480	276120	254950	226820	175910	138590	87830	59630	49650	48670	53340	50340
28	253380	275340	254290	225970	174520	134240	86550	58750	49580	48800	54340	50290
29	255560	274380	253600	224880	172890	130490	85310	57780	49310	48830	55110	50100
30	257660	273430	252950	223340	---	126450	84430	56810	48930	48740	55910	50190
31	259720	---	252390	221860	---	123310	---	55920	---	48240	57950	---
MAX	259720	282110	272330	247650	220070	172010	120100	83480	54990	49210	57950	62570
MIN	218210	262060	252390	221860	172890	123310	84430	55920	48900	48240	48250	49900
(†)	5307.46	5411.45	5406.71	5400.30	5386.95	5370.65	5354.15	5336.74	5331.24	5330.63	5338.25	5332.31
(††)	+42590	+13710	-21040	-26700	-48970	-49580	-38880	-28510	-6990	-690	+9710	-7760

CAL YR 1987 MAX 396170 MIN 49850 (††) +201805
WTR YR 1988 MAX 282110 MIN 48240 (††) *-163010

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

* COMPUTED ON BASIS OF REVISED CAPACITY TABLE EFFECTIVE JAN. 1, 1988.

RIO GRANDE BASIN

08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM -- Continued

WATER-QUALITY RECORDS

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

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

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

08317300 - COCHITI LAKE AT SITE A (LAT 35°38'11" LONG 106°19'05")

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CaCO3) (00900)
SEP												
01...	1030	89.0	90.0	--	--	--	--	--	19.5	0.5	--	--
01...	1031	85.0	90.0	380	371	7.73	7.60	28.5	19.5	1.1	<10	140
01...	1032	80.0	90.0	--	--	--	--	--	19.5	1.6	--	--
01...	1033	75.0	90.0	--	--	--	--	--	20.0	1.9	--	--
01...	1034	70.0	90.0	--	--	--	--	--	20.0	2.6	--	--
01...	1035	65.0	90.0	--	--	--	--	--	20.5	2.5	--	--
01...	1036	60.0	90.0	--	--	--	--	--	20.5	2.2	--	--
01...	1037	55.0	90.0	--	--	--	--	--	21.0	2.1	--	--
01...	1038	50.0	90.0	--	--	--	--	--	21.0	2.1	--	--
01...	1039	45.0	90.0	390	--	7.58	--	--	21.5	1.7	--	--
01...	1040	40.0	90.0	--	--	--	--	--	21.5	2.2	--	--
01...	1041	35.0	90.0	--	--	--	--	--	22.0	3.4	--	--
01...	1042	30.0	90.0	--	--	--	--	--	22.0	3.7	--	--
01...	1043	25.0	90.0	--	--	--	--	--	22.0	4.4	--	--
01...	1044	20.0	90.0	--	--	--	--	--	22.0	5.3	--	--
01...	1045	15.0	90.0	--	--	--	--	--	22.5	5.9	--	--
01...	1046	10.0	90.0	--	--	--	--	--	22.5	6.6	--	--
01...	1047	5.00	90.0	395	--	8.25	--	--	22.5	7.9	--	--
01...	1048	1.00	90.0	--	--	--	--	--	22.5	8.2	--	--

DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CaCO3 (00902)	CALCIUM DIS- SOLVED AS CA (00915)	MAGNE- SIUM, DIS- SOLVED AS MG (00925)	SODIUM, DIS- SOLVED AS NA (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED AS K (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CaCO3 (39086)	ALKA- LINITY LAB (MG/L AS CaCO3) (90410)	SULFATE DIS- SOLVED AS SO4 (00945)	CHLO- RIDE, DIS- SOLVED AS CL (00940)
------	--	---	---	---	--	--	--	---	--	--	--	--

SEP												
01...	20	45	7.8	24	0.9	3.1	157	0	129	125	59	6.8

DATE	FLUO- RIDE, DIS- SOLVED AS F (00950)	SILICA, DIS- SOLVED AS SiO2 (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) AS N (00630)	NITRO- GEN, DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L) AS N (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N (00605)	PHOS- PHOROUS TOTAL (MG/L) AS P (00665)	PHOS- PHOROUS DIS- SOLVED (MG/L) AS P (00671)	CARBON, ORGANIC TOTAL (MG/L) AS C (00680)	ARSENIC TOTAL (UG/L) AS AS (01002)	ARSENIC DIS- SOLVED (UG/L) AS AS (01000)
------	---	--	---	---	---	---	---	--	---	--	--	---

SEP												
01...	0.40	19	240	<0.100	<0.100	0.100	0.40	0.060	0.040	3.9	3	3

DATE	BORON, DIS- SOLVED (UG/L) AS B (01020)	CADMIUM TOTAL RECOVERABLE AS CD (01027)	CADMIUM DIS- SOLVED (UG/L) AS CD (01025)	CHRO- MIUM, TOTAL RECOVERABLE (UG/L) AS CR (01034)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR (01030)	COPPER, TOTAL RECOVERABLE (UG/L) AS CU (01042)	COPPER, DIS- SOLVED (UG/L) AS CU (01040)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	LEAD, TOTAL RECOVERABLE (UG/L) AS PB (01051)	LEAD, DIS- SOLVED (UG/L) AS PB (01049)	MERCURY TOTAL RECOVERABLE (UG/L) AS HG (71900)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)
------	---	---	---	--	--	---	---	---	---	---	---	---

SEP												
01...	40	8	<1	2	<1	4	<1	8	<5	<5	0.30	0.1

08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM -- Continued

WATER-QUALITY RECORDS

08317300 - COCHITI LAKE AT SITE A (LAT 35°38'11" LONG 106°19'05")

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)
SEP 01...	<1	<1	10	7	<2.0	130	570	5	<10	6	<50

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
SEP 01...	30	1500	<100	780	0.04	70	22	0.0	90	K14	39

08317400 RIO GRANDE BELOW COCHITI DAM, NM

LOCATION.--Lat 35°37'05", long 106°19'24", in SW¼NE¼ sec.17, T.16 N., R.6 E., Sandoval County, Hydrologic Unit 13020201, in Pueblo de Cochiti Grant, on right bank 320 ft upstream from bridge on State Highway 22, 700 ft downstream from Cochiti Dam, 1.4 mi northeast of Cochiti Pueblo, and at mile 1,587.6.

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

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 5,226.08 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Nov. 14, 1973, at site 2.4 mi downstream at elevation 5,210 ft, from topographic map. Nov. 14, 1973 to Jan. 8, 1976, at site 320 ft downstream at datum 1.79 ft lower.

REMARKS.--No estimated daily discharges. Water-discharge 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 FOR PERIOD OF RECORD.--Maximum discharge, 10,300 ft³/s, July 26, 1971, gage height, 7.90 ft, site and datum then in use, from rating curve extended above 2,600 ft³/s; minimum, 0.51 ft³/s, Aug. 3-5, 1977, Aug. 27-28, 1978, result of regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 15, 1941, reached a discharge of 23,400 ft³/s at a nearby site upstream from mouth of Santa Fe River. The flood of May 23, 1920, probably exceeded 23,400 ft³/s, and is likely the highest since 1905.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,720 ft³/s, Mar. 30; minimum daily, 140 ft³/s, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	526	329	927	933	1570	1200	3700	2130	1880	743	687	140
2	509	523	926	933	1770	2010	3700	2120	1880	731	616	280
3	489	668	929	935	1770	2040	3690	2370	1750	785	744	401
4	488	668	936	937	1760	1980	3690	2720	1570	620	856	401
5	488	702	936	937	1690	1940	3670	2270	1560	546	1110	405
6	488	770	933	939	1580	1950	3620	1980	1450	753	1340	267
7	478	821	937	937	1580	2170	3560	1990	1210	791	1230	441
8	473	817	935	937	1580	2300	3190	1980	1120	557	707	659
9	473	819	934	937	1580	2310	2690	1980	942	555	422	1340
10	465	884	937	940	1590	2330	2630	1970	773	748	422	2290
11	462	916	941	940	1590	1770	2600	1960	814	702	422	2240
12	458	917	941	943	1590	866	2330	1960	984	459	450	1810
13	458	917	939	941	1600	885	2090	2110	1080	347	497	1580
14	462	918	942	943	1600	902	2060	2180	1070	350	503	1850
15	465	926	941	1010	1600	924	2040	2150	1020	373	500	1750
16	464	918	937	1100	1620	944	2050	2130	927	366	460	1200
17	460	922	943	1100	1600	956	2080	2000	867	334	415	906
18	465	919	949	1100	1610	969	2200	1930	839	257	406	901
19	465	920	955	1080	1600	990	2190	1910	837	251	402	889
20	465	917	955	1070	1620	993	1990	1900	794	316	402	692
21	419	919	955	1090	1620	1560	2010	1900	616	524	403	685
22	368	920	953	1100	1630	1960	2030	1880	451	612	401	805
23	326	926	941	1100	1630	2600	2040	1920	407	568	401	852
24	322	927	932	1100	1640	3030	2060	2000	403	562	401	1020
25	323	932	933	1090	1630	3320	2080	1990	453	534	401	978
26	328	927	934	1090	1630	3630	2090	1980	536	580	405	553
27	328	926	933	1090	1640	3620	2110	1970	674	737	408	441
28	328	927	930	1110	1640	3600	2110	1950	789	844	412	552
29	328	924	933	1270	1620	3660	2120	1930	863	876	415	600
30	328	929	934	1410	---	3720	2130	1910	872	1010	415	531
31	328	---	935	1410	---	3700	---	1900	---	994	261	---
TOTAL	13227	25448	29086	32452	47180	64829	76550	63070	29431	18425	16914	27459
MEAN	427	848	938	1047	1627	2091	2552	2035	981	594	546	915
MAX	526	932	955	1410	1770	3720	3700	2720	1880	1010	1340	2290
MIN	322	329	926	933	1570	866	1990	1880	403	251	261	140
AC-FT	26240	50480	57690	64370	93580	128600	151800	125100	58380	36550	33550	54460
(+)	7680	240	0	0	0	5940	7190	7800	8020	6890	7540	5730
(++)	4270	653	0	0	0	3910	4290	4470	4220	3930	4380	3620
CAL YR 1987 TOTAL	773385			MEAN 2119	MAX 5910	MIN 308	AC-FT 1534000	(+)	55720	(++)	28900	
WTR YR 1988 TOTAL	444071			MEAN 1213	MAX 3720	MIN 140	AC-FT 880800	(+)	57020	(++)	33740	

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

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

OCT N D
7480 0 0

08317400 RIO GRANDE BELOW COCHITI DAM, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGES: July 1974 to September 1984, October 1985 to September 1988 (discontinued).

INSTRUMENTATION.--Automatic pumping sediment sampler.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 343 mg/L, June 16, 1975; minimum daily mean, 1 mg/L on several days in 1977 and 1981.

SEDIMENT LOADS: Maximum daily, 5,050 tons, May 18, 1984; minimum daily, 0.02 ton, Aug. 4, 1977.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 84 mg/L, Sept. 17; minimum daily mean, 5 mg/L, Mar. 31, Apr. 4.

SEDIMENT LOADS: Maximum daily, 464 tons, Sept. 10; minimum daily, 4.5 tons, Sept. 1.

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	27	38	17	15	18	45	16	40	20	85	18	58
2	27	37	17	24	18	45	16	40	20	96	20	109
3	27	36	17	31	18	45	16	40	20	96	21	116
4	27	36	17	31	18	45	16	40	20	95	21	112
5	27	36	17	32	18	45	16	40	19	87	21	110
6	27	36	17	35	18	45	16	41	19	81	21	111
7	27	35	17	38	18	46	16	40	19	81	23	135
8	27	34	12	26	16	40	18	46	18	77	22	137
9	27	34	12	27	16	40	18	46	18	77	22	137
10	27	34	12	29	16	40	18	46	17	73	22	138
11	27	34	12	30	16	41	18	46	16	69	22	105
12	27	33	12	30	16	41	18	46	17	73	19	44
13	23	28	12	30	16	41	18	46	17	73	19	45
14	23	29	12	30	16	41	23	59	17	73	19	46
15	23	29	16	40	16	41	23	63	17	73	18	45
16	23	29	16	40	16	40	23	68	17	74	18	46
17	23	29	16	40	16	41	23	68	18	78	18	46
18	23	29	16	40	16	41	23	68	17	74	18	47
19	23	29	16	40	16	41	23	67	17	73	28	75
20	23	29	16	40	16	41	23	66	17	74	19	51
21	22	25	16	40	16	41	21	62	17	74	11	46
22	23	23	20	50	15	39	19	56	16	70	12	64
23	23	20	20	50	15	38	18	53	17	75	8	56
24	23	20	20	50	15	38	18	53	16	71	9	74
25	17	15	20	50	15	38	18	53	16	70	10	90
26	17	15	20	50	15	38	18	53	15	66	9	88
27	17	15	20	50	15	38	18	53	15	66	8	78
28	17	15	20	50	15	38	19	57	15	66	6	58
29	17	15	20	50	15	38	19	65	15	66	9	89
30	17	15	20	50	15	38	20	76	---	---	8	80
31	17	15	---	---	15	38	20	76	---	---	5	50
TOTAL	---	847	---	1138	---	1267	---	1673	---	2206	---	2486

08317900 GALISTEO RESERVOIR NEAR CERRILLOS, NM

LOCATION.--Lat 35°27'44", long 106°12'30", in NW¼ sec.9 T.14 N., R.7 E., Sante Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, at Galisteo Dam on Galisteo Creek, 5.0 mi northwest of Cerrillos, and at mile 11.8.

DRAINAGE AREA.--596 mi².

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

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

REMARKS.--Reservoir is formed by an earthfill dam, completed Oct. 11, 1970. Capacity, 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.

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 NE¼NE¼ sec.8, T.14 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, on right bank 0.4 mi downstream from Galisteo Dam, 5.3 mi northwest of Cerrillos, and at mile 11.4.

DRAINAGE AREA.--597 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 5,450 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 21, 1981, at site 1,200 ft downstream at different datum.

REMARKS.--Estimated daily discharges: Jan. 2 to Mar. 3. Records good except for estimated daily discharges, which are poor. Flow regulated by Galisteo Reservoir 0.4 mi upstream. Diversions for irrigation of about 50 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 6.20 ft³/s, 4,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2000 ft³/s July 27, 1971 gage height, 7.00 ft; maximum gage height, 7.00 ft; maximum gage height, 7.33 ft, July 20, 1971; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 850 ft³/s, July 9, gage height, 5.57 ft; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.84	1.3	.86	.98	1.4	3.8	.00	.00	2.0	.00	66
2	.00	1.4	1.5	.85	.96	1.4	3.7	.00	.00	1.4	3.7	105
3	.00	.93	1.4	.86	.97	1.4	3.6	.00	.00	.95	114	4.6
4	.00	.77	1.6	.87	.98	1.5	3.3	.00	.00	.00	1.1	1.7
5	.00	1.1	1.5	.90	1.0	1.5	2.7	.00	16	2.2	10	.86
6	.00	1.2	1.4	.92	1.1	1.5	1.7	.00	2.8	29	6.2	.59
7	.00	1.4	1.4	.98	1.1	1.3	1.4	.00	.00	.96	6.1	.49
8	.00	1.1	1.4	1.0	1.1	1.2	1.2	.00	.00	63	4.0	.00
9	.00	.97	1.3	1.2	1.2	1.3	.87	.00	.00	198	5.4	.00
10	.00	.93	1.4	1.1	1.2	1.5	1.0	.00	.00	149	33	.00
11	.00	.88	1.6	1.1	1.1	1.3	1.4	.00	6.2	4.2	3.1	1.3
12	.00	.92	1.3	1.1	1.0	1.1	.95	.00	18	.68	1.7	41
13	.00	.93	.53	1.1	1.1	1.4	.90	.00	3.7	.00	.60	111
14	.00	.85	.80	1.0	1.0	1.1	1.2	.00	.00	.00	.00	215
15	.00	1.0	.63	.98	1.4	1.7	1.6	.00	6.2	.00	51	12
16	.00	.98	1.1	.98	1.1	1.6	6.3	.00	27	.00	17	5.8
17	.00	1.0	2.7	.98	1.2	1.7	3.7	3.6	1.6	4.7	31	3.8
18	.00	.91	4.8	.96	1.3	1.9	2.9	4.1	.00	146	74	2.8
19	.00	1.0	4.5	.98	1.3	1.9	2.2	1.8	.00	22	11	2.1
20	.00	1.2	2.5	.97	1.3	1.7	1.6	1.9	.00	1.8	2.7	2.0
21	.00	1.2	3.0	.95	1.3	1.7	1.3	2.9	.00	.00	1.5	3.9
22	.00	1.3	3.1	.95	1.3	1.5	1.3	1.6	.00	.00	52	17
23	.00	1.3	2.5	.94	1.3	1.1	1.8	.00	.00	.00	114	15
24	.00	1.3	2.4	.92	1.4	.97	1.8	.00	.00	.00	2.2	7.7
25	.00	1.3	2.0	.92	1.4	.90	1.5	.00	4.3	.00	5.5	6.9
26	.00	1.1	1.5	.94	1.4	1.3	.73	1.2	2.5	.00	3.9	4.3
27	.00	1.2	.66	.96	1.5	1.3	.53	.00	.64	61	2.9	3.4
28	.00	1.3	2.0	.97	1.5	.95	.52	.00	13	8.8	4.9	2.6
29	.00	1.3	3.9	.98	1.5	.79	.98	.00	1.7	1.7	9.1	2.3
30	.00	1.2	3.2	.98	---	1.3	.72	.00	.00	6.8	7.9	2.2
31	.00	---	1.5	.98	---	1.6	---	.00	---	.00	17	---
TOTAL	.00	32.81	60.42	30.18	34.99	42.81	57.20	17.10	103.64	704.19	596.50	641.34
MEAN	.00	1.09	1.95	.97	1.21	1.38	1.91	.55	3.45	22.7	19.2	21.4
MAX	.00	1.4	4.8	1.2	1.5	1.9	6.3	4.1	27	198	114	215
MIN	.00	.77	.53	.85	.96	.79	.52	.00	.00	.00	.00	.00
AC-FT	.00	65	120	60	69	85	113	34	206	1400	1180	1270
CAL YR 1987	TOTAL	760.40	MEAN	2.08	MAX	28	MIN	.00	AC-FT	1510		
WTR YR 1988	TOTAL	2321.18	MEAN	6.34	MAX	215	MIN	.00	AC-FT	4600		

08319000 RIO GRANDE AT SAN FELIPE, NM
(Surveillance network station)

LOCATION.--Lat 35°26'39", long 106°26'23", in SW¼NW¼ sec.17, T.14 N., R.5 E., Sandoval County, Hydrologic Unit 13020201, in San Felipe Grant, on right bank 200 ft downstream from Tonque Arroyo, 1,700 ft upstream from steel highway bridge, 0.8 mi upstream from San Felipe Pueblo, 11 mi northeast of Bernalillo, and at mile 1,572.7.

DRAINAGE AREA.--16,100 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1926-30, WSP 1392: 1937(M), WSP 1512: 1931-32, 1933(M), 1934-36, 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 5,115.73 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1957, at site 1,800 ft downstream at datum 5.35 ft lower, except period May 16, 1945 to Sept. 30, 1946 when it was 5.94 ft lower than present datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow completely regulated since November 1973 by Cochiti Dam (station 08317300) 17 mi upstream. Prior to November 1973 some regulation of flow by El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions for irrigation of about 705,000 acres upstream from station, some of which is irrigated downstream by Cochiti eastside main canal and San Felipe eastside acequia, which bypass station.

AVERAGE DISCHARGE.--48 years (water years 1926-73), 1,374 ft³/s, 995,500 acre-ft/yr, prior to closure of Cochiti Dam.
15 years (water years 1974-88), 1,607 ft³/s, 1,164,000 acre-ft/yr, since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,300 ft³/s, June 26, 1937, gage height, 11.13 ft site and datum then in use, from rating curve extended above 15,000 ft³/s; minimum, 32 ft³/s, July 7, 1934.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,600 ft³/s, at 1100 hours Mar. 31, gage height, 5.56 ft; minimum daily, 344 ft³/s, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	747	590	1130	1090	1610	1410	3490	2050	2060	921	905	344
2	748	710	1120	1090	1870	2100	3150	2040	2060	951	769	512
3	721	911	1120	1090	1830	2270	3400	2230	1980	977	999	529
4	727	903	1120	1090	1860	2280	3460	2440	1730	809	979	518
5	729	941	1120	1090	1820	2260	3440	2060	1720	763	1100	512
6	727	962	1120	1110	1680	2260	3450	2040	1650	935	1400	450
7	722	1030	1120	1100	1670	2390	3440	2040	1450	973	1440	398
8	707	1030	1120	1100	1670	2540	3260	2030	1320	740	1110	657
9	709	1040	1120	1100	1670	2540	2670	2010	1210	929	731	899
10	705	1070	1120	1100	1670	2540	2670	1980	971	1070	671	1830
11	708	1120	1120	1100	1660	2270	2660	1980	875	961	599	1870
12	711	1130	1120	1100	1660	1160	2500	1980	1030	708	614	1790
13	719	1130	1120	1100	1660	1130	2170	2080	1150	554	676	1600
14	726	1120	1120	1110	1660	1130	2150	2230	1170	497	689	2070
15	728	1120	1120	1150	1650	1130	2160	2240	1140	528	727	1700
16	728	1120	1120	1260	1650	1090	2200	2230	1110	520	697	1330
17	734	1120	1120	1260	1640	1070	2220	2140	1020	482	685	990
18	731	1120	1130	1260	1640	1060	2330	2100	1000	559	672	977
19	732	1120	1120	1260	1640	1060	2380	2090	1020	417	609	983
20	729	1120	1110	1250	1640	1060	2100	2080	967	404	590	826
21	699	1120	1110	1250	1630	1360	2100	2040	805	542	581	879
22	642	1120	1110	1250	1630	1870	2080	2040	656	711	573	979
23	576	1120	1110	1250	1630	2270	2080	2060	586	648	728	1060
24	571	1120	1100	1250	1620	2880	2080	2170	571	662	598	1120
25	568	1120	1100	1250	1620	3040	2080	2150	635	631	580	1180
26	565	1130	1100	1250	1620	3400	2070	2140	692	648	585	847
27	569	1130	1100	1250	1620	3410	2070	2130	806	817	581	524
28	566	1140	1090	1260	1620	3400	2070	2130	929	999	619	633
29	563	1150	1100	1340	1620	3430	2060	2100	1030	974	601	698
30	574	1150	1090	1510	---	3520	2060	2090	1040	1040	584	664
31	570	---	1090	1510	---	3530	---	2070	---	1130	532	---
TOTAL	20951	31707	34510	37180	48460	66860	76050	65190	34383	23500	23224	29369
MEAN	676	1057	1113	1199	1671	2157	2535	2103	1146	758	749	979
MAX	748	1150	1130	1510	1870	3530	3490	2440	2060	1130	1440	2070
MIN	563	590	1090	1090	1610	1060	2060	1980	571	404	532	344
AC-FT	41560	62890	68450	73750	96120	132600	150800	129300	68200	46610	46060	58250
(+)	3960	0	0	0	0	2000	3680	3720	3650	3540	3420	2560
CAL YR 1987 TOTAL	831513			MEAN	2278	MAX	5720	MIN	442	AC-FT	1649000	
WTR YR 1988 TOTAL	491384			MEAN	1343	MAX	3530	MIN	344	AC-FT	974700	

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

RIO GRANDE BASIN

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 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS	SPE- CIFIC CON- DUCT- ANCE	SPE- CIFIC CON- DUCT- ANCE	PH (STAND- ARD	PH LAB (STAND- ARD	TEMPER- ATURE AIR	TEMPER- ATURE WATER	OXYGEN, DIS- SOLVED	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
		(CFS) (00061)	(US/CM) (00095)	(US/CM) (90095)	(UNITS) (00400)	(UNITS) (00403)	(DEG C) (00020)	(DEG C) (00010)	(MG/L) (00300)	(MG/L) (00340)	(00900)	(00902)
NOV 02...	1000	597	370	389	7.60	8.00	15.0	10.0	7.8	320	140	30
MAR 02...	1212	1920	315	351	8.10	8.30	14.0	11.0	12.2	12	130	14
MAY 10...	1130	2000	380	391	8.20	7.90	23.0	14.0	9.2	23	140	23
AUG 02...	1230	763	408	416	8.60	8.50	25.0	23.0	8.0	--	160	29
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 02...	43	8.5	24	0.9	3.2	134	0	110	113	72	5.9	
MAR 02...	38	7.7	21	0.8	2.7	144	0	118	113	56	6.3	
MAY 10...	40	8.6	27	1	2.3	154	0	126	113	75	7.8	
AUG 02...	48	9.2	28	1	3.6	124	18	132	129	69	7.5	
DATE		FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (UG/L AS N) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHOS, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC TOTAL (UG/L AS AS) (01002)
NOV 02...	0.30	17	242	<0.100	0.100	0.080	0.62	0.030	0.030	8.6	2	
MAR 02...	0.40	16	216	<0.100	<0.100	0.080	0.42	0.040	<0.010	3.0	--	
MAY 10...	0.40	18	247	<0.100	<0.100	0.040	0.26	0.050	0.030	4.1	--	
AUG 02...	0.30	19	262	--	--	--	--	--	--	--	3	
DATE		ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 02...	2	40	<1	2	2	<10	9	4	10	5	<5	
MAR 02...	--	40	--	--	--	--	--	--	4	--	--	
MAY 10...	--	40	--	--	--	--	--	--	12	--	--	
AUG 02...	3	50	<1	28	3	<1	6	3	12	<5	<5	

RIO GRANDE BASIN

08319000 RIO GRANDE AT SAN FELIPE, NM -- Continued

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WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 02...	0.10	<0.1	<1	<1	40	14	15	24	99	K630	880
MAR 02...	--	--	--	--	--	--	75	389	31	K6	33
MAY 10...	--	--	--	--	--	--	47	254	86	<10	K16
AUG 02...	<0.10	0.2	<1	<1	--	8	139	286	55	K190	K64

08321500 JEMEZ RIVER BELOW EAST FORK, NEAR JEMEZ SPRINGS, NM

LOCATION.--Lat 35°49'39", long 106°38'52", in NW¼ sec.5, T.18 N., R.3 E., Sandoval County, Hydrologic Unit 13020202, on left bank 0.4 mi downstream from East Fork and boundary of Santa Fe National Forest, 5.3 mi northeast of Jemez Springs, and at mile 43.0.

DRAINAGE AREA.--173 mi².

PERIOD OF RECORD.--July 1949 to October 1950 (gaged separately upstream from East Fork), May 1951 to September 1957 (irrigation seasons only), March 1958 to September 1976, July 1981 to current year.

REVISED RECORDS.--WSP 1512: 1951-54(M), 1955, 1956(M). WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,703 ft above National Geodetic Vertical Datum of 1929 (plane-table survey by Topographic Division, U.S. Geological Survey, 1952). Prior to May 1951, at sites 3,000 ft upstream, at different datums and on separate channels.

REMARKS.--Estimated daily discharges: Dec. 3 to Jan. 14, Jan. 21, 20, and Apr. 10-12. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years (water years 1950, 1959-76, 1982-88), 33.6 ft³/s, 24,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 2,500 ft³/s, Apr. 21, 1958, gage height, 7.35 ft, from rating curve extended above 1,100 ft³/s on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.91 ft³/s, Jan. 24, 1969, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Mar. 28	0030	*579	*3.40	Aug. 28	1000	274	2.64
Apr. 17	0130	439	3.09				

Minimum daily discharge, 15 ft³/s, Oct. 2-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	31	18	19	22	26	34	65	28	26	24	105
2	15	44	21	18	21	27	40	63	26	25	24	55
3	15	40	21	21	22	24	43	61	24	24	22	55
4	15	28	22	22	20	22	71	58	24	25	22	46
5	15	24	24	21	21	22	141	56	29	21	25	42
6	15	36	22	20	19	23	175	55	29	20	40	40
7	15	43	22	19	20	24	192	52	25	18	30	38
8	15	34	20	18	22	19	174	51	21	18	24	35
9	16	28	19	20	21	21	139	47	20	22	25	33
10	16	24	22	22	22	23	100	45	20	28	32	31
11	17	23	24	20	20	17	92	43	25	25	30	34
12	18	22	22	21	22	17	89	41	25	20	29	51
13	19	22	16	19	22	18	75	40	21	19	24	65
14	26	23	18	18	22	18	71	40	19	18	21	69
15	25	24	24	20	21	18	90	38	19	19	21	62
16	21	23	24	20	23	17	178	37	21	20	21	41
17	20	20	23	20	23	17	277	38	22	27	27	35
18	20	19	24	18	21	18	186	45	22	22	33	32
19	19	19	23	19	21	18	153	50	20	22	29	30
20	19	22	22	19	21	20	105	45	19	21	23	29
21	19	22	25	18	21	23	87	52	18	22	21	39
22	19	21	21	19	22	26	84	42	18	20	21	57
23	19	21	20	20	20	33	101	37	21	18	48	59
24	21	21	20	20	21	45	89	34	30	17	53	46
25	21	19	17	20	21	56	78	38	23	17	46	34
26	21	20	16	19	22	123	67	42	24	17	55	31
27	20	21	28	19	22	268	62	36	25	18	114	30
28	20	17	19	20	23	322	60	31	36	20	238	28
29	20	20	19	21	24	134	64	30	33	21	136	27
30	24	21	20	22	---	91	64	27	28	24	73	27
31	27	---	22	21	---	71	---	29	---	26	117	---
TOTAL	589	752	658	613	622	1601	3181	1368	715	660	1448	1306
MEAN	19.0	25.1	21.2	19.8	21.4	51.6	106	44.1	23.8	21.3	46.7	43.5
MAX	27	44	28	22	24	322	277	65	36	28	238	105
MIN	15	17	16	18	19	17	34	27	18	17	21	27
AC-FT	1170	1490	1310	1220	1230	3180	6310	2710	1420	1310	2870	2590
CAL YR 1987	TOTAL	22500		MEAN	61.6	MAX	959	MIN	13	AC-FT	44630	
WTR YR 1988	TOTAL	14002.7		MEAN	38.3	MAX	199	MIN	8.5	AC-FT	27770	

08323000 RIO GUADALUPE AT BOX CANYON, NEAR JEMEZ, NM

LOCATION.--Lat 35°43'52", long 106°45'44", Sandoval County, Hydrologic Unit 13020202, in Canon de San Diego Grant, on left bank at downstream end of Guadalupe Box Canyon, 4.8 mi upstream from mouth, 5 mi southwest of Jemez Springs, and 7 mi north of Jemez.

DRAINAGE AREA.--235 mi².

PERIOD OF RECORD.--November 1938 to September 1942, August 1949 to September 1950, (monthly discharge only for November, December 1938 and August 1949 published in WSP 1312), May 1951 to September 1957 (irrigation seasons only), May 1958 to September 1976, July 1981 to current year. Prior to 1951 published as "08323500 Rio Guadalupe near Jemez Springs".

REVISED RECORDS.--WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,015 ft above National Geodetic Vertical Datum of 1929 (plane-table survey by Topographic Division, U.S. Geological Survey, 1952). Prior to 1951 at site 2.4 mi downstream at lower datums.

REMARKS.--Estimated daily discharges: Nov. 10 to Dec. 16 and Dec. 17 to Jan. 29. Records good except for estimated daily discharges, which are poor. Flow regulated to some extent since October 1958 by San Gregorio Reservoir on Clear Creek, 24 mi upstream (capacity, 345 acre-ft), and by transmountain diversion into Rio Puerco Basin for irrigation of about 300 acres in vicinity of Cuba. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years (water years 1939-42, 1950, 1959-76, 1982-1988), 47.7 ft³/s, 34,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,190 ft³/s, May 13 or 14, 1941, gage height, 8.4 ft, from floodmarks, site and datum in use June 1941 to September 1942, from rating curve extended above 1,000 ft³/s; minimum, 2.8 ft³/s, Dec. 9, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 5	2230	*825	*6.37	Aug. 31	0030	169	4.68
Aug. 28	0245	302	5.11	Sept. 13	1145	111	4.46

Minimum daily discharge, 8.5 ft³/s, July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	19	13	13	15	30	43	188	57	28	25	107
2	10	27	13	12	15	31	41	174	46	25	44	89
3	10	22	12	14	16	30	47	140	40	29	37	71
4	9.8	17	13	14	14	27	60	138	39	27	19	59
5	9.5	16	14	13	14	28	61	161	56	24	63	50
6	9.4	20	14	13	13	29	65	179	65	22	67	44
7	9.3	25	13	12	14	32	80	146	44	20	30	40
8	9.3	21	12	13	16	24	95	121	34	22	21	35
9	9.2	16	12	13	14	25	101	111	30	24	19	32
10	9.3	15	13	14	15	28	92	117	27	26	22	29
11	9.4	14	14	13	13	23	87	127	35	24	24	37
12	9.4	13	15	13	14	22	93	129	36	21	22	88
13	9.7	14	10	13	14	24	103	132	28	15	19	104
14	11	15	11	12	14	22	103	132	25	9.8	17	81
15	13	14	13	14	14	23	113	144	23	9.4	16	67
16	12	15	16	14	14	22	158	143	23	9.8	16	48
17	11	12	15	13	15	23	162	130	24	13	17	41
18	11	11	15	14	14	23	122	142	23	16	21	37
19	10	11	14	14	15	21	114	169	22	16	23	33
20	10	13	14	15	14	22	113	129	20	11	21	31
21	10	12	13	15	14	25	119	123	19	16	17	33
22	10	12	13	16	15	31	114	95	19	16	16	39
23	10	13	12	16	15	37	105	83	20	12	20	43
24	10	13	12	15	16	42	99	78	21	11	34	35
25	11	12	11	15	16	38	95	92	25	9.7	26	30
26	11	11	12	14	18	47	92	92	31	8.5	41	29
27	11	13	15	14	20	59	91	83	28	9.2	85	31
28	11	12	14	13	23	71	99	76	35	21	199	25
29	11	11	12	15	27	54	114	68	36	14	94	24
30	13	13	12	16	---	53	142	60	31	34	74	23
31	15	---	11	14	---	53	---	67	---	32	109	---
TOTAL	326.3	452	403	429	451	1019	2923	3769	962	575.4	1258	1435
MEAN	10.5	15.1	13.0	13.8	15.6	32.9	97.4	122	32.1	18.6	40.6	47.8
MAX	15	27	16	16	27	71	162	188	65	34	199	107
MIN	9.2	11	10	12	13	21	41	60	19	8.5	16	23
AC-FT	647	897	799	851	895	2020	5800	7480	1910	1140	2500	2850
CAL YR 1987	TOTAL	22927.2		MEAN	62.8	MAX	634	MIN	9.2	AC-FT	45480	
WTR YR 1988	TOTAL	14002.7		MEAN	38.3	MAX	199	MIN	8.5	AC-FT	27770	

RIO GRANDE BASIN

08324000 JEMEZ RIVER NEAR JEMEZ, NM

LOCATION.--Lat 35°39'42", long 106°44'34", Sandoval County, Hydrologic Unit 13020202, in Canon de San Diego Grant, on left bank 0.7 mi downstream from Rio Guadalupe, 3.5 mi north of Jemez, and at mile 29.5.

DRAINAGE AREA.--470 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1936 to May 1941, August 1949 to October 1950, May 1951 to September 1952 (irrigation seasons only), March 1953 to current year. Monthly discharge only for some periods, published in WSP 1732. Published as Jemez Creek near Jemez, 1936-41.

REVISED RECORDS.--WSP 1712: Drainage area. WSP 1923, 1957-58.

GAGE.--Water-stage recorder. Concrete control since Dec. 6, 1965. Datum of gage is 5,622 ft above National Geodetic Vertical Datum of 1929 (plane-table survey by Topographic Division, U.S. Geological Survey 1952). June 22, 1936 to Mar. 11, 1937, at site 60 ft upstream at datum 0.50 ft higher. Mar. 12, 1937, to July 8, 1938, at present site at datum 0.7 ft higher. July 9, 1938, to May 6, 1941, at site 60 ft upstream at datum 0.70 ft higher.

REMARKS.--No estimated daily discharges. Water-discharge records good. Diversion for irrigation of about 300 acres upstream from station. Several observations of water temperature were made during the year, and U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--40 years (water years 1937-40, 1950, 1954-88), 77.1 ft³/s, 55,860 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft³/s, Apr. 21, 1958, from rating curve extended above 2,200 ft³/s on basis of contracted-opening measurement of peak flow; maximum gage height, 10.10 ft, July 15, 1985, present datum; minimum, 1.2 ft³/s, July 25, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1890 occurred between May 6 and 15, 1941, after gage was destroyed (discharge probably exceeded 6,000 ft³/s), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
AUG. 5	2230	*925	*6.37				

Minimum discharge, 12 ft³/s, Dec. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	62	30	35	41	68	105	242	83	48	56	213
2	24	94	33	42	41	70	109	237	71	44	80	164
3	23	73	36	42	42	71	119	213	62	45	73	130
4	22	55	36	33	40	61	151	205	59	46	47	107
5	22	50	39	36	39	65	233	214	78	43	94	93
6	19	58	38	40	37	66	273	229	87	38	112	86
7	25	75	36	38	37	75	295	204	64	35	67	80
8	28	65	36	33	41	55	286	183	55	34	53	71
9	29	51	31	34	41	60	268	170	47	36	46	65
10	32	48	33	36	42	67	213	171	42	44	55	60
11	31	43	37	36	40	55	184	173	48	49	58	63
12	30	39	35	34	41	51	181	173	54	35	57	133
13	28	37	34	31	41	62	190	178	46	29	47	151
14	36	39	24	37	42	45	188	173	41	26	41	154
15	42	41	22	37	39	53	211	178	38	25	37	135
16	41	40	27	39	44	57	293	174	39	26	36	94
17	36	40	36	38	45	50	435	167	40	33	42	77
18	33	40	40	37	41	51	332	178	37	37	53	69
19	29	34	39	37	44	52	290	209	38	38	54	61
20	26	39	37	34	41	56	248	182	35	30	45	57
21	29	35	25	35	43	62	231	179	32	39	40	68
22	34	36	34	36	43	71	219	144	30	39	36	91
23	33	34	35	43	43	83	228	120	33	31	54	103
24	33	35	36	38	42	106	210	112	35	31	89	87
25	34	31	33	34	44	113	187	125	42	28	76	68
26	34	37	28	41	48	178	177	133	49	24	90	61
27	34	34	33	38	47	310	163	116	45	26	186	62
28	34	27	34	39	48	449	168	106	59	45	382	55
29	32	33	31	40	58	255	189	91	67	37	236	51
30	36	32	33	41	---	197	212	80	57	67	154	51
31	43	---	32	40	---	170	---	86	---	66	236	---
TOTAL	954	1357	1033	1154	1235	3184	6588	5145	1513	1174	2732	2760
MEAN	30.8	45.2	33.3	37.2	42.6	103	220	166	50.4	37.9	88.1	92.0
MAX	43	94	40	43	58	449	435	242	87	67	382	213
MIN	19	27	22	31	37	45	105	80	30	24	36	51
AC-FT	1890	2690	2050	2290	2450	6320	13070	10210	3000	2330	5420	5470
CAL YR 1987	TOTAL	47955		MEAN	131	MAX	1440	MIN	19	AC-FT	95120	
WTR YR 1988	TOTAL	28829		MEAN	78.8	MAX	449	MIN	19	AC-FT	57180	

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 12...	1115	41	510	533	8.00	8.20	11.5	7.0	10.2	370	130	0
MAR 16...	1130	51	430	431	8.30	8.20	7.5	4.5	13.0	--	120	0
MAY 17...	1130	173	225	210	8.61	8.00	--	14.0	8.8	--	67	0
JUL 13...	1314	31	510	520	8.54	8.60	30.0	27.0	--	18	130	0
AUG 10...	1430	60	350	--	8.35	--	31.0	24.0	7.5	--	--	--

[illegible][illegible]

08324000 JEMEZ RIVER NEAR JEMEZ, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

[illegible][illegible]

08328500 JEMEZ CANYON RESERVOIR NEAR BERNALILLO, NM

LOCATION.--Lat 35°23'40", long 106°32'50", in SW¼SW¼ sec.32, T.14 N., R.4 E., Sandoval County, Hydrologic Unit 13020202, at corner of outlet works control tower of Jemez Canyon Dam on Jemez River, 2.8 mi upstream from mouth, and 6 mi north of Bernalillo.

DRAINAGE AREA.--1,034 mi².

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

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

REMARKS.--Reservoir is formed by earthfill dam, completed October 19, 1953. Capacity, 172,800 acre-ft, from capacity table adapted January 1, 1985, between elevations 5,125.0 ft sill of outlet gates and 5,252.3 ft operating deck of spillway. Maximum controlled capacity, 102,700 acre-ft at elevation 5,232.0 ft (floor of spillway which is located about 0.8 mi south of dam). Capacity by original survey was 189,100 acre-ft. Original plan for reservoir operation was to desilt all flow above 30 ft³/s by storage for one day before releasing to Rio Grande, and for possible detention during flood stage on Rio Grande. A U.S. Army Corps of Engineers satellite telemeter at station.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 34,960 acre-ft, May 10, elevation, 5,200.58 ft; minimum contents, 26,520 acre-ft, Mar. 1, elevation, 5,194.59 ft.

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

5,170	4,200	5,190	20,840	5,210	50,620
5,175	6,980	5,195	27,060	5,215	60,480
5,180	10,730	5,200	34,100	5,220	71,550
5,185	15,400	5,205	41,860	5,225	83,720

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27660	27470	26740	26610	26620	26520	29190	34400	29580	28860	27500	28040
2	27660	27510	26740	26630	26740	26530	29540	34540	29330	28790	27760	27860
3	27650	27490	26730	26660	26740	26550	29720	34590	29210	28660	27800	27820
4	27630	27590	26730	26710	26740	26550	29790	34590	29190	28570	27680	27760
5	27610	27530	26740	26780	26740	26570	29830	34660	29190	28380	27620	27660
6	27570	27450	26750	26830	26740	26580	29970	34830	29230	28340	27820	27230
7	27540	27370	26810	26820	26740	26630	30310	34930	29300	28270	28030	26890
8	27500	27300	26860	26730	26740	26660	30490	34940	29280	28700	28030	26890
9	27490	27120	26890	26700	26740	26660	30750	34940	29110	28920	27800	26940
10	27460	27030	26820	26660	26770	26670	30850	34960	29010	28940	27590	27100
11	27430	27060	26790	26650	26660	26670	31100	34940	29010	28660	27420	27310
12	27420	27060	26780	26630	26660	26670	31160	34940	29010	28230	27250	27960
13	27390	27060	26770	26630	26660	26670	31230	34930	29040	27990	27220	29110
14	27370	26930	26730	26630	26620	26690	31320	34750	29080	27960	27190	28780
15	27370	26930	26690	26670	26620	26690	31460	34500	29080	27860	27120	28040
16	27370	26930	26730	26740	26620	26700	32030	34190	29070	27800	27110	27570
17	27370	27070	26790	26770	26590	26700	32620	33860	29010	27720	27150	27470
18	27370	27060	26910	26820	26590	26700	32810	33450	28920	27690	27490	27300
19	27370	27060	26980	26850	26590	26700	33100	33120	28810	27630	27580	27090
20	27370	27060	27030	26750	26590	26700	33390	32740	28770	27740	27610	26830
21	27370	27010	27050	26690	26590	26700	33530	32350	28720	27740	27630	26850
22	27370	26980	26990	26610	26590	26700	33720	31960	28670	27700	27650	26950
23	27370	26940	26910	26550	26590	26700	33780	31520	28630	27660	27650	27090
24	27370	26910	26710	26550	26590	26700	33890	31300	28630	27650	27650	27160
25	27370	26870	26710	26590	26530	26700	34110	31030	28640	27590	27850	27220
26	27370	26790	26660	26620	26530	26770	34140	30780	28660	27530	27880	27220
27	27370	26770	26650	26700	26530	27100	34140	30610	28680	27430	27730	27150
28	27370	26740	26570	26770	26530	27770	34190	30450	28790	27430	28050	26970
29	27370	26740	26570	26750	26530	28340	34230	30250	28830	27420	28250	26780
30	27370	26750	26570	26700	---	28610	34250	30030	28900	27420	28300	26750
31	27370	---	28620	26640	---	28900	---	29790	---	27470	28300	---
MAX	27660	27590	28620	26850	26770	28900	34250	34960	29580	28940	28300	29110
MIN	27370	26740	26570	26550	26530	26520	29190	29790	28630	27420	27110	26750
(+)	5195.23	5194.77	5194.64	5194.68	5194.60	5196.36	5200.10	5197.00	5196.36	5195.31	5195.92	5194.77
(++)	-310	-613	-171	+53	-106	+2375	+5344	+5544	-10888	-1431	+827	-1547
CAL YR 1987	MAX 72110	MIN 26570	(++)	-33515								
WTR YR 1988	MAX 34960	MIN 26520	(++)	-8881								

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

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

08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, NM

LOCATION.--Lat 35°23'24", long 106°32'03", in NE¼ sec.5, T.13 N., R.4 E., Sandoval County, Hydrologic Unit 13020202, on right bank 0.8 mi downstream from Jemez Canyon Dam, 2.0 mi upstream from mouth, and 6 mi north of Bernalillo.

DRAINAGE AREA.--1,038 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1936 to January 1938, March 1943 to current year. Published as "Jemez Creek" prior to 1948, and as "near Bernalillo" prior to 1954.

REVISED RECORDS.--WSP 1178: 1949. WSP 1212: 1950. WSP 1512: 1936, 1943, 1945, 1947-48, 1949(M), 1950. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,095.60 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Apr. 24, 1951, at site 0.8 mi upstream at datum 24.51 ft higher. Apr. 24, 1951, to June 25, 1958, at site 37 ft upstream at datum 4.40 ft above present datum. Supplementary water-stage recorder at gages on Jemez Canyon Dam at datum 5,125.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark) used at times since January 1953.

REMARKS.--No estimated daily discharges. Water-discharge records good except for those below 5.0 cfs, which are fair. 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. A U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--46 years (water years 1937, 1944-88), 61.9 ft³/s, 44,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft³/s, Aug. 29, 1943, gage height, 5.62 ft, site and datum then in use, from rating curve extended above 3,000 ft³/s; no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in 1900 was probably less than 16,000 ft³/s, but highest observed outside period of record.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 477 ft³/s, Sept. 13; minimum daily, 0.15 ft³/s, Aug. 21, 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.0	18	1.1	40	34	39	118	152	90	5.1	363
2	3.0	66	18	1.1	24	34	39	115	152	68	12	285
3	2.8	111	17	.90	25	34	40	116	73	68	47	131
4	2.8	111	16	.90	25	34	87	116	20	66	88	131
5	2.8	110	15	17	25	35	140	115	20	47	54	131
6	2.8	109	14	62	25	35	140	114	20	21	18	215
7	2.8	108	13	114	26	35	140	112	21	22	18	166
8	2.8	107	13	86	26	35	139	112	54	18	71	21
9	2.4	106	50	56	26	35	137	111	99	9.2	131	20
10	2.4	71	60	56	27	35	137	111	53	1.2	131	20
11	2.2	27	27	43	27	36	137	112	8.1	148	131	23
12	2.1	26	14	22	28	36	135	113	7.6	245	82	134
13	2.2	26	13	14	28	36	133	176	5.6	74	18	477
14	2.4	26	12	14	28	36	132	210	13	14	18	441
15	2.3	26	7.6	14	28	36	131	209	35	13	11	438
16	2.4	26	1.6	14	29	36	132	211	45	12	3.4	330
17	2.4	26	1.2	14	29	37	128	255	45	12	3.4	140
18	2.4	26	18	13	28	37	128	326	46	8.0	3.4	140
19	2.2	34	32	34	29	37	128	324	47	3.7	1.3	156
20	2.1	41	31	102	29	38	133	325	25	3.6	.25	153
21	2.3	41	71	106	30	38	129	329	3.4	9.9	.15	72
22	2.4	41	95	46	30	37	127	330	3.0	15	.29	47
23	2.4	40	94	4.7	31	38	125	281	2.6	12	.25	46
24	2.4	55	64	2.6	31	38	125	188	2.6	12	.15	46
25	2.3	80	35	2.0	32	38	123	189	2.2	11	.15	47
26	2.2	84	34	1.9	32	38	123	189	1.9	8.8	53	96
27	2.4	47	34	1.7	32	39	123	171	1.8	6.0	140	131
28	2.4	18	20	19	33	39	123	149	1.7	6.0	140	158
29	2.1	18	1.9	52	33	39	122	150	42	5.4	140	118
30	2.1	18	1.1	67	---	41	121	149	89	5.2	140	45
31	1.9	---	1.1	63	---	39	---	150	---	5.2	219	---
TOTAL	75.4	1627.0	842.5	1044.90	836	1135	3596	5676	1091.5	1040.2	1679.84	4721
MEAN	2.43	54.2	27.2	33.7	28.8	36.6	120	183	36.4	33.6	54.2	157
MAX	3.2	111	95	114	40	41	140	330	152	245	219	477
MIN	1.9	2.0	1.1	.90	24	34	39	111	1.7	1.2	.15	20
AC-FT	150	3230	1670	2070	1660	2250	7130	11260	2160	2060	3330	9360
CAL YR 1987	TOTAL	40469.77	MEAN	111	MAX	729	MIN	.90	AC-FT	80270		
WTR YR 1988	TOTAL	23365.34	MEAN	63.8	MAX	477	MIN	.15	AC-FT	46350		

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to September 1988 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
NOV 02...	1300	158	780	719	8.00	8.40	15.0	14.0	8.8	150	11	51	
JAN 06...	1230	30	1100	1090	7.83	8.30	5.5	3.5	10.9	180	0	60	
MAR 02...	0900	34	960	954	8.20	8.30	9.5	7.0	10.5	170	0	55	
MAY 10...	1330	111	875	789	8.70	8.40	26.0	14.0	9.8	140	0	46	
JUL 07...	0957	21	780	--	8.50	--	29.0	20.0	11.1	--	--	--	
AUG 09...	1030	131	1200	1160	7.80	8.00	28.0	25.5	7.4	180	29	60	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 02...	6.5	90	3	6.5	143	110	75	0.60	26	452	390	10	
JAN 06...	8.5	150	5	10	196	140	140	0.80	28	656	680	26	
MAR 02...	7.6	130	5	7.8	177	130	110	0.30	28	575	610	11	
MAY 10...	6.5	110	4	7.4	156	100	91	0.70	26	482	470	19	
JUL 07...	--	--	--	--	--	--	--	--	--	--	--	--	
AUG 09...	8.5	170	6	9.6	156	230	140	0.70	24	737	630	12	

RIO GRANDE BASIN

08329700 CAMPUS WASH AT ALBUQUERQUE, NM

LOCATION.--Lat 35°05'40", long 106°37'22", in SE¼ 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 Baretas Stormwater Pumping Station outfall, 600 ft downstream from Tucker Road bridge, and 1,500 ft northeast of intersection of Lomas and University Blvds. in Albuquerque.

PERIOD OF RECORD.--April 1982 to current year (no winter records).

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

REMARKS.--Estimated daily discharges: June 30 to July 7. Records good except for estimated daily discharges, which are poor. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,010 ft³/s, Aug. 25, 1986, gage height, 4.00 ft, from floodmarks from step-backwater analysis of channel; no flow of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 629 ft³/s, at 2200 hours July 28, gage height, 3.05 ft; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	9.1	.00				13	.00	.00	15	.00	2.7
2	.00	.31	.00				.00	.00	.00	.00	.00	.00
3	.00	.00	.00				.00	.00	.00	.00	.32	.00
4	.00	.00	.00				.00	.00	.00	.00	.00	.00
5	.00	.18	.00				.00	.00	.00	.00	.00	.00
6	.00	.00	.00				.00	.00	.00	.00	.00	.00
7	.04	.00	.00				.00	.00	.00	.00	.00	.00
8	.03	.00	---				.00	.00	.00	21	.00	.00
9	.00	.00	---				.00	.00	.00	44	39	.04
10	.00	.00	---				.00	.00	5.3	2.0	.36	.00
11	.02	.00	---				.00	.00	8.4	.00	.04	3.6
12	.02	.00	---				.00	.00	.00	.00	.00	10
13	.00	.00	---				.00	.00	.00	.00	.00	28
14	1.9	.00	---				3.8	.00	.00	.00	.00	1.3
15	.00	.79	---				.00	.00	.00	.00	.48	.00
16	.00	.00	---				35	.49	.80	.00	.14	.00
17	.00	.00	---				.00	.00	.00	1.8	5.2	.00
18	.00	.00	---				.00	4.3	.00	.11	.00	.00
19	.00	.00	---				.00	.00	.00	.00	.00	.00
20	.00	.00	---				.00	5.2	.00	.00	.00	.07
21	.00	.00	---				.00	.00	.00	.00	.00	12
22	.00	.00	---				.00	.00	.00	.00	.24	11
23	.00	.00	---				.00	.00	.00	.00	.22	.00
24	.00	.00	---				.00	.00	.00	.00	.43	.00
25	.00	.00	---				.00	.00	.00	.00	10	.00
26	.00	.00	---				.00	.00	.94	.00	.80	.00
27	.00	.00	---				.00	.00	1.1	7.0	3.4	.00
28	.00	.00	---				.00	.00	4.1	23	2.1	.00
29	.00	.00	---				.00	.00	.00	2.9	.59	.00
30	3.8	.00	---				.00	.00	.00	.28	.00	.00
31	.00	---	---				---	.00	---	.00	1.5	---
TOTAL	5.81	10.38	---				51.80	9.99	20.64	117.09	64.82	68.71
MEAN	.19	.35	---				1.73	.32	.69	3.78	2.09	2.29
MAX	3.8	9.1	---				35	5.2	8.4	44	39	28
MIN	.00	.00	---				.00	.00	.00	.00	.00	.00
AC-FT	12	21	---				103	20	41	232	129	136

08329835 NORTH FLOODWAY CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'03", long 106°36'42", in SE¼ 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 Blvd. NE and 3,000 ft downstream from confluence of Campus Wash and Embudo Arroyo in Albuquerque.

PERIOD OF RECORD.--May 1982 to current year (no winter records).

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

REMARKS.--Estimated daily discharges: Sept. 1-12. Records good except for estimated daily discharges, which are poor.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,250 ft³/s, at 1945 hours July 9, gage height, 12.10 ft from floodmarks; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	65	.00				133	.00	.00	2.9	.00	.00
2	.00	3.6	.00				11	.00	.00	8.8	.00	.00
3	.00	.00	.00				.00	.00	.00	5.2	.00	.00
4	.00	.00	.00				.00	.00	11	.08	.00	.00
5	.00	6.0	.00				.00	.00	8.6	104	.00	.00
6	.06	2.9	.00				.00	.00	.90	20	.00	.00
7	.00	.00	.00				.00	.00	.00	.00	.00	.00
8	.00	.00	---				.08	.00	.00	79	20	.00
9	.00	.00	---				.00	.00	3.2	485	164	.00
10	.00	.00	---				.00	.00	92	94	32	.00
11	.00	.00	---				.00	.00	83	.00	20	.00
12	.00	.00	---				.00	.00	20	.00	.00	21
13	.00	.00	---				.00	.00	.00	.00	.00	200
14	17	.00	---				88	.00	.00	.00	.00	32
15	.00	14	---				.39	.00	.00	.00	.00	.00
16	.00	3.0	---				222	16	8.0	.00	56	.00
17	.00	.00	---				3.5	19	2.1	22	41	.00
18	.00	.00	---				.10	64	.00	32	17	.00
19	.00	.00	---				.10	14	.00	2.8	13	.00
20	.00	.00	---				.22	79	.00	5.0	.00	.00
21	.00	.00	---				.00	.00	.00	.00	.00	162
22	.00	.00	---				5.0	.00	3.7	.00	.31	111
23	.00	.00	---				.00	.00	5.3	.00	3.1	22
24	.00	.00	---				.04	.00	9.1	.00	8.1	.00
25	.00	.00	---				.00	.00	8.0	.00	23	.00
26	.00	.75	---				2.2	.00	11	6.1	15	.00
27	.00	.00	---				.00	.00	49	26	34	.00
28	.00	.04	---				.08	.00	69	149	35	.00
29	.00	.00	---				3.8	.00	1.7	48	6.0	.00
30	37	.00	---				3.1	.00	42	26	.00	.00
31	3.4	---	---				---	.00	---	14	6.5	---
TOTAL	57.46	95.29	---				472.61	192.00	427.60	1129.88	494.01	548.00
MEAN	1.85	3.18	---				15.8	6.19	14.3	36.4	15.9	18.3
MAX	37	65	---				222	79	92	485	164	200
MIN	.00	.00	---				.00	.00	.00	.00	.00	.00
AC-FT	114	189	---				937	381	848	2240	980	1090

08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM

LOCATION.--Lat 35°11'58", long 106°35'53", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on left bank 0.5 mi upstream from Edith Blvd., 1.1 mi upstream from mouth, and 1.2 mi northeast of Alameda.

PERIOD OF RECORD.--July 1968 to current year (no winter records).

GAGE.--Water-stage recorder 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.--Estimated daily discharges: July 16 to Sept. 15. Records good except for estimated daily discharges and those below 25 ft³/s, which are poor. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s, Aug. 14, 1980, gage height, 10.4 ft, from rating curve extended above 2,900 ft³/s; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 14	1800	1,650	3.05	July 8	2115	3,300	4.80
Apr. 16	1050	2,170	3.64	July 9	2000	*10,700	*10.20
June 10	2000	2,160	3.63	July 29	0100	5,000	6.30
June 28	0200	1,530	2.90	Sept. 13	2100	3,330	3.93
July 5	1900	2,200	3.68				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00				227	.00	.00	50	.00	.00
2	.00	.00	.00				175	.00	.00	63	.00	.00
3	.00	.00	.00				.00	.00	.00	59	.00	.00
4	.00	.00	.00				.00	.00	.00	50	.00	.00
5	.00	58	.00				.00	.00	63	240	.00	.00
6	1.1	51	.00				.00	.00	36	74	.00	.00
7	.00	.00	.00				.00	.00	.00	.00	.00	.00
8	.00	.00	.00				.00	.00	.00	238	30	.00
9	.00	.00	---				.00	.00	14	902	200	.00
10	2.3	.00	---				.00	.00	130	66	40	.00
11	.00	.00	---				.00	.00	118	.00	25	.00
12	.00	.00	---				.00	.00	52	.00	.00	10
13	.00	47	---				.00	.00	.00	.00	.00	300
14	49	89	---				107	.00	.00	.00	.00	40
15	.00	98	---				47	.00	.00	.00	.00	.00
16	.00	143	---				261	17	29	.00	90	.00
17	.00	.00	---				34	23	42	30	45	.00
18	.00	.00	---				.00	99	.00	40	20	.00
19	.00	.00	---				.00	38	.00	6.0	17	.00
20	.00	.00	---				.00	124	.00	7.0	.00	.00
21	.00	.00	---				.00	.00	.00	.00	.00	166
22	.00	.00	---				.00	.00	23	.00	.00	145
23	.00	.00	---				.00	.00	34	.00	.00	38
24	.00	33	---				.00	.00	27	.00	4.0	.00
25	.00	.00	---				.00	.00	77	.00	30	.00
26	.00	.00	---				.00	.00	88	30	15	.00
27	.00	.00	---				.00	.00	20	75	30	.00
28	.00	.00	---				.00	.00	199	200	40	.00
29	.00	.00	---				.00	.00	29	70	10	.00
30	133	.00	---				.00	.00	104	30	.00	.00
31	27	---	---				---	.00	---	15	10	---
TOTAL	212.40	519.00	---				851.00	301.00	1085.00	2245.00	606.00	699.00
MEAN	6.85	17.3	---				28.4	9.71	36.2	72.4	19.5	23.3
MAX	133	143	---				261	124	199	902	200	300
MIN	.00	.00	---				.00	.00	.00	.00	.00	.00
AC-FT	421	1030	---				1690	597	2150	4450	1200	1390

RIO GRANDE BASIN

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08330000 RIO GRANDE AT ALBUQUERQUE, NM

LOCATION.--Lat 35°05'21", long 106°40'48", Bernalillo County, Hydrologic Unit 13020203, in Atrisco Grant, on downstream side of Central Ave. bridge in Albuquerque, and at mile 1,540.0.

DRAINAGE AREA.--17,440 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1946(M).

GAGE.--Water-stage recorder. 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.--No estimated daily discharges. Records good. Flow completely regulated since November 1973 by Cochiti Dam (station 08317300) 50 mi upstream. Possible regulation by operation of reservoirs on Rio Chama and by flood-and-silt-detention reservoirs on Galisteo Creek and Jemez River (stations 08285000, 08286900, 08317900, 08328500). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions upstream from station for irrigation of about 718,000 acres, several hundred of which are downstream from station. National Weather Service gage height telemeter, and U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records for Albuquerque Riverside drain and Arenal, Armijo, and Atrisco canals provided by Middle Rio Grande Conservancy District.

AVERAGE DISCHARGE.--32 years (water years 1942-73), 1,068 ft³/s, 773,800 acre-ft/yr, prior to closure of Cochiti Dam.
15 years (water years 1974-88), 1,481 ft³/s, 1,073,000 acre-ft/yr, since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s, Apr. 24, 1942, from rating curve extended above 13,900 ft³/s; maximum gage height, 7.82 ft, Aug. 10, 1967; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,820 ft³/s, at 2330 hours July 9, gage height, 5.30 ft; minimum daily, 238 ft³/s, July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	415	596	1100	1020	1520	1530	3880	1860	1900	986	740	623
2	419	740	1110	996	1750	1490	3720	1950	1930	807	485	601
3	416	855	1120	979	1870	2150	3750	1890	1900	703	416	614
4	402	1010	1110	979	1850	2130	3700	2260	1590	731	579	506
5	408	992	1090	978	1890	2170	3720	2080	1460	605	596	492
6	411	1030	1070	1020	1780	2170	3670	1860	1420	573	819	456
7	408	1040	1060	1100	1700	2190	3610	1830	1180	577	1200	471
8	407	1090	1060	1140	1700	2450	3600	1790	900	616	929	391
9	408	1100	1080	1130	1710	2550	3000	1820	839	1070	603	465
10	426	1110	1130	1140	1710	2620	2660	1790	718	1700	568	1370
11	429	1110	1120	1140	1700	2620	2580	1750	693	950	409	2230
12	437	1140	1110	1120	1720	1700	2590	1760	808	834	378	2500
13	429	1150	1150	1120	1690	946	2170	1760	780	571	333	2780
14	451	1160	1180	1120	1690	860	2080	2100	836	359	300	3540
15	469	1180	1180	1110	1690	818	2140	2170	810	312	298	2680
16	482	1220	1180	1220	1700	743	2610	2290	711	285	423	1950
17	474	1210	1200	1320	1700	709	2360	2280	610	285	445	1290
18	475	1190	1270	1390	1680	701	2310	2200	505	291	625	895
19	481	1150	1190	1400	1670	684	2490	2470	456	325	515	698
20	481	1170	1160	1380	1640	673	2170	2560	470	266	358	687
21	488	1170	1150	1450	1620	662	2070	2290	494	238	318	705
22	483	1170	1190	1400	1600	1180	2130	2280	422	256	323	791
23	467	1170	1190	1310	1540	1550	2000	2210	374	337	375	966
24	441	1160	1190	1260	1520	2510	1970	2140	331	297	428	931
25	442	1170	1160	1220	1520	2720	1990	2100	345	291	326	1030
26	437	1180	1120	1200	1510	3210	1970	2090	386	356	357	919
27	431	1170	1100	1170	1510	3340	1990	2210	423	438	387	673
28	435	1130	1100	1170	1500	3400	1950	1990	772	585	559	489
29	436	1100	1070	1200	1520	3480	1960	2080	818	1130	574	580
30	460	1090	1060	1450	---	3590	1900	1990	874	799	654	571
31	472	---	1050	1530	---	3730	---	1850	---	783	607	---
TOTAL	13720	32753	35050	37162	48200	61276	78740	63700	25755	18356	15927	32894
MEAN	443	1092	1131	1199	1662	1977	2625	2055	859	592	514	1096
MAX	488	1220	1270	1530	1890	3730	3880	2560	1930	1700	1200	3540
MIN	402	596	1050	978	1500	662	1900	1750	331	238	298	391
AC-FT	27210	64970	69520	73710	95600	121500	156200	126300	51090	36410	31590	65250
(†)	14760	1470	1130	1340	1180	8180	13960	15640	14390	14060	14060	10320
CAL YR 1987	TOTAL	809428	MEAN	2218	MAX	6120	MIN	138	AC-FT	1606000	(†)	127700
WTR YR 1988	TOTAL	463533	MEAN	1266	MAX	3880	MIN	238	AC-FT	919400	(†)	110500

(†) COMBINED FLOW, IN ACRE-FEET, OF ALBUQUERQUE RIVERSIDE DRAIN, AND ARENAL, ARMILJO AND ATRISCO CANALS. THIS FLOW, WHICH BYPASSES RIVER GAGE, CAN BE ADDED TO RIVER RECORDS TO GET THE ENTIRE FLOW IN VALLEY CROSS SECTION.

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to September 1988 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to current year.

WATER TEMPERATURES: October 1969 to current year.

SUSPENDED-SEDIMENT DISCHARGES: May 1969 to September 1969 (partial-record station), October 1969 to current year.

REMARKS.--Sediment total-load measurements were made quarterly and total-load values were determined using equation from double-mass relationship plot for period of record.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,840 microsiemens, Oct. 12, 1974; minimum daily, 115 microsiemens, Aug. 14, 1980.

WATER TEMPERATURES: Maximum daily, 34.0°C, July 12, 1970; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 45,500 mg/L, July 21, 1971; minimum daily mean, no flow on many days in 1971, 1972, and 1977.

SEDIMENT LOADS: Maximum daily, 275,000 tons, July 27, 1971; minimum daily, 0 ton on many days in 1971, 1972, and 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 539 microsiemens, Aug. 4; minimum daily, 258 microsiemens, July 29.

WATER TEMPERATURES: Maximum daily, 26.0°C, Sept. 7, 8; minimum daily, 6.0°C, Dec. 27.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7390 mg/L, Sept. 14; minimum daily mean, 13 mg/L, Jan. 25.

SEDIMENT LOADS: Maximum daily, 70,600 tons, Sept. 14; minimum daily, 38 tons, Oct. 26..

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 03...	0830	774	405	418	8.68	8.30	13.0	13.0	9.2	<10	160	31
MAR 01...	1015	1560	342	386	8.10	8.30	16.0	7.0	11.0	--	140	21
MAY 11...	1330	1800	390	389	8.70	8.20	27.0	20.5	7.9	--	140	21
JUL 08...	1000	703	490	--	8.10	--	28.0	21.5	--	--	--	--
SEP 29...	1230	721	470	507	8.30	8.30	19.0	17.0	8.0	47	160	22

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 03...	49	8.2	25	0.9	3.5	--	--	--	125	73	8.6	0.30
MAR 01...	43	7.8	25	1	7.0	--	--	--	119	62	8.5	0.40
MAY 11...	41	8.5	32	1	2.6	--	--	--	117	76	13	0.50
JUL 08...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 29...	50	8.7	43	2	3.9	162	6	143	139	84	22	0.40

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 03...	21	264	<0.100	<0.100	0.040	0.76	0.090	0.070	4.9	60	9
MAR 01...	17	242	--	--	--	--	--	--	--	50	10
MAY 11...	18	262	--	--	--	--	--	--	--	70	10
JUL 08...	--	--	--	--	--	--	--	--	--	--	--
SEP 29...	20	316	<0.100	<0.100	<0.010	--	0.060	0.020	3.6	130	10

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	ARSENIC	ARSENIC	CADMIUM	CADMIUM	CHRO-	CHRO-	COPPER,	COPPER,		
		TOTAL	DIS-	TOTAL	DIS-	TOTAL	TOTAL	TOTAL	DIS-		
		(UG/L AS AS) (01002)	SOLVED (UG/L AS AS) (01000)	RECOV-ERABLE (UG/L AS CD) (01027)	SOLVED (UG/L AS CD) (01025)	RECOV-ERABLE (UG/L AS CR) (01034)	MIUM, SOLVED (UG/L AS CR) (01030)	RECOV-ERABLE (UG/L AS CU) (01042)	RECOV-ERABLE (UG/L AS CU) (01040)		
NOV 03...	0830	3	4	<1	1	6	<10	6	3		
		LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, TOTAL RECOV-ERABLE (UG/L AS SE) (01147)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)		
NOV 03...		<5	<5	0.10	<0.1	<1	<1	10	<3		
		GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80040)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03516)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90) (80050)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90) (80060)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L AS U) (09511)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)		
NOV 03...		5.2	0.4	3.8	1.7	2.8	1.6	0.37	2.2		
		STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOCITY, MEAN (F/S) (00055)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	SEDIMENT, DISCHARGE, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80156)	
NOV 03...	0830	774	290	1.5	1.82	405	13.0	146	305	505	
NOV 11...	1200	1110	--	--	--	--	--	123	369	--	
MAR 01...	1015	1560	259	2.2	2.78	342	7.0	293	1230	1890	
MAY 11...	1330	1800	375	1.9	2.53	390	20.5	337	1640	2440	
JUN 30...	0900	706	--	--	--	--	--	3250	6200	--	
JUL 10...	0800	1370	--	--	--	--	14.0	6950	25700	--	
JUL 11...	1100	882	--	--	--	517	17.0	6990	16600	--	
JUL 22...	0945	240	--	--	--	--	20.5	808	524	--	
AUG 19...	1000	550	--	--	--	--	20.0	4420	6560	--	
SEP 26...	1338	894	275	1.3	2.53	--	--	256	618	952	
		SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .031 MM (70341)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
NOV 03...	87	--	--	--	--	--	--	--	--	--	
NOV 11...	85	--	--	--	--	--	--	--	--	--	
MAR 01...	10	--	--	--	--	--	--	--	--	--	
MAY 11...	96	100	58	71	88	--	--	--	--	--	
JUN 30...	98	--	--	--	--	--	--	--	--	--	
JUL 10...	100	--	59	77	97	--	--	--	--	--	
JUL 11...	97	--	--	--	--	--	--	--	--	--	
JUL 22...	--	--	63	81	96	--	98	99	99	100	
AUG 19...	100	--	56	71	97	--	--	--	--	--	
SEP 26...	--	--	--	--	--	0	82	89	95	100	

RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
NOV 03...	0	1	15	70	93	94	95	96	98	100
11...	--	--	--	--	--	--	--	--	--	--
MAR 01...	--	0	4	41	79	93	98	100	--	--
MAY 11...	19	40	54	86	99	100	--	--	--	--
JUN 30...	--	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
AUG 19...	--	--	--	--	--	--	--	--	--	--
SEP 26...	1	6	21	80	95	98	99	100	--	--

DATE	TIME	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN, TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)
MAY 11...	1330	--	--	--	--	--	--	--	--	--
SEP 29...	1230	<0.1	<0.010	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010

DATE	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)
MAY 11...	--	--	--	--	--	--	--	--	--
SEP 29...	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.01

DATE	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
MAY 11...	--	--	--	<0.01	<0.01	<0.01	--	--	--
SEP 29...	<0.01	<1	<0.01	--	--	--	<0.1	<0.10	<0.01

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

WATER-QUALITY RECORDS
WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	372	455	393	372	386	395	361	406	426	448	459	451
2	412	456	383	372	383	393	360	407	435	450	460	475
3	419	474	385	369	377	379	372	411	420	439	465	522
4	426	477	388	372	367	378	372	408	419	447	539	449
5	432	495	390	381	370	375	388	400	424	444	501	481
6	427	409	391	412	378	378	394	417	449	399	503	482
7	433	401	395	410	375	380	395	422	416	460	---	522
8	432	408	390	410	376	374	397	421	419	439	464	421
9	436	407	394	399	374	373	396	420	426	393	468	440
10	434	411	399	403	364	372	393	426	437	505	466	445
11	440	413	401	384	374	369	395	424	338	517	496	402
12	435	398	397	380	375	367	394	427	429	444	498	401
13	443	401	391	376	376	390	397	442	432	482	523	496
14	433	398	326	377	381	390	405	445	427	463	467	506
15	435	397	378	384	384	391	409	445	427	450	469	491
16	438	393	385	380	360	392	398	445	444	447	465	491
17	444	403	383	368	376	380	399	438	446	462	492	483
18	442	401	380	370	378	388	404	464	438	468	496	457
19	443	398	369	372	379	392	404	455	439	---	---	457
20	442	399	382	398	380	391	403	455	445	492	433	452
21	442	398	384	402	381	392	403	462	440	---	432	452
22	441	399	398	396	381	386	414	467	439	---	436	436
23	446	401	406	328	386	359	395	450	440	---	438	398
24	446	403	392	366	384	364	399	433	429	---	451	397
25	453	401	388	370	386	365	400	432	444	---	435	424
26	456	403	373	376	385	368	398	432	442	---	436	426
27	462	---	385	377	385	367	401	435	440	472	438	443
28	459	---	388	379	384	372	401	424	382	452	435	457
29	467	393	386	373	385	357	400	429	429	258	433	457
30	461	394	382	385	---	366	404	428	448	---	482	453
31	462	---	383	386	---	367	---	428	---	---	472	---
MEAN	439	414	386	382	378	378	395	432	429	447	467	456
WTR YR 1988	MEAN		416	MAX	539	MIN		258				

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	13.0	11.0	8.0	8.0	11.0	9.0	15.0	14.0	16.0	17.0	16.0
2	15.0	14.0	13.0	9.0	9.0	12.0	8.0	12.0	18.0	19.0	18.0	15.0
3	14.0	13.0	12.0	7.0	9.0	10.0	10.0	14.0	11.0	19.0	16.0	20.0
4	16.0	13.0	12.0	8.0	10.0	11.0	8.0	13.0	13.0	18.0	17.0	19.0
5	16.0	13.0	13.0	9.0	10.0	12.0	9.0	13.0	15.0	18.0	17.0	22.0
6	19.0	14.0	11.0	9.0	8.0	10.0	12.0	12.0	19.0	17.0	19.0	15.0
7	13.0	13.0	11.0	10.0	11.0	12.0	14.0	12.0	14.0	18.0	21.0	26.0
8	13.0	12.0	14.0	10.0	10.0	11.0	10.0	16.0	15.0	17.0	16.0	26.0
9	14.0	13.0	12.0	9.0	9.0	13.0	10.0	20.0	15.0	20.0	17.0	23.0
10	14.0	12.0	12.0	10.0	10.0	12.0	12.0	16.0	14.0	14.0	18.0	16.0
11	15.0	14.0	13.0	9.0	11.0	10.0	13.0	19.0	13.0	17.0	17.0	23.0
12	14.0	12.0	12.0	9.0	10.0	10.0	12.0	21.0	17.0	15.0	19.0	24.0
13	14.0	12.0	11.0	10.0	9.0	---	13.0	12.0	13.0	17.0	22.0	23.0
14	16.0	13.0	9.0	10.0	9.0	10.0	11.0	11.0	13.0	17.0	17.0	25.0
15	14.0	12.0	9.0	11.0	9.0	9.0	12.0	16.0	15.0	18.0	18.0	22.0
16	14.0	12.0	9.0	10.0	10.0	10.0	11.0	21.0	15.0	22.0	23.0	23.0
17	13.0	12.0	10.0	12.0	10.0	11.0	14.0	17.0	14.0	22.0	22.0	17.0
18	14.0	13.0	10.0	7.0	9.0	12.0	13.0	14.0	15.0	15.0	19.0	18.0
19	15.0	14.0	9.0	8.0	11.0	12.0	13.0	14.0	18.0	---	---	18.0
20	14.0	13.0	10.0	7.0	10.0	13.0	15.0	16.0	14.0	25.0	18.0	15.0
21	13.0	12.0	9.0	7.0	9.0	11.0	13.0	16.0	15.0	---	19.0	16.0
22	14.0	12.0	9.0	7.0	10.0	11.0	11.0	18.0	15.0	20.5	19.0	14.0
23	14.0	14.0	8.0	9.0	9.0	11.0	11.0	14.0	14.0	---	18.0	17.0
24	15.0	12.0	9.0	10.0	11.0	10.0	12.0	13.0	15.0	---	19.0	13.0
25	13.0	12.0	8.0	9.0	11.0	13.0	15.0	14.0	15.0	---	18.0	23.0
26	14.0	11.0	9.0	9.0	10.0	12.0	16.0	13.0	14.0	---	19.0	12.0
27	13.0	---	6.0	8.0	10.0	10.0	20.0	14.0	14.0	21.0	16.0	12.0
28	14.0	---	7.0	9.0	11.0	10.0	21.0	13.0	16.0	24.0	20.0	13.0
29	13.0	11.0	8.0	10.0	10.0	11.0	16.0	17.0	17.0	20.5	17.0	12.0
30	15.0	12.0	9.0	10.0	---	10.0	16.0	13.0	16.0	---	17.0	13.0
31	13.0	---	8.0	9.0	---	9.0	---	16.0	---	---	16.0	---
MEAN	14.5	12.5	10.0	9.0	10.0	11.0	12.5	15.0	15.0	18.5	18.5	18.5
WTR YR 1988	MEAN		13.5	MAX	26.0	MIN		6.0				

08330540 TRAMWAY FLOODWAY CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°04'43", long 106°29'51", Bernalillo County, Hydrologic Unit 13020203, on left bank 300 ft downstream from Copper Boulevard bridge, near corner of Tramway and Copper Boulevard NE in Albuquerque.

DRAINAGE AREA.--1.60 mi².

PERIOD OF RECORD.--July 1987 to current year (no winter record).

GAGE.--Water stage recorder and concrete lined channel. Elevation of gage is 5,760 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 6 to May 4. Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,250 ft³/s, July 9, 1988, gage height, 7.62 ft from floodmarks, from step-backwater analysis of channel; no flow most of time.

EXTREMES FOR PERIOD JULY TO SEPTEMBER 1987.--Maximum discharge, 75.0 ft³/s, at 2045 hours, Aug. 2, gage height, 0.78 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,250 ft³/s, at 1900 hours July 9, gage 7.62 ft from floodmarks, from step-backwater analysis of channel; no flow time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	.00	.00
2										---	2.0	.00
3										---	.06	.00
4										---	.04	.00
5										---	.00	.00
6										---	6.6	.00
7										---	.00	.00
8										---	.00	.00
9										---	.00	.00
10										---	.13	.00
11										---	.45	.00
12										---	.00	.00
13										---	.00	.00
14										---	.00	.06
15										---	.00	.00
16										---	.00	.00
17										.00	.00	.00
18										.00	.00	.00
19										.00	.00	.00
20										.00	.00	.00
21										2.5	.43	.00
22										.00	2.6	.00
23										.00	.48	.00
24										.00	1.0	.00
25										.00	.46	.00
26										.00	.00	.00
27										.00	.08	.00
28										.30	.00	.00
29										.00	.00	.00
30										.64	.00	.00
31										.00	.03	---
TOTAL										---	14.36	.06
MEAN										---	.46	.00
MAX										---	6.6	.06
MIN										---	.00	.00
AC-FT										---	28	.1

RIO GRANDE BASIN

08330540 TRAMWAY FLOODWAY CHANNEL AT ALBUQUERQUE, NM -- Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.85				---	.07	.00	.00	.00	.00	1.2
2	.00	.00				---	.00	.00	.00	.23	.00	.00
3	.00	.00				---	.00	.00	.00	.00	.00	.00
4	.00	.00				.00	.00	.00	.00	.00	.00	.00
5	.00	.00				.00	.00	.00	.00	3.9	.00	.07
6	.00	.80				.00	.00	.00	.00	.00	.00	.01
7	.00	.00				.00	.00	.00	.00	.00	.00	.00
8	.00	.00				.00	.00	.00	.00	.52	.00	.00
9	.00	.00				.00	.00	.00	.00	69	.12	.00
10	.00	.00				.00	.00	.00	3.9	.00	.00	.00
11	.00	.00				.00	.00	.00	1.8	.00	.00	.00
12	.00	.00				.00	.00	.00	.00	.00	.00	.00
13	.00	.00				.00	.00	.00	.00	.00	.00	.00
14	.27	.00				.00	.00	.00	.00	.00	.00	.00
15	.00	.00				.00	.00	.00	.00	.00	.10	.00
16	.00	.00				.00	.00	.00	.00	.00	3.6	.00
17	.00	.00				.00	.00	.01	.00	.34	.44	.00
18	.00	.00				.00	.00	.43	.00	.08	.00	.00
19	.00	.00				.00	.00	.00	.00	.00	.00	.00
20	.00	.00				.00	.00	.15	.00	.00	.00	.00
21	.00	.00				.00	.00	.00	.00	.00	.00	.00
22	.00	.00				.00	.00	.00	.00	.00	1.2	.00
23	.00	.00				.00	.00	.00	.70	.00	.89	.00
24	.00	.00				.00	.00	.00	.63	.00	.12	.00
25	.00	.00				.00	.00	.00	.00	.00	.05	.00
26	.00	.00				.00	.00	.00	.72	.00	.00	.00
27	.00	---				.00	.00	.00	2.7	.00	.00	.00
28	.00	---				.00	.00	.00	4.9	1.2	.17	.00
29	.00	---				.00	.00	.00	.32	.00	.00	.00
30	.50	---				.00	.00	.00	.00	.00	.00	.00
31	.00	---				.05	---	.00	---	.00	.00	---
TOTAL	.77	---				---	.07	.59	15.67	75.27	6.69	1.28
MEAN	.02	---				---	.00	.02	.52	2.43	.22	.04
MAX	.50	---				---	.07	.43	4.9	69	3.6	1.2
MIN	.00	---				---	.00	.00	.00	.00	.00	.00
AC-FT	1.5	---				---	.1	1.2	31	149	13	2.5

08330560 TIJERAS ARROYO AT KIRTLAND AIR FORCE BASE, NM

LOCATION.--Lat 35°02'23", long 106°31'53", Bernalillo County, Hydrologic Unit 13020203, on right bank 80 ft upstream from Kirtland AFB landfill road.

DRAINAGE AREA.--80.6 mi²

PERIOD OF RECORD.--June 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,360 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: July 9-19. Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,780 ft³/s, July 9, 1988, gage height, 5.18 ft, from floodmarks, from slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR PERIOD JUNE TO SEPTEMBER 1987.--Maximum daily discharges, 3.6 ft³/s, Aug. 22; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,780 ft³/s, July 9, gage height, 5.18 ft, from floodmarks, from slope-area measurement of peak flow; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	.00	.00	.00
2									---	.00	.62	.00
3									---	.00	.00	.00
4									---	.00	.00	.00
5									---	.00	.00	.00
6									---	.00	1.6	.00
7									---	.00	.00	.00
8									---	.00	.00	.00
9									---	.00	.00	.00
10									---	.00	.00	.00
11									---	.00	.00	.00
12									---	.00	.00	.00
13									---	.00	.00	.00
14									---	.00	.00	.00
15									---	.00	.00	.00
16									---	.00	.00	.00
17									---	.00	.00	.00
18									---	.00	.00	.00
19									---	.00	.00	.00
20									---	.00	.00	.00
21									---	1.4	.00	.00
22									---	.00	3.6	.00
23									---	.00	.91	.00
24									---	.04	.00	.00
25									---	.00	.00	.00
26									---	.00	.00	.00
27									---	.00	.00	.00
28									---	.00	.00	.00
29									.00	.00	.00	.00
30									.00	1.7	.00	.00
31									---	.50	.00	---
TOTAL									---	3.64	6.73	.00
MEAN									---	.12	.22	.00
MAX									---	1.7	3.6	.00
MIN									---	.00	.00	.00
AC-FT									---	7.2	13	.00

RIO GRANDE BASIN

08330560 TIJERAS ARROYO AT KIRTLAND AIR FORCE BASE, NM -- Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.68	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.2	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	74	2.0	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	7.3	.00	.01	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.6
14	.00	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	15	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.31	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.90	1.0	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	1.78	.00	8.20	100.20	2.36	2.60
MEAN	.00	.00	.00	.00	.00	.00	.06	.00	.27	3.23	.08	.09
MAX	.00	.00	.00	.00	.00	.00	1.1	.00	7.3	74	2.0	2.6
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	3.5	.00	16	199	4.7	5.2
WTR YR 1988	TOTAL	115.14		MEAN	.31	MAX	74	MIN	.00	AC-FT	228	

LOCATION.--Lat 35°01'19", long 106°35'40", Bernalillo County, Hydrologic Unit 13020203, on left bank 3.1 mi upstream from highway bridge on Interstate 25, and 3 mi south of Albuquerque.

PERIOD OF RECORD.--August 1987 to current year.

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

REMARKS.--No estimated daily discharges. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft³/s, July 9, 1988, gage height, 4.60 ft, from slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR PERIOD AUGUST TO SEPTEMBER 1987.--Maximum discharge, 375 ft³/s, Aug. 22, gage height, 2.42 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,090 ft³/s, July 9, gage height, 4.60 ft from slope-area measurement of peak flow; no flow most of time.

[illegible]

08330580 TIJERAS ARROYO AT MONTESSA PARK NEAR ALBUQUERQUE, NM -- Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	16	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	101	3.8	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	5.6	2.0	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	13
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.90	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	4.1	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	6.0	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	18
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.1	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.6	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	10.10	6.50	124.70	4.27	31.00
MEAN	.00	.00	.00	.00	.00	.00	.00	.33	.22	4.02	.14	1.03
MAX	.00	.00	.00	.00	.00	.00	.00	6.0	5.6	101	3.8	18
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	20	13	247	8.5	61
WTR YR 1988	TOTAL	176.57		MEAN	.48	MAX	101	MIN	.00	AC-FT	350	

08330600 TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'09", long 106°38'57", in SW¼SW¼ 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 mi south of Albuquerque.

DRAINAGE AREA.--128 mi².

PERIOD OF RECORD.--October 1951 to September 1968, (annual maximum only), August 1974 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,000 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 10, 1988 at site 1,700 ft downstream at different datum.

REMARKS.--Estimated daily discharges: July 9-19. Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,930 ft³/s, July 9, 1988, gage height, 9.6 ft, from floodmarks, from slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,930 ft³/s, July 9, gage height, 9.6 ft, from floodmarks, from slope-area measurement of peak flow; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00				---	.54	.00	.00	.00	.00	4.0
2	.00	.00				---	.00	.00	.00	.00	.00	.09
3	.00	---				---	.00	.00	.00	.00	.00	.00
4	.00	---				---	.00	.00	.00	.00	.00	.00
5	.00	---				---	.00	.00	.00	21	.00	.00
6	.00	---				---	.00	.00	.00	.12	.00	.00
7	.00	---				---	.00	.00	.00	.00	.00	.00
8	.00	---				---	.00	.00	.00	20	.00	.00
9	.00	---				---	.00	.00	.00	122	27	.00
10	.00	---				.00	.00	.00	7.9	.00	6.6	.00
11	.00	---				.00	.00	.00	3.0	.00	.00	.00
12	.00	---				.00	.00	.00	.00	.00	.00	5.1
13	.00	---				.00	.00	.00	.00	.00	.00	48
14	.00	---				.00	1.9	.00	.00	.00	.00	1.1
15	.00	---				.00	.00	.00	.00	.00	.00	.00
16	.00	---				.00	10	.00	2.8	.00	.00	.00
17	.00	---				.00	.00	.00	.00	10	2.5	.00
18	.00	---				.00	.00	3.9	.00	5.0	2.4	.00
19	.00	---				.00	.00	.30	.00	.00	.00	.00
20	.00	---				.00	.00	1.3	.00	.00	.00	.00
21	.00	---				.00	.00	.35	.00	.00	.00	5.0
22	.00	---				.00	.00	.00	.00	.00	.00	17
23	.00	---				.00	.00	.00	.00	.00	1.2	.00
24	.00	---				.00	.00	.00	.00	.00	5.0	.00
25	.00	---				.00	.00	.00	.00	.00	1.4	.00
26	.00	---				.00	.00	.00	.00	.00	2.2	.00
27	.00	---				.00	.00	.00	.00	.00	1.4	.00
28	.00	---				.00	.00	.00	.00	1.1	.00	.00
29	.00	---				.00	.00	.00	1.2	13	.00	.00
30	.00	---				.00	.00	.00	.00	.00	.00	.00
31	.00	---				.00	---	.00	---	.00	.00	---
TOTAL	.00	---				---	12.44	5.85	14.90	192.22	49.70	80.29
MEAN	.00	---				---	.41	.19	.50	6.20	1.60	2.68
MAX	.00	---				---	10	3.9	7.9	122	27	48
MIN	.00	---				---	.00	.00	.00	.00	.00	.00
AC-FT	.00	---				---	25	12	30	381	99	159

RIO GRANDE BASIN

08330775 SOUTH DIVERSION CHANNEL ABOVE TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'09", long 106°39'02", Bernalillo County, Hydrologic Unit 13020203, on right bank 600 ft upstream from confluence with Tijeras Arroyo, and 2.5 mi south of Albuquerque.

PERIOD OF RECORD.--June to September 1988.

GAGE.--Water stage recorder and concrete control. Elevation of gage is 4,930 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft³/s, Aug. 9, 1988, gage height, 4.62 ft from floodmarks, from step-backwater analysis of channel; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period June to September, 1,100 ft³/s, Aug. 9, gage height, 4.62 ft from floodmarks, from step-backwater analysis of channel; no flow most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	.00	1.2	7.0
2	---	---	---	---	---	---	---	---	---	.00	.00	2.9
3	---	---	---	---	---	---	---	---	---	.00	.00	.58
4	---	---	---	---	---	---	---	---	---	.65	.00	.00
5	---	---	---	---	---	---	---	---	---	.90	.00	.00
6	---	---	---	---	---	---	---	---	---	3.7	.00	.00
7	---	---	---	---	---	---	---	---	---	.00	.00	.00
8	---	---	---	---	---	---	---	---	.00	5.7	.00	.00
9	---	---	---	---	---	---	---	---	.00	49	66	.00
10	---	---	---	---	---	---	---	---	.00	20	15	.00
11	---	---	---	---	---	---	---	---	4.7	1.8	1.4	.00
12	---	---	---	---	---	---	---	---	6.8	.00	.00	8.0
13	---	---	---	---	---	---	---	---	.00	.00	.00	1.6
14	---	---	---	---	---	---	---	---	1.5	.00	.00	12
15	---	---	---	---	---	---	---	---	.00	.00	.00	.00
16	---	---	---	---	---	---	---	---	.00	.00	.00	.00
17	---	---	---	---	---	---	---	---	4.0	.00	1.5	.00
18	---	---	---	---	---	---	---	---	.00	.00	.35	.00
19	---	---	---	---	---	---	---	---	.00	.00	.00	.00
20	---	---	---	---	---	---	---	---	.00	.00	.00	.00
21	---	---	---	---	---	---	---	---	.00	.00	.00	9.4
22	---	---	---	---	---	---	---	---	.00	.00	.00	11
23	---	---	---	---	---	---	---	---	.00	.00	.00	6.3
24	---	---	---	---	---	---	---	---	.00	.00	.00	.00
25	---	---	---	---	---	---	---	---	.87	.00	13	.00
26	---	---	---	---	---	---	---	---	.71	.00	31	.00
27	---	---	---	---	---	---	---	---	1.3	.00	2.4	.00
28	---	---	---	---	---	---	---	---	7.5	7.1	6.2	.00
29	---	---	---	---	---	---	---	---	1.3	22	.00	.00
30	---	---	---	---	---	---	---	---	.00	2.1	.00	.00
31	---	---	---	---	---	---	---	---	---	1.4	.65	---
TOTAL	---	---	---	---	---	---	---	---	---	114.35	138.70	58.78
MEAN	---	---	---	---	---	---	---	---	---	3.69	4.47	1.96
MAX	---	---	---	---	---	---	---	---	---	49	66	12
MIN	---	---	---	---	---	---	---	---	---	.00	.00	.00
AC-FT	---	---	---	---	---	---	---	---	---	227	275	117

08330800 TIJERAS ARROYO BELOW SOUTH DIVERSION CHANNEL INLET NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'09", long 106°39'41", in SW¼SE¼ sec.18, T.9 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on left bank 260 ft upstream from highway bridge on State Highway 47, 500 ft downstream from South Diversion Channel inlet, 1.0 mi downstream from highway bridge on Interstate Highway 25 and 2.5 mi south of Albuquerque.

PERIOD OF RECORD.--July 1974 to June 1988 (discontinued), no winter records.

GAGE.--Water-stage recorder and concrete lined channel. Elevation of gage is 4,930 ft above National Geodetic Vertical Datum of 1929, from U.S. Army Corps of Engineers plan and profile map.

REMARKS.--No estimated daily discharges. Records poor. South Diversion Channel intercepts flow of numerous arroyos in northeast and southeast Albuquerque and discharges into Tijeras Arroyo at a point 0.8 mi upstream from the Rio Grande.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft³/s, Aug. 19, 1976, gage height (not determined); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge during period October to June, 10 ft³/s, April 15; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00			---	.50	.00	.00			
2	.00	.00	.00			---	.00	.00	.00			
3	.00	.00	.00			---	.00	.00	.00			
4	.00	.00	.00			---	.00	.00	.00			
5	.00	.00	.00			---	.00	.00	.00			
6	.00	.00	.00			---	.00	.00	.00			
7	.00	.00	.00			---	.00	.00	.00			
8	.00	.00	.00			---	.00	.00	.00			
9	.00	.00	---			---	.00	.00	---			
10	.00	.00	---			.00	.00	.00	---			
11	.00	.00	---			.00	.00	.00	---			
12	.00	.00	---			.00	.00	.00	---			
13	.00	.00	---			.00	2.0	.00	---			
14	.00	.00	---			.00	.00	.00	---			
15	.00	.00	---			.00	10	.00	---			
16	.00	.00	---			.00	.00	.00	---			
17	.00	.00	---			.00	.00	.00	---			
18	.00	.00	---			.00	.00	4.0	---			
19	.00	.00	---			.00	.00	.50	---			
20	.00	.00	---			.00	.00	1.3	---			
21	.00	.00	---			.00	.00	.40	---			
22	.00	.00	---			.00	.00	.00	---			
23	.00	.00	---			.00	.00	.00	---			
24	.00	.00	---			.00	.00	.00	---			
25	.00	.00	---			.00	.00	.00	---			
26	.00	.00	---			.00	.00	.00	---			
27	.00	.00	---			.00	.00	.00	---			
28	.00	.00	---			.00	.00	.00	---			
29	.00	.00	---			.00	.00	.00	---			
30	.00	.00	---			.00	.00	.00	---			
31	.00	---	---			.00	---	.00	---			
TOTAL	.00	.00	---			---	12.50	6.20	---			
MEAN	.00	.00	---			---	.42	.20	---			
MAX	.00	.00	---			---	10	4.0	---			
MIN	.00	.00	---			---	.00	.00	---			
AC-FT	.00	.00	---			---	25	12	---			

RIO GRANDE BASIN

08331000 RIO GRANDE AT ISLETA, NM
(Surveillance network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 34°54'21", long 106°41'04", in NE¼NE¼SW¼ sec.24, T.08 N., R.02 E., Valencia County, Hydrologic Unit 13020203, 50 feet upstream from diversion dam, 50 feet downstream from bridge on State Highway 147, at Isleta.

DRAINAGE AREA.--18,100 mi² (estimated).

PERIOD OF RECORD.--Water years 1972 to current year.

REMARKS.--Samples are collected on the Peralta main canal or the Belen Highline canal when the river is completely diverted. Water-discharge measurements were made at the time water-quality samples were collected.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L) AS CACO3 (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 03...	1330	926	418	462	8.09	7.80	20.0	17.0	9.2	11	160	24
MAR 01...	1313	1540	355	394	7.60	7.90	24.0	15.0	8.9	<10	140	18
MAY 12...	1030	1790	430	442	7.80	7.70	25.0	18.0	6.7	<10	140	24
AUG 08...	1100	1040	420	459	7.80	7.90	27.0	24.0	5.8	53	160	24

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 03...	49	8.2	32	1	4.5	183	0	150	132	73	14	0.40
MAR 01...	42	7.8	26	1	3.1	142	0	116	119	61	11	0.40
MAY 12...	43	8.5	35	1	2.6	146	0	120	119	77	15	0.50
AUG 08...	49	8.5	31	1	4.1	154	0	126	134	76	11	0.40

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (90665)	PHOS- PHOROUS ORTHORHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ARSENIC TOTAL (UG/L AS AS) (01002)
NOV 03...	23	287	0.300	0.430	0.910	0.99	2.2	0.600	0.550	8.1	--	5
MAR 01...	18	242	0.500	0.230	0.100	0.40	1.0	0.240	0.160	--	3.0	--
MAY 12...	20	276	0.500	0.490	0.410	0.29	1.2	0.330	0.260	4.2	--	--
AUG 08...	20	283	0.500	0.440	0.160	0.44	1.1	0.170	0.110	36	--	4

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)
NOV 03...	4	80	<1	1	4	<10	10	3	18	6	<5	0.10
MAR 01...	--	60	--	--	--	--	--	--	4	--	--	--
MAY 12...	--	70	--	--	--	--	--	--	15	--	--	--
AUG 08...	4	60	<1	<1	48	<1	80	5	11	56	<5	0.10

08331000 RIO GRANDE AT ISLETA, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)
NOV 03...	<0.1	<1	<1	20	<3	3.0	1.3	4.6	2.6	3.4	2.5	0.11
MAR 01...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<0.1	<1	<1	260	<3	--	--	--	--	--	--	--

DATE	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)
NOV 03...	2.4	77	193	88	240	520	--	--	--	--	--
MAR 01...	--	58	241	79	<10	K12	--	--	--	--	--
MAY 12...	--	41	198	93	K20	K44	--	--	--	--	--
AUG 08...	--	3500	9830	97	K2300	2900	<0.1	<0.010	<0.1	<0.010	<0.010

DATE	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN, TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)
NOV 03...	--	--	--	--	--	--	--	--	--	--	--
MAR 01...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<0.010	0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01

DATE	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
NOV 03...	--	--	--	--	--	--	--	--	--	--	--
MAR 01...	--	--	--	--	--	<0.01	<0.01	<0.01	--	--	--
MAY 12...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<0.01	<0.01	<0.01	<1	<0.01	--	--	--	<0.1	<0.10	<0.01

RIO GRANDE BASIN

08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, NM

LOCATION.--Lat 34°24'52", long 106°48'11", Socorro County, Hydrologic Unit 13020203, in Sevilleta or Belen Grant, 0.2 mi south of U.S. Highway 60, 1.8 mi east of Bernardo, about 3 mi upstream from floodway, and 4 mi upstream from Rio Puerco.

PERIOD OF RECORD.--June 1936 to September 1937, October 1964 to current year. July 1943 to September 1964, included in composite flow of "Rio Grande near Bernardo". October 1960 to September 1964, monthly acre-feet published in WSP 1923 (daily records available in district files). Beginning October 1952, flow in conveyance channel represents controlled diversion from Rio Grande. Prior to October 1952, records called "San Francisco Riverside drain near Bernardo", are not equivalent.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,720.00 ft above National Geodetic Vertical Datum of 1929. Prior to October 1964, 0.2 mi upstream at various datums.

REMARKS.--Estimated daily discharges: July 15 to Sept. 30. Records good except for estimated daily discharges, which are poor. Conveyance channel is 1 of 4 channels (stations 08332010, 08332030, and 08332050) carrying flow in valley cross section. Original design and plan was for conveyance channel to carry flows up to about 2,000 ft³/s. For combined monthly flow in acre-ft of this channel, floodway, Bernardo interior drain and Lower San Juan Riverside drain, see tabulation below daily table for station 08332010. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,220 ft³/s, Apr. 22, 1958; no flow many days most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.5	4.9	5.1	5.5	7.8	6.3	4.7	1.9	1.5	2.0	4.0
2	1.1	2.5	4.9	5.3	5.3	7.6	6.5	4.3	2.0	1.6	2.5	3.5
3	1.0	2.5	4.9	5.3	5.4	7.3	6.4	3.7	2.1	1.6	2.5	3.5
4	1.2	2.7	5.0	5.3	5.3	7.8	6.0	4.2	1.7	1.6	3.0	4.0
5	1.1	3.0	5.2	5.3	5.3	7.4	6.0	3.6	2.9	1.6	3.0	4.5
6	.91	3.1	5.2	5.5	5.3	7.5	5.9	3.6	2.1	1.7	4.0	4.0
7	2.0	3.1	5.1	5.6	5.3	7.7	6.0	3.6	1.9	1.7	3.5	3.5
8	1.0	3.4	5.2	5.9	5.4	7.2	6.6	3.7	1.7	1.6	3.5	3.5
9	1.0	3.6	4.9	5.9	5.3	7.1	7.0	3.9	1.9	1.8	3.0	3.0
10	.94	3.7	4.9	5.9	5.5	6.9	9.8	4.0	2.4	1.9	3.0	4.5
11	1.2	3.7	4.7	5.9	5.3	6.7	8.5	3.3	2.2	2.0	3.0	4.0
12	.95	3.9	4.5	5.6	5.0	11	9.1	4.1	2.0	2.3	3.0	4.0
13	.95	4.0	4.5	5.3	4.5	8.4	7.9	4.4	1.8	2.2	3.0	4.5
14	1.2	4.0	4.2	5.4	4.5	7.8	7.4	3.5	1.9	2.4	3.5	8.0
15	1.4	3.9	4.1	5.6	4.5	6.3	7.0	3.4	1.5	2.0	5.0	5.0
16	2.8	4.0	4.1	5.8	4.5	8.4	7.3	4.1	1.5	2.0	4.5	4.0
17	1.7	4.1	4.2	5.8	4.5	6.0	6.8	3.6	1.4	2.5	4.0	3.5
18	1.5	4.1	4.6	5.9	4.5	5.3	6.4	4.4	1.3	3.0	4.0	3.5
19	1.7	4.1	4.9	5.9	4.5	5.0	5.5	3.8	1.2	3.0	4.0	3.0
20	3.0	4.2	4.9	5.9	4.7	4.9	5.4	4.1	1.1	2.5	4.5	3.0
21	1.9	4.4	4.8	5.9	4.9	4.9	9.3	4.1	1.1	3.0	3.0	3.0
22	1.8	4.4	4.9	5.9	5.1	4.6	7.7	4.5	1.1	3.0	3.5	2.5
23	1.9	4.6	4.9	5.9	5.2	4.5	7.7	3.5	1.1	3.0	3.5	2.0
24	3.3	4.7	4.8	5.9	5.5	4.5	6.7	3.1	1.0	5.0	3.5	2.0
25	2.7	4.8	4.9	5.9	5.9	4.9	6.5	3.5	1.0	3.0	3.5	2.0
26	2.3	4.9	4.9	5.9	6.1	5.4	5.5	3.2	1.1	3.0	4.0	1.5
27	4.5	4.9	4.9	5.9	6.9	5.5	6.8	2.9	1.2	2.5	4.0	1.5
28	2.5	4.9	4.9	5.9	6.8	5.5	12	2.6	1.3	2.5	3.5	1.5
29	2.5	5.0	4.9	5.7	7.8	5.6	20	2.4	1.3	2.0	3.5	2.0
30	2.2	4.9	5.0	5.3	---	5.6	5.6	2.3	1.3	2.0	3.0	2.0
31	2.2	---	5.0	5.3	---	5.4	---	2.0	---	1.5	3.0	---
TOTAL	56.85	117.6	148.8	175.7	154.3	200.5	225.6	112.1	48.0	71.0	106.5	100.5
MEAN	1.83	3.92	4.80	5.67	5.32	6.47	7.52	3.62	1.60	2.29	3.44	3.35
MAX	4.5	5.0	5.2	5.9	7.8	11	20	4.7	2.9	5.0	5.0	8.0
MIN	.91	2.5	4.1	5.1	4.5	4.5	5.4	2.0	1.0	1.5	2.0	1.5
AC-FT	113	233	295	349	306	398	447	222	95	141	211	199
CAL YR 1987	TOTAL	2599.73		MEAN	7.12	MAX	35	MIN	.55	AC-FT	5160	
WTR YR 1988	TOTAL	1517.45		MEAN	4.15	MAX	20	MIN	.91	AC-FT	3010	

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM

LOCATION.--Lat 34°25'01", long 106°48'00", Socorro County, Hydrologic Unit 13020203, in Belen or Sevilleta Grant, on downstream side of bridge on U.S. Highway 60, 5 mi downstream from heading of conveyance channel, 2 mi east of Bernardo, and at mile 1,487.2.

DRAINAGE AREA.--19,230 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

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 record prior to October 1964.

GAGE.--Water-stage recorder. Datum of gage is 4,722.55 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 19-27, Nov. 5-13, 17-19, Nov. 21 to Jan. 3, Jan. 17-25, Feb. 3-13, 17-19, Feb. 25 to Mar. 2, Mar. 4-22, Apr. 1-7, July 12-14, 17, 18, and Aug. 3 to Sept. 7. Water-discharge records fair. Since November 1973 flow completely regulated by Cochiti Dam (station 08317300) 100 mi upstream. Floodway is 1 of 4 channels (stations 08331990, 08332030, and 08332050) carrying flow in valley cross section. For combined monthly flow in acre-ft of floodway, conveyance channel, Bernardo interior drain and Lower San Juan Riverside drain see tabulation below. Diversions for irrigation of about 740,000 acres upstream from station.

AVERAGE DISCHARGE.--19 years (water years 1937-38, 1942-58), 1,125 ft³/s, 815,100 acre-ft/yr. Includes flow of floodway, conveyance channel, and Bernardo interior drain.

15 years (water years 1959-73), 898 ft³/s, 605,600 acre-ft/yr, includes flow of floodway, conveyance channel, Bernardo interior drain, and lower San Juan Riverside drain, prior to closure of Cochiti Dam.

15 years (water years 1974-88), 1,463 ft³/s, 1,060,000 acre-ft/yr, includes flow of floodway, conveyance channel, Bernardo interior drain, and lower San Juan Riverside drain since, closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD (1936-39 AND SINCE 1941).--Maximum discharge, 21,000 ft³/s, Apr. 25, 1942, gage height, 6.90 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,560 ft³/s, Mar. 30; minimum daily, 0.58 ft³/s, July 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
1	243	488	1220	1040	1510	1650	3400	1560	1560	797	445	929			
2	230	555	1180	1030	1520	1600	3300	1770	1650	1060	644	832			
3	209	805	1200	993	1900	1850	3200	1930	1730	793	276	871			
4	226	828	1190	966	2150	2790	2950	1660	1640	603	26	906			
5	257	1070	1160	954	2280	2890	2900	1890	1360	677	29	675			
6	255	1160	1140	968	2500	2980	2850	1830	1270	660	51	537			
7	258	1130	1150	968	2450	2900	2800	1640	1110	668	79	437			
8	270	1110	1160	1030	2050	2920	2730	1480	1020	379	220	351			
9	259	1160	1220	1110	1840	3220	2460	1510	754	335	202	321			
10	244	1180	1070	1070	1750	3270	2130	1480	523	733	347	161			
11	239	1170	1270	995	1970	3460	1740	1490	395	1750	570	308			
12	248	1120	1170	951	2010	3480	1670	1510	310	900	289	1700			
13	246	1120	1140	921	1700	2530	1620	1480	387	700	214	2400			
14	252	1080	1160	902	1560	1420	1310	1460	364	550	159	2640			
15	249	1090	1150	893	1620	1250	1170	1700	382	247	121	3410			
16	272	1100	1240	897	1600	1100	1320	1940	377	119	101	2440			
17	283	1100	1330	1130	1540	1050	2080	1950	453	35	292	1850			
18	290	1160	1340	1340	1520	964	1970	1880	424	20	426	1540			
19	314	1160	1360	1530	1510	957	2160	1980	321	12	621	1230			
20	331	951	1330	1330	1470	957	2600	2420	188	8.3	570	1080			
21	327	1120	1290	1430	1420	987	2350	2430	146	3.1	486	1020			
22	342	1390	1270	1380	1440	949	2100	2040	101	.76	342	1090			
23	378	1340	1320	1680	1500	1050	2050	2030	85	.58	293	1040			
24	422	1370	1350	1700	1600	1710	1820	1880	59	1.1	396	1120			
25	377	1360	1330	1300	1700	2450	1810	1590	67	1.0	349	1100			
26	351	1460	1230	1160	1650	2970	1750	1640	40	1.1	305	1280			
27	322	1360	1230	1200	1700	3200	1580	1770	15	1.4	314	1240			
28	300	1310	1210	1250	1700	3250	1570	1660	54	1.8	369	707			
29	298	1190	1160	1270	1680	3480	1640	1630	237	2.2	595	382			
30	298	1070	1100	1280	---	3560	1660	1770	725	128	713	354			
31	330	---	1060	1420	---	3500	---	1560	---	588	867	---			
TOTAL	8920	33507	37730	36088	50840	70344	64690	54560	17747	11775.34	10711	33951			
MEAN	288	1117	1217	1164	1753	2269	2156	1760	592	380	346	1132			
MAX	422	1460	1360	1700	2500	3560	3400	2430	1730	1750	867	3410			
MIN	209	488	1060	893	1420	949	1170	1460	15	.58	26	161			
AC-FT	17690	66460	74840	71580	100800	139500	128300	108200	35200	23360	21250	67340			
(+)	28920	72700	81140	77540	106500	150300	139700	118200	47540	35430	34860	79030			
CAL YR 1987	TOTAL	761185	MEAN	2085	MAX	6110	MIN	111	AC-FT	1510000	(+)	MEAN	2255	AC-FT	1633000
WTR YR 1988	TOTAL	430863.34	MEAN	1177	MAX	3560	MIN	.58	AC-FT	8546000	(+)	MEAN	1339	AC-FT	972000

(+) COMBINED FLOW, IN ACRE-FEET, AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY, CONVEYANCE CHANNEL, BERNARDO INTERIOR DRAIN AND LOWER SAN JUAN RIVERSIDE DRAIN.

RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1956 to current year.

WATER TEMPERATURES: October 1964 to current year.

SUSPENDED-SEDIMENT DISCHARGES: October 1964 to current year.

REMARKS.--Records prior to 1965 water year were published as 08332000 Rio Grande near Bernardo, N. Mex., a composite of 08331990 Rio Grande Conveyance Channel near Bernardo, 08332010 Rio Grande Floodway near Bernardo, and 08332050 Bernardo Interior Drain at Bernardo. Sediment total-load measurements were made quarterly and total-load values were determined using equation from double-mass relationship for period of record.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1964-88): Maximum daily, 1,410 microsiemens, July 23, 1976; minimum daily, 224 microsiemens, June 5, 1980.

WATER TEMPERATURES: Maximum daily, 34.5°C, Aug. 9, 1975; minimum daily, 0.0°C on several days during 1971-72, 1976-77, 1979, and 1983-87.

SEDIMENT CONCENTRATIONS (water years 1975-88): Maximum daily mean, 21,400 mg/L, Aug. 11, 1979; minimum daily mean, no flow on many days of most years.

SEDIMENT LOADS: Maximum daily, 356,000 tons, Aug. 11, 1967; minimum daily, 0 ton on many days each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 709 microsiemens, Oct. 3; minimum daily, 379 microsiemens, Apr. 2.

WATER TEMPERATURES: Maximum daily, 31.0°C, Aug. 22; minimum daily, 3.0°C, Dec. 26.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7,800 mg/L, Sept. 15; minimum daily mean, 26 mg/L, June 24, 25.

SEDIMENT LOADS: Maximum daily, 71,800 tons, Sept. 15; minimum daily, 0.17 tons, July 26.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	
NOV 04...	1030	799	--	531	8.30	8.00	19.0	13.5	8.3	40	180	
JAN 08...	1110	1010	410	--	7.50	--	7.5	5.0	11.4	--	--	
MAR 23...	1200	849	590	480	8.02	8.00	24.0	15.0	8.1	--	160	
MAY 05...	1000	1700	460	464	8.40	8.10	23.0	17.0	8.0	--	150	
JUL 19...	1306	12	570	569	8.80	8.60	34.5	27.0	7.4	74	160	
DATE		HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINTY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
NOV 04...	37	57	9.5	43	1	4.6	145	91	19	0.40	25	
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	
MAR 23...	20	49	8.8	40	1	3.8	139	84	19	0.50	23	
MAY 05...	20	44	8.6	38	1	3.4	126	82	16	0.50	20	
JUL 19...	18	49	10	56	2	5.4	146	110	24	0.50	23	
DATE		SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 04...	342	0.900	0.910	0.070	1.0	2.0	0.470	0.440	10	100	8	
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	
MAR 23...	312	--	--	--	--	--	--	--	--	90	9	
MAY 05...	288	--	--	--	--	--	--	--	--	80	5	
JUL 19...	366	<0.100	<0.100	<0.010	--	--	0.270	0.130	6.3	120	4	

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

[illegible]

RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

WATER-QUALITY RECORDS
SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	647	547	465	450	432	414	393	483	474	512	561	577
2	685	549	470	453	433	419	379	465	477	516	555	583
3	709	508	470	---	414	402	395	461	478	534	542	590
4	694	518	467	451	407	403	399	465	478	535	576	628
5	666	455	473	449	409	398	403	460	488	529	418	650
6	662	495	468	455	412	400	413	465	485	521	588	597
7	698	510	460	452	410	397	419	473	486	539	564	595
8	683	508	458	455	416	398	424	473	497	540	519	634
9	693	481	---	---	---	---	427	478	519	475	497	608
10	691	485	455	475	413	393	429	472	545	541	---	663
11	705	485	458	464	415	396	437	477	502	384	---	656
12	694	484	458	463	419	398	431	482	514	---	517	463
13	694	472	462	461	416	407	429	490	495	---	592	438
14	675	473	459	459	417	441	439	479	481	543	613	421
15	692	469	460	456	418	457	448	495	518	570	604	490
16	672	463	458	454	417	471	414	507	514	593	645	553
17	683	462	458	453	417	472	414	493	515	602	567	564
18	676	463	452	443	418	477	422	497	520	555	529	571
19	686	466	453	429	418	479	457	499	535	---	537	565
20	660	480	449	440	417	488	453	500	---	---	562	---
21	680	475	458	439	414	493	457	514	552	---	568	529
22	654	478	457	447	421	499	469	512	564	---	578	500
23	656	477	460	466	414	485	461	514	574	---	545	482
24	657	486	468	454	415	434	456	518	582	---	534	474
25	678	478	460	441	415	414	457	524	582	---	576	486
26	582	473	468	441	417	402	459	497	585	---	565	494
27	590	475	457	436	417	381	461	496	624	---	527	473
28	616	465	454	439	418	395	462	492	572	---	531	485
29	609	473	454	440	415	393	471	494	586	---	534	508
30	609	470	456	439	---	399	475	498	501	613	---	553
31	608	---	453	442	---	398	---	478	---	---	570	---
MEAN	665	484	460	450	417	427	435	489	526	535	554	546
WTR YR 1988	MEAN	498	MAX	709	MIN	379						

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	17.0	11.0	4.0	9.0	14.0	14.0	19.0	22.0	29.0	25.0	23.0
2	23.0	15.0	11.0	5.0	11.0	13.0	13.0	17.0	27.0	30.0	27.0	24.0
3	22.0	15.0	11.0	---	11.0	13.0	16.0	18.0	26.0	30.0	30.0	24.0
4	22.0	15.0	12.0	8.0	11.0	13.0	18.0	20.0	26.0	30.0	24.0	25.0
5	22.0	13.0	12.0	8.0	11.0	13.0	18.0	19.0	22.0	28.0	22.0	28.0
6	21.0	13.0	11.0	10.0	10.0	14.0	18.0	19.0	25.0	30.0	28.0	27.0
7	22.0	11.0	13.0	10.0	10.0	13.0	19.0	17.0	26.0	30.0	29.0	29.0
8	20.0	11.0	11.0	8.0	10.0	11.0	17.0	18.0	27.0	30.0	25.0	29.0
9	21.0	10.0	---	---	---	---	18.0	21.0	28.0	28.0	26.0	28.0
10	24.0	10.0	11.0	9.0	11.0	14.0	17.0	24.0	29.0	29.0	27.0	28.0
11	21.0	11.0	12.0	7.0	11.0	13.0	19.0	24.0	27.0	29.0	28.0	24.0
12	20.0	11.0	9.0	10.0	10.0	9.0	20.0	24.0	24.0	30.0	30.0	23.0
13	23.0	9.0	8.0	8.0	10.0	10.0	20.0	25.0	26.0	30.0	30.0	21.0
14	19.0	9.0	4.0	9.0	9.0	12.0	17.0	25.0	29.0	30.0	29.0	14.0
15	18.0	7.0	7.0	8.0	12.0	12.0	19.0	26.0	28.0	30.0	26.0	25.0
16	20.0	8.0	5.0	9.0	12.0	11.0	15.0	28.0	28.0	30.0	28.0	25.0
17	20.0	7.0	7.0	9.0	10.0	11.0	9.0	23.0	29.0	30.0	27.0	24.0
18	19.0	7.0	9.0	8.0	11.0	11.0	18.0	24.0	29.0	30.0	26.0	23.0
19	19.0	9.0	9.0	8.0	11.0	15.0	19.0	20.0	29.0	---	25.0	25.0
20	18.0	9.0	10.0	7.0	13.0	17.0	20.0	19.0	29.0	---	30.0	---
21	19.0	10.0	10.0	5.0	10.0	21.0	19.0	19.0	30.0	---	28.0	18.0
22	16.0	11.0	10.0	6.0	14.0	17.0	16.0	23.0	30.0	---	31.0	21.0
23	15.0	10.0	9.0	8.0	14.0	12.0	17.0	21.0	30.0	---	26.0	22.0
24	19.0	11.0	9.0	7.0	16.0	13.0	18.0	23.0	27.0	---	30.0	22.0
25	18.0	11.0	5.0	6.0	13.0	16.0	20.0	23.0	28.0	---	27.0	23.0
26	18.0	10.0	3.0	5.0	17.0	17.0	19.0	22.0	27.0	---	29.0	23.0
27	19.0	11.0	6.0	9.0	12.0	15.0	20.0	22.0	29.0	---	22.0	23.0
28	17.0	10.0	5.0	8.0	14.0	17.0	19.0	23.0	26.0	---	21.0	23.0
29	15.0	10.0	6.0	10.0	14.0	13.0	19.0	22.0	28.0	---	20.0	20.0
30	17.0	10.0	8.0	9.0	---	14.0	21.0	18.0	29.0	30.0	---	22.0
31	12.0	---	6.0	10.0	---	13.0	---	19.0	---	---	26.0	---
MEAN	19.5	10.5	8.5	8.0	11.5	13.5	17.5	21.5	27.5	29.5	26.5	23.5
WTR YR 1988	MEAN	18.0	MAX	31.0	MIN	3.0						

RIO GRANDE BASIN

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.--Estimated daily discharges: July 20, 21 and Sept. 12-21. Water-discharge records good. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 208 ft³/s, May 5, 1983; no flow at times. Prior to 1952, drain was subject to overflow from floodway.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	41	54	46	32	49	89	57	69	121	101	95
2	64	40	48	45	32	49	89	65	60	113	106	95
3	69	40	48	45	32	49	78	68	60	113	103	95
4	71	40	46	44	33	49	70	74	59	136	104	94
5	61	41	46	45	34	49	72	62	64	133	105	95
6	66	41	48	42	35	48	77	62	61	134	99	96
7	84	42	48	42	36	48	74	64	53	124	93	99
8	75	42	47	42	36	56	71	64	62	129	98	101
9	65	41	47	41	36	56	68	60	57	141	101	97
10	73	41	46	41	37	52	71	55	69	122	99	97
11	63	41	46	39	37	53	72	57	123	119	103	96
12	52	41	45	38	39	64	76	51	120	102	102	96
13	51	42	43	39	40	72	70	53	118	96	105	95
14	80	42	44	40	40	65	66	50	94	91	105	102
15	83	42	48	41	41	67	67	60	111	93	102	99
16	74	42	48	42	42	63	76	60	108	100	104	96
17	79	42	47	43	42	75	73	58	109	96	102	96
18	83	42	48	44	42	81	73	68	107	98	97	96
19	90	42	48	45	43	78	63	57	103	98	102	96
20	85	42	47	46	45	73	59	68	113	97	107	97
21	89	42	46	46	45	70	58	70	94	97	106	95
22	94	42	45	46	45	75	58	75	98	92	106	95
23	97	47	45	47	46	77	64	73	79	87	102	92
24	93	62	44	46	46	70	60	66	78	86	104	91
25	101	61	43	35	47	75	58	61	102	84	101	92
26	86	63	42	26	47	73	52	60	114	81	105	95
27	74	63	42	27	48	77	47	69	118	81	103	96
28	62	64	45	28	48	68	47	74	122	81	102	96
29	55	65	46	28	49	58	52	72	120	91	95	96
30	53	64	46	29	---	54	57	67	117	99	95	97
31	56	---	45	31	---	53	---	69	---	100	95	---
TOTAL	2278	1400	1431	1239	1175	1946	2007	1969	2762	3235	3152	2878
MEAN	73.5	46.7	46.2	40.0	40.5	62.8	66.9	63.5	92.1	104	102	95.9
MAX	101	65	54	47	49	81	89	75	123	141	107	102
MIN	50	40	42	26	32	48	47	50	53	81	93	91
AC-FT	4520	2780	2840	2460	2330	3860	3980	3910	5480	6420	6250	5710
CAL YR 1987 TOTAL		24158		MEAN	66.2	MAX	109	MIN	28	AC-FT	47920	
WTR YR 1988 TOTAL		25472		MEAN	69.6	MAX	141	MIN	26	AC-FT	50520	

08334000 RIO PUERCO ABOVE ARROYO CHICO, NEAR GUADALUPE, NM

LOCATION.--Lat 35°38'08", long 107°09'56", in SW¼ sec.21, T.16 N., R.3 W., Sandoval County, Hydrologic Unit 13020204, on right bank 1.6 mi upstream from Arroyo Chico, 5.5 mi northeast of village of Guadalupe, and at mile 106.8.

DRAINAGE AREA.--420 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,950 ft above National Geodetic Vertical Datum of 1929. Prior to July 14, 1966 at datum 1.01 ft higher.

REMARKS.--Estimated daily discharges: Dec. 18 to Jan. 28, Feb. 10 to 22, and June 6 to July 7. Water-discharge records poor. Diversions for irrigation of about 3,700 acres upstream from station in past years, but present diversion negligible. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 13.8 ft³/s, 10,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,940 ft³/s, July 29, 1967, gage height, 13.53 ft, from rating curve extended above 1,300 ft³/s on basis of slope-area measurements at gage heights 7.75 ft and 10.60 ft; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1943, probably exceeded 5,000 ft³/s based on records for stations upstream and downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 29	2115	2,160	7.52	Aug. 28	0900	*5,260	*11.07

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.6	.00	.00	.31	23	4.6	24	22	.00	78	48
2	.00	21	.00	.00	.45	14	9.7	31	17	.00	211	36
3	.00	6.4	.00	.00	.80	11	6.1	27	11	.00	13	37
4	.00	2.4	.00	.00	1.2	8.5	6.0	23	10	.00	3.5	26
5	.00	.79	.00	.00	1.3	5.5	5.0	26	10	.00	1.9	19
6	.00	.08	.00	.00	1.3	5.2	4.1	32	9.0	2.0	83	18
7	.00	.00	.00	.00	1.6	4.4	4.1	32	9.0	.40	18	17
8	.00	.56	.00	.00	1.8	3.5	4.6	29	8.0	.08	5.2	16
9	.00	.22	.00	.00	2.2	2.8	5.0	24	8.0	146	4.1	14
10	.00	.00	.00	.00	3.8	2.9	6.0	25	7.5	5.6	4.1	12
11	.00	.00	.00	.00	3.5	3.1	6.5	31	6.0	17	3.9	14
12	.00	.00	.00	.00	3.3	2.1	7.4	35	5.5	1.4	2.7	43
13	.00	.00	.00	.00	2.7	2.0	6.3	35	5.5	.12	1.5	30
14	.00	.00	.00	.00	2.3	1.3	8.1	33	4.0	.00	.38	10
15	.00	.00	.00	.00	2.3	1.9	12	32	4.0	.00	2.5	5.0
16	.00	.00	.00	.00	2.4	2.4	16	34	3.5	.00	.08	4.5
17	.00	.00	.00	.00	2.7	3.6	25	36	3.5	1.7	42	4.0
18	.00	.00	.00	.00	3.8	1.9	20	35	3.0	.43	19	4.0
19	.00	.00	.00	.00	2.8	2.0	17	39	1.0	.00	17	3.8
20	.00	.00	.00	.00	3.8	1.7	14	40	1.0	.00	9.3	3.8
21	.00	.00	.00	.00	2.8	1.4	16	38	.00	.00	5.5	3.5
22	.00	.00	.00	.00	3.8	1.3	17	27	.00	.00	3.0	3.3
23	.00	.00	.00	.00	17	1.1	19	17	.00	.00	28	5.5
24	.00	.00	.00	.00	20	.60	18	16	.00	.00	53	5.7
25	.00	.00	.00	.00	16	.23	19	14	.00	.00	86	5.0
26	.00	.00	.00	.00	17	.17	17	18	.00	.00	158	4.3
27	.00	.00	.00	.00	16	.65	16	19	.00	.00	87	3.4
28	.00	.00	.00	.00	26	1.4	16	19	.00	.00	1110	2.8
29	.00	.00	.00	.00	52	2.6	18	20	.00	188	36	2.3
30	.00	.00	.00	.04	---	3.2	22	19	.00	38	15	2.2
31	.00	---	.00	.17	---	3.8	---	22	---	1.5	146	---
TOTAL	.00	34.05	.00	.21	214.96	119.25	365.5	852	148.50	402.23	2247.66	403.1
MEAN	.00	1.13	.00	.01	7.41	3.85	12.2	27.5	4.95	13.0	72.5	13.4
MAX	.00	21	.00	.17	52	23	25	40	22	188	1110	48
MIN	.00	.00	.00	.00	.31	.17	4.1	14	.00	.00	.08	2.2
AC-FT	.00	68	.00	.4	426	237	725	1690	295	798	4460	800
CAL YR 1987	TOTAL	4711.22		MEAN	12.9	MAX	77	MIN	.00	AC-FT	9340	
WTR YR 1988	TOTAL	4787.46		MEAN	13.1	MAX	1110	MIN	.00	AC-FT	9500	

08334000 RIO PUERCO ABOVE ARROYO CHICO, NEAR GUADALUPE, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-56 (published as "below Cabezón"), 1981 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGES: July 1948 to June 1956, October 1981 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since August 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 214,000 mg/L, Aug. 28, 1988; minimum daily mean, no flow on many days each year.

SEDIMENT LOADS: Maximum daily, 730,000 tons, July 27, 1955; minimum daily, 0 ton on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 214,000 mg/L, Aug. 28; minimum daily mean, no flow on many days.

SEDIMENT LOADS: Maximum daily, 99,300 tons, Aug. 2; minimum daily, 0 ton on many days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
MAR												
08...	1047	6.1	1.0	4860	80	67	74	86	88	95	100	--
APR												
22...	1330	21	12.0	--	--	35	39	55	76	92	99	100
MAY												
26...	1200	24	20.5	57700	3740	40	47	67	94	100	--	--
SEP												
02...	1154	37	--	35200	3520	60	71	89	95	98	100	--

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN CONCEN- TRATION	LOADS	MEAN CONCEN- TRATION	LOADS	MEAN CONCEN- TRATION	LOADS	MEAN CONCEN- TRATION	LOADS	MEAN CONCEN- TRATION	LOADS	MEAN CONCEN- TRATION	LOADS
	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9500	118	21100	1370	4440	264	0	.00	123000	28600	69700	9970
2	7960	208	21900	1830	3820	175	0	.00	165000	99300	46600	4660
3	6730	111	20400	1490	3280	97	0	.00	98800	4530	46200	4620
4	5030	81	18900	1170	33500	904	0	.00	35300	457	39600	2780
5	4260	58	21000	1470	39500	1070	0	.00	19600	138	38500	1980
6	3690	41	22400	1940	15600	379	28500	154	62900	14600	36400	1770
7	3520	39	24300	2100	5670	138	26700	29	67600	3650	34100	1570
8	5060	63	23400	1830	3780	82	22800	4.9	40300	631	33200	1430
9	5340	72	21000	1360	18700	404	85200	35200	20100	239	27100	1020
10	6340	103	20700	1400	6370	129	38000	728	21900	242	19800	642
11	9560	168	21600	1810	6200	100	72600	3920	31500	349	16100	609
12	9480	189	25500	2410	6000	89	47200	255	20800	168	48400	5620
13	9800	167	27100	2560	6000	89	19300	21	17200	79	35000	2840
14	10200	223	26600	2370	5000	54	0	.00	12500	29	20000	540
15	21900	710	27600	2380	5000	54	0	.00	25800	209	10000	135
16	20300	877	28300	2600	4500	43	0	.00	21200	20	6000	73
17	19000	1280	30200	2940	4500	43	48700	329	86600	11000	5000	54
18	17800	961	29400	2780	4000	32	24700	65	64200	3990	5000	54
19	16300	748	29500	3110	2000	5.4	0	.00	62500	3710	4500	46
20	18500	699	29600	3200	2000	5.4	0	.00	49400	1730	4500	46
21	17700	765	25500	2620	0	.00	0	.00	35300	848	4500	43
22	17100	785	23100	1680	0	.00	0	.00	24000	324	4200	37
23	18500	949	18600	854	0	.00	0	.00	87600	8040	10000	148
24	18600	904	15500	670	0	.00	0	.00	133000	22600	12000	185
25	20800	1070	12300	465	0	.00	.0	.00	143000	38200	10000	135
26	20000	918	11200	544	0	.00	0	.00	173000	84100	6000	70
27	19700	851	9300	477	0	.00	0	.00	151000	44800	4500	41
28	19200	829	7200	369	0	.00	0	.00	214000	37600	4000	30
29	20500	996	6040	326	0	.00	36500	2760	83100	13000	3000	19
30	20300	1210	5380	276	0	.00	139000	17300	32800	2210	2500	15
31	---	---	5400	321	---	---	77000	582	115000	50300	---	---
TOTAL	---	16193	---	50722	---	4156.80	---	61347.90	---	475693	---	41182
TOTAL LOAD FOR YEAR: 662460.68 TONS.												

RIO GRANDE BASIN

08341400 BLUEWATER LAKE NEAR BLUEWATER, NM

LOCATION.--Lat 35°17'31", long 108°06'40", in SE¼ sec.9, T.12 N., R.12 W., Cibola County, Hydrologic Unit 13020207, at left end of Bluewater Dam on Bluewater Creek, and 9.5 mi west of Bluewater.

DRAINAGE AREA.--201 mi².

WATER-DISCHARGE RECORDS

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. Datum of gage is 7,345.57 ft above National Geodetic Vertical Datum of 1929. July 1958 to January 1961, nonrecording gage at nearby site, same datum. Gage heights have been converted to sea-level elevations.

REMARKS.--Lake is formed by concrete arch dam. Storage began in 1927. Capacity, 38,500 acre-ft survey of 1945 at elevation 7,402.6 ft crest of uncontrolled siphon spillway which is vented to avoid drawdown below crest, and 44,200 acre-ft at elevation 7,405.6 ft crest of ungated spillway over dam. Capacity table used through 1944 showed a capacity of 50,300 acre-ft at crest of ungated spillway over dam, and that used from 1945-50, 43,500 acre-ft. Tables used prior to 1958 are not available and no adjustments are made for changes in tables. Dead storage, 3.4 acre-ft at elevation 7,345.4 ft sill of lower outlet tube. Lake not usually drawn below conservation pool level elevation, 7,365.36 ft, below which ownership is by State Game and Fish Department. Above this level, water is owned and used by Bluewater-Toltec Irrigation Co. Figures given herein represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents determined, 47,100 acre-ft Apr. 30, 1941. Contents may have been greater on Apr. 28, 1941 when peak discharge of 800 ft³/s occurred at station 8 mi downstream; no storage at times prior to 1947.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 20,820 acre-ft, Apr. 27, elevation, 7,390.3 ft; minimum, 10,780 acre-ft, Sept. 30, elevation, 7,379.8 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,389.7	20,090	-----
Oct. 31	7,389.2	19,490	- 600
Nov. 30	7,389.1	19,370	- 120
Dec. 31	7,388.9	19,140	- 230
CAL YR 1987			- 4,230
Jan. 31	7,388.8	19,020	- 120
Feb. 28	7,389.0	19,250	+ 230
Mar. 31	7,389.8	20,210	+ 960
Apr. 30	7,390.1	20,570	+ 360
May 31	7,388.7	18,910	- 1,660
June 30	7,384.8	14,910	- 4,000
July 31	7,381.4	12,020	- 2,890
Aug. 31	7,380.8	11,550	- 470
Sept. 30	7,379.8	10,780	- 770
WTR YR 1988			- 9,310

08341400 BLUEWATER LAKE NEAR BLUEWATER, NM -- Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected in Bluewater Lake impounded by Bluewater Dam on Bluewater Creek.

PERIOD OF RECORD.--Water years 1966-69, 1987 to current year.

REMARKS.--Samples for chemical analyses are collected 300 ft upstream from Bluewater Dam.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE	SPE- CIFIC CON- DUCT- ANCE	PH (STAND- ARD UNITS)	PH (STAND- ARD UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS- SOLVED (MG/L AS CA)	
		(US/CM) (00095)	(US/CM) (90095)	(00400)	(00403)	(00020)	(00010)	(00300)	(00900)	(00902)	(00915)	
NOV 18...	1215	--	443	8.40	7.60	5.5	9.0	10.1	200	76	55	
MAR 02...	1330	415	414	8.10	8.30	11.5	12.5	9.2	190	59	51	
MAY 17...	1200	460	458	8.20	8.40	14.0	14.5	8.2	220	81	62	
JUL 14...	1330	500	500	8.60	8.20	27.0	23.0	7.2	240	95	66	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 18...	14	8.6	0.3	3.0	142	0	116	119	81	7.7	0.30	
MAR 02...	14	7.9	0.3	2.0	124	0	102	126	86	4.3	0.50	
MAY 17...	16	9.0	0.3	1.5	164	0	134	140	94	5.1	0.40	
JUL 14...	18	10	0.3	1.9	109	17	117	144	110	5.0	0.30	
DATE		SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (UG/L AS AS) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	
NOV 18...		8.7	250	2	2	40	<1	<1	2	1	5	
MAR 02...		7.7	249	--	--	30	--	--	--	--	--	
MAY 17...		8.9	281	--	--	40	--	--	--	--	--	
JUL 14...		9.3	307	--	--	40	--	--	--	--	--	
DATE		COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	
NOV 18...		2	10	<5	<5	<0.10	<0.1	<1	<1	20	11	
MAR 02...		--	3	--	--	--	--	--	--	--	--	
MAY 17...		--	14	--	--	--	--	--	--	--	--	
JUL 14...		--	60	--	--	--	--	--	--	--	--	

RIO GRANDE BASIN

08343000 RIO SAN JOSE AT GRANTS, NM

LOCATION.--Lat 35°09'16", long 107°52'11", in SW¼NW¼ sec.26, T.11 N., R.10 W., Cibola County, Hydrologic Unit 13020207, on right bank at bridge on El Morro St., 0.2 mi south of Santa Fe Ave. in Grants, and at mile 67.8

DRAINAGE AREA.--1,020 mi², approximately.

PERIOD OF RECORD.--October 1912 to February 1914, June 1914, October 1914 to February 1915, May 1915 to June 1921, September 1921 to June 1923, October 1923 to May 1926, September to December 1926, May 1949 to September 1966, June 1968 to current year. Monthly discharge only for some periods published in WSP 1312. Prior to October 1967, published as "Bluewater Creek at Grants".

REVISED RECORDS.--WSP 1512: 1913-14. WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,468.34 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). See WSP 1732 or 1923 for history of changes prior to Jan. 1, 1926.

REMARKS.--Estimated daily discharges: May 30 to July 13. Records good except for estimated daily discharge, which are poor. Flow slightly regulated by Bluewater Lake (station 08341400) 24 mi upstream. Diversions and groundwater withdrawals for irrigation of about 4,500 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years (water years 1913, 1915-20, 1922, 1924-25, 1950-66, 1968-88), 2.97 ft³/s, 2,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1950-66 AND SINCE 1968).--Maximum discharge recorded, 1,760 ft³/s, Aug. 28, 1952, gage height, 5.35 ft, from rating curve extended above 300 ft³/s on basis of velocity-area studies; no flow for long periods.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood observed occurred Sept. 6 or 7, 1909, when Bluewater Dam washed out. A flood in July 1919 probably exceeded the one in 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 12	0630	*2.0	*1.54				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.34
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.24	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.37	.35
MEAN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.24	.34
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.7	.7

CAL YR 1987	TOTAL	14.75	MEAN	.04	MAX	8.4	MIN	.00	AC-FT	29
WTR YR 1988	TOTAL	.72	MEAN	.00	MAX	.34	MIN	.00	AC-FT	1.4

08343100 GRANTS CANYON AT GRANTS, NM

LOCATION.--Lat 35°09'39", long 107°50'15", in NE¼NE¼ sec.25, T.11 N., R.10 W., Cibola County, Hydrologic Unit 13020207, on upstream side of culvert under Roosevelt Avenue, in Grants, 0.2 mi east of intersection of Roosevelt and First Avenue, and 1.1 mi upstream from confluence with Rio San Jose (formerly Bluewater Creek).

DRAINAGE AREA.--13.0 mi².

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

GAGE.--Water-stage recorder and culvert control. Elevation of gage is 6,450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 19 and July 10-13. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--27 years, 0.123 ft³/s, 89 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft³/s, Aug. 26, 1963, gage height, 5.10 ft, from rating curve extended above 220 ft³/s on basis of slope-area measurements at gage heights 3.17 ft, 5.10 ft, and 5.38 ft; maximum gage height, 5.38 ft, Sept. 8, 1967; no flow for most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 175 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 10	Unknown	*321	*2.17	No other peak greater than base discharge.			
No flow most of time.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.2	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	18	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.7	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.1	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.30	.00	2.5	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.75	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	1.05	25.20	9.30	.00
MEAN	.00	.00	.00	.00	.00	.00	.00	.00	.03	.81	.30	.00
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.75	18	3.7	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	2.1	50	18	.00
CAL YR 1987	TOTAL	.91	MEAN	.00	MAX	.59	MIN	.00	AC-FT	1.8		
WTR YR 1988	TOTAL	35.55	MEAN	.10	MAX	18	MIN	.00	AC-FT	71		

08343500 RIO SAN JOSE NEAR GRANTS, NM

LOCATION.--Lat 35°04'27", long 107°45'01", in SE&SE¼ sec.23, T.10 N., R.9 W., Cibola County, Hydrologic Unit 13020207, on right bank at west boundary of Acoma Pueblo Grant, 8.5 mi southeast of Grants, and at mile 57.4.

DRAINAGE AREA.--2,300 mi², approximately, of which 1,130 mi² does not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1936 to current year. Prior to October 1955, published as "San Jose River near Grants".

REVISED RECORDS.--WSP 898: 1936-39(M). WSP 1512: 1943. WSP 1712: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6,269.47 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: July 13 to Sept. 20. Water-discharge records good except for estimated daily discharges, which are poor. Flow slightly regulated by Bluewater Lake (station 08341400), 34 mi upstrea. Diversions and ground-water withdrawal for irrigation of about 5,100 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--52 years, 6.73 ft³/s, 4,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft³/s, Sept. 20, 1963, gage height, 4.87 ft, from rating curve extended above 450 ft³/s on basis of slope-area measurements at gage heights 3.19 ft and 4.87 ft; minimum, 1.9 ft³/s, Feb. 21, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood probably occurred Sept. 6 or 7, 1909, following destruction of Bluewater dam. The peak of Sept. 20, 1963 may have been exceeded by those of July 1919, August and September 1929, and August 1935.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 5	unknown	*205	*2.80	No other peak greater than base discharge.			

Minimum daily discharge, 3.2 ft³/s, Dec. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	6.0	5.3	5.3	6.5	5.9	6.1	5.1	3.7	8.3	9.5	7.0
2	3.7	6.1	5.3	5.3	6.7	6.0	6.0	4.8	3.8	6.5	7.0	6.4
3	3.9	6.9	5.3	5.6	7.8	6.4	5.9	4.9	3.8	5.8	6.0	6.2
4	4.2	5.7	5.4	5.8	7.4	8.9	5.9	5.1	3.8	5.8	7.0	6.0
5	4.7	5.5	5.5	6.1	6.9	7.4	5.8	5.1	3.9	5.8	50	6.0
6	4.9	5.4	6.0	6.7	6.5	6.4	5.8	4.9	4.0	7.2	30	6.0
7	5.0	5.3	5.8	7.0	6.4	6.2	5.8	4.6	4.0	11	20	6.0
8	5.3	5.3	5.6	7.2	6.3	5.8	6.0	4.8	4.0	6.9	10	6.0
9	5.3	5.4	5.3	6.7	6.0	5.6	5.9	4.8	4.0	6.2	8.0	6.0
10	5.0	5.5	5.3	6.3	5.9	5.6	5.9	4.8	4.0	8.2	6.0	6.0
11	5.0	5.5	5.4	6.6	5.7	5.4	5.8	4.8	5.3	7.5	5.8	7.0
12	5.1	5.5	5.4	7.8	5.6	5.3	5.8	4.8	6.5	11	5.6	9.0
13	5.3	5.5	3.8	6.2	5.6	5.4	5.8	4.9	4.7	5.8	5.4	15
14	5.3	5.6	3.2	5.9	5.6	5.3	5.9	5.0	4.4	5.6	5.2	8.0
15	5.3	5.5	3.7	6.0	5.6	5.5	5.9	5.1	4.3	5.3	5.1	6.8
16	5.3	5.3	3.8	6.3	5.7	5.4	6.7	5.0	4.4	5.2	5.1	6.2
17	5.3	5.3	3.8	6.4	5.6	5.4	11	4.8	4.8	5.2	5.1	6.1
18	5.3	5.3	3.8	6.6	5.6	5.3	7.8	4.6	4.9	5.1	5.2	6.0
19	5.3	5.2	4.2	7.0	5.6	5.4	6.2	4.6	5.1	5.1	15	6.1
20	5.3	5.2	5.5	6.1	5.6	5.4	5.9	4.5	5.0	5.1	8.0	6.7
21	5.3	5.3	6.5	5.7	5.6	5.4	5.6	4.2	5.1	9.0	6.0	6.1
22	5.4	5.4	6.2	5.9	5.7	5.5	5.4	3.9	5.2	6.0	5.2	6.2
23	5.6	5.4	6.3	5.8	5.7	5.6	5.3	3.8	5.6	5.4	4.9	6.6
24	5.5	5.4	7.4	5.9	5.8	5.9	5.3	3.7	5.6	5.2	4.9	6.3
25	5.5	5.3	6.3	5.8	5.7	6.0	5.4	3.7	5.8	5.1	5.2	6.0
26	5.7	5.3	5.4	6.0	5.6	5.9	5.2	3.7	5.9	5.1	8.0	6.0
27	5.9	5.3	5.3	6.4	5.7	6.0	5.1	3.7	5.8	5.1	12	6.0
28	5.9	5.2	5.5	6.5	5.8	5.9	5.1	3.7	5.9	5.1	9.0	5.8
29	5.8	5.2	5.8	6.7	5.9	5.7	5.2	3.8	6.3	5.1	6.0	6.1
30	5.9	5.3	5.8	7.0	---	5.7	5.2	3.6	8.2	20	5.0	6.1
31	5.9	---	5.5	7.0	---	5.8	---	3.6	---	13	5.0	---
TOTAL	160.3	164.1	163.4	195.6	174.1	181.4	178.7	138.4	147.8	216.7	290.2	199.7
MEAN	5.17	5.47	5.27	6.31	6.00	5.85	5.96	4.46	4.93	6.99	9.36	6.66
MAX	5.9	6.9	7.4	7.8	7.8	8.9	11	5.1	8.2	20	50	15
MIN	3.4	5.2	3.2	5.3	5.6	5.3	5.1	3.6	3.7	5.1	4.9	5.8
AC-FT	318	325	324	388	345	360	354	275	293	430	576	396
CAL YR 1987 TOTAL	1839.8			MEAN	5.04	MAX	11	MIN	2.5	AC-FT	3650	
WTR YR 1988 TOTAL	2210.4			MEAN	6.04	MAX	50	MIN	3.2	AC-FT	4380	

RIO GRANDE BASIN

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08343500 RIO SAN JOSE NEAR GRANTS, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1980-82, 1986 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 16...	1300	5.3	1280	1420	7.90	7.90	10.5	10.0	9.7	55	390	160
JAN 21...	1230	5.7	1600	--	8.00	--	0.0	9.0	11.0	<10	--	--
MAR 03...	1100	6.4	1650	1610	8.00	7.90	10.0	9.5	11.4	24	420	190
MAY 19...	1000	4.6	1580	1620	7.90	8.00	22.5	12.5	8.4	23	430	200
JUL 13...	1230	6.2	1300	1410	8.10	8.10	28.5	19.0	10.7	28	380	170
AUG 16...	1430	5.1	1250	--	8.60	--	21.0	19.0	11.9	<10	--	--
DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 16...	88	41	150	3	7.2	256	0	210	227	330	120	0.80
MAR 03...	91	47	170	4	7.8	234	0	192	232	370	170	0.80
MAY 19...	95	48	190	4	6.3	288	0	233	236	390	160	0.90
JUL 13...	88	40	160	4	7.8	249	0	204	217	330	130	0.60
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHOPHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
NOV 16...	29	918	2.80	2.70	0.230	0.87	3.9	1.40	1.20	4.0	2	1
JAN 21...	--	--	2.70	2.70	0.430	0.67	3.8	1.20	0.940	4.2	--	--
MAR 03...	25	1020	1.20	--	0.290	0.81	2.3	1.80	--	5.0	--	--
MAY 19...	27	1070	2.50	2.20	0.110	0.59	3.2	2.10	1.40	4.3	--	--
JUL 13...	29	926	1.50	1.50	0.090	0.51	2.1	2.40	1.10	6.1	5	5
AUG 16...	--	--	2.10	2.10	0.020	0.38	2.5	1.20	--	3.4	--	--
DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
NOV 16...	330	<1	1	3	2	6	2	<10	<5	<5	<0.10	<0.1
MAR 03...	360	--	--	--	--	--	--	<3	--	--	--	--
MAY 19...	390	--	--	--	--	--	--	11	--	--	--	--
JUL 13...	350	<1	2	3	3	6	1	20	<5	<5	<0.10	<0.1

RIO GRANDE BASIN

08343500 RIO SAN JOSE NEAR GRANTS, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)
NOV 16...	3	3	20	10	5.0	6.3	270	4	<1	<10	<50	<1
JUL 13...	4	5	30	16	--	--	--	--	--	--	--	--
DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)
NOV 16...	80	<10	<10	<0.10	<10	140	2.7	9.7	28	7.0	28	0.51
DATE	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. 0.7 % FINER THAN (COLS./ UM-MF 100 ML) (70331)	COLI- FORM, FECAL, 0.7 (COLS./ UM-MF 100 ML) (31625)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML) (31673)	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	
NOV 16...	78		210	3.0	95	84	110	--	--	--	--	--
JAN 21...	--		111	1.7	93	K1	K36	--	--	--	--	--
MAR 03...	--		--	--	--	77	K48	--	--	--	--	--
MAY 19...	--		206	2.6	99	K17	120	--	--	--	--	--
JUL 13...	--		133	2.2	99	K130	340	--	--	--	--	--
AUG 16...	--		--	--	--	K400	K1400	<0.1	<0.010	<0.1	<0.010	<0.010
DATE	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN, TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	
AUG 16...	<0.010	0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	
DATE	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)	
MAR 03...	--	--	--	--	--	<0.01	<0.01	<0.01	--	--	--	--
AUG 16...	<0.01	<0.01	<0.01	<1	<0.01	--	--	--	<0.1	<0.10	<0.01	

08349800 RIO PAGUATE BELOW JACKPILE MINE NEAR LAGUNA, NM

LOCATION.--Lat 35°07'09", long 107°19'58", in SW¼SE¼ sec.2, T.10 N., R.5 W., Cibola County, Hydrologic Unit 13020207, in Pagate Purchase Grant, near right bank on downstream end of bridge piling of the Atchison, Topeka and Santa Fe Railway Co. bridge, 1.4 mi downstream from Rio Moquino, 4.2 mi upstream from Pagate Reservoir, 5.0 mi southeast of Pagate and 26 mi east of Grants.

DRAINAGE AREA.--107 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 5,820 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 17 to Jan. 21 and July 7 to Sept. 30. Water-discharge records fair except for estimated daily discharges, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 2.94 ft³/s, 2,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s, Aug. 5, 1988, gage height, 23.0 ft, from floodmarks, from rating curve extended above 20 ft³/s on basis of slope-area measurements at gage heights 8.60 ft and 23.0 ft and contracted-opening measurement at gage height 10.19 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 27	1915	222	5.42	Aug. 5	unknown	*14,200	*23.0

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	1.8	.70	2.0	2.4	1.9	2.0	1.0	.21	.93	40	60
2	.04	.97	1.0	2.0	2.6	2.0	1.7	.93	.17	.82	15	40
3	.04	.43	1.5	2.0	2.6	2.9	1.6	.93	.12	.74	10	10
4	.06	.43	2.0	2.0	2.5	2.2	1.5	1.1	.16	.59	15	8.0
5	.08	.43	2.5	2.0	2.3	2.0	1.4	1.1	.17	.57	3000	5.0
6	.13	.51	3.0	1.8	2.3	1.8	1.5	1.2	.27	3.8	600	4.0
7	.15	.43	2.8	1.8	2.5	1.8	1.5	1.2	.13	.60	50	1.0
8	.12	.39	2.8	2.0	2.6	2.2	1.4	1.3	.07	.50	40	.80
9	.13	.42	2.6	2.0	2.5	1.9	1.4	1.2	.05	.40	15	.50
10	.14	.43	2.5	2.0	2.0	1.6	1.5	1.2	.06	.40	5.0	.40
11	.15	.51	2.4	1.9	2.0	1.9	1.5	1.1	.55	.30	10	.60
12	.27	.49	2.3	2.0	2.0	2.0	1.5	1.1	.54	.30	5.0	62
13	2.4	.49	2.2	2.1	2.3	1.9	1.5	1.1	.12	.30	5.0	215
14	.27	.73	2.0	2.0	2.6	2.3	1.4	.94	.04	.50	6.0	105
15	.17	.84	1.8	2.3	2.3	2.2	1.5	1.0	.83	1.0	2.0	10
16	.16	.43	1.8	2.2	2.0	1.7	3.0	.67	.02	.80	1.0	5.0
17	.16	.50	1.8	2.0	2.1	1.9	2.5	.71	.00	.80	40	3.0
18	.16	.50	1.8	1.9	2.4	2.0	2.0	1.6	.00	.10	30	1.0
19	.16	.40	1.9	1.8	1.9	1.6	1.7	.95	.00	.00	70	1.0
20	.18	.40	1.9	1.7	1.9	1.5	1.5	.80	.00	3.0	20	1.0
21	.20	.50	1.9	1.6	1.9	1.4	1.5	.80	.00	10	10	1.5
22	.22	.50	2.0	1.6	1.9	1.3	1.6	1.0	.00	13	5.0	2.0
23	.26	.60	2.0	1.5	1.8	1.3	1.6	.84	.00	2.0	15	3.0
24	.30	.60	2.0	1.3	1.8	1.1	1.3	.43	.00	1.0	10	1.0
25	.30	.50	2.0	.93	1.9	1.1	1.3	.51	.00	.50	70	.80
26	.24	.50	2.0	.74	2.0	1.1	1.3	.73	.00	.30	50	1.0
27	.24	.50	2.0	.64	1.8	1.1	1.3	.84	12	.20	55	1.0
28	.25	.50	2.0	.25	1.8	1.4	1.4	.70	2.6	.10	110	1.0
29	.31	.50	2.0	.22	1.9	1.5	1.3	.58	1.4	2.0	65	.80
30	.47	.50	2.0	1.7	---	1.5	1.1	.47	1.0	225	10	1.0
31	.43	---	2.0	2.6	---	1.6	---	.31	---	100	8.0	---
TOTAL	8.27	16.73	63.20	52.58	62.6	53.7	47.3	28.34	20.51	370.55	4387.0	546.40
MEAN	.27	.56	2.04	1.70	2.16	1.73	1.58	.91	.68	12.0	142	18.2
MAX	2.4	1.8	3.0	2.6	2.6	2.9	3.0	1.6	12	225	3000	215
MIN	.04	.39	.70	.22	1.8	1.1	1.1	.31	.00	.00	1.0	.40
AC-FT	16	33	125	104	124	107	94	56	41	735	8700	1080
CAL YR 1987	TOTAL	1118.19		MEAN	3.06	MAX	36	MIN	.00	AC-FT	2220	
WTR YR 1988	TOTAL	5657.18		MEAN	15.5	MAX	3000	MIN	.00	AC-FT	11220	

08349800 RIO PAQUATE BELOW JACKPILE MINE NEAR LAGUNA, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977, 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 16...	1100	0.73	1900	1910	8.20	8.30	6.0	4.0	11.2	800	630
MAR 03...	1300	2.8	1800	1760	8.10	8.20	9.5	8.5	9.9	650	410
MAY 19...	1200	0.88	2000	2080	8.40	8.10	21.5	18.5	8.2	760	540
JUL 13...	1030	0.26	2000	2130	8.20	8.00	28.0	21.5	7.4	980	800

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 16...	140	110	150	2	6.6	310	0	254	175	870
MAR 03...	120	84	150	3	7.8	242	0	198	241	750
MAY 19...	140	99	200	3	8.0	273	12	244	218	990
JUL 13...	160	140	200	3	8.9	303	0	248	177	1000

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)
NOV 16...	19	0.60	21	1420	1	1	110	<1	<1	2
MAR 03...	2.2	0.20	19	1280	1	<1	90	<1	2	5
MAY 19...	16	0.30	21	1610	1	1	120	1	<1	4
JUL 13...	19	0.50	21	1660	1	1	130	<1	<1	2

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
NOV 16...	1	3	1	13	<5	<5	<0.10	<0.1	2	2
MAR 03...	1	5	2	17	<5	<5	<0.10	<0.1	4	4
MAY 19...	1	5	1	20	<5	<5	<0.10	<0.1	17	16
JUL 13...	2	4	4	20	<5	<5	<0.10	<0.1	5	5

[illegible]

LOCATION.--Lat 34°58'03", long 107°10'10", in NE¼ sec.32, T.9 N., R.3 W., Cibola County, Hydrologic Unit 13020207, on left bank 0.3 mi downstream from State Highway 6, 1.2 mi northeast of Correo, and 13 mi upstream from mouth.

PERIOD OF RECORD.--April 1943 to current year. Prior to October 1955, published as "San Jose River at Correo".

REMARKS.--Estimated daily discharges: Nov. 25 to Feb. 5 and Apr. 5-13. Records good except for estimated daily discharges, which are poor. Flow regulated to some extent since 1927 by Bluewater Lake (station 08341400) 79 mi upstream. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,150 ft³/s, Aug. 11, 1955; maximum gage height, 20.7 ft, Aug. 22, 1958, backwater from dam (present datum); no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

No flow for many days.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.66	3.6	2.5	3.8	6.4	8.5	2.1	.00	.00	95	130
2	.00	37	3.6	2.5	4.5	6.3	8.7	2.0	.00	.00	38	106
3	.00	11	3.6	2.5	5.5	7.1	7.1	1.2	.00	.00	19	63
4	.00	4.7	3.6	2.5	6.5	7.9	6.3	.41	.00	.00	32	48
5	.00	3.7	3.6	2.5	7.5	8.0	4.2	.17	.00	.00	2640	21
6	.00	3.3	3.6	2.5	9.5	8.4	4.0	.24	.00	.03	926	12
7	.00	4.1	3.6	2.5	8.5	9.0	3.0	.20	.00	24	137	10
8	.00	3.7	3.6	3.0	7.8	7.7	3.2	.10	.00	1.4	83	9.4
9	.00	3.5	3.6	3.6	7.4	6.9	3.5	.08	.00	.49	29	8.4
10	.00	3.5	3.6	3.6	6.9	6.4	3.8	.02	.00	.29	16	6.9
11	.00	3.0	3.6	3.0	6.7	6.5	4.0	.01	.00	.79	31	9.2
12	.00	3.2	3.6	2.8	6.4	6.3	4.2	.00	.00	21	16	157
13	.00	3.3	3.6	2.6	6.4	6.5	4.0	.00	.00	3.3	15	469
14	.00	3.4	3.0	2.4	6.7	6.6	4.3	.00	.00	1.7	12	231
15	.00	3.4	2.5	2.2	6.6	6.6	6.7	.00	.00	.03	5.9	54
16	.00	3.5	2.5	2.0	6.7	6.8	11	.00	.00	.01	5.0	22
17	.00	3.7	2.5	2.0	6.7	6.9	17	.00	.00	.00	112	13
18	.00	4.1	2.5	2.0	6.8	6.8	21	.00	.00	.02	97	9.9
19	.00	4.2	2.5	2.0	6.7	6.7	17	.00	.00	.00	147	7.7
20	.00	3.5	3.0	2.0	6.5	6.8	16	.00	.00	12	62	6.7
21	.00	2.7	4.0	2.0	6.7	6.9	12	.00	.00	32	28	7.1
22	.00	3.2	4.5	2.0	6.5	6.6	8.7	.00	.00	26	20	8.8
23	.00	3.6	4.0	2.0	6.2	6.4	7.2	.00	.00	8.7	58	11
24	.00	3.7	3.5	2.0	6.1	6.3	5.5	.00	.00	2.6	43	6.7
25	.00	3.7	3.2	2.0	6.3	6.3	4.0	.00	.00	1.3	154	4.4
26	.00	3.7	2.8	2.0	6.4	6.0	1.6	.00	.00	.65	117	4.3
27	.00	3.6	2.5	2.0	6.6	6.2	.37	.00	.00	.42	119	3.9
28	.00	3.6	2.5	2.0	6.6	6.2	.73	.00	.00	.36	334	3.7
29	.00	3.6	2.5	2.3	6.5	5.4	1.7	.00	.00	7.1	154	2.9
30	.00	3.6	2.5	2.9	---	5.5	2.2	.00	.00	550	63	2.2
31	.00	---	2.5	3.5	---	6.2	---	.00	---	220	48	---
TOTAL	.00	145.46	99.8	75.4	192.0	208.6	201.50	6.53	.00	914.19	5655.9	1449.2
MEAN	.00	4.85	3.22	2.43	6.62	6.73	6.72	.21	.00	29.5	182	48.3
MAX	.00	37	4.5	3.6	9.5	9.0	21	2.1	.00	550	2640	469
MIN	.00	.66	2.5	2.0	3.8	5.4	.37	.00	.00	.00	5.0	2.2
AC-FT	.00	289	198	150	381	414	400	13	.00	1810	11220	2870
CAL YR 1987	TOTAL	4367.22		MEAN	12.0	MAX	153	MIN	.00	AC-FT	8660	
WTR YR 1988	TOTAL	8948.58		MEAN	24.4	MAX	2640	MIN	.00	AC-FT	17750	

LOCATION.--Lat 34°24'33", long 106°51'09", in SE¼ sec.8, T.2 N., R.1 E., Socorro County, Hydrologic Unit 13020204, on bridge on former U.S. Highway 85 and 0.2 mi upstream from Interstate Highway 25, 1.2 mi southwest of Bernardo, 3 mi upstream from mouth, and 18 mi south of Belen.

WATER-DISCHARGE RECORDS

REMARKS.--Estimated daily discharges: Dec. 6, Mar. 11-21, Apr. 1-5, Apr. 23 to May 4, May 26 to June 1, June 18-29, July 5-8, Aug. 19-20, Aug. 27 to Sept. 4, and Sept. 16-21, 23-30. Water-discharge records poor. Diversions for irrigation of about 11,500 acres upstream from station (includes 3,700 acres irrigated wholly or partly from wells).

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since about 1880 occurred Sept. 23, 1929, from information by local residents (discharge, about 35,000 ft³/s, estimated on basis of peak at Rio Puerco). Another flood occurred Aug. 12, 1929 (discharge, 30,600 ft³/s, by slope-area measurement, from reports of New Mexico State Engineer).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 8	0330	*3,750	11.84	Sept. 14	1830	2,650	*11.97
Aug. 28	1700	2,220	10.67				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	25	.00	.00	.00	201	801	254
2	.00	.00	.00	.00	3.2	79	.00	.00	.00	70	204	940
3	.00	.00	.00	.00	4.4	52	.00	.00	.00	33	400	834
4	.00	26	.00	.00	4.6	37	.00	.00	.00	19	414	103
5	.00	19	.00	.00	3.8	35	2.0	.00	.00	10	126	88
6	.00	5.8	.00	.00	7.5	25	3.6	3.1	.00	5.0	531	41
7	.00	2.4	.00	.00	9.2	19	1.4	5.6	.00	2.0	569	23
8	.00	1.3	.00	.00	5.6	12	.00	3.0	.00	2.0	200	13
9	.00	.87	.00	.00	6.1	11	.00	1.0	.00	167	400	9.2
10	.00	.66	.00	.00	5.1	9.2	.00	9.3	.00	28	220	6.1
11	.00	.76	.00	.00	4.6	8.0	.00	12	.00	101	532	6.1
12	.00	.30	.00	.00	3.8	5.0	.00	8.1	.00	51	40	35
13	.00	.10	.00	.00	4.4	5.0	.00	3.6	.00	30	20	643
14	.00	.00	.00	.00	4.4	4.0	.00	1.5	.00	24	7.5	1610
15	.00	.00	.00	.00	3.0	3.0	.00	2.4	8.1	9.2	4.0	1940
16	.00	.00	.00	.00	2.3	1.5	.00	8.5	4.4	3.6	169	30
17	.00	.00	.00	.00	2.3	1.5	.00	10	3.0	1.4	106	5.0
18	.00	.00	.00	.00	2.6	1.0	43	5.6	1.0	.00	826	1.0
19	.00	.00	.00	.00	2.4	.80	88	6.1	.00	.00	600	.00
20	.00	.00	.00	.00	8.5	.50	41	16	.00	4.5	300	.00
21	.00	.00	.00	.00	15	.20	26	48	.00	2.3	118	.00
22	.00	.00	.00	.00	12	.20	16	54	.00	.40	50	34
23	.00	.00	.00	.00	10	.00	3.0	42	.00	5.7	248	5.0
24	.00	.00	.00	.00	7.8	.00	2.0	25	.00	8.5	55	3.0
25	.00	.00	.00	.00	5.1	.00	1.0	13	.00	5.6	79	2.0
26	.00	.00	.00	.00	27	.00	.00	5.0	.00	1.5	573	2.0
27	.00	.00	.00	.00	30	.00	.00	2.0	.00	1.2	1290	1.5
28	.00	.00	.00	.00	26	.00	.00	.00	.00	1.3	1700	1.5
29	.00	.00	.00	.00	25	.00	.00	.00	.00	5.3	1630	1.1
30	.00	.00	.00	.00	---	.00	.00	.00	21	80	500	1.0
31	.00	---	.00	.00	---	.00	---	.00	---	471	1200	---
TOTAL	.00	57.19	.00	.00	245.70	334.90	227.00	284.80	37.50	1344.50	13912.5	6632.50
MEAN	.00	1.91	.00	.00	8.47	10.8	7.57	9.19	1.25	43.4	449	221
MAX	.00	26	.00	.00	30	79	88	54	21	471	1700	1940
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.0	.00
AC-FT	.00	113	.00	.00	487	664	450	565	74	2670	27600	13160
CAL YR 1987	TOTAL	8898.83		MEAN	24.4	MAX	405	MIN	.00	AC-FT	17650	
WTR YR 1988	TOTAL	23076.59		MEAN	63.1	MAX	1940	MIN	.00	AC-FT	45770	

08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1956 to current year.

WATER TEMPERATURES: October 1964 to current year.

SUSPENDED-SEDIMENT DISCHARGES: October 1947 to current year.

REMARKS.--Samples are collected when flow is observed on this ephemeral stream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 11,400 microsiemens, June 10, 1968; minimum daily, 238 microsiemens, July 30, 1969.

WATER TEMPERATURES: Maximum daily, 32.0°C, July 29, 1977; minimum daily, 0.0°C, Dec. 30, 1971, Mar. 3, 1985.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 267,000 mg/L, July 26, 1957; minimum daily mean, no flow on many days of each year.

SEDIMENT LOADS: Maximum daily, 2,240,000 tons, Aug. 7, 1957; minimum daily, 0 ton on many days of each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,360 microsiemens, Mar. 22; minimum daily, 917 microsiemens, July 9.

WATER TEMPERATURES: Maximum daily, 30.0°C, Jun. 29; minimum daily, 6.5°C, Mar. 4.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 215,000 mg/L, July 31; minimum daily mean, no flow on many days.

SEDIMENT LOADS: Maximum daily, 273,000 tons, July 31; minimum daily, 0 ton on many days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 04...	1430	76	3700	3900	8.10	7.60	--	12.0	7.9	620	320	150
MAR 04...	1100	39	2120	2270	8.15	8.00	11.5	6.5	10.8	500	290	140
22...	1218	0.20	4150	4360	8.30	8.00	24.0	20.0	--	1000	790	210
JUL 14...	0930	23	--	2810	7.64	7.30	28.0	23.5	--	730	510	180

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 04...	59	510	9	10	301	1500	320	0.80	9.6	2740	530	20
MAR 04...	36	350	7	6.6	205	930	67	0.90	8.1	1660	200	630
22...	120	640	9	5.7	227	1500	410	1.0	17	3040	940	20
JUL 14...	69	340	6	8.1	228	1400	75	0.70	9.5	2220	190	20

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 04...	1430	18	17	17	13	12	11	0.08	18

08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued
 WATER-QUALITY RECORDS
 WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	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)
NOV												
04...	1030	1.0	--	13.5	85700	231	--	65	77	97	100	--
MAR												
04...	1100	39	2120	6.5	81700	8600	--	66	80	98	100	--
22...	1218	0.20	4150	20.0	360	0.19	100	--	--	--	--	--
APR												
20...	1500	37	--	19.0	61800	6170	--	65	76	96	100	--
21...	1600	25	--	--	53100	3580	98	--	--	--	--	--
JUL												
12...	1630	42	--	29.0	121000	13700	--	60	72	95	100	--
AUG												
03...	1600	342	--	29.0	104000	96000	--	50	59	81	99	100
05...	1730	48	--	22.0	88600	11500	--	51	59	80	99	100
19...	1630	580	--	26.0	98500	154000	--	51	59	80	97	100
SEP												
03...	1500	300	--	23.0	65000	52600	--	57	65	86	99	100

RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	3320	1840	1430
2									---	2660	2140	1670
3									---	2380	2110	---
4									---	2450	---	1360
5									---	---	2170	1630
6									---	---	1500	1780
7									---	---	1420	1810
8									---	---	2010	1940
9									---	917	1960	1990
10									---	1850	1880	---
11									---	3330	1040	---
12									---	2990	1090	1790
13									---	---	1450	1730
14									---	2810	1840	1730
15									---	---	---	1150
16									---	---	1270	1210
17									---	---	1260	1300
18									---	---	1700	1410
19									---	---	---	---
20									---	---	1500	---
21									---	---	1570	---
22									---	---	1620	---
23									---	---	923	---
24									---	---	973	---
25									---	---	1010	---
26									---	---	1910	---
27									---	---	1310	---
28									---	---	1300	---
29									---	---	1430	---
30									2240	3550	---	---
31									---	---	1650	---
MEAN									2240	2610	1550	1600

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	28.0	24.0	22.0
2									---	29.0	25.0	23.0
3									---	29.0	29.0	23.0
4									---	29.0	---	24.0
5									---	---	22.0	24.0
6									---	---	27.0	26.0
7									---	---	28.0	28.0
8									---	---	24.0	28.0
9									---	27.0	25.0	27.0
10									---	28.0	25.0	---
11									---	28.0	29.0	---
12									---	29.0	29.0	22.0
13									---	---	29.0	20.0
14									---	23.5	30.0	18.0
15									---	---	---	24.0
16									---	---	27.0	24.0
17									---	---	26.0	23.0
18									---	---	25.0	22.0
19									---	---	26.0	---
20									---	---	29.0	---
21									---	---	27.0	---
22									---	---	30.0	---
23									---	---	27.0	---
24									---	---	29.0	---
25									---	---	26.0	---
26									---	---	28.0	---
27									---	---	21.0	---
28									---	---	20.0	---
29									---	---	19.0	---
30									30.0	29.0	---	---
31									---	---	25.0	---
MEAN									30.0	28.5	26.0	23.5

08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT. WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN		MEAN		MEAN		MEAN		MEAN		MEAN	
	CONCEN- TRATION (MG/L)	LOADS (T/DAY)	CONCEN- TRATION (MG/L)	LOADS (T/DAY)	CONCEN- TRATION (MG/L)	LOADS (T/DAY)	CONCEN- TRATION (MG/L)	LOADS (T/DAY)	CONCEN- TRATION (MG/L)	LOADS (T/DAY)	CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	0	.00	0	.00	0	.00	0	.00	0	.00	32300	2180
2	0	.00	0	.00	0	.00	0	.00	28500	246	46500	9920
3	0	.00	0	.00	0	.00	0	.00	22600	268	39700	5570
4	0	.00	67100	4710	0	.00	0	.00	21200	263	33500	3350
5	0	.00	67700	3470	0	.00	0	.00	22200	228	34400	3250
6	0	.00	42800	670	0	.00	0	.00	30300	614	30100	2030
7	0	.00	36500	237	0	.00	0	.00	28300	703	29000	1490
8	0	.00	25900	91	0	.00	0	.00	26500	401	21600	700
9	0	.00	14600	34	0	.00	0	.00	24700	407	17100	508
10	0	.00	11500	20	0	.00	0	.00	21300	293	14700	365
11	0	.00	8580	18	0	.00	0	.00	23800	296	11200	242
12	0	.00	6180	5.0	0	.00	0	.00	24100	247	7930	107
13	0	.00	5530	1.5	0	.00	0	.00	23700	282	5630	76
14	0	.00	0	.00	0	.00	0	.00	24200	287	5230	56
15	0	.00	0	.00	0	.00	0	.00	25100	203	3650	30
16	0	.00	0	.00	0	.00	0	.00	22700	141	2840	12
17	0	.00	0	.00	0	.00	0	.00	23100	143	2790	11
18	0	.00	0	.00	0	.00	0	.00	22300	157	2300	6.2
19	0	.00	0	.00	0	.00	0	.00	22000	143	2310	5.0
20	0	.00	0	.00	0	.00	0	.00	33500	769	2100	2.8
21	0	.00	0	.00	0	.00	0	.00	32900	1330	2130	1.2
22	0	.00	0	.00	0	.00	0	.00	30300	982	1820	.98
23	0	.00	0	.00	0	.00	0	.00	25400	686	0	.00
24	0	.00	0	.00	0	.00	0	.00	20600	434	0	.00
25	0	.00	0	.00	0	.00	0	.00	14500	200	0	.00
26	0	.00	0	.00	0	.00	0	.00	43600	3180	0	.00
27	0	.00	0	.00	0	.00	0	.00	40200	3260	0	.00
28	0	.00	0	.00	0	.00	0	.00	32600	2290	0	.00
29	0	.00	0	.00	0	.00	0	.00	35300	2380	0	.00
30	0	.00	0	.00	0	.00	0	.00	---	---	0	.00
31	0	.00	---	---	0	.00	0	.00	---	---	0	.00
TOTAL	---	0.00	---	9256.50	---	0.00	---	0.00	---	20833.00	---	29913.18

DAY	MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION	
	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)	(MG/L)	(T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	0	.00	0	.00	0	.00	131000	71100	66700	144000	35800	24600
2	0	.00	0	.00	0	.00	94900	17900	45700	25200	48000	122000
3	0	.00	0	.00	0	.00	95000	8460	94400	102000	49500	111000
4	0	.00	0	.00	0	.00	90500	4640	95300	107000	40900	11400
5	4000	22	0	.00	0	.00	72400	1950	51000	17400	36300	8620
6	6450	63	27000	226	0	.00	29900	404	57700	82700	34900	3860
7	20300	77	54900	830	0	.00	15600	84	26100	40100	26400	1640
8	0	.00	43200	350	0	.00	10500	57	49300	26600	22800	800
9	0	.00	29300	79	0	.00	53000	23900	91800	99100	16400	407
10	0	.00	56900	1430	0	.00	50300	3800	62100	36900	13100	216
11	0	.00	54400	1760	0	.00	66700	18200	30700	44100	12600	208
12	0	.00	52900	1160	0	.00	46000	6330	17600	1900	22500	2130
13	0	.00	43900	427	0	.00	22500	1820	36800	1990	39400	68400
14	0	.00	36100	146	0	.00	20800	1350	26600	539	29500	128000
15	0	.00	44100	286	44100	964	18900	469	21400	231	20200	106000
16	0	.00	50800	1170	23400	278	17600	171	31800	14500	21200	1720
17	0	.00	45700	1230	10800	87	14800	56	25100	7180	18000	243
18	76200	8850	36500	552	6030	16	0	.0	41000	91400	11000	30
19	87400	20800	44200	728	0	.00	0	.0	35900	58200	0	.0
20	55300	6120	56600	2450	0	.00	45700	555	55200	44700	0	.0
21	42600	2990	79800	10300	0	.00	36300	225	25700	8190	0	.0
22	47600	2060	74900	10900	0	.00	21300	23	27000	3650	21800	2000
23	34700	281	63300	7180	0	.00	44100	679	49200	32900	16000	216
24	22200	120	56400	3810	0	.00	48200	1110	37400	5550	11700	95
25	10000	27	39600	1390	0	.00	33800	511	59100	12600	9890	53
26	0	.00	23900	323	0	.00	26300	107	81900	127000	7770	42
27	0	.00	15000	81	0	.00	29900	97	49400	172000	6200	25
28	0	.00	0	.00	0	.00	32800	115	58000	266000	4850	20
29	0	.00	0	.00	0	.00	60500	866	57200	252000	3670	11
30	0	.00	0	.00	46000	2610	199000	43000	40800	55100	3550	9.6
31	---	---	0	.00	---	---	215000	273000	40000	130000	---	---
TOTAL	---	41410.00	---	46808.00	---	3955.00	---	480979.0	---	2010730	---	593745.6
TOTAL LOAD FOR YEAR:	3237630.28 TONS.											

08354500 SOCORRO MAIN CANAL NORTH AT SAN ACACIA, NM

LOCATION.--Lat 34°15'17", long 106°53'43", in SE¼NW¼ sec.1, T.1 S., R.1 W., Socorro County, Hydrologic Unit 13020203, on right bank at San Acacia, and 0.5 mi downstream from point of diversion.

PERIOD OF RECORD.--April 1936 to September 1964 (monthly discharge only), October 1964 to current year.

REVISED RECORDS.--WSP 1242: 1951.

GAGE.--Water-stage recorder. Datum of gage is 4,660.16 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 8, 1958, at site 300 ft upstream (in old channel) at datum 0.42 ft lower.

REMARKS.--No estimated daily discharges. Records good. This canal is 1 of 3 channels (stations 08354800, 08354900) carrying flow in valley cross section. For combined monthly flow in acre-ft of this canal, conveyance channel, and floodway, see tabulation below daily table for 08354900. Canal diverts water from right bank of Rio Grande for irrigation of about 8,000 acres. Alamillo Acequia and 3 other smaller ditches divert water from canal upstream from station for irrigation of about 400 acres. Discharge records collected at the canal heading from October 1964 to September 1965 indicate that 7,770 acre-ft or 9% of the initial canal flow was diverted before reaching the regular gaging station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 285 ft³/s, April 3, 1987; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	31	.00	.00	.00	21	179	240	265	165	144	119
2	181	15	.00	.00	.00	48	159	215	264	144	159	118
3	179	.00	.00	.00	.00	47	137	227	271	123	152	117
4	188	.00	.00	.00	.00	67	159	234	259	187	179	115
5	189	.00	.00	.00	.00	67	166	274	266	170	143	113
6	184	.00	.00	.00	.00	67	199	262	257	74	124	112
7	173	.00	.00	.00	.00	89	191	229	276	118	125	114
8	188	.00	.00	.00	.00	98	198	237	282	144	158	122
9	188	.00	.00	.00	.00	120	192	263	280	79	184	126
10	189	.00	.00	.00	.00	117	189	270	278	94	158	121
11	205	.00	.00	.00	.00	106	194	259	278	90	162	129
12	198	.00	.00	.00	.00	115	192	244	278	98	150	132
13	188	.00	.00	.00	.00	125	201	254	277	122	162	104
14	183	.00	.00	.00	.00	127	188	236	276	185	164	73
15	182	.00	.00	.00	.00	167	176	271	277	215	156	76
16	184	.00	.00	.00	.00	175	128	257	267	214	159	69
17	189	.00	.00	.00	.00	159	134	251	268	230	162	104
18	177	.00	.00	.00	.00	169	110	247	273	241	177	114
19	198	.00	.00	.00	.00	166	117	256	260	192	147	200
20	201	.00	.00	.00	.00	173	132	243	265	165	165	207
21	177	.00	.00	.00	.00	172	164	235	265	157	150	148
22	200	.00	.00	.00	.00	178	174	214	271	89	132	104
23	163	.00	.00	.00	.00	191	193	238	257	90	137	129
24	156	.00	.00	.00	.00	199	185	238	204	90	133	147
25	139	.00	.00	.00	.00	215	199	234	184	90	131	145
26	154	.00	.00	.00	.00	220	221	247	186	89	141	140
27	149	.00	.00	.00	.00	224	244	262	180	90	130	167
28	142	.00	.00	.00	.00	223	249	256	216	164	127	155
29	159	.00	.00	.00	.00	202	251	253	219	253	124	197
30	154	.00	.00	.00	.00	196	259	262	195	241	122	186
31	100	---	.00	.00	---	183	---	248	---	153	119	---
TOTAL	5428	46.00	.00	.00	.00	4426	5480	7656	7594	4556	4576	3903
MEAN	175	1.53	.00	.00	.00	143	183	247	253	147	148	130
MAX	205	31	.00	.00	.00	224	259	274	282	253	184	207
MIN	100	.00	.00	.00	.00	21	110	214	180	74	119	69
AC-FT	10770	91	.00	.00	.00	8780	10870	15190	15060	9040	9080	7740
CAL YR 1987	TOTAL	46315.20		MEAN	127	MAX	285	MIN	.00	AC-FT	91870	
WTR YR 1988	TOTAL	43665.00		MEAN	119	MAX	282	MIN	.00	AC-FT	86610	

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM
(Surveillance network)

LOCATION.--Lat 34°14'54", long 106°54'04", in SW¼ sec.1, T.1 S., R.1 W., Socorro County, Hydrologic Unit 13020203, on right bank 75 ft upstream from railway crossing, 0.5 mi south of San Acacia, and 1.2 mi downstream from San Acacia diversion dam.

PERIOD OF RECORD.--October 1958 to September 1964 included in composite flow of station "08355000 Rio Grande at San Acacia," October 1960 to September 1964 (monthly discharge published in WSP 1923 with records for station 08355000), October 1964 to current year. Daily records 1958-64 are available in files at district office.

GAGE.--Water-stage recorder. Datum of gage is 4,652.50 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--No estimated daily discharges. Records good. Conveyance channel, constructed in 1958, is 1 of 3 channels (stations 08354500, 08354900) carrying flow in valley cross section. Original design and plan was for conveyance channel to carry all flows up to about 2,000 ft³/s. For combined monthly flow in acre-ft of this channel, floodway, and Socorro main canal north see tabulation below daily table for station 08354900.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,950 ft³/s, May 12, 13, 1966; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.16	.37	.07	.07	.00	.00	.00
2	.00	.00	.00	.00	.00	.16	.36	.05	.07	.00	.00	.00
3	.00	.00	.00	.00	.00	.18	.32	.05	.07	.00	.00	.00
4	.00	.00	.00	.00	.00	.19	.34	.04	.07	.00	.00	.00
5	.00	.00	.00	.00	.00	.20	.32	.04	.09	.07	.00	.00
6	.00	.00	.00	.00	.00	.18	.29	.04	.09	.04	.00	.00
7	.00	.00	.00	.00	.00	.29	.29	.04	.07	.00	.00	.00
8	.00	.00	.00	.00	.00	.35	.26	.04	.05	.00	.00	.00
9	.00	.00	.00	.00	.00	.33	.25	.04	.07	.00	.00	.00
10	.00	.00	.00	.00	.00	.29	.24	.03	.06	.00	.00	.00
11	.00	.00	.00	.00	.00	.32	.22	.03	.06	.00	.00	.00
12	.00	.00	.00	.00	.00	.39	.20	.03	.04	.00	.00	.00
13	.00	.00	.00	.00	.00	.40	.19	.03	.03	.00	.00	.00
14	.00	.00	.00	.00	.00	.35	.18	.03	.03	.00	.00	.00
15	.00	.00	.00	.00	.00	.29	.16	.02	.03	.00	.00	.00
16	.00	.00	.00	.00	.00	.26	.21	.02	.02	.00	.00	.00
17	.00	.00	.00	.00	.00	.24	.16	.03	.01	.00	.00	.00
18	.00	.00	.00	.00	.06	.20	.16	.03	.00	.00	.00	.00
19	.00	.00	.00	.00	.11	.15	.16	.03	.00	.00	.00	.00
20	.00	.00	.00	.00	.10	.13	.15	.18	.00	.00	.00	.00
21	.00	.00	.00	.00	.10	.12	.12	.27	.00	.00	.00	.00
22	.00	.00	.00	.00	.10	.13	.10	.27	.00	.00	.00	.00
23	.00	.00	.00	.00	.09	.13	.09	.21	.00	.00	.00	.00
24	.00	.00	.00	.00	.09	.12	.09	.15	.00	.00	.00	.00
25	.00	.00	.00	.00	.09	.16	.07	.10	.00	.00	.00	.00
26	.00	.00	.00	.00	.20	.20	.06	.08	.00	.00	.00	.00
27	.00	.00	.00	.00	.22	.22	.06	.08	.00	.00	.00	.00
28	.00	.00	.00	.00	.22	.28	.08	.09	.00	.00	.00	.00
29	.00	.00	.00	.00	.19	.32	.08	.08	.04	.00	.00	.00
30	.00	.00	.00	.00	---	.30	.07	.07	.06	.00	.00	.00
31	.00	---	.00	.00	---	.36	---	.08	---	.00	.00	---
TOTAL	.00	.00	.00	.00	1.57	7.40	5.65	2.35	1.03	.11	.00	.00
MEAN	.00	.00	.00	.00	.05	.24	.19	.08	.03	.00	.00	.00
MAX	.00	.00	.00	.00	.22	.40	.37	.27	.09	.07	.00	.00
MIN	.00	.00	.00	.00	.00	.12	.06	.02	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	3.1	15	11	4.7	2.0	.2	.00	.00
CAL YR 1987	TOTAL	135.53		MEAN	.37	MAX	16	MIN	.00	AC-FT	269	
WTR YR 1988	TOTAL	18.11		MEAN	.05	MAX	.40	MIN	.00	AC-FT	36	

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM
(Surveillance network)

LOCATION.--Lat 34°15'23", long 106°53'18", Socorro County, Hydrologic Unit 13020203, in Sevilleta Grant, on right bank 0.2 mi downstream from San Acacia diversion dam, 0.3 mi east of San Acacia, 2 mi downstream from Rio Salado, and at mile 1,472.6.

DRAINAGE AREA.--26,770 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, Co.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1936 to September 1958 (prior to construction of conveyance channel), October 1958 to September 1964 (flow in conveyance channel included), October 1964 to current year. Prior to October 1964 published as "08355000 Rio Grande at San Acacia" and records are not equivalent.

REVISED RECORDS.--WSP 1242: 1951. WSP 1732: 1958(M). WRD 1969: 1967.

GAGE.--Water-stage recorder. 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. Floodway is bypassed by Socorro main canal north and since Oct. 1958, by conveyance channel.

REMARKS.--Estimated daily discharges: Dec. 26 to Jan. 2, Feb. 7-19, and Aug. 26 to Sept. 11. Water-discharge records poor. Floodway is 1 of 3 channels (stations 08354500, 08354800) carrying flow in valley cross section. For combined monthly flow in acre-ft of floodway, conveyance channel, and Socorro main canal north see tabulation below. Normal plan is for floodway to carry flow when combined capacities of conveyance channel (about 2,000 ft³/s) and Socorro main canal north (about 200 ft³/s) is exceeded, during periods of silt sluicing, and when river silt load is excessive. Diversions upstream from station for irrigation of about 760,000 acres; this includes Socorro main canal north which bypasses station and irrigates about 8,000 acres.

AVERAGE DISCHARGE.--22 years (water years 1937-58), 1,192 ft³/s, 863,000 acre-ft/yr, prior to construction of conveyance channel; does not include Socorro main canal north.

15 years (water years 1959-73), 911 ft³/s, 660,000 acre-ft/yr, combined flow of floodway, conveyance channel and Socorro main canal north, prior to closure of Cochiti Dam.

15 years (water years 1974-88), 1,502 ft³/s, 1,088,000 acre-ft/yr, combined flow of floodway, conveyance channel, and Socorro main canal north, since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft³/s, Aug. 5, 1936, gage height, 10.75 ft, site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,160 ft³/s, Sept. 15; minimum daily, 24 ft³/s, July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
1	128	333	1170	1310	1640	1820	3610	1690	1590	761	1070	2190			
2	161	281	1300	1230	1630	1850	3790	1560	1500	858	905	2860			
3	154	293	1350	1070	1730	1640	3270	1720	1460	761	1000	2600			
4	210	425	1340	1060	1580	2080	3360	1470	1340	559	654	2250			
5	203	764	1350	973	1580	1840	3150	1510	1300	485	710	2410			
6	149	1210	1230	936	1660	2020	3230	1820	1010	772	1380	2300			
7	213	1180	1340	937	1490	2060	3090	1520	988	565	1340	2220			
8	163	1280	1270	1090	1520	1930	3090	1480	898	459	1500	2210			
9	268	1600	1240	1160	1710	2120	3060	1420	738	741	1220	2020			
10	200	1690	1280	1180	1990	1940	2580	1430	497	710	795	1860			
11	230	1360	1370	1140	1970	2020	2160	1440	381	1670	989	1880			
12	204	1340	1480	1120	1950	1810	2070	1360	395	1160	549	3390			
13	207	1310	1390	1090	1980	1570	2030	1350	347	863	429	3480			
14	233	1410	1370	1050	1860	905	1850	1340	349	687	323	4000			
15	166	1410	1460	1040	1690	716	1560	1360	290	325	272	4160			
16	140	1510	1550	1100	1700	754	1970	1620	281	166	438	2050			
17	263	1330	1660	1040	1690	711	2790	1710	279	35	565	1580			
18	281	1400	1620	1180	1790	692	2880	1700	277	31	870	1390			
19	311	1500	1590	1210	1840	632	2540	1670	185	31	917	950			
20	385	1390	1640	1160	1810	647	2470	2040	89	1100	945	929			
21	319	1440	1560	1150	1770	648	2300	2400	65	44	589	1010			
22	360	1630	1480	1210	1700	645	2090	2250	59	30	471	1120			
23	292	1480	1360	1250	1750	618	2170	2030	33	29	628	1160			
24	291	1510	1230	1190	1810	1460	1930	1900	32	27	664	1230			
25	220	1500	1340	1240	1610	2250	1850	1830	32	27	476	1270			
26	222	1540	1250	1020	1760	2970	1720	1660	32	26	673	1130			
27	199	1350	1260	1050	1870	3160	1560	1770	33	26	1120	1350			
28	139	1120	1340	1120	1890	3200	1430	1770	34	24	2810	1050			
29	190	1040	1330	1180	1850	3260	1570	1710	167	189	2290	673			
30	167	987	1380	1270	---	3190	1690	1720	495	141	2560	531			
31	251	---	1310	1310	---	3300	---	1600	---	684	3740	---			
TOTAL	6919	36613	42840	35066	50820	54458	72860	51850	15176	13986	32892	57253			
MEAN	223	1220	1382	1131	1752	1757	2429	1673	506	451	1061	1908			
MAX	385	1690	1660	1310	1990	3300	3790	2400	1590	1670	3740	4160			
MIN	128	281	1170	936	1490	618	1430	1340	32	24	272	531			
AC-FT	13720	72620	84970	69550	100800	108000	144500	102800	30100	27740	65240	113600			
(+)	24490	72710	84970	69550	100800	116800	155400	118000	45160	36780	74320	121300			
CAL YR 1987	TOTAL	772244	MEAN	2116	MAX	5240	MIN	18	AC-FT	1532000	(+)	MEAN	2243	AC-FT	1624000
WTR YR 1988	TOTAL	470733	MEAN	1286	MAX	4160	MIN	24	AC-FT	933700	(+)	MEAN	1406	AC-FT	1020000
(+) COMBINED FLOW, IN ACRE-FEET, 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.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July to December 1937, March 1939 to September 1956, October 1964 to current year.

WATER TEMPERATURES: October 1947 to August 1956, January 1959 to current year.

SUSPENDED-SEDIMENT DISCHARGES: July 1946 to June 1956, January 1959 to current year.

REMARKS.--When there is insufficient flow to sample 08354800 Rio Grande Coneyance Channel at San Acacia or 08354900 Rio Grande Floodway at San Acacia, samples are taken from 08354500 Socorro Main Canal North at San Acacia. Sediment total-load measurements were made quarterly and total-load values determined using equation from double-mass relationship plot for period of record.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,700 microsiemens, July 14, 1940; minimum daily, 236 microsiemens, May 17, 1942.

WATER TEMPERATURES (1947-56, 1959-62, 1964-88): Maximum daily, 34.5°C, July 13, 1971; minimum daily, 0.0°C on many days during winter months of most years.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 223,000 mg/L, Aug. 11, 1946; minimum daily mean, no flow on many days of most years.

SEDIMENT LOADS: Maximum daily, 1,760,000 tons, Aug. 12, 1955; minimum daily, 0 ton on many days of most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,400 microsiemens, Aug 4; minimum daily, 421 microsiemens, Apr. 1.

WATER TEMPERATURES: Maximum daily, 32.0°C, July 16; minimum daily, 0.0°C, Dec. 27, 29.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 48,600 mg/L, Aug. 22; minimum daily mean, 47 mg/L, June 1.

SEDIMENT LOADS: Maximum daily, 164,000 tons, Sept. 13; minimum daily, 6.1 tons, June 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV											
06...	1100	1320	700	658	7.60	8.10	19.0	13.0	--	9.0	53
20...	1345	1360	495	539	8.25	8.10	15.0	10.0	72	9.6	--
MAR											
24...	1115	1070	490	476	8.00	8.00	20.0	13.5	--	13.0	75
MAY											
04...	1100	1500	--	477	8.60	8.10	26.0	19.5	--	7.9	17
AUG											
16...	1000	207	820	937	8.00	7.80	32.0	21.0	--	7.1	83
DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WAT WH TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER WH IT FIELD MG/L AS CO3 (00447)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
NOV											
06...	210	62	65	11	65	2	4.8	--	256	--	0
20...	170	31	53	9.6	44	2	3.7	173	--	0	--
MAR											
24...	160	19	48	9.0	41	1	12	--	166	--	0
MAY											
04...	150	24	47	9.0	41	1	2.7	--	98	--	24
AUG											
16...	240	44	74	14	89	3	5.4	--	189	--	0
DATE	ALKA- LINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
NOV											
06...	--	210	--	146	140	32	0.50	24	--	435	0.800
20...	142	--	142	138	94	25	0.50	22	332	341	--
MAR											
24...	--	136	--	138	85	18	0.50	22	--	323	1.00
MAY											
04...	--	120	--	131	85	18	0.50	21	--	306	0.600
AUG											
16...	--	155	--	199	200	49	0.60	21	--	577	0.700

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	
NOV 06...	0.760	0.040	1.8	2.6	2.20	0.310	32	1300	1100	130	200	
NOV 20...	0.720	--	--	--	--	--	--	--	--	90	--	
MAR 24...	0.970	0.010	--	--	0.370	0.280	4.8	K71	<5	90	8	
MAY 04...	0.600	0.020	0.38	1.0	0.240	0.220	3.8	K64	160	80	5	
AUG 16...	0.860	0.110	0.69	1.5	1.20	0.080	410	--	10000	130	14	
DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	
NOV 06...	1100	5	7	<1	1	280	<10	48	11	40	<5	
NOV 20...	1345	--	4	--	<1	--	1	--	1	--	<5	
AUG 16...	1000	1	4	<1	<1	320	<1	600	3	700	<5	
DATE	TIME	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 06...	0.20	<0.1	--	<1	1	--	--	200	27	--	--	
NOV 20...	--	<0.1	4	--	<1	440	3	--	<3	<0.1	2.5	
AUG 16...	1.1	<0.1	--	1	<1	--	--	2400	5	--	--	
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (F/S) (00055)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)			
OCT 16...	1057	101	--	--	--	--	--	109	30			
NOV 06...	1100	1320	195	1.2	5.36	700	13.0	3940	14000			
NOV 22...	1117	1350	--	--	--	--	--	252	919			
DEC 18...	0728	1620	--	--	--	--	--	173	757			
JAN 06...	1646	936	--	--	--	--	--	109	275			
FEB 14...	0700	1900	--	--	--	--	--	379	1940			
FEB 27...	1252	1800	--	--	--	--	13.0	1480	7190			
MAR 03...	1646	1640	--	--	--	--	12.0	3590	15900			
MAR 09...	1730	2150	--	--	--	--	--	396	2300			
MAR 25...	--	2250	--	--	--	--	16.5	93	565			
MAY 04...	1100	1500	190	2.5	3.25	--	19.5	99	401			
MAY 23...	1540	2030	--	--	--	--	--	318	1740			
JUN 29...	0845	52	--	--	--	791	21.0	1160	163			
JUL 02...	1930	817	--	--	--	--	27.5	4970	11000			
JUL 08...	1611	522	115	1.8	2.56	--	29.0	10200	14400			
JUL 09...	1410	846	--	--	--	729	25.0	8910	20400			
JUL 16...	0800	31	--	--	--	669	32.0	706	59			
AUG 03...	1800	1090	--	--	--	--	27.0	53700	158000			
AUG 04...	1712	549	--	--	--	--	28.0	55200	81800			

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SEDI- MENT, DISCH, SUSP. + BED MA- (T/DAY) (80156)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	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)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)
OCT 16...	--	76	--	--	--	--	--	--	--
NOV 06...	18000	--	43	52	74	88	95	100	1
NOV 22...	--	72	--	--	--	--	--	--	--
DEC 18...	--	86	--	--	--	--	--	--	--
JAN 06...	--	64	--	--	--	--	--	--	--
FEB 14...	--	88	--	--	--	--	--	--	--
FEB 27...	--	100	68	81	97	--	--	--	--
MAR 03...	--	100	63	75	96	--	--	--	--
MAR 09...	--	88	--	--	--	--	--	--	--
MAR 25...	--	81	--	--	--	--	--	--	--
MAY 04...	621	98	--	--	--	--	--	--	0
MAY 23...	--	91	--	--	--	--	--	--	--
JUN 29...	--	99	--	--	--	--	--	--	--
JUL 02...	--	100	65	78	99	--	--	--	--
JUL 08...	19000	--	62	77	97	99	100	--	--
JUL 09...	--	96	--	--	--	--	--	--	--
JUL 16...	--	95	--	--	--	--	--	--	--
AUG 03...	--	--	54	65	92	99	100	--	--
AUG 04...	--	--	56	67	91	99	100	--	--

DATE	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
NOV 06...	10	74	99	100	--	--	--	--	--
MAY 04...	3	26	52	59	63	68	78	88	100

DATE	TIME	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39516)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL (UG/L) (39330)
NOV 20...	1345	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	<1.0	<0.1	--	<1	--
MAR 24...	1115	--	--	--	--	--	--	--	--	--	--	--
AUG 16...	1000	--	--	--	--	--	--	--	--	<0.1	--	<0.010

RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	ATRA- ZINE, TOTAL (UG/L) (39630)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL (UG/L) (39360)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL (UG/L) (39370)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)
NOV 20...	<0.1	<0.10	--	<1.0	--	<0.1	--	<0.1	--	<0.1	0.01	--
MAR 24...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 16...	--	--	<0.1	--	<0.010	--	<0.010	--	<0.010	--	<0.01	<0.010
DATE	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE BOTTOM MATL. (UG/KG) (39423)	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	
NOV 20...	<0.1	--	--	<0.1	<0.01	--	<0.1	--	<0.1	--	<0.1	
MAR 24...	--	--	--	--	--	--	--	--	--	--	--	
AUG 16...	--	<0.010	<0.010	--	<0.01	<0.010	--	<0.010	--	<0.010	--	
DATE	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	METHYL THION, TOTAL (UG/L) (39600)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	METHYL THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	
NOV 20...	<0.01	--	<0.1	<0.01	<0.1	<0.01	<0.01	--	<10	<0.01	0.01	
MAR 24...	--	--	--	--	--	--	--	--	--	--	0.01	
AUG 16...	<0.01	<0.01	--	<0.01	--	<0.01	<0.01	<1	--	<0.01	--	
DATE	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)	AME- TRYNE TOTAL (UG/L) (82184)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	
NOV 20...	<0.01	<0.01	--	--	--	<0.10	<0.10	<1.00	<0.10	<0.1	<0.1	
MAR 24...	<0.01	<0.01	--	--	--	--	--	--	--	--	--	
AUG 16...	--	--	<0.1	<0.10	<0.01	--	--	--	--	--	--	

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

WATER-QUALITY RECORDS
 SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	614	631	571	554	567	520	421	498	488	564	1280	805
2	637	631	572	550	564	574	432	492	491	665	893	796
3	658	623	542	568	556	585	444	489	493	607	1380	798
4	663	663	551	600	518	539	---	492	500	601	1400	792
5	661	666	553	585	520	504	---	495	518	572	1390	768
6	657	647	564	619	517	493	428	486	512	572	1070	700
7	656	592	566	627	497	430	446	507	511	570	1060	692
8	682	597	514	594	529	430	453	514	505	718	825	696
9	689	586	539	595	525	426	445	509	522	729	822	693
10	677	575	541	595	526	434	451	519	573	477	711	729
11	672	549	579	586	520	437	462	522	579	465	632	722
12	690	553	577	572	513	469	461	518	579	579	637	663
13	693	555	587	573	510	490	464	511	577	596	637	791
14	659	551	547	567	511	491	473	514	558	625	897	649
15	677	552	532	541	507	483	482	515	569	655	916	641
16	676	551	534	548	490	519	477	476	590	748	922	638
17	660	549	572	566	500	523	469	522	585	731	774	617
18	677	485	532	534	492	525	536	512	576	754	1030	614
19	665	522	535	554	500	511	552	506	613	993	1050	630
20	660	534	536	545	496	509	520	515	647	991	945	620
21	660	625	524	544	507	518	501	560	662	1070	725	621
22	657	626	528	566	513	520	506	575	691	968	710	620
23	654	629	530	544	543	470	497	550	694	955	751	531
24	661	615	549	521	520	455	490	533	744	1020	635	530
25	683	612	545	533	533	451	495	513	758	1010	1130	534
26	674	567	557	541	535	437	489	522	755	972	1140	565
27	698	546	547	552	536	425	493	497	777	970	935	585
28	704	547	496	570	525	437	484	499	780	930	929	581
29	631	568	535	622	526	424	487	500	791	879	802	597
30	623	558	550	586	---	427	498	496	644	965	787	620
31	618	---	557	584	---	425	---	491	---	970	798	---
MEAN	664	584	547	569	521	480	477	511	609	772	923	661
WTR YR 1988		MEAN	611	MAX	1400	MIN	421					

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	14.5	7.5	2.5	8.5	14.5	15.0	18.0	21.0	23.0	24.0	25.0
2	20.0	14.0	8.0	2.0	9.5	11.5	15.5	20.0	23.0	27.5	28.0	22.5
3	16.0	13.0	7.5	4.0	11.5	12.0	16.5	18.5	20.5	26.5	27.0	24.0
4	21.0	12.0	7.0	5.0	7.0	12.0	---	20.0	24.5	28.0	28.0	21.0
5	19.0	14.5	9.5	4.5	7.5	12.5	---	19.0	23.0	27.5	24.5	24.0
6	17.5	13.5	9.5	7.0	7.0	14.0	18.0	19.0	23.5	30.0	25.0	25.0
7	15.0	12.0	10.0	7.0	5.5	13.0	18.0	17.5	22.0	30.0	26.0	25.0
8	17.0	11.5	9.5	6.0	5.5	11.0	19.5	18.0	22.5	29.0	27.0	25.0
9	16.5	9.5	7.0	5.5	7.5	12.0	17.0	21.0	26.0	25.5	23.0	25.0
10	17.0	9.0	8.0	6.5	9.5	11.0	16.5	22.0	25.0	24.0	27.0	24.5
11	20.0	14.5	9.0	4.5	9.5	11.0	18.5	21.5	24.5	26.0	25.5	21.5
12	19.5	14.0	7.5	6.0	9.5	12.5	19.0	19.0	24.0	27.5	27.5	19.5
13	16.5	11.0	3.5	5.5	10.0	11.5	19.5	24.0	25.0	29.0	29.0	24.0
14	19.0	10.0	4.0	4.0	9.5	10.5	16.0	25.0	23.5	28.5	26.0	23.5
15	20.0	4.0	1.0	5.5	6.5	11.5	16.0	23.0	26.5	25.0	26.5	23.0
16	15.0	6.0	2.0	6.5	7.5	11.0	15.0	21.5	26.0	24.0	24.0	20.0
17	15.0	7.5	4.0	6.0	7.5	11.0	15.0	23.5	27.0	21.5	27.0	23.5
18	17.0	7.0	3.5	6.0	7.0	10.0	16.0	21.0	28.0	21.0	28.0	24.0
19	16.5	10.0	2.0	5.0	8.0	13.0	19.0	21.5	24.0	26.5	27.0	23.0
20	9.0	8.5	5.5	4.5	7.5	14.0	19.5	19.0	27.0	26.0	26.5	22.0
21	14.0	8.0	6.0	3.0	9.5	15.5	17.0	20.0	22.0	26.0	26.5	21.0
22	11.5	8.5	7.0	4.0	11.0	16.0	16.0	22.0	25.0	27.0	25.0	19.0
23	16.0	8.5	7.5	3.5	11.5	16.5	15.0	23.0	24.5	27.0	28.0	18.0
24	19.0	8.0	7.0	5.0	11.0	15.5	13.0	21.5	25.0	26.0	30.0	17.5
25	15.0	9.0	3.5	4.5	10.5	16.0	19.0	22.0	24.5	28.0	28.5	19.5
26	16.0	8.0	.5	5.0	12.5	17.0	20.0	23.5	23.0	27.5	26.0	23.0
27	16.5	7.5	.0	4.5	13.0	17.0	20.0	22.0	22.0	26.5	23.0	21.0
28	9.5	5.0	1.5	6.5	14.5	17.5	18.0	23.0	23.5	25.0	21.0	23.5
29	15.0	6.5	.0	8.0	14.5	17.0	20.0	23.0	21.0	25.0	23.0	24.5
30	13.5	8.0	3.0	10.0	---	15.0	20.0	19.0	21.0	24.0	23.0	15.5
31	13.0	---	3.5	7.5	---	11.5	---	19.5	---	26.0	23.5	---
MEAN	16.0	10.0	5.5	5.5	9.5	13.5	17.5	21.0	24.0	26.5	26.0	22.5
WTR YR 1988		MEAN	16.5	MAX	30.0	MIN	.0					

RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

WATER-QUALITY RECORDS
SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968												
DAY	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)
	(MG/L)		(MG/L)		(MG/L)		(MG/L)		(MG/L)		(MG/L)	
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	107	37	218	196	341	1080	175	619	162	717	1660	8160
2	127	55	1830	1390	228	800	178	591	373	1640	2610	13000
3	197	82	3420	2710	232	846	166	480	257	1200	2070	9170
4	100	57	5160	5920	260	941	194	555	332	1420	1650	9270
5	129	71	5230	10800	274	999	177	465	390	1660	1060	5270
6	114	46	2850	9310	419	1390	173	437	269	1210	967	5270
7	134	77	797	2540	300	1090	176	445	504	2030	832	4630
8	172	76	785	2710	344	1180	171	503	476	1950	409	2130
9	172	124	891	3850	207	693	224	702	265	1220	417	2390
10	193	104	812	3710	232	802	210	669	205	1100	341	1790
11	107	66	1070	3930	237	877	197	606	228	1210	245	1340
12	95	52	666	2410	473	1890	181	547	276	1450	117	572
13	113	63	801	2830	438	1640	169	497	307	1640	106	449
14	153	96	725	2760	367	1360	170	482	318	1600	103	252
15	140	63	1090	4150	398	1570	180	505	200	913	103	199
16	132	50	724	2950	324	1360	151	448	142	652	114	232
17	127	90	827	2970	207	928	187	525	155	707	99	190
18	120	91	405	1530	200	875	163	519	176	851	79	148
19	151	127	329	1330	211	906	203	663	121	601	68	116
20	147	153	370	1390	238	1050	208	651	161	787	65	114
21	210	181	660	2570	233	981	156	484	546	2610	63	110
22	370	360	486	2140	220	879	143	467	550	2520	73	127
23	187	147	389	1550	196	720	153	516	1270	6000	136	227
24	233	183	383	1560	191	634	148	476	573	2800	155	611
25	200	119	420	1700	184	666	386	1290	2430	10600	269	1630
26	145	87	328	1360	164	553	552	1520	1810	8600	106	850
27	163	88	354	1290	181	616	173	490	1270	6410	226	1930
28	150	56	333	1010	213	771	123	372	1250	6380	272	2350
29	176	90	345	969	199	715	101	322	1500	7490	269	2370
30	253	114	347	925	169	630	139	477	---	---	218	1880
31	269	182	---	---	166	587	159	562	---	---	229	2040
TOTAL	---	3187	---	84460	---	30029	---	17885	---	77968	---	78817

DAY	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS
	CONCEN- TRATION (MG/L)		CONCEN- TRATION (MG/L)		CONCEN- TRATION (MG/L)		CONCEN- TRATION (MG/L)		CONCEN- TRATION (MG/L)		CONCEN- TRATION (MG/L)	
APRIL												
1	282	2750	90	411	47	202	886	1820	22200	64100	13200	78100
2	262	2680	92	388	101	409	1110	2570	15700	38400	14800	114000
3	244	2150	93	432	96	378	881	1810	30800	83200	13500	94800
4	250	2270	74	294	155	561	423	638	29100	51400	8740	53100
5	229	1950	78	318	103	362	737	965	43400	83200	671	4370
MAY												
6	202	1760	119	585	94	256	858	1790	29900	111000	691	4290
7	144	1200	153	628	112	299	380	580	19100	69100	1440	8630
8	186	1550	97	388	107	259	2540	3150	17500	70900	501	2990
9	191	1580	101	387	126	251	5120	10200	15100	49700	383	2090
10	146	1020	302	1170	131	176	3510	6730	10400	22300	413	2070
JUNE												
11	126	735	367	1430	103	106	4620	20800	10800	28800	15000	76100
12	114	637	340	1250	137	146	5910	18500	2890	4280	8120	74300
13	97	532	244	889	139	130	4060	9460	1390	1610	17500	164000
14	179	894	127	459	89	84	3610	6700	9380	8180	13100	141000
15	110	463	120	441	142	111	1140	1000	23300	17100	8490	95400
JULY												
16	202	1070	437	1910	285	216	457	205	27000	31900	8360	46300
17	896	6750	522	2410	174	131	304	29	24400	37200	1420	6060
18	1870	14500	332	1520	91	68	227	19	26900	63200	2020	7580
19	2380	16300	278	1250	88	44	16900	1410	31000	76800	668	1710
20	1550	10300	478	2630	129	31	29400	87300	14700	37500	3740	9380
AUGUST												
21	1190	7390	1500	9720	129	23	688	82	7610	12100	2790	7610
22	837	4720	2880	17500	168	27	278	23	48600	61800	3830	11600
23	530	3110	1510	8280	81	7.2	222	17	27000	45800	583	1830
24	403	2100	911	4670	71	6.1	223	16	35900	64400	563	1870
25	269	1340	362	1790	124	11	298	22	32300	41500	654	2240
SEPTEMBER												
26	279	1300	325	1460	223	19	166	12	35300	64100	757	2310
27	267	1120	173	827	129	11	747	52	33900	103000	310	1130
28	238	919	195	932	107	9.8	134	8.7	14200	108000	336	953
29	213	903	176	813	224	101	17200	8780	14000	86600	401	729
30	149	680	120	557	276	369	20900	7960	13000	89900	174	249
31	---	---	111	480	---	---	30600	56500	13000	131000	---	---
TOTAL	---	94673	---	66219	---	4804.1	---	249148.7	---	1758070	---	1016791
TOTAL LOAD FOR YEAR: 3482051.8 TONS.												

TOTAL LOAD FOR YEAR: 3482051.8

TONS.

4804.1

249148.7

1758070

1016791

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM

(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 33°41'15", long 106°59'40", Socorro County, Hydrologic Unit 13020203, in Pedro Armendaris Grant No. 34, on right bank 0.4 mi northwest of Atchison, Topeka and Santa Fe Railway Co. bridge over floodway channel, 1.0 mi southwest of former site of San Marcial, 3.5 mi downstream from railroad bridge near Tiffany siding, and 51 mi downstream from heading at San Acacia.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to September 1959, October 1969 to current year. Prior to October 1964 monthly discharge only published with record for Rio Grande at San Marcial (station 08358500).

GAGE.--Water-stage recorder. Datum of gage is 4,454.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Apr. 29, 1958, at datum 4.19 ft higher.

REMARKS.--No estimated daily discharges. Water-discharge records good. Original design and plan was for conveyance channel to carry all flows up to about 2,000 ft³/s. Conveyance channel is 1 of 2 channels (station 08358400) carrying flow in valley cross section. For combined monthly flow in acre-ft of this channel and floodway see tabulation below daily table for station 08358400.

EXTREMES FOR PERIOD OF RECORD (SINCE 1954).--Maximum daily discharge, 2,200 ft³/s, May 14, 1966; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	222	244	271	284	367	407	390	530	276	215	339
2	184	176	242	276	276	355	416	426	520	249	214	353
3	173	182	248	280	279	335	465	391	486	281	215	377
4	170	182	233	298	314	338	479	389	485	273	246	378
5	176	202	240	320	323	343	425	328	487	265	254	359
6	174	213	238	342	333	351	380	412	536	426	297	354
7	180	221	237	344	315	349	393	479	486	340	331	345
8	187	222	245	275	307	381	408	503	441	352	384	367
9	185	222	259	258	284	393	420	517	451	371	394	363
10	205	233	260	256	291	358	420	378	437	350	384	323
11	202	245	257	258	304	341	423	451	472	363	330	299
12	204	247	236	263	288	345	425	483	491	386	358	297
13	219	223	246	265	304	345	406	455	459	384	301	328
14	218	219	217	270	296	356	386	493	309	388	282	464
15	217	215	211	250	288	334	391	483	313	385	303	409
16	238	216	206	272	294	354	406	491	365	354	304	417
17	235	213	238	302	289	398	425	493	403	369	245	419
18	230	217	280	287	267	376	420	509	412	357	249	412
19	231	233	278	287	267	339	420	518	398	293	317	389
20	243	233	269	264	282	347	404	527	407	257	331	373
21	266	232	279	277	279	350	396	540	363	327	329	404
22	247	236	264	264	282	306	400	555	318	293	261	400
23	258	237	266	309	286	235	392	518	317	211	243	399
24	288	236	256	301	292	240	386	541	300	200	281	398
25	282	239	242	295	277	306	370	517	281	210	292	408
26	261	230	206	267	280	376	399	512	287	190	306	409
27	258	226	225	273	344	374	400	504	304	180	328	397
28	229	233	258	284	365	408	393	526	267	175	389	369
29	221	235	254	268	383	421	385	553	297	180	335	306
30	239	235	262	286	---	400	383	542	330	150	323	318
31	257	---	267	284	---	373	---	518	---	140	342	---
TOTAL	6875	6675	7663	8746	8673	10894	12223	14942	11952	8975	9383	11173
MEAN	222	223	247	282	299	351	407	482	398	290	303	372
MAX	288	247	280	344	383	421	479	555	536	426	394	464
MIN	170	176	206	250	267	235	370	328	267	140	214	297
AC-FT	13640	13240	15200	17350	17200	21610	24240	29640	23710	17800	18610	22160
CAL YR 1987	TOTAL	105270		MEAN	288	MAX	487	MIN	170	AC-FT	208800	
WTR YR 1988	TOTAL	118174		MEAN	323	MAX	555	MIN	140	AC-FT	234400	

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1954 to current year.

WATER TEMPERATURES: March 1954 to current year.

SUSPENDED-SEDIMENT DISCHARGES: March 1954 to current year.

REMARKS.--Water samples for chemical and biological analyses collected at this station when all flow is diverted from the station 08358400 Rio Grande Floodway at San Marcial, NM.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,860 microsiemens, Oct. 25, 1956; minimum daily, 298 microsiemens, May 25, 1984.

WATER TEMPERATURES: Maximum daily, 37.0°C, July 17, 24, Sept. 2; minimum daily, 0.0°C on many days during December and January of most years.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 144,000 mg/L, Sept. 19, 1971; minimum daily mean, no flow on many days during most years.

SEDIMENT LOADS: Maximum daily, 638,000 tons, Aug. 28, 1972; minimum daily, 0 ton on many days during most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,310 microsiemens Aug. 1, 2, 5; minimum daily, 500 microsiemens, Feb. 14.

WATER TEMPERATURES: Maximum daily, 36.0°C, July 3; minimum daily, 6.0°C, Feb. 14.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 19,800 mg/L, Aug. 16; minimum daily mean, 47 mg/L, Dec. 12.

SEDIMENT LOADS: Maximum daily, 23,600 tons, Sept. 14; minimum daily, 30 tons, Dec. 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)
MAR 25...	1300	326	900	836	7.85	8.10	19.5	14.0	62	9.7
MAY 03...	1145	399	890	790	8.30	8.10	24.0	17.0	42	8.5
AUG 17...	1045	245	830	840	8.15	8.20	24.5	22.0	190	6.8

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
MAR 25...	220	44	65	13	92	3	5.2	205	0	168
MAY 03...	210	30	62	12	85	3	2.2	223	0	183
AUG 17...	230	53	70	13	93	3	6.0	212	0	174

DATE	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
MAR 25...	173	160	64	0.50	22	528	527	<0.010	0.220	0.010
MAY 03...	175	140	60	0.50	21	503	490	<0.010	0.210	0.020
AUG 17...	177	160	65	0.40	24	543	540	<0.010	0.300	0.020

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTH, DIS- SOLVED (MG/L AS P) (00671)	CYANIDE TOTAL (MG/L AS CN) (00720)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR 25...	0.020	0.39	0.120	0.080	<0.010	K110	<5	8	11
MAY 03...	0.040	0.48	0.090	0.070	<0.010	K140	K100	10	15
AUG 17...	0.010	0.48	0.120	0.090	<0.010	K430	K1300	8	2
DATE	TIME	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)	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)
MAR 25...	1300	<10	6	64	<0.5	<1	1	<3	1
MAY 03...	1145	10	5	69	<0.5	<1	<1	<3	3
AUG 17...	1045	10	7	69	<0.5	<1	<1	<3	<1
DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	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)
MAR 25...	<5	95	0.2	<5	2	<1	<1.0	700	<6
MAY 03...	<5	78	<0.1	<6	2	<1	<1.0	660	<6
AUG 17...	<5	86	<0.1	<10	<1	<1	<1.0	810	<6
DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
MAR 25...	4	--	--	--	--	--	--	--	--
MAY 03...	22	5.6	2.1	6.9	3.3	5.0	3.0	0.04	1.3
AUG 17...	3	--	--	--	--	--	--	--	--

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (F/S) (00055)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DISCH, SUSP. + BED MA- TERIAL (T/DAY) (80156)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)
OCT											
10...	1800	211	--	--	--	--	--	609	347	--	100
28...	1825	229	--	--	--	--	--	324	200	--	97
DEC											
15...	1425	202	--	--	--	--	--	75	41	--	28
FEB											
15...	1315	288	--	--	--	--	--	248	193	--	94
MAR											
25...	1410	306	--	--	--	--	18.0	823	680	--	99
MAY											100
03...	1145	399	--	--	--	890	17.0	144	155	306	--
JUL											
05...	1825	320	--	--	--	--	32.0	2840	2450	--	99
14...	1840	393	--	--	--	859	30.0	3160	3350	--	98
AUG											
05...	1425	254	--	--	--	1310	26.0	25800	17700	--	96
06...	1525	305	--	--	--	--	25.0	23400	19300	--	100
11...	1200	312	50.0	0.58	2.17	--	22.5	5040	4250	6140	--
17...	1045	245	53.0	0.51	1.93	830	22.0	641	424	758	--
30...	1400	323	--	--	--	--	21.0	10000	8720	--	--
SEP											
01...	1600	339	--	--	--	--	19.0	15000	13700	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	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)
OCT												
10...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
15...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
15...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
25...	55	68	95	--	--	--	--	0	1	17	93	100
MAY												
03...	--	--	--	88	95	99	100	22	67	98	100	--
JUL												
05...	69	82	96	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
05...	--	--	--	--	--	--	--	--	--	--	--	--
06...	71	86	98	--	--	--	--	--	--	--	--	--
11...	66	78	94	97	98	100	--	0	1	32	97	100
17...	36	45	67	79	84	96	100	0	1	33	95	100
30...	68	81	98	100	--	--	--	--	--	--	--	--
SEP												
01...	67	80	99	100	--	--	--	--	--	--	--	--

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued

WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	886	554	737	957	1010	766	842	784	781	854	1310	---
2	949	562	743	956	979	787	819	788	786	861	1310	1070
3	845	562	751	961	743	797	797	802	790	860	1300	1050
4	942	558	757	940	530	802	806	792	780	---	1300	1060
5	844	555	753	946	536	804	822	788	789	---	---	1070
6	951	556	757	945	526	813	706	812	794	824	---	1040
7	856	559	749	942	529	787	836	795	788	826	995	1020
8	837	---	748	944	526	791	855	780	790	814	988	1020
9	839	---	752	959	528	801	867	783	785	819	988	1080
10	---	---	751	942	527	799	872	783	793	815	986	1040
11	836	---	594	935	525	863	849	785	578	818	1300	950
12	829	997	585	937	524	866	833	792	576	824	1290	932
13	861	997	582	944	527	786	868	579	576	817	989	936
14	892	993	745	835	500	845	855	789	---	805	979	938
15	937	995	---	992	---	856	864	795	856	816	978	790
16	909	997	759	983	511	859	859	833	850	805	850	783
17	976	997	759	976	510	863	895	831	850	802	829	785
18	983	737	---	1010	503	872	914	834	851	802	875	789
19	989	731	766	994	504	843	887	830	851	566	875	786
20	989	532	587	998	503	793	917	840	849	565	938	788
21	1000	532	---	988	502	795	915	836	853	939	883	787
22	---	728	758	991	511	791	918	829	853	903	942	785
23	563	751	942	967	508	798	916	845	857	938	938	782
24	611	739	958	976	529	805	909	832	852	939	935	866
25	618	764	---	975	527	785	899	749	852	936	945	867
26	618	758	962	990	529	---	782	743	769	956	857	870
27	617	762	962	977	530	792	781	742	767	936	858	876
28	---	752	---	994	533	799	788	---	---	859	862	879
29	621	545	---	997	799	796	789	747	---	931	859	877
30	623	539	---	996	---	834	776	536	---	---	858	876
31	628	---	---	976	---	842	---	745	---	---	---	---
MEAN	823	721	759	965	572	814	848	781	789	838	1000	910
WTR YR 1988		MEAN	822	MAX	1310	MIN	500					

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.0	14.0	11.0	10.0	14.0	22.0	24.0	30.0	29.0	32.0	23.0	19.0
2	30.0	13.0	12.0	10.0	13.0	22.0	26.0	34.0	29.0	32.0	24.0	19.0
3	32.0	13.0	10.0	13.0	15.0	22.0	28.0	29.0	32.0	36.0	23.0	22.0
4	32.0	12.0	10.0	11.0	16.0	22.0	27.0	29.0	34.0	32.0	24.0	20.0
5	28.0	12.0	8.0	9.0	18.0	22.0	27.0	27.0	30.0	32.0	26.0	22.0
6	28.0	18.0	9.0	10.0	18.0	22.0	29.0	30.0	30.0	32.0	25.0	19.0
7	28.0	14.0	10.0	12.0	20.0	22.0	29.0	30.0	32.0	24.0	26.0	21.0
8	25.0	---	10.0	9.0	17.0	22.0	28.0	30.0	30.0	32.0	23.0	20.0
9	30.0	---	10.0	10.0	16.0	20.0	30.0	30.0	34.0	32.0	24.0	19.0
10	---	---	11.0	10.0	16.0	22.0	26.0	28.0	30.0	33.0	23.0	19.0
11	29.0	---	10.0	10.0	19.0	21.0	29.0	28.0	30.0	23.0	24.0	20.0
12	29.0	12.0	9.0	10.0	17.0	22.0	28.0	29.0	32.0	34.0	23.0	21.0
13	28.0	10.0	8.0	9.0	17.0	22.0	28.0	30.0	32.0	32.0	23.0	22.0
14	28.0	12.0	10.0	10.0	6.0	22.0	29.0	28.0	---	30.0	26.0	19.0
15	27.0	10.0	---	12.0	---	21.0	28.0	34.0	32.0	32.0	24.0	21.0
16	27.0	11.0	9.0	10.0	19.0	22.0	31.0	32.0	34.0	32.0	20.0	22.0
17	29.0	13.0	9.0	10.0	17.0	22.0	29.0	30.0	34.0	34.0	22.0	19.0
18	29.0	12.0	---	10.0	17.0	20.0	27.0	34.0	32.0	32.0	22.0	21.0
19	27.0	12.0	10.0	10.0	17.0	21.0	28.0	32.0	32.0	30.0	22.0	17.5
20	28.0	10.0	10.0	12.0	16.0	23.0	29.0	32.0	32.0	29.0	23.0	18.0
21	28.0	12.0	---	12.0	17.0	21.0	28.0	32.0	34.0	28.0	25.0	19.0
22	---	14.0	10.0	9.0	17.0	24.0	28.0	30.0	34.0	30.0	24.0	18.0
23	21.0	12.0	9.0	10.0	17.0	23.0	28.0	34.0	34.0	28.0	21.0	18.0
24	20.0	12.0	8.0	10.0	17.0	21.0	29.0	35.0	32.0	31.0	22.0	17.0
25	22.0	12.0	---	10.0	16.0	24.0	31.0	32.0	32.0	28.0	21.0	17.0
26	19.0	12.0	10.0	10.0	17.5	---	29.0	32.0	32.0	26.0	22.0	18.0
27	16.0	12.0	10.0	10.0	17.0	20.0	29.0	32.0	32.0	27.0	22.0	18.0
28	---	12.0	---	10.0	17.0	22.0	28.0	32.0	---	29.0	21.0	13.0
29	18.0	12.0	---	12.0	17.0	22.0	28.0	31.0	---	27.0	20.0	18.0
30	20.0	12.0	---	10.0	---	24.0	27.0	34.0	---	---	21.0	17.0
31	21.0	---	---	10.0	---	22.0	---	31.0	---	---	20.0	---
MEAN	26.0	12.5	9.5	10.5	16.5	22.0	28.0	31.0	32.0	30.5	23.0	19.0
WTR YR 1988		MEAN	22.0	MAX	36.0	MIN	6.0					

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM

(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 33°40'50", long 106°59'30", Socorro County, Hydrologic Unit 13020203, in Pedro Armendaris Grant No. 33, on pier of the Atchison, Topeka, and Santa Fe Railway Co. bridge, 1.1 mi downstream from former site of San Marcial, 18.5 mi southwest of San Antonio, and at mile 1,425.2.

DRAINAGE AREA.--27,700 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

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. Datum of gage is 4,455.19 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 24-26, Dec. 31 to Jan. 7, Feb. 1, Mar. 19-24, June 23 to July 7, July 17-22, and Aug. 8-9, 19-24. Water-discharge records fair except for estimated daily discharges, 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. Normal plan is for floodway to carry flow when capacity of conveyance channel (about 2,000 ft³/s) is exceeded. Combined monthly discharge in acre-ft is given at end of each year table. Diversion for irrigation of about 775,000 acres upstream from station (includes about 13,800 acre-ft diverted from conveyance channel, as based on weekly measurements, data provided by U.S. Bureau of Reclamation).

AVERAGE DISCHARGE.--24 years (water years 1965-88), 745 ft³/s, 539,800 acre-ft/yr.

Total flow of river.--93 years (water years 1895-1988), 1,271 ft³/s, 920,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, since January 1895 about 50,000 ft³/s Oct. 11, 1904; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,530 ft³/s, Sept. 16; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	136	734	1280	1000	1400	2660	1150	992	10	382	2900
2	.00	357	824	1300	1070	1380	3010	1130	982	20	518	1830
3	.00	487	888	1540	1220	1330	3380	1200	927	100	457	1600
4	40	579	920	1680	1190	1400	3140	1100	932	110	734	1080
5	36	634	888	1720	1280	1890	3140	1060	901	150	434	693
6	39	699	903	1060	1270	1850	2970	1120	918	200	833	458
7	46	666	898	1020	1360	1810	2690	1120	621	265	1060	290
8	38	689	814	848	1340	1860	2500	994	564	193	1750	265
9	43	735	907	793	1280	1840	2350	987	449	186	1800	129
10	29	823	957	787	1230	1910	2260	945	359	209	923	69
11	39	893	945	822	1150	1870	2050	884	265	432	549	41
12	28	933	927	836	1170	1850	1850	790	142	425	1250	450
13	29	911	999	862	1200	1850	1750	749	104	201	701	2900
14	22	860	1170	850	1170	1490	1760	725	78	101	481	3260
15	31	933	968	844	1140	951	1680	667	71	60	328	3630
16	46	959	945	837	1210	748	1590	750	50	22	356	4530
17	65	943	1050	848	1210	750	1640	1020	45	5.0	909	3960
18	109	931	994	904	1230	998	2040	1050	33	1.3	695	2920
19	146	888	972	911	1360	987	2090	922	30	1.0	1270	1650
20	116	976	1010	922	1440	1080	1910	910	23	109	1650	744
21	131	938	979	986	1520	1040	1930	1280	8.8	220	1410	681
22	98	911	961	995	1440	1010	1840	1570	2.3	31	1010	869
23	119	1150	987	984	1470	630	1670	1440	2.0	13	788	916
24	152	1190	1020	975	1550	603	1660	1320	2.0	10	1520	773
25	174	771	1230	971	1540	915	1540	1170	2.0	9.7	746	789
26	167	759	1360	938	1460	1250	1510	1050	2.0	9.7	1140	761
27	163	752	913	921	1380	1450	1450	1020	2.0	9.5	1750	676
28	158	786	653	965	1360	2080	1290	1100	2.0	8.8	2470	793
29	131	770	547	965	1270	2330	1280	1090	5.0	7.4	2220	404
30	94	714	752	953	---	2430	1250	999	8.0	66	1940	154
31	101	---	1020	963	---	2660	---	1040	---	43	2460	---
TOTAL	2390.00	23773	29135	31280	37510	45642	61880	32352	8522.1	3228.4	34534	40215
MEAN	77.1	792	940	1009	1293	1472	2063	1044	284	104	1114	1341
MAX	174	1190	1360	1720	1550	2660	3380	1570	992	432	2470	4530
MIN	.00	136	547	787	1000	603	1250	667	2.0	1.0	328	41
AC-FT	4740	47150	57790	62040	74400	90530	122700	64170	16900	6400	68500	79770
(+)	18380	60390	72990	79390	91600	112100	146900	93810	40610	24960	87110	101900

CAL YR 1987 TOTAL 653102.00 MEAN 1789 MAX 4540 MIN. .00 AC-FT 1295000 (+) MEAN 2078 AC-FT 1504000
WTR YR 1988 TOTAL 350461.50 MEAN 958 MAX 4530 MIN. .00 AC-FT 695100 (+) MEAN 1281 AC-FT 930300

(+) COMBINED FLOW, IN ACRE-Feet, AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY AND CONVEYANCE CHANNEL.

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1905-07, 1946 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1905 to April 1907, July 1946 to current year.

WATER TEMPERATURES: January 1949 to current year.

SUSPENDED-SEDIMENT DISCHARGES: July 1946 to current year.

REMARKS.--Records of chemical analyses and sediment discharge for years prior to 1946 have been published in Water Bulletins of International Boundary and Water Commission. Sediment total-load measurements were made quarterly and total load values were determined using equation from double-mass relationship plot for period of record.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,730 microsiemens, Apr. 8, 1953; minimum daily, 277 microsiemens, June 12, 1983.

WATER TEMPERATURES: Maximum daily, 37.0°C, July 22, 27, Aug. 7; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 135,000 mg/L, July 23, 1977; minimum daily mean, no flow on many days each year.

SEDIMENT LOADS: Maximum daily, 1,200,000 tons, Sept. 21, 1982; minimum daily, 0 ton on many days each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1610 microsiemens, Aug. 16; minimum daily, 393 microsiemens, Mar. 25.

WATER TEMPERATURES: Maximum daily, 36.0°C, July 7, 17; minimum daily, 4.0°C, Nov. 20.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 57,300 mg/L, Sept. 1; minimum daily mean, no flow Oct. 1-3.

SEDIMENT LOADS: Maximum daily, 449,000 tons, Sept. 1; minimum daily, 0 ton, Oct. 1-3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (PTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV										
05...	1200	589	710	612	7.90	8.00	21.0	12.0	760	9.2
20...	1000	900	505	542	8.35	8.20	12.5	4.0	240	11.4
MAR										
25...	1000	898	625	538	8.20	8.10	18.0	10.5	370	9.7
MAY										
03...	0930	1220	625	--	8.50	--	22.0	12.0	--	9.1

[illegible][illegible]

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

		NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTH- DIS- SOLVED (MG/L AS P) (00671)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	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)
NOV											
05...		0.050	0.060	2.4	0.250	0.260	K41	2000	--	18	2
20...		--	--	--	--	--	--	--	90	--	--
MAR											
25...		0.010	0.010	0.49	0.380	0.290	--	--	--	10	3
MAY											
03...		--	--	--	--	--	--	--	--	--	--
		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)	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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
NOV											
05...	1200	30	5	68	<0.5	<1	<1	<3	4	<5	49
20...	1000	--	4	--	--	<1	2	--	2	<5	--
MAR											
25...	1000	20	5	66	<0.5	<1	2	<1	1	<5	64
		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)	NITRO- GEN, NO2+NO3 TOT. IN BOT. MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)
NOV											
05...		0.2	<10	3	<1	<1.0	580	<6	7	<2.0	5.0
20...		<0.1	4	--	<1	--	480	3	3	--	--
MAR											
25...		0.1	--	4	<1	<1.0	450	5	4	--	--
		PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)
NOV											
05...		290	5	<1	<10	<50	8	5200	10	150	<0.10
20...		--	--	--	--	--	--	--	--	--	--
MAR											
25...		--	--	--	--	--	--	--	--	--	--
		ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90) (80060)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV											
05...		40	4.3	45	5.8	40	4.3	34	--	0.08	2.1
20...		--	--	--	--	--	--	--	<0.1	--	2.8
MAR											
25...		--	7.2	12	6.1	18	4.6	17	--	0.10	3.2

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (F/S) (00055)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DISCH, SUSP. + BED MA- (T/DAY) (80155)	SEDI- MENT, DISCH, SUSP. + BED MA- (T/DAY) (80156)	SED. SUSP. SIEVE DIAM. % FINER 0.062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER 0.125 MM (70332)	
NOV													
05...	1200	589	--	--	--	710	12.0	3030	4820	6070	--	--	
26...	1745	739	--	--	--	--	12.0	992	1980	--	97	100	
MAR													
25...	1625	902	347	1.3	1.93	--	18.5	263	641	992	98	--	
MAY													
03...	0930	1220	--	--	--	625	12.0	219	721	1110	95	100	
AUG													
08...	0800	841	--	--	--	--	22.0	58100	132000	--	--	--	
11...	1030	415	--	--	--	--	--	--	--	--	--	--	
16...	1000	276	208	1.1	2.37	--	24.0	35900	26800	58600	--	--	
16...	1620	402	--	--	--	--	24.0	63800	69200	--	100	--	
DATE	TIME	SED. SUSP. FALL DIAM. % FINER 0.002 MM (70337)	SED. SUSP. FALL DIAM. % FINER 0.004 MM (70338)	SED. SUSP. FALL DIAM. % FINER 0.016 MM (70340)	SED. SUSP. FALL DIAM. % FINER 0.031 MM (70341)	SED. SUSP. FALL DIAM. % FINER 0.062 MM (70342)	SED. SUSP. FALL DIAM. % FINER 0.125 MM (70343)	SED. SUSP. FALL DIAM. % FINER 0.250 MM (70344)	BED MAT. SIEVE DIAM. % FINER 0.062 MM (80164)	BED MAT. SIEVE DIAM. % FINER 0.125 MM (80165)	BED MAT. SIEVE DIAM. % FINER 0.250 MM (80166)	BED MAT. SIEVE DIAM. % FINER 0.500 MM (80167)	BED MAT. SIEVE DIAM. % FINER 1.00 MM (80168)
NOV													
05...	50	60	88	--	96	99	100	1	12	89	100	--	--
26...	52	65	92	--	--	--	--	--	--	--	--	--	--
MAR													
25...	--	--	--	--	--	--	--	1	6	68	100	--	--
MAY													
03...	44	--	73	--	--	--	--	--	--	--	--	--	--
AUG													
08...	52	72	96	--	99	100	--	--	--	--	--	--	--
11...	--	--	--	0	--	--	--	8	38	98	100	--	--
16...	56	72	92	--	99	99	100	0	1	57	98	100	--
16...	67	81	97	--	--	--	--	--	--	--	--	--	--
DATE	TIME	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)			
NOV													
20...	1000	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	<1.0	<0.1	<1			
DATE	TIME	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATERIAL (UG/KG) (39423)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39383)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)			
NOV													
20...	<0.1	<0.10	<1.0	<0.1	<0.1	<0.1	0.01	<0.1	<0.1	<0.01			
DATE	TIME	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATERIAL (UG/KG) (39423)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOT. IN BOTTOM MATERIAL (UG/KG) (39481)	METHYL THION, TOTAL (UG/L) (39600)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)		
NOV													
20...	<0.1	<0.1	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.01	<10			
DATE	TIME	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)			
NOV													
20...	<0.01	<0.01	<0.01	<0.01	<0.10	<0.10	<1.00	<0.10	<0.1	<0.1			

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued
WATER-QUALITY RECORDSSPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	783	546	552	468	719	---	785	528	---	916	---
2	---	764	541	548	474	739	465	523	524	---	905	1380
3	---	758	541	544	475	740	458	521	515	---	924	1180
4	---	759	540	548	885	739	460	792	520	---	917	1170
5	---	759	541	547	892	749	461	520	523	---	922	1160
6	---	755	580	548	897	754	469	520	523	581	915	1030
7	---	759	592	553	893	726	803	520	520	580	918	1060
8	---	---	595	548	892	746	472	578	521	580	---	1080
9	---	---	600	549	890	744	486	579	524	589	1600	1090
10	---	---	599	547	907	748	489	776	526	581	1590	865
11	---	---	730	549	898	551	492	577	783	579	---	855
12	---	533	718	550	891	550	491	578	786	599	1610	859
13	---	535	747	545	889	532	491	595	---	667	1150	855
14	---	536	531	545	---	530	491	652	---	667	1090	857
15	---	537	525	489	795	539	505	600	---	668	1100	857
16	---	536	525	482	801	---	496	551	---	---	913	803
17	602	534	526	486	518	546	500	551	---	668	900	813
18	625	535	---	488	505	551	525	556	---	829	921	812
19	629	734	523	476	504	525	525	549	---	809	907	821
20	645	735	524	479	503	402	514	551	---	797	908	819
21	636	561	544	483	572	402	523	552	---	797	832	824
22	---	747	527	482	777	627	522	558	---	---	826	852
23	755	756	556	485	785	559	522	---	---	---	830	850
24	699	754	549	484	788	416	497	---	---	---	829	855
25	769	745	---	476	787	393	516	524	---	---	763	853
26	775	---	545	478	790	401	594	530	---	---	758	854
27	776	760	545	477	795	406	601	527	---	---	748	855
28	782	765	---	474	649	409	596	533	---	---	744	557
29	783	804	---	476	527	437	613	531	---	---	761	894
30	788	711	---	482	---	460	780	526	---	---	---	896
31	757	---	---	474	---	460	---	---	---	---	1380	---
MEAN	716	686	572	511	730	570	530	577	566	666	985	919
WTR YR 1988	MEAN	671	MAX	1610	MIN	393						

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	14.0	10.0	10.0	13.0	22.0	24.0	31.0	31.0	---	23.0	22.0
2	---	12.0	10.0	9.0	13.0	20.0	26.0	34.0	29.0	---	25.0	21.0
3	---	12.0	11.0	11.0	16.0	22.0	29.0	29.0	32.0	---	22.0	23.0
4	---	12.0	9.0	11.0	16.0	22.0	28.0	30.0	32.0	---	22.0	21.0
5	---	14.0	8.0	10.0	17.0	24.0	27.0	29.0	32.0	---	24.0	23.0
6	---	12.0	10.0	10.0	17.0	22.0	29.0	34.0	30.0	32.0	23.0	21.0
7	---	12.0	11.0	10.0	18.0	22.0	30.0	31.0	32.0	36.0	22.0	22.0
8	---	---	11.0	10.0	17.0	23.0	28.0	30.0	30.0	32.0	22.0	21.0
9	---	---	10.0	12.0	17.0	21.0	28.0	34.0	32.0	32.0	22.0	19.0
10	---	---	10.0	10.0	17.0	22.0	26.0	30.0	32.0	34.0	22.0	20.0
11	---	---	11.0	10.0	17.0	22.0	28.0	32.0	32.0	31.0	24.0	21.0
12	---	12.0	10.0	10.0	18.0	22.0	28.0	30.0	34.0	34.0	22.0	21.0
13	---	11.0	10.0	10.0	17.0	24.0	27.0	27.0	---	34.0	25.0	22.0
14	---	10.0	10.0	10.0	---	24.0	28.0	32.0	---	34.0	22.0	21.0
15	---	11.0	10.0	10.0	16.0	22.0	29.0	32.0	---	32.0	24.0	20.0
16	---	11.0	10.0	11.0	17.0	---	29.0	31.0	---	32.0	22.0	21.0
17	29.0	12.0	9.0	12.0	17.0	22.0	18.0	32.0	---	36.0	23.0	20.0
18	28.0	12.0	10.0	12.0	16.0	22.0	28.0	34.0	---	29.0	25.0	19.0
19	29.0	9.0	10.0	11.0	17.0	22.0	29.0	32.0	---	29.0	23.0	17.0
20	29.0	12.0	10.0	11.0	17.0	21.0	31.0	33.0	---	30.0	22.0	17.5
21	24.0	10.0	---	12.0	18.0	21.0	27.0	32.0	---	30.0	23.0	17.0
22	---	12.0	10.0	10.0	17.0	29.0	28.0	32.0	---	---	22.0	17.5
23	28.0	12.0	10.0	10.0	17.0	24.0	28.0	34.0	---	---	22.0	18.0
24	29.0	10.0	11.0	10.0	16.0	20.0	29.0	35.0	---	---	24.0	19.0
25	20.0	11.0	---	---	16.0	23.0	28.0	31.0	---	---	22.0	18.0
26	19.0	---	10.0	10.0	17.0	19.0	29.0	32.0	---	---	21.0	17.5
27	14.0	9.0	10.0	10.0	18.0	21.0	29.0	32.0	---	---	23.0	17.5
28	16.0	11.0	---	12.0	17.0	23.0	28.0	31.0	---	---	22.0	17.0
29	16.0	10.0	---	10.0	18.0	23.0	28.0	30.0	---	---	19.0	17.0
30	18.0	10.0	---	10.0	---	23.0	27.0	34.0	---	---	22.0	17.5
31	20.0	---	---	12.0	---	21.0	---	32.0	---	---	21.0	---
MEAN	23.0	11.5	10.0	10.5	16.5	22.5	27.5	31.5	31.5	32.5	22.5	19.5
WTR YR 1988	MEAN	21.0	MAX	36.0	MIN	8.0						

RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)	
	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	0	.00	243	89	107	212	168	581	182	491	128	484
2	0	.00	384	370	86	191	220	772	214	618	104	388
3	0	.00	254	334	88	211	212	881	180	593	115	413
4	370	40	223	349	88	219	204	925	510	1640	107	404
5	331	32	222	380	90	216	111	515	869	3000	113	577
6	366	39	182	343	121	295	114	326	638	2190	109	544
7	417	52	185	333	54	131	203	559	453	1660	114	557
8	372	38	181	337	51	112	165	378	486	1760	119	598
9	418	49	161	320	60	147	224	480	307	1060	104	517
10	391	31	140	311	56	145	275	584	302	1000	109	562
11	453	48	125	301	182	464	381	846	620	1930	322	1630
12	395	30	120	302	727	1820	328	740	303	957	506	2530
13	414	32	142	349	282	761	211	491	578	1870	453	2260
14	352	21	130	302	120	379	428	982	554	1750	470	1890
15	408	34	134	338	102	267	209	476	492	1510	451	1160
16	495	61	107	277	136	347	113	255	274	895	419	846
17	589	103	129	328	139	394	135	309	370	1210	368	745
18	660	194	127	319	211	566	131	320	207	687	416	1120
19	845	333	141	338	108	283	146	359	272	999	528	1410
20	793	248	148	390	168	458	120	299	246	956	691	2010
21	809	286	115	291	124	328	137	365	325	1330	530	1490
22	695	184	135	332	115	298	128	344	300	1170	272	742
23	551	177	166	515	212	565	122	324	391	1550	142	242
24	519	213	191	614	117	322	112	295	269	1130	172	280
25	338	159	135	281	86	286	195	511	341	1420	243	600
26	288	130	140	287	109	400	196	496	308	1210	182	614
27	331	146	444	901	267	658	231	574	368	1370	260	1020
28	327	139	976	2070	194	342	227	591	234	859	275	1540
29	303	107	392	815	196	289	232	604	248	850	125	786
30	500	127	228	440	220	447	216	556	---	---	119	781
31	390	106	---	---	188	518	173	450	---	---	129	926
TOTAL	---	3159.00	---	12956	---	12071	---	16188	---	37665	---	29666

DAY	MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)	
	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	108	776	356	1110	389	1040	57	1.5	7880	8130	57300	449000
2	93	756	420	1280	444	1180	72	3.9	8530	11900	20000	98800
3	104	949	330	1070	424	1060	1380	373	8230	10200	14600	63100
4	129	1090	356	1060	453	1140	807	240	8790	17400	10800	31500
5	112	950	425	1220	261	635	582	236	4730	5540	502	939
6	118	946	404	1220	354	877	449	242	9360	21100	467	577
7	123	893	329	995	389	652	380	272	22600	64700	526	412
8	110	742	235	631	380	579	508	265	24000	113000	558	399
9	120	761	236	629	464	563	329	165	26600	129000	297	103
10	152	928	229	584	307	298	285	161	33400	83200	303	56
11	153	847	239	570	200	143	286	334	30300	44900	371	41
12	157	784	214	456	110	42	667	765	32400	109000	4070	4950
13	158	747	229	463	81	23	567	308	27600	52200	13500	106000
14	166	789	236	462	74	16	470	128	25100	32600	11200	98600
15	178	807	242	436	120	23	473	77	23200	20500	8580	84100
16	160	687	511	1030	112	15	456	27	23800	22900	1560	19100
17	172	762	550	1510	136	17	426	5.8	23800	58400	1080	11500
18	290	1600	741	2100	127	11	388	1.4	25400	47700	1020	8040
19	278	1570	792	1970	124	10	315	.85	21300	73000	1130	5030
20	284	1460	630	1550	98	6.1	4600	1350	19500	86900	1160	2330
21	262	1370	588	2030	94	2.2	3210	1910	20200	76900	976	1790
22	287	1430	595	2520	99	.61	307	26	15900	43400	512	1200
23	235	1060	597	2320	93	.50	258	9.1	6980	14900	472	1170
24	241	1080	583	2080	81	.44	233	6.3	8040	33000	436	910
25	214	890	535	1690	61	.33	214	5.6	13000	26200	413	880
26	287	1170	502	1420	40	.22	198	5.2	14300	44000	364	748
27	252	987	538	1480	35	.19	194	5.0	8390	39600	258	471
28	244	850	485	1440	44	.24	174	4.1	12100	80700	254	544
29	262	905	446	1310	59	.80	123	2.5	13400	80300	126	137
30	357	1200	482	1300	60	1.3	4390	782	16200	84900	67	28
31	---	---	446	1250	---	---	4940	574	53300	354000	---	---
TOTAL	---	29786	---	39186	---	8336.93	---	8286.25	---	1890170	---	992455
TOTAL LOAD FOR YEAR: 3079925.18 TONS.												

08360500 ELEPHANT BUTTE RESERVOIR AT ELEPHANT BUTTE, NM

LOCATION.--Lat 33°09'15", long 107°11'28", in NW¼ sec.30, T.13 S., R.3 W., Sierra County, Hydrologic Unit 13020211, at dam on Rio Grande, 1 mi west of Elephant Butte, 4 mi northeast of Truth or Consequences (Hot Springs) and at mile 1,383.2.

DRAINAGE AREA.--29,445 mi², approximately including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--March 1915 to December 1939 (monthend contents only published in WSP 1312), January 1940 to September 1965 (monthend contents only), October 1965 to current year.

REVISED RECORDS.--WSP 1442: 1954(m). WSP 1632: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.3 ft above National Geodetic Vertical Datum of 1929. Oct. 16, 1939, to May 2, 1940, and prior to September 1930, nonrecording gages.

REMARKS.--Reservoir is formed by concrete dam. Storage began Jan. 6, 1915. Dam completed May 13, 1916. Capacity, 2,110,300 acre-ft survey of 1980 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 U.S. Bureau of Reclamation. A 50,000 acre-ft permanent pool is authorized for recreational purposes.

COOPERATION.--Records provided by U.S. 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, 2,099,200 acre-ft, Mar. 17, gage height, 4,406.70 ft; minimum contents, 1,911,100 acre-ft, Aug. 29, gage height, 4,401.45 ft.

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

4,350	655.0	4,390	1,540.7
4,360	826.2	4,400	1,860.9
4,370	1,027.6	4,410	2,222.6
4,380	1,264.3		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1960700	1956400	1996600	2044500	2094100	2090100	2075000	2065200	2065600	2006600	1947200	1917700
2	1961400	1957500	1998700	2045200	2092600	2089300	2078000	2066300	2066300	2006300	1945800	1921200
3	1960300	1957800	2000200	2046600	2094500	2087100	2079400	2061200	2065900	2005500	1943400	1924000
4	1960300	1958500	2001200	2048500	2094100	2085300	2083100	2059700	2066300	2004100	1942700	1925800
5	1960700	1958500	2003700	2056100	2094500	2084900	2086000	2059000	2067700	2005900	1939500	1926500
6	1959600	1961400	2005200	2059400	2093700	2083800	2086800	2057500	2064500	2002000	1937400	1927500
7	1958900	1962800	2006300	2062300	2093400	2083800	2086800	2056500	2063000	2001200	1937400	1928900
8	1958500	1963100	2008400	2064500	2093000	2082700	2087100	2054600	2062300	2000500	1937400	1930300
9	1958500	1963100	2010200	2065900	2091900	2081600	2086400	2054300	2061200	1998000	1937000	1931400
10	1958500	1964200	2011300	2067700	2093000	2082000	2084600	2055700	2060100	1997300	1936000	1931100
11	1958900	1966000	2013800	2068500	2090400	2081600	2083500	2055700	2057500	1994800	1934200	1930700
12	1958200	1968800	2017000	2072100	2089000	2085700	2083100	2055700	2060100	1993400	1934200	1932100
13	1957500	1968800	2019900	2073200	2089300	2088200	2081600	2057200	2054300	1993700	1932800	1934900
14	1956800	1970200	2017800	2075000	2089700	2091900	2081600	2057900	2052100	1992700	1932800	1938400
15	1956100	1970900	2020300	2076100	2089300	2094800	2081300	2060100	2050300	1988700	1932800	1943000
16	1956100	1972000	2020600	2078000	2090100	2097400	2080200	2060100	2047700	1988400	1930300	1948600
17	1956100	1974500	2022400	2078300	2091200	2099200	2078700	2059000	2045600	1987700	1928200	1954300
18	1956100	1975200	2026000	2080500	2090400	2097400	2079100	2059700	2043000	1985500	1925800	1959200
19	1956100	1976600	2027100	2082700	2091200	2095600	2078700	2058600	2043000	1984800	1923300	1962800
20	1954600	1978400	2030000	2084200	2088600	2094500	2079100	2059000	2039800	1979800	1921900	1964900
21	1954600	1980200	2032500	2086000	2089000	2092600	2079100	2060500	2037200	1977000	1922600	1967400
22	1954600	1982300	2032900	2087900	2090100	2089300	2078700	2062300	2034700	1974500	1921600	1971300
23	1955300	1983700	2035800	2090400	2090100	2086800	2077600	2064800	2031100	1972400	1919800	1973100
24	1955300	1986200	2039800	2091900	2090800	2083100	2077200	2066300	2025300	1972700	1918400	1975600
25	1956800	1986900	2041600	2093000	2090800	2080500	2075400	2067700	2025000	1970600	1916300	1977000
26	1957100	1988700	2039800	2093400	2091900	2078700	2074300	2068800	2025000	1967000	1913600	1979800
27	1956800	1989800	2040500	2094100	2091900	2077200	2073600	2071400	2019500	1964200	1912900	1981200
28	1957100	1991200	2041900	2094800	2092600	2075800	2071400	2069600	2016700	1960700	1912500	1983000
29	1957800	1992700	2040800	2094100	2091200	2074300	2070700	2065900	2013800	1954600	1911100	1982300
30	1957500	1995200	2043700	2094500	---	2073600	2069200	2067700	2011600	1951500	1912900	1983000
31	1957500	---	2043400	2092600	---	2075400	---	2066600	---	1951100	1912900	---
MAX	1961400	1995200	2043700	2094800	2094500	2099200	2087100	2071400	2067700	2006600	1947200	1983000
MIN	1954600	1956400	1996600	2044500	2088600	2073600	2069200	2054300	2011600	1951100	1911100	1917700
(+)	4402.77	4402.74	4405.47	4406.52	4406.48	4406.05	4405.88	4405.81	4404.29	4402.59	4401.50	4403.49
(++)	-3500	+37700	+48200	+49200	-1400	-15800	-6200	-2600	-55000	-60500	-38200	+70100
CAL YR 1987	MAX 2095600	MIN 1954600	(++)	+46700								
WTR YR 1988	MAX 2099200	MIN 1911100	(++)	+22000								

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

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

RIO GRANDE BASIN

08361000 RIO GRANDE BELOW ELEPHANT BUTTE DAM, NM

LOCATION.--Lat 33°08'54", long 107°12'22", Sierra County, Hydrologic Unit 13030101, in Pedro Armendaris Grant, on left bank 1.0 mi downstream from dam, 1.5 mi upstream from Cuchillo Negro River, and at mile 1,382.2.

DRAINAGE AREA.--29,450 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--January 1915 to current year. Monthly or annual discharge only for some periods, published in WSP 1732. Figures of daily discharge, published in WSP 458 for October to December 1916, are unreliable.

REVISED RECORDS.--WSP 1562: 1920. WSP 1632: Drainage area. WSP 1732: 1917, 1920. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 4,241.09 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 24, 1980 at datum 1.0 ft higher. See WSP 1732 for history of changes prior to Apr. 24, 1942.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Elephant Butte Reservoir (station 08360500). Diversion for irrigation of about 800,000 acres upstream from station.

AVERAGE DISCHARGE.--73 years, 995 ft³/s, 720,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8,220 ft³/s, May 22, 1942; no flow at times prior to 1929, Mar. 2-4, 1979.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	41	89	124	1520	2090	2080	2110	1720	1500	1290	66
2	68	41	89	124	1510	2050	2090	2100	1520	1490	1740	22
3	67	41	91	124	1520	2090	2090	2110	1510	100	1740	21
4	65	41	92	124	1520	2080	2070	2110	1500	90	1750	13
5	65	41	97	125	1500	2080	2050	2110	137	1130	1760	13
6	64	42	99	126	1500	2090	2570	1700	1310	1500	1760	13
7	55	42	100	127	1490	2090	2970	1460	1500	1510	750	11
8	47	41	101	129	2000	2090	3050	1450	1510	1480	1520	12
9	47	41	101	131	2300	2090	3020	1460	1510	1450	1510	12
10	46	41	104	132	2310	2100	3030	1020	1530	106	1320	12
11	46	41	106	136	1810	1590	3040	793	1540	1300	1310	12
12	45	41	106	137	1480	144	3040	809	157	1490	1700	11
13	44	41	107	137	1470	141	2520	824	1360	1510	1720	9.7
14	43	42	108	140	1470	143	2180	836	1560	1520	705	9.0
15	43	42	109	147	1470	145	2180	838	1570	1530	1480	9.0
16	43	44	108	145	1460	150	2190	847	1570	1100	1670	9.0
17	43	47	110	145	1460	154	2200	850	1580	108	1710	9.0
18	43	52	111	148	1470	576	2200	846	1570	1320	1710	9.0
19	43	54	112	148	1480	1450	2200	1280	156	1520	1720	9.0
20	43	57	113	151	1470	1460	2210	1070	1370	1510	1740	9.5
21	43	60	114	156	1480	1850	2210	603	1570	1510	708	10
22	42	64	114	160	1470	2080	2210	840	1560	1500	1510	10
23	42	66	118	160	1470	2070	2190	840	1560	1490	1760	11
24	41	71	119	159	1470	2100	2170	842	1550	81	1720	14
25	41	73	124	566	1480	2080	2170	842	1530	1300	1710	19
26	41	76	125	808	1480	2080	2180	593	155	1500	1740	24
27	41	79	125	812	1480	2080	2160	798	1330	1510	1700	27
28	40	82	125	812	1490	2090	2150	1490	1510	1510	725	31
29	40	84	125	1260	1880	2070	2140	1480	1540	1510	1550	38
30	41	87	125	1500	---	2070	2130	1480	1520	1500	1800	37
31	41	---	124	1500	---	2080	---	1480	---	79	1600	---
TOTAL	1545	1615	3391	10593	45910	49453	70690	37911	40005	36754	47128	512.2
MEAN	49.8	53.8	109	342	1583	1595	2356	1223	1334	1186	1520	17.1
MAX	132	87	125	1500	2310	2100	3050	2110	1720	1530	1800	66
MIN	40	41	89	124	1460	141	2050	593	137	79	705	9.0
AC-FT	3060	3200	6730	21010	91060	98090	140200	75200	79350	72900	93480	1020
CAL YR 1987	TOTAL	659925		MEAN	1808	MAX	4620	MIN	40	AC-FT	1309000	
WTR YR 1988	TOTAL	345507.2		MEAN	944	MAX	3050	MIN	9.0	AC-FT	685300	

08362000 CABALLO RESERVOIR NEAR ARREY, NM

LOCATION.--Lat 32°53'47", long 107°17'30", in SE¼SW¼ sec.19, T.16 S., R.4 W., Sierra County, Hydrologic Unit 13030101, in control tower of Caballo Dam on Rio Grande, 0.5 mi downstream from mouth of Apache Canyon, 0.9 mi upstream from Bojarquez Bridge, 2 mi upstream from Percha diversion dam, 3.5 mi northeast of Arrey, 5.2 mi south of Caballo, and at mile 1,356.6.

DRAINAGE AREA.--30,700 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--February 1938 to September 1965 (monthend contents only), October 1965 to current year.

REVISED RECORDS.--WSP 978: 1942. WSP 1632: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.3 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam, completed Sept. 19, 1938. Storage began Feb. 8, 1938. Capacity by 1981 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 U.S. Bureau of Reclamation.

COOPERATION.--Records provided by U.S. 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, 304,000 acre-ft, Mar. 10, gage height, 4,179.56 ft; minimum contents, 83,300 acre-ft, Sept. 30, gage height, 4,152.25 ft.

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

4,125	4,810	4,160	131,200
4,130	11,680	4,170	209,400
4,140	33,770	4,180	308,900
4,150	71,800		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231300	210900	209400	215300	234700	294500	242700	254800	220500	168200	124100	141700
2	229300	210900	209400	215000	237400	296000	243100	253600	220100	167100	123400	140200
3	228000	210800	209600	215200	240900	297600	243200	253200	219500	164300	123100	138600
4	226500	210800	209700	215000	243800	299000	243600	253600	218800	159900	122800	137200
5	224700	210900	210000	215200	246300	300200	243600	253600	215600	158800	122800	135900
6	223100	210900	210000	215500	248900	301300	243800	253200	213200	158600	123400	134300
7	221500	210900	210000	215700	251600	302900	245400	252500	212100	158500	123500	132400
8	220100	210600	210100	215900	254600	302900	247000	251500	210900	157800	123500	130400
9	218200	210400	210200	216100	258900	303400	249100	250700	210000	157400	124300	128200
10	215700	210200	210200	216300	263000	304000	249500	249500	208800	155400	124500	125500
11	213200	210200	210400	216400	266100	302600	251200	247200	207500	154700	125100	122900
12	211600	210100	210900	217000	268600	298000	252900	245300	208800	155000	126100	120600
13	211800	210100	211400	217100	271100	293300	253800	243600	202100	155000	127000	117900
14	211600	209700	211200	217100	273800	288100	253500	242600	200400	154700	126900	115600
15	211800	210000	211500	217000	276300	282700	254200	241300	199100	154500	127300	112900
16	211700	209600	211700	217400	278700	277700	255100	239900	197500	153300	129100	110400
17	211700	210000	211700	217600	280400	271800	255900	238500	196100	150400	133700	107300
18	211700	209600	212000	217700	281300	266300	256900	236600	194800	149200	136900	105700
19	211100	209400	212100	218300	282500	263000	257400	235400	191700	148700	137700	103200
20	210900	209400	212600	218200	284300	259800	257400	235100	189000	147700	138200	100800
21	210900	209400	212500	218300	286300	257100	257300	232900	187500	147000	138800	100300
22	211100	209400	212300	218800	288300	255300	257000	231600	185700	146100	138300	96600
23	210900	209400	212600	219200	289600	253500	256900	230600	183900	144900	139000	94500
24	211000	209600	212800	219700	290600	252000	257300	229100	181900	141400	139200	92600
25	211000	209400	213000	220100	291700	250200	256900	227700	179900	138700	139500	90600
26	211000	210000	213200	221600	292300	248500	256700	226200	176200	137200	139700	88900
27	210900	209500	213300	223100	291900	247000	256200	224600	173300	135600	139800	87800
28	210900	209500	213500	224600	291700	245900	255300	223600	172300	133300	139000	86800
29	210900	209600	213700	226600	292700	243700	255200	222200	171000	131400	138800	85300
30	210900	209400	214500	229500	---	243200	254900	221900	169600	129700	140600	83300
31	210900	---	215300	232000	---	243000	---	221100	---	126800	142100	---
MAX	231300	210900	215300	232000	292700	304000	257400	254800	220500	168200	142100	141700
MIN	210900	209400	209400	215000	234700	243000	242700	221100	169600	126800	122800	83300
(+)	4170.17	4170.01	4170.67	4172.50	4178.52	4173.65	4174.87	4171.31	4165.19	4159.36	4161.52	4152.25
(++)	-21800	-1500	+5900	+16700	+60700	-49700	-11900	-33800	-51500	-42800	+15300	-58800

CAL YR 1987 MAX 262600 MIN 209400 (++) +26700
WTR YR 1988 MAX 304000 MIN 83300 (++) +173200

(+) ELEVATION, IN FEET, 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 NE¼SW¼ sec.30, T.16 S., R.4 W., Sierra County, Hydrologic Unit 13030102, on left bank 2,000 ft upstream from Interstate Highway 25, 4,200 ft downstream from Caballo Dam, 1.2 mi downstream from Apache Canyon, 1.3 mi upstream from Percha diversion dam, 3 mi northeast of Arrey, 5 mi south of Caballo, and at mile 1,355.6.

DRAINAGE AREA.--30,700 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--January 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,140.9 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1938, at datum 7.0 ft higher, Oct. 7-12, 1938, at datum 6.0 ft higher, and Oct. 13, 1938, to Dec. 31, 1945, at datum 5.0 ft higher than present datum.

REMARKS.--Flow regulated by Caballo Reservoir (station 08362000) capacity, 331,500 acre-ft, 1981 survey and Elephant Butte Reservoir (station 08360500) capacity, 2,110,300 acre-ft, 1980 survey. Diversions for irrigation of about 800,000 acres upstream from station. Figures of daily discharge do not include Bonita ditch which diverts from Caballo Dam and bypasses station for irrigation below. See monthly table below for record of ditch.

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

AVERAGE DISCHARGE.--50 years, 900 ft³/s, 652,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,650 ft³/s, May 20, 1942; minimum daily, 0.1 ft³/s, Oct. 31 to Nov. 14, 1954, Nov. 7 to Dec. 31, 1955, Feb. 15-29, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,290 ft³/s, Mar. 21; minimum daily, 62 ft³/s, Jan. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1060	77	74	69	71	1180	2110	2460	1850	2240	2110	914
2	964	77	74	68	72	1260	1950	2430	1850	2260	2040	900
3	904	77	74	67	74	1520	1950	2230	1910	2240	1930	838
4	905	77	74	65	73	1520	1950	2120	2010	2230	1910	699
5	901	76	74	64	73	1520	2110	2140	2010	2200	1730	651
6	806	75	74	64	73	1510	2230	1960	2000	2140	1590	923
7	806	74	73	64	73	1520	2250	1890	2070	2010	1250	1050
8	804	73	71	64	74	1660	2270	1890	2120	1890	1240	1180
9	1040	70	72	64	72	1720	2280	1880	2120	1670	1260	1250
10	1350	71	72	64	72	1950	2300	1800	2180	1560	1280	1300
11	1350	70	72	64	71	2260	2330	1800	2270	1370	1080	1410
12	661	70	72	62	71	2570	2350	1820	2270	1410	1080	1380
13	583	70	72	63	72	2550	2340	1620	2260	1590	1160	1330
14	100	70	71	63	70	2720	2230	1430	2280	1590	1320	1380
15	90	70	73	64	71	2890	1830	1440	2330	1690	1380	1450
16	80	71	73	65	184	2990	1610	1440	2310	1780	1330	1400
17	80	71	72	65	380	3040	1630	1560	2240	1780	1150	1300
18	80	71	72	66	772	3160	1610	1680	2190	1760	1000	1300
19	80	71	72	64	806	3280	1950	1660	2170	1940	1480	1300
20	80	72	71	67	414	3290	2210	1560	2150	2060	1570	1360
21	80	72	71	70	320	3290	2230	1460	2280	1930	1450	1350
22	80	72	73	68	520	3150	2220	1450	2420	2060	1440	1280
23	80	72	73	69	660	3030	2240	1440	2470	2240	1510	1220
24	80	72	72	67	795	3020	2240	1550	2540	2290	1540	1100
25	80	73	71	68	792	2980	2280	1540	2590	2270	1550	1100
26	79	73	71	68	1300	2870	2340	1450	2580	2390	1700	1000
27	78	73	71	69	1530	2860	2420	1660	2470	2460	1880	490
28	77	73	71	69	1030	2700	2440	1750	2140	2550	1640	584
29	77	74	71	69	1180	2600	2440	1790	2250	2460	1180	677
30	77	74	71	70	---	2520	2460	1850	2210	2390	680	843
31	77	---	70	70	---	2500	---	1850	---	2270	113	---
TOTAL	13589	2181	2237	2053	11765	75630	64800	54600	66540	62720	43573	32959
MEAN	438	72.7	72.2	66.2	406	2440	2160	1761	2218	2023	1406	1099
MAX	1350	77	74	70	1530	3290	2460	2460	2590	2550	2110	1450
MIN	77	70	70	62	70	1180	1610	1430	1850	1370	113	490
AC-FT	26950	4330	4440	4070	23340	150000	128500	108300	132000	124400	86430	65370
(†)	0	0	0	0	0	112	51	51	60	76	74	71
CAL YR 1987	TOTAL	693897		MEAN	1901	MAX	4650	MIN	70	AC-FT	1376000	
WTR YR 1988	TOTAL	432647		MEAN	1182	MAX	3290	MIN	62	AC-FT	858200	

(†) DIVERSION, IN ACRE-FEET, BY BONITA DITCH; 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 stream-quality accounting network)

WATER-QUALITY RECORDS

LOCATION.--Lat 31°48'10", long 106°32'25", El Paso County, Hydrologic Unit 13030102, on downstream side of first pier from left abutment of Courchesne Bridge at El Paso, 1.7 mi upstream from American Dam, 5.6 mi upstream from Santa Fe Street-Juarez Avenue Bridge between El Paso and Cd. Juarez, Chihuahua, and at mile 1,249.

DRAINAGE AREA.--32,207 mi², approximately, including 2,940 mi² in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--Water years 1930 to current year.

REMARKS.--Records of discharge are given in International Boundary and Water Commission Water Bulletins.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	
NOV													
10...	1030	260	1640	1690	8.60	8.30	16.0	11.5	13	10.0	380	140	
DEC													
08...	1000	178	1700	1720	8.30	8.20	12.5	9.0	9.7	10.2	380	140	
JAN													
06...	1345	194	1740	1700	8.50	8.20	16.5	12.5	9.1	--	380	140	
MAR													
08...	1000	980	800	783	8.20	7.90	12.0	12.0	88	9.0	190	49	
MAY													
17...	1030	690	980	970	8.20	8.30	32.0	21.0	36	7.8	240	64	
JUL													
26...	1115	1120	860	897	8.20	8.00	32.0	26.0	39	7.5	220	59	
AUG													
30...	1000	1400	780	759	8.10	7.30	24.0	20.5	550	7.5	230	87	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV													
10...	110	25	210	5	9.6	282	6	241	243	410	170	0.70	
DEC													
08...	110	25	220	5	13	290	5	246	241	390	180	0.70	
JAN													
06...	110	24	220	5	9.9	260	14	237	235	400	180	0.70	
MAR													
08...	57	12	89	3	5.5	159	5	138	143	150	67	0.60	
MAY													
17...	70	15	110	3	2.5	205	2	172	174	190	83	0.60	
JUL													
26...	65	14	110	3	6.5	195	1	162	162	170	79	0.50	
AUG													
30...	67	14	100	3	5.8	173	0	142	139	180	78	0.50	
DATE		SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	
NOV													
10...	22	1120	1110	0.510	0.020	0.530	0.090	0.080	0.61	0.190	0.160	20	
DEC													
08...	21	1120	1110	0.550	0.080	0.630	0.130	0.170	0.57	0.290	0.190	--	
JAN													
06...	20	1130	1110	0.500	0.070	0.570	0.180	0.200	0.52	0.280	0.210	<10	
MAR													
08...	13	479	481	--	<0.010	0.190	0.040	0.030	0.76	0.090	0.050	--	
MAY													
17...	12	606	590	0.170	0.020	0.190	0.020	0.040	2.9	0.060	0.080	10	
JUL													
26...	14	564	558	0.150	0.010	0.160	0.020	0.020	0.68	0.190	0.040	30	
AUG													
30...	16	544	548	--	<0.010	0.490	<0.010	0.020	--	0.080	0.050	20	

RIO GRANDE BASIN

08364000 RIO GRANDE AT EL PASO, TX -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)	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)
NOV 10...	4	110	<0.5	<1	1	<3	2	13	<5	150	17	<0.1
DEC 08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	3	81	<0.5	<1	1	<3	2	5	<5	160	62	0.1
MAR 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	4	79	<0.5	<1	<1	<3	4	<3	<5	90	2	<0.1
JUL 26...	4	78	<0.5	<1	<1	<3	3	4	<5	86	2	--
AUG 30...	3	67	<0.5	<1	<1	<3	<1	9	<5	79	9	0.2

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)	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)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 10...	<10	2	<1	<1.0	1400	<6	11	44	31	52	600	790
DEC 08...	--	--	--	--	--	--	--	163	78	78	K130	680
JAN 06...	10	2	<1	<1.0	1400	<6	7	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	62	164	50	250	740
MAY 17...	<10	2	<1	<1.0	850	<6	6	449	836	25	310	930
JUL 26...	<10	3	<1	<1.0	790	<6	<3	142	429	94	530	340
AUG 30...	<10	1	<1	1.0	750	<6	99	1750	6610	80	--	5400

WATER-QUALITY RECORDS

REMARKS.--Records of discharge are given in International Boundary and Water Commission Water Bulletins.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CaCO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CaCO3 (00902)
NOV												
12...	1115	417	2780	2890	8.10	7.60	18.0	13.0	39	8.6	550	310
DEC												
09...	1230	410	2960	2920	8.10	7.30	17.0	9.5	20	8.1	520	290
MAR												
09...	1130	254	2690	2690	8.20	7.70	18.0	13.0	92	9.0	460	260
MAY												
18...	1115	233	3390	3410	8.20	7.60	26.0	23.0	92	7.9	610	390
JUL												
27...	1200	112	4350	4310	8.30	7.60	33.0	27.0	49	11.5	710	480
AUG												
31...	1200	943	1810	1760	8.00	7.50	31.0	25.0	480	7.0	350	170

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 12...	160	36	430	8	12	308	0	252	246	490	440	0.90
DEC 09...	150	36	420	8	14	303	7	260	238	510	500	0.80
MAR 09...	120	39	400	8	9.0	251	0	206	200	460	420	0.80
MAY 18...	170	44	510	9	9.0	239	17	224	224	570	670	0.80
JUL 27...	180	62	660	11	11	255	29	257	228	730	710	0.80
AUG 31...	98	24	240	6	7.7	209	0	171	171	310	290	0.60

[illegible]

RIO GRANDE BASIN

08370500 RIO GRANDE BELOW OLD FORT QUITMAN, TX -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)	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)
NOV 12...	12	100	<10	<1	1	<1	2	<10	<5	180	30	<0.1
DEC 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	8	<100	<10	1	<1	<1	3	20	<5	210	130	<0.1
JUL 27...	8	<100	<10	<1	<1	1	<1	20	<5	230	20	<0.1
AUG 31...	4	77	<0.5	2	<1	<3	1	5	<5	120	3	<0.1

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)	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)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 12...	8	6	1	<1.0	2400	7	10	340	383	24	220	420
DEC 09...	--	--	--	--	--	--	--	2180	2410	6	120	720
MAR 09...	--	--	--	--	--	--	--	658	451	42	K27	270
MAY 18...	11	4	<1	<1.0	2900	12	50	825	519	58	97	250
JUL 27...	13	6	<1	<1.0	3400	15	30	379	115	50	440	320
AUG 31...	10	4	<1	1.0	1500	<6	18	1820	4630	72	>6000	3900

08377900 RIO MORA NEAR TERRERO, NM
(Hydrologic bench-mark station)

LOCATION.--Lat 35°46'38", long 105°39'27", in E NE¼ sec.22, T.18 N., R.12 E., San Miguel County, Hydrologic Unit 13060001, in Santa Fe National Forest, on left bank 450 ft upstream from bridge on State Highway 63, 600 ft upstream from mouth, and 2.6 mi north of Terrero.

DRAINAGE AREA.--53.2 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 2, and Dec. 10 to Jan. 24. Water-discharge records good except for estimated daily discharges, which are poor. About 90 percent of the drainage is in the Pecos Wilderness Area and not subject to development, watershed management, or the building of highways; there is limited cattle grazing by permit.

AVERAGE DISCHARGE.--25 years, 32.1 ft³/s, 23,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft³/s, June 8, 1979, gage height, 4.15 ft; minimum determined, 0.90 ft³/s, Jan. 12-14, 1964, but may have been less during periods of ice effect.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since 1886 probably occurred Sept. 29, 1904 (based on statement for Pecos River near Pecos and history of that flood period).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 18	0345	218	2.58	July 30	1030	101	2.04
June 11	0345	110	2.09	Aug. 23	2215	169	2.39
July 1	1515	125	2.17	Aug. 28	0100	143	2.27
July 6	0230	148	2.30	Sept. 2	0345	*242	*2.66
July 17	0500	137	2.24	Sept. 14	0145	157	2.34

Minimum discharge, 2.8 ft³/s, Mar. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	8.8	12	4.3	5.7	6.9	9.2	53	71	104	58	121
2	12	9.5	11	4.4	5.2	6.4	14	50	67	99	63	197
3	12	8.5	10	4.5	5.3	6.1	13	42	64	87	57	153
4	11	7.4	8.8	4.6	5.0	5.5	14	41	63	76	55	130
5	11	7.9	7.3	4.7	5.0	6.3	16	50	62	75	60	116
6	11	12	6.6	4.7	4.8	6.2	19	59	59	104	61	102
7	10	11	6.4	4.7	5.0	6.0	24	60	56	78	55	89
8	9.9	7.6	6.1	4.7	5.2	4.7	27	57	52	77	52	78
9	9.5	6.8	6.0	4.8	5.3	8.4	27	52	49	81	53	70
10	9.4	6.9	6.0	4.8	5.6	5.8	23	55	60	80	56	62
11	9.3	7.5	6.0	5.0	5.3	6.5	22	63	83	81	59	57
12	9.2	6.8	5.8	5.1	5.3	8.4	23	71	66	70	53	69
13	9.2	7.3	5.8	5.1	5.3	8.7	24	82	60	64	47	93
14	10	7.8	5.0	5.2	5.6	11	24	93	54	64	44	138
15	11	6.9	5.0	5.4	5.6	18	27	113	54	68	45	112
16	9.6	6.1	4.9	5.6	5.7	14	31	130	49	69	47	97
17	9.0	6.6	4.9	5.9	5.6	11	26	147	45	107	57	87
18	8.9	7.5	4.8	6.0	5.1	9.7	25	202	42	89	61	78
19	8.4	10	4.8	6.0	5.1	6.9	26	185	38	79	61	70
20	8.0	15	4.7	5.6	4.9	5.2	28	162	35	77	53	64
21	8.0	16	4.6	5.5	5.0	6.2	32	138	33	72	49	75
22	8.6	11	4.5	5.7	5.4	6.6	31	123	33	66	51	73
23	8.2	7.1	4.5	5.9	5.6	7.3	27	110	37	61	94	68
24	8.1	6.8	4.3	6.0	6.1	8.2	25	99	42	55	108	61
25	8.4	5.8	4.2	6.2	6.3	8.0	22	92	41	50	106	54
26	7.7	7.2	4.1	5.5	6.9	9.8	22	87	44	47	99	49
27	7.5	7.6	4.2	5.7	7.3	12	25	87	60	44	111	47
28	7.5	8.6	4.1	6.0	7.7	15	28	88	63	44	132	45
29	7.3	13	4.2	6.1	7.1	13	33	84	59	54	119	41
30	8.3	13	4.2	6.2	---	13	41	83	96	79	111	38
31	7.7	---	4.3	6.1	---	12	---	77	---	65	103	---
TOTAL	289.7	264.0	179.1	166.0	163.0	272.8	728.2	2835	1637	2266	2180	2534
MEAN	9.35	8.80	5.78	5.35	5.62	8.80	24.3	91.5	54.6	73.1	70.3	84.5
MAX	14	16	12	6.2	7.7	18	41	202	96	107	132	197
MIN	7.3	5.8	4.1	4.3	4.8	4.7	9.2	41	33	44	44	38
AC-FT	575	524	355	329	323	541	1440	5620	3250	4490	4320	5030
CAL YR 1987	TOTAL	15647.0		MEAN	42.9	MAX	350	MIN	4.1	AC-FT	31040	
WTR YR 1988	TOTAL	13514.8		MEAN	36.9	MAX	202	MIN	4.1	AC-FT	26810	

RIO GRANDE BASIN

08377900 RIO MORA NEAR TERRERO, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00026)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 02...	1100	9.6	111	123	7.60	8.10	11.0	6.5	0.40	9.9	53	4
MAR 31...	1315	12	100	111	7.00	8.00	0.0	1.0	2.3	11.0	50	6
JUN 14...	0900	56	74	70	7.30	7.90	17.0	8.0	1.2	8.6	32	3
AUG 11...	1300	56	80	84	7.60	7.90	15.0	12.0	2.8	8.0	44	7
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB AS CACO3 (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 02...	18		2.0	1.6	0.1	0.70	74	0	61	49	9.3	1.8
MAR 31...	17		1.9	1.4	0.1	0.50	59	0	48	44	11	1.5
JUN 14...	11		1.2	0.80	0.1	0.50	34	0	28	29	7.0	0.50
AUG 11...	15		1.5	1.1	0.1	0.50	42	0	35	37	6.6	0.40
DATE		FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 02...	0.20		6.2	85	69	<0.010	<0.100	0.040	0.020	0.86	0.060	<0.010
MAR 31...	0.30		7.2	70	67	<0.010	<0.100	<0.010	<0.010	--	0.010	<0.010
JUN 14...	0.30		5.2	50	44	<0.010	<0.100	0.020	0.040	0.28	<0.010	<0.010
AUG 11...	0.10		6.9	59	55	<0.010	<0.100	<0.010	0.010	--	0.020	<0.010
DATE		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)	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)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
NOV 02...	<10		6	26	<0.5	<1	<1	<3	<1	7	<5	5
MAR 31...	100		<1	22	<0.5	1	1	<3	1	88	<5	6
JUN 14...	40		<1	18	<0.5	<1	2	<3	1	27	<5	<4
AUG 11...	60		<1	23	<0.5	<1	<1	<3	3	72	<5	<4

08377900 RIO MORA NEAR TERRERO, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)
NOV 02...	<1	0.8	<10	<1	<1	1.0	43	<6	5	0.8	<0.4
MAR 31...	1	<0.1	<10	4	<1	<1.0	37	<6	<3	--	--
JUN 14...	2	1.1	<10	1	<1	<1.0	25	<6	<3	<0.4	<0.4
AUG 11...	3	<0.1	<10	3	<1	<1.0	31	<6	34	--	--
DATE	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. 3 FINER THAN .062 MM (70331)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC CI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 02...	0.9	<0.4	0.8	<0.4	0.03	0.38	1	0.03	80	K1	K5
MAR 31...	--	--	--	--	--	--	1	0.03	33	K1	K7
JUN 14...	0.7	<0.4	0.7	<0.4	0.05	0.07	1	0.15	51	3	26
AUG 11...	--	--	--	--	--	--	43	6.5	94	--	--

08378500 PECOS RIVER NEAR PECOS, NM

LOCATION.--Lat 35°42'30", long 105°40'55", in NE¼NE¼ sec.17, T.17 N., R.12 E., San Miguel County, Hydrologic Unit 13060001, in Santa Fe National Forest, on left bank 30 ft downstream from bridge on private road, 270 ft upstream from Indian Creek, 2.4 mi downstream from Holy Ghost Creek, 9.0 mi north of Pecos, and at mile 896.6.

DRAINAGE AREA.--189 mi².

PERIOD OF RECORD.--August 1919 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "near Cowles" 1919-25, "at Irvins Ranch" 1926-29, and as "at Irvins Ranch near Pecos" 1930-39.

REVISED RECORDS.--WSP 898: Drainage area. WSP 1312: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 7,502.94 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1977, at site 30 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 25 to Feb. 26, and Mar. 12-18. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 75 acres, 1959 determinations, upstream from station. Several observations of water temperature were made during the year. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--69 years, 100 ft³/s, 72,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 4,500 ft³/s, Sept. 21 or 22, 1929, gage height, 6.2 ft, from floodmark, from rating curve extended above 1,600 ft³/s; minimum, 2.0 ft³/s, Mar. 19, 1971, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1904, was greatest since 1886, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 310 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 8	0415	*481	*3.12	Aug. 28	0145	406	2.96
June 11	0315	354	2.87	Sept. 2	0330	442	3.07
July 6	0230	406	2.98	Sept. 14	0600	*481	*3.12
July 17	0430	368	2.90				

Minimum discharge, 10 ft³/s, Mar. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	39	31	34	26	31	35	152	192	188	164	282
2	37	41	30	32	25	30	40	144	182	188	173	368
3	37	37	28	31	24	28	39	123	177	169	162	300
4	35	31	27	36	24	26	42	121	174	151	162	263
5	34	32	25	49	23	25	47	140	174	153	169	239
6	33	50	24	47	22	26	55	155	170	257	176	217
7	32	45	24	46	22	28	74	156	168	178	163	197
8	32	33	23	44	24	21	89	149	164	170	153	182
9	31	29	24	43	25	27	90	138	158	194	162	171
10	31	27	23	42	26	29	76	143	182	184	178	159
11	31	29	21	45	24	22	73	158	272	195	180	157
12	30	23	21	48	24	31	80	174	209	163	171	197
13	30	27	22	50	25	28	84	200	189	150	152	276
14	34	30	31	53	26	31	88	225	173	145	141	408
15	35	29	35	55	26	31	92	264	170	154	141	305
16	33	24	38	57	25	26	108	294	159	148	149	261
17	30	22	39	52	24	27	91	320	147	239	185	234
18	30	22	40	44	23	26	84	426	139	207	192	214
19	29	28	41	39	22	23	88	392	131	210	190	195
20	28	30	41	36	21	23	96	356	121	221	170	182
21	29	29	40	33	20	25	107	312	114	215	159	211
22	30	28	40	32	20	29	104	283	116	183	154	217
23	29	26	38	30	21	31	90	253	128	166	185	199
24	29	26	35	30	22	35	83	234	137	155	211	180
25	31	22	30	29	22	34	75	224	131	145	216	167
26	29	24	30	28	23	40	74	217	135	139	205	156
27	28	29	25	32	27	50	80	223	151	134	274	147
28	27	33	25	29	29	58	88	231	150	136	365	140
29	27	32	32	28	30	50	102	222	141	159	313	134
30	33	31	39	27	---	47	123	221	174	217	289	128
31	32	---	36	26	---	46	---	207	---	186	284	---
TOTAL	973	908	958	1207	695	984	2397	6857	4828	5499	5988	6486
MEAN	31.4	30.3	30.9	38.9	24.0	31.7	79.9	221	161	177	193	216
MAX	37	50	41	57	30	58	123	426	272	257	365	408
MIN	27	22	21	26	20	21	35	121	114	134	141	128
AC-FT	1930	1800	1900	2390	1380	1950	4750	13600	9580	10910	11880	12860
CAL YR 1987 TOTAL		46584		MEAN	128	MAX	803	MIN	21	AC-FT	92400	
WTR YR 1988 TOTAL		37780		MEAN	103	MAX	426	MIN	20	AC-FT	74940	

08379187 TECOLOTE CREEK BELOW WRIGHT CANYON NEAR EL PORVENIR, NM

LOCATION.--Lat 35°40'20", long 105°27'58", in NW¼SE¼ sec.28, T.17 N., R.14 E., San Miguel County, Hydrologic Unit 13060001, in Santa Fe National Forest, on right bank 2.3 mi upstream from Blue Canyon, and 5.1 mi southwest of El Porvenir.

DRAINAGE AREA.--5.42 mi².

PERIOD OF RECORD.--September 1987 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 8,060 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Several observations of water temperature were made during the year. Daily mean discharges for September 1987 are given in table below.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13 ft³/s, Sept. 14, 1988, gage height, 2.14 ft; minimum discharge recorded, 0.31 ft³/s, Sept. 25, 1987.

EXTREMES FOR SEPTEMBER 1987.--Maximum discharge, 0.84 ft³/s, Sept. 30, gage height, 1.27 ft; minimum recorded, 0.31 ft³/s, Sept. 25.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13 ft³/s, Sept. 14, gage height, 2.14 ft; minimum discharge recorded, 0.33 ft³/s, October 8, 9, 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, SEPTEMBER 1987

September 1.....	0.75	September 11.....	0.55	September 21.....	0.40	Total.....	15.51
September 2.....	0.70	September 12.....	0.55	September 22.....	0.40	Mean.....	0.52
September 3.....	0.60	September 13.....	0.50	September 23.....	0.34	Max.....	0.75
September 4.....	0.60	September 14.....	0.50	September 24.....	0.32	Min.....	0.32
September 5.....	0.70	September 15.....	0.50	September 25.....	0.39	Ac-ft.....	31
September 6.....	0.70	September 16.....	0.45	September 26.....	0.50		
September 7.....	0.65	September 17.....	0.45	September 27.....	0.39		
September 8.....	0.65	September 18.....	0.45	September 28.....	0.38		
September 9.....	0.65	September 19.....	0.45	September 29.....	0.40		
September 10.....	0.60	September 20.....	0.45	September 30.....	0.54		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50						---	1.6	.92	2.8	1.1	6.4
2	.41						---	1.5	.89	2.2	3.9	6.1
3	.38						---	1.4	.87	2.0	5.4	5.5
4	.38						---	1.4	.93	1.8	3.4	5.0
5	.36						---	1.4	.98	1.8	2.6	4.5
6	.36						---	1.4	.84	1.7	3.1	4.1
7	.36						---	1.3	.76	1.7	2.9	3.8
8	.35						---	1.3	.71	1.7	3.3	3.6
9	.36						---	1.1	.66	1.5	5.7	3.2
10	.36						---	1.1	.68	1.4	9.7	3.0
11	.36						---	1.1	1.3	1.4	6.4	3.1
12	.35						---	1.1	.94	1.2	5.1	4.9
13	.35						---	1.1	.77	1.1	4.1	7.8
14	.39						---	1.1	.78	1.1	3.8	12
15	.39						---	1.1	.95	1.0	3.6	8.3
16	.38						---	1.1	.95	1.0	3.6	6.4
17	.37						---	1.2	.84	1.1	3.7	5.5
18	.35						---	2.0	.70	1.0	3.7	4.8
19	.35						---	1.3	.63	.96	3.1	4.2
20	.37						---	1.7	.58	1.4	2.7	3.9
21	.38						2.1	1.8	.57	1.2	2.5	4.4
22	.38						2.0	1.6	.59	1.0	3.3	4.0
23	.37						1.8	1.4	.65	.88	6.2	3.7
24	.37						1.6	1.3	1.4	.88	7.5	3.4
25	.38						1.4	1.3	1.8	.84	7.1	3.1
26	.38						1.4	1.2	1.3	.76	5.7	2.9
27	.38						1.4	1.1	1.4	.96	6.3	2.7
28	.38						1.4	1.1	1.6	1.0	9.2	2.6
29	.38						1.5	1.0	1.3	1.0	8.2	2.5
30	.38						1.6	.96	3.7	1.5	7.4	2.4
31	.38						---	.94	---	1.2	6.6	---
TOTAL	11.64						---	40.00	30.99	41.08	150.9	137.8
MEAN	.38						---	1.29	1.03	1.33	4.87	4.59
MAX	.50						---	2.0	3.7	2.8	9.7	12
MIN	.35						---	.94	.57	.76	1.1	2.4
AC-FT	23						---	79	61	81	299	273

08379500 PECOS RIVER NEAR ANTON CHICO, NM

LOCATION.--Lat 35°10'44", long 105°06'30", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 2.1 mi upstream from Canon Blanco, 2.3 mi southeast of Anton Chico, 9.7 mi downstream from Tecolote Creek, and at mile 808.0.

DRAINAGE AREA.--1,050 mi², approximately (contributing area).

PERIOD OF RECORD.--April 1910 to May 1916, October 1916 to September 1924, August to December 1925, January 1927 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1342: 1951(M), 1952-53. WSP 1512: 1912-14, 1931, 1933(M), 1935-36(M), 1938(P), 1939-40, 41-42(P), 1945(M), 1946(P). WSP 1712: 1942(P).

GAGE.--Water-stage recorder. Elevation of gage is 5,130 ft above National Geodetic Vertical Datum of 1929, from river-profile map. See WSP 1732 for history of changes prior to June 21, 1951.

REMARKS.--No estimated daily discharges. Records good. Diversions upstream from station for irrigation of about 4,900 acres, 1959 determinations, upstream and downstream from station. Acequia del Bodo Juan Paiz (see table below) diverts water 8 mi upstream from gage and bypasses this station on left bank; ditch flow not included in record measurements made at point opposite regular gage. A portion of this flow may be returned to the river about 5.0 mi downstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--75 years (1910-15, 1915-24, 1926-88), 130 ft³/s, 94,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,300 ft³/s, June 1, 1937, gage height, 20.34 ft, from floodmarks, at site and datum then in use, from slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since 1879 occurred Sept. 29, 1904, discharge about 73,000 ft³/s, from information by a local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 6	2245	*6,850	*9.86	Sept. 2	0100	3,770	8.08

Minimum discharge, 1.0 ft³/s, Dec. 23.

DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND, OF DITCH, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

Date	Discharge	Date	Discharge
Feb. 12	11.6	Sept. 20	23.4
Aug. 9	46.2		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	10	7.7	33	20	25	59	25	118	139	172	600
2	59	17	7.5	26	26	29	60	43	106	177	172	1050
3	28	15	8.8	24	26	36	50	59	96	193	152	483
4	24	9.6	12	24	26	40	49	48	90	170	171	385
5	11	13	11	29	27	40	49	36	114	270	236	304
6	9.9	17	8.7	29	12	36	49	50	122	603	178	264
7	9.5	16	7.7	37	12	34	51	63	106	342	432	226
8	14	20	7.4	38	12	34	54	75	97	181	192	196
9	11	28	7.9	34	12	37	64	73	87	133	154	177
10	7.8	20	8.9	31	12	33	72	72	86	385	181	152
11	9.1	13	6.7	32	13	29	72	67	116	149	320	134
12	9.4	13	7.6	29	13	34	68	69	223	146	226	174
13	6.2	13	4.8	26	14	32	63	67	187	105	196	644
14	8.5	19	8.8	24	13	34	62	83	150	91	152	1010
15	12	35	1.5	26	14	35	65	100	290	83	187	693
16	12	42	1.6	29	14	30	79	134	209	81	120	511
17	18	47	1.9	19	14	37	113	215	143	71	135	416
18	15	40	3.5	24	14	40	106	291	104	150	273	353
19	4.7	18	12	18	14	35	76	359	92	260	316	304
20	4.0	6.3	16	17	13	35	74	335	79	133	198	277
21	4.6	5.5	12	15	13	32	74	339	74	151	156	257
22	12	5.9	4.6	18	13	35	71	305	65	145	130	301
23	12	6.2	13	22	14	34	68	260	62	119	417	296
24	8.8	7.1	36	21	14	36	65	223	78	97	313	251
25	6.1	5.6	22	19	14	38	62	227	117	87	336	211
26	8.4	6.2	16	22	18	40	52	204	117	76	317	171
27	8.2	5.0	39	22	16	40	30	194	119	89	259	143
28	8.4	4.9	43	24	13	43	25	190	147	148	408	113
29	9.0	4.1	32	23	11	48	23	180	133	182	523	102
30	7.2	6.4	22	23	---	53	21	154	125	223	430	96
31	8.9	---	34	24	---	51	---	124	---	193	511	---
TOTAL	433.7	468.8	425.6	782	447	1135	1826	4664	3652	5372	7963	10294
MEAN	14.0	15.6	13.7	25.2	15.4	36.6	60.9	150	122	173	257	343
MAX	67	47	43	38	27	53	113	359	290	603	523	1050
MIN	4.0	4.1	1.5	15	11	25	21	25	62	71	120	96
AC-FT	860	930	844	1550	887	2250	3620	9250	7240	10660	15790	20420
CAL YR 1987	TOTAL	66395.9		MEAN	182	MAX	1020	MIN	1.5	AC-FT	131700	
WTR YR 1988	TOTAL	37463.1		MEAN	102	MAX	1050	MIN	1.5	AC-FT	74310	

08380500 GALLINAS CREEK NEAR MONTEZUMA, NM

LOCATION.--Lat 35°39'07", long 105°19'06", San Miguel County, Hydrologic Unit 13060001, in Las Vegas Grant, on left bank 2.4 mi west of Montezuma, 6.9 mi northwest of Las Vegas, and at mile 74.4.

DRAINAGE AREA.--84 mi², approximately.

PERIOD OF RECORD.--March to September 1915, June 1916 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1964, published as Gallinas River near Montezuma.

REVISED RECORDS.--WSP 898: Drainage area. WSP 1562: 1951(P), 1952(M), 1955(P), 1957. WSP 1632: 1931-32, 1933(M), 1934, 1935(M), 1938, 1939-40(M), 1941-42, 1945, 1949-50(M).

GAGE.--Water-stage recorder. Elevation of gage is 6,880 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 21, 1934, at different datum.

REMARKS.--Estimated daily discharges: Nov. 29, and Dec. 13 to Mar. 23. Records good except those for winter period, which are poor. Diversions for irrigation of about 80 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--72 years, 19.5 ft³/s, 14,130 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,120 ft³/s, Aug. 2, 1966, gage height, 9.7 ft, from floodmarks, from rating curve extended above 500 ft³/s on basis of slope-area measurements at gage heights 5.25 ft, 8.25 ft, and 9.7 ft; minimum, 0.20 ft³/s, Oct. 6-9, 1922, Sept. 21, Oct. 9-14, 1956, Dec. 13, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since about 1900 occurred the night of Sept. 29, 1904 (discharge not determined), from information by local residents and G. B. Monk's report on floods.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 29	0830	ice jam	*4.89	Aug. 23	1000	*570	3.59

Minimum discharge, 3.4 ft³/s, Dec. 9, but may have been less during periods of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	5.5	11	6.5	8.7	4.8	11	24	19	33	18	84
2	6.9	7.6	11	7.0	8.2	5.0	13	24	18	25	21	93
3	6.6	7.3	11	7.3	8.0	5.3	17	23	16	22	41	82
4	6.7	6.3	7.2	7.0	7.8	5.6	19	20	17	19	37	70
5	6.1	5.9	7.0	6.8	7.4	5.5	19	19	18	25	52	60
6	5.9	8.2	6.7	6.8	7.2	5.4	18	22	15	24	40	51
7	5.9	9.9	6.3	6.8	7.0	5.2	19	23	14	19	43	44
8	5.9	8.0	5.9	7.4	6.5	5.3	22	22	13	20	54	38
9	5.9	7.1	5.6	7.7	6.2	5.5	24	20	12	18	108	34
10	5.4	6.4	6.4	8.0	6.0	5.9	20	19	12	21	203	30
11	5.6	6.3	6.4	8.4	6.0	6.7	18	19	18	19	129	28
12	5.9	6.3	5.9	9.0	5.8	7.6	17	18	16	16	74	37
13	5.4	6.2	6.0	9.4	5.7	9.2	17	20	14	15	50	76
14	5.5	6.4	6.0	9.9	5.6	10	18	22	14	14	37	91
15	5.9	6.4	5.9	10	5.2	10	19	24	24	14	29	101
16	5.9	6.1	6.1	9.5	4.9	9.2	25	26	21	16	30	80
17	5.8	5.9	6.4	8.7	4.9	8.4	28	30	17	21	25	63
18	5.5	6.5	6.5	8.4	4.8	8.1	26	46	14	19	32	54
19	5.4	6.0	7.5	8.0	4.8	8.0	25	41	12	16	29	45
20	5.4	6.8	7.9	7.4	4.9	8.3	24	43	10	30	22	39
21	5.3	6.7	7.2	7.5	4.9	8.5	25	44	6.3	30	19	38
22	5.4	6.4	7.0	8.0	4.8	9.2	25	38	7.4	24	28	43
23	5.4	6.2	6.8	8.4	4.7	10	23	33	7.2	20	257	36
24	5.3	6.5	6.5	7.8	4.5	12	22	30	11	17	177	32
25	5.4	5.6	6.4	7.1	4.3	12	20	27	20	16	114	28
26	5.1	6.5	6.3	7.2	4.3	13	18	26	15	14	90	25
27	5.0	7.5	6.3	7.6	4.4	12	17	24	21	13	99	23
28	4.9	9.0	6.2	7.9	4.5	13	18	23	34	13	205	21
29	5.0	10	6.3	8.3	4.8	16	19	23	27	16	169	19
30	5.0	11	6.2	8.2	---	15	21	21	30	25	125	19
31	5.4	---	6.3	8.6	---	14	---	21	---	22	96	---
TOTAL	176.5	210.5	214.2	246.6	166.8	273.7	607	815	492.9	616	2453	1484
MEAN	5.69	7.02	6.91	7.95	5.75	8.83	20.2	26.3	16.4	19.9	79.1	49.5
MAX	7.7	11	11	10	8.7	16	28	46	34	33	257	101
MIN	4.9	5.5	5.6	6.5	4.3	4.8	11	18	6.3	13	18	19
AC-FT	350	418	425	489	331	543	1200	1620	978	1220	4870	2940
CAL YR 1987	TOTAL	12995.6		MEAN	35.6	MAX	226	MIN	4.9	AC-FT	25780	
WTR YR 1988	TOTAL	7756.2		MEAN	21.2	MAX	257	MIN	4.3	AC-FT	15380	

08382500 GALLINAS RIVER NEAR COLONIAS, NM

LOCATION.--Lat 35°10'55", long 104°53'59", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 2.1 mi upstream from Canon Blanco, 2.3 mi southeast of Anton Chico, and Preston Beck Grants, on right bank 2.3 mi south of San Miguel-Guadalupe County line, 2.4 mi upstream from mouth, 5.8 mi northwest of Colonias, and 9.0 mi east of Dilia. Mouth at Pecos River mile 789.2.

DRAINAGE AREA.--610 mi², approximately.

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,940 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 12-17, Dec. 23 to Jan. 7, Jan. 9, Jan. 17-21, June 15-30, July 8 to Aug. 9, and Sept. 21-27. Records good except for estimated discharges which are poor. Diversions for irrigation of about 7,000 acres, 1959 determination, upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 17.1 ft³/s, 12,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft³/s, July 11, 1982, gage height, 19.67 ft, from rating curve extended above 1,900 ft³/s on basis of slope-area measurements at gage heights 8.64 ft, 12.74 ft, 16.65 ft, and 27.2 ft; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about June 1, 1937, reached a stage of about 27.2 ft; discharge determined as 26,700 ft³/s by slope-area measurement made in 1951. A flood of about the same magnitude occurred Sept. 29-30, 1904.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 15	1715	2,740	9.34	July 6	0330	*11,300	*17.79

Minimum discharge 0.77 ft³/s, May 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	6.9	9.5	8.3	14	7.5	8.6	5.7	5.7	6.7	16	41
2	9.4	7.3	9.3	8.8	17	7.8	9.4	4.9	4.5	6.0	150	41
3	7.5	7.7	9.2	9.4	17	8.4	11	5.1	2.8	5.7	200	49
4	7.1	7.8	9.3	9.6	15	8.1	11	4.8	2.1	5.6	80	33
5	6.5	7.8	9.3	9.0	19	8.5	14	5.2	2.3	8.1	60	24
6	6.1	9.8	9.3	7.7	17	8.2	11	4.8	2.7	1800	50	20
7	5.8	13	9.1	9.1	15	7.6	9.7	3.9	1.5	1710	90	17
8	5.8	12	8.7	10	14	7.3	9.5	3.1	2.0	300	400	14
9	5.8	14	8.5	11	13	7.0	7.6	2.9	2.8	100	58	12
10	5.6	13	8.7	11	12	6.9	6.5	3.2	1.7	900	40	11
11	5.3	12	8.6	14	12	6.6	6.8	3.9	1.7	700	29	8.9
12	5.7	11	8.4	14	10	6.6	7.8	2.7	4.5	140	25	11
13	6.5	11	8.1	12	8.6	6.8	7.8	1.5	6.0	35	20	145
14	6.1	10	7.9	12	8.3	6.9	7.5	1.0	5.1	19	17	221
15	6.1	9.9	7.8	14	8.2	6.8	7.1	1.0	458	12	14	245
16	6.3	10	7.9	16	8.1	6.8	9.8	1.1	535	11	45	89
17	6.5	9.8	10	13	7.8	7.8	13	.99	100	25	85	48
18	6.5	9.8	11	12	7.9	8.6	23	2.2	23	10	117	33
19	6.5	9.8	12	11	8.2	9.9	21	5.2	8.0	9.0	87	24
20	6.5	9.8	13	10	8.3	10	14	23	5.5	50	75	27
21	6.4	9.5	14	9.2	8.7	9.1	11	13	5.3	80	34	26
22	6.1	8.6	12	11	8.3	8.1	10	12	5.8	40	22	25
23	6.1	8.5	11	13	7.9	7.2	9.3	13	6.8	22	73	23
24	6.1	8.5	9.6	14	7.7	6.7	8.8	12	27	14	91	21
25	6.4	8.2	9.0	13	7.8	6.1	8.6	25	26	10	137	20
26	6.1	7.9	8.2	11	7.5	5.8	8.0	20	24	7.0	50	19
27	6.1	8.3	7.7	14	7.3	5.8	7.5	11	45	8.0	38	18
28	6.5	8.7	7.5	13	7.3	5.4	7.0	9.7	25	300	32	19
29	6.5	8.9	7.4	14	7.4	5.5	6.5	8.8	13	400	62	18
30	6.5	9.1	7.5	15	---	5.5	6.8	7.6	5.3	110	58	17
31	6.5	---	7.9	15	---	5.5	---	6.6	---	35	57	---
TOTAL	199.4	288.6	287.4	364.1	310.3	224.8	299.6	224.89	1358.1	6879.1	2312	1319.9
MEAN	6.43	9.62	9.27	11.7	10.7	7.25	9.99	7.25	45.3	222	74.6	44.0
MAX	9.4	14	14	16	19	10	23	25	535	1800	400	245
MIN	5.3	6.9	7.4	7.7	7.3	5.4	6.5	.99	1.5	5.6	14	8.9
AC-FT	396	572	570	722	615	446	594	446	2690	13640	4590	2620
CAL YR 1987	TOTAL	15024.8		MEAN	41.2	MAX	394	MIN	3.5	AC-FT	29800	
WTR YR 1988	TOTAL	14068.19		MEAN	38.4	MAX	1800	MIN	.99	AC-FT	27900	

08382600 PECOS RIVER ABOVE CANON DEL UTA NEAR COLONIAS, NM

LOCATION.--Lat 35°05'29", long 104°48'00", in T.10 N., R.20 E., Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 0.4 mi upstream from Canon del Uta, 2.9 mi southeast of Colonias, and at mile 775.8.

DRAINAGE AREA.--2,330 mi², approximately.

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

GAGE.--Water-stage recorder. 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.--Estimated daily discharges: June 13, 14, July 25-30, and Sept. 14, 15. Records fair except for estimated daily discharges, which are poor. Diversions and ground-water withdrawals for irrigation for about 11,800 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--12 years, 89.1 ft³/s, 64,550 acre ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft³/s, June 20, 1982, gage height, 10.36 ft, from rating curve extended above 1,200 ft³/s on basis of discharges transferred from station 5 mi downstream using the relation between peak gage heights at the two stations; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 14	1415	*4,310	*8.94	No other peak greater than base discharge.			

Minimum discharge, 2.4 ft³/s, part or all of each day Apr. 4-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	7.4	5.4	5.4	4.8	2.9	3.4	6.8	62	49	176	380
2	8.5	7.4	5.4	5.4	4.8	2.9	3.9	6.8	51	67	172	786
3	8.5	7.3	5.4	5.4	4.3	3.0	7.1	7.3	36	109	189	422
4	8.5	7.3	5.5	5.8	4.5	3.0	2.5	7.7	22	130	127	300
5	8.5	7.3	6.1	5.8	4.3	3.0	2.4	7.7	20	109	255	227
6	8.5	7.5	6.2	5.8	4.2	3.0	2.4	7.6	65	596	390	200
7	8.1	7.9	5.9	5.9	4.2	2.9	2.4	7.6	54	838	379	192
8	8.1	7.9	6.0	6.1	3.9	2.8	2.4	8.2	36	313	356	172
9	8.1	7.7	5.9	6.1	3.7	2.8	2.4	17	23	127	205	118
10	8.1	7.6	5.5	6.0	3.6	2.8	2.4	15	18	552	172	80
11	8.1	7.1	5.2	6.0	3.6	2.8	7.8	12	17	334	347	67
12	8.1	7.1	4.9	6.1	3.5	2.8	11	8.3	80	143	227	91
13	7.7	7.4	5.0	6.1	3.2	2.8	9.1	7.9	374	127	213	787
14	7.2	8.1	5.1	6.1	3.2	2.9	6.2	8.6	171	73	118	1710
15	6.8	8.8	5.0	6.4	3.1	2.9	6.0	22	307	49	75	1170
16	6.5	8.4	4.8	6.5	3.0	3.0	14	42	456	40	129	483
17	6.3	8.0	4.8	6.5	3.2	3.0	26	79	195	56	79	328
18	6.1	7.7	4.8	6.6	3.2	2.8	49	188	93	46	297	259
19	6.3	7.7	4.8	7.3	3.2	2.8	48	273	53	338	320	206
20	6.1	6.0	5.0	6.9	3.2	2.8	31	345	32	214	256	174
21	6.1	7.3	5.1	6.8	3.2	2.8	22	335	18	115	140	156
22	6.3	6.9	5.0	6.5	3.2	3.0	24	329	18	107	86	149
23	6.5	6.6	4.8	6.4	3.2	3.0	28	284	15	101	151	217
24	6.5	6.1	5.1	6.2	3.2	2.9	31	274	18	82	429	170
25	6.8	6.1	5.1	6.0	3.2	2.8	21	304	17	48	354	139
26	6.8	5.8	5.1	6.0	3.2	2.9	7.7	185	27	30	335	110
27	6.5	5.5	5.2	5.8	3.2	3.1	7.3	154	47	22	236	86
28	6.7	5.4	5.4	5.8	3.1	3.1	7.0	141	48	111	241	63
29	7.0	5.4	5.4	5.4	3.0	3.0	6.8	130	61	61	524	58
30	6.9	5.4	5.3	5.3	---	3.0	6.9	112	53	291	459	45
31	7.0	---	5.3	5.0	---	3.2	---	82	---	152	519	---
TOTAL	225.7	212.1	163.5	187.4	103.2	90.5	401.1	3407.5	2487	5430	7956	9345
MEAN	7.28	7.07	5.27	6.05	3.56	2.92	13.4	110	82.9	175	257	312
MAX	8.5	8.8	6.2	7.3	4.8	3.2	49	345	456	838	524	1710
MIN	6.1	5.4	4.8	5.0	3.0	2.8	2.4	6.8	15	22	75	45
AC-FT	448	421	324	372	205	180	796	6760	4930	10770	15780	18540

CAL YR 1987	TOTAL	59803.4	MEAN	164	MAX	1050	MIN	4.8	AC-FT	118600
WTR YR 1988	TOTAL	30009.0	MEAN	82.0	MAX	1710	MIN	2.4	AC-FT	59520

08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°03'35", long 104°45'41", in NE¼SE¼SE¼ sec.25, T.10 N., R.20 E., Guadalupe County, Hydrologic Unit 13060001, at south boundary Preston Beck Grant, on left bank, 1.6 mi upstream from River Ranch, 5.8 miles southeast of Colonias, 9.1 miles northwest of Santa Rosa, and at mile 770.8.

DRAINAGE AREA.--2,340 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1976 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder. Elevation of gage is 4,760 ft above National Geodetic Vertical Datum of 1929, (levels by U.S. Army Corps of Engineers).

REMARKS.--Estimated daily discharges: Nov. 12, 13, May 26-31, June 1, 2, 17-23, Aug. 2, 3, 11-16, 27, 28, 30, 31, and Sept. 1, 2, 7-13, 17-22, 24-30. Water-discharge records fair except for estimated daily discharges, which are poor. Diversions and ground-water withdrawals for irrigation of about 11,800 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--12 years, 112 ft³/s, 81,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft³/s, June 21, 1982, gage height, 14.50 ft, recorded, 15.33 ft, from floodmarks, from rating curve extended above 1,500 ft³/s on basis of slope-area measurement of peak flow; minimum, 2.9 ft³/s, Aug. 21, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 13	1645	4,170	9.82	Sept. 2	0630	4,360	10.00
July 7	0445	5,510	10.87	Sept. 13	2400	*5,580	*10.92

Minimum discharge, 19 ft³/s, part of each day Mar. 24-26, 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	28	27	25	22	22	23	26	103	68	170	605
2	26	28	27	25	22	22	21	26	78	81	226	1690
3	26	28	28	24	23	22	26	26	62	121	229	711
4	26	28	28	24	23	21	21	27	50	130	128	514
5	26	28	28	24	23	22	20	27	47	111	149	384
6	26	30	28	24	23	21	20	26	81	843	326	332
7	27	28	27	24	23	21	20	25	69	1310	442	280
8	26	27	28	24	23	21	20	25	56	323	390	225
9	26	28	27	24	23	21	20	34	45	143	248	201
10	27	28	27	24	23	20	20	34	34	490	165	174
11	27	28	28	24	23	20	25	32	32	349	365	123
12	27	28	28	24	23	21	32	28	65	169	365	113
13	27	29	29	24	22	21	30	28	478	140	344	1050
14	28	29	29	24	23	21	27	28	149	74	243	1830
15	28	30	27	24	23	21	26	37	240	54	152	1090
16	28	30	27	24	23	20	35	50	655	42	187	550
17	28	29	27	24	23	21	52	80	313	70	103	369
18	27	29	27	24	23	20	74	207	179	62	298	298
19	27	28	27	24	23	20	82	331	99	314	358	234
20	27	28	26	23	23	20	53	402	64	237	304	187
21	28	28	26	24	22	20	41	374	46	133	185	166
22	28	28	26	23	22	20	42	371	47	116	130	198
23	28	28	26	23	22	20	50	327	46	110	121	237
24	28	28	25	23	22	20	52	282	37	76	654	198
25	27	28	26	23	22	20	44	389	33	51	461	161
26	27	29	26	23	22	20	29	228	58	33	404	140
27	28	28	25	23	22	20	27	198	68	29	309	122
28	28	28	25	23	22	20	27	182	67	223	298	104
29	28	28	25	23	22	20	27	161	86	109	702	91
30	28	28	25	23	---	20	27	147	73	255	628	79
31	28	---	25	23	---	21	---	129	---	153	672	---
TOTAL	843	850	830	735	655	639	1013	4287	3460	6419	9756	12456
MEAN	27.2	28.3	26.8	23.7	22.6	20.6	33.8	138	115	207	315	415
MAX	28	30	29	25	23	22	82	402	655	1310	702	1830
MIN	26	27	25	23	22	20	20	25	32	29	103	79
AC-FT	1670	1690	1650	1460	1300	1270	2010	8500	6860	12730	19350	24710
CAL YR 1987	TOTAL	73828	MEAN	202	MAX	1350	MIN	24	AC-FT	146400		
WTR YR 1988	TOTAL	41943	MEAN	115	MAX	1830	MIN	20	AC-FT	83190		

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV												
10...	1045	28	800	838	7.95	7.90	25.5	11.0	0.40	9.9	450	350
JAN												
21...	1115	24	820	844	8.04	8.20	9.5	6.0	0.50	15.6	510	400
MAR												
15...	1530	21	875	892	8.49	7.90	18.0	17.5	0.50	8.4	480	380
MAY												
17...	1115	76	450	465	7.98	8.00	26.0	21.0	400	6.8	230	110
JUL												
12...	1030	174	345	396	8.04	8.00	25.0	22.0	840	6.8	170	74
SEP												
15...	0925	1030	340	--	7.90	--	16.0	16.0	--	7.4	--	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 10...	150	19	10	0.2	1.2	181	0	148	103	330	5.4	0.40
JAN 21...	170	21	10	0.2	1.6	147	17	149	107	370	4.9	0.30
MAR 15...	160	20	10	0.2	1.4	135	5	3120	99	390	4.3	0.30
MAY 17...	75	9.8	6.4	0.2	1.4	139	0	114	114	120	2.8	0.30
JUL 12...	55	7.3	9.6	0.3	2.0	117	0	96	94	85	3.7	0.20
SEP 15...	--	--	--	--	--	271	0	222	--	--	--	--

[illegible]

RIO GRANDE BASIN

08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)	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)
NOV 10...	1	100	<0.5	<1	9	<3	1	5	<5	19	31	<0.1
JAN 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	1	90	<0.5	<1	<1	<3	2	74	<5	11	8	<0.1
JUL 12...	2	140	<0.5	1	<1	<3	1	97	<5	10	6	<0.1
SEP 15...	--	--	--	--	--	--	--	--	--	--	--	--

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)	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)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 10...	<10	<1	1	1.0	1500	<6	5	64	4.9	54	K9	K21
JAN 21...	--	--	--	--	--	--	--	62	4.1	81	K1	K4
MAR 15...	--	--	--	--	--	--	--	51	2.9	72	K2	K1
MAY 17...	<10	<1	<1	1.0	660	<6	5	1620	332	33	K620	1800
JUL 12...	<10	2	<1	<1.0	400	<6	120	1610	756	86	470	1500
SEP 15...	--	--	--	--	--	--	--	4050	11300	81	290	1700

LOCATION.--Lat 35°05'42", long 104°39'49", Guadalupe County, Hydrologic Unit 13060001, in Preston-Beck Grant, on left bank, 3.7 mi upstream from mouth, 4.9 mi northeast of Santa Rosa Dam, and 10.4 mi northeast of Santa Rosa. Mouth at Pecos River mile 763.0.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,770 ft above National Geodetic Vertical Datum of 1929, from topographic map.

AVERAGE DISCHARGE.--15 years, 1.54 ft³/s, 1,120 acre-ft/yr.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood of unknown date reached a discharge of about 6,800 ft³/s, gage height, 11.6 ft, from floodmarks, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*), from rating curve extended as explained above:

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.02	.00	.00	.11	.00	.00
2	.00	.00	.00	.00	.00	.00	.04	.00	.00	.03	.00	.00
3	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.0	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.00	.00
7	.00	2.5	.00	.00	.00	.00	.00	.00	.00	.14	.00	.00
8	.00	2.1	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
9	.00	.40	.00	.02	.00	.00	.00	.00	.00	.00	.78	.00
10	.00	.14	.00	.02	.00	.00	.00	.00	.00	.00	.05	.00
11	.00	.06	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.04	.00	.06	.00	.00	.00	.00	.00	.00	.68	.00
13	.00	.03	.00	.03	.00	.00	.00	.00	394	.00	.00	38
14	.00	.01	.00	.03	.00	.00	.00	.00	120	.00	.00	492
15	.00	.06	.00	.03	.00	.00	.00	.00	43	.00	.00	8.5
16	.00	.07	.00	.02	.00	.00	.04	.00	12	.00	.32	1.4
17	.00	.06	.00	.02	.00	.00	.02	.00	2.6	.00	2.2	.28
18	.00	.04	.00	.02	.00	.00	.00	.00	.58	.00	.30	.11
19	.00	.00	.02	.02	.00	.00	.00	.00	.17	.00	70	.02
20	.00	.00	.03	.02	.00	.00	.00	.00	.05	.00	.76	.00
21	.00	.00	.00	.02	.00	.00	.00	.00	.01	.00	.04	2.1
22	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	1.8
23	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.17
24	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.04
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
26	.00	.00	.00	.00	.00	.00	.00	5.0	9.9	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.47	25	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.01	4.1	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.78	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.24	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	5.51	.05	.40	.00	.00	.13	5.48	612.43	3.49	75.13	544.43
MEAN	.00	.18	.00	.01	.00	.00	.00	.18	20.4	.11	2.42	18.1
MAX	.00	2.5	.03	.06	.00	.00	.04	5.0	394	2.0	70	492
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	11	.1	.8	.00	.00	.3	11	1210	6.9	149	1080
CAL YR 1987	TOTAL	648.70		MEAN	1.78	MAX	262	MIN	.00	AC-FT	1290	
WTR YR 1988	TOTAL	1247.05		MEAN	3.41	MAX	492	MIN	.00	AC-FT	2470	

08382760 LOS ESTEROS CREEK TRIBUTARY ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°05'35", long 104°40'20", Guadalupe County, Hydrologic Unit 13060001, in Preston-Beck Grant, 0.5 mi southwest of Los Esteros Creek gage, 0.8 mi upstream from confluence with Los Esteros Creek, 4.6 mi northeast of Santa Rosa Dam, and 10.2 mi northeast of Santa Rosa.

DRAINAGE AREA.--13.7 mi².

PERIOD OF RECORD.--July 1973 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,760 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No known diversions or ground-water withdrawals for irrigation upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--15 years, 0.27 ft³/s, 196 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft³/s, Aug. 29, 1977, gage height, 7.80 ft, from rating curve extended above 0.5 ft³/s on basis of velocity-area studies and slope-area measurement at gage height 7.80 ft; no flow most of the time.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft³/s and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 13	1600	*446	*3.13	Sept. 13	2230	359	2.93
June 26	1900	146	2.24				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	33	.00	.00	27
14	.00	.00	.00	.00	.00	.00	.00	.00	.49	.00	.00	19
15	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.08
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.04	9.7	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.70	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.04	43.90	.05	.00	46.08
MEAN	.00	.00	.00	.00	.00	.00	.00	.00	1.46	.00	.00	1.54
MAX	.00	.00	.00	.00	.00	.00	.00	.04	33	.04	.00	27
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.08	87	.1	.00	91
CAL YR 1987 TOTAL	18.48			MEAN	.05	MAX	14	MIN	.00	AC-FT	37	
WTR YR 1988 TOTAL	90.07			MEAN	.25	MAX	33	MIN	.00	AC-FT	179	

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 mi², approximately.

PERIOD OF RECORDS.--April 1980 to current year.

GAGE.--Water-stage recorder. Elevation 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, 447,100 acre-ft, from capacity table effective August 1980, between elevations, 4,630.0 ft, invert of outlet structure, and 4,797.0 ft, crest of spillway. No dead storage. Lake was created primarily for flood, irrigation, and sediment control.

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, 114,900 acre-ft, June 16, elevation, 4,748.34 ft; minimum, 78,820 acre-ft, Sept. 30, elevation, 4,738.23 ft.

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111600	111360	111750	111750	111400	111950	111910	112980	111670	100040	97310	95840
2	111560	111360	111710	111830	111440	111990	111950	112820	111750	98290	97560	95730
3	111520	111400	111710	111910	111440	111990	111990	112700	111830	96520	97820	96160
4	111520	111480	111640	111870	111440	111990	112030	112700	111910	94990	98180	95950
5	111520	111520	111520	111670	111480	112030	112150	112700	111950	94100	98610	95560
6	111480	111560	111480	111560	111480	112030	112190	112660	112070	93790	99050	95160
7	111400	111520	111360	111560	111480	112030	112230	112540	112150	93610	99670	94530
8	111440	111520	111440	111560	111520	112030	112270	112390	112230	92630	100330	93610
9	111320	111520	111520	111560	111520	112030	112230	112350	112270	92560	100880	93020
10	111240	111520	111480	111560	111520	112030	112190	112350	112230	93120	101180	92280
11	111200	111520	111400	111520	111520	111990	112190	112390	112190	93820	101620	91450
12	111240	111520	111400	111520	111520	111950	112230	112350	112270	94210	102100	90760
13	111320	111480	111400	111520	111520	111950	112270	112310	112660	94390	102480	91760
14	111320	111480	111400	111520	111560	111910	112270	112310	114020	94490	102740	94030
15	111360	111520	111440	111520	111560	111910	112310	112310	114330	94530	102960	96130
16	111320	111560	111400	111520	111560	111910	112350	112350	114900	94600	103190	97020
17	111280	111520	111640	111520	111600	111910	112540	112390	114420	94670	103370	96810
18	111240	111560	111670	111480	111600	111950	112740	112780	113980	94700	103710	96380
19	111240	111560	111670	111480	111640	111950	112820	113260	113940	94950	104430	95310
20	111200	111600	111670	111440	111670	111950	112940	113620	113940	95310	104880	93790
21	111160	111600	111600	111440	111710	111950	112940	113260	113900	95520	105260	91940
22	111200	111600	111520	111440	111710	111950	112900	112900	113900	95630	105480	90380
23	111200	111600	111480	111440	111750	111950	112900	112420	113700	95770	105860	89190
24	111200	111600	111480	111440	111790	111950	112940	112030	112540	95880	105710	87600
25	111200	111600	111520	111480	111790	111910	112940	111600	111010	95910	104610	85930
26	111280	111600	111560	111480	111750	111910	112940	111560	109290	95910	103260	84870
27	111360	111560	111560	111440	111750	111910	112940	111670	107550	95910	101580	84370
28	111360	111560	111560	111400	111830	111910	112980	111710	105860	96160	100150	81710
29	111400	111640	111600	111400	111910	111870	112980	111750	104240	96480	98870	79390
30	111360	111750	111640	111400	---	111830	112980	111710	102440	96740	97740	78820
31	111360	---	111670	111400	---	111870	---	111600	---	97060	96700	---
MAX	111600	111750	111750	111910	111910	112030	112980	113620	114900	100040	105860	97020
MIN	111160	111360	111360	111400	111400	111830	111910	111560	102440	92560	96700	78820
(+)	-200	+390	-80	-270	+510	-40	+1110	-1380	-9160	-5380	-360	-17880

CAL YR 1987 MAX 120480 MIN 106060 (+) +5230
WTR YR 1988 MAX 114900 MIN 78820 (+) -32740

(+) CHANGE IN CONTENTS, IN ACRE-Feet

08382810 SANTA ROSA LAKE NEAR SANTA ROSA, NM -- Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4747.51	4747.45	4747.55	4747.55	4747.46	4747.60	4747.59	4747.86	4747.53	4744.47	4743.72	4743.31
2	4747.50	4747.45	4747.54	4747.57	4747.47	4747.61	4747.60	4747.82	4747.55	4743.99	4743.79	4743.28
3	4747.49	4747.46	4747.54	4747.59	4747.47	4747.61	4747.61	4747.79	4747.57	4743.50	4743.86	4743.40
4	4747.49	4747.48	4747.52	4747.58	4747.47	4747.61	4747.62	4747.79	4747.59	4743.07	4743.96	4743.34
5	4747.49	4747.49	4747.49	4747.53	4747.48	4747.62	4747.65	4747.79	4747.60	4742.82	4744.08	4743.23
6	4747.48	4747.50	4747.48	4747.50	4747.48	4747.62	4747.66	4747.78	4747.63	4742.73	4744.20	4743.12
7	4747.46	4747.49	4747.45	4747.50	4747.48	4747.62	4747.67	4747.75	4747.65	4742.68	4744.37	4742.94
8	4747.47	4747.49	4747.47	4747.50	4747.49	4747.62	4747.68	4747.71	4747.67	4742.40	4744.55	4742.68
9	4747.44	4747.49	4747.49	4747.50	4747.49	4747.62	4747.67	4747.70	4747.68	4742.38	4744.70	4742.51
10	4747.42	4747.49	4747.48	4747.50	4747.49	4747.62	4747.66	4747.70	4747.67	4742.54	4744.78	4742.30
11	4747.41	4747.49	4747.46	4747.49	4747.49	4747.61	4747.66	4747.71	4747.66	4742.74	4744.90	4742.06
12	4747.42	4747.49	4747.46	4747.49	4747.49	4747.60	4747.67	4747.70	4747.68	4742.85	4745.03	4741.86
13	4747.44	4747.48	4747.46	4747.49	4747.49	4747.60	4747.68	4747.69	4747.78	4742.90	4745.13	4742.15
14	4747.44	4747.48	4747.46	4747.49	4747.50	4747.59	4747.68	4747.69	4748.12	4742.93	4745.20	4742.80
15	4747.45	4747.49	4747.47	4747.49	4747.50	4747.59	4747.69	4747.69	4748.20	4742.94	4745.26	4743.39
16	4747.44	4747.50	4747.46	4747.49	4747.50	4747.59	4747.70	4747.70	4748.34	4742.96	4745.32	4743.64
17	4747.43	4747.49	4747.52	4747.49	4747.51	4747.59	4747.75	4747.71	4748.22	4742.98	4745.37	4743.58
18	4747.42	4747.50	4747.53	4747.48	4747.51	4747.60	4747.80	4747.81	4748.11	4742.99	4745.46	4743.46
19	4747.42	4747.50	4747.53	4747.48	4747.52	4747.60	4747.82	4747.93	4748.10	4743.06	4745.65	4743.16
20	4747.41	4747.51	4747.53	4747.47	4747.53	4747.60	4747.85	4748.02	4748.10	4743.16	4745.77	4742.73
21	4747.40	4747.51	4747.51	4747.47	4747.54	4747.60	4747.85	4747.93	4748.09	4743.22	4745.87	4742.20
22	4747.41	4747.51	4747.49	4747.47	4747.54	4747.60	4747.84	4747.84	4748.09	4743.25	4745.93	4741.75
23	4747.41	4747.51	4747.48	4747.47	4747.55	4747.60	4747.84	4747.72	4748.04	4743.29	4746.03	4741.40
24	4747.41	4747.51	4747.48	4747.47	4747.56	4747.60	4747.85	4747.62	4747.75	4743.32	4745.99	4740.93
25	4747.41	4747.51	4747.49	4747.48	4747.56	4747.59	4747.85	4747.51	4747.36	4743.33	4745.70	4740.43
26	4747.43	4747.51	4747.50	4747.48	4747.55	4747.59	4747.85	4747.50	4746.92	4743.33	4745.34	4740.11
27	4747.45	4747.50	4747.50	4747.47	4747.55	4747.59	4747.85	4747.53	4746.47	4743.33	4744.89	4739.96
28	4747.45	4747.50	4747.50	4747.46	4747.57	4747.59	4747.86	4747.54	4746.03	4743.40	4744.50	4739.14
29	4747.46	4747.52	4747.51	4747.46	4747.59	4747.58	4747.86	4747.55	4745.60	4743.49	4744.15	4738.41
30	4747.45	4747.55	4747.52	4747.46	---	4747.57	4747.86	4747.54	4745.12	4743.56	4743.84	4738.23
31	4747.45	---	4747.53	4747.46	---	4747.58	---	4747.51	---	4743.65	4743.55	---
MEAN	4747.44	4747.49	4747.50	4747.49	4747.51	4747.60	4747.74	4747.71	4747.53	4743.14	4744.87	4742.05
MAX	4747.51	4747.55	4747.55	4747.59	4747.59	4747.62	4747.86	4748.02	4748.34	4744.47	4746.03	4743.64
MIN	4747.40	4747.45	4747.45	4747.46	4747.46	4747.57	4747.59	4747.50	4745.12	4742.38	4743.55	4738.23
CAL YR 1987	MEAN	4747.27	MAX	4749.71	MIN	4746.08						
WTR YR 1988	MEAN	4746.50	MAX	4748.34	MIN	4738.23						

08382830 PECOS RIVER BELOW SANTA ROSA DAM, NM

LOCATION.--Lat 35°01'27", long 104°41'20", Guadalupe County, Hydrologic Unit 13060001, in Jose Perea Grant, on right bank, 0.2 mi downstream from Santa Rosa Dam, 5.7 mi north of Santa Rosa, and at mile 757.0.

DRAINAGE AREA.--2,430 mi², approximately.

PERIOD OF RECORD.--January 1980 to current year.

GAGE.--Water-stage recorder. Elevation 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, 195 ft upstream at datum 2.36 ft higher.

REMARKS.--Estimated daily discharges: Dec. 14-17, 25-31, Jan. 1, 2, and Feb. 11-15. Records good except for estimated daily discharges, which are poor. Flow completely regulated by Santa Rosa Lake (08382810) 0.2 mi upstream since April 1980. Diversions and ground-water withdrawals for irrigation of about 12,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--8 years, 99.9 ft³/s, 72,380 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft³/s, June 26, 1980, gage height, about 5.77 ft, present datum; no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,310 ft³/s, Sept. 29; minimum daily, no flow, Nov. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	.00	23	1.3	13	.79	.90	1.1	8.2	948	.89	1030
2	8.0	3.1	38	1.3	13	.71	.84	.89	6.9	942	.92	682
3	8.5	1.4	38	1.2	9.3	.68	.86	.92	4.7	941	.31	469
4	8.5	1.0	36	62	3.0	.77	.89	.98	4.1	940	.33	470
5	9.1	.95	36	98	1.1	.81	.89	1.1	3.7	939	.26	472
6	9.1	.94	36	52	.46	.89	.90	.98	3.4	940	.26	473
7	5.0	.71	19	25	.33	.92	1.0	.89	3.3	938	.26	474
8	1.6	.52	8.2	25	.37	.89	.97	.94	2.5	826	.21	473
9	1.0	.72	6.7	25	.37	.90	.65	.95	2.6	206	.21	473
10	.31	.70	6.0	25	.37	.91	.59	1.0	3.1	29	.21	473
11	.13	.72	6.2	25	.37	.98	.65	.94	1.7	15	.21	470
12	.04	1.1	5.3	25	.37	1.0	.59	.81	1.3	4.6	.21	468
13	.08	1.7	5.0	25	.37	.92	.59	.85	1.1	4.6	.19	470
14	.08	1.8	5.0	24	.37	.89	.67	.94	1.0	4.6	.17	342
15	.08	2.0	5.0	25	.37	.95	.70	1.0	2.3	4.6	.17	113
16	.10	2.2	5.0	25	.37	.96	.77	1.1	283	4.4	.35	217
17	.15	2.2	22	24	.31	.89	.68	1.3	531	4.3	.59	526
18	.17	2.2	34	24	.31	.95	.68	1.2	262	4.3	.59	526
19	.19	2.2	34	23	.33	1.0	.85	1.2	64	4.3	.59	847
20	.21	2.2	34	23	.37	1.0	.88	272	20	4.3	.59	1030
21	.21	2.2	34	24	.40	1.0	.72	491	3.8	4.3	.91	1030
22	.23	2.2	32	21	.42	1.0	.66	491	2.6	4.0	.05	1030
23	.26	2.2	20	13	.37	1.1	.57	490	111	4.0	.04	1030
24	.32	2.3	2.5	13	.32	1.1	.51	490	573	4.0	486	1020
25	.37	2.4	1.6	12	.31	1.1	.63	490	897	4.7	1020	1020
26	.37	2.4	1.6	13	3.3	1.0	.64	248	892	2.7	1050	541
27	.40	2.4	1.6	13	3.2	1.0	.68	88	868	1.2	1050	253
28	.46	2.3	1.6	13	1.5	1.0	.72	88	915	1.0	1040	1220
29	.51	2.2	1.6	13	1.0	.95	.83	89	954	1.0	1040	1310
30	.43	2.3	1.4	13	---	.90	.82	90	946	.92	1040	519
31	.07	---	1.3	13	---	.96	---	58	---	.89	1040	---
TOTAL	63.97	51.26	501.6	719.8	55.66	28.92	22.33	3404.09	7372.3	7732.71	7774.52	19471
MEAN	2.06	1.71	16.2	23.2	1.92	.93	.74	110	246	249	251	649
MAX	9.1	3.1	38	98	13	1.1	1.0	491	954	948	1050	1310
MIN	.04	.00	1.3	1.2	.31	.68	.51	.81	1.0	.89	.04	113
AC-FT	127	102	995	1430	110	57	44	6750	14620	15340	15420	38620
CAL YR 1987 TOTAL	59870.27			MEAN	164	MAX	1040	MIN	.00	AC-FT	118800	
WTR YR 1988 TOTAL	47198.16			MEAN	129	MAX	1310	MIN	.00	AC-FT	93620	

RIO GRANDE BASIN

08383000 PECOS RIVER AT SANTA ROSA, NM

LOCATION.--Lat 34°56'36", long 104°41'55", in NW¼SE¼ sec.3, T.8 N., R.21 E., Guadalupe County, Hydrologic Unit 13060001, on left bank, 0.4 mi downstream from bridge on Interstate Highway 40, 0.6 mi upstream from bridge on Parker Street in Santa Rosa, 1.9 mi upstream from El Rito Creek, and at mile 748.4.

DRAINAGE AREA.--2,650 mi², approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1903 to December 1905 (gage heights only), January to December 1906, February 1910 to July 1911, September 1912 to December 1924, March to May 1927, July 1927, January 1928 to current year. Monthly discharge only for some periods, published in WSP 1312. Figures of daily discharge for Apr. 5-20, May 4-7, 11, Aug. 13, 16-18, 24, Sept. 7-9, 11, 13, 19, 21, 23, 25, 27, Oct. 1-31, Nov. 3, 4, 9, 11, 20, 22, 1910, and Feb. 1 to Mar. 31, June 1 to July 31, 1911, published in WSP 358 are unreliable and should not be used.

REVISED RECORDS.--WSP 1512: 1913-15. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and partial concrete control. Elevation of gage is 4,537.56 ft above National Geodetic Vertical Datum of 1929. For history of changes prior to Sept. 13, 1967, see WSP 2123.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated by Santa Rosa Lake (station 08382810) 8.8 mi upstream since April 1980. Diversions for irrigation of about 12,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--63 years (water years 1906, 1913-1914, 1928-79), 135 ft³/s, 97,810 acre-ft/yr, prior to completion of Santa Rosa Dam.
9 years (water years 1980-1988), 99.5 ft³/s, 72,100 acre-ft/yr, since completion of Santa Rosa Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft³/s, June 2, 1937, gage height, 25.7 ft, site and datum then in use, from rating curve extended above 32,000 ft³/s; minimum, 0.28 ft³/s, Jan. 7, 1971. The flood of June 2, 1937, is the greatest since about 1886. Flood of Sept. 30, 1904, reached a stage of 24.7 ft, site and datum then in use, discharge, 45,000 ft³/s, by Kutter's formula. Flood of June 9, 1903, reached a stage of 21.1 ft, same site and datum as in 1904, discharge, 34,000 ft³/s, by comparison with 1904 flood.
Since completion of Santa Rosa Dam in 1980, maximum discharge, 7,050 ft³/s, Aug. 11, 1981, gage height, 6.56 ft; minimum daily, 2.0 ft³/s, July 23-25, 31, and Aug. 1, 12, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,290 ft³/s, Sept. 28, gage height, 2.83 ft; minimum daily, 3.9 ft³/s, Oct. 29 to Nov. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	3.9	8.7	4.5	15	7.4	8.8	4.7	21	923	5.1	977
2	15	3.9	44	4.5	15	8.1	8.6	4.9	16	902	5.3	710
3	15	3.9	44	4.5	15	7.8	6.8	4.5	13	902	6.8	458
4	15	3.9	44	25	10	6.8	5.8	5.7	11	902	6.2	458
5	14	3.9	44	87	8.2	6.5	5.8	5.8	10	904	11	458
6	14	4.8	44	68	7.2	6.5	5.8	5.7	11	895	6.6	459
7	14	5.1	38	29	6.5	6.5	5.5	6.0	9.3	910	7.0	466
8	11	5.1	16	29	5.9	6.5	5.1	7.0	8.5	824	6.9	470
9	6.9	5.1	14	29	5.7	6.8	5.8	6.5	7.6	310	5.8	474
10	6.1	5.1	12	28	5.8	6.9	5.8	6.5	19	65	5.1	481
11	5.8	5.1	11	28	5.8	6.5	5.8	6.5	8.9	45	5.5	493
12	5.5	5.1	11	27	5.8	6.5	5.8	6.5	7.1	14	5.3	501
13	5.1	5.1	11	27	5.5	6.5	5.8	6.5	5.8	10	5.5	523
14	4.9	5.1	11	27	5.1	6.5	5.8	6.5	5.6	8.7	5.5	428
15	4.5	5.1	8.3	27	5.1	6.5	5.8	6.5	70	8.4	5.7	214
16	4.5	5.1	8.1	27	5.1	6.5	9.0	6.2	217	9.0	5.4	160
17	4.5	5.1	12	27	5.1	6.5	9.4	5.8	511	10	5.1	579
18	4.5	5.1	43	27	5.1	6.5	7.0	6.5	336	9.6	5.3	579
19	4.5	5.1	44	27	5.1	6.2	5.8	9.5	120	9.4	5.3	828
20	4.5	5.1	44	27	5.1	5.8	5.5	169	71	8.6	5.1	1040
21	4.5	5.1	44	26	5.1	5.8	4.9	451	21	9.1	5.5	1030
22	4.5	5.1	44	26	4.8	5.8	5.1	458	18	9.0	5.7	1020
23	4.5	5.1	42	15	5.0	5.8	5.1	458	73	9.3	5.8	999
24	4.5	5.1	14	16	5.1	4.9	5.1	459	485	9.8	311	987
25	4.5	5.1	7.5	14	5.1	4.8	5.1	457	841	9.8	951	985
26	4.5	5.1	5.9	14	5.1	5.1	5.1	303	847	12	987	668
27	4.5	5.1	5.7	16	6.5	5.1	5.1	109	821	8.5	983	144
28	4.2	5.1	5.1	16	8.1	5.4	5.1	110	853	5.8	976	1160
29	3.9	5.1	5.1	16	7.7	5.8	5.1	108	900	5.1	976	1270
30	3.9	5.1	4.9	16	---	5.6	5.1	106	912	5.5	976	680
31	3.9	---	4.5	15	---	5.5	---	95	---	5.1	976	---
TOTAL	221.7	146.7	694.8	769.5	199.6	193.4	180.3	3400.8	7249.8	7758.7	7272.5	19699
MEAN	7.15	4.89	22.4	24.8	6.88	6.24	6.01	110	242	250	235	657
MAX	15	5.1	44	87	15	8.1	9.4	459	912	923	987	1270
MIN	3.9	3.9	4.5	4.5	4.8	4.8	4.9	4.5	5.6	5.1	5.1	144
AC-FT	440	291	1380	1530	396	384	358	6750	14380	15390	14430	39070
CAL YR 1987	TOTAL	58705.3		MEAN	161	MAX	1000	MIN	3.9	AC-FT	116400	
WTR YR 1988	TOTAL	47786.8		MEAN	131	MAX	1270	MIN	3.9	AC-FT	94790	

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1905-07, 1959 to current year.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 11...	1200	5.5	2400	2540	7.72	8.00	19.0	12.0	9.3	1200	1000	360
JAN 20...	0935	22	850	--	7.57	--	4.0	2.0	13.1	--	--	--
MAR 17...	0945	6.4	2470	2450	7.75	7.80	-0.5	6.5	10.8	1400	1300	480
MAY 18...	1530	6.4	2600	2610	7.92	7.90	24.5	24.5	--	1800	1700	630
JUL 13...	0930	11	1600	1630	7.84	8.10	28.0	23.0	6.6	890	770	290
SEP 14...	1040	421	450	--	7.93	--	23.0	19.5	9.2	--	--	--

[illegible]

RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM
(Surveillance network station)

LOCATION.--Lat 34°43'48", long 104°31'28", in NE¼SE¼NW¼ sec.20, T.6 N., R.23 E., Guadalupe County, Hydrologic Unit 13060001, on left bank 9.0 mi southeast of Puerto de Luna, 17.5 mi upstream from Sumner Dam, and at mile 719.5.

DRAINAGE AREA.--3,970 mi², approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to current year.

REVISED RECORDS.--WSP 1512: 1939.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,311.34 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 15, 1954, at datum 1.0 ft higher.

REMARKS.--Estimated daily discharges: Dec. 26-31, July 10-14, and Aug. 12-17. Water-discharge records good except for estimated daily discharges, which are poor. Flow regulated by Santa Rosa Lake (station 08382810) 37.7 mi upstream since April 1980. Diversions for irrigation of about 12,500 acres, 1959 determination, upstream from station. Discharge represents inflow to Lake Sumner. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--41 years (water years 1939-79), 209 ft³/s, 151,400 acre-ft/yr, prior to completion of Santa Rosa Dam.
9 years (water years 1980-88), 188 ft³/s, 136,210 acre-ft/yr, since completion of Santa Rosa Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,600 ft³/s, Sept. 1, 1942, gage height, 17.00 ft, from rating curve extended above 7,400 ft³/s on basis of flow "at Santa Rosa"; minimum, 11 ft³/s, Jan. 31, 1951.
Since completion of Santa Rosa Dam in 1980, maximum discharge, 27,100 ft³/s, Sept. 2, 1986, gage height, 11.23 ft; minimum, 37 ft³/s, Aug. 3, 4, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1886 occurred June 2, 1937, when peak at Santa Rosa was 55,200 ft³/s, and peak inflow to Lake Sumner was about 75,000 ft³/s. Flood of July 24, 1895, was reported as "highest in 10 years." Other major floods occurred on June 9, 1903, Sept. 30, 1904, and May 1, 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,310 ft³/s, Sept. 14, gage height, 5.47 ft; minimum, 60 ft³/s, May 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	73	82	83	94	84	87	75	162	1170	75	1360
2	74	76	87	82	95	85	94	72	96	1190	75	1370
3	75	76	114	83	96	88	93	72	84	1220	72	700
4	79	75	118	81	93	87	80	74	79	1230	70	678
5	78	75	120	124	88	84	73	74	78	1350	72	666
6	77	82	120	184	84	85	72	74	93	1270	77	662
7	72	84	120	138	83	83	73	74	78	1290	77	656
8	71	83	109	118	82	85	75	77	78	1300	102	652
9	70	82	90	113	80	84	72	73	76	886	81	658
10	71	84	88	108	80	83	76	72	75	290	109	657
11	71	82	87	109	82	82	70	71	75	149	142	658
12	72	83	87	112	81	86	70	70	68	109	91	670
13	69	82	89	109	79	81	70	67	66	98	76	909
14	73	84	96	111	79	88	70	67	65	94	73	1910
15	71	83	106	110	80	87	71	66	68	92	71	626
16	71	84	112	109	83	84	84	65	420	85	69	232
17	70	83	90	110	80	84	110	62	495	84	69	456
18	73	82	93	110	81	88	91	72	621	148	124	662
19	74	82	120	110	81	80	83	90	272	134	118	729
20	74	82	123	109	81	74	81	87	171	86	75	1250
21	76	82	120	109	81	74	77	433	122	84	75	1500
22	77	82	119	108	81	72	74	568	85	82	72	1330
23	75	82	120	105	81	72	73	571	76	78	80	1290
24	77	82	113	96	82	70	77	581	194	78	115	1280
25	72	80	84	96	84	67	84	595	907	79	915	1290
26	70	80	84	93	85	70	78	612	1030	78	1270	1280
27	74	81	84	94	84	71	79	293	1080	75	1300	377
28	71	82	84	95	85	72	78	209	1040	87	1310	937
29	70	82	84	95	84	72	81	214	1130	82	1300	1590
30	71	82	83	95	---	73	80	200	1160	74	1330	1400
31	73	---	83	94	---	69	---	192	---	70	1400	---
TOTAL	2267	2432	3109	3293	2429	2464	2376	5922	10044	13142	10885	28435
MEAN	73.1	81.1	100	106	83.8	79.5	79.2	191	335	424	351	948
MAX	79	84	123	184	96	88	110	612	1160	1350	1400	1910
MIN	69	73	82	81	79	67	70	62	65	70	69	232
AC-FT	4500	4820	6170	6530	4820	4890	4710	11750	19920	26070	21590	56400
CAL YR 1987 TOTAL		88301		MEAN	242	MAX	1080	MIN	39	AC-FT	175100	
WTR YR 1988 TOTAL		86798		MEAN	237	MAX	1910	MIN	62	AC-FT	172200	

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 1987 TO SEPTEMBER 1988

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	
NOV 12...	1100	81	2810	2910	8.20	7.80	23.0	8.0	11.0	10	1200	1100	
MAR 16...	0945	80	2890	2920	8.18	7.80	7.0	5.0	11.3	<10	1600	1500	
MAY 18...	1115	66	2920	2930	8.08	7.80	21.0	18.5	--	12	1900	1800	
SEP 13...	1300	787	1100	1190	7.88	7.30	25.0	24.0	7.0	61	610	470	
DATE	TIME	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 12...	360	71	100	1	2.1	146	0	120	82	1500	150	0.60	
MAR 16...	530	70	99	1	7.7	159	0	130	109	1700	130	0.60	
MAY 18...	630	74	99	1	2.5	134	0	110	90	1700	140	0.60	
SEP 13...	200	27	22	0.4	3.6	159	0	130	141	520	24	0.30	
DATE	TIME	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
NOV 12...	14	2250	<0.100	<0.100	0.110	0.09	--	<0.010	0.010	0.5	2	2	
MAR 16...	13	2620	<0.100	<0.100	0.120	0.28	--	0.010	<0.010	0.3	--	--	
MAY 18...	15	2720	<0.100	<0.100	0.110	0.49	--	0.020	<0.010	1.1	--	--	
SEP 13...	26	912	0.400	0.450	0.100	9.9	10	0.410	0.130	150	3	3	
DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
NOV 12...	110	<1	1	1	3	8	1	10	<5	<5	<0.10	<0.1	
MAR 16...	110	--	--	--	--	--	--	20	--	--	--	--	
MAY 18...	120	--	--	--	--	--	--	20	--	--	--	--	
SEP 13...	50	<1	6	260	5	290	7	2400	85	<5	--	0.1	

RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)
NOV 12...	<1	<1	<10	20	<2.0	0.7	110	2	<1	<10	<50
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
SEP 13...	<1	<1	850	36	--	--	--	--	--	--	--
DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 12...	<1	10	<10	<10	<0.10	<10	267	58	91	K2	54
MAR 16...	--	--	--	--	--	--	336	72	79	<1	K6
MAY 18...	--	--	--	--	--	--	197	35	80	K2	K32
SEP 13...	--	--	--	--	--	--	16200	34400	91	5800	31000

08384000 LAKE SUMNER NEAR FORT SUMNER, NM

LOCATION.--Lat 34°36'30", long 104°23'04", in SE¼SW¼ sec.34, T.5 N., R.24 E., DeBaca County, Hydrologic Unit 13060001, near center of dam on Pecos River, 5.0 mi northeast of Guadalupe, 12.2 mi northwest of Fort Sumner, and at mile 702.0.

DRAINAGE AREA.--4,390 mi², approximately (contributing area).

PERIOD OF RECORD.--December 1938 to September 1965 (month end elevations and contents), October 1965 to current year. Month end 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.--Nonrecording gage. Elevation of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). April 1, 1946 to Sept. 30, 1957, water-stage recorder above elevation 4,234.25 ft, nonrecording gage below.

REMARKS.--Lake is formed by earthfill dam, completed and storage began in August 1937. Capacity, 101,600 acre-ft, from capacity table dated November 1973, between elevation 4,200.0 ft, sill of outlet gate, and elevation 4,275.0 ft, normal operating level. No dead storage. Reservoir is used to store water for irrigation.

COOPERATION.--Records provided by U.S. 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, 46,470 acre-ft, Feb. 13-20, elevation, 4,259.20 ft; minimum, 13,730 acre-ft, Sept. 18-20, elevation, 4,241.30 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 08:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36570	27450	32620	38430	44630	45670	43340	42330	19170	19310	22280	21500
2	36570	27470	32620	38670	44890	45670	43340	42330	19310	19310	22280	21960
3	36570	27630	32620	38900	45190	45670	43600	42080	19310	19310	22120	22280
4	36570	27630	32820	38900	45190	45410	43600	42080	19310	19310	21960	22120
5	36570	27820	33040	39140	45190	45410	43850	41830	19310	19590	21960	21350
6	36350	28010	33470	39380	45410	45410	43850	41830	19310	20010	21810	20740
7	36350	28580	33900	39860	45410	45410	43850	41580	19310	20010	21810	19590
8	36120	28770	33900	40110	45670	45150	43850	41580	19310	20300	21650	19310
9	36120	28970	34340	40350	45940	45150	43850	41330	19170	20600	21650	18490
10	35890	28970	34340	40590	45940	45150	43600	41330	19170	20600	21500	17820
11	35890	29360	34560	40590	46200	45150	43600	41080	19030	22590	21500	17070
12	35670	29360	34780	40840	46200	44890	43600	39140	18890	22760	21350	16100
13	35670	29360	34780	41080	46470	44890	43340	37260	18760	22760	21350	15280
14	35670	29750	34780	41330	46470	44890	43340	35000	18760	22760	21350	14940
15	35670	29950	35000	41580	46470	44630	43340	33040	18490	22590	21190	15480
16	35670	30350	35220	41830	46470	44630	43340	30960	18490	22590	21190	15400
17	35670	30350	35670	42080	46470	44630	43340	28970	19170	22590	21040	14600
18	35670	30550	35670	42080	46470	44630	43340	26890	19870	22440	21040	13730
19	35670	30550	35890	42330	46470	44370	43340	25450	20740	23410	21040	13730
20	35670	30550	35350	42580	46470	44370	43340	23570	21040	23410	21040	13730
21	35440	30750	36350	42580	46200	44370	43340	21650	21190	23410	20890	14160
22	35440	30960	36570	42830	46200	44110	43340	20450	21040	23240	20740	15740
23	35440	31160	36800	43090	46200	44110	43090	19890	21040	23240	20740	16340
24	35440	31160	37030	43340	45940	44110	43090	18580	20890	23100	20740	16700
25	33900	31370	37260	43340	45940	43850	43090	17880	19170	23100	20740	16950
26	31780	31570	37260	43600	45940	43850	42830	16950	18890	22920	20160	17320
27	29570	31780	37490	43850	45940	43600	42830	17820	19170	22760	20450	17690
28	28200	31780	37730	43850	45940	43600	42580	18490	19170	22590	20600	16820
29	27450	32200	37960	44110	45940	43340	42580	18620	19170	22590	20740	16460
30	27450	32620	38200	44370	---	43340	42580	18890	19170	22590	20890	17440
31	27450	---	38200	44630	---	43340	---	19030	---	22440	20740	---
MAX	36570	32620	38200	44630	46470	45670	43850	42330	21190	23410	22280	22280
MIN	27450	27450	32620	38430	44630	43340	42580	16950	18490	19310	20160	13730
(+)	-9350	+5170	+5580	+6430	+1310	-2600	-760	-23550	+140	+3270	-1700	-3300
CAL YR 1987	MAX 67440	MIN 27450	(+)	-29691								
WTR YR 1988	MAX 46470	MIN 13730	(+)	-19360								

(+) CHANGE IN CONTENTS, IN ACRE-FEET

08384500 PECOS RIVER BELOW SUMNER DAM, NM
(National stream-quality accounting network station)

LOCATION.--Lat 34°36'15", long 104°23'14", sec.2, T.4 N., R.24 E., DeBaca County, Hydrologic Unit 13060003, on left bank 1,200 ft downstream from Sumner Dam, 2.9 mi upstream from Salado Creek, 4.6 mi northeast of Guadalupe, 12.2 mi northwest of Fort Sumner, and at mile 701.7.

DRAINAGE AREA.--4,390 mi², approximately (contributing area).

PERIOD OF RECORD.--October 1912 to April 1926, August 1926 to current year. Monthly discharge only for some periods, published in WSP 1312. October 1944 to September 1974, published as "below Alamogordo Dam." Prior to October 1944, published as "near Guadalupe."

REVISED RECORDS.--WSP 1512: 1932. WSP 1632: 1942. WSP 1712: 1944.

GAGE.--Water-stage recorder and Parshall flume, with concrete control above top of flume. Elevation of gage is 4,142.67 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). Prior to Sept. 10, 1936, at site 1.5 mi upstream at different datum. Sept. 14, 1936 to Mar. 8, 1941, and June 11 to Sept. 21, 1941, at site 0.2 mi downstream at different datums.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow completely regulated by Lake Sumner (station 08384000) 0.3 mi upstream since August 1937. Diversion for irrigation of about 12,500 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--23 years (1913-25, 1927-36), 236 ft³/s, 171,000 acre-ft/yr, prior to completion of Sumner Dam. 52 years (water years 1937-88), 201 ft³/s, 145,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft³/s, Sept. 1, 1942, by computation of flow over spillway and through outlet gates of Sumner Dam by U.S. Bureau of Reclamation; maximum gage height, 13.58 ft, Sept. 22, 1941; no flow at times.

Flood of June 2, 1937, about 75,000 ft³/s, at site 1.5 mi upstream, from peak inflow to Lake Sumner.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,180 ft³/s, July 4; minimum daily, 0.39 ft³/s, Nov. 4, 23, 25-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	3.4	.50	1.3	2.4	98	39	97	82	1160	102	1010
2	99	.52	.51	1.2	2.4	98	1.3	97	82	1170	102	791
3	99	.59	.50	1.2	2.4	98	1.3	97	83	1170	102	684
4	99	.39	.50	1.2	2.4	98	1.3	97	83	1180	102	674
5	99	.55	.50	1.3	2.4	98	23	97	84	1170	102	868
6	99	.64	.50	1.3	2.3	98	90	97	95	1170	102	976
7	99	.59	.50	1.3	2.2	98	90	97	100	1160	102	826
8	99	.56	.51	1.4	2.0	98	90	97	100	1140	102	733
9	99	.54	.50	1.5	1.7	98	90	94	100	384	102	738
10	99	.62	.50	1.5	1.8	98	90	92	99	1.6	102	874
11	99	.58	.50	1.8	1.8	98	82	726	99	38	102	947
12	82	.51	.50	1.9	1.9	98	79	1040	99	104	102	953
13	71	.50	.60	1.9	1.9	98	79	1040	93	105	102	946
14	71	.58	.54	1.9	52	97	79	1040	103	105	102	952
15	71	.53	.55	2.0	78	97	79	1040	103	105	102	956
16	71	.50	.58	2.2	78	97	80	1040	104	105	102	952
17	71	.50	.63	2.2	92	97	79	1040	103	104	102	585
18	71	.52	.71	2.2	101	97	79	1040	103	107	101	378
19	71	.50	.77	2.4	101	97	79	1040	104	105	101	428
20	71	.50	.77	2.2	101	97	80	1030	104	105	101	727
21	73	.50	.88	2.2	101	97	80	1030	103	105	101	947
22	73	.46	.94	2.2	101	97	79	1030	103	105	101	955
23	73	.39	.97	2.2	101	97	79	1030	105	105	101	955
24	682	.40	1.1	2.2	101	97	80	1030	754	105	100	959
25	1010	.39	1.1	2.3	101	97	80	1030	1110	105	701	959
26	990	.39	1.1	2.3	101	97	97	389	1110	105	1010	753
27	990	.39	1.1	2.4	101	98	97	83	1120	105	1010	535
28	783	.39	1.1	2.4	101	95	97	84	1150	105	1010	831
29	88	.39	1.2	2.4	99	93	97	84	1160	102	1010	911
30	86	.50	1.3	2.4	---	93	97	83	1150	102	1010	730
31	85	---	1.3	2.4	---	93	---	83	---	102	1000	---
TOTAL	6672	17.82	23.26	59.3	1537.6	3007	2193.9	16994	9788	11834.6	9191	24533
MEAN	215	.59	.75	1.91	53.0	97.0	73.1	548	326	382	296	818
MAX	1010	3.4	1.3	2.4	101	98	97	1040	1160	1180	1010	1010
MIN	71	.39	.50	1.2	1.7	93	1.3	83	82	1.6	100	378
AC-FT	13230	35	46	118	3050	5960	4350	33710	19410	23470	18230	48660
CAL YR 1987	TOTAL	99172.08		MEAN	272	MAX	1200	MIN	.39	AC-FT	196700	
WTR YR 1988	TOTAL	85851.48		MEAN	235	MAX	1180	MIN	.39	AC-FT	170300	

08385000 FORT SUMNER MAIN CANAL NEAR FORT SUMNER, NM

LOCATION.--Lat 34°30'30", long 104°16'40", in SE¼SW¼SW¼ 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, 3.0 mi northwest of Fort Sumner, and at Pecos River mile 684.8.

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. Elevation of gage is 4,034.7 ft above National Geodetic Vertical Datum of 1929 (U.S. 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.--No estimated daily discharges. Records 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 temperatures were made during the year.

AVERAGE DISCHARGE.--37 years (water years 1940-42, 1955-88), 50.0 ft³/s, 36,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 174 ft³/s, July 22, 1941; no flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	46	.00	.00	.00	91	45	96	87	103	100	.00
2	77	.10	.00	.00	.00	95	1.6	94	87	103	99	.00
3	76	.03	.00	.00	.00	96	1.5	93	88	102	99	.00
4	76	.00	.00	.00	.00	96	1.3	92	89	103	98	.00
5	76	.00	.00	.00	.00	96	1.1	92	90	103	97	66
6	75	.00	.00	.00	.00	96	41	88	94	106	96	97
7	75	.00	.00	.00	.00	97	88	98	99	103	96	95
8	76	.00	.00	.00	.00	98	88	97	97	37	91	92
9	78	.00	.00	.00	.00	98	91	96	97	.09	100	94
10	78	.00	.00	.00	.00	97	92	94	97	.00	100	96
11	78	.00	.00	.00	.00	98	90	98	97	.17	100	98
12	78	.00	.00	.00	.00	98	80	96	97	66	99	98
13	73	.00	.00	.00	.00	98	81	95	96	100	99	98
14	64	.00	.00	.00	.00	97	81	94	87	100	95	98
15	67	.00	.00	.00	27	97	82	94	99	100	98	98
16	65	.00	.00	.00	53	97	85	94	96	100	98	98
17	65	.00	.00	.00	74	97	86	93	90	100	98	88
18	65	.00	.00	.00	97	97	83	93	87	103	100	103
19	65	.00	.00	.00	100	96	82	94	82	93	96	100
20	65	.00	.00	.00	100	93	81	38	84	92	99	100
21	66	.00	.00	.00	100	89	82	1.5	97	89	99	105
22	66	.00	.00	.00	100	92	81	1.4	98	92	99	40
23	66	.00	.00	.00	99	94	81	61	97	102	101	.00
24	69	.00	.00	.00	96	95	82	93	99	98	100	.00
25	60	.00	.00	.00	99	96	79	93	103	98	84	.00
26	77	.00	.00	.00	99	96	85	91	103	99	100	67
27	89	.00	.00	.00	99	96	90	90	103	99	98	94
28	89	.00	.00	.00	99	96	96	92	103	99	102	96
29	77	.00	.00	.00	98	99	96	90	103	100	49	102
30	77	.00	.00	.00	---	97	96	92	103	99	.02	102
31	76	---	.00	.00	---	93	---	89	---	99	.02	---
TOTAL	2261	46.13	.00	.00	1340.00	2971	2149.5	2622.9	2849	2688.26	2790.04	2125.00
MEAN	72.9	1.54	.00	.00	46.2	95.8	71.6	84.6	95.0	86.7	90.0	70.8
MAX	89	46	.00	.00	100	99	96	98	103	106	102	105
MIN	60	.00	.00	.00	.00	89	1.1	1.4	82	.00	.02	.00
AC-FT	4480	91	.00	.00	2660	5890	4260	5200	5650	5330	5530	4210
CAL YR 1987	TOTAL	20110.13	MEAN	55.1	MAX	108	MIN	.00	AC-FT	39890		
WTR YR 1988	TOTAL	21842.83	MEAN	59.7	MAX	106	MIN	.00	AC-FT	43330		

08386000 PECOS RIVER NEAR ACME, NM
(Surveillance network station)

LOCATION.--Lat 33°32'10", long 104°22'34", in SW¼NW¼ sec.14, T.9 S., R.25 E., Chaves County, Hydrologic Unit 13060007, on right bank 3.0 mi downstream from U.S. Highway 70, 3.7 mi downstream from Salt Creek, 4.7 mi southwest of Acme, 14 mi northeast of Roswell, and at mile 585.3.

DRAINAGE AREA.--11,380 mi², approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1921 to June 1923, July 1937 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. 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.--Estimated daily discharges: Jan. 21-27. Water-discharge records good except for estimated daily discharges, which are poor. Flow regulated by Lake Sumner (station 08384000) 117 mi upstream since August 1937. Diversions for irrigation of about 20,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--51 years (water years 1938-88), 179 ft³/s, 129,690 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft³/s, Sept. 23, 1941, gage height, 13.71 ft, from rating curve extended above 27,000 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 28, 1937, reached a discharge of 53,000 ft³/s, gage height, 14.82 ft, from floodmarks, site and datum then in use, from slope-area measurement, but may have been exceeded by the flood of Oct. 1, 1904.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 7	2300	*1,830	*5.90				

Minimum discharge, 2.9 ft³/s, Jan. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	169	18	18	13	19	35	16	125	971	22	858
2	45	190	18	26	13	18	53	14	88	914	21	1010
3	37	139	18	27	13	15	52	15	61	926	26	831
4	40	128	18	27	14	17	77	15	48	880	39	746
5	42	99	17	24	22	19	56	16	39	921	38	736
6	38	82	17	24	33	16	34	21	34	1040	34	694
7	33	68	16	23	28	23	25	22	32	1250	34	741
8	36	55	15	22	29	24	21	22	31	1260	22	768
9	37	46	14	20	25	21	19	23	25	1080	25	672
10	32	43	13	15	23	18	18	17	22	1250	26	608
11	33	39	13	17	18	23	21	14	18	677	47	617
12	35	37	13	18	16	23	18	16	15	393	58	706
13	45	36	13	19	16	44	17	18	13	199	24	751
14	33	34	12	18	13	32	18	576	11	137	17	775
15	40	32	17	17	13	29	23	686	12	112	13	776
16	45	30	17	17	13	42	26	785	462	102	12	783
17	36	27	18	17	12	60	28	836	261	113	13	789
18	44	25	23	17	12	60	28	853	119	98	10	870
19	46	23	42	17	12	72	27	1080	73	73	8.6	638
20	46	22	68	15	42	85	24	1060	52	316	8.2	436
21	52	21	53	9.0	40	82	23	926	39	446	30	493
22	56	21	35	11	26	64	19	980	35	170	30	748
23	53	20	26	7.7	21	45	17	935	34	124	18	1210
24	43	20	20	13	20	43	16	913	28	102	16	767
25	50	19	25	12	19	31	15	891	21	93	47	842
26	88	19	37	13	21	28	15	875	20	84	86	824
27	604	18	36	14	26	22	14	931	483	66	97	762
28	679	18	33	14	26	32	13	619	765	49	656	660
29	778	18	20	14	21	30	18	323	851	38	676	637
30	759	18	15	15	---	28	18	204	881	33	686	802
31	301	---	16	14	---	24	---	159	---	27	732	---
TOTAL	4260	1516	716	534.7	600	1089	788	13861	4698	13944	3571.8	22550
MEAN	137	50.5	23.1	17.2	20.7	35.1	26.3	447	157	450	115	752
MAX	778	190	68	27	42	85	77	1080	881	1260	732	1210
MIN	32	18	12	7.7	12	15	13	14	11	27	8.2	436
AC-FT	8450	3010	1420	1060	1190	2160	1560	27490	9320	27660	7080	44730
CAL YR 1987	TOTAL	87249.87		MEAN	239	MAX	1190	MIN	.17	AC-FT	173100	
WTR YR 1988	TOTAL	68128.5		MEAN	186	MAX	1260	MIN	7.7	AC-FT	135100	

08386000 PECOS RIVER NEAR ACME, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS	SPE- CIFIC CON- DUCT- ANCE	SPE- CIFIC CON- DUCT- ANCE	PH (STAND- ARD	PH LAB (STAND- ARD	TEMPER- ATURE AIR	TEMPER- ATURE WATER	OXYGEN, DIS- SOLVED	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	
		(CFS) (00061)	(US/CM) (00095)	(US/CM) (90095)	UNITS) (00400)	UNITS) (00403)	(DEG C) (00020)	(DEG C) (00010)	(MG/L) (00300)	(MG/L) (00340)	(00900)	(00902)	
NOV 16...	1345	30	3110	3230	8.56	8.00	20.5	13.0	9.9	<10	1000	960	
MAR 17...	1445	57	3580	3550	8.26	7.80	11.0	12.0	10.8	15	1700	1600	
MAY 20...	1000	1090	2310	2360	7.79	7.50	18.0	17.0	--	24	1300	1200	
SEP 20...	1115	443	1090	1120	8.15	7.90	25.0	17.5	8.1	18	550	460	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 16...	280	83	260	4	3.5	127	2	108	80	1200	410	0.60	
MAR 17...	500	100	260	3	3.8	129	0	106	93	1600	180	0.50	
MAY 20...	420	58	110	1	3.0	98	0	80	89	1200	140	0.50	
SEP 20...	180	25	32	0.6	2.3	114	0	93	91	490	34	0.30	
DATE		SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC TOTAL (UG/L AS AS) (01002)	
NOV 16...	14	2300	0.300	0.280	0.110	0.39	0.80	0.010	0.010	1.4	2		
MAR 17...	9.7	2710	<0.100	<0.100	0.100	0.40	--	0.030	<0.010	2.0	--		
MAY 20...	10	2000	0.200	0.160	0.080	0.42	0.70	1.30	<0.010	15	--		
SEP 20...	8.9	828	0.300	0.250	0.080	0.52	0.90	0.020	0.010	3.5	3		
DATE		ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	
NOV 16...	1	220	<1	<1	3	1	7	1	20	<5	<5		
MAR 17...	--	240	--	--	--	--	--	--	20	--	--		
MAY 20...	--	140	--	--	--	--	--	--	70	--	--		
SEP 20...	2	60	4	4	7	<1	11	1	12	6	<5		

08386000 PECOS RIVER NEAR ACME, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)
NOV 16...	1.3	0.1	<1	<1	20	10	<2.0	1.5	160	3	<1
MAR 17...	--	--	--	--	--	--	--	--	--	--	--
MAY 20...	--	--	--	--	--	--	--	--	--	--	--
SEP 20...	<0.10	0.1	<1	<1	120	7	--	--	--	--	--
DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	
NOV 16...	<10	<50	<1	10	<10	16	<0.10	<10	468	38	54
MAR 17...	--	--	--	--	--	--	--	--	345	53	93
MAY 20...	--	--	--	--	--	--	--	--	3900	11500	73
SEP 20...	--	--	--	--	--	--	--	--	3410	4080	88

08387000 RIO RUIDOSO AT HOLLYWOOD, NM

LOCATION.--Lat 33°19'36", long 105°37'38", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.25, T.11 S., R.13 E., Lincoln County, Hydrologic Unit 13060008, on center pier on downstream side of bridge on Blooming Dale Road in Ruidoso Downs, 0.1 mi north of U.S. Highway 70, 0.7 mi downstream from Gavilan Canyon, 1.7 mi downstream from Carrizo Creek, and at mile 24.4.

DRAINAGE AREA.--120 mi², approximately.

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.--Estimated daily discharge: Jan. 25-28. Water-discharge records good except for estimated daily discharges, which are poor. Village of Ruidoso diverts from right bank 7.0 mi upstream for municipal use and returns a portion of this water as effluent from sewage disposal plant downstream from the gage. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--28 years (1954-1981), 14.9 ft³/s, 10,800 acre-ft/yr, for period when sewage disposal plant effluent was discharged upstream from gage.

6 years (water years 1982-88), 35.5 ft³/s, 25,720 acre-ft/yr, since disposal plant effluent is discharged downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft³/s, Aug. 11, 1984, gage height, 9.68 ft, from rating curve extended above 510 ft³/s on basis of slope-area measurement of peak flow; maximum gage-height, 10.05 ft, datum then in use, June 17, 1965; minimum discharge, 0.30 ft³/s, Jan. 1, 1962 and May 8-9, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Sept. 29, 1941, is probably the highest since at least 1904 (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 19	2215	186	2.80	Sept. 1	2300	*617	*3.95
Aug. 20	1330	194	2.82				

Minimum discharge, 7.7 ft³/s, part of each day Dec. 25-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	18	10	8.9	14	37	33	30	12	16	24	210
2	8.9	20	10	8.9	15	37	29	30	12	15	47	208
3	9.0	17	10	8.8	19	36	28	27	12	15	38	157
4	9.3	15	10	8.8	19	33	27	25	12	16	33	128
5	9.4	16	11	11	18	31	26	24	11	15	34	116
6	9.8	22	11	41	17	30	26	26	11	21	38	91
7	10	17	11	14	17	31	25	27	11	23	44	70
8	11	16	11	12	17	31	28	25	11	27	51	61
9	11	15	10	12	18	30	37	24	14	27	48	54
10	11	15	10	11	18	31	37	22	14	26	49	49
11	11	14	10	11	19	31	33	21	16	31	50	45
12	11	14	11	11	19	30	28	22	16	28	45	44
13	12	14	9.5	11	20	29	28	23	18	27	41	47
14	12	14	8.6	11	20	30	28	24	16	25	37	46
15	13	15	9.8	11	20	32	27	24	15	24	34	46
16	13	13	12	11	20	31	31	25	15	29	33	45
17	13	14	14	11	26	30	26	26	16	38	31	44
18	12	13	45	12	33	29	24	29	16	47	44	42
19	13	12	25	11	32	28	21	26	15	63	39	40
20	12	12	10	11	30	25	21	23	14	56	53	40
21	12	12	9.5	11	30	26	24	20	14	40	49	40
22	13	12	9.3	12	31	28	29	18	14	36	65	41
23	14	12	9.5	11	31	29	29	16	14	33	57	39
24	16	12	9.2	11	26	31	26	15	14	37	55	37
25	14	12	8.5	11	23	36	23	15	17	33	59	35
26	14	12	8.2	11	26	40	24	15	17	27	74	30
27	14	12	8.6	12	31	44	27	14	19	32	91	25
28	14	11	9.0	12	31	47	28	16	18	31	176	24
29	14	12	8.8	12	35	45	33	19	17	29	179	24
30	14	11	9.5	14	---	40	29	16	15	25	144	24
31	14	---	9.1	14	---	37	---	13	---	26	122	---
TOTAL	373.2	424	358.1	378.4	675	1025	835	680	436	918	1884	1902
MEAN	12.0	14.1	11.6	12.2	23.3	33.1	27.8	21.9	14.5	29.6	60.8	63.4
MAX	16	22	45	41	35	47	37	30	19	63	179	210
MIN	8.8	11	8.2	8.8	14	25	21	13	11	15	24	24
AC-FT	740	841	710	751	1340	2030	1660	1350	865	1820	3740	3770
CAL YR 1987	TOTAL	13315.1		MEAN	36.5	MAX	183	MIN	8.2	AC-FT	26410	
WTR YR 1988	TOTAL	9888.7		MEAN	27.0	MAX	210	MIN	8.2	AC-FT	19610	

08387000 RIO RUIDOSO AT HOLLYWOOD, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-67, 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV 13...	1040	15	1220	1220	8.71	7.90	20.0	7.0	13.0	11	600
MAR 10...	1030	29	850	842	8.17	8.40	13.0	6.0	12.9	24	390
MAY 23...	1245	16	910	941	8.21	8.10	25.5	15.5	11.0	15	380
SEP 19...	1500	40	--	1100	8.18	8.10	28.0	16.5	9.3	17	510

DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
------	--	---	---	---	--	--	--	--	--	---

NOV 13...	500	170	42	52	1	1.7	100	440	63	0.40
MAR 10...	260	110	27	36	0.8	1.2	129	290	42	0.30
MAY 23...	290	100	32	44	1	2.6	91	340	47	0.30
SEP 19...	340	140	38	49	1	1.8	170	370	50	0.20

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTH, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
------	--	--	---	--	---	---	--	--	--	--

NOV 13...	14	844	0.100	0.230	0.020	--	--	<0.010	<0.010	0.9
MAR 10...	13	598	0.300	0.250	0.040	0.36	0.70	0.030	<0.010	1.6
MAY 23...	12	634	0.300	0.290	0.050	0.35	0.70	0.020	<0.010	1.7
SEP 19...	13	764	0.100	0.110	0.050	0.25	0.40	0.030	0.010	2.0

DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)
------	---	---	---	--	--	--	---	--	---	---

NOV 13...	20	4	18	14	490	4	1	<10	<50	6
MAR 10...	20	9	--	--	--	--	--	--	--	--
MAY 23...	30	10	--	--	--	--	--	--	--	--
SEP 19...	20	10	--	--	--	--	--	--	--	--

RIO GRANDE BASIN

08387000 RIO RUIDOSO AT HOLLYWOOD, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 13...	5000	20	160	<0.10	50	217	8.7	76	K12	K400
MAR 10...	--	--	--	--	--	108	8.6	81	100	K17
MAY 23...	--	--	--	--	--	81	3.6	69	6000	58
SEP 19...	--	--	--	--	--	90	9.8	56	24	48

08387600 EAGLE CREEK BELOW SOUTH FORK, NEAR ALTO, NM

LOCATION.--Lat 33°23'33", long 105°43'16", in SE¼SW¼ sec.31, T.10 S., R.13 E., Lincoln County, Hydrologic Unit 13060008, in Lincoln National Forest on right bank, 100 ft upstream from culvert under State Road No. 532, 400 ft downstream from South Fork, and 2.5 mi west of Alto. Mouth at Rio Ruidoso mile 11.3.

DRAINAGE AREA.--8.14 mi².

PERIOD OF RECORD.--August 1969 to December 1980, April to September 1988.

GAGE.--Water-stage recorder. Elevation of gage is 7,600 ft above National Geodetic Vertical Datum of 1929, from topographic map. August 26, 1969 to December 31, 1980, at site 360 ft downstream at datum 6.0 ft higher.

REMARKS.--No estimated daily discharges. Records fair. No diversions for irrigation above station. Some water is stored in small unregulated recreational ponds on the Mescalero Apache Indian Reservation upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years (water years 1970-80), 3.14 ft³/s, 2,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 206 ft³/s, Dec. 19, 1978, gage height, 3.79 ft, from rating curve extended above 21 ft³/s; minimum, 0.05 ft³/s, June 30, July 3, 4, 1974, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 25 ft³/s and maximum (*), for the period May to September:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 17	0515	38	5.18	Aug. 19	1230	*63	*5.62
Aug. 4	1930	48	5.36	Aug. 28	1130	50	5.50

Minimum discharge, 0.44 ft³/s, part of each day July 3-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	4.3	.92	.80	1.6	33
2							---	4.3	.95	.59	3.9	32
3							---	3.8	.89	.49	3.1	30
4							---	3.3	.87	.50	7.5	27
5							---	2.9	.88	.51	14	21
6							---	3.0	.81	.68	12	16
7							---	3.4	.78	1.2	13	12
8							---	3.2	.71	1.0	13	9.3
9							---	2.9	.69	1.9	11	7.1
10							---	2.5	.65	2.4	14	5.6
11							---	2.2	.65	2.4	13	4.3
12							---	2.3	.64	1.6	10	4.5
13							---	2.4	.66	2.0	7.5	5.5
14							---	2.4	.70	1.4	5.6	4.3
15							---	2.6	.64	.97	4.8	4.3
16							---	2.7	.66	.90	4.3	4.2
17							---	2.7	.66	9.3	3.7	3.5
18							---	2.8	.63	12	3.4	3.1
19							---	2.7	.62	15	16	2.9
20							---	2.4	.57	12	30	2.9
21							---	2.0	.54	8.6	30	3.7
22							---	1.7	.55	6.7	26	5.0
23							---	1.5	.54	4.9	23	3.9
24							---	1.3	.81	4.3	19	2.8
25							---	1.3	.85	3.8	18	2.5
26							---	1.2	.77	2.6	25	2.3
27							---	2.4	1.2	.93	2.3	2.1
28							---	2.6	1.1	.93	1.8	2.0
29							---	3.1	1.0	.87	1.6	1.9
30							---	3.8	.97	.81	1.4	1.9
31							---		.95	---	1.2	---
TOTAL							---	73.02	22.18	106.84	506.4	260.6
MEAN							---	2.36	.74	3.45	16.3	8.69
MAX							---	4.3	.95	15	48	33
MIN							---	.95	.54	.49	1.6	1.9

08390500 RIO HONDO AT DIAMOND A RANCH, NEAR ROSWELL, NM

LOCATION.--33°20'57", long 104°51'05", in NE¼NE¼ sec.20, T.11 S, R.21 E., Chaves County, Hydrologic Unit 13060008, on right bank 40 ft downstream from bridge on Mossman Road at Diamond A Ranch farm, 1.3 mi south of U.S. Highway 70-380, 13 mi upstream from Two Rivers Reservoir, 21 mi upstream from mouth of Rocky Arroyo, 18 mi west of Roswell, and at mile 44.7.

DRAINAGE AREA.--947 mi², contributing area.

PERIOD OF RECORD.--May 1908 to August 1909, May 1939 to current year. Monthly discharge only for 1908-9, published in Technical Report No. 7, State of New Mexico, State Engineer Office, Streamflow and Reservoir Content 1888-1954.

REVISED RECORDS.--WSP 1392: Drainage area. WSP 1512: 1939-40(P), 1941, 1942-43(P), 1946(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,190 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 11, 1965, at site on left bank at same datum.

REMARKS.--Estimated daily discharges: Dec. 13-19. Records fair except for estimated daily discharges, which are poor. Diversions and ground-water withdrawals upstream from station for irrigation above and below station of about 6,500 acres, 1959 determination. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--49 years (water years 1940-88), 25.6 ft³/s, 18,550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,800 ft³/s, June 18, 1965, gage height, 26.40 ft, from rating curve extended above 3,100 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 28.78 ft, Sept. 22, 1941; no flow most of the time.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood on June 1, 1937, reached a discharge of 24,900 ft³/s, at Riverside about 13 mi upstream. Other major floods occurred Oct. 31, 1901, Sept. 29, 30, 1904 and July 25, 1905.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 2	1615	*616	*11.41				
No flow many days.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	5.3	25	47	37	28	25	25	9.3	.00	16	291
2	8.4	10	23	46	39	16	24	26	8.7	.00	17	432
3	6.3	14	22	46	39	24	22	36	8.3	.00	45	414
4	6.8	14	24	46	42	42	22	23	5.6	.00	86	337
5	8.1	13	26	45	56	46	16	16	.00	.00	54	289
6	8.4	14	27	45	54	49	15	21	.00	.00	51	242
7	8.3	17	27	92	51	50	16	17	.00	4.7	50	181
8	8.4	30	37	73	53	41	14	14	.00	8.2	64	148
9	7.3	26	36	66	53	41	15	17	.00	16	78	131
10	4.4	20	35	62	53	19	17	5.4	.00	12	77	104
11	6.6	22	33	58	52	40	19	2.4	.00	13	83	89
12	2.8	23	31	57	52	48	17	6.9	.00	10	71	86
13	1.4	23	33	53	52	48	14	6.9	.00	8.0	59	89
14	.11	22	38	50	51	50	15	9.1	.00	9.8	53	95
15	.79	27	41	48	50	53	15	10	.00	10	46	78
16	.84	26	44	49	52	38	19	11	.00	9.4	35	71
17	.02	28	50	47	56	34	42	11	.00	25	31	68
18	1.2	21	60	47	62	29	38	15	.00	20	31	65
19	2.5	15	72	48	75	30	27	20	.00	37	56	62
20	1.2	15	79	48	74	33	15	21	.00	192	62	64
21	.45	14	55	48	72	24	11	15	.00	109	108	64
22	2.0	18	52	48	76	16	12	12	.00	65	100	55
23	2.3	16	50	48	68	16	14	11	.00	49	126	58
24	2.2	14	49	48	65	14	31	11	.00	40	117	55
25	2.5	17	51	46	64	14	34	6.7	.00	40	91	51
26	2.5	19	55	36	58	15	22	.02	.00	35	98	49
27	1.9	32	54	44	63	30	21	11	.00	24	120	44
28	2.0	45	54	40	61	38	21	13	.00	21	178	39
29	2.7	40	48	38	56	39	17	10	.00	27	306	39
30	7.1	40	48	39	---	38	24	11	.00	20	303	40
31	6.0	---	48	38	---	27	---	11	---	16	302	---
TOTAL	126.51	640.3	1327	1546	1636	1030	614	425.42	31.90	821.10	2914	3830
MEAN	4.08	21.3	42.8	49.9	56.4	33.2	20.5	13.7	1.06	26.5	94.0	128
MAX	11	45	79	92	76	53	42	36	9.3	192	306	432
MIN	.02	5.3	22	36	37	14	11	.02	.00	.00	16	39
AC-FT	251	1270	2630	3070	3250	2040	1220	844	63	1630	5780	7600
CAL YR 1987	TOTAL	27541.84		MEAN	75.5	MAX	348	MIN	.00	AC-FT	54630	
WTR YR 1988	TOTAL	14942.23		MEAN	40.8	MAX	432	MIN	.00	AC-FT	29640	

08390600 TWO RIVERS RESERVOIR NEAR ROSWELL, NM

LOCATION.--08390610 Rio Hondo Reservoir: Lat 33°17'55", long 104°43'20", in SW¼SE¼NE¼ 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 NW¼SE¼NE¼ sec.16, T.12 S., R.22 E., at left end of Rocky Dam on Rocky Arroyo, and 14 mi southwest of Roswell.

DRAINAGE AREA.--1,027 mi²; Rio Hondo, 963 mi²; Rocky Arroyo, 64 mi².

PERIOD OF RECORD.--July 1963 to current year (prior to October 1965 month end contents only). Prior to October 1966 contents at 0800 hours.

GAGE.--Water-stage recorder. 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 166,200 acre-ft, at elevation 4,032.0 ft, crest of ungated spillway. Capacity of Rio Hondo Reservoir, 181 acre-ft, from capacity table dated August 1971, between elevations 3,957.0 ft, sill of outlet gate, and 3,980.0. Capacity of Rocky Arroyo Reservoir, 13,410 acre-ft, from capacity table dated August 1971, between elevations 3,945.0, sill of outlet gate, and 3,980.0 ft. No dead storage in Rio Hondo Reservoir or Rocky Arroyo Reservoir. Primary objective of project is flood control. Outlet conduits in Rocky Dam have fixed openings. Figures given herein represent total contents at 2400 hours from new capacity table put into use Jan. 1, 1972.

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

EXTREMES FOR PERIOD OF RECORD.--Rio Hondo Reservoir: Maximum contents, 1,260 acre-ft, July 29, 1965, elevation, 3,985.7 ft; no storage most of time.

Rocky Arroyo Reservoir: Maximum contents, 6,090 acre-ft, June 18, 1965, elevation, 3,970.7 ft; no storage most of time.

EXTREMES FOR CURRENT YEAR.--Maximum contents, Rio Hondo Res., 602 acre-ft, Jan. 10, elevation, 3,984.58 ft; Rocky Arroyo Res., no storage during year; no contents both reservoirs most of time.

CONTENTS, IN ACRE-FEET, AND ELEVATION, IN FEET, WATER YEAR, OCTOBER 1987 TO SEPTEMBER 1988.

NO CONTENTS AT 2400 HOURS DURING YEAR EXCEPT:

RIO HONDO RESERVOIR

DATE	ELEVATION	CONTENTS	DATE	ELEVATION	CONTENTS
Jan. 2	3968.80	2	Jan. 8	3983.90	516
3	3976.66	61	9	3984.48	589
4	3980.71	226	10	3984.58	602
5	3981.71	299	11	3982.90	407
6	3982.60	378	Sept. 3	3980.00	181
7	3983.20	438			

ROCKY ARROYO RESERVOIR

No contents at 2400 hours during year.

RIO GRANDE BASIN

08390800 RIO HONDO BELOW DIAMOND A DAM, NEAR ROSWELL, NM

LOCATION.--Lat 33°18'05", long 104°43'12", in NE¼SE¼NE¼ sec.4, T.12 S., R.22 E., Chaves County, Hydrologic Unit 13060008, on left bank, 500 ft downstream from outlet conduit of Diamond A Dam (Two Rivers Reservoir), 13 mi southwest of Roswell, and at mile 33.3.

DRAINAGE AREA.--963 mi², contributing area.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,949.68 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Estimated daily discharges: Oct. 4, 5, Dec. 15-17, Jan. 1-4, July 24-26, and Sept. 11-19. Records good except for estimated daily discharges, which are poor. Diversions and ground-water withdrawals for irrigation of about 6,500 acres, 1959 determination, upstream from station. This record represents the outflow from Two Rivers Reservoir through Diamond A Dam 0.1 mi upstream; flow from reservoir can also be discharged into Rocky Arroyo through Rocky Dam (see REMARKS for station 08390600). Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--25 years, 15.9 ft³/s, 11,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 659 ft³/s, July 29, 1965, gage height, 4.91 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 402 ft³/s, Sept. 3; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	.00	19	28	32	31	9.4	16	.08	.00	7.9	216
2	4.5	1.3	17	.14	33	19	9.9	19	.00	.00	1.0	332
3	4.1	4.5	17	.12	33	24	8.2	28	.00	.00	23	402
4	3.1	6.3	20	.15	35	36	15	24	.00	.00	67	378
5	2.3	5.0	20	.07	46	37	9.5	14	.00	.00	48	309
6	2.3	6.0	22	.07	44	40	7.8	17	.00	.00	45	249
7	3.1	3.9	22	.07	44	39	2.1	13	.00	.00	39	193
8	.32	13	27	.07	44	34	1.3	7.9	.00	.00	63	144
9	1.8	16	28	.07	43	34	.38	12	.00	.00	62	113
10	.52	10	28	.07	43	35	.02	5.0	.00	.00	60	105
11	.00	16	27	116	43	29	.79	.70	.00	.00	65	86
12	.00	17	26	86	43	35	.64	1.1	.00	.00	69	76
13	.00	17	29	42	41	36	.03	1.1	.00	.00	53	70
14	.00	14	31	40	40	35	.00	.28	.00	.00	43	88
15	.00	15	35	40	42	35	.00	1.9	.00	.00	36	71
16	.00	14	37	40	42	30	2.2	2.8	.00	.00	30	63
17	.00	21	41	39	43	25	12	2.0	.00	.00	26	56
18	.00	15	43	38	45	24	17	3.7	.00	.66	25	53
19	.00	8.5	56	39	53	18	12	9.4	.00	10	36	51
20	.00	10	66	39	54	8.7	6.3	15	.00	106	51	51
21	.00	8.3	50	38	53	9.4	7.5	7.4	.00	99	69	57
22	.00	12	48	39	54	4.6	8.4	4.7	.00	60	82	46
23	.00	12	46	39	52	3.7	9.2	1.5	.00	40	78	47
24	.00	9.2	43	38	51	3.5	16	.66	.00	28	88	45
25	.00	11	46	40	52	3.5	20	.81	.00	31	72	40
26	.00	13	49	31	47	4.0	11	.05	.00	26	69	37
27	.00	17	50	37	47	5.8	11	.00	.00	12	79	30
28	.00	27	50	34	47	14	11	11	.00	4.3	107	21
29	.00	26	50	33	48	15	9.8	6.2	.00	16	203	20
30	.00	26	47	33	---	12	9.7	5.9	.00	4.2	218	24
31	.00	---	45	32	---	11	---	1.3	---	15	218	---
TOTAL	27.44	375.00	1135	941.83	1294	691.2	228.16	233.40	.08	452.16	2132.9	3473
MEAN	.89	12.5	36.6	30.4	44.6	22.3	7.61	7.53	.00	14.6	68.8	116
MAX	5.4	27	66	116	54	40	20	28	.08	106	218	402
MIN	.00	.00	17	.07	32	3.5	.00	.00	.00	.00	1.0	20
AC-FT	54	744	2250	1870	2570	1370	453	463	.2	897	4230	6890
CAL YR 1987	TOTAL	22588.54	MEAN	61.9	MAX	326	MIN	.00	AC-FT	44800		
WTR YR 1988	TOTAL	10984.17	MEAN	30.0	MAX	402	MIN	.00	AC-FT	21790		

08393500 RIO HONDO AT ROSWELL, NM

LOCATION.--Lat 33°22'19", long 104°32'42", in NE¼SE¼ sec.7, T.11 S., R.24 E., Chaves County, Hydrologic Unit 13060008, on left bank, 0.3 mi upstream from bridge on Sunset Ave. in Roswell, 6.3 mi downstream from Rocky Arroyo and 11.7 mi upstream from mouth. Mouth at Pecos River mile 566.0.

DRAINAGE AREA.--1,070 mi², approximately, contributing area.

PERIOD OF RECORD.--February 1981 to current year. Records for June 1903 to February 1906, published in WSP 358, are unreliable and should not be used.

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Two Rivers Reservoir (station 08390600) 21.7 mi upstream. Diversions and ground-water withdrawals for irrigation upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--7 years, 28.0 ft³/s, 20,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 373 ft³/s, Dec. 23, 1984, gage height, 6.73 ft, from rating curve extended above 354 ft³/s; maximum gage height, 7.5 ft, May 3, 1981, from floodmarks; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 253 ft³/s, Sept. 4, gage height, 4.94 ft; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	16	36	22	27	.00	.00	.00	.00	.00	179
2	.00	.00	11	.82	22	11	.00	.00	.00	.00	.00	201
3	.00	.00	10	.00	23	11	.00	.00	.00	.00	.00	240
4	.00	.00	12	.00	23	21	.00	.00	.00	.00	33	247
5	.00	.00	12	.00	31	19	.00	1.1	.00	.00	34	233
6	.00	.00	13	.00	33	23	.00	2.8	.00	.00	29	199
7	.00	.00	13	.00	32	24	.00	1.5	.00	.00	26	156
8	.00	.00	16	.00	34	22	.00	.01	.00	.00	37	131
9	.00	2.4	20	.00	32	16	.00	.00	.00	.00	35	116
10	.00	1.5	21	.00	31	20	.00	.00	.00	.00	29	99
11	.00	1.3	19	58	31	15	.00	.00	.00	.00	30	83
12	.00	4.1	18	77	31	14	.00	.00	.00	.00	35	75
13	.00	4.2	20	30	30	18	.00	.00	.00	.00	29	75
14	.00	4.1	19	29	29	17	.00	.00	.00	.00	21	79
15	.00	2.0	21	29	30	18	.00	.00	.00	.00	18	69
16	.00	2.9	23	28	31	16	.00	.00	.00	.00	12	62
17	.00	6.9	29	27	31	11	.00	.00	.00	.00	8.1	56
18	.00	5.5	32	27	33	11	3.6	.00	.00	.00	6.7	61
19	.00	2.2	38	27	40	7.9	.43	.00	.00	.00	8.9	56
20	.00	1.4	57	28	41	1.6	.00	.00	.00	31	34	49
21	.00	1.2	41	27	41	.87	.00	.00	.00	87	39	57
22	.00	1.2	38	28	40	.00	.00	.00	.00	46	66	45
23	.00	2.4	36	29	39	.00	.00	.00	.00	29	59	43
24	.00	2.4	35	27	38	.00	.00	.00	.00	18	73	40
25	.00	2.0	36	27	39	.00	1.9	.00	.00	8.4	58	36
26	.00	3.4	39	22	36	.00	.82	.00	.00	8.6	52	31
27	.00	6.1	38	24	34	.00	.00	.00	.00	1.2	63	24
28	.00	16	40	24	32	.13	.00	.14	.00	.00	82	11
29	.00	19	38	23	35	.01	.00	.00	.00	.00	175	5.9
30	.00	19	38	23	---	.00	.00	.00	.00	.00	194	7.6
31	.00	---	39	23	---	.00	---	.00	---	.00	190	---
TOTAL	.00	111.20	838	673.82	944	324.51	6.75	5.55	.00	229.20	1476.70	2766.5
MEAN	.00	3.71	27.0	21.7	32.6	10.5	.22	.18	.00	7.39	47.6	92.2
MAX	.00	19	57	77	41	27	3.6	2.8	.00	87	194	247
MIN	.00	.00	10	.00	22	.00	.00	.00	.00	.00	.00	5.9
AC-FT	.00	221	1660	1340	1870	644	13	11	.00	455	2930	5490
CAL YR 1987	TOTAL	18912.00		MEAN	51.8	MAX	232	MIN	.00	AC-FT	37510	
WTR YR 1988	TOTAL	7376.23		MEAN	20.2	MAX	247	MIN	.00	AC-FT	14630	

RIO GRANDE BASIN

08394100 PECOS RIVER NEAR HAGERMAN, NM

LOCATION.--Lat 33°10'08", long 104°18'24", in SE¼SW¼SE¼ sec.23, T.13 S., R.26 E., Chaves County, Hydrologic Unit 13060007, on left bank 3.4 mi upstream from Rio Felix, 4.9 mi north of Hagerman, and at mile 544.6.

DRAINAGE AREA.--13,630 mi², approximately (contributing area).

PERIOD OF RECORD.--February 1968 to current year (operated as a low-flow station only).

GAGE.--Water-stage recorder. Elevation of gage is 3,390 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Lake Sumner (station 08384000) 157 mi upstream and by Two Rivers Reservoir (station 08390600) 55 mi upstream. Diversions and ground-water withdrawals for irrigation of about 80,000 acres upstream from station. Several observations of water temperatures were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined, 3,700 ft³/s, Sept. 11, 1969; no flow at times in 1971, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge greater than 1,200 ft³/s, May 20, 21, July 8-11, and Sept. 1-4, 23, 24; minimum, 13 ft³/s, Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	228	69	111	86	92	52	36	196	728	57	a---
2	71	196	70	111	84	63	56	32	168	792	50	a---
3	65	168	68	80	84	54	67	31	131	763	45	a---
4	58	142	67	77	87	52	76	30	106	766	39	a---
5	54	130	67	75	106	48	78	31	91	762	53	1050
6	54	111	70	77	129	51	83	37	77	794	49	970
7	53	99	67	77	139	51	61	34	69	928	46	901
8	49	87	67	76	141	48	53	36	64	a---	52	1060
9	47	77	67	75	134	55	47	35	58	a---	46	992
10	52	71	72	74	132	54	46	34	49	a---	41	757
11	49	67	73	73	129	50	43	34	42	a---	41	700
12	47	65	71	139	123	47	38	32	40	426	36	729
13	51	63	73	163	119	50	40	30	35	300	69	932
14	55	61	82	110	114	56	37	122	31	213	49	880
15	60	59	84	109	106	64	34	630	29	175	33	852
16	54	58	84	108	106	57	35	718	44	146	23	856
17	59	64	88	102	105	60	49	751	357	183	19	780
18	57	66	87	99	105	75	48	842	172	145	17	791
19	57	67	111	98	107	79	44	1030	124	135	17	781
20	60	64	140	97	112	85	45	a---	82	176	15	451
21	63	61	164	98	122	98	46	a---	63	465	17	475
22	65	61	156	92	141	106	45	1010	50	265	16	532
23	71	60	135	90	129	99	43	957	42	227	50	a---
24	71	59	119	92	105	84	39	960	40	191	45	a---
25	65	59	113	91	100	73	35	893	39	159	44	1040
26	59	58	111	91	99	65	34	958	34	136	40	1020
27	248	60	99	86	96	59	32	901	57	122	74	998
28	592	60	87	86	99	56	33	970	576	103	272	910
29	662	65	114	86	90	46	33	393	754	81	756	695
30	688	69	117	86	---	55	34	253	690	66	995	684
31	422	---	117	86	---	53	---	223	---	60	1060	---
TOTAL	4133	2555	2909	2915	3229	1985	1406	---	4310	---	4166	---
MEAN	133	85.2	93.8	94.0	111	64.0	46.9	---	144	---	134	---
MAX	688	228	164	163	141	106	83	---	754	---	1060	---
MIN	47	58	67	73	84	46	32	---	29	---	15	---
AC-FT	8200	5070	5770	5780	6400	3940	2790	---	8550	---	8260	---

a Discharge greater than 1,200 ft³/s.

08395500 PECOS RIVER NEAR LAKE ARTHUR, NM

LOCATION.--Lat 32°59'18", long 104°19'20", in SW¼NE¼ sec.27, T.15 S., R.26 E., Chaves County, Hydrologic Unit 13060007, on left bank 400 ft upstream from bridge on Yuma Road, 2.5 mi east of Lake Arthur, 7 mi upstream from Cottonwood Creek, 11 mi northeast of Artesia, and at mile 522.0.

DRAINAGE AREA.--14,760 mi², approximately (contributing area).

PERIOD OF RECORD.--August 1938 to current year.

GAGE.--Water-stage recorder and rock control. Elevation of gage is 3,327.07 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 6, Oct. 31 to Nov. 6, Dec. 16, 17, Dec. 23 to Jan. 6, May 29 to June 7, July 13-22, July 26 to Aug. 10, and Sept. 1-7. Records good except for estimated daily discharges, which are poor. Flow regulated by Lake Sumner (station 08384000) 180 mi upstream 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 temperatures were made during the year.

AVERAGE DISCHARGE.--50 years, 227 ft³/s, 164,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft³/s, Sept. 24, 1941, gage height, 21.90 ft, from rating curve extended above 16,100 ft³/s on basis of slope-area measurement at gage height 21.77 ft; no flow at times in 1947, 1953-4, 1962, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1937, reached a stage of 21.77 ft, discharge, 51,500 ft³/s on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,320 ft³/s, July 8, gage height, 5.76 ft; minimum, 5.5 ft³/s, Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	316	78	120	100	102	39	28	196	645	33	840
2	58	201	79	119	100	96	39	32	151	680	31	920
3	57	165	79	119	101	81	50	28	123	681	34	1050
4	52	149	79	111	102	72	65	21	87	672	37	1050
5	57	144	79	96	108	70	45	21	79	661	32	950
6	47	136	79	92	117	68	44	20	62	681	25	880
7	42	122	79	92	137	66	52	25	59	794	26	840
8	42	110	75	91	141	66	37	29	54	1100	30	848
9	44	101	74	90	141	60	26	32	42	1150	32	853
10	44	92	74	90	138	64	23	31	37	943	32	730
11	54	90	77	89	135	63	22	30	26	975	20	676
12	55	89	79	88	134	57	20	30	30	475	22	660
13	41	86	82	174	129	59	21	28	33	259	18	772
14	45	84	93	146	129	61	27	28	31	219	42	777
15	65	84	92	119	121	62	26	438	22	174	35	725
16	67	80	78	119	116	67	25	684	18	138	21	730
17	56	77	75	119	115	54	31	766	254	118	14	720
18	57	78	105	119	114	46	41	843	186	108	11	735
19	59	78	108	112	112	57	39	955	95	101	9.4	756
20	63	78	123	112	114	64	35	1120	67	99	11	512
21	67	76	141	112	117	78	36	1060	38	295	7.3	478
22	67	72	159	112	133	79	38	843	24	360	8.6	491
23	68	75	154	107	141	84	42	872	22	236	6.8	821
24	70	72	152	108	131	81	47	878	20	190	14	1230
25	70	72	123	107	108	64	43	876	19	161	15	916
26	66	72	117	106	104	60	28	869	20	120	11	864
27	82	72	110	106	104	59	31	894	30	96	8.2	842
28	602	73	103	95	103	51	34	874	314	70	42	820
29	701	73	96	102	104	48	30	646	593	52	526	701
30	675	75	105	102	---	39	25	276	592	44	693	632
31	608	---	120	95	---	45	---	226	---	38	741	---
TOTAL	4140	3092	3067	3369	3449	2023	1061	13503	3324	12335	2588.3	23819
MEAN	134	103	98.9	109	119	65.3	35.4	436	111	398	83.5	794
MAX	701	316	159	174	141	102	65	1120	593	1150	741	1230
MIN	41	72	74	88	100	39	20	20	18	38	6.8	478
AC-FT	8210	6130	6080	6680	6840	4010	2100	26780	6590	24470	5130	47240
CAL YR 1987	TOTAL	108377.9		MEAN	297	MAX	1400	MIN	6.6	AC-FT	215000	
WTR YR 1988	TOTAL	75770.3		MEAN	207	MAX	1230	MIN	6.8	AC-FT	150300	

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM
(Surveillance program station)

LOCATION.--Lat 32°50'27", long 104°19'23", in NW¼NW¼ sec.18, T.17 S., R.27 E., Eddy County, Hydrologic Unit 13060007, on left bank 250 ft upstream from bridge on State Highway 83, 4.3 mi east of Artesia, 7.0 mi upstream from Rio Penasco, 17 mi upstream from McMillan Dam, and at mile 503.9.

DRAINAGE AREA.--15,300 mi², approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1905 to June 1909, August 1909 to current year. Monthly discharge only for some periods, published in WSP 1312 and 1712. Records for Aug. 22-31, 1934, and October 1936 to April 1937, published in WSP 763 and 828, respectively are not reliable and should not be used. Prior to February 1936, published as "near Dayton."

REVISED RECORDS.--WSP 1312 and 1512: 1913, 1915, 1917-18(M), 1920, 1923, 1931-36. WSP 1712: 1906(M), 1908-11(M), 1919, 1921-23(M), 1929, 1931-32(M), 1935-36(M), 1937, 1939(M), 1941(M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 3,291.92 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). See WSP 1923 or 2123 for history of changes prior to Apr. 5, 1941. Apr. 5, 1941 to Apr. 2, 1981, water-stage recorder at site 250 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 19-30, Dec. 28, 29. Water-discharge records good except for estimated daily discharges, which are poor. Considerable flow regulation by Lake Sumner (station 08384000) since August 1937, and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigation of about 154,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--52 years (water years 1937-88), 241 ft³/s, 174,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge probably occurred May 30, 1937, when a discharge of 51,500 ft³/s was measured by slope-area method at a point 15 mi upstream, gage height, 14.7 ft, site and datum then in use; no flow at times in 1934, 1946-47, 1953-54, 1957, 1964-65.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1893 occurred Oct. 2, 1904, discharge not determined; the peak inflow to Lake McMillan, which includes Rio Penasco and Fourmile Draw, was estimated at 82,000 ft³/s. The second highest flood occurred July 25, 1905, discharge below Rio Penasco, 50,300 ft³/s, based on gain in storage and spill from Lake McMillan. The floods in August 1893 and October 1904 damaged McMillan Dam and washed out Avalon Dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 24	2030	*1,130	*7.99				
Minimum discharge, 17 ft ³ /s, part of each day Aug. 23, 24, 28.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	363	85	123	107	111	44	33	208	667	40	848
2	75	232	86	120	107	113	43	37	165	699	36	917
3	75	194	85	120	105	88	44	39	143	718	39	1010
4	78	169	85	107	104	78	64	35	123	704	40	1020
5	75	144	84	93	115	74	63	30	98	687	35	981
6	60	134	83	94	117	72	46	26	91	701	28	915
7	51	123	85	94	134	69	56	23	78	736	31	877
8	50	110	83	95	148	70	53	28	66	859	33	878
9	49	99	77	94	151	66	38	32	59	1000	35	897
10	53	93	76	93	146	65	31	35	51	948	36	832
11	54	88	79	91	142	68	28	34	47	989	27	774
12	66	87	83	90	142	65	27	33	40	749	32	765
13	59	85	84	113	139	62	27	32	42	395	31	793
14	54	83	95	178	136	66	27	30	43	285	31	847
15	62	82	90	127	130	64	34	203	42	196	50	818
16	77	82	77	126	126	74	31	549	35	150	40	817
17	69	79	78	124	121	68	33	589	81	133	31	822
18	63	79	115	121	122	56	39	636	270	155	25	805
19	68	79	113	118	119	55	49	741	121	127	22	832
20	70	80	119	116	118	68	38	832	90	130	21	759
21	77	80	142	114	122	83	34	911	64	188	22	622
22	77	80	163	114	130	85	36	807	47	480	19	628
23	78	80	161	113	151	91	36	796	37	235	19	756
24	81	81	144	110	145	89	41	773	31	188	18	1040
25	82	81	128	110	132	80	43	778	25	156	25	980
26	81	81	123	109	113	69	41	767	29	124	26	911
27	73	81	121	111	115	67	28	783	37	101	22	886
28	333	82	115	108	111	63	32	794	128	91	19	864
29	566	82	99	104	113	52	35	699	558	80	328	788
30	615	82	113	109	---	49	33	365	652	59	676	704
31	598	---	123	107	---	46	---	245	---	45	785	---
TOTAL	3945	3295	3194	3446	3661	2226	1174	11715	3501	12775	2622	25386
MEAN	127	110	103	111	126	71.8	39.1	378	117	412	84.6	846
MAX	615	363	163	178	151	113	64	911	652	1000	785	1040
MIN	49	79	76	90	104	46	27	23	25	45	18	622
AC-FT	7820	6540	6340	6840	7260	4420	2330	23240	6940	25340	5200	50350
CAL YR 1987 TOTAL		114581		MEAN	314	MAX	1060	MIN	13	AC-FT	227300	
WTR YR 1988 TOTAL		76940		MEAN	210	MAX	1040	MIN	18	AC-FT	152600	

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1937 to current year.

WATER TEMPERATURES: April 1949 to current year.

SUSPENDED-SEDIMENT DISCHARGES: January 1949 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 28,800 microsiemens, June 24, 1977; minimum daily, 111 microsiemens, Aug. 31, 1982.

WATER TEMPERATURES: Maximum daily, 36.0°C, July 27, 1966, July 25, 1969; minimum daily, 0.0°C on many days during winter months of most years.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 21,300 mg/L, Aug. 1, 1962; minimum daily mean, 0 mg/L on several days in 1982, 1984, and 1986.

SEDIMENT LOADS: Maximum daily, 183,000 tons, Sept. 26, 1955; minimum daily, 0 ton on many days during 1953-54, 1957, 1964, 1982, 1984.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 17,500 microsiemens, Aug. 26; minimum daily, 1,060 microsiemens, Aug. 13.

WATER TEMPERATURES: Maximum daily, 34.0°C, Aug. 21; minimum daily, 0.0°C, Dec. 27.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 8,410 mg/L, Sept. 18; minimum daily mean, 12 mg/L, Oct. 27.

SEDIMENT LOADS: Maximum daily, 16,200 tons, Sept. 18; minimum daily, 1.9 ton, Oct. 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV 02...	1200	234	2400	2470	7.77	7.90	19.5	17.0	8.8	16
FEB 29...	1115	107	7000	7100	8.29	7.80	14.0	14.0	10.8	32
MAY 03...	1215	41	12000	12000	8.08	7.50	19.5	18.0	9.6	67
SEP 01...	1100	862	1800	1770	7.76	7.90	24.0	22.0	8.0	13

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY TOT IT FIELD MG/L AS CACO3 (39086)
NOV 02...	860	760	250	57	180	3	3.4	121	0	99
FEB 29...	2000	1900	520	170	890	9	7.8	177	0	145
MAY 03...	3200	3100	720	340	1900	15	11	146	0	120
SEP 01...	810	720	250	46	90	1	3.1	117	0	96

DATE	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 02...	98	860	300	0.70	11	1720	0.300	0.270	0.100
FEB 29...	151	1700	1400	0.80	10	4790	1.30	0.680	0.190
MAY 03...	125	2600	3100	0.70	5.8	8750	<0.100	<0.100	0.150
SEP 01...	94	750	130	0.50	11	1340	0.300	0.270	0.060

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT							
01...	1345	74	--	--	463	93	90
28...	1641	472	--	18.0	3210	4090	--
NOV							
02...	1200	234	2400	17.0	926	585	92
02...	1639	246	--	18.5	780	518	98
DEC							
29...	0816	99	--	--	409	109	86
FEB							
29...	1115	107	7000	14.0	364	105	89
MAR							
31...	1432	50	--	--	561	76	91
MAY							
03...	1215	41	12000	18.0	853	94	89
21...	1132	949	--	18.5	3710	9510	--
22...	1039	815	--	--	4610	10100	76
JUN							
30...	0718	538	--	--	3820	5550	88
JUL							
11...	1827	645	1380	25.0	2640	4600	75
12...	1437	708	--	27.5	2280	4360	--
SEP							
01...	1100	862	1800	22.0	2120	4930	97

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	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)
OCT						
01...	--	--	--	--	--	--
28...	--	34	45	68	90	100
NOV						
02...	--	--	--	--	--	--
02...	100	52	64	86	--	--
DEC						
29...	--	--	--	--	--	--
FEB						
29...	--	--	--	--	--	--
MAR						
31...	--	--	--	--	--	--
MAY						
03...	--	--	--	--	--	--
21...	--	40	52	75	95	100
22...	--	--	--	--	--	--
JUN						
30...	--	--	--	--	--	--
JUL						
11...	--	--	--	--	--	--
12...	--	41	52	71	95	100
SEP						
01...	--	--	--	--	--	--

RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5540	2190	8580	6680	7100	7370	10100	12600	4170	2400	6520	1750
2	5880	2550	8310	6800	7140	7400	10200	12400	4470	2420	7700	1740
3	6020	2810	7900	7020	7280	7610	10300	12700	4650	2470	8330	1620
4	6240	3450	7820	7020	7250	7840	10300	12600	4690	2160	9060	1560
5	6290	3860	7810	6860	7060	9250	8880	12000	4990	1990	8470	1470
6	6470	4150	8150	8060	7240	9650	9300	12900	5440	1920	9380	1510
7	6730	4240	8120	8300	6800	9770	9160	13800	5790	1800	9900	1500
8	7060	4940	8220	8250	6450	9930	8420	14600	5990	1740	11100	1460
9	7490	5200	8280	8470	6610	10100	8870	12800	6030	1870	10700	1370
10	8040	5250	8450	8460	6760	10100	9490	12100	7540	1520	9770	1400
11	8120	5210	8300	8610	7420	10100	11000	12300	7750	1380	9230	1490
12	8150	6090	8350	8680	7370	10000	11200	12200	8430	1500	11100	1450
13	7480	6560	8000	4540	7390	10300	12300	12100	8800	1970	1060	1390
14	8050	6850	7500	4500	7350	10500	13800	12100	8000	2540	10300	1390
15	7960	7070	7580	4860	7360	9840	12800	1200	8570	2730	10800	1350
16	7380	7300	7830	6270	7450	9450	11700	4650	9190	3070	8000	1350
17	7450	7360	7930	6560	7480	9490	11700	3640	9400	3280	7850	1340
18	7790	7770	8110	6530	7290	8930	12100	3310	3830	3530	10100	1360
19	7730	7770	7890	6720	7390	9720	12100	3080	3130	3690	10600	1330
20	7380	7910	7460	6730	7330	9790	10600	3080	3610	3840	11800	1420
21	7300	8200	7120	6800	7270	8100	11600	3070	3910	4250	14700	1620
22	7460	8180	7050	6890	7130	7540	11700	3090	4140	3290	15100	1690
23	7160	8090	7050	6820	6720	7210	11500	2850	4980	2970	14000	1820
24	7050	8200	6410	6930	6450	7100	11400	3030	7410	2930	15200	1530
25	6900	8350	6080	6720	6370	7040	11900	3030	8270	2960	16300	1500
26	6850	8430	6470	6750	6400	7590	10900	3090	9130	2960	17500	1410
27	6970	8460	5820	6590	6810	7900	10800	3060	10200	4450	12400	1340
28	5300	8430	6480	6580	7050	8400	11400	3080	10200	4460	11800	1340
29	3120	8580	---	7130	7040	9100	11500	2980	3590	4860	7110	1350
30	2380	8460	7250	7180	---	9570	13800	3330	2730	5430	2550	1380
31	2280	---	---	6730	---	---	---	3600	---	5760	2200	---
MEAN	6650	6400	7600	6940	7060	8890	11000	7430	6300	2970	10000	1470
WTR YR 1988		MEAN	6890	MAX	17500	MIN	1060					

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	17.0	7.0	4.0	11.0	17.0	11.0	19.0	23.0	26.5	27.5	23.0
2	17.0	18.5	5.0	4.0	11.0	10.0	12.0	20.0	25.0	25.0	31.5	24.0
3	16.5	16.0	11.0	6.0	9.5	12.0	20.0	17.0	21.5	25.5	27.5	23.0
4	16.5	19.0	7.0	5.0	7.0	9.0	18.0	18.0	28.0	28.0	24.0	24.0
5	21.5	18.0	10.0	6.0	4.0	10.0	21.0	16.0	28.0	28.5	31.5	21.0
6	15.5	15.5	2.0	5.0	4.0	15.0	17.5	26.0	29.0	27.0	29.0	23.0
7	21.0	15.0	8.0	4.5	4.0	17.0	14.0	19.0	28.5	27.0	25.0	21.5
8	14.5	15.0	6.5	5.0	6.0	13.0	20.5	14.0	23.0	27.0	27.5	23.0
9	22.0	12.0	10.5	5.0	6.0	13.0	16.0	27.0	25.0	25.0	24.0	23.0
10	17.0	15.0	6.0	3.5	11.0	15.0	11.0	28.0	21.0	24.0	24.5	23.0
11	23.0	10.0	8.0	6.0	11.5	16.0	12.5	19.0	29.0	26.0	31.0	21.5
12	17.0	13.0	12.0	4.5	12.0	11.0	23.0	16.0	25.0	27.5	32.0	22.0
13	17.0	11.0	8.0	5.5	10.5	9.5	23.0	28.0	29.0	27.0	32.5	22.0
14	22.0	11.0	4.0	5.0	8.0	15.0	15.5	18.0	30.0	28.0	25.0	24.0
15	22.5	10.0	2.0	8.0	14.0	9.5	15.5	28.5	25.0	31.0	27.0	24.0
16	19.5	9.0	3.0	6.0	8.0	15.0	18.0	24.0	30.5	29.0	26.0	23.5
17	19.0	9.0	1.5	7.5	9.5	10.0	14.5	23.0	27.5	30.0	30.0	23.5
18	15.0	9.0	5.0	7.0	7.5	15.0	18.0	25.0	24.0	28.0	32.5	22.0
19	20.0	12.5	7.0	7.0	11.0	15.5	16.0	21.5	26.0	26.0	25.0	23.0
20	15.0	8.0	6.0	3.0	10.0	10.0	17.0	20.5	28.5	25.0	27.5	22.0
21	14.0	12.5	9.0	4.0	11.0	19.0	16.0	18.5	30.5	22.5	34.0	21.5
22	15.0	10.0	7.0	4.0	7.0	19.0	18.0	18.0	23.0	24.5	32.5	22.0
23	18.0	12.5	9.0	5.0	9.0	20.0	23.0	21.0	31.0	28.0	30.0	22.0
24	15.0	8.0	8.0	5.5	9.0	15.0	15.0	27.0	29.0	24.0	24.0	21.0
25	20.0	11.5	9.0	4.0	13.5	20.0	21.5	23.0	29.0	28.5	27.5	21.0
26	15.0	9.0	2.0	6.0	13.0	21.0	14.0	21.5	25.0	25.0	26.0	21.0
27	21.0	5.0	.0	5.0	19.0	16.5	19.0	22.0	23.0	29.0	28.0	20.5
28	18.0	5.0	4.0	6.0	14.5	20.0	19.5	22.0	32.0	29.0	20.0	23.0
29	17.0	9.0	---	7.0	16.5	18.0	24.0	21.5	26.0	30.0	19.0	20.0
30	19.0	5.0	6.0	11.0	---	13.0	16.5	22.0	24.5	25.0	19.5	18.0
31	18.0	---	---	8.0	---	---	---	25.0	---	24.0	20.0	---
MEAN	18.0	11.5	6.5	5.5	10.0	14.5	17.5	21.5	26.5	27.0	27.0	22.0
WTR YR 1988		MEAN	17.5	MAX	34.0	MIN	.0					

RIO GRANDE BASIN

08398500 RIO PENASCO AT DAYTON, NM

LOCATION.--Lat 32°44'36", long 104°24'49", in NE¼SE¼SE¼ sec.18, T.18 S., R.26 E., Eddy County, Hydrologic Unit 13060010, on left bank 1.2 mi upstream from U.S. Highway 285, 1.9 mi northwest of old Dayton railway station, 5.6 mi upstream from mouth, and 7.0 mi south of Artesia. Mouth at Pecos River mile 496.4.

DRAINAGE AREA.--1,060 mi², approximately.

PERIOD OF RECORD.--April 1951 to current year. Prior to October 1953, published as "near Dayton."

REVISED RECORDS.--WSP 1242: 1951(M). WSP 1512: 1956. WSP 1923: 1955.

GAGE.--Water-stage recorder and rock and concrete control. Elevation of gage is 3,385.19 ft above National Geodetic Vertical Datum of 1929. Prior to May 9, 1968, at site 2.4 mi downstream, at datum 44.30 ft lower. May 9, 1968 to June 12, 1975, at present site at datum 1.98 ft higher.

REMARKS.--Estimated daily discharges: Jan. 7 to Feb. 28. Records good except for estimated daily discharges which are poor. Diversions and ground-water withdrawals for irrigation of about 3,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--37 years, 6.09 ft³/s, 4,410 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft³/s, Aug. 23, 1966, gage height, 16.4 ft, from floodmarks, present site and datum, from rating curve extended above 7,800 ft³/s on basis of slope-area measurements at gage heights, 6.82 ft and 7.90 ft, at previous site and datum; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about Sept. 22, 1941, reached a stage of about 9 ft, from floodmark, previous site and datum, discharge not determined. Peak discharge at discontinued station "near Dunken" (station 08397600), about 60 mi upstream, was 70,000 ft³/s, determined in 1956, from rating curve extended above a slope-area measurement of 36,000 ft³/s, for peak of Oct. 6 or 7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 2	1800	*108	*2.26				
No flow most of time.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	8.8
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	31
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.4
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.14
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	.00	3.3
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	1.9
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
27	.00	.00	.00	.00	.00	.00	.00	.00	.48	.00	.00	.01
28	.00	.00	.00	.00	.00	.00	.00	1.5	.02	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.56	.01	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.01	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	2.07	.51	.12	.00	54.85
MEAN	.00	.00	.00	.00	.00	.00	.00	.07	.02	.00	.00	1.83
MAX	.00	.00	.00	.00	.00	.00	.00	1.5	.48	.07	.00	31
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	4.1	1.0	.2	.00	109
CAL YR 1987 TOTAL	41.88			MEAN	.11	MAX	31	MIN	.00	AC-FT	83	
WTR YR 1988 TOTAL	57.55			MEAN	.16	MAX	31	MIN	.00	AC-FT	114	

08399500 PECOS RIVER (KAISER CHANNEL) NEAR LAKEWOOD, NM

LOCATION.--Lat 32°41'22", long 104°17'53", in NW¼SE¼ sec.5, T.19 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on left bank 3.0 mi upstream from high-water line of Lake McMillan, 6.0 mi northeast of Lakewood, 7.0 mi northeast of gates in McMillan Dam, 12 mi southeast of Artesia, and at mile 492.1.

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1954, published as Kaiser Lake-McMillan Channel near Lakewood.

GAGE.--Water-stage recorder. Elevation of gage is 3,268.53 ft above National Geodetic Vertical Survey of 1929 (U.S. Bureau of Reclamation bench mark). Prior to Mar. 23, 1955, at site 3.0 mi downstream at datum 7.83 ft lower. Mar. 23, 1955 to Sept. 30, 1963, at present site at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 4 to Nov. 30, Dec. 14 to Jan. 5, Jan. 13, 14, Mar. 3-9, Apr. 12-19, Apr. 28 to May 9, May 14-21, May 26 to June 2, and Aug. 1-3. Records fair except for estimated daily discharges, which are poor. Considerable flow regulation by Lake Summer (station 08384000) since August 1937, and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigation of about 170,000 acres, 1959 determination, upstream from station. Above about 1,500 ft³/s, flow will begin bypassing station and depending on the magnitude and duration of flow, may reach Lake McMillan (station 08400500). Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--38 years, 157 ft³/s, 113,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,920 ft³/s, July 12, 1960; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,110 ft³/s, Sept. 25; minimum daily, 5.0 ft³/s, Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	400	78	119	104	104	41	31	200	664	39	771
2	72	270	80	118	104	101	41	32	160	655	34	843
3	74	200	80	116	104	92	41	34	141	663	34	995
4	76	170	79	111	102	79	47	32	125	673	35	1060
5	74	145	79	90	106	73	57	29	107	647	31	1050
6	62	130	78	88	109	69	45	24	94	620	24	884
7	51	120	78	89	115	66	46	22	83	647	20	842
8	50	110	79	89	128	64	52	26	71	769	25	835
9	48	97	74	87	131	63	40	30	62	1030	34	905
10	52	91	73	87	132	60	34	31	51	959	29	818
11	53	86	75	86	129	61	31	32	48	978	20	703
12	62	85	77	86	128	61	28	31	40	748	18	682
13	61	84	78	96	127	59	26	30	38	367	24	697
14	52	81	90	170	125	58	25	29	41	294	18	781
15	59	81	88	123	122	61	27	170	38	214	33	745
16	78	79	76	115	119	61	26	530	34	162	35	726
17	69	78	76	114	115	62	27	560	29	134	23	719
18	62	78	113	114	115	56	31	600	218	137	17	691
19	66	77	111	112	112	52	40	680	118	130	12	720
20	68	76	115	109	111	57	38	800	87	118	9.6	673
21	74	76	140	108	113	61	34	840	63	124	9.0	531
22	75	76	158	108	116	70	34	800	41	360	7.5	513
23	75	75	156	108	127	68	34	780	27	244	5.0	584
24	78	76	140	106	127	69	36	740	24	202	5.9	1040
25	79	77	128	105	120	68	38	750	17	158	11	1110
26	80	77	120	105	107	61	39	740	18	123	17	907
27	72	76	115	105	106	58	30	740	44	101	13	883
28	300	76	110	105	103	54	28	740	73	88	7.4	861
29	540	76	98	102	103	50	30	700	510	79	158	785
30	590	76	105	104	---	46	31	400	631	64	541	659
31	580	---	120	104	---	42	---	250	---	44	707	---
TOTAL	3808	3299	3067	3279	3360	2006	1077	11233	3233	12196	1996.4	24013
MEAN	123	110	98.9	106	116	64.7	35.9	362	108	393	64.4	800
MAX	590	400	158	170	132	104	57	840	631	1030	707	1110
MIN	48	75	73	86	102	42	25	22	17	44	5.0	513
AC-FT	7550	6540	6080	6500	6660	3980	2140	22280	6410	24190	3960	47630
CAL YR 1987 TOTAL	111519		MEAN	306	MAX	1020	MIN	14	AC-FT	221200		
WTR YR 1988 TOTAL	72567.4		MEAN	198	MAX	1110	MIN	5.0	AC-FT	143900		

08400000 FOURMILE DRAW NEAR LAKEWOOD, NM

LOCATION.--Lat 32°40'20", long 104°22'07", in SW¼NW¼SE¼ sec.10, T.19 S., R.26 E., Eddy County, Hydrologic Unit 13060011, in left side of channel 360 ft downstream from ford on Lakewood-Dayton road, 1.9 mi downstream from U.S. Highway 285, 2.8 mi north of Lakewood, 3.8 mi upstream from mouth, and 11.5 mi south of Artesia. Mouth at Pecos River mile 490.6.

DRAINAGE AREA.--265 mi², approximately.

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WRD 1968: 1967.

GAGE.--Water-stage recorder. Elevation of gage is 3,299.14 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1951 to June 19, 1962, at site 1.8 mi upstream at datum 30.61 ft higher. June 19, 1962 to Oct. 12, 1966 at site 410 ft upstream at datum 6.08 ft higher.

REMARKS.--Estimated daily discharges: Sept. 22. Records good except for estimated daily discharges, which are poor. No surface diversions above station.

AVERAGE DISCHARGE.--37 years, 4.33 ft³/s, 3,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,300 ft³/s, Aug. 23, 1966, gage height, 19.9 ft, from floodmarks, present datum, from rating curve extended above 5,000 ft³/s on basis of slope-area measurement of peak flow; no flow most of time.

The flood of Aug. 23, 1966, (information from local resident) is believed to be the greatest since at least 1920.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 20	2200	*115	*1.84				
No flow most of time.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.1
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.1
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	14.22
MEAN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.1
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	28
CAL YR 1987 TOTAL	.00			MEAN	.00	MAX	.00	MIN	.00	AC-FT	.00	
WTR YR 1988 TOTAL	14.22			MEAN	.04	MAX	9.1	MIN	.00	AC-FT	28	

08400500 LAKE MCMILLAN NEAR LAKEWOOD, NM

LOCATION.--Lat 32°35'42", long 104°20'49", in NE¼NE¼ sec.11, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, near outlet gates of McMillan Dam on Pecos River, 3.4 mi southeast of Lakewood, and at mile 484.3.

DRAINAGE AREA.--16,990 mi², approximately (contributing area).

PERIOD OF RECORD.--January 1939 to September 1965 (month end gage heights and contents), October 1965 to current year. Month end gage heights January 1918 to December 1938, in files of Pecos River Commission.

GAGE.--Nonrecording gage. Elevation of gage is 3,241.6 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Lake is formed by McMillan Dam, an earthfill structure, completed and storage began in 1893. The structure was damaged by floods of October 1893 and Oct. 2, 1904. Capacity, 27,300 acre-ft, from capacity table dated August 1964, between gage heights 0.0 ft (sill of outlet gate) and 24.9 ft, crest of spillway No. 2. Flashboards in spillway No. 2 may be used to increase this capacity. Maximum capacity without spill, 33,620 acre-ft, at gage height 26.1 ft, crest of spillway No. 1. No dead storage. No storage allocated to flood control. Figures given herein represent usable contents. Gage heights may be affected by variable drawdown due to flow through gates. Water is used for irrigation by Carlsbad Irrigation District.

COOPERATION.--Record provided by Carlsbad Irrigation District.

EXTREMES FOR PERIOD OF RECORD (SINCE 1938).--Maximum contents observed, 68,500 acre-ft, Sept. 26, 1941, gage height, 29.95 ft; no storage for periods in 1944-54, 1957, 1964, 1965, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 28,780 acre-ft, Mar. 26, gage height, 25.19 ft; minimum, 1,980 acre-ft, Aug. 29, gage height, 16.25 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 08:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16190	12590	16970	20750	24380	28320	23910	7290	18160	5980	17880	5870
2	15830	13630	16970	20930	24660	28420	22520	7290	18160	7240	17120	6090
3	15480	14290	17010	21150	24800	28470	21900	7290	18160	8590	16010	6090
4	15480	14620	17160	21210	24950	28520	21260	7290	17880	9910	15570	7720
5	15310	15030	17160	21260	25050	28520	20970	7290	17690	11170	15310	9370
6	15170	15200	17230	21310	25190	28520	20430	7220	17500	12520	14960	10600
7	14790	15480	17310	21500	25340	28570	20240	7010	17230	14120	14620	11610
8	14120	15620	17380	21670	25480	28520	19900	6780	16740	15480	14450	12220
9	13630	15870	17420	21850	25630	28520	19650	6360	16010	17230	14790	12830
10	13050	15830	17500	21940	25780	28520	18670	5980	14960	19700	14790	13150
11	12460	15870	17540	22030	25930	28470	18160	5780	13960	21630	14290	13310
12	12000	15980	17690	22120	26120	28520	17500	5570	13630	23440	13790	12990
13	11470	16010	17650	22250	26320	28520	16670	5190	13150	24140	13310	13630
14	11170	16120	18790	22340	26470	28520	15570	4530	12680	24380	12830	14620
15	10600	16120	18160	22430	26520	28470	14960	4010	12220	24380	12370	14450
16	10100	16270	18160	22520	26670	28520	14120	3670	11630	24380	12060	13790
17	9770	16270	18160	22710	26810	28520	13790	3870	10880	24380	11610	13470
18	9470	16600	18240	22520	26860	28520	13790	4070	10180	24380	11320	13790
19	9470	16370	18470	23070	27030	28520	13470	4430	9770	24140	10460	14790
20	9560	16410	18670	23260	27110	28520	12520	5530	9180	23910	9110	14120
21	9500	16410	18830	23400	27160	28520	11670	6890	8410	24140	8210	14620
22	9500	16560	19080	23540	27060	28680	11030	8210	7460	22980	7130	15830
23	9630	16630	19240	23630	27160	28680	10180	10180	6550	22980	6200	16190
24	9720	16710	19650	23720	27560	28680	9880	10880	5210	22980	5420	15830
25	9770	16600	19780	23770	27710	28730	9560	11910	4110	22980	4670	17310
26	9850	16640	19990	23810	27860	28780	8720	12930	2940	22750	3810	17500
27	9910	16710	20070	23960	28120	27810	8410	13790	3120	22070	3120	17880
28	9910	16670	20200	24100	28320	27210	8090	14790	3030	21310	2850	18080
29	10070	16710	20280	24190	28320	26320	7600	16560	3260	20120	1980	18270
30	10740	16780	20410	24290	---	25210	7480	17690	4530	19590	2850	18080
31	12060	---	20620	24380	---	24430	---	18160	---	18770	4530	---
MAX	16190	16780	20620	24380	28320	28780	23910	18160	18160	24380	17880	18270
MIN	9470	12590	16970	20750	24380	24430	7480	3670	2940	5980	1980	5870
(+)	-4830	+4720	+3840	+3760	+3940	-3890	-16950	+10680	-13630	+14240	-14240	+13550
CAL YR 1987	MAX 31450	MIN 5640	(+)	+2740.6								
WTR YR 1988	MAX 28780	MIN 1980	(+)	+1190								

(+) CHANGE IN CONTENTS, IN ACRE-FEET

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 08:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.35	21.27	22.56	23.50	24.30	25.10	24.20	19.32	22.87	18.75	22.80	18.70
2	22.25	21.60	22.56	23.54	24.36	25.12	23.90	19.32	22.87	19.30	22.60	18.80
3	22.15	21.80	22.57	23.59	24.39	25.13	23.76	19.32	22.87	19.85	22.30	18.80
4	22.12	21.94	22.61	23.61	24.42	25.14	23.63	19.32	22.80	20.35	22.20	19.50
5	22.09	22.02	22.61	23.63	24.44	25.14	23.55	19.32	22.75	20.80	22.10	20.15
6	22.06	22.07	22.63	23.65	24.47	25.14	23.45	19.29	22.70	21.25	22.00	20.60
7	21.93	22.15	22.65	23.68	24.50	25.15	23.38	19.20	22.63	21.75	21.90	20.95
8	21.77	22.21	22.67	23.71	24.53	25.14	23.30	19.10	22.50	22.15	21.85	21.15
9	21.61	22.27	22.68	23.75	24.56	25.14	23.24	18.92	22.30	22.63	21.95	21.35
10	21.42	22.25	22.70	23.77	24.59	25.14	23.00	18.75	22.00	23.25	21.95	21.45
11	21.23	22.26	22.71	23.79	24.62	25.13	22.87	18.66	21.70	23.70	21.80	21.50
12	21.08	22.29	22.75	23.81	24.66	25.14	22.70	18.57	21.60	24.10	21.65	21.40
13	20.90	22.30	22.74	23.84	24.70	25.14	22.48	18.40	21.45	24.25	21.50	21.60
14	20.72	22.33	23.03	23.86	24.73	25.14	22.20	18.10	21.30	24.30	21.35	21.90
15	20.58	22.33	22.87	23.88	24.74	25.13	22.00	17.85	21.15	24.30	21.20	21.85
16	20.42	22.37	22.87	23.90	24.77	25.14	21.75	17.68	20.96	24.30	21.10	21.65
17	20.30	22.37	22.87	23.94	24.80	25.14	21.69	17.78	20.70	24.30	20.95	21.55
18	20.19	22.46	22.89	23.98	24.81	25.14	21.69	17.88	20.45	24.30	20.85	21.65
19	20.19	22.40	22.95	24.02	24.84	25.14	21.55	18.05	20.30	24.25	20.55	21.95
20	20.22	22.41	23.00	24.06	24.86	25.14	21.25	18.51	20.08	24.20	20.15	21.75
21	20.20	22.41	23.04	24.09	24.87	25.14	21.00	19.15	19.78	24.25	19.70	21.90
22	20.20	22.45	23.10	24.12	24.85	25.17	20.78	19.70	19.39	24.00	19.25	22.25
23	20.24	22.47	23.14	24.14	24.87	25.17	20.45	20.45	19.00	24.00	18.85	22.35
24	20.28	22.49	23.24	24.16	24.95	25.17	20.34	20.70	18.41	24.00	18.50	22.25
25	20.30	22.46	23.27	24.17	24.98	25.18	20.22	21.05	17.90	24.00	18.15	22.65
26	20.33	22.47	23.32	24.18	25.01	25.19	19.90	21.38	17.30	23.95	17.75	22.70
27	20.35	22.49	23.34	24.21	25.06	25.00	19.78	21.65	17.40	23.80	17.40	22.80
28	20.35	22.48	23.37	24.24	25.10	24.88	19.65	21.95	17.35	23.65	17.25	22.85
29	20.44	22.49	23.39	24.26	25.10	24.70	19.45	22.45	17.47	23.35	16.25	22.90
30	20.64	22.51	23.44	24.28	---	24.48	19.40	22.75	18.10	23.23	17.25	22.85
31	21.10	---	23.48	24.30	---	24.31	---	22.87	---	23.02	18.10	---
MEAN	20.97	22.26	22.94	23.92	24.72	25.07	21.89	19.59	20.60	23.01	20.36	21.46
MAX	22.35	22.51	23.48	24.30	25.10	25.19	24.20	22.87	22.87	24.30	22.80	22.90
MIN	20.19	21.27	22.56	23.50	24.30	24.31	19.40	17.68	17.30	18.75	16.25	18.70
CAL YR 1987	MEAN 22.84	MAX 25.70	MIN 18.60									
WTR YR 1988	MEAN 22.23	MAX 25.19	MIN 16.25									

08401000 PECOS RIVER BELOW MCMILLAN DAM, NM

LOCATION.--Lat 32°35'40", long 104°20'59", in NW¼NE¼ sec.11, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on left bank 700 ft downstream from gates in McMillan Dam, 3.4 mi southeast of Lakewood, and at mile 484.1.

DRAINAGE AREA.--16,990 mi², approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1908, January 1909 to December 1911, (January 1906, and January 1910 to December 1911, gage heights and discharge measurements only), August 1939 to December 1940, December 1946 to September 1988 (discontinued). Published as "near Lakewood" 1906-11, and as "below McMillan Dam, near Lakewood" 1939-40.

REVISED RECORDS.--WSP 1512: 1909.

GAGE.--Water-stage recorder and rock control. Elevation of gage is 3,238.21 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). See WSP 1732 for history of changes prior to Mar. 12, 1957. Supplemental water-stage recorders on McMillan Dam spillways No. 1 and 2, Apr. 6, 1960, to Sept. 30, 1970.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Lake McMillan (station 08400500) 0.2 mi upstream. Discharge figures do not include flow, if any, over Lake McMillan spillways No. 1 and 2 which enters the Pecos River downstream from this gage. Diversions and ground-water withdrawals for irrigation of about 171,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--43 years (water years 1907, 1940, 1948-88), 103 ft³/s, 74,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s, Aug. 23, 1966, includes flow of spillways; no flow many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 2, 1904, may have reached 60,000 ft³/s. The flood of Aug. 3, 1893, damaged McMillan Dam, then under construction, and destroyed Avalon Dam; this flood was described as "highest in 50 years" at Carlsbad.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 955 ft³/s, Sept. 15; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	9.5	5.3	1.1	.42	.29	355	33	121	8.2	354	428
2	157	9.4	5.4	1.0	.17	.64	327	15	121	9.3	352	860
3	99	9.1	5.8	.82	.29	.17	241	11	121	9.6	310	418
4	80	8.8	5.9	.88	.33	.35	208	5.4	121	10	132	274
5	80	8.3	6.6	1.6	.12	.52	130	4.9	121	11	132	325
6	174	8.2	6.9	1.5	.00	.50	130	75	121	11	131	327
7	217	8.2	6.9	1.8	.00	.49	159	109	164	13	160	425
8	249	8.0	6.9	1.7	.00	.61	207	155	282	13	14	474
9	261	7.7	6.9	1.6	.00	.73	222	186	385	14	13	582
10	260	7.4	7.5	1.0	.00	.83	221	172	383	14	156	639
11	260	6.8	7.5	.90	.00	.73	236	78	254	15	216	687
12	259	6.5	7.6	1.5	.00	.62	303	66	192	135	215	608
13	258	6.2	7.6	1.4	.00	.58	338	246	193	178	205	240
14	259	6.1	6.0	1.4	.00	.36	337	274	192	179	166	502
15	257	5.4	5.7	1.0	.00	.31	335	291	201	145	166	955
16	223	5.0	6.1	.34	.00	.46	187	358	290	13	161	855
17	146	4.9	6.1	.29	.00	.18	3.7	410	346	13	161	720
18	46	4.3	4.3	.30	.00	.00	97	409	345	63	221	342
19	8.4	4.4	3.3	.29	.00	.00	337	368	343	356	439	705
20	8.3	4.4	3.4	.35	.00	.00	336	189	366	169	502	926
21	8.1	3.3	2.1	.66	.00	.00	315	191	448	312	497	48
22	7.4	3.1	2.7	.64	.00	.09	324	193	442	292	465	193
23	7.7	3.2	2.9	.73	.00	1.1	275	191	451	178	326	627
24	7.7	55	3.1	.68	.00	1.3	246	240	467	178	323	625
25	8.0	6.5	2.5	.68	.00	1.3	197	283	482	179	370	668
26	8.1	6.1	3.6	.66	.00	167	160	297	213	281	310	680
27	8.2	4.9	2.6	.52	.00	362	160	300	45	319	217	694
28	8.4	4.9	.69	.50	.00	391	159	207	6.7	359	296	725
29	8.9	4.9	.51	.46	.00	354	140	120	6.9	359	104	723
30	9.1	5.1	2.2	.46	---	355	69	120	7.3	356	6.6	722
31	9.3	---	.98	.46	---	356	---	121	---	356	158	---
TOTAL	3637.6	235.6	145.58	27.22	1.33	1997.16	6754.7	5718.3	7230.9	4548.1	7278.6	16997
MEAN	117	7.85	4.70	.88	.05	64.4	225	184	241	147	235	567
MAX	261	55	7.6	1.8	.42	391	355	410	482	359	502	955
MIN	7.4	3.1	.51	.29	.00	.00	3.7	4.9	6.7	8.2	6.6	48
AC-FT	7220	467	289	54	2.6	3960	13400	11340	14340	9020	14440	33710
CAL YR 1987	TOTAL	88718.68		MEAN	243	MAX	616	MIN	.51	AC-FT	176000	
WTR YR 1988	TOTAL	54572.09		MEAN	149	MAX	955	MIN	.00	AC-FT	108200	

08401200 SOUTH SEVEN RIVERS NEAR LAKEWOOD, NM

LOCATION.--Lat 32°35'19", long 104°25'17", in SE¼SE¼NW¼ sec.7, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on downstream side of center pier of bridge on U.S. Highway 285, 0.4 mi south of Seven Rivers, 2.6 mi upstream from mouth, and 4.0 mi southwest of Lakewood. Mouth at Pecos River mile 480.9.

DRAINAGE AREA.--220 mi², approximately.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,280 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 8, 1965, at site 400 ft upstream at datum 0.52 ft higher.

REMARKS.--Estimated daily discharges: June 3-12. Records good except for estimated daily discharges, which are poor. No surface diversions above station, ground-water withdrawals for 240 acres, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--25 years, 4.86 ft³/s, 3,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft³/s, May 30, 1965, gage height, 20.0 ft, from floodmarks, present site and datum, from rating curve extended above 5,700 ft³/s on basis of slope-area measurements at gage heights, 18.15 ft and 20.0 ft; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1941, about 30,000 ft³/s, gage height, 22.8 ft, from old debris on left bank, former site and datum, from rating curve extended above 5,700 ft³/s on basis of slope-area measurement at gage height 21.8 ft. Probable date of flood, Oct. 7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	Unknown	1,130	8.35	Sept. 20	2300	*8,440	*13.78
No flow most of time.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	24	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	18	.00	15	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	198	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.7	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	941
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	461
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	19	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	19.00	216.00	5.70	39.00	1402.01
MEAN	.00	.00	.00	.00	.00	.00	.00	.61	7.20	.18	1.26	46.7
MAX	.00	.00	.00	.00	.00	.00	.00	19	198	5.7	24	941
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	38	428	11	77	2780
CAL YR 1987 TOTAL	.00			MEAN	.00	MAX	.00	MIN	.00	AC-FT	.00	
WTR YR 1988 TOTAL	1681.71			MEAN	4.59	MAX	941	MIN	.00	AC-FT	3340	

LOCATION.--Lat 32°32'48", long 104°22'43", in NE¼SE¼NE¼ 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 northwest of Carlsbad, and at mile 478.6.

PERIOD OF RECORD.--August to September 1988.

GAGE.--Nonrecording gage. Elevation of gage is 3,202.5 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Lake is formed by a concrete and earthfill dam on Pecos River. Storage began August 1988. Capacity, 966,360 acre-ft, from capacity table dated Aug. 24, 1981, between elevations 3,202.5 ft and 3,303.5 ft (stage at maximum flood). Dead storage 2,010 acre-ft. Lake was created primarily for irrigation storage and flood control.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 12,820 acre-ft, Sept. 30, 1988, elevation, 3,241.20 ft; no storage prior to Aug. 31, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum contents during period August to September, 12,820 acre-ft, Sept. 30, elevation, 3,241.20 ft; no storage prior to Aug. 31.

[illegible]

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
INSTANTANEOUS VALUES

[illegible]

08401500 PECOS RIVER BELOW MAJOR JOHNSON SPRINGS NEAR CARLSBAD, NM

LOCATION.--Lat 32°32'38", long 104°22'00", in NE¼NW¼SE¼ sec.27, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on left bank, 0.8 miles downstream from Brantley Dam, 3.2 mi downstream from South Seven Rivers, 4.7 mi southeast of Seven Rivers, 6.4 mi south of Lakewood, 11.0 mi northwest of Carlsbad, and at mile 477.8.

DRAINAGE AREA.--17,650 mi², approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1947 to September 1950, October 1971 to current year (operated as a low-flow station only). Records prior to October 1971, not equivalent due to spring inflow between sites.

GAGE.--Water-stage recorder. Elevation of gage is 3,191.15 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation reference point). Prior to October 1971, at site 1.3 mi upstream at different datum. October 1971 to June 4, 1985, at site 0.8 mi upstream at datum 7.29 ft higher.

REMARKS.--Estimated daily discharges: Feb. 18, 19. Water-discharge records good except for estimated daily discharges, which are poor. Flow regulated by Lake McMillan (station 08400500) 6.5 mi upstream. Flows when they occur, from Lake McMillan Spillways No. 1 and 2, that bypasses upstream station are included in the total flow. Diversions and ground-water withdrawals for irrigation of about 173,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,160 ft³/s, Sept. 15, 1949, July 24, 1950, from rating curve extended above 780 ft³/s; maximum gage height, 5.38 ft, Sept. 15, 1949, site and datum then in use; minimum discharge, 7.0 ft³/s, July 20, 1977, Aug. 12, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, greater than 500 ft³/s, Mar. 28, June 24, 25, Aug. 21, 22, and Sept. 15; minimum daily, 2.9 ft³/s, Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	269	55	48	44	45	47	355	97	158	82	394	193
2	206	54	49	44	44	47	354	65	157	77	394	321
3	150	52	49	43	44	47	290	57	157	74	381	199
4	121	51	50	43	44	47	244	47	157	70	236	90
5	114	48	49	43	46	46	185	41	157	67	167	24
6	139	54	50	44	45	46	162	56	157	65	157	23
7	202	60	50	44	45	46	167	112	161	64	167	85
8	216	58	50	44	45	45	201	133	248	64	127	164
9	239	55	49	45	45	45	227	177	355	61	77	312
10	240	54	51	45	45	45	229	183	404	61	107	321
11	240	54	52	46	44	45	230	135	377	61	217	253
12	240	55	53	47	45	45	282	90	321	94	223	249
13	240	56	55	43	46	45	326	161	256	171	222	2.9
14	242	60	56	43	46	45	343	237	235	182	193	108
15	242	59	51	44	46	44	348	259	229	187	179	a---
16	230	57	49	44	45	44	315	321	274	106	175	384
17	196	54	47	44	46	44	116	389	351	73	172	258
18	126	53	47	45	46	44	79	411	379	70	175	127
19	76	54	47	45	46	48	267	425	385	264	364	125
20	60	55	47	44	46	50	355	283	386	268	490	229
21	59	56	48	44	47	49	324	215	461	275	a---	32
22	59	55	47	44	46	49	338	208	494	333	a---	17
23	58	50	47	44	46	49	325	208	496	239	442	19
24	56	11	47	43	46	47	275	221	a---	201	371	19
25	55	58	47	43	46	45	250	263	a---	198	387	19
26	55	52	46	43	47	74	197	293	489	244	395	23
27	54	50	46	43	47	320	186	303	225	331	287	26
28	54	50	46	45	47	a---	183	289	122	373	141	20
29	54	50	44	44	47	359	186	187	94	391	7.1	20
30	53	48	45	44	---	342	130	161	88	394	24	21
31	54	---	45	45	---	352	---	158	---	395	81	---
TOTAL	4399	1578	1507	1366	1323	---	7469	6185	---	5535	---	---
MEAN	142	52.6	48.6	44.1	45.6	---	249	200	---	179	---	---
MAX	269	60	56	47	47	---	355	425	---	395	---	---
MIN	53	11	44	43	44	---	79	41	---	61	---	---
AC-FT	8730	3130	2990	2710	2620	---	14810	12270	---	10980	---	---

a Discharge greater than 500 ft³/s.

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV												
03...	1430	55	4610	4790	7.79	7.70	30.0	19.5	9.0	1500	1400	440
JAN												
06...	1445	44	5010	--	7.88	--	16.0	11.0	10.5	--	--	--
MAR												
03...	1430	48	5000	4920	7.69	7.70	15.0	15.0	--	1800	1700	520
MAY												
09...	1415	180	8250	8380	7.91	7.40	29.5	20.0	9.2	2500	2500	640
JUN												
30...	1100	86	4330	4570	7.56	7.60	27.0	26.0	9.1	1900	1800	550
AUG												
29...	1445	3.3	--	--	--	--	19.0	23.5	7.7	--	--	--

[illegible]

08401900 ROCKY ARROYO AT HIGHWAY BRIDGE, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'23", long 104°22'28", in SE¼SE¼ sec.3, T.21 S., R.25 E., Eddy County, Hydrologic Unit 13060011, at downstream end of bridge pier nearest left bank on U.S. Highway 285, 2.1 mi upstream from mouth and 10 mi northwest of Carlsbad. Mouth at Pecos River mile 475.2.

DRAINAGE AREA.--285 mi, approximately.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,250 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to February 1985, at site 60 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Aug. 8. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of 220 acres, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--25 years, 8.33 ft³/s, 6,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft³/s Aug. 23, 1966, gage height, 15.35 ft, from rating curve extended above 8,500 ft³/s on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Since about 1941 the maximum discharge probably occurred Oct. 7, 1954, discharge, 63,600 ft³/s, gage height, 19.2 ft, from highwater marks on downstream end of bridge pier, by slope-area measurement at site 5 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 7	1930	1,140	7.25	Sept. 20	2330	*13,720	*12.10

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	58	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.3	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	540
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	866
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	136
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.0
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.3
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.37
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	65.30	1553.67
MEAN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.11	51.8
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	58	866
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	130	3080
CAL YR 1987 TOTAL	115.99			MEAN	.32	MAX	79	MIN	.00	AC-FT	230	
WTR YR 1988 TOTAL	1618.97			MEAN	4.42	MAX	866	MIN	.00	AC-FT	3210	

08402000 PECOS RIVER AT DAMSITE 3, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'40", long 104°19'58", sec.6, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank at damsite 3 of Carlsbad project of Bureau of Reclamation, about 1 mi upstream from flow line of Lake Avalon, 1.3 mi downstream from Rocky Arroyo, 8.0 mi northwest of Carlsbad, and at mile 473.8.

DRAINAGE AREA.--17,980 mi², approximately (contributing area).

PERIOD OF RECORD.--August 1939 to December 1940, August 1944 to current year.

REVISED RECORDS.--WSP 1512: 1946-47(M), 1948(P), 1949, 1950(P). WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,171.31 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Aug. 10, 1944, at site 1,000 ft downstream at datum 1.00 ft higher. Aug. 10, 1944 to Dec. 31, 1966, at present datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Nov. 27 to Dec. 2, Jan. 18 to Feb. 1, Feb. 21 to Mar. 3, and Sept. 22. Records good except for estimated daily discharges, which are fair. Flow regulated by Lake McMillan (station 08400500) 10 mi upstream. 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 temperatures were made during the year.

AVERAGE DISCHARGE.--45 years (water years 1940, 1945-88), 162 ft³/s, 117,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,000 ft³/s, Aug. 23, 1966, gage height, 21.32 ft, present datum, from floodmark, from rating curve extended above 25,000 ft³/s on basis of slope-area measurement at gage height 19.53 ft; minimum, 2.5 ft³/s, Sept. 14, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 40,000 ft³/s, occurred in Aug. 1893, Oct. 2, 1904, July 25, 1905, Apr. 17, 1915, Aug. 7, 1916, and May 30, 1937, based primarily on records for station "at Carlsbad." Peak of May 22, 1941, was estimated at 60,000 ft³/s. Floods of 1893 and 1904 originated upstream from McMillan Dam and contributed to the two failures of Avalon Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,380 ft³/s, Sept. 20, gage height, 9.92 ft; minimum, 2.5 ft³/s, Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	288	53	38	43	47	49	358	116	157	84	351	154
2	224	53	38	43	39	48	347	83	157	68	347	290
3	160	47	39	42	32	53	315	74	157	72	346	204
4	123	46	39	41	43	48	257	66	157	78	238	103
5	116	36	38	41	49	46	202	61	157	62	160	28
6	128	18	41	41	49	48	164	62	156	62	150	22
7	217	48	42	41	49	47	163	112	163	57	153	53
8	232	48	38	41	49	45	195	130	245	60	140	144
9	264	47	38	41	49	45	228	178	346	60	76	253
10	266	43	40	42	49	54	233	189	379	60	86	288
11	267	41	42	42	49	63	235	152	378	56	206	233
12	266	39	43	42	49	63	272	102	329	65	238	238
13	266	39	46	41	50	64	315	145	264	150	228	24
14	266	44	49	41	54	60	333	239	233	165	209	3.2
15	269	50	45	42	56	53	338	262	255	173	186	406
16	260	56	44	43	54	50	329	308	252	118	173	349
17	221	52	41	43	54	52	140	368	311	62	169	241
18	136	48	39	43	55	52	76	398	357	59	184	146
19	81	48	39	43	55	52	224	408	374	187	337	75
20	61	50	39	43	54	53	336	311	368	274	417	652
21	58	52	41	42	54	52	312	230	387	230	480	767
22	57	53	41	42	53	52	321	218	415	300	476	132
23	57	56	40	42	53	50	321	214	434	249	417	22
24	53	35	39	42	52	56	275	223	449	196	340	18
25	53	23	41	42	52	57	254	266	478	188	362	19
26	53	48	42	42	51	61	205	297	442	218	383	20
27	52	45	42	43	51	257	190	309	229	300	303	25
28	53	42	42	44	50	386	187	305	115	335	173	21
29	53	40	42	45	49	376	195	204	87	358	21	18
30	56	37	43	46	---	351	153	165	84	369	16	18
31	56	---	43	47	---	354	---	157	---	354	53	---
TOTAL	4712	1337	1274	1316	1450	3097	7473	6352	8315	5069	7418	4966.2
MEAN	152	44.6	41.1	42.5	50.0	99.9	249	205	277	164	239	166
MAX	288	56	49	47	56	386	358	408	478	369	480	767
MIN	52	18	38	41	32	45	76	61	84	56	16	3.2
AC-FT	9350	2650	2530	2610	2880	6140	14820	12600	16490	10050	14710	9850
CAL YR 1987	TOTAL	102723		MEAN	281	MAX	667	MIN	18	AC-FT	203800	
WTR YR 1988	TOTAL	52779.2		MEAN	144	MAX	767	MIN	3.2	AC-FT	104700	

08403500 CARLSBAD MAIN CANAL AT HEAD, NEAR CARLSBAD, NM

LOCATION.--Lat 32°29'25", long 104°15'08", in NW¼SW¼SW¼ sec.12, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank 220 ft downstream from headgates in Avalon Dam, and 3.3 mi, north of Carlsbad. Pecos River mile 467.2.

PERIOD OF RECORD.--July 1939 to current year (monthly discharge only July 1939 to September 1965). January 1941 to March 1951 published in WSP 1732.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,156.50 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to March 1951, at site 20 ft upstream at datum 0.9 ft higher.

REMARKS.--No estimated daily discharges. 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 temperatures were made during the year.

AVERAGE DISCHARGE.--49 years, 104 ft³/s, 75,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 526 ft³/s, Sept. 15, 16, 1946; no flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	.01	.00	.00	.00	.00	288	49	163	60	266	142
2	189	.00	.00	.00	.00	.00	225	85	176	69	277	122
3	182	.00	.00	.00	.00	.00	192	85	157	76	283	92
4	194	.00	.00	.00	.00	.00	193	104	152	66	281	66
5	171	.00	.00	.00	.00	.00	219	140	127	104	268	79
6	225	.00	.00	.00	.00	.00	248	120	171	116	174	96
7	220	.00	.00	.00	.00	.00	241	111	243	133	146	115
8	189	.00	.00	.00	.00	.00	227	100	278	108	145	160
9	186	.00	.00	.00	.00	.00	220	98	287	84	169	171
10	163	.00	.00	.00	.00	.00	204	123	248	83	162	155
11	170	.00	.00	.00	.00	.00	234	138	218	69	78	132
12	225	.00	.00	.00	.00	.00	286	189	190	91	74	177
13	256	.00	.00	.00	.00	.00	293	248	202	85	97	255
14	267	.00	.00	.00	.00	.00	301	245	259	111	90	269
15	235	.00	.00	.00	.00	.00	290	228	317	156	161	284
16	180	.00	.00	.00	.00	79	282	243	301	132	248	259
17	120	.00	.00	.00	.00	134	242	330	321	107	298	212
18	80	.00	.00	.00	.00	123	218	334	304	198	356	184
19	73	.00	.00	.00	.00	137	250	312	277	309	345	186
20	71	.00	.00	.00	.00	116	279	238	337	229	344	181
21	85	.00	.00	.00	.00	124	264	200	376	181	336	98
22	107	.00	.00	.00	64	190	257	164	398	202	334	43
23	81	.00	.00	.00	59	193	216	170	383	235	362	13
24	65	.00	.00	.00	58	209	197	226	363	236	345	.40
25	73	.00	.00	.00	76	261	207	243	333	248	307	.38
26	83	.00	.00	.00	70	248	200	254	224	268	286	.31
27	105	.00	.00	.00	39	268	196	267	134	284	289	.30
28	167	.00	.00	.00	12	286	201	229	48	320	289	22
29	183	.00	.00	.00	.00	303	134	141	53	308	141	52
30	157	.00	.00	.00	---	320	56	146	61	294	119	52
31	69	---	.00	.00	---	314	---	131	---	288	127	---
TOTAL	4776	.01	.00	.00	378.00	3305.00	6860	5691	7101	5250	7197	3618.39
MEAN	154	.00	.00	.00	13.0	107	229	184	237	169	232	121
MAX	267	.01	.00	.00	76	320	301	334	398	320	362	284
MIN	65	.00	.00	.00	.00	.00	56	49	48	60	74	.30
AC-FT	9470	.02	.00	.00	750	6560	13610	11290	14080	10410	14280	7180
CAL YR 1987 TOTAL	46141.01			MEAN	126	MAX	382	MIN	.00	AC-FT	91520	
WTR YR 1988 TOTAL	44176.40			MEAN	121	MAX	398	MIN	.00	AC-FT	87620	

RIO GRANDE BASIN

08403800 LAKE AVALON NEAR CARLSBAD, NM

LOCATION.--Lat 32°29'27", long 104°15'05", in NW¼SW¼ sec.12, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on headwall at outlet gate of dam on Pecos River, 3.3 mi north of Carlsbad, and at mile 467.2.

DRAINAGE AREA.--18,070 mi², approximately (contributing area).

PERIOD OF RECORD.--January 1939 to September 1965 (monthend gage heights and contents), October 1965 to current year. Month end gage heights January 1919 to December 1938, in files of Pecos River Commission.

REVISED RECORDS.--WSP 898: 1939.

GAGE.--Nonrecording gage. Elevation of gage is 3,157.0 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. 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 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, 4,330 acre-ft, from capacity table put into use January 1, 1982, between gage heights, 0.0 (sill of outlet gates) and 20.4 ft, crest of spillway No. 2. No dead storage. No storage allocated to flood control. 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 was passing through reservoir.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,880 acre-ft, Jan. 31 to Feb. 22, gage height, 19.90 ft; minimum, 616 acre-ft, Mar. 27, Apr. 19, 20, Aug. 20, and Sept. 15, gage height, 15.30 ft.

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 08:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610	710	2250	3710	3880	3450	760	1410	1280	1750	919	710
2	1750	760	2330	3710	3880	3530	919	1410	1210	1750	1030	864
3	1680	864	2400	3710	3880	3530	1210	1410	1210	1680	1150	1150
4	1540	919	2560	3790	3880	3530	1280	1370	1180	1680	1280	1280
5	1410	975	2630	3790	3880	3530	1540	1280	1150	1610	1150	1280
6	1210	1030	2710	3790	3880	3530	1340	1030	1090	1470	975	1150
7	1090	1090	2710	3790	3880	3530	1090	975	975	1340	919	975
8	1090	1150	2790	3790	3880	3620	975	919	811	1210	1280	864
9	1210	1210	2870	3790	3880	3620	975	919	662	1090	975	864
10	1280	1280	2950	3790	3880	3620	975	1210	710	975	710	1210
11	1470	1340	3030	3790	3880	3710	975	1210	975	919	710	1340
12	1610	1410	3110	3790	3880	3710	975	1090	1280	811	975	1470
13	1680	1470	3110	3790	3880	3710	919	864	1410	892	1210	1470
14	1680	1540	3110	3790	3880	3710	975	710	1280	1030	1340	975
15	1610	1610	3200	3790	3880	3710	975	710	1150	1090	1470	616
16	1680	1680	3280	3790	3880	3620	1060	710	1030	1150	1470	919
17	1820	1680	3280	3790	3880	3530	1090	710	811	1150	1210	1030
18	2030	1750	3280	3790	3880	3280	864	710	760	1000	919	1090
19	2030	1820	3360	3790	3880	3110	616	811	811	662	662	919
20	2030	1890	3360	3790	3880	2950	616	919	919	710	616	760
21	1960	1960	3450	3790	3880	2710	710	975	811	811	639	2870
22	1820	2030	3450	3790	3880	2330	760	1030	760	919	811	3200
23	1750	2030	3530	3790	3710	2330	864	1090	710	1030	975	3360
24	1680	2030	3530	3790	3620	1750	1090	1090	760	1030	919	3280
25	1610	2030	3620	3790	3530	1410	1150	1030	811	1000	864	3240
26	1540	2030	3620	3790	3360	919	1210	1030	1150	811	975	3200
27	1470	2100	3620	3790	3280	616	1210	1030	2950	710	975	3200
28	1280	2100	3620	3790	3280	616	1150	1090	1610	710	1210	3200
29	1030	2100	3620	3790	3360	811	1150	1090	1690	710	1210	3110
30	760	2100	3620	3790	---	760	1340	1150	1690	811	1030	2950
31	662	---	3710	3880	---	760	---	1180	---	864	811	---
MAX	2030	2100	3710	3880	3880	3710	1540	1410	2950	1750	1470	3360
MIN	662	710	2250	3710	3280	616	616	710	662	662	616	616
(+)	-808	+1438	+1610	+170	-520	-2600	+580	-160	+510	-826	-53	+2139

CAL YR 1987 MAX 5000 MIN 662 (+) -1091
WTR YR 1988 MAX 3880 MIN 616 (+) +1480

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

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 08:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.00	15.50	17.85	19.70	19.85	19.40	15.65	16.70	16.50	17.20	15.90	15.50
2	17.20	15.60	17.95	19.75	19.85	19.50	15.90	16.70	16.40	17.20	16.10	15.80
3	17.10	15.75	18.05	19.75	19.85	19.50	16.35	16.70	16.40	17.15	16.30	16.30
4	16.90	15.90	18.25	19.80	19.85	19.50	16.50	16.65	16.35	17.10	16.50	16.50
5	16.70	16.00	18.35	19.80	19.85	19.50	16.90	16.45	16.30	17.00	16.30	16.50
6	16.40	16.10	18.45	19.80	19.90	19.50	16.60	16.10	16.20	16.85	16.00	16.30
7	16.20	16.20	18.50	19.80	19.90	19.50	16.20	16.00	16.00	16.60	15.90	16.00
8	16.20	16.30	18.60	19.80	19.90	19.55	16.00	15.90	15.70	16.40	16.05	15.80
9	16.40	16.40	18.70	19.80	19.90	19.60	15.95	15.90	15.40	16.20	16.00	15.80
10	16.55	16.50	18.80	19.80	19.90	19.60	16.00	16.40	15.50	16.05	15.50	16.40
11	16.80	16.60	18.90	19.80	19.90	19.65	16.00	16.40	16.00	15.95	15.50	16.60
12	17.00	16.70	19.00	19.80	19.90	19.65	15.95	16.20	16.50	15.70	16.00	16.80
13	17.10	16.80	19.00	19.80	19.90	19.70	15.90	15.80	16.70	15.85	16.40	16.80
14	17.10	16.90	19.00	19.80	19.90	19.70	16.00	15.50	16.50	16.10	16.60	16.00
15	17.00	17.00	19.10	19.80	19.90	19.70	16.05	15.50	16.30	16.20	16.80	15.30
16	17.10	17.10	19.20	19.80	19.90	19.60	16.15	15.50	16.10	16.30	16.80	15.90
17	17.30	17.15	19.25	19.80	19.90	19.55	16.20	15.50	15.70	16.30	16.40	16.10
18	17.60	17.20	19.25	19.80	19.90	19.20	15.80	15.50	15.60	16.05	15.90	16.20
19	17.60	17.30	19.30	19.80	19.90	19.00	15.30	15.70	15.70	15.40	15.40	15.90
20	17.60	17.40	19.35	19.80	19.90	18.80	15.35	15.95	15.90	15.50	15.30	15.60
21	17.50	17.50	19.40	19.80	19.90	18.50	15.50	16.05	15.70	15.70	15.35	18.70
22	17.30	17.60	19.45	19.80	19.90	18.00	15.60	16.10	15.60	15.90	15.70	19.10
23	17.25	17.60	19.50	19.80	19.70	18.00	15.80	16.20	15.50	16.10	16.00	19.30
24	17.10	17.60	19.55	19.80	19.60	17.20	16.20	16.20	15.60	16.10	15.90	19.20
25	17.05	17.65	19.60	19.80	19.50	16.70	16.30	16.10	15.75	16.05	15.80	19.15
26	16.90	17.65	19.60	19.80	19.30	15.90	16.40	16.10	16.30	15.70	16.00	19.10
27	16.80	17.70	19.60	19.80	19.20	15.30	16.40	16.15	18.80	15.50	16.00	19.10
28	16.50	17.70	19.60	19.80	19.20	15.30	16.30	16.20	17.00	15.50	16.40	19.10
29	16.10	17.75	19.65	19.80	19.30	15.70	16.30	16.20	17.15	15.50	16.40	19.00
30	15.60	17.75	19.65	19.80	---	15.60	16.60	16.30	17.15	15.70	16.10	18.80
31	15.40	---	19.70	19.85	---	15.65	---	16.35	---	15.80	15.70	---
MEAN	16.85	16.90	19.04	19.80	19.77	18.44	16.07	16.10	16.21	16.15	16.03	17.09
MAX	17.60	17.75	19.70	19.85	19.90	19.70	16.90	16.70	18.80	17.20	16.80	19.30
MIN	15.40	15.50	17.85	19.70	19.20	15.30	15.30	15.50	15.40	15.40	15.30	15.30
CAL YR 1987	MEAN 19.03		MAX 21.10		MIN 15.40							
WTR YR 1988	MEAN 17.37		MAX 19.90		MIN 15.30							

08404000 PECOS RIVER BELOW AVALON DAM, NM

LOCATION.--Lat 32°28'55", long 104°15'47", in SW¼SW¼NE¼ sec.14, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank 4,800 ft downstream from Avalon Dam, 4.5 mi northwest of Carlsbad, and at mile 466.3.

DRAINAGE AREA.--18,080 mi², approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1907, (published as "at Avalon"), June 1951 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,130 ft above National Geodetic Vertical Datum of 1929, from topographic map. January 1906 to March 1907, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records excellent. 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 temperatures were made during the year.

AVERAGE DISCHARGE.--37 years, 36.9 ft³/s, 26,730 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,500 ft³/s, Aug. 23, 1966, gage height, 26.4 ft, from floodmarks, from rating curve extended above 33,000 ft³/s on basis of computation of peak flow over Tansill Dam 5.8 mi downstream; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 2, 1904, caused in part, by failure of Avalon Dam, probably exceeded 90,000 ft³/s, and is probably the greatest flood since 1842. A major flood occurred Aug. 3, 1893, and was described as "greatest in 50 years"; it damaged McMillan Dam, then under construction, and washed out the original Avalon Dam. Another major flood occurred Aug. 7, 1916, discharge 70,000 ft³/s, at site 6.5 mi downstream.

EXTREMES FOR CURRENT YEAR.--No flow during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CAL YR 1987 TOTAL	43120.53			MEAN	118	MAX	472	MIN	.00	AC-FT	85530	
WTR YR 1988 TOTAL	.00			MEAN	.00	MAX	.00	MIN	.00	AC-FT	.00	

08405150 DARK CANYON DRAW AT CARLSBAD, NM

LOCATION.--Lat 32°24'24", long 104°13'34", in NE¼NW¼SE¼ sec.7, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on downstream side of bridge on Canal Street in Carlsbad, and 0.6 mi upstream from mouth. Mouth at Pecos River mile 459.2.

DRAINAGE AREA.--450 mi², approximately.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,088.21 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. A Soil Conservation Service flood control project on Hackberry Draw, an upstream tributary, has some effect on flood peaks and flow duration. Ground-water withdrawals upstream from station for irrigation of approximately 2,100 acres, 1973 determination, and for municipal supply for Carlsbad. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--15 years, 7.96 ft³/s, 5,770 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s Sept. 26, 1980, gage height, 12.10 ft from rating curve extended above 7,100 ft³/s, maximum gage height, 12.53 ft, June 24, 1986; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a discharge of 66,000 ft³/s, as determined by slope-area measurement at site 1.2 mi upstream. Another flood of approximately the same magnitude occurred Sept. 20, 1941.

Other major peaks occurred July 17, 1906, July 24, 1908, July 24, 1911, Apr. 18, 1915, Aug. 8, 1916, Sept. 15, 1919, Aug. 4, 1925, and May 23, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 4	0100	*404	*3.80				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	46	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.4
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.1
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	19
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	46.00	34.50
MEAN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.48	1.15
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	46	19
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	91	68
CAL YR 1987 TOTAL	74.00			MEAN	.20	MAX	74	MIN	.00	AC-FT	147	
WTR YR 1988 TOTAL	80.50			MEAN	.22	MAX	46	MIN	.00	AC-FT	160	

08405200 PECOS RIVER BELOW DARK CANYON DRAW, AT CARLSBAD, NM

LOCATION.--Lat 32°24'37", long 104°12'58", in NE¼SW¼NW¼ sec.8, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on left bank, 700 ft downstream from mouth of Dark Canyon Draw, 0.3 mi downstream from Lower Tansill Dam and Bataan recreational area, 0.8 mi downstream from bridge on U.S. Highway 62-180 in Carlsbad, and at mile 459.1.

DRAINAGE AREA.--18,550 mi², approximately, contributing area.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,075.19 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated by Lake Avalon (station 08403800) 8.1 mi upstream and by several other reservoirs and up to Nov. 1982 at low stages by power plant. Power plant discontinued operation Nov. 1982. Gage is bypassed on left bank by Carlsbad Main Canal East which irrigates several hundred acres adjacent to and downstream from gage and on right bank by Carlsbad Main Canal South, which with supplemental ground-water withdrawals irrigates about 23,000 acres downstream. Diversions and ground-water withdrawals upstream from station for irrigation of about 198,000 acres, 1959 determination. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--18 years, 65.2 ft³/s, 47,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft³/s, Sept. 26, 1980, gage height, 14.60 ft, from floodmarks, from rating curve extended above 12,000 ft³/s on basis of slope-area measurement at gage height 15.22 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a stage of about 22 ft, discharge not determined. (For dates of other historical floods see station 08404000.)

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 407 ft³/s, Sept. 20, gage height, 2.89 ft; minimum 3.6 ft³/s, all or part of each day Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	35	26	29	32	34	34	32	29	29	26	32
2	20	36	26	30	31	36	36	32	29	27	26	32
3	30	33	26	30	32	32	37	30	27	28	54	30
4	38	31	26	30	32	34	37	29	25	27	61	28
5	40	31	26	30	35	33	36	28	26	26	42	28
6	37	31	26	31	31	34	33	28	26	26	29	27
7	37	31	26	31	32	34	34	27	26	29	30	27
8	36	30	26	31	31	34	33	27	26	27	31	27
9	35	29	26	32	32	35	32	26	25	26	32	27
10	35	28	27	32	33	36	31	28	25	28	40	26
11	36	28	26	32	30	38	32	26	26	27	45	26
12	35	30	27	32	32	39	31	27	36	27	33	25
13	35	29	30	31	33	38	31	27	25	28	32	23
14	41	30	30	31	32	35	33	28	26	26	32	33
15	41	28	26	31	32	36	34	28	28	43	32	25
16	37	28	26	32	34	38	36	27	26	31	31	23
17	37	28	26	31	34	35	35	26	26	28	33	24
18	38	28	27	31	34	34	32	31	27	26	33	24
19	37	27	32	31	35	36	35	33	27	27	34	23
20	36	27	27	31	34	36	32	28	27	46	34	54
21	34	28	28	32	34	38	33	27	27	28	33	81
22	36	29	27	31	35	42	33	28	26	28	30	44
23	37	28	29	32	33	42	31	31	27	29	31	48
24	35	28	28	31	33	37	29	31	27	30	32	28
25	36	28	30	31	35	36	27	28	39	27	30	27
26	35	27	27	31	35	37	28	26	27	27	29	26
27	35	27	28	31	35	37	28	28	31	29	30	27
28	35	27	27	31	35	38	29	30	26	28	32	27
29	35	26	28	31	33	35	34	27	27	27	31	27
30	34	26	30	31	---	35	31	29	28	26	30	29
31	32	---	30	31	---	37	---	29	---	26	28	---
TOTAL	1068.6	872	850	962	959	1121	977	882	823	887	1046	928
MEAN	34.5	29.1	27.4	31.0	33.1	36.2	32.6	28.5	27.4	28.6	33.7	30.9
MAX	41	36	32	32	35	42	37	33	39	46	61	81
MIN	3.6	26	26	29	30	32	27	26	25	26	26	23
AC-FT	2120	1730	1690	1910	1900	2220	1940	1750	1630	1760	2070	1840
CAL YR 1987	TOTAL	62076.4		MEAN	170	MAX	664	MIN	3.6	AC-FT	123100	
WTR YR 1988	TOTAL	11375.6		MEAN	31.1	MAX	81	MIN	3.6	AC-FT	22560	

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 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 06...	0930	31	3320	3560	7.60	7.90	20.0	19.0	8.4	1100	1000	300
JAN 12...	1100	31	3300	3520	8.00	7.90	14.5	7.0	12.5	1200	1000	310
MAR 04...	1045	35	3320	3490	--	7.70	16.5	14.0	9.8	1200	1100	320
MAY 10...	1130	29	3760	3790	7.86	7.80	27.5	20.5	8.8	1500	1400	380
JUL 08...	1015	26	3590	3590	7.68	7.70	27.5	26.0	--	1400	1200	350
SEP 06...	1015	28	3400	3510	7.71	7.80	24.0	23.0	7.9	1400	1200	350

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 06...	91	330	4	4.8	91	980	620	0.70	17	2400	230	10
JAN 12...	97	330	4	5.7	152	1100	580	0.70	17	2530	210	20
MAR 04...	100	330	4	5.0	147	1100	530	0.70	16	2490	220	20
MAY 10...	130	370	4	4.6	74	1200	590	0.70	15	2730	240	20
JUL 08...	120	340	4	4.4	162	1100	570	0.50	18	2600	210	<10
SEP 06...	120	340	4	4.3	168	1100	540	0.60	18	2570	210	30

08405500 BLACK RIVER ABOVE MALAGA, NM

LOCATION.--Lat 32°13'44", long 104°09'02", in SW¼NW¼SW¼ sec.12, T.24 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on right bank 0.6 mi upstream from Black River diversion dam, 4.6 mi west of Malaga, and 7.1 mi upstream from mouth. Mouth at Pecos River mile 436.3.

DRAINAGE AREA.--343 mi².

PERIOD OF RECORD.--March to December 1940, December 1946 to current year.

REVISED RECORDS.--WSP 1632: 1948, 1949-50(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,070 ft above National Geodetic Vertical Datum of 1929, from topographic map. March to December 1940, water-stage recorder and Cippoletti weir at site 0.3 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Diversions and ground-water withdrawals for irrigation of about 1,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--41 years (water years 1948-88), 13.1 ft³/s, 9,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,600 ft³/s, Aug. 23, 1966, gage height, 21.7 ft, from floodmarks, from rating curve extended above 5,900 ft³/s on basis of slope-area measurements at gage heights 12.60 ft and 21.7 ft; minimum, 0.51 ft³/s, June 1, 1983.
The flood of Aug. 23, 1966, exceeded the previous maximum stage which occurred in 1908 by about 1.0 ft, from information by local resident.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 20 or 21, 1941, reached a stage of 19.0 ft, present site and datum, determined in 1947 from well defined floodmarks, discharge, 33,000 ft³/s, from rating curve extended above 1,400 ft³/s on basis of slope-area measurements at gage heights 8.41 ft and 12.60 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 20	1230	*1,120	*4.45	Sept. 23	0130	559	3.39
Aug. 11	0630	550	3.37				

Minimum discharge, 7.1 ft³/s, part of each day June 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	9.7	13	14	19	15	12	13	11	10	11	11
2	7.9	10	12	16	19	10	13	12	12	12	11	12
3	7.8	10	12	17	19	9.4	13	12	12	12	12	12
4	7.8	10	12	17	19	9.4	13	13	13	12	12	12
5	8.1	10	12	17	20	9.5	13	13	13	12	12	10
6	8.2	11	12	17	21	9.4	13	13	13	12	12	9.4
7	8.2	11	12	17	19	9.6	13	12	13	11	13	8.7
8	8.2	11	12	17	19	9.4	13	12	13	13	12	8.2
9	8.2	11	12	17	19	9.4	13	12	13	14	19	8.2
10	8.2	11	12	17	19	9.3	13	13	12	23	20	8.2
11	8.7	11	12	17	19	8.7	13	13	13	18	142	8.2
12	8.8	11	12	17	19	8.5	13	13	13	14	38	8.2
13	8.6	11	13	17	19	8.7	13	13	13	13	18	8.2
14	8.6	11	16	17	19	8.6	14	13	13	13	14	8.2
15	8.9	11	16	18	19	8.8	14	13	13	13	10	8.1
16	8.7	11	14	17	19	9.3	14	13	12	18	8.6	7.9
17	8.6	12	13	15	19	9.4	15	12	12	15	8.2	7.8
18	8.9	12	14	18	19	9.4	14	10	12	13	8.2	8.1
19	9.4	12	16	19	19	9.4	13	9.3	12	13	8.2	8.2
20	9.3	12	15	18	19	9.4	13	9.0	12	285	8.1	15
21	8.8	12	14	18	18	10	13	8.8	12	90	7.8	82
22	9.2	12	14	18	18	9.9	13	8.5	9.6	24	9.1	62
23	37	12	13	18	18	9.4	10	8.2	7.9	13	8.6	222
24	11	12	14	18	18	9.5	8.9	8.2	7.4	10	8.2	43
25	9.8	12	14	18	18	9.4	11	8.6	7.2	9.3	8.2	17
26	9.4	12	14	18	18	9.4	9.6	8.9	7.9	8.6	8.2	13
27	9.4	12	14	18	18	9.4	9.0	9.0	8.9	8.1	7.9	12
28	9.4	12	14	19	18	9.4	9.1	22	9.1	7.6	8.3	12
29	10	15	14	19	17	9.1	9.8	13	8.1	7.2	9.2	11
30	9.4	13	14	19	---	9.0	9.9	9.5	8.0	7.3	9.2	11
31	9.4	---	14	19	---	9.7	---	9.0	---	8.0	9.1	---
TOTAL	302.1	342.7	415	541	544	294.8	368.3	357.0	336.1	739.1	491.1	672.6
MEAN	9.75	11.4	13.4	17.5	18.8	9.51	12.3	11.5	11.2	23.8	15.8	22.4
MAX	37	15	16	19	21	15	15	22	13	285	142	222
MIN	7.8	9.7	12	14	17	8.5	8.9	8.2	7.2	7.2	7.8	7.8
AC-FT	599	680	823	1070	1080	585	731	708	667	1470	974	1330
CAL YR 1987	TOTAL	4957.0		MEAN	13.6	MAX	82	MIN	5.8	AC-FT	9830	
WTR YR 1988	TOTAL	5403.8		MEAN	14.8	MAX	285	MIN	7.2	AC-FT	10720	

08406500 PECOS RIVER NEAR MALAGA, NM

LOCATION.--Lat 32°12'26", long 104°01'22", in SW¼NW¼NE¼ sec.19, T.24 S., R.29 E., Eddy County, Hydrologic Unit 13060011, on right bank 3.1 mi southeast of Malaga, 4.3 mi downstream from Black River, and at mile 432.2.

DRAINAGE AREA.--19,190 mi², approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1920 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1632: 1925, 1932-37.

GAGE.--Water-stage recorder. Elevation of gage is 2,895.64 ft above National Geodetic Vertical Datum of 1929. May 1, 1920 to Mar. 24, 1949, at datum 3 ft higher.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals upstream from station for irrigation of about 202,000 acres, 1959 determination. Harroun Canal bypasses gage on left bank and irrigates approximately 1,000 acres adjacent to and downstream from gage. This bypass is not gaged. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--16 years (water years 1921-36), 274 ft³/s, 198,500 acre-ft/yr, prior to completion of Lake Sumner.

52 years (water years 1938-88), 169 ft³/s, 122,440 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft³/s, Aug. 23, 1966, gage height, 42.1 ft, from floodmarks, from rating curve extended above 36,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 3.7 ft³/s, Oct. 20, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in 1904, discharge not determined. Flood of Aug. 7, 1916, reached a discharge of 70,000 ft³/s, at Carlsbad, 27 mi upstream. Flood in September 1919 reached a stage of 29.4 ft, present datum, discharge, 40,400 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 673 ft³/s, July 20, gage height, 6.37 ft; minimum, 32 ft³/s, part of each day June 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	104	101	100	103	71	68	60	38	53	50	77
2	52	114	100	100	102	67	86	54	37	53	46	133
3	41	120	100	101	101	62	85	57	38	52	45	84
4	43	110	100	103	100	58	79	63	41	55	49	84
5	62	102	100	103	105	58	77	65	39	65	97	70
6	66	103	100	104	110	59	75	68	40	52	71	62
7	65	104	99	105	105	58	66	74	40	47	55	60
8	68	104	99	104	104	59	71	60	38	54	51	54
9	71	101	98	104	104	56	70	70	40	63	54	52
10	67	100	97	104	104	56	67	64	38	80	52	54
11	66	100	98	104	101	56	64	54	49	88	121	57
12	69	101	98	105	100	55	65	61	45	70	106	58
13	70	103	99	104	101	53	71	58	56	71	60	57
14	68	103	128	102	104	51	70	57	45	72	51	65
15	78	104	124	99	94	63	64	48	37	68	58	73
16	98	103	107	107	94	70	66	40	40	76	61	75
17	82	101	103	106	98	75	73	41	40	103	64	66
18	88	103	103	102	98	79	78	38	39	71	60	59
19	97	102	115	108	98	72	76	54	40	61	55	55
20	90	100	119	103	99	71	83	73	34	180	56	53
21	75	101	107	97	98	69	87	63	42	258	52	151
22	69	104	103	100	98	78	76	49	42	95	49	241
23	112	105	101	101	90	74	70	47	37	60	49	323
24	134	103	103	99	103	85	66	70	39	63	55	204
25	110	101	103	99	95	86	72	59	42	55	53	108
26	97	100	102	99	92	76	67	57	58	48	52	90
27	87	101	101	99	101	63	67	53	106	47	59	90
28	88	102	100	99	99	53	67	48	74	47	57	89
29	111	101	99	100	78	62	72	49	67	61	88	83
30	107	104	100	101	---	58	73	47	56	57	87	82
31	105	---	101	102	---	58	---	40	---	49	79	---
TOTAL	2501	3104	3208	3164	2879	2011	2171	1741	1377	2274	1942	2809
MEAN	80.7	103	103	102	99.3	64.9	72.4	56.2	45.9	73.4	62.6	93.6
MAX	134	120	128	108	110	86	87	74	106	258	121	323
MIN	41	100	97	97	78	51	64	38	34	47	45	52
AC-FT	4960	6160	6360	6280	5710	3990	4310	3450	2730	4510	3850	5570
CAL YR 1987 TOTAL		81681		MEAN	224	MAX	887	MIN	41	AC-FT	162000	
WTR YR 1988 TOTAL		29181		MEAN	79.7	MAX	323	MIN	34	AC-FT	57880	

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 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
NOV 05...	1030	102	6000	6420	8.41	7.50	19.0	18.0	10.4	1700	1600	420	
JAN 08...	1315	103	5800	5910	8.27	8.00	9.0	6.0	12.5	1800	1600	440	
MAR 02...	1245	67	5900	5830	8.25	7.50	24.5	17.0	12.1	1900	1800	490	
MAY 04...	1215	63	7100	7000	8.01	7.50	28.0	20.0	8.5	2400	2300	570	
JUL 07...	1145	46	6800	6700	7.78	7.50	31.0	27.5	--	2100	2000	500	
SEP 07...	1300	61	6000	6440	7.92	7.60	30.0	25.0	7.9	1900	1800	460	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 05...	160	770	8	11	139	1600	--	0.80	14	--	410	20	
JAN 08...	160	600	6	10	202	1700	1100	0.70	16	4150	320	30	
MAR 02...	170	700	7	11	150	1700	1100	0.70	12	4270	360	40	
MAY 04...	240	860	8	11	138	1800	1300	0.80	6.9	4870	420	40	
JUL 07...	210	790	8	10	125	1900	1300	0.60	16	4800	390	60	
SEP 07...	180	750	8	13	139	1700	1100	0.70	18	4310	390	30	

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM

LOCATION.--Lat 32°11'19", long 103°58'43", in SW¼SW¼NW¼ sec.27, T.24 S., R.29 E., Eddy County, Hydrologic Unit 13060011, on right bank 550 ft upstream from Pierce Canyon Crossing, and 6.0 mi southeast of Malaga, and at mile 425.7.

DRAINAGE AREA.--19,260 mi², approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1938 to September 1941, August 1951 to current year.

REVISED RECORDS.--WSP 898: 1938(M). WSP 1712: 1959.

GAGE.--Water-stage recorder. Elevation of gage is 2,889.18 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). July 1938 to Sept. 1941, at datum 1.19 ft higher.

REMARKS.--No estimated daily discharges. Water-discharge records good except those above 300 ft³/s, which are 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. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--40 years (water years 1939-41, 1952-88), 136 ft³/s, 98,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined, 65,000 ft³/s, Aug. 23, 1966; maximum gage height, 31.6 ft, Aug. 23, 1966, from floodmarks; minimum, 0.54 ft³/s, May 30, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 458 ft³/s, July 21, gage height, 3.45 ft³/s, from rating curve extended above 420 ft³/s on basis of runoff comparisons with nearby stations; minimum, 33 ft³/s, part of each day June 18, 19, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	107	101	99	101	81	61	68	45	62	56	91
2	71	111	100	97	101	72	79	57	41	67	53	114
3	58	120	99	99	100	70	83	56	40	62	55	113
4	46	113	99	100	99	71	83	62	41	59	54	87
5	65	107	99	101	102	60	80	65	40	67	90	86
6	81	104	99	101	106	62	75	67	40	63	97	70
7	79	106	99	102	106	66	67	81	40	57	75	68
8	80	106	98	102	101	66	64	72	38	69	62	62
9	84	103	98	101	101	62	69	68	39	76	67	64
10	77	102	96	102	101	59	66	75	40	92	62	63
11	74	101	97	102	99	59	62	64	45	103	82	62
12	77	102	97	102	99	56	61	62	51	95	146	62
13	77	103	99	101	98	55	63	64	50	79	85	62
14	77	104	113	99	100	56	68	65	54	78	65	62
15	86	104	123	97	96	60	62	55	41	91	72	76
16	105	104	108	100	94	70	63	45	39	84	79	80
17	102	101	101	103	98	74	76	41	41	117	77	71
18	98	103	101	98	99	81	80	42	40	97	72	71
19	108	102	110	102	99	74	78	48	39	75	67	61
20	116	99	115	101	99	69	76	70	39	80	67	57
21	103	99	110	96	99	70	87	75	37	310	64	102
22	91	101	102	96	98	73	78	63	45	137	56	257
23	98	103	100	99	94	73	69	54	40	78	55	293
24	142	102	100	97	95	79	65	69	42	71	71	241
25	118	100	101	97	101	86	67	68	42	65	74	135
26	106	99	100	96	92	77	67	63	56	57	69	98
27	98	100	99	97	99	82	65	62	121	54	64	92
28	98	101	97	97	99	68	68	54	102	52	70	90
29	106	100	97	98	95	61	73	52	85	56	85	86
30	119	102	97	99	---	62	75	56	65	69	104	85
31	108	---	98	101	---	60	---	51	---	59	102	---
TOTAL	2837	3109	3153	3082	2871	2114	2130	1894	1478	2581	2297	2961
MEAN	91.5	104	102	99.4	99.0	68.2	71.0	61.1	49.3	83.3	74.1	98.7
MAX	142	120	123	103	106	86	87	81	121	310	146	293
MIN	46	99	96	96	92	55	61	41	37	52	53	57
AC-FT	5630	6170	6250	6110	5690	4190	4220	3760	2930	5120	4560	5870
CAL YR 1987	TOTAL	82097	MEAN	225	MAX	716	MIN	46	AC-FT	162800		
WTR YR 1988	TOTAL	30507	MEAN	83.4	MAX	310	MIN	37	AC-FT	60510		

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected 0.2 mi downstream from streamflow gaging station.

PERIOD OF RECORD.--Water years 1938-41, 1952 to current year.

REMARKS.--No appreciable inflow between streamflow gaging station and sampling point except during periods of heavy local rains.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV												
05...	1300	109	8550	8730	8.57	7.40	22.0	20.0	11.5	2000	1800	460
JAN												
05...	1230	100	8100	--	8.16	--	18.5	8.5	--	--	--	--
08...	1530	102	8000	8310	8.35	8.00	7.0	5.5	16.0	1800	1700	460
MAR												
02...	1500	70	8900	8620	8.38	7.50	23.0	17.0	15.7	1800	1700	440
MAY												
04...	1315	64	10900	10400	8.10	7.60	28.0	20.0	9.2	2400	2200	540
JUL												
07...	1345	57	11100	10600	8.00	7.20	37.0	27.5	--	--	--	--
SEP												
07...	1100	69	8000	8600	7.97	7.40	27.0	23.5	9.0	1900	1800	460

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV												
05...	200	1200	12	27	131	1700	2100	0.70	13	5780	490	30
JAN												
05...	--	--	--	--	--	--	--	--	--	--	--	--
08...	170	1100	11	30	193	1700	1800	0.70	15	5390	420	40
MAR												
02...	180	1300	14	33	135	1700	1900	0.60	10	5650	480	20
MAY												
04...	250	1700	16	40	139	1900	2700	0.80	6.6	7220	580	40
JUL												
07...	--	1600	--	33	123	2000	2300	0.60	16	--	560	60
SEP												
07...	190	1300	13	30	125	1800	2000	0.70	16	5870	490	30

08407500 PECOS RIVER AT RED BLUFF, NM
(National stream-quality accounting network station)

LOCATION.--Lat 32°04'30", long 104°02'21", in SW¼NW¼NE¼ sec.1, T.26 S., R.28 E., Eddy County, Hydrologic Unit 13060011, on right bank at Red Bluff, 0.2 mi downstream from Red Bluff Draw, 1.6 mi northwest of the El Paso Natural Gas (Pecos River) compressor station, 5.2 mi north of the New Mexico-Texas state line, 5.5 mi upstream from Delaware River, and at mile 411.2.

DRAINAGE AREA.--19,540 mi², approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,850.05 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals upstream from station for irrigation of about 202,000 acres, 1959 determination. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--51 years, 164 ft³/s, 118,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 111,000 ft³/s, Aug. 23, 1966, gage height, 33.32 ft, from rating curve extended above 32,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 0.19 ft³/s, Aug. 1, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1904 reached a stage of 28.0 ft, from information by Panhandle and Santa Fe Railway Co. (For dates of other historical floods see stations 08404000, 08406500).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 483 ft³/s, Sept. 23, gage height, 5.61 ft; minimum, 36 ft³/s, part of each day June 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	101	99	97	101	87	60	71	53	67	53	92
2	77	104	98	96	101	78	69	60	48	72	51	87
3	63	111	97	96	101	71	83	56	45	70	49	132
4	51	111	97	98	99	73	83	59	45	66	50	85
5	51	103	97	99	101	66	80	65	47	68	65	86
6	72	99	97	100	104	63	75	66	44	74	105	72
7	77	99	97	100	108	66	71	73	44	65	79	65
8	76	99	96	102	103	68	64	80	43	82	65	62
9	80	98	95	100	102	66	67	67	41	81	63	58
10	78	96	95	100	102	62	67	74	42	97	61	60
11	72	95	95	100	100	61	64	72	43	111	60	56
12	72	96	95	101	99	60	61	64	53	115	132	58
13	75	97	96	100	98	57	61	67	51	94	112	58
14	74	98	106	99	99	56	67	66	59	86	68	55
15	79	98	119	97	98	59	65	63	51	101	63	64
16	89	99	112	96	95	65	61	53	42	94	72	72
17	106	98	100	104	95	71	68	45	44	121	74	71
18	100	97	99	101	99	77	78	45	43	126	70	69
19	99	97	107	99	99	76	78	46	42	94	66	60
20	111	96	114	103	99	70	73	62	43	78	61	54
21	106	95	114	98	99	70	82	81	38	249	61	69
22	96	97	104	96	99	69	81	72	44	187	57	229
23	87	99	100	98	97	76	71	64	46	97	50	308
24	122	99	99	98	91	73	66	61	42	70	57	271
25	124	98	100	98	104	84	63	79	46	67	69	170
26	107	96	99	98	96	82	68	70	50	57	67	113
27	96	97	98	98	96	77	64	69	102	53	59	97
28	93	98	97	98	102	80	65	65	142	50	66	94
29	95	98	96	98	99	61	70	59	97	49	66	89
30	113	98	96	99	---	65	72	60	81	61	98	86
31	102	---	96	101	---	62	---	59	---	58	103	---
TOTAL	2733	2967	3110	3068	2886	2151	2097	1993	1611	2760	2172	2942
MEAN	88.2	98.9	100	99.0	99.5	69.4	69.9	64.3	53.7	89.0	70.1	98.1
MAX	124	111	119	104	108	87	83	81	142	249	132	308
MIN	51	95	95	96	91	56	60	45	38	49	49	54
AC-FT	5420	5890	6170	6090	5720	4270	4160	3950	3200	5470	4310	5840
CAL YR 1987	TOTAL	82529	MEAN	226	MAX	901	MIN	51	AC-FT	163700		
WTR YR 1988	TOTAL	30490	MEAN	83.3	MAX	308	MIN	38	AC-FT	60480		

RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
OCT 29...	1330	92	9500	9470	8.35	7.40	27.5	19.0	6.5	10.4	1800
JAN 04...	1400	99	8900	8430	8.35	8.00	13.0	5.5	2.5	13.3	1900
FEB 26...	1400	96	8900	8490	8.28	7.40	24.0	14.0	12	13.4	1800
MAY 02...	1500	57	10800	10900	7.88	7.30	22.5	19.5	33	8.3	2500
JUN 29...	1400	104	9750	10000	8.30	7.10	34.0	27.0	23	7.6	2100
AUG 31...	1315	102	--	9180	7.90	7.50	31.5	25.0	35	9.0	2300

DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT MG/L AS CACO3 (39086)	ALKA- LITY WAT WH TOT FET MG/L AS CACO3 (00410)
OCT 29...	1700	440	180	1400	15	27	170	0	139	139
JAN 04...	1800	460	180	1300	13	34	209	8	185	--
FEB 26...	1700	440	180	1300	14	31	181	0	148	--
MAY 02...	2300	570	250	1700	15	38	140	0	115	--
JUN 29...	2000	470	230	1600	16	31	84	14	93	--
AUG 31...	2200	550	230	1500	14	6.0	171	0	140	--

DATE	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT 29...	132	1700	2500	0.70	12	6580	6360	0.950	0.040	0.990
JAN 04...	124	1700	2100	0.70	13	6290	5870	1.96	0.040	2.00
FEB 26...	143	1700	1800	0.60	10	6010	5550	1.16	0.040	1.20
MAY 02...	131	2000	2600	0.70	5.6	7620	7250	0.330	0.030	0.360
JUN 29...	100	1900	2300	0.60	17	7130	6620	0.650	0.070	0.720
AUG 31...	132	1900	2400	0.70	16	6640	6690	0.730	0.050	0.780

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
OCT 29...	0.100	0.100	0.90	0.050	0.010	10	1	200	<10	2
JAN 04...	0.140	0.120	1.1	0.080	<0.010	--	--	--	--	--
FEB 26...	0.120	0.120	1.5	0.080	<0.010	--	--	--	--	--
MAY 02...	0.170	0.190	1.1	0.110	<0.010	20	2	<100	<10	2
JUN 29...	0.160	0.230	0.14	0.130	0.020	150	2	<100	<10	1
AUG 31...	0.120	0.140	0.78	0.030	0.010	10	2	100	<10	3

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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)
OCT 29...	2	3	2	20	<5	90	20	0.2	3	2
JAN 04...	--	--	--	--	--	--	--	--	--	--
FEB 26...	--	--	--	--	--	--	--	--	--	--
MAY 02...	<1	1	2	20	<5	90	40	0.5	4	4
JUN 29...	5	1	4	100	19	90	40	1.0	3	1
AUG 31...	2	2	<1	40	9	90	30	0.9	3	<1

DATE	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)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 29...	1	<1.0	7500	33	20	312	77	87	K1200	93
JAN 04...	--	--	--	--	--	635	169	95	K11	K2
FEB 26...	--	--	--	--	--	393	102	88	22	78
MAY 02...	2	1.0	8400	38	30	501	77	89	K9	K240
JUN 29...	2	<1.0	8000	42	50	387	109	93	<1	28
AUG 31...	1	1.0	5900	42	30	457	126	89	K1	<1

LOCATION.--Lat 32°01'23", long 104°03'15", in NE¼SW¼SE¼ sec.23, T.26 S., R.28 E., Eddy County, Hydrologic Unit 13070002, near center of channel on downstream side of pier of bridge on U.S. Highway 285, 2.1 mi north of the New Mexico-Texas state line, 3.6 mi southwest of Red Bluff, 3.7 mi upstream from mouth and 14 mi south of Malaga. Mouth at Pecos River mile 405.6.

PERIOD OF RECORD.--April 1912 to September 1913, May 1914 to June 1915, October 1937 to current year. Published as "near Malaga" 1912-13, and as "near Angeles, Tex." 1914-15.

REMARKS.--No estimated daily discharges. Records good. One small upstream diversion. Several observations of water temperatures were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,400 ft³/s, Oct. 2, 1955, gage height, 27.0 ft, from floodmarks, from rating curve extended above 6,500 ft³/s on basis of slope-area measurements at gage heights, 12.84 ft, 17.55 ft, and 27.0 ft; no flow many days most years.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 21	1130	*102	3.85				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	5.8	6.6	7.0	6.9	6.8	6.3	5.7	4.2	3.1	1.4	4.1
2	5.4	5.9	6.7	7.0	6.9	6.8	6.2	5.4	4.1	3.0	1.6	4.3
3	5.4	5.9	6.8	6.9	6.9	6.7	6.2	5.2	4.0	2.9	1.9	3.2
4	5.4	5.7	6.8	6.8	6.9	6.7	6.2	5.0	4.1	2.8	1.5	2.8
5	5.5	5.6	6.9	6.8	6.9	6.8	6.2	5.1	4.0	2.7	2.9	2.7
6	5.5	5.8	6.9	6.8	7.0	6.8	6.2	5.0	4.0	2.7	15	2.6
7	5.5	5.9	6.8	6.8	7.0	6.7	6.3	4.7	3.9	2.7	3.2	2.6
8	5.5	5.8	6.7	6.7	7.0	6.7	6.5	4.5	3.9	2.9	2.7	2.5
9	5.5	5.6	6.7	6.6	7.1	6.7	6.4	4.5	3.8	3.1	2.8	2.5
10	5.4	5.6	6.7	6.7	7.0	6.7	6.2	4.5	3.8	3.6	5.2	2.4
11	5.5	5.7	6.8	6.8	6.9	6.7	6.2	4.4	3.8	3.6	5.3	2.4
12	5.5	5.8	6.7	6.9	6.8	6.6	6.2	4.4	3.8	3.3	5.1	2.4
13	5.6	6.1	6.8	6.8	6.7	6.5	6.3	4.4	3.8	3.0	3.2	2.4
14	5.4	6.1	7.3	6.7	6.7	6.6	6.3	4.4	3.8	2.7	3.1	2.4
15	5.4	6.0	7.4	6.8	6.6	6.6	6.3	4.3	3.7	2.6	2.9	2.4
16	5.5	5.9	7.0	6.9	6.6	6.7	6.2	4.2	3.7	2.8	2.8	2.4
17	5.7	5.9	7.0	6.9	6.6	6.6	6.1	4.2	3.7	2.8	2.8	2.4
18	6.0	5.9	7.1	6.8	6.7	6.5	6.1	4.2	3.6	2.7	2.7	2.7
19	5.9	5.9	7.5	6.7	6.7	6.6	6.1	4.2	3.5	2.7	2.7	2.8
20	5.7	5.9	7.7	6.7	6.8	6.7	6.0	4.4	3.5	2.7	2.6	2.6
21	5.6	6.0	7.5	6.7	6.7	6.6	5.9	4.3	3.4	21	2.6	2.8
22	5.6	6.2	7.3	6.7	6.8	6.5	5.9	4.2	3.4	5.4	2.7	2.8
23	5.8	6.2	7.2	6.9	6.7	6.5	5.9	4.2	3.4	2.5	2.7	3.1
24	5.9	6.2	7.2	6.9	6.7	6.5	5.9	4.1	3.4	2.0	2.9	2.7
25	5.8	6.2	7.1	6.9	6.7	6.4	5.9	4.0	3.4	1.8	2.7	2.6
26	5.6	6.2	7.0	6.9	6.9	6.3	5.8	4.0	3.4	1.8	2.6	2.5
27	5.6	6.4	7.0	6.9	6.9	6.4	5.8	4.0	4.4	1.7	2.7	2.5
28	5.5	6.5	7.0	7.0	6.9	6.4	5.8	4.4	3.4	1.7	3.0	2.4
29	5.7	6.6	7.0	7.0	6.8	6.3	6.1	4.4	3.4	1.5	3.0	2.4
30	5.7	6.6	7.2	7.0	---	6.2	5.9	4.3	3.4	1.4	3.2	2.4
31	5.7	---	7.1	7.0	---	6.3	---	4.2	---	1.4	3.0	---
TOTAL	173.3	179.9	217.5	212.0	197.8	203.9	183.4	138.8	111.7	100.6	102.5	80.8
MEAN	5.59	6.00	7.02	6.84	6.82	6.58	6.11	4.48	3.72	3.25	3.31	2.69
MAX	6.0	6.6	7.7	7.0	7.1	6.8	6.5	5.7	4.4	21	15	4.3
MIN	5.4	5.6	6.6	6.6	6.6	6.2	5.8	4.0	3.4	1.4	1.4	2.4
AC-FT	344	357	431	421	392	404	364	275	222	200	203	160
CAL YR 1987	TOTAL	3202.6		MEAN	8.77	MAX	239	MIN	3.3	AC-FT	6350	

08410000 RED BLUFF RESERVOIR NEAR ORLA, TX

LOCATION.--Lat 31°54'04", long 103°54'35", Reeves County, Hydrologic Unit 13070001, at right end of Red Bluff Dam on the Pecos River, 2.8 mi upstream from Salt Creek, and 5.2 mi north of Orla.

DRAINAGE AREA.--20,720 mi², approximately (contributing area).

PERIOD OF RECORD.--February 1937 to current year. Monthly contents only for some periods, published in WSP 1312.

GAGE.--Nonrecording gage. Datum of gage is 0.43 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by a rock-faced earthfill dam 9,200 ft long. The dam was completed and storage began in September 1936. The dam and reservoir are owned and operated by the Red Bluff Water Power Control District. The water is used for power development and for irrigation from Mentone and Grandfalls. The uncontrolled emergency spillway, 790 ft wide, is a cut through natural ground located to the right of right end of dam. The controlled service spillway is equipped with 12 tainter gates that are 25 by 15 ft high. Inflow is regulated by many reservoirs and diversion dams. The capacity curve is based on Geological Survey topographic map and aerial photography, survey of 1986. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Gage height (feet)	Capacity (acre-feet)
Top of dam	2,856.0	-
Crest of emergency spillway.....	2,845.0	324,000
Top of gates (top of conservation pool)	2,842.0	289,700
Crest of service spillway and bottom of tainter gates.....	2,827.0	155,700
Lowest gated outlet (invert)	2,764.0	2,800

COOPERATION.--Gage-height records and capacity curve were furnished by Red Bluff Water Power and Control District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 352,000 acre-ft, Sept. 27, 28, 1941, gage height, 2,846.2 ft, observed on nonrecording gage at service spillway (affected by variable drawdown due to flow through tainter gates); minimum observed, 11,080 acre-ft, May 13, 1948, gage height, 2,781.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 226,500 acre-ft, Feb. 28 to Mar. 13, gage height, 2,835.8 ft; minimum observed, 179,300 acre-ft, Sept. 12-17, 20-22, gage height, 2,830.2 ft.

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

2,830.0	177,700	2,834.0	210,400
2,832.0	193,500	2,836.0	228,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 08:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	224700	217600	217600	222000	222900	226500	224700	209900	201800	191800	187800	180900
2	224700	217600	217600	222000	222900	226500	224700	209900	201800	191800	187800	180900
3	224700	217600	217600	222000	223800	226500	224700	209000	200700	191800	187000	180900
4	223800	217600	217600	222000	223800	226500	224700	209000	200700	191000	187000	180900
5	222900	217600	217600	222000	223800	226500	224700	209000	199900	190200	186200	180900
6	222000	217600	217600	222000	223800	226500	223800	209000	199100	190200	186200	180900
7	222000	217600	218500	222000	223800	226500	222900	209000	199100	190200	186200	180100
8	222000	217600	218500	222000	223800	226500	222000	208100	198300	191800	186200	180100
9	222000	217600	218500	222000	223800	226500	221100	208100	198300	191800	185400	180100
10	221100	217600	218500	222000	224700	226500	220200	208100	197500	191800	185400	180100
11	221100	217600	218500	222000	224700	226500	219300	208100	197500	191800	185400	180100
12	221100	217600	218500	222000	224700	226500	218500	208100	196700	191800	184900	179300
13	221100	217600	218500	222000	224700	226500	217600	207200	196700	191800	184900	179300
14	220200	217600	218500	222000	224700	225600	216700	207200	196700	191800	184900	179300
15	220200	217600	219300	222000	224700	225600	215800	207200	195900	191800	184900	179300
16	220200	217600	219300	222000	224700	225600	214900	207200	195900	191800	184900	179300
17	220200	217600	219300	222000	224700	225600	214000	206300	195900	191800	184100	179300
18	220200	217600	219300	222000	224700	225600	213100	205400	195100	191800	184100	180100
19	220200	217600	219300	222900	225600	225600	212200	205400	195100	191800	184100	180100
20	220200	217600	220200	222000	225600	225600	212200	205400	195100	191800	184100	179300
21	219300	217600	220200	222900	225600	225600	211300	204500	194300	191000	183300	179300
22	219300	217600	220200	222900	225600	225600	210400	204500	194300	191000	183300	179300
23	219300	217600	220200	222900	225600	225600	209900	204500	194300	191000	182500	180100
24	219300	217600	220200	222900	225600	225600	209900	204500	193500	191000	182500	180900
25	218500	217600	221100	222900	225600	225600	209900	203600	193500	190200	182500	180900
26	218500	217600	221100	222900	225600	225600	209900	203600	192600	190200	181700	180900
27	218500	217600	221100	222900	225600	225600	209900	203600	192600	190200	181700	180900
28	218500	217600	221100	222900	226500	225600	209900	203600	192600	189400	180900	180900
29	218500	217600	221100	222900	226500	225600	209900	202700	192600	189400	180900	180900
30	217600	217600	221100	222900	---	225600	209900	202700	192600	188600	180900	180900
31	217600	---	222000	222900	---	224700	---	202700	---	188600	180900	---
MAX	224700	217600	222000	222900	226500	226500	224700	209900	201800	191800	187800	180900
MIN	217600	217600	217600	222000	222900	224700	209900	202700	192600	188600	180900	179300
(+)	2834.8	2834.8	2835.3	2835.4	2835.8	2835.6	2833.9	2833.1	2831.9	2831.4	2830.4	2830.4
(++)	-8000	0	+4400	+900	+3600	-1800	-14800	-7200	-10100	-4000	-7700	0

CAL YR 1987 MAX 284200 MIN 217600 (++) -21000
WTR YR 1988 MAX 226500 MIN 179300 (++) -44700

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

MIMBRES RIVER BASIN

08477110 MIMBRES RIVER AT MIMBRES, NM

LOCATION.--Lat 32°51'17", long 107°58'23", in NW¼SW¼ sec.3, T.16 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.--184 mi².

PERIOD OF RECORD.--March 1978 to current year.

GAGE.--Water-stage recorder. 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.--Estimated daily discharges: Aug. 18-22, 25-31 and Sept. 3-7. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--10 years, 21.8 ft³/s, 15,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,360 ft³/s, Dec. 28, 1984, gage height, 8.05 ft, from floodmarks, from rating curve extended above 450 ft³/s on basis of slope-area measurements at gage heights 6.70 ft and 8.05 ft; minimum, 0.22 ft³/s, Aug. 22, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 15	2345	*2,800	*6.58	Aug. 31	1815	419	4.30

Minimum discharge, 3.7 ft³/s, Mar. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	8.7	7.4	5.1	5.4	8.3	4.6	4.7	13	6.7	14	116
2	8.3	8.5	7.3	5.0	5.4	8.8	4.6	5.1	13	6.3	21	94
3	8.1	8.4	6.3	5.1	5.4	9.3	4.4	5.2	14	6.3	43	80
4	8.0	8.5	6.4	5.2	5.8	9.5	5.2	5.5	13	6.7	36	68
5	7.9	8.5	6.1	5.3	6.7	9.7	4.6	3.9	13	8.1	30	56
6	7.5	8.8	5.9	5.3	6.5	10	3.9	3.9	12	12	41	47
7	7.5	8.5	6.6	5.0	6.4	10	3.9	3.9	11	12	68	40
8	7.7	8.1	6.9	4.8	6.6	11	4.1	3.9	11	13	69	34
9	8.0	8.1	6.8	4.8	6.8	10	4.1	3.9	10	14	43	32
10	7.7	8.1	5.8	4.9	6.9	11	4.0	3.9	9.7	16	45	29
11	7.4	8.1	5.7	5.2	7.0	11	4.1	4.0	9.1	15	57	30
12	7.6	8.1	5.7	5.2	6.9	11	4.1	4.1	7.2	27	58	67
13	7.8	8.1	6.1	5.2	7.1	12	3.9	4.0	7.0	24	65	67
14	7.9	7.8	6.2	5.2	7.7	12	4.1	4.2	7.1	18	44	89
15	8.1	7.9	6.2	5.2	7.8	12	4.1	4.2	6.8	16	326	67
16	8.3	7.9	5.9	5.2	7.8	11	4.5	4.4	6.6	16	1620	51
17	8.3	7.8	5.8	5.1	7.8	10	4.9	5.3	6.5	16	1270	43
18	8.1	8.0	5.9	5.3	8.0	9.6	5.4	5.3	6.5	16	900	37
19	7.1	8.0	5.7	5.2	8.1	10	5.4	5.6	7.3	32	660	33
20	6.0	7.7	5.5	5.1	8.0	9.5	5.3	6.1	7.1	52	500	33
21	6.2	7.5	5.6	5.2	8.1	6.2	5.0	5.8	7.1	73	350	46
22	6.8	7.5	5.9	5.2	8.0	6.2	4.9	5.8	7.3	36	250	50
23	7.0	7.5	5.9	5.2	8.1	5.4	4.9	7.8	6.9	23	175	42
24	7.1	7.6	5.4	5.1	8.4	4.4	4.9	11	7.0	16	90	37
25	7.0	7.4	5.6	5.1	8.4	4.8	4.9	11	7.0	15	65	33
26	7.1	6.6	5.4	5.2	8.3	4.2	5.0	12	6.7	14	54	31
27	7.1	6.2	5.4	5.3	8.3	4.3	5.1	13	7.3	15	54	29
28	7.4	6.8	5.3	5.4	7.9	5.1	5.1	13	7.8	15	54	27
29	8.7	6.5	5.0	5.6	7.7	5.3	4.9	12	7.4	16	54	25
30	8.4	7.1	5.1	5.5	---	5.3	5.0	11	7.0	36	54	24
31	8.5	---	5.1	5.3	---	5.0	---	14	---	24	130	---
TOTAL	237.0	234.3	183.9	160.5	211.3	261.9	138.9	207.5	262.4	616.1	7240	1457
MEAN	7.65	7.81	5.93	5.18	7.29	8.45	4.63	6.69	8.75	19.9	234	48.6
MAX	8.7	8.8	7.4	5.6	8.4	12	5.4	14	14	73	1620	116
MIN	6.0	6.2	5.0	4.8	5.4	4.2	3.9	3.9	6.5	6.3	14	24
AC-FT	470	465	365	318	419	519	276	412	520	1220	14360	2890
CAL YR 1987	TOTAL	5849.6		MEAN	16.0	MAX	67	MIN	5.0	AC-FT	11600	
WTR YR 1988	TOTAL	11210.8		MEAN	30.6	MAX	1620	MIN	3.9	AC-FT	22240	

TULAROSA VALLEY BASIN

305

08481500 TULAROSA CREEK NEAR BENT, NM
(National stream-quality accounting network station)

LOCATION.--Lat 33°08'41", long 105°53'50", in SE¼NW¼ sec.32, T.13 S., R.11 E., Otero County, Hydrologic Unit 13044503, on right bank 45 ft downstream from old U.S. Highway 70 bridge, 2.6 mi west of Bent, and 8.5 mi northeast of Tularosa, and at mile 19.4.

DRAINAGE AREA.--120 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1947 to current year. Prior to October 1982 published as "Rio Tularosa near Bent".

REVISED RECORDS.--WSP 1312: 1949(M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5,450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: July 27, 28 and Aug. 2 to Sept. 1. Water-discharge records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--40 years (1949-88), 11.5 ft³/s, 8,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,280 ft³/s, June 18, 1965, gage height, 5.02 ft, from rating curve extended above 160 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 5.60 ft, Aug. 8, 1988, discharge not determined; no flow May 14, 1955, result of unusual regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood probably occurred Sept. 3, 1938, when a peak of 9,640 ft³/s was computed for station approximately 6 mi downstream near Tularosa. Another flood may have occurred July 2, 1914.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 125 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 15	1530	248	2.74	Aug. 5	1845	1,810	3.80
July 27	1400	3,720	4.58	Aug. 8	1500	not determined	*5.60
July 31	1445	637	3.24	Aug. 15	1330	1,420	3.61
Aug. 2	1900	*3,980	4.68	Aug. 18	1445	1,360	3.57

Minimum daily discharge, 11.0 ft³/s, July 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	23	22	21	22	22	22	20	19	20	22	24
2	19	21	22	21	23	22	22	20	19	16	100	26
3	18	20	22	21	23	23	20	20	19	17	50	25
4	16	20	22	21	23	23	21	22	19	17	35	24
5	16	22	22	22	23	22	20	22	20	21	75	24
6	15	25	22	26	22	20	22	22	21	20	35	23
7	18	23	22	22	23	21	22	22	21	20	30	23
8	18	22	22	22	23	20	22	22	21	20	160	23
9	18	22	22	22	23	22	21	22	22	18	75	23
10	18	21	22	22	23	22	21	22	22	11	35	22
11	18	21	23	22	23	22	22	22	22	13	30	22
12	18	21	23	22	22	22	21	22	19	13	25	23
13	18	21	23	22	22	22	20	22	20	13	25	23
14	18	21	22	22	22	22	20	22	20	13	20	22
15	19	21	22	22	22	21	21	20	29	13	50	22
16	18	21	22	22	22	22	23	20	26	14	30	21
17	19	22	22	23	22	22	20	20	26	17	25	21
18	17	22	24	23	23	22	21	22	24	16	50	19
19	19	21	23	22	22	22	21	22	23	16	25	19
20	17	21	23	22	22	20	22	22	21	16	25	20
21	19	22	22	22	22	20	22	22	21	15	20	26
22	19	21	22	22	22	22	22	23	22	16	20	27
23	21	22	22	22	21	22	21	25	22	16	25	26
24	19	21	22	22	22	22	22	24	23	12	30	26
25	19	22	22	22	22	22	22	24	21	15	30	28
26	19	22	21	22	22	22	22	24	16	12	25	29
27	19	22	21	22	23	22	22	23	21	70	25	27
28	19	22	21	22	22	22	22	24	16	22	25	23
29	20	22	21	22	22	22	23	18	19	24	30	22
30	21	22	21	22	---	22	22	17	19	22	25	22
31	21	---	21	22	---	22	---	17	---	38	25	---
TOTAL	572	649	683	684	648	674	644	669	633	586	1202	705
MEAN	18.5	21.6	22.0	22.1	22.3	21.7	21.5	21.6	21.1	18.9	38.8	23.5
MAX	21	25	24	26	23	23	23	25	29	70	160	29
MIN	15	20	21	21	21	20	20	17	16	11	20	19
AC-FT	1130	1290	1350	1360	1290	1340	1280	1330	1260	1160	2380	1400
CAL YR 1987	TOTAL	8126	MEAN	22.3	MAX	70	MIN	15	AC-FT	16120		
WTR YR 1988	TOTAL	8349	MEAN	22.8	MAX	160	MIN	11	AC-FT	16560		

TULAROSA VALLEY BASIN

08481500 TULAROSA CREEK NEAR BENT, NM -- Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV 13...	1330	22	1330	1300	8.20	7.80	16.0	10.0	17	9.4	19
DEC 10...	1300	21	1320	1290	8.20	7.80	16.5	9.0	2.9	9.5	--
MAR 10...	1245	22	1330	1290	8.20	7.90	18.0	12.0	18	9.0	--
MAY 19...	1330	21	1370	1330	8.10	7.80	19.0	14.5	17	8.6	12
JUL 28...	1215	21	1540	1470	8.00	7.80	25.0	18.0	9.8	7.7	21
SEP 01...	1215	23	1420	1300	8.10	7.80	21.0	18.0	30	7.7	<10

DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
NOV 13...	700	530	190	54	43	0.7	1.4	293	0	240	--
DEC 10...	700	460	190	54	43	0.7	1.2	286	0	234	234
MAR 10...	670	470	180	54	44	0.8	1.2	254	11	226	--
MAY 19...	710	520	190	56	45	0.8	1.1	276	0	226	--
JUL 28...	810	600	230	56	45	0.7	1.4	265	0	217	--
SEP 01...	710	520	190	57	46	0.8	1.2	271	0	222	--

DATE	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 13...	173	420	57	0.40	14	949	889	<0.010	0.710	0.050
DEC 10...	186	450	62	0.40	14	951	958	<0.010	0.660	<0.010
MAR 10...	198	450	60	0.40	13	938	924	<0.010	0.640	0.030
MAY 19...	186	480	62	0.50	14	1000	965	<0.010	0.590	0.050
JUL 28...	204	580	62	0.40	15	1140	1120	<0.010	0.610	0.100
SEP 01...	196	500	60	0.40	15	1020	992	<0.010	0.590	0.030

TULAROSA VALLEY BASIN

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08481500 TULAROSA CREEK NEAR BENT, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHOPHOSPHATE DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	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)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
NOV 13...	0.050	0.45	0.010	<0.010	2.8	10	1	38	<0.5	<1
DEC 10...	0.050	--	0.010	0.020	--	--	--	--	--	--
MAR 10...	0.030	--	0.010	<0.010	--	--	--	--	--	--
MAY 19...	0.050	0.65	<0.010	<0.010	2.7	10	2	37	<0.5	<1
JUL 28...	0.090	0.70	0.260	<0.010	5.9	20	<1	27	<0.5	<1
SEP 01...	0.060	0.27	<0.010	<0.010	2.8	<10	<1	28	<0.5	<1

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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)
NOV 13...	2	<3	2	6	<5	23	15	<0.1	<10	<1
DEC 10...	--	--	--	--	--	--	--	--	--	--
MAR 10...	--	--	--	--	--	--	--	--	--	--
MAY 19...	<1	<3	1	8	<5	24	15	<0.1	<10	3
JUL 28...	1	<3	1	9	<5	25	19	<0.1	<10	3
SEP 01...	<1	<3	<1	4	<5	21	34	0.1	<10	1

DATE	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)	SEDI- MENT, DIS- SOLVED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 13...	1	<1.0	2200	<6	10	98	5.8	72	K27	150
DEC 10...	--	--	--	--	--	98	5.6	83	K8	140
MAR 10...	--	--	--	--	--	137	8.1	84	K10	48
MAY 19...	2	1.0	2300	<6	11	154	8.7	67	210	410
JUL 28...	1	<1.0	2500	<6	15	502	28	78	K210	1400
SEP 01...	1	1.0	2400	<6	10	134	8.3	78	--	320

TULAROSA VALLEY BASIN

08484500 LA LUZ CREEK AT LA LUZ, NM

LOCATION.--Lat 32°58'56", long 105°55'30", in SW¼NE¼ sec.25, T.15 S., R.10 E., Otero County, Hydrologic Unit 13050003, on right bank retaining wall of old diversion dam, 200 ft downstream of low-water crossing of county road, and 1.0 mi east of La Luz.

DRAINAGE AREA.--62.7 mi²

PERIOD OF RECORD.--October 1982 to September 1988, discontinued. Records for November 1931 to September 1932 published in WSP 733, are unreliable and should not be used.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,870 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 14-16, 26-28, Jan. 20-23, 25 and Sept. 2-15. Records fair except for estimated daily discharges, which are poor. Diversions upstream from station for municipal water supply for city of Alamogordo. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years, 7.94 ft³/s, 5,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,840 ft³/s, Aug. 23, 1984, gage height, 10.2 ft, from floodmarks, on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 2	2100	*97	*2.93

Minimum discharge, 0.07 ft³/s, July 7, 14-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	11	11	11	9.0	7.2	5.8	5.8	2.8	2.7	6.6	15
2	5.5	9.0	12	11	12	5.3	6.0	6.2	2.7	2.2	16	12
3	5.8	9.1	11	9.9	14	7.1	5.3	3.2	3.8	2.2	9.3	9.5
4	4.0	8.8	10	9.9	14	7.1	6.1	3.4	3.5	2.2	9.8	8.5
5	4.4	11	10	9.7	14	13	7.5	3.9	2.7	3.1	13	7.5
6	4.8	15	12	14	13	13	7.7	4.2	2.7	2.1	6.7	8.0
7	4.3	13	12	11	13	11	7.7	4.0	2.7	1.3	4.1	7.0
8	3.8	12	12	10	9.4	8.7	6.0	3.6	2.6	.81	12	6.5
9	3.8	11	12	9.9	6.8	8.9	5.0	3.5	2.7	1.6	7.1	5.5
10	4.0	10	12	9.9	6.6	8.7	4.9	3.4	2.5	2.5	6.5	6.0
11	5.7	11	12	9.6	11	9.5	3.8	3.4	2.5	2.7	3.9	5.5
12	7.2	12	12	8.6	13	11	3.6	3.3	2.3	1.1	2.6	5.5
13	4.4	12	13	7.8	12	11	3.9	3.4	3.1	.20	7.4	5.0
14	4.2	12	12	7.5	12	12	3.9	3.2	2.3	.12	8.2	6.0
15	6.9	13	13	7.2	12	9.3	3.8	3.3	2.3	.11	7.3	5.9
16	11	13	13	7.3	8.0	9.2	6.8	3.3	2.9	3.1	9.1	4.3
17	10	12	14	7.9	5.8	10	6.8	3.3	2.0	3.8	8.7	2.8
18	9.6	12	16	10	8.1	11	5.2	3.4	2.3	2.9	9.1	2.7
19	9.0	13	13	9.1	12	11	4.1	3.7	2.2	3.5	10	2.7
20	6.1	13	11	10	14	9.3	4.1	3.8	2.2	5.6	9.3	3.0
21	3.9	13	11	11	15	7.2	4.9	3.2	2.3	5.9	8.3	3.5
22	4.4	13	9.9	10	15	7.2	6.4	3.2	2.3	3.4	8.3	6.1
23	6.9	12	9.4	11	14	7.4	5.1	3.2	2.2	1.6	7.9	9.5
24	8.6	10	10	10	14	7.3	3.5	3.2	2.2	1.0	7.3	8.4
25	7.5	10	11	10	12	8.9	3.3	3.5	2.5	1.1	6.9	8.4
26	6.3	11	13	11	12	12	3.1	3.8	2.5	1.2	8.6	7.5
27	4.2	11	12	10	14	9.7	3.2	4.7	2.5	2.0	9.6	5.5
28	4.5	10	13	9.0	13	8.4	4.0	4.4	2.4	1.7	7.5	5.6
29	5.0	10	13	8.8	10	7.4	8.2	3.0	2.3	2.3	11	6.2
30	5.5	10	12	9.2	---	8.7	5.6	3.0	2.1	5.4	13	8.2
31	8.9	---	11	9.3	---	7.3	---	2.9	---	7.9	11	---
TOTAL	184.2	342.9	368.3	300.6	338.7	284.8	155.3	113.4	76.1	77.34	266.1	197.8
MEAN	5.94	11.4	11.9	9.70	11.7	9.19	5.18	3.66	2.54	2.49	8.58	6.59
MAX	11	15	16	14	15	13	8.2	6.2	3.8	7.9	16	15
MIN	3.8	8.8	9.4	7.2	5.8	5.3	3.1	2.9	2.0	.11	2.6	2.7
AC-FT	365	680	731	596	672	565	308	225	151	153	528	392
CAL YR 1987 TOTAL	3539.5			MEAN	9.70	MAX	29	MIN	2.2	AC-FT	7020	
WTR YR 1988 TOTAL	2705.54			MEAN	7.39	MAX	16	MIN	.11	AC-FT	5370	

08492900 SACRAMENTO RIVER NEAR SUNSPOT, NM

LOCATION.--Lat 32°42'50", long 105°45'15", in SW¼NE¼ sec.30, T.18 S., R.12 E., Otero County, Hydrologic Unit 13050004, on left abutment of concrete weir in Lincoln National Forest, 100 ft downstream from natural soda dam, 0.5 mi downstream from Hornbuckle Canyon, 3.2 mi downstream from Sacramento Lake, and 6.4 mi southeast of Sunspot.

DRAINAGE AREA.--12.8 mi².

PERIOD OF RECORD.--July 1984 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,830 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 13-16 and Jan. 5, 6. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for municipal water supply for village of Orogrande. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22 ft³/s, Aug. 14, 1984, gage height, 2.24 ft; minimum, 0.77 ft³/s, June 19, 20, 29, 30, and July 22, 23, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14 ft³/s, at 1915 hours Sept. 22, gage height, 2.02 ft; minimum, 0.77 ft³/s, June 19, 20, 29, 30, and July 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.0	1.5	1.4	1.6	1.6	1.4	1.2	.95	1.3	1.1	3.3
2	1.7	1.8	1.5	1.4	1.6	1.6	1.4	1.2	.94	1.3	1.3	5.7
3	1.7	1.7	1.5	1.4	1.8	1.7	1.4	1.2	.97	1.3	1.4	4.5
4	1.7	1.7	1.5	1.4	1.6	1.7	1.3	1.2	.96	1.3	1.4	4.5
5	1.7	2.0	1.6	1.4	1.6	1.6	1.3	1.2	.98	1.6	2.6	4.7
6	1.7	2.1	1.6	1.5	1.6	1.6	1.3	1.2	.95	1.5	1.8	4.9
7	1.7	1.8	1.6	1.6	1.7	1.6	1.3	1.1	.92	1.2	2.1	4.9
8	1.7	1.8	1.6	1.5	1.7	1.6	1.3	1.1	.90	1.5	1.8	5.1
9	1.6	1.7	1.6	1.5	1.6	1.6	1.3	1.1	.89	2.6	1.6	5.2
10	1.6	1.7	1.6	1.5	1.5	1.6	1.3	1.1	.91	1.7	1.7	5.3
11	1.6	1.7	1.6	1.5	1.5	1.6	1.3	1.1	1.2	1.3	1.5	5.5
12	1.6	1.7	1.6	1.5	1.6	1.6	1.3	1.0	1.1	1.2	1.6	7.3
13	1.6	1.7	1.7	1.5	1.6	1.5	1.3	.95	1.2	1.1	1.7	6.8
14	1.8	1.7	1.5	1.4	1.5	1.6	1.3	.93	1.3	1.1	1.5	5.7
15	1.8	1.7	1.5	1.4	1.6	1.5	1.3	.93	1.1	1.0	1.6	5.6
16	1.7	1.7	1.6	1.4	1.5	1.5	1.3	1.0	1.0	1.3	1.8	5.6
17	1.7	1.7	1.6	1.5	1.5	1.5	1.3	1.0	1.0	1.1	1.5	5.8
18	1.7	1.7	2.0	1.5	1.5	1.5	1.7	1.0	.97	1.0	2.9	5.8
19	1.7	1.6	1.7	1.5	1.5	1.5	1.6	1.1	.91	.96	2.2	5.8
20	1.7	1.6	1.6	1.5	1.5	1.5	1.4	1.0	.90	.98	2.8	6.2
21	1.6	1.7	1.6	1.5	1.5	1.5	1.3	.94	.93	.93	2.3	6.3
22	1.7	1.7	1.6	1.5	1.5	1.5	1.3	.94	1.1	.89	2.2	7.3
23	2.2	1.6	1.6	1.5	1.5	1.5	1.3	.98	.97	.88	2.1	6.5
24	1.8	1.6	1.6	1.6	1.5	1.5	1.3	.99	1.0	.95	2.1	6.1
25	1.7	1.6	1.5	1.6	1.5	1.5	1.2	1.1	.99	.97	2.3	6.1
26	1.6	1.6	1.5	1.6	1.6	1.5	1.2	1.1	1.1	.93	2.4	6.1
27	1.6	1.5	1.5	1.5	1.6	1.5	1.2	1.0	1.1	1.1	2.8	6.1
28	1.6	1.5	1.5	1.5	1.6	1.4	1.5	1.1	1.0	1.0	2.7	6.1
29	1.6	1.5	1.4	1.5	1.6	1.4	1.5	1.0	.93	1.1	3.5	6.2
30	1.6	1.5	1.4	1.6	---	1.4	1.3	1.0	.91	1.0	4.1	6.2
31	1.7	---	1.4	1.5	---	1.4	---	.95	---	1.4	3.4	---
TOTAL	52.5	50.9	48.6	46.2	45.5	47.6	40.2	32.71	30.08	37.49	65.8	171.2
MEAN	1.69	1.70	1.57	1.49	1.57	1.54	1.34	1.06	1.00	1.21	2.12	5.71
MAX	2.2	2.1	2.0	1.6	1.8	1.7	1.7	1.2	1.3	2.6	4.1	7.3
MIN	1.6	1.5	1.4	1.4	1.5	1.4	1.2	.93	.89	.88	1.1	3.3
AC-FT	104	101	96	92	90	94	80	65	60	74	131	340
CAL YR 1987 TOTAL	964.4		MEAN	2.64	MAX	6.2	MIN	1.4	AC-FT	1910		
WTR YR 1988 TOTAL	668.78		MEAN	1.83	MAX	7.3	MIN	.88	AC-FT	1330		

COLORADO RIVER BASIN

SAN JUAN RIVER BASIN

09346400 SAN JUAN RIVER NEAR CARRACAS, CO

LOCATION.--Lat 37°00'49", long 107°18'42", in SE¼SW¼ sec.17, T.32 N., R.4 W., Archuleta County, Hydrologic Unit 14080101, on right bank just upstream from flow line of Navajo Reservoir, 3 mi northwest of Carracas, 7.2 mi upstream from Piedra River, and at mile 332.8.

DRAINAGE AREA.--1,230 mi², approximately.

PERIOD OF RECORD.--October 1961 to current year. Water-quality data available, July 1969 to August 1973. Sediment data available, August 1973.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 6,090 ft above National Geodetic Vertical Datum of 1929, from river-profile map.

REMARKS.--Estimated daily discharges: Nov. 25, Nov. 27 to Dec. 3, Dec. 10, and Dec. 12 to Mar. 10. Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of about 11,000 acres upstream from station. Highwater diversions upstream from station into Rio Grande Basin through Azotea tunnel (08284160) began in March 1971. Several observations of specific conductance and water temperature were obtained and are published in Water Resources Data for Colorado.

AVERAGE DISCHARGE.--9 years (water years 1962-70), 632 ft³/s, 457,900 acre-ft/yr, prior to completion of Azotea tunnel;
18 years (water years 1971-88), 657 ft³/s, 476,000 acre-ft/yr, since completion of Azotea tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft³/s, Sept. 6, 1970, gage height, 8.34 ft, from rating curve extended above 6,000 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 9.29 ft, Jan. 15, 1987 (backwater from ice); minimum, about 5 ft³/s, Dec. 10, 1961, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911; June 29, 1927.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
May 18	0900	*2,300	*4.68				

Minimum daily discharge, 110 ft³/s, Dec. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	235	150	130	150	380	532	910	925	697	304	369
2	123	501	150	130	150	370	535	854	804	720	312	305
3	118	370	170	130	150	360	629	769	761	597	325	268
4	112	326	204	140	150	340	785	742	1040	514	276	249
5	113	312	221	150	140	340	881	787	1500	434	261	238
6	115	430	208	150	140	350	983	844	1650	398	349	228
7	117	500	192	160	140	330	1150	775	1710	365	554	216
8	113	386	195	160	150	300	1270	735	1530	331	392	201
9	113	330	173	150	150	300	1210	690	1400	325	313	189
10	113	300	150	150	150	310	1100	701	1350	333	276	176
11	111	280	176	140	150	270	1050	733	1350	401	236	188
12	111	257	150	140	150	232	1000	843	1340	348	231	285
13	112	240	130	140	150	228	1000	1040	1220	293	249	368
14	127	245	110	140	160	221	1030	1250	1070	264	208	347
15	196	260	110	140	160	214	1040	1480	1010	242	195	297
16	177	246	130	150	160	248	1090	1650	986	238	224	265
17	159	218	180	150	170	208	1120	1800	914	231	557	248
18	151	204	180	150	180	209	980	2160	921	221	455	242
19	145	179	180	150	170	220	877	2040	921	197	394	235
20	138	200	170	140	160	298	804	1810	960	189	326	221
21	135	211	160	140	160	450	795	1380	906	214	284	221
22	140	214	150	150	170	640	802	1090	797	192	261	357
23	136	201	150	140	190	764	809	995	774	179	227	351
24	135	198	160	140	210	836	768	920	801	173	261	301
25	213	180	150	140	230	698	696	904	795	170	287	272
26	282	192	150	140	260	871	632	905	697	176	307	253
27	222	170	150	140	300	1080	619	952	645	176	396	242
28	203	170	130	140	320	1260	631	1100	726	179	370	226
29	183	160	130	150	350	825	669	1170	702	191	411	214
30	201	160	150	150	---	736	772	1280	807	237	361	201
31	244	---	160	150	---	633	---	1110	---	327	343	---
TOTAL	4686	7875	4969	4470	5270	14521	26259	34419	31012	9552	9945	7773
MEAN	151	263	160	144	182	468	875	1110	1034	308	321	259
MAX	282	501	221	160	350	1260	1270	2160	1710	720	557	369
MIN	111	160	110	130	140	208	532	690	645	170	195	176
AC-FT	9290	15620	9860	8870	10450	28800	52080	68270	61510	18950	19730	15420

CAL YR 1987 TOTAL 269333 MEAN 738 MAX 3710 MIN 110 AC-FT 534200
WTR YR 1988 TOTAL 160751 MEAN 439 MAX 2160 MIN 110 AC-FT 318800

09349800 PIEDRA RIVER NEAR ARBOLES, CO

LOCATION.--Lat 37°05'18", long 107°23'50", in NE¼SW¼ sec.21, T.33 N., R.5 W., Archuleta County, Hydrologic Unit 14080102, on left bank 3 mi downstream from Ignacio Creek, 4.6 mi northeast of Arboles Post Office, and 2.5 mi upstream from Navajo Reservoir.

DRAINAGE AREA.--629 mi².

PERIOD OF RECORD.--August 1962 to current year. Gage operated 1895-1899, 1910-1927 at a site 7.5 mi downstream at altitude 6,000 ft. Low flow records probably not equivalent. Water quality data available, November to August 1973.

GAGE.--Water-stage recorder. Elevation of gage is 6,147.52 ft above National Geodetic Vertical Datum of 1929, from Colorado State Highway Department bench mark.

REMARKS.--Estimated daily discharges: Dec. 13-20, 24, Dec. 29 to Feb. 21, Apr. 14 to May 3, July 21-31, and Aug. 17-23. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 2,800 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published in Water Resources Data for Colorado.

AVERAGE DISCHARGE.--26 years, 414 ft³/s, 299,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,370 ft³/s, Sept. 6, 1970, gage height, 6.38 ft recorded, 7.55 ft, from floodmarks, from rating curve extended above 4,400 ft³/s on basis of slope-area measurement of peak flow; minimum, 11 ft³/s, Dec. 9, 1963, Oct. 1, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
May 19	0400	*1,480	*2.98				

Minimum daily discharge, 60 ft³/s, Dec. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	145	93	80	85	266	289	740	680	445	148	307
2	89	240	93	75	85	266	324	670	609	391	145	271
3	87	217	105	80	85	254	394	590	614	375	173	235
4	85	189	103	85	80	227	491	552	814	399	160	210
5	83	181	107	90	80	223	552	580	937	341	145	200
6	81	396	117	90	80	216	572	607	1130	307	399	185
7	81	389	105	95	80	238	683	558	1180	280	621	171
8	79	290	105	95	80	182	860	525	1110	250	446	151
9	79	239	97	90	85	167	833	480	1040	250	352	136
10	79	213	93	85	85	191	729	494	986	254	294	128
11	79	192	97	80	85	149	700	556	988	266	263	136
12	79	168	93	80	85	136	733	662	980	246	235	232
13	79	157	75	80	85	128	830	822	856	213	216	455
14	93	157	60	80	90	125	860	941	723	189	192	389
15	127	174	70	85	90	130	850	1060	651	174	178	316
16	120	151	75	90	90	142	840	1170	644	171	295	273
17	110	137	90	90	90	118	760	1230	591	160	510	243
18	101	125	100	85	100	115	650	1350	584	154	440	222
19	98	105	100	80	95	122	560	1360	590	136	380	206
20	93	115	95	80	90	130	500	1110	608	136	330	192
21	89	122	95	85	90	163	500	865	567	130	290	247
22	85	120	87	85	97	229	500	743	501	120	250	506
23	85	115	91	85	99	287	470	679	500	100	230	415
24	87	115	90	85	107	358	410	664	518	95	286	351
25	112	105	97	80	114	340	370	685	524	90	288	307
26	120	115	95	80	123	413	320	678	439	90	257	277
27	110	105	93	80	147	557	330	712	415	90	343	254
28	105	95	81	80	211	736	350	816	437	95	389	240
29	105	91	85	85	249	462	410	852	534	100	341	216
30	120	95	95	90	---	421	530	930	559	130	311	201
31	139	---	90	85	---	361	---	793	---	180	357	---
TOTAL	2970	5058	2872	2615	2962	7852	17200	24474	21309	6357	9264	7672
MEAN	95.8	169	92.6	84.4	102	253	573	789	710	205	299	256
MAX	139	396	117	95	249	736	860	1360	1180	445	621	506
MIN	79	91	60	75	80	115	289	480	415	90	145	128
AC-FT	5890	10030	5700	5190	5880	15570	34120	48540	42270	12610	18380	15220
CAL YR 1987	TOTAL	225992	MEAN 619	MAX 2830	MIN 60	AC-FT 448300						
WTR YR 1988	TOTAL	160751	MEAN 439	MAX 2160	MIN 110	AC-FT 318800						

SAN JUAN RIVER BASIN

09354500 LOS PINOS RIVER AT LA BOCA, CO

LOCATION.--Lat 37°00'34", long 107°35'56", in NE¼NW¼ 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, 0.1 mi upstream from Spring Creek, and 2 mi upstream from maximum elevation of Navajo Reservoir.

DRAINAGE AREA.--510 mi², approximately.

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.

GAGE.--Water-stage recorder. Datum of gage is 6,143.59 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 13 to Feb. 17. Records good except for estimated daily discharges, which are poor. Flow regulated by Vallecito Reservoir (station 09353000) 24 mi upstream since April 1941. Diversions for irrigation of about 33,000 acres upstream from station. Several observations of specific conductance and water temperature were obtained and are published in Water Resources Data for Colorado.

AVERAGE DISCHARGE.--38 years, 240 ft³/s, 173,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft³/s, July 27, 1957, gage height, 8.95 ft, from rating curve extended above 5,100 ft³/s; minimum daily, 6.1 ft³/s, May 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood on Oct. 5, 1911 has not yet been exceeded.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft³/s, at 1400 hours Aug. 6, gage height, 5.64 ft; minimum daily, 55 ft³/s, Dec. 14, May 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	348	206	110	120	473	103	133	179	264	247	185
2	173	460	192	110	120	456	107	113	161	241	241	182
3	179	316	213	110	120	373	103	66	150	227	180	173
4	173	280	210	110	120	354	110	61	148	241	170	167
5	173	271	203	110	120	340	115	73	143	224	170	164
6	167	374	213	110	120	284	122	69	145	210	653	161
7	155	350	213	110	120	252	137	89	143	199	434	145
8	155	309	213	110	120	147	150	85	152	189	282	133
9	158	284	213	110	120	130	152	81	162	195	255	120
10	173	287	213	110	120	137	139	55	147	195	224	118
11	176	299	210	110	100	104	130	81	181	209	223	147
12	185	295	209	110	100	97	125	109	253	170	254	184
13	199	291	140	110	100	91	125	99	204	150	221	192
14	226	304	55	120	100	87	132	110	185	150	203	176
15	316	335	85	85	100	85	147	122	173	150	192	167
16	284	322	85	100	100	91	172	122	195	145	265	170
17	169	304	85	120	90	79	285	127	192	155	374	167
18	141	294	85	120	87	76	228	208	185	148	269	198
19	142	287	85	120	87	81	189	254	176	123	238	179
20	155	295	85	120	83	83	167	238	173	127	224	173
21	176	317	85	120	85	97	153	210	170	142	223	198
22	167	304	85	120	91	112	164	191	158	133	223	306
23	179	283	85	120	93	125	173	179	167	142	223	236
24	240	214	85	120	101	132	164	133	170	166	185	234
25	342	206	85	120	118	113	148	140	177	173	185	220
26	300	213	85	120	133	125	133	147	195	153	182	217
27	287	213	95	120	175	140	118	155	223	152	236	174
28	283	210	110	120	265	161	130	150	286	143	244	150
29	287	203	110	120	343	126	135	143	398	150	248	143
30	348	202	110	120	---	120	137	172	306	167	221	152
31	296	---	110	120	---	115	---	192	---	219	193	---
TOTAL	6583	8670	4258	3535	3551	5186	4393	4107	5697	5452	7682	5331
MEAN	212	289	137	114	122	167	146	132	190	176	248	178
MAX	348	460	213	120	343	473	285	254	398	264	653	306
MIN	141	202	55	85	83	76	103	55	143	123	170	118
AC-FT	13060	17200	8450	7010	7040	10290	8710	8150	11300	10810	15240	10570

CAL YR 1987 TOTAL 153082 MEAN 419 MAX 1840 MIN 55 AC-FT 303600
WTR YR 1988 TOTAL 64445 MEAN 176 MAX 653 MIN 55 AC-FT 127800

09355000 SPRING CREEK AT LA BOCA, CO

LOCATION.--Lat 37°00'40", long 107°35'47", in SE¼SW¼ 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 mi², approximately.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733. Water quality data available, May 1974.

GAGE.--Water-stage recorder. Elevation of gage is 6,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 18-21, 25, Nov. 28 to Dec. 4, Dec. 8 to Mar. 3, July 8, 9, Aug. 11, and Sept. 5-30. Records good except those for flows above 125 ft³/s which are fair, and those 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 the Los Pinos River near Bayfield, Co. which causes a considerable change in the annual pattern and natural flow. Several observations of specific conductance and water temperature were obtained and are published in Water Resources Data for Colorado.

AVERAGE DISCHARGE.--38 years, 32.1 ft³/s, 23,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft³/s, Sept. 6, 1970, gage height, 4.62 ft, from rating curve extended above 160 ft³/s on basis of field estimate of peak flow; maximum gage height, 5.98 ft, Mar. 9, 1960 (backwater from ice); minimum discharge, 0.6 ft³/s, Nov. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 362 ft³/s, at 1300 hours Aug. 6, gage height, 2.13 ft; maximum gage height, 3.58 ft, Feb. 28 (backwater from ice); minimum daily, 3.4 ft³/s, Dec. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	21	5.0	4.2	5.0	34	6.5	4.8	55	61	82	88
2	69	67	5.0	4.0	4.8	48	6.1	5.4	54	60	71	64
3	69	13	5.5	4.2	4.8	90	5.7	57	50	65	56	59
4	67	7.5	6.0	4.4	4.8	84	6.5	14	48	80	54	54
5	72	6.9	6.5	4.6	4.6	58	6.9	11	55	74	50	50
6	71	48	6.5	5.0	4.4	39	6.9	12	55	69	181	48
7	66	30	6.1	5.0	4.6	31	7.3	12	50	64	87	46
8	69	13	5.5	5.0	4.8	15	7.4	15	48	60	66	44
9	61	7.9	5.0	5.0	5.0	11	7.4	15	55	60	62	42
10	54	6.5	5.0	4.8	5.0	11	6.5	12	65	72	60	40
11	50	6.5	5.5	4.6	5.0	9.3	6.1	15	74	73	75	48
12	45	6.1	4.8	4.6	5.0	7.8	5.7	17	78	62	92	75
13	50	6.5	4.2	4.4	5.0	7.8	5.6	24	67	57	69	110
14	57	7.4	3.6	4.4	5.0	7.0	6.1	30	61	57	66	100
15	69	21	3.4	4.6	5.5	6.9	7.3	41	64	60	65	85
16	57	16	4.2	5.0	5.5	6.9	14	40	74	55	80	70
17	50	8.7	5.5	5.0	5.5	6.5	38	45	69	60	184	65
18	47	7.0	6.0	4.8	6.0	6.5	13	57	71	54	84	60
19	40	7.5	6.0	4.6	5.5	6.1	9.3	70	64	45	73	60
20	37	8.5	5.5	4.6	5.0	6.1	7.8	94	65	43	61	55
21	26	8.0	5.0	4.6	6.0	6.1	7.4	73	61	52	67	70
22	22	6.6	4.6	4.8	7.0	7.8	7.8	61	59	50	71	120
23	21	6.5	5.0	4.6	8.5	7.8	7.8	59	54	54	71	100
24	29	6.5	5.0	4.6	10	8.5	7.8	52	59	55	69	85
25	29	6.5	5.0	4.6	12	7.0	7.0	52	80	59	67	75
26	10	7.0	5.0	4.6	15	7.8	6.5	52	80	57	64	70
27	7.0	6.9	4.6	4.6	20	8.5	6.1	47	88	60	99	65
28	6.9	6.0	4.2	4.6	22	11	5.7	46	84	59	70	60
29	6.9	5.5	4.4	4.8	26	7.0	5.6	50	111	60	74	55
30	14	5.5	5.0	5.0	---	6.1	5.2	59	79	64	84	50
31	9.3	---	4.8	5.0	---	6.5	---	60	---	82	78	---
TOTAL	1350.1	381.0	157.4	144.6	227.3	576.0	247.0	1202.2	1977	1883	2432	2013
MEAN	43.6	12.7	5.08	4.66	7.84	18.6	8.23	38.8	65.9	60.7	78.5	67.1
MAX	72	67	6.5	5.0	26	90	38	94	111	82	184	120
MIN	6.9	5.5	3.4	4.0	4.4	6.1	5.2	4.8	48	43	50	40
AC-FT	2680	756	312	287	451	1140	490	2380	3920	3730	4820	3990
CAL YR 1987	TOTAL	17013.1	MEAN	46.6	MAX	182	MIN	3.4	AC-FT	33750		
WTR YR 1988	TOTAL	12590.6	MEAN	34.4	MAX	184	MIN	3.4	AC-FT	24970		

SAN JUAN RIVER BASIN

09355100 NAVAJO RESERVOIR NEAR ARCHULETA, NM

LOCATION.--Lat 36°48'28", long 107°36'31", in SW¼SE¼ 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 mi east of Farmington, and at mile 298.6.

DRAINAGE AREA.--3,230 mi², 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 U.S. 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, 11, 1965, elevation, 5,906.36 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,236,200 acre-ft, July 4, elevation, 6,051.21 ft; minimum contents, 1,045,500 acre-ft, Feb. 25, 26, elevation, 6,033.88 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 1987 TO SEPTEMBER 1988
INSTANTANEOUS OBSERVATION AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1093100	1083200	1091400	1074200	1057200	1051400	1070900	1119400	1185100	1235500	1208700	1222000
2	1092500	1084600	1091000	1073500	1057500	1053200	1071200	1121100	1186300	1236100	1208100	1221700
3	1091800	1085100	1090800	1073000	1057200	1054800	1072300	1122500	1187500	1235500	1207400	1221500
4	1090700	1085500	1090600	1072500	1056600	1056400	1074400	1123500	1190200	1236200	1206300	1221300
5	1090200	1086600	1090600	1072400	1056000	1057500	1075900	1124400	1193400	1236100	1206000	1221200
6	1088900	1088700	1090100	1072000	1055400	1058600	1077500	1125400	1197200	1236100	1207900	1220600
7	1088100	1091000	1089600	1071400	1054700	1059200	1079800	1126600	1200300	1235500	1203200	1219400
8	1086900	1092600	1089400	1071000	1054300	1059200	1082700	1127800	1203400	1234900	1208800	1219200
9	1086400	1093100	1089100	1070400	1053800	1059800	1085100	1128600	1206500	1234300	1208500	1218700
10	1085700	1093500	1088800	1069900	1053200	1060000	1087000	1129300	1208900	1233600	1207800	1218400
11	1085100	1093800	1088600	1068900	1052600	1060000	1088900	1130100	1212100	1233400	1207700	1218100
12	1084500	1093900	1088400	1068400	1052300	1059700	1090600	1131300	1214900	1232400	1207900	1218100
13	1084100	1094200	1087500	1067700	1051400	1059600	1092100	1133300	1217000	1232000	1207800	1218400
14	1083700	1094500	1086700	1067100	1051000	1059300	1093700	1135900	1218400	1231200	1207400	1218600
15	1084100	1094700	1085800	1066400	1050400	1058800	1095900	1139200	1220100	1230500	1207100	1218400
16	1084100	1095000	1085000	1066000	1049800	1058600	1099500	1142500	1221200	1229700	1208600	1218500
17	1083600	1094800	1084100	1065700	1049500	1058100	1103100	1147800	1222600	1228800	1211100	1218500
18	1082800	1094700	1083300	1065500	1048900	1057800	1105200	1152600	1223800	1228000	1213300	1218400
19	1083100	1094600	1082500	1064800	1048300	1057500	1106800	1156800	1225100	1226300	1213700	1217800
20	1082400	1094500	1081800	1064100	1047600	1057200	1107000	1160200	1226200	1224900	1214000	1217000
21	1081600	1094400	1081400	1063400	1047100	1057300	1108300	1163000	1226800	1223500	1214400	1217100
22	1081200	1094300	1081500	1062500	1046700	1058100	1110000	1165500	1226800	1221700	1214200	1217800
23	1081500	1094100	1080700	1062100	1046100	1059200	1111900	1167400	1227100	1220000	1213800	1217900
24	1081400	1094000	1080300	1061100	1045900	1060300	1113100	1169100	1227800	1218200	1215400	1217800
25	1081200	1093700	1079800	1060600	1045500	1061800	1114000	1170200	1228900	1216500	1216400	1217700
26	1081400	1093500	1079000	1060000	1045500	1063400	1114500	1172900	1229600	1214700	1217100	1217800
27	1081300	1093100	1078300	1059400	1045900	1065900	1115000	1174600	1230300	1213200	1217900	1217400
28	1081100	1092700	1077700	1058800	1047000	1068400	1115600	1177000	1232400	1211600	1219200	1216700
29	1081000	1092400	1076800	1058600	1048900	1069800	1116400	1179000	1234200	1210300	1219900	1216000
30	1081500	1091900	1076200	1058000	---	1070300	1117600	1181600	1234900	1209200	1220100	1215300
31	1082300	---	1075100	1057500	---	1070900	---	1183800	---	1208800	1220600	---
MAX	1093100	1095000	1091400	1074200	1057500	1070900	1117600	1183800	1234900	1236200	1220600	1222000
MIN	1081000	1083200	1075100	1057500	1045500	1051400	1070900	1119400	1185100	1208800	1203200	1215300
(+)	6037.42	6038.33	6036.74	6035.05	6034.21	6036.34	6040.73	6046.69	6051.10	6048.87	6049.88	6049.43
(++)	-11700	+9600	-16800	-17600	-8600	+22000	+46700	+66200	+51100	-26100	+11800	-5300
CAL YR 1987	MAX 1426000	MIN 1075100	(++)	-354900								
WTR YR 1988	MAX 1236200	MIN 1045500	(++)	+121300								

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

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

SAN JUAN RIVER BASIN

315

09355500 SAN JUAN RIVER NEAR ARCHULETA, NM

LOCATION.--Lat 36°48'05", long 107°41'51", in N sec.20, T.30 N., R.8 W., San Juan County, Hydrologic Unit 14080101, on left bank 0.5 mi upstream from Gobernador Canyon, 0.8 mi northeast of Archuleta, 7.2 mi downstream from Navajo Dam, and at mile 291.4.

DRAINAGE AREA.--3,260 mi², approximately.

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, is 455,000 acre-ft. The correct value is 1,455,000 acre-ft.

GAGE.--Water-stage recorder. Elevation of gage is 5,653 ft above National Geodetic Vertical Datum of 1929, from river-profile survey. Prior to Dec. 29, 1959, at site 5.0 mi upstream at elevation 55 ft higher. Dec. 29, 1959 to Nov. 15, 1964, at site 0.4 mi upstream at elevation 5 ft higher. Prior to Nov. 28, 1966, at elevation 2.0 ft higher.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow completely regulated by Navajo Reservoir (station 09355100) 7 mi upstream except for minor inflow from 30 mi² intervening drainage area. Highwater diversions through Azotea tunnel (station 08284160) into Rio Grande Basin began in March 1971. Diversions for irrigation of about 47,000 acres upstream from station. Releases from Navajo Reservoir, beginning in January 1976, for use on Navajo Indian Irrigation Project bypass gage in tunnel on left bank. See tabulation below for monthly and annual releases as furnished by U.S. Bureau of Reclamation.

AVERAGE DISCHARGE.--7 years (water years 1956-62), 1,304 ft³/s, 944,700 acre-ft/yr, prior to closure of Navajo Dam. 26 years (water years 1963-88), 1,249 ft³/s, 904,900 acre-ft/yr, since closure of Navajo Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft³/s, July 27, 1957, gage height, 11.00 ft, site and datum then in use; minimum determined, 8 ft³/s, Feb. 28, 1963. Maximum discharge since construction of Navajo Dam in 1962, 6,500 ft³/s, June 20, 1965, gage height, 4.57 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 787 ft³/s, Oct. 4; minimum daily, 501 ft³/s, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	778	624	610	585	604	624	637	602	644	693	687	527
2	782	624	610	585	610	624	637	596	644	708	685	525
3	781	618	610	585	610	624	630	597	650	726	692	520
4	787	617	606	585	604	624	630	597	650	723	694	518
5	713	617	604	585	597	624	630	592	650	659	708	518
6	631	616	604	591	604	624	630	594	654	661	728	511
7	630	614	608	591	604	624	630	597	657	672	713	539
8	630	610	620	591	597	624	630	599	657	678	713	543
9	630	610	617	591	597	624	630	604	659	684	619	531
10	630	610	613	585	597	625	623	604	664	699	552	510
11	630	610	610	585	597	633	624	635	664	693	555	515
12	630	610	604	585	597	637	624	692	664	669	563	524
13	631	610	605	585	605	635	624	666	671	616	557	529
14	671	613	604	585	610	637	625	636	654	574	560	546
15	682	610	604	585	610	637	630	630	598	573	569	719
16	628	610	607	597	610	637	634	629	601	573	575	526
17	630	610	608	597	616	637	625	625	604	570	595	511
18	630	605	604	597	617	637	624	638	604	566	590	507
19	628	604	609	597	617	637	624	630	605	626	609	536
20	632	606	617	597	617	632	619	632	610	773	594	603
21	617	605	612	591	617	637	614	630	610	779	591	606
22	617	604	610	591	617	637	617	629	637	777	604	604
23	617	607	609	591	617	637	608	624	692	779	554	604
24	617	610	612	597	622	640	606	624	704	779	504	603
25	623	610	617	597	621	639	610	624	706	772	511	597
26	618	618	621	597	617	637	610	624	699	774	501	597
27	617	617	633	597	617	632	610	630	709	775	520	597
28	617	610	630	597	621	634	610	637	664	744	508	597
29	618	610	630	597	624	632	606	637	614	684	512	592
30	625	610	635	604	---	630	604	639	668	681	564	575
31	619	---	637	604	---	633	---	644	---	686	576	---
TOTAL	20189	18349	19020	18347	17693	19588	18655	19337	19507	21366	18503	16730
MEAN	651	612	614	592	610	632	622	624	650	689	597	558
MAX	787	624	637	604	624	640	637	692	709	779	728	719
MIN	617	604	604	585	597	624	604	592	598	566	501	507
AC-FT	40040	36400	37730	36390	35090	38850	37000	38350	38690	42380	36700	33180
(+)	4120	0	0	0	0	1480	11420	17780	25320	29600	20810	13650

CAL YR 1987 TOTAL 828774 MEAN 2271 MAX 5060 MIN 604 AC-FT 1644000
WTR YR 1988 TOTAL 227284 MEAN 621 MAX 787 MIN 501 AC-FT 450800

(+) DISCHARGE, IN ACRE-FEET, THROUGH NAVAJO INDIAN IRRIGATION TUNNEL.

SAN JUAN RIVER BASIN

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 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)
NOV 16...	1345	610	238	241	7.90	7.90	5.5	9.0	17
JAN 11...	1200	585	230	240	7.90	8.00	11.5	5.0	13
MAR 16...	0915	637	271	288	7.58	8.30	3.0	3.0	17
MAY 25...	1500	624	265	279	8.64	8.40	23.5	11.0	3.8
JUL 11...	1300	706	255	267	8.12	8.00	29.0	11.0	4.3
AUG 22...	1900	630	250	263	8.46	8.30	25.5	13.0	3.5

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
NOV 16...	12.5	96	23	28	6.3	11	0.5	1.6	88
JAN 11...	11.1	88	12	26	5.6	12	0.6	1.5	85
MAR 16...	11.4	110	23	31	7.0	17	0.7	1.7	99
MAY 25...	11.0	100	22	30	6.8	15	0.7	1.6	90
JUL 11...	11.2	99	18	29	6.4	14	0.6	1.7	96
AUG 22...	9.5	100	26	30	7.2	14	0.6	1.5	79

DATE	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
NOV 16...	0	72	73	42	2.1	0.20	12	168	147
JAN 11...	0	70	76	41	3.1	0.20	10	154	145
MAR 16...	0	81	83	58	2.7	0.10	9.9	173	177
MAY 25...	5	82	81	52	2.3	0.30	10	174	167
JUL 11...	0	79	81	53	2.4	0.20	10	171	165
AUG 22...	10	81	79	48	2.1	0.10	11	170	161

SAN JUAN RIVER BASIN

317

09363500 ANIMAS RIVER NEAR CEDAR HILL, NM

LOCATION.--Lat 37°02'17", long 107°52'25", in sec.7, T.32 N., R.9 W., La Plata County, Colorado, Hydrologic Unit 14080104, on right bank 0.8 mi downstream from Florida River, 2.5 mi upstream from Colorado-New Mexico State line, 8.5 mi north of Cedar Hill, and at mile 32.9.

DRAINAGE AREA.--1,090 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for October and November 1933, published in WSP 1313.

REVISED RECORDS.--WSP 1563: 1940 and 1946 (monthly figures only).

GAGE.--Water-stage recorder. Elevation of gage is 5,960 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 14, 1937, at datum between 1.52 ft and 1.36 ft higher. Sept. 15, 1937, to Sept. 30, 1946, at datum 1.36 ft higher.

REMARKS.--Estimated daily discharges: Dec. 3 to Jan. 2 and Jan. 20 to Feb. 5. Water-discharge records good except for estimated daily discharges, 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 November 1963 (capacity, 40,100 acre-ft). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--55 years, 925 ft³/s, 670,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s, June 19, 1949, gage height, 11.45 ft; minimum, 63 ft³/s, Jan. 21, 1935.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in October 1911 at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
June 8	1200	*3,390	*6.87				

Minimum daily discharge, 240 ft³/s, Dec. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	365	560	312	270	330	682	534	1070	1520	1720	463	693
2	371	739	291	305	350	687	474	1100	1250	1490	537	664
3	357	603	288	309	330	618	473	933	1680	1320	491	619
4	331	556	290	320	332	575	498	850	2350	1330	467	581
5	328	574	285	325	340	551	506	850	2700	1320	420	537
6	348	866	282	330	340	495	542	909	2810	1200	717	529
7	341	868	280	340	335	462	609	922	3000	1110	1220	493
8	348	698	280	342	330	434	774	855	2990	1030	1200	481
9	335	601	279	345	332	421	816	790	2870	994	854	420
10	355	570	270	343	324	427	739	777	2720	933	714	413
11	373	550	270	345	322	426	714	884	2710	887	658	397
12	371	483	265	352	316	359	652	1120	2430	815	613	455
13	371	459	263	343	317	359	790	1510	2330	741	527	934
14	435	451	260	338	324	362	869	1710	1920	690	453	931
15	470	449	260	342	316	371	885	2030	1680	653	420	832
16	426	442	255	340	312	380	923	2310	1610	634	441	753
17	387	402	253	342	323	369	1040	2380	1750	590	610	695
18	371	382	250	335	310	350	892	2410	1820	521	843	637
19	358	354	250	330	313	359	802	2270	1810	498	682	603
20	354	376	250	329	320	325	791	1920	1900	453	606	637
21	356	387	247	329	323	340	831	1550	2000	432	553	693
22	352	375	242	332	336	366	846	1360	1870	419	519	1070
23	326	363	240	330	344	440	816	1320	1830	391	554	1020
24	306	354	242	335	348	456	749	1410	1880	381	623	918
25	357	349	244	337	363	462	704	1490	1930	360	566	839
26	355	336	245	340	403	480	685	1500	1890	353	551	782
27	362	333	245	349	460	537	635	1600	1790	355	585	736
28	360	327	252	350	564	632	712	1900	1840	373	759	722
29	350	324	255	351	641	634	808	2180	2020	360	665	667
30	471	333	260	350	---	549	881	2200	1930	359	635	598
31	448	---	268	352	---	512	---	1950	---	416	681	---
TOTAL	11438	14464	8173	10380	10298	14420	21990	46060	62830	23128	19627	20349
MEAN	369	482	264	335	355	465	733	1486	2094	746	633	678
MAX	471	868	312	352	641	687	1040	2410	3000	1720	1220	1070
MIN	306	324	240	270	310	325	473	777	1250	353	420	397
AC-FT	22690	28690	16210	20590	20430	28600	43620	91360	124600	45870	38930	40360
CAL YR 1987 TOTAL	448166			MEAN	1228	MAX	5270	MIN	240	AC-FT	888900	
WTR YR 1988 TOTAL	263157			MEAN	719	MAX	3000	MIN	240	AC-FT	522000	

COLORADO RIVER BASIN

SAN JUAN RIVER BASIN

09363500 ANIMAS RIVER NEAR CEDAR HILL, NM -- Continued

PERIOD OF RECORD.--Water years 1943, 1945, 1958-59, 1969-73, 1975, 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV 20...	1136	353	--	649	8.20	8.40	10.0	3.0	11.8	<10	280
MAR 16...	1334	389	660	567	8.32	8.20	6.5	6.5	12.0	72	260
MAY 25...	1020	1560	285	292	8.25	8.00	23.0	11.0	9.6	13	130
AUG 24...	1045	543	490	494	8.24	7.60	27.0	18.0	9.3	<10	210

DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 20...	120	87	15	28	0.8	3.7	--	--	--	159	140
MAR 16...	110	77	16	24	0.7	2.8	164	10	150	151	140
MAY 25...	42	40	6.1	7.9	0.3	1.4	--	--	--	83	54
AUG 24...	75	64	11	22	0.7	2.9	--	--	--	130	100

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 20...	24	0.40	9.6	404	0.300	0.260	0.080	--	--	0.030	0.020
MAR 16...	16	0.30	7.1	375	0.200	0.290	0.030	0.17	0.40	0.010	<0.010
MAY 25...	6.7	0.30	6.0	172	<0.100	<0.100	0.020	--	--	0.020	<0.010
AUG 24...	17	0.30	8.2	304	0.100	0.120	0.040	0.46	0.60	0.020	0.010

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)
NOV 20...	1.5	80	14	3.0	6.5	250	6	<1	<10	<50	<1
MAR 16...	4.1	50	4	--	--	--	--	--	--	--	--
MAY 25...	3.0	30	14	--	--	--	--	--	--	--	--
AUG 24...	3.2	60	33	--	--	--	--	--	--	--	--

COLORADO RIVER BASIN

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SAN JUAN RIVER BASIN

09363500 ANIMAS RIVER NEAR CEDAR HILL, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, SUSP. SIEVE DIAM. % FINER THAN (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN (T/DAY) (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 20...	40	<10	13	<0.10	<10	35	33	72	K4	K2
MAR 16...	--	--	--	--	--	47	49	57	K6	K5
MAY 25...	--	--	--	--	--	96	404	35	350	250
AUG 24...	--	--	--	--	--	315	462	70	>20000	K120

SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, NM
(National stream-quality accounting network station)

LOCATION.--Lat 36°43'17", long 108°12'05", in SW¼SW¼ sec.15, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080104, in Boyd City Park, on right bank 900 ft upstream from bridge on Miller Ave., 0.4 mi downstream from bridge on U.S. Highway 64 in Farmington, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--1,360 mi², approximately.

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. 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.--No estimated daily discharges. Water-discharge records good. Diversions for irrigation of about 30,000 acres upstream from station.

AVERAGE DISCHARGE.--77 years, 930 ft³/s, 673,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 25,000 ft³/s, June 29, 1927, gage height, 8.5 ft, site and datum then in use, from rating curve extended above 10,000 ft³/s; minimum, 1.0 ft³/s, Aug. 11, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911, when a stage of about 16.5 ft was reached (datum in use Oct. 1938 to Nov. 1973). Flood of Sept. 6, 1909, reached a stage of 11.1 ft, 1904-5 site and datum (discharge, about 19,000 ft³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	1915	*6,350	*8.53	No other peak greater than base discharge.			

Minimum discharge, 208 ft³/s, July 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	511	339	310	335	563	533	805	1390	1580	398	566
2	228	670	328	263	357	598	485	991	1150	1360	619	559
3	233	594	315	279	416	551	493	847	1150	1200	676	498
4	234	500	323	335	370	507	496	728	1730	1100	485	471
5	249	463	330	326	344	481	514	671	2580	1130	416	432
6	247	713	329	353	344	441	527	696	2620	1000	756	398
7	252	846	318	330	343	426	562	736	2800	888	1000	371
8	247	688	308	322	340	390	670	685	2950	806	1180	361
9	251	585	304	315	347	383	803	622	2840	748	835	337
10	243	539	295	313	355	385	751	569	2670	749	650	307
11	266	526	298	305	358	394	711	582	3120	680	567	317
12	277	493	295	311	344	349	687	734	2720	633	542	303
13	282	459	298	303	340	336	698	1100	2370	613	480	520
14	313	466	284	298	344	329	795	1400	2060	560	408	751
15	389	477	294	304	331	340	818	1760	1610	538	364	675
16	403	460	304	334	339	355	835	2220	1510	513	351	615
17	355	437	311	331	342	364	1010	2460	1490	540	479	556
18	345	430	327	327	340	358	908	2470	1620	483	659	498
19	340	418	348	311	335	356	796	2410	1630	432	618	461
20	344	402	325	322	332	367	767	2020	1670	383	533	439
21	345	416	307	289	344	346	738	1580	1740	364	484	468
22	361	411	288	312	348	371	780	1290	1630	344	442	953
23	354	399	308	319	353	403	751	1140	1540	311	465	854
24	343	378	321	344	355	440	711	1160	1650	296	671	719
25	356	368	341	338	363	447	669	1320	1720	280	704	674
26	372	376	343	327	367	451	636	1440	1670	269	502	619
27	371	368	316	335	397	481	611	1360	1580	262	484	572
28	372	358	301	341	437	536	598	1630	1840	234	563	538
29	372	351	308	330	527	599	625	1940	1860	281	617	519
30	449	361	308	346	---	562	684	2130	1910	320	617	466
31	447	---	306	335	---	549	---	1860	---	462	629	---
TOTAL	9865	14463	9720	9908	10447	13458	20662	41356	58820	19359	18194	15817
MEAN	318	482	314	320	360	434	689	1334	1961	624	587	527
MAX	449	846	348	353	527	599	1010	2470	3120	1580	1180	953
MIN	225	351	284	263	331	329	485	569	1150	234	351	303
AC-FT	19570	28690	19280	19650	20720	26690	40980	82030	116700	38400	36090	31370
CAL YR 1987	TOTAL	447826		MEAN	1227	MAX	5760	MIN	224	AC-FT	888300	
WTR YR 1988	TOTAL	242069		MEAN	661	MAX	3120	MIN	225	AC-FT	480100	

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1940 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1941 to current year.

WATER TEMPERATURES: December 1950 to current year.

SUSPENDED-SEDIMENT DISCHARGES: December 1950 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,980 microsiemens, Aug. 19, 1944; minimum daily, 89 microsiemens, June 15, 1985.

WATER TEMPERATURES: Maximum daily, 32.0°C, Aug. 26, 1966 and July 16, 1977; minimum daily, 0.0°C, on many days during winter months each year.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 36,800 mg/L, July 23, 1954; minimum daily mean, 1 mg/L on several days during 1956, 1958, and 1974.

SEDIMENT LOADS: Maximum daily, 337,000 tons, July 23, 1954; minimum daily, less than .50 ton on many days during 1955-57, 1959-60, 1963, 1972, 1974, and 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 850 microsiemens, Aug. 2; minimum daily, 247 microsiemens, June 7, 8.

WATER TEMPERATURES: Maximum daily, 28.0°C, July 29; minimum daily, 0.0°C on many days during November and January.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 33,700 mg/L, Aug. 31; minimum daily mean, 18 mg/L, July 22.

SEDIMENT LOADS: Maximum daily, 86,500 tons, Sept. 22; minimum daily, 17 tons, July 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV 18...	0904	430	800	716	--	8.20	-3.0	1.5	18	12.2
MAR 14...	1500	296	750	712	8.34	8.30	11.5	7.5	14	10.5
MAY 23...	1530	1110	388	394	8.34	8.20	29.0	17.5	21	8.3
AUG 25...	1000	624	490	493	7.97	7.60	24.0	19.5	2200	7.0
DATE	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
NOV 18...	310	130	98	15	35	0.9	3.1	--	--	--
MAR 14...	310	140	96	17	35	0.9	3.0	168	14	162
MAY 23...	170	62	54	7.9	14	0.5	1.7	115	8	108
AUG 25...	180	58	57	7.8	35	1	3.0	133	0	109
DATE	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
NOV 18...	174	170	22	0.40	9.4	463	460	--	<0.010	0.240
MAR 14...	167	180	20	0.30	8.4	459	462	--	<0.010	0.140
MAY 23...	106	75	8.8	0.30	6.8	244	234	--	<0.010	0.160
AUG 25...	118	120	12	0.40	7.9	309	317	0.260	0.010	0.270

SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV 18...	0.010	0.030	--	0.020	<0.010	33	99	4	36
MAR 14...	0.020	0.030	0.28	0.020	<0.010	K7	K4	67	45
MAY 23...	0.010	0.020	0.59	0.030	<0.010	K29	200	10	11
AUG 25...	0.030	0.070	0.27	0.030	0.050	3000	5800	120	6

DATE	TIME	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)	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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 18...	0904	<10	1	93	<0.5	<1	<1	<3	3	<5
MAR 14...	1500	50	<1	92	<0.5	<1	1	<3	3	<5
MAY 23...	1530	30	<1	74	<0.5	<1	<1	<3	17	<5
AUG 25...	1000	160	1	160	<0.5	1	<1	<3	1	<5

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	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)
NOV 18...	46	<0.1	<10	<1	<1	<1.0	1200	<6	10
MAR 14...	56	<0.1	<10	2	1	1.0	1100	<6	36
MAY 23...	25	<0.1	<10	15	<1	<1.0	570	<6	17
AUG 25...	28	<0.1	<10	2	1	1.0	850	<6	18

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	
OCT								
31...	2300	451	--	8.0	3800	4630	99	
NOV								
18...	0904	430	800	1.5	79	92	62	
FEB								
28...	2200	451	--	--	2020	2460	97	
MAR								
01...	1730	573	--	11.0	2890	4470	--	
14...	1500	296	750	7.5	1200	959	31	
MAY								
16...	1500	2430	--	--	1330	8730	59	
23...	1530	1110	388	17.5	266	797	27	
AUG								
25...	1000	624	490	19.5	25200	42500	--	
DATE		SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	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								
31...	100	43	60	89	--	--	--	--
NOV								
18...	--	--	--	--	--	--	--	--
FEB								
28...	--	--	--	--	--	--	--	--
MAR								
01...	--	45	61	88	98	100	--	--
14...	--	--	--	--	--	--	--	--
MAY								
16...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
AUG								
25...	--	51	58	81	93	99	100	--

SAN JUAN RIVER BASIN

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	633	748	805	737	559	631	541	464	382	361	662	487
2	669	740	802	690	670	658	542	436	386	---	850	466
3	675	594	---	627	---	656	539	442	393	366	832	430
4	690	624	625	675	732	---	538	443	332	360	564	504
5	710	646	648	647	748	654	564	487	254	357	564	498
6	690	545	637	628	738	631	583	490	251	392	556	497
7	730	582	645	644	740	599	544	---	247	387	---	526
8	768	591	739	652	735	611	541	491	247	396	360	488
9	---	596	733	700	736	606	538	490	---	435	480	---
10	743	643	734	675	738	583	479	473	249	428	481	409
11	733	651	763	698	731	572	490	465	251	453	556	579
12	730	648	700	679	565	571	488	479	274	452	575	530
13	726	650	---	676	711	592	441	315	296	471	---	532
14	---	662	661	716	717	---	435	331	291	470	638	412
15	769	706	675	705	716	591	434	270	333	513	599	404
16	799	712	705	735	712	573	---	274	345	514	696	419
17	795	704	671	722	727	572	461	270	346	547	501	433
18	781	720	679	619	728	573	467	268	306	638	486	441
19	813	705	674	650	---	607	477	295	309	641	460	488
20	791	716	673	670	727	610	459	295	313	639	581	436
21	797	723	687	643	726	579	476	---	286	610	580	---
22	795	726	668	680	---	---	470	392	---	588	589	453
23	786	733	653	---	748	578	---	397	280	568	605	396
24	795	742	---	660	707	598	513	338	305	542	607	411
25	816	745	---	687	753	568	519	348	299	572	642	411
26	810	701	615	683	770	560	519	350	296	---	642	409
27	815	684	645	668	---	575	515	352	329	607	609	434
28	830	706	639	689	641	580	524	262	316	623	605	473
29	---	787	677	714	627	533	471	264	300	603	535	475
30	---	796	673	720	---	530	466	266	310	618	560	476
31	761	---	734	---	---	550	---	270	---	690	461	---
MEAN	757	684	687	679	708	591	501	370	305	512	582	461
WTR YR 1988		MEAN	568	MAX	850	MIN	247					

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.0	8.0	4.0	.0	4.0	11.0	10.5	14.0	20.0	23.0	26.0	24.0
2	13.0	8.0	4.0	.0	4.0	10.0	11.0	14.0	20.0	---	26.0	25.0
3	19.5	.0	---	.0	---	10.0	11.0	14.0	23.0	23.0	25.0	25.0
4	18.0	.0	4.0	.5	4.0	---	11.0	13.0	24.0	23.0	26.5	25.0
5	18.0	.0	4.0	.0	4.5	10.0	15.0	14.0	20.0	23.0	25.0	25.0
6	18.0	.0	4.5	.0	5.0	11.0	17.0	14.0	20.0	26.0	26.0	24.0
7	18.0	.0	4.5	.0	6.0	8.0	18.0	---	19.0	26.0	---	24.0
8	18.0	.0	5.0	2.0	5.0	6.0	18.0	15.0	19.5	26.0	24.5	24.0
9	---	.0	5.0	2.0	5.0	6.0	15.0	15.0	---	26.0	24.5	---
10	17.0	.0	5.0	3.0	5.0	4.0	15.0	17.0	17.0	25.0	24.5	23.0
11	16.0	.0	4.0	4.0	5.5	3.0	15.0	21.0	16.5	25.0	24.0	22.0
12	15.0	.0	4.0	1.5	6.0	3.0	12.5	21.0	18.5	25.0	24.0	20.0
13	15.0	.0	---	.0	6.0	---	10.0	19.0	19.0	25.0	---	20.0
14	---	.0	3.0	.0	6.0	---	12.5	19.0	20.0	25.0	25.0	20.0
15	12.0	.0	2.0	2.0	6.0	10.0	11.0	19.0	20.5	25.0	26.0	20.0
16	13.0	.0	1.5	3.0	6.0	10.0	---	19.0	22.0	26.0	25.0	22.0
17	13.0	.0	1.0	3.0	5.0	10.0	12.0	15.0	20.0	26.5	24.0	19.0
18	13.0	5.0	1.5	3.0	5.0	10.0	12.0	15.0	22.0	27.0	24.0	20.5
19	14.0	6.0	2.0	2.0	---	10.0	12.0	15.0	23.0	27.0	24.0	19.5
20	14.0	6.0	2.5	1.0	8.0	11.5	13.0	15.5	22.0	27.0	25.0	19.0
21	14.0	6.0	3.0	.0	4.0	14.0	13.0	---	22.0	26.5	25.0	19.5
22	14.0	6.0	3.0	.0	---	---	8.0	11.0	---	26.0	22.0	19.5
23	13.5	6.0	3.0	---	6.5	12.0	---	19.5	24.0	21.0	26.0	19.5
24	13.0	6.0	---	.0	6.0	10.5	9.0	19.0	24.0	26.0	26.0	19.5
25	13.0	6.0	---	.0	10.0	10.0	10.5	18.0	23.0	27.0	25.0	18.0
26	13.0	6.0	1.0	.0	10.0	11.0	10.5	19.0	23.0	---	24.0	13.0
27	12.5	6.0	1.0	3.0	---	14.0	14.0	19.0	26.0	27.0	24.5	19.0
28	8.0	5.0	1.0	4.5	10.0	12.0	16.0	18.0	17.0	27.0	25.0	19.0
29	---	5.0	1.0	4.5	10.5	10.0	16.0	18.0	19.0	28.0	24.0	17.0
30	---	4.0	1.0	4.0	---	10.0	14.0	15.0	20.0	26.0	23.0	16.0
31	8.0	---	1.0	4.0	---	10.0	---	13.0	---	26.0	21.0	---
MEAN	14.5	3.0	3.0	1.5	6.0	9.5	13.0	16.5	21.0	25.5	24.5	20.5
WTR YR 1988		MEAN	13.5	MAX	28.0	MIN	.0					

WATER-QUALITY RECORDS
SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	137	197	261	567	73	274	108	461	766	823	4300	6570
2	97	127	189	506	51	158	73	268	3380	5650	301	454
3	76	101	148	338	64	199	85	275	3620	6610	281	378
4	108	145	148	291	163	761	71	211	1640	2150	197	251
5	110	153	102	185	424	2950	67	204	3150	3540	168	196
6	99	141	87	163	616	4360	63	170	3750	7650	163	175
7	200	303	81	161	656	4960	84	201	3580	9670	153	153
8	232	420	75	139	476	3790	60	131	1660	5290	144	140
9	218	473	89	149	455	3490	89	180	778	1750	301	274
10	171	347	110	169	452	3260	40	81	669	1170	383	317
11	167	321	124	195	288	2430	82	151	411	629	141	121
12	190	352	135	268	1410	10400	68	116	353	517	97	79
13	364	686	507	1510	1320	8450	94	156	334	433	1330	1870
14	344	738	862	3260	576	3200	60	91	200	220	656	1330
15	349	771	1230	5840	331	1440	55	80	203	200	333	607
16	346	780	1530	9170	400	1630	43	60	1110	1050	1000	1660
17	376	1030	388	2580	724	2910	61	89	1430	1850	1740	2610
18	361	885	354	2360	341	1490	30	39	505	899	1170	1570
19	208	447	208	1350	334	1470	40	47	366	611	325	405
20	176	364	139	758	152	685	30	31	316	455	3050	3620
21	244	486	119	508	189	888	27	27	252	329	22000	27800
22	185	390	111	387	214	942	18	17	211	252	33600	86500
23	177	359	123	379	123	511	38	32	2380	2990	6020	13900
24	136	261	185	579	130	579	44	35	5370	9730	272	528
25	120	217	199	709	252	1170	80	60	1590	3020	290	528
26	117	201	108	420	652	2940	73	53	1040	1410	107	179
27	98	162	91	334	2590	11000	42	30	1170	1530	104	161
28	113	182	116	511	2560	12700	42	27	1270	1930	160	232
29	262	442	112	587	2990	15000	66	50	2680	4460	349	489
30	332	613	117	673	692	3570	471	407	2820	4700	431	542
31	---	---	120	603	---	---	1470	1830	33700	57200	---	---
TOTAL	---	12094	---	35649	---	107607	---	5610	---	138718	---	153639
TOTAL LOAD FOR YEAR:			503893	TONS.								

SAN JUAN RIVER BASIN

09365000 SAN JUAN RIVER AT FARMINGTON, NM

LOCATION.--Lat 36°43'22", long 108°13'30", in NW¼SE¼ sec.17, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080105, on left bank 360 ft downstream from highway bridge on State Highway 371 in Farmington, 4,000 ft downstream from Animas River, 2.3 mi upstream from La Plata River, and at mile 251.4.

DRAINAGE AREA.--7,240 mi², approximately.

PERIOD OF RECORD.--June to December 1904, January 1905 to September 1906 (gage heights and discharge measurements only), September 1912 to current year. Monthly discharge only for some periods, published in WSP 1313. Discharge records for January to December 1905, published in WSP 175, are unreliable and should not be used.

REVISED RECORDS.--WSP 1119: Drainage area. WSP 1243: 1938. WSP 1313: 1905, 1914. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 5,230.37 ft above National Geodetic Vertical Datum of 1929. See WSP 1313 or 1733 for history of changes prior to Nov. 19, 1933.

REMARKS.-- Estimated daily discharges: Aug. 18-24. Water-discharge records good except for estimated daily discharges, which are fair. Since June 1962 flow is partly controlled by operation of Navajo Reservoir (station 09355100) 50 mi upstream. Diversions upstream from station for irrigation of about 86,000 acres, 4,000 of which is irrigated by Farmers Mutual ditch which diverts from Animas River and bypasses this station; ditch flow not included in record. At times this ditch may be supplied partly or entirely by diversion from San Juan River downstream from this station. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--76 years (water years 1913-88), 2,391 ft³/s, 1,732,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 68,000 ft³/s, June 29, 1927, gage height, 10.2 ft, site and datum then in use, from rating curve extended above 37,000 ft³/s; minimum, 14 ft³/s, Aug. 22, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911. Flood of Sept. 6, 1909, reached a stage of about 12.3 ft, site and datum in use May to September 1906.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 11	2000	6,810	5.27				

Minimum daily discharge, 577 ft³/s, July 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	893	1280	989	901	994	1150	1140	1290	1970	2270	1410	1910
2	912	1590	988	856	1000	1200	1020	1490	1720	2030	1550	2160
3	933	1340	974	884	1050	1190	1000	1330	1700	1860	1510	1540
4	947	1140	997	932	1020	1150	999	1200	2250	1790	1490	1260
5	949	1090	1000	989	1030	1140	975	1100	3030	1660	1370	1130
6	792	1480	1020	1100	1030	1050	1050	1140	3060	1470	1490	1070
7	762	1610	1010	1040	1020	1020	1070	1200	3180	1300	2940	961
8	740	1360	984	1000	1000	1010	1120	1120	3350	1200	2230	926
9	752	1200	981	983	1020	1010	1260	1030	3270	1130	1740	918
10	746	1130	958	979	1030	1010	1190	958	3130	1110	1290	905
11	759	1100	961	1010	1050	1020	1130	981	3570	1060	1250	861
12	781	1030	957	983	1040	965	1100	1250	3180	932	1310	851
13	802	995	1000	939	1040	920	1070	1710	2880	790	1150	918
14	879	1020	960	909	1050	910	1170	2040	2630	689	1060	1140
15	1070	1070	942	910	1040	913	1220	2320	2180	646	949	1270
16	1060	996	926	1010	1060	922	1250	2620	2040	638	954	1330
17	997	952	986	1010	1000	943	1520	2710	1990	681	2300	1250
18	981	932	1050	1020	998	921	1340	2760	2120	645	1910	1180
19	964	909	1100	987	1020	919	1200	2780	2120	577	1880	1110
20	967	902	1050	944	1040	925	1190	2480	2130	651	1390	1070
21	975	928	1000	901	1050	898	1150	2120	2210	751	1230	1090
22	985	917	958	924	1040	934	1260	1820	2150	752	1170	1250
23	955	900	980	917	1030	965	1260	1680	2100	721	1110	1420
24	937	887	1000	956	1010	1000	1150	1690	2230	719	1940	1450
25	989	886	1040	932	1020	1010	1110	1850	2450	737	2680	1380
26	955	929	1030	927	1030	1010	1030	1980	2510	733	1930	1300
27	991	902	967	942	1050	1050	1040	1910	2250	737	1680	1240
28	960	902	916	970	1060	1080	989	2170	3080	736	1420	1200
29	961	890	931	972	1100	1210	1040	2440	3360	714	1420	1130
30	1120	965	929	995	---	1120	1140	2630	2610	753	1340	1070
31	1060	---	913	989	---	1140	---	2410	---	1890	2100	---
TOTAL	28574	32232	30497	29811	29922	31705	34183	56209	76450	32372	49193	36290
MEAN	922	1074	984	962	1032	1023	1139	1813	2548	1044	1587	1210
MAX	1120	1610	1100	1100	1100	1210	1520	2780	3570	2270	2940	2160
MIN	740	886	913	856	994	898	975	958	1700	577	949	851
AC-FT	56680	63930	60490	59130	59350	62890	67800	111500	151600	64210	97570	71980
CAL YR 1987	TOTAL	1268978		MEAN	3477	MAX	10800	MIN	693	AC-FT	2517000	
WTR YR 1988	TOTAL	467438		MEAN	1277	MAX	3570	MIN	577	AC-FT	927200	

09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 36°59'51", long 108°11'17", in NW¼SE¼ sec.10, T.32 N., R.13 W., La Plata County, Colorado, Hydrologic Unit 14080105, on right bank at Colorado-New Mexico State line, 0.2 mi downstream from Ponds Arroyo, and 4.8 mi north of La Plata, NM.

DRAINAGE AREA.--331 mi².

PERIOD OF RECORD.--January 1920 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1934(M), 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 5,975.15 ft above National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 17, 1934.

REMARKS.--Estimated daily discharges: Dec. 9, 10, 13, 14, 16, 17, 21, 22, Dec. 26 to Jan. 18, and Jan. 22-30. Records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 15,000 acres, most of which are upstream from station.

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

AVERAGE DISCHARGE.--68 years, 36.5 ft³/s, 26,440 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft³/s, Aug. 24, 1927, gage height, 11.36 ft, present datum, from rating curve extended above 750 ft³/s on basis of slope-area measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 246 ft³/s, at 0415 hours Nov. 6, gage height, 3.93 ft; maximum gage height, 6.32 ft at 0015 Jan. 3 (backwater from ice); minimum daily, 4.6 ft³/s, July 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	33	27	22	28	61	46	55	56	31	4.7	21
2	9.6	37	27	18	30	66	42	60	40	27	8.9	20
3	9.5	33	26	18	32	53	37	54	42	27	7.1	18
4	9.1	29	26	20	31	50	36	44	62	48	6.0	19
5	8.9	29	26	26	31	49	34	41	69	30	6.5	21
6	8.9	103	25	26	32	47	33	42	87	24	9.4	17
7	11	72	24	22	31	49	49	45	76	20	19	15
8	9.1	54	24	22	30	40	57	44	84	19	16	13
9	9.4	41	22	22	30	42	57	40	83	17	13	11
10	8.9	35	22	22	30	49	48	35	74	21	10	9.3
11	10	33	24	24	30	45	42	33	81	26	9.1	7.8
12	10	31	24	20	31	43	35	37	67	20	8.8	11
13	13	29	22	20	30	45	30	52	51	13	9.5	37
14	16	33	20	20	29	41	28	76	43	8.3	9.8	28
15	16	35	20	22	28	44	33	93	43	6.7	8.9	27
16	14	32	20	24	30	42	56	88	42	7.4	10	24
17	14	30	24	22	29	38	91	89	37	7.5	19	20
18	15	30	26	22	28	36	67	69	36	6.6	15	15
19	13	29	26	23	28	38	53	84	32	4.9	13	14
20	13	28	26	23	28	39	45	83	35	5.9	10	13
21	13	27	24	23	29	39	42	70	33	7.9	9.0	13
22	14	30	24	20	31	40	44	60	31	5.6	10	16
23	13	30	26	18	30	41	44	59	32	5.9	10	14
24	15	28	25	16	28	43	52	66	38	8.2	11	11
25	18	28	26	18	29	38	51	65	37	7.4	11	9.0
26	16	30	26	22	30	37	45	63	42	5.9	13	6.4
27	16	28	26	26	32	41	36	65	40	5.4	12	6.3
28	15	28	24	28	35	57	31	74	48	5.4	24	6.8
29	17	28	26	28	38	59	33	75	64	5.3	25	7.6
30	28	27	24	30	---	61	38	91	63	4.6	20	8.4
31	27	---	22	28	---	57	---	79	---	4.8	23	---
TOTAL	420.4	1060	754	695	878	1430	1335	1931	1568	436.7	381.7	459.6
MEAN	13.6	35.3	24.3	22.4	30.3	46.1	44.5	62.3	52.3	14.1	12.3	15.3
MAX	28	103	27	30	38	66	91	93	87	48	25	37
MIN	8.9	27	20	16	28	36	28	33	31	4.6	4.7	6.3
AC-FT	834	2100	1500	1380	1740	2840	2650	3830	3110	866	757	912
CAL YR 1987	TOTAL	27278.0	MEAN	74.7	MAX	571	MIN	8.6	AC-FT	54110		
WTR YR 1988	TOTAL	11349.4	MEAN	31.0	MAX	103	MIN	4.6	AC-FT	22510		

SAN JUAN RIVER BASIN

09367500 LA PLATA RIVER NEAR FARMINGTON, NM

LOCATION.--Lat 36°44'23", long 108°14'51", in NE¼SW¼ sec.7, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080105, on right bank 1,300 ft upstream from bridge on U.S. Highway 550 in Farmington, and 1,800 ft upstream from mouth.

DRAINAGE AREA.--583 mi².

PERIOD OF RECORD.--March 1938 to current year.

REVISED RECORDS.--WSP 1243: 1944-45. WSP 1313: 1943-44(M), 1946-50(M). WSP 1733: 1951(M).

GAGE.--Water-stage recorder. Elevation of gage is 5,210 ft above National Geodetic Vertical Datum of 1929, from river-profile map. Prior to July 28, 1978 at elevation 1.0 ft higher.

REMARKS.--Estimated daily discharges: Oct. 1-29, Nov. 11-19, Jan. 21-28, Feb. 9-17, Mar. 25 to Apr. 19, July 3-11, and Aug. 4 to Sept. 30. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 24,000 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years, 29.8 ft³/s, 21,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, that of Sept. 10, 1939, "discharge not determined", gage height, 6.03 ft, site and datum then in use; no flow for long periods in some years.
Major floods occurred Sept. 5 or 6, 1909, and Oct. 5 or 6, 1911.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 861 ft³/s, at 0045 hours Aug. 31, gage height, 4.60 ft; minimum daily, 0.40 ft³/s, Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	84	36	40	50	75	42	4.8	4.6	9.4	23	20
2	1.1	98	36	40	72	77	34	7.5	3.8	7.3	15	9.0
3	1.2	60	35	40	141	68	32	6.7	3.5	6.6	13	8.0
4	1.2	47	35	40	79	58	31	4.6	3.2	6.0	9.3	7.0
5	1.2	42	35	40	57	56	33	4.5	4.5	5.5	7.5	6.0
6	1.3	215	34	41	55	55	26	4.5	3.9	5.0	8.0	5.0
7	1.4	166	32	40	54	53	26	4.3	8.6	4.5	7.0	4.0
8	1.4	94	31	40	52	51	36	4.1	7.5	4.0	6.5	4.0
9	1.3	70	29	38	50	50	35	3.9	8.4	3.5	6.0	4.0
10	1.3	60	29	35	50	49	30	3.9	7.8	3.0	5.5	3.5
11	1.3	45	28	36	51	50	10	3.9	9.5	2.4	5.0	3.5
12	1.2	30	28	41	50	49	8.8	3.9	15	3.4	4.5	3.5
13	1.3	30	31	38	49	48	8.5	3.9	7.5	3.0	4.0	3.5
14	1.4	30	30	38	48	48	5.0	4.0	6.9	2.9	3.5	3.5
15	1.5	60	34	45	48	47	6.5	5.5	6.0	2.9	10	3.0
16	2.0	52	34	47	46	47	7.0	11	5.9	2.8	8.5	3.0
17	1.5	47	38	41	44	47	10	6.7	5.9	2.8	9.0	3.0
18	1.5	44	38	40	43	42	7.0	6.2	5.9	2.8	3.0	3.0
19	1.5	42	37	39	44	39	6.5	4.5	7.8	2.7	6.0	3.0
20	1.4	40	35	39	43	35	6.0	5.5	7.8	2.3	2.0	3.0
21	1.4	38	32	36	45	37	5.2	4.3	6.9	2.2	1.0	3.0
22	1.4	40	32	35	49	39	6.8	4.1	6.4	2.0	.40	2.5
23	1.5	41	35	36	52	40	7.4	4.3	5.8	1.8	42	2.5
24	2.0	40	34	35	48	42	7.0	4.2	4.3	1.8	8.0	2.5
25	5.0	38	34	34	48	42	8.0	4.3	4.4	1.8	10	2.5
26	3.0	41	34	32	49	36	8.1	4.5	3.6	1.7	6.5	2.5
27	2.0	40	37	34	52	38	5.6	4.7	5.2	1.8	4.0	2.5
28	2.5	39	38	35	60	46	5.2	5.1	45	1.9	3.0	2.5
29	6.0	38	38	39	64	51	5.0	4.9	23	3.2	2.0	2.5
30	47	36	39	49	---	46	4.8	4.5	13	11	8.0	2.5
31	29	---	40	51	---	47	---	6.5	---	14	50	---
TOTAL	127.9	1747	1058	1214	1593	1508	463.4	155.3	251.6	126.0	291.20	128.0
MEAN	4.13	58.2	34.1	39.2	54.9	48.6	15.4	5.01	8.39	4.06	9.39	4.27
MAX	47	215	40	51	141	77	42	11	45	14	50	20
MIN	1.1	30	28	32	43	35	4.8	3.9	3.2	1.7	.40	2.5
AC-FT	254	3470	2100	2410	3160	2990	919	308	499	250	578	254
CAL YR 1987	TOTAL	27948.3		MEAN	76.6	MAX	701	MIN	1.0	AC-FT	55440	
WTR YR 1988	TOTAL	8663.40		MEAN	23.7	MAX	215	MIN	.40	AC-FT	17180	

09367540 SAN JUAN RIVER NEAR FRUITLAND, NM

WATER-QUALITY RECORDS

LOCATION.--Lat 36°44'25", long 108°24'09", in NW¼SE¼ sec.10, T.29 N., R.15 W., San Juan County, Hydrologic Unit 14080105, on right bank 300 ft downstream from Four Corners Powerplant highway bridge, 0.4 mi west of Fruitland, 10 mi downstream from La Plata River, 14.0 mi upstream from Chaco River, and at mile 239.

DRAINAGE AREA.--8,010 mi², approximately.

PERIOD OF RECORD.--Water years 1978 to current year.

REMARKS.--Discharge record estimated from station 09365000 San Juan River at Farmington, which is approximately 11 miles upstream.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)
NOV 18...	1655	E922	690	626	--	8.20	8.5	5.5	28
JAN 13...	0930	E910	700	610	8.06	8.10	-1.0	4.5	18
MAR 17...	1105	E943	700	630	8.09	8.30	5.5	5.0	28
MAY 26...	1645	E1920	390	395	8.24	8.00	28.0	18.5	27
JUL 12...	1530	E922	490	500	8.12	8.10	33.0	24.5	250
AUG 25...	1500	E2180	1000	976	7.90	7.80	33.0	22.0	14000

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
NOV 18...	11.4	240	110	70	15	41	1	2.4	--
JAN 13...	13.2	220	86	64	14	41	1	2.1	153
MAR 17...	10.6	240	110	67	17	42	1	2.4	153
MAY 26...	8.0	150	54	46	7.7	21	0.8	1.6	115
JUL 12...	6.8	180	63	56	9.3	34	1	2.0	138
AUG 25...	5.0	190	73	65	7.0	130	4	3.7	144

DATE	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
NOV 18...	--	--	130	170	15	0.30	12	460	404
JAN 13...	0	125	132	170	13	0.30	9.3	405	393
MAR 17...	0	125	128	180	13	0.20	8.9	409	407
MAY 26...	0	94	93	93	7.1	0.30	7.1	249	240
JUL 12...	0	113	115	120	9.8	0.10	8.8	332	309
AUG 25...	0	118	118	340	9.4	0.60	9.2	686	636

SAN JUAN RIVER BASIN

09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM

LOCATION.--Lat 36°46'24", long 108°26'26", in SE¼NW¼ sec.32, T.30 N., R.15 W., San Juan County, Hydrologic Unit 14080105, on right bank 0.6 mi downstream from Westwater Arroyo, 0.7 mi upstream from highway to San Juan Power Plant, 14 mi west of Farmington, and at mile 4.5.

DRAINAGE AREA.--73.8 mi².

PERIOD OF RECORD.--September 1974 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,130 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 20, 1978, at datum, 10.0 ft higher.

REMARKS.--Estimated daily discharges: Oct. 1-8, Nov. 25-27, Jan. 3-7, and Jan. 21 to Feb. 10. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--14 years, 1.59 ft³/s, 1,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,420 ft³/s, May 20, 1978, gage height, 18.94 ft, from floodmark, from rating curve extended above 6.0 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 1	1915	*51	*6.37				
No flow for many days.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	7.6	10	.10	.10	.00	.00	.04	.01	.03	.02	.00
2	.00	1.2	3.6	.50	.11	.00	.00	.03	.00	.03	.02	.00
3	.00	.16	2.2	.06	.10	.00	.00	.02	.10	.04	.69	.00
4	.00	.00	.23	.20	.08	.00	.00	.02	.01	.03	.02	.00
5	.00	.00	.07	.11	.05	.00	.00	.02	.00	.01	.01	.00
6	.00	6.0	.05	.15	.07	.00	.00	.01	.01	.04	.01	.00
7	.00	.50	.06	.10	.10	.00	.00	.02	.01	.02	.04	.00
8	.00	.35	.07	.06	.10	.00	.00	.02	.02	.04	.04	.00
9	.00	.09	.05	.05	.10	.00	.00	.01	.02	.02	.05	.00
10	.00	.06	.05	.04	.15	.00	.00	.01	.01	.02	.00	.00
11	.00	.00	.03	.10	.10	.00	.00	.01	.01	.04	.02	.00
12	.00	.00	.02	.09	.10	.00	.00	.17	.04	.03	.04	.00
13	.00	.00	.05	.08	.00	.00	.00	.32	.01	.03	.02	.00
14	.00	.00	.06	.09	.00	.00	.00	.05	.01	.01	.03	.00
15	.00	.00	.10	.10	.00	.01	.00	.01	.01	.03	.02	.00
16	.00	.00	.25	.10	.00	.01	.00	.02	.01	.02	.02	.00
17	.00	.00	.10	.10	.00	.09	.00	.02	.01	.02	.04	.00
18	.00	.00	.17	.11	.00	.00	.00	.11	.03	.07	.02	.00
19	.00	.00	.10	.10	.00	.00	.01	.02	.03	.01	.12	.00
20	.00	.00	.12	.08	.00	.00	.05	.01	.03	.02	.03	.00
21	.00	.00	.10	.05	.00	.00	.06	.00	.04	.02	.02	.00
22	.00	10	.25	.07	.00	.00	.05	.01	.02	.02	.06	.00
23	.00	15	.10	.10	.00	.00	.08	.01	.03	.01	.05	.00
24	.00	11	.05	.10	.00	.00	.07	.01	.03	.01	.21	.00
25	.00	12	.05	.03	.00	.00	.09	.00	.04	.01	.04	.00
26	.00	8.0	.05	.03	.00	.00	.08	.00	.04	.02	.00	.00
27	.00	7.5	.05	.10	.00	.00	.06	.00	.04	.02	.00	.00
28	.00	8.5	.10	.00	.00	.00	.04	.01	.02	.01	.00	.00
29	.00	1.8	.13	.09	.00	.00	.06	.01	.02	.02	.00	.00
30	.92	11	.09	.10	---	.00	.02	.00	.05	.01	.00	.00
31	.23	---	.12	.10	---	.00	---	.01	---	.03	.00	---
TOTAL	1.15	100.76	18.47	3.09	1.16	.11	.67	1.00	.71	.74	1.64	.00
MEAN	.04	3.36	.60	.10	.04	.00	.02	.03	.02	.02	.05	.00
MAX	.92	15	10	.50	.15	.09	.09	.32	.10	.07	.69	.00
MIN	.00	.00	.02	.00	.00	.00	.00	.00	.00	.01	.00	.00
AC-FT	2.3	200	37	6.1	2.3	.2	1.3	2.0	1.4	1.5	3.3	.00

CAL YR 1987	TOTAL	163.24	MEAN	.45	MAX	15	MIN	.00	AC-FT	324
WTR YR 1988	TOTAL	129.50	MEAN	.35	MAX	15	MIN	.00	AC-FT	257

09367680 CHACO WASH AT CHACO CULTURE NATIONAL MONUMENT, NM

LOCATION.--Lat 36°01'43", long 107°55'04", in NW¼NE¼ sec.29, T.21 N., R.10 W., 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.--578 mi².

PERIOD OF RECORD.--April 1976 to current year. Published as "at Chaco Canyon National Monument" prior to October 1985.

REVISED RECORDS.--WDR NM-80-1: 1979.

GAGE.--Water-stage recorder. Elevation of gage is 6,140 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-8, Nov. 5-8, Jan. 11-13, Feb. 16 to Mar. 5, July 13, 14, Aug. 8-10, 20-23, Sept. 5-7, and Sept. 14-21. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--12 years, 4.66 ft³/s, 3,380 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,920 ft³/s, Sept. 2, 1988, gage height, 8.55 ft, from rating curve extended above 350 ft³/s on basis of slope-area measurements at gage heights, 3.44 ft, 3.68 ft and 5.32 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 2	0930	167	2.53	Aug. 7	0500	668	4.53
June 29	1345	128	2.35	Aug. 17	2400	177	2.57
July 10	0600	494	3.90	Aug. 25	0545	215	2.73
July 21	0930	150	2.45	Aug. 29	0015	638	4.42
July 30	0300	124	2.33	Sept. 2	0715	*1,920	*8.55
Aug. 1	1400	158	2.49	Sept. 11	2045	124	2.33
Aug. 6	1030	400	3.54				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.21	.00	.00	.00	.00	.00	.00	.00	.03	64	102
2	.00	26	.00	.00	.10	.00	.00	.00	.00	.00	42	623
3	.00	5.4	.00	.00	10	.00	.00	.00	.00	2.2	31	120
4	.00	1.2	.00	.00	25	.00	.00	.00	.00	2.1	25	79
5	.00	.50	.00	.00	13	.00	.00	.00	.00	.31	21	49
6	.00	.68	.00	.00	5.0	.00	.00	.00	.00	.20	132	25
7	.00	.50	.00	.00	20	.00	.00	.00	.00	.08	262	6.9
8	.00	.05	.00	.00	15	.00	.00	.00	.00	.00	57	23
9	.00	.00	.00	.00	10	.00	.00	.00	.00	.00	10	1.3
10	.00	.00	.00	.00	8.0	.00	.00	.00	.00	66	2.5	.50
11	.00	.00	.00	.00	5.0	.00	.00	.00	.00	12	1.3	25
12	.00	.00	.00	.00	2.5	.00	.00	.00	.00	4.5	9.7	20
13	.00	.00	.00	.00	1.0	.00	.00	.00	.00	112	4.2	47
14	.00	.00	.00	.00	.50	.00	.00	.00	.00	.12	2.7	43
15	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	1.9	9.9
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	17	5.4
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	65	2.5
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	88	.92
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	86	.30
20	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	70	.06
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	32	36	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	36	35	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	39	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.7	71	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.1	75	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3	177	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	137	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.21	8.6	300	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	25	5.5	277	.00
30	.00	.00	.00	.00	---	.00	.00	.00	1.6	24	131	.00
31	.00	---	.00	.00	---	.00	---	.00	---	8.9	88	---
TOTAL	.00	34.54	.00	.00	115.15	.00	.00	.03	26.81	336.64	2358.3	1183.78
MEAN	.00	1.15	.00	.00	3.97	.00	.00	.00	.89	10.9	76.1	39.5
MAX	.00	26	.00	.00	25	.00	.00	.03	25	112	300	623
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.00
AC-FT	.00	69	.00	.00	228	.00	.00	.06	53	668	4680	2350
CAL YR 1987	TOTAL	902.44		MEAN	2.47	MAX	201	MIN	.00	AC-FT	1790	
WTR YR 1988	TOTAL	4055.25		MEAN	11.1	MAX	623	MIN	.00	AC-FT	8040	

SAN JUAN RIVER BASIN

09367950 CHACO RIVER NEAR WATERFLOW, NM

LOCATION.--Lat 36°43'28", long 108°35'27", in SW¼SW¼ sec.13, T.29 N., R.17 W., San Juan County, Hydrologic Unit 14080106, on downstream end of right bridge pier, 4.2 mi upstream from Dead Mans Wash, 5.3 mi downstream from the Hogback, 6.6 mi southwest of Waterflow, 7.2 mi southeast of Shiprock and at mile 4.5.

DRAINAGE AREA.--4,350 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1959-69 (annual maximum only), November 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,980 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to 1975 at site 1.8 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Oct. 10-20, Feb. 5-8, June 6-26, 28, Aug. 5-16, 18-21, and Sept. 2-3. Water-discharge records fair except for estimated daily discharges, which are poor. Base flow is mostly waste water from Four Corners Power Plant.

AVERAGE DISCHARGE.--12 years (water years 1977-88), 50.8 ft³/s, 36,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s, Sept. 20, 1969, gage height, 7.88 ft site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 1	2145	883	5.19	Aug. 7	0415	2,390	6.78
Nov. 6	0900	1,350	5.76	Aug. 17	0300	966	5.25
Feb. 4	0100	3,010	7.49	Aug. 24	1730	3,120	7.47
July 30	0015	3,810	8.17	Sept. 2	2315	*4,420	*8.53
Aug. 2	1330	1,040	5.35				

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	75	.00	22	5.7	250	12	21	13	109	171	744
2	21	202	.00	24	39	241	12	17	13	19	306	1050
3	21	79	.00	23	1530	98	20	20	12	7.7	147	2500
4	21	30	.00	22	2080	49	19	26	10	4.4	105	1000
5	21	40	.00	21	634	60	12	23	12	4.9	73	889
6	21	431	.00	22	78	38	16	24	11	3.5	37	511
7	20	217	.00	22	51	23	17	20	12	1.3	800	210
8	31	103	.00	22	35	19	12	28	1.0	1.3	630	38
9	20	60	.00	21	25	22	9.2	20	2.8	.81	425	34
10	20	11	.00	21	22	18	12	22	.32	1.2	350	19
11	21	8.6	1.2	20	21	17	13	25	10	2.0	175	8.8
12	20	4.9	17	20	21	17	12	26	11	13	80	5.4
13	1.7	2.8	17	20	20	18	16	35	29	11	50	2.0
14	.85	3.6	19	21	20	19	10	25	12	11	150	1.1
15	.71	2.5	19	19	20	23	9.5	23	.41	4.6	100	.90
16	.53	4.1	20	19	21	19	7.0	25	5.0	3.4	120	.83
17	.39	2.5	21	19	22	18	7.0	14	8.0	4.9	431	.77
18	.29	1.5	21	18	22	17	8.4	17	10	14	350	.72
19	.19	.50	21	20	20	20	13	18	12	16	290	.62
20	.08	.00	22	20	22	26	16	15	14	14	200	.77
21	.58	.00	21	19	19	30	13	15	16	4.0	175	2.5
22	.50	.00	23	19	10	22	13	14	20	2.6	144	.86
23	.04	.00	23	2.4	10	23	13	14	22	2.0	17	.69
24	.04	.00	22	1.2	52	13	9.5	13	20	1.7	777	.61
25	.40	.00	22	.96	38	18	20	13	17	1.7	1880	.52
26	.34	.00	22	.94	36	23	26	26	20	1.4	916	.45
27	.43	.00	22	.92	29	25	33	24	22	1.3	438	.39
28	.18	.00	23	.91	34	13	22	15	850	1.4	1850	.28
29	.13	.00	22	1.0	30	14	24	12	1040	1.4	1000	.18
30	15	.00	21	3.0	---	13	24	13	1840	1.2	850	.49
31	12	---	22	5.7	---	12	---	14	---	2.3	305	---
TOTAL	292.38	1279.00	421.20	471.03	4966.7	1218	450.6	617	4065.53	268.01	13342	7023.88
MEAN	9.43	42.6	13.6	15.2	171	39.3	15.0	19.9	136	8.65	430	234
MAX	31	431	23	24	2080	250	33	35	1840	109	1880	2500
MIN	.04	.00	.00	.91	5.7	12	7.0	12	.32	.81	17	.18
AC-FT	580	2540	835	934	9850	2420	894	1220	8060	532	26460	13930
CAL YR 1987	TOTAL	13298.23		MEAN	36.4	MAX	1550	MIN	.00	AC-FT	26380	
WTR YR 1988	TOTAL	34415.33		MEAN	94.0	MAX	2500	MIN	.00	AC-FT	68260	

09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
MAR 17...	0900	18	1290	--	8.47	--	4.5	4.0	--	--	--
JUL 12...	1330	16	--	--	--	--	34.0	26.5	--	--	--
AUG 24...	1600	611	1300	1280	8.11	7.50	35.0	24.0	4.8	110	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
MAR 17...	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--
AUG 24...	38	3.2	250	11	5.9	198	0	162	158	470

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
MAR 17...	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--
AUG 24...	14	0.90	19	896	1	1	100	2	<1	31

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)
MAR 17...	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--
AUG 24...	31	<5	1.7	<0.1	3	4	72	<2.0	4.0	180

SAN JUAN RIVER BASIN

09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
MAR 17...	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--
AUG 24...	3	<10	3	<50	20	6200	<100	290	0.01	20
DATE	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
MAR 17...	405	20	96	--	--	--	--	--	--	--
JUL 12...	53900	2330	--	80	90	97	99	99	99	100
AUG 24...	74200	122000	--	--	--	--	--	--	--	--

09368000 SAN JUAN RIVER AT SHIPROCK, NM
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 36°47'32", long 108°43'54", in NW¼ sec.27, T.30 N., R.18 W., San Juan County, Hydrologic Unit 14080105, on left bank 3 mi west of Shiprock, 6 mi downstream from Chaco River, and at mile 215.0.

DRAINAGE AREA.--12,900 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January to October 1911, February 1927 to current year. Monthly or yearly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1243: 1931, 1934-38, 1951. WSP 1313: 1911, 1933. WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 4,848.68 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Apr. 6, 1922, nonrecording gage and Apr. 7, 1922, to Oct. 25, 1933, water-stage recorder, at site 3 mi upstream at different datum. Oct. 26, 1933, to Sept. 30, 1936, water-stage recorder at present site at datum 3.31 ft higher and Oct. 1, 1936, to Sept. 30, 1952, at datum 1.77 ft higher. Supplementary water-stage recorders at nearby sites, same datum, used at times.

REMARKS.--Estimated daily discharges: Oct. 1-19, Feb. 1 to Mar. 15, and July 2 to Sept. 30. Water-discharge records good except for estimated daily discharges, which are fair. Since 1962 flow partly regulated by Navajo Reservoir (station 09355100). Diversions for irrigation of about 118,000 acres upstream from station. Ungaged canals bypass station on both right and left bank, though some of bypass flow is returned to river downstream from gage.

AVERAGE DISCHARGE.--62 years (water years 1927-88), 2,240 ft³/s, 1,623,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD (SINCE 1927).--Maximum discharge, about 80,000 ft³/s, Aug. 11, 1929, gage height, 5.7 ft, site and datum then in use; minimum daily, 8 ft³/s, Aug. 25, 26, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911, and reached a stage of 22 ft, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 12	0200	6,050	6.49	June 29	1130	*6,650	*6.69

Minimum daily discharge, 520 ft³/s, July 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	1300	1020	973	970	1220	1220	978	1730	3940	1210	2730
2	1040	1910	1010	922	1030	1320	1080	1230	1500	2500	1150	3160
3	1050	1830	990	950	1000	1280	1030	1230	1290	1900	1300	3300
4	1030	1500	986	1030	990	1200	1010	1030	1480	1810	1400	2800
5	1020	1310	1010	1020	980	1250	1050	878	2570	1700	1120	1550
6	975	1820	1010	1100	990	1220	1100	833	2790	1500	1500	1300
7	870	2080	1000	1100	1000	1200	1120	890	2820	1350	3500	1100
8	790	1910	992	1060	1020	1150	1090	806	3030	1250	3300	1000
9	780	1600	1020	1030	1050	1100	1260	786	2990	1130	2300	950
10	770	1380	1010	1010	1040	1050	1300	766	2850	1120	1600	906
11	775	1320	1000	1050	1070	1060	1210	668	2890	1090	1200	861
12	800	1290	1000	1020	1050	1050	1090	695	3620	920	1000	851
13	825	1210	1060	996	1050	1000	1010	1080	2650	780	1100	950
14	920	1200	1050	978	1060	970	1110	1610	2420	680	1000	1150
15	1100	1330	1010	939	1050	960	1180	1770	1890	630	890	1270
16	1110	1260	1000	1020	1040	970	1230	2230	1640	620	730	1330
17	1080	1110	1010	1080	1100	990	1510	2530	1510	625	1100	1350
18	990	1090	1060	1080	1080	958	1490	2660	1710	610	1900	1200
19	980	1080	1110	1070	1050	965	1290	2660	1730	520	2500	1160
20	1000	1030	1100	1000	1080	930	1170	2370	1760	540	1900	1070
21	1010	1050	1040	979	1100	888	1120	1970	1820	660	1500	1090
22	1050	1060	993	984	1150	912	1280	1640	1800	640	1300	1250
23	980	1080	1000	961	1170	948	1410	1390	1650	620	1150	1420
24	950	1060	1020	979	1160	1020	1290	1220	1730	610	2550	1450
25	960	1030	1060	1020	1100	1010	1230	1300	2060	615	2800	1500
26	957	1050	1060	1020	1160	1000	1080	1590	2220	620	3100	1450
27	972	1050	1050	1020	1150	1030	1040	1510	2040	620	2950	1360
28	995	1020	1000	1070	1140	1020	989	1610	3000	615	2900	1310
29	996	1000	1020	1040	1160	1190	953	1940	4070	590	2850	1200
30	1220	1030	1010	982	---	1210	915	2350	4120	600	2500	1150
31	1250	---	947	1030	---	1150	---	2250	---	1390	2400	---
TOTAL	30295	38990	31648	31513	30990	33221	34857	46470	69380	32795	57700	43168
MEAN	977	1300	1021	1017	1069	1072	1162	1499	2313	1058	1861	1439
MAX	1250	2080	1110	1100	1170	1320	1510	2660	4120	3940	3500	3300
MIN	770	1000	947	922	970	888	915	668	1290	520	730	851
AC-FT	60090	77340	62770	62510	61470	65890	69140	92170	137600	65050	114400	85620
CAL YR 1987	TOTAL	1252277		MEAN	3431	MAX	10700	MIN	710	AC-FT	2484000	
WTR YR 1988	TOTAL	481027		MEAN	1314	MAX	4120	MIN	520	AC-FT	954100	

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 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	
NOV 17...	1503	1110	800	690	8.23	8.70	10.0	6.5	78	12.5	--	--	
MAR 15...	1433	960	710	689	8.07	8.10	15.5	8.0	43	11.0	250	120	
MAY 26...	1200	1700	440	464	8.22	7.90	29.0	19.0	73	8.5	180	72	
AUG 23...	1330	1150	685	607	8.26	8.00	33.0	24.0	790	7.0	220	90	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 17...	--	--	--	--	--	--	160	0	131	110	200	15	0.30
MAR 15...	73	17	47	1	2.5	171	0	140	132	210	15	0.20	
MAY 26...	54	9.7	26	0.9	2.0	129	0	106	104	110	9.1	0.30	
AUG 23...	69	11	49	2	2.7	161	0	132	129	160	13	0.30	
DATE		SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
NOV 17...	--	--	480	--	--	--	--	--	--	--	--	--	--
MAR 15...	9.4	452	456	--	<0.010	0.250	0.080	0.080	0.22	0.060	0.040	20	
MAY 26...	7.3	288	282	0.170	0.010	0.180	0.020	0.020	0.38	0.030	0.010	20	
AUG 23...	10	408	395	0.350	0.010	0.360	0.060	0.050	1.0	0.390	0.040	30	
DATE		ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV 17...	--	--	--	--	50	--	--	--	--	--	--	--	--
MAR 15...	<1	66	<0.5	--	<1	<1	<3	2	7	<5	35	29	
MAY 26...	1	69	<0.5	--	<1	<1	<3	6	17	<5	23	10	
AUG 23...	1	100	<0.5	--	<1	<1	<3	4	20	<5	31	5	

SAN JUAN RIVER BASIN

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09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

	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)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)
NOV 17...	<0.1	--	--	--	--	--	--	--	<2.0	5.0	220	5
MAR 15...	<0.1	<10	2	1	<1.0	830	<6	11	--	--	--	--
MAY 26...	<0.1	<10	<1	1	1.0	610	<6	11	--	--	--	--
AUG 23...	<0.1	<10	1	1	<1.0	910	<6	15	--	--	--	--
DATE	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	GROSS ALPHA, DIS- SOLVED (UG/L AS (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS (03515)
NOV 17...	<1	<10	<50	8	4400	10	220	<0.10	40	1.1	4.8	4.4
MAR 15...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 26...	--	--	--	--	--	--	--	--	--	3.0	14	3.2
AUG 23...	--	--	--	--	--	--	--	--	--	--	--	--
DATE	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 KF AGAR (COLS./ PER 100 ML) (31625)	STREP- TOCOCCI FECAL, 0.7 KF AGAR (COLS. PER 100 ML) (31673)	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)
NOV 17...	5.0	3.1	4.3	0.06	2.3	178	533	89	K140	140	--	--
MAR 15...	--	--	--	--	--	2380	6170	20	<10	K12	--	--
MAY 26...	9.0	2.5	7.9	0.06	1.1	478	2190	49	K29	350	--	--
AUG 23...	--	--	--	--	--	1220	3790	93	3200	1700	<0.1	<0.010
DATE	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	
AUG 23...	<0.1	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	
DATE	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION TOTAL (UG/L) (39786)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)	
AUG 23...	<0.010	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<0.1	<0.10	<0.01	

SAN JUAN RIVER BASIN

09371010 SAN JUAN RIVER AT FOUR CORNERS, CO

LOCATION.--Lat 37°00'20", long 109°02'00", SE¼NE¼ sec.21, T.32 N., R.20 W., Montezuma County, Hydrologic Unit 14080201, on left bank 1,300 ft upstream from bridge on U.S. Highway 160, 0.1 mi north of New Mexico-Colorado State line, 1.0 mi east of Four Corners Monument, 3.0 mi downstream from Mancos River, and at mile 187.2.

DRAINAGE AREA.--14,600 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,900 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Feb. 3-5 and Mar. 2 to May 25. Water-discharge records fair, except for estimated daily discharges, which are poor. Flow partly regulated by Navajo Reservoir (09355100). Several observation of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 2,684 ft³/s, 1,945,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s, May 29, 1979, gage height, 6.25 ft; maximum gage height, 14.43 ft, Dec. 12, 1978 (backwater from ice); minimum, 110 ft³/s, Aug. 19, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 31	1700	*6,070	*4.13	No other peak greater than base discharge			

Minimum daily discharge, 529 ft³/s, July 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	925	1270	1010	1040	1090	2030	1290	1700	1990	2940	1830	2970
2	927	1960	989	1030	1200	2520	1060	1460	1660	2470	1950	3050
3	946	1880	977	1010	1210	2650	1060	1200	1460	2150	1730	3470
4	982	1500	966	1040	1170	2480	1030	870	1420	1980	1530	2210
5	975	1330	993	1040	1200	2320	1200	820	2240	1850	1240	1450
6	797	2530	1010	1070	1290	2880	1270	800	2870	1620	1130	1180
7	663	2330	999	1160	1160	2630	1300	880	2910	1310	3750	1030
8	657	1920	996	1160	1150	2520	1480	1590	3080	1080	3150	822
9	644	1490	1010	1140	1170	2360	1560	1590	3210	981	2410	801
10	681	1260	1000	1090	1230	2340	1510	1290	3030	920	1640	751
11	675	1160	1050	1130	1410	1850	1460	1270	3000	916	1190	681
12	667	1120	984	1020	1370	1710	1400	1150	3700	874	1060	803
13	666	1040	1040	939	1290	1490	1400	1350	3160	700	1210	1020
14	719	1020	1100	912	1270	1110	1160	1500	2800	571	1040	1360
15	936	1280	1180	940	1190	1000	1020	1700	2290	539	774	1530
16	1080	1360	1180	951	1160	910	1270	2100	1850	541	704	1540
17	1070	1350	1110	1010	1180	1000	1430	2500	1690	540	1310	1270
18	1000	1150	1060	1000	1150	1100	1350	2800	1780	532	2590	1120
19	990	1100	1100	1080	1080	1050	1540	3200	1890	529	2210	1000
20	913	1150	1140	1050	1060	1110	1260	3000	1910	536	1960	970
21	942	1140	1080	967	1060	1130	1270	2650	1950	541	1440	1030
22	975	1170	993	1050	1110	1080	1300	2400	1940	542	1260	1430
23	958	1150	1020	1030	1170	1200	1350	1950	1770	559	960	1820
24	935	1120	1060	1130	1340	1320	1430	1700	1770	570	1650	1700
25	939	1110	1220	1140	1460	1270	1560	1650	2050	576	3890	1430
26	998	1070	1260	1090	1470	1260	1750	1760	2300	580	2720	1310
27	1020	1030	1190	1120	1470	1200	1700	1700	2800	582	2470	1260
28	1020	1020	1120	1110	1790	1240	1720	1680	3100	582	2480	1210
29	1020	1050	1160	1150	1920	1350	1680	2030	4000	582	2660	1140
30	1610	993	1150	1080	---	1410	1710	2330	3880	583	2690	1130
31	1390	---	1080	1140	---	1270	---	2410	---	839	4380	---
TOTAL	28720	40053	33227	32819	36820	50790	41520	55030	73500	30115	61008	42488
MEAN	926	1335	1072	1059	1270	1638	1384	1775	2450	971	1968	1416
MAX	1610	2530	1260	1160	1920	2880	1750	3200	4000	2940	4380	3470
MIN	644	993	966	912	1060	910	1020	800	1420	529	704	681
AC-FT	56970	79450	65910	65100	73030	100700	82350	109200	145800	59730	121000	84270
CAL YR 1987 TOTAL	1316474			MEAN	3607	MAX	10100	MIN	644	AC-FT	2611000	
WTR YR 1988 TOTAL	526090			MEAN	1437	MAX	4380	MIN	529	AC-FT	1043000	

09371010 SAN JUAN RIVER AT FOUR CORNERS, CO -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978-81, November 1984 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV 17...	1042	1180	--	805	7.90	8.40	4.0	3.0	78	11.0	310
DEC 03...	1515	989	730	727	8.55	8.30	--	4.0	--	--	300
JAN 12...	1030	1140	725	731	8.42	8.20	11.5	0.5	13	12.6	260
MAR 15...	1032	992	820	785	8.35	8.10	9.0	4.0	53	11.4	290
MAY 24...	1100	1380	600	552	8.30	8.00	25.5	17.5	53	8.2	200
JUL 12...	1030	884	700	611	8.47	8.20	31.0	24.0	52	8.1	230
AUG 23...	0840	884	700	668	8.23	8.10	24.0	23.5	1000	7.0	240

DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 17...	170	89	22	58	1	3.0	131	0	107	146	250
DEC 03...	160	85	21	52	1	2.5	156	7	140	140	250
JAN 12...	130	73	19	50	1	2.3	146	12	140	132	240
MAR 15...	150	78	23	55	1	2.5	142	12	136	139	250
MAY 24...	89	60	13	33	1	2.2	129	7	118	115	140
JUL 12...	110	66	15	43	1	2.3	131	7	119	118	180
AUG 23...	110	72	14	50	1	2.9	156	0	128	128	200

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
NOV 17...	18	0.30	--	15	--	543	--	--	--	--	--
DEC 03...	15	0.40	0.032	8.5	521	520	<1	70	<0.5	70	<1
JAN 12...	16	0.30	--	8.1	505	488	--	--	--	--	--
MAR 15...	15	0.20	--	9.3	527	516	--	--	--	--	--
MAY 24...	10	0.30	--	7.7	359	335	--	--	--	--	--
JUL 12...	12	0.30	--	6.6	405	396	--	--	--	--	--
AUG 23...	12	0.30	--	10	456	438	--	--	--	--	--

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

[illegible]

LITTLE COLORADO RIVER BASIN

341

09386900 RIO NUTRIA NEAR RAMAH, NM

LOCATION.--Lat 35°16'57", long 108°33'10", in NW¼SW¼ sec.8, T.12 N., R.16 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank at mouth of Nutria Canyon, 0.9 mi upstream from Nutria Diversion Dam, 1.3 mi northeast of Upper Nutria, and 10.4 mi northwest of Ramah.

DRAINAGE AREA.--71.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year.

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

GAGE.--Water-stage recorder and concrete control. Concrete control raised 1.0 ft June 6, 1975. Control raised 2.35 ft June 28, 1984. Elevation of gage is 6,860 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 16-31, Jan. 2-10, and Feb. 3-18. Water-discharge records good except for estimated daily discharges, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 7.14 ft³/s, 5,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 782 ft³/s, Apr. 14, 1973, gage height, 5.58 ft, datum then in use, from rating curve extended above 470 ft³/s; maximum gage height, 7.90 ft, Mar. 12, 1985; no flow Oct. 1-20, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 18	2315	*64	*5.48	No other peak greater than base discharge.			

Minimum daily discharge, 0.04 ft³/s, July 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	1.2	.34	.60	.41	12	.73	8.2	.24	.39	.30	.18
2	.19	1.9	.36	.54	.47	7.5	.69	5.5	.24	.35	.16	.11
3	.16	.96	.39	.55	.50	8.4	.63	4.0	.24	.22	.17	.09
4	.14	.60	.46	.57	.64	13	.53	3.1	.22	.20	.13	.10
5	.12	.50	.51	.60	1.5	18	.44	2.4	.21	.25	.08	.09
6	.10	5.0	.53	.64	.98	25	.37	2.1	.22	.22	4.9	.08
7	.10	1.4	.62	.62	.67	27	.41	1.7	.21	.19	10	.10
8	.12	.69	.57	.56	.62	14	.40	1.3	.21	.30	1.0	.08
9	.12	.50	.58	.50	.58	9.5	.36	1.2	.19	.33	.20	.06
10	.14	.38	.57	.45	.60	12	.34	1.1	.19	.30	.11	.06
11	.17	.31	.62	.37	.70	6.6	.41	1.1	.23	.25	.07	.14
12	.18	.29	.70	.38	.90	3.4	.39	.94	.22	.23	.07	.59
13	.21	.30	.73	.33	1.3	2.7	.37	.88	.20	.17	.06	.47
14	.23	.32	.72	.36	1.1	2.3	.38	.80	.17	.18	.06	.18
15	.24	.39	.61	.39	1.0	2.3	.51	.73	.18	.18	.09	.14
16	.24	.35	.69	.45	1.2	2.2	6.8	.66	.18	.16	.10	.12
17	.24	.31	.73	.49	1.2	1.4	23	.68	.19	.16	.10	.10
18	.24	.28	.70	.51	1.0	1.5	29	1.1	.20	.11	.10	.10
19	.29	.25	.68	.56	.27	1.6	42	1.0	.18	.06	.12	.10
20	.31	.24	.65	.52	.17	2.9	31	.77	.16	.06	.11	.10
21	.31	.28	.66	.46	.19	2.8	17	.60	.16	.05	.11	.12
22	.33	.29	.64	.41	.63	2.3	27	.51	.17	.04	.12	.12
23	.37	.28	.63	.41	2.0	2.1	35	.47	.18	.04	.15	.11
24	.37	.30	.64	.38	3.3	1.8	36	.42	.30	.04	.38	.10
25	.38	.30	.67	.37	5.4	1.2	29	.40	.21	.05	.13	.10
26	.37	.33	.68	.35	12	1.0	18	.32	.28	.06	.06	.10
27	.40	.35	.66	.31	20	1.2	12	.37	.28	.06	.06	.10
28	.47	.34	.65	.33	15	1.0	9.5	.37	4.0	.08	.06	.10
29	.46	.39	.64	.33	14	.67	13	.33	1.3	.08	.11	.10
30	.71	.34	.69	.44	---	.62	11	.29	.70	2.1	.42	.11
31	.48	---	.66	.44	---	.67	---	.25	---	1.5	.38	---
TOTAL	8.47	19.37	18.98	14.22	88.33	188.66	346.26	43.59	11.66	8.41	19.91	4.05
MEAN	.27	.65	.61	.46	3.05	6.09	11.5	1.41	.39	.27	.64	.13
MAX	.71	5.0	.73	.64	20	27	42	8.2	4.0	2.1	10	.59
MIN	.10	.24	.34	.31	.17	.62	.34	.25	.16	.04	.06	.06
AC-FT	17	38	38	28	175	374	687	86	23	17	39	8.0
CAL YR 1987	TOTAL	4096.85	MEAN	11.2	MAX	226	MIN	.09	AC-FT	8130		
WTR YR 1988	TOTAL	771.91	MEAN	2.11	MAX	42	MIN	.04	AC-FT	1530		

LITTLE COLORADO RIVER BASIN

09386900 RIO NUTRIA NEAR RAMAH, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978, 1980, 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS	SPE- CIFIC CON- DUCT- ANCE	SPE- CIFIC CON- DUCT- ANCE	PH (STAND- ARD	PH LAB (STAND- ARD	TEMPER- ATURE AIR	TEMPER- ATURE WATER	OXYGEN, DIS- SOLVED	HARD- NESS TOTAL	HARD- NESS NONCARB WH WAT	CALCIUM DIS- SOLVED
		(CFS) (00061)	(US/CM) (00095)	(US/CM) (90095)	UNITS) (00400)	UNITS) (00403)	(DEG C) (00020)	(DEG C) (00010)	(MG/L) (00300)	(MG/L AS CACO3) (00900)	(MG/L AS CACO3 (00902)	(MG/L AS CA) (00915)
NOV 17...	1200	0.31	510	550	7.50	8.00	5.5	3.5	10.0	270	110	71
JAN 20...	1500	0.52	--	569	7.90	8.00	2.0	2.5	11.4	300	35	79
MAR 01...	1230	5.9	210	225	7.80	8.20	9.5	6.0	11.2	100	1	29
MAY 18...	1400	1.3	510	487	8.20	--	26.0	16.0	8.0	250	18	59
JUN 28...	0900	7.2	596	--	--	--	--	--	--	--	--	--
JUL 15...	0930	0.21	550	587	7.70	7.90	17.5	15.0	6.6	300	37	80
AUG 17...	1100	0.10	550	459	7.70	8.00	25.0	16.0	6.0	290	86	80
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
NOV 17...	23	12	0.3	1.5	351	0	288	167	50	12	0.40	11
JAN 20...	24	12	0.3	0.80	329	0	270	262	52	6.1	0.40	11
MAR 01...	7.3	4.5	0.2	1.1	104	0	85	102	20	2.9	0.30	8.1
MAY 18...	24	14	0.4	1.4	279	0	229	228	44	6.9	0.50	11
JUN 28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	24	13	0.3	1.1	315	0	258	262	46	6.6	0.40	11
AUG 17...	23	12	0.3	1.1	320	0	262	209	56	13	0.30	12
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	
NOV 17...	281	1	1	30	<1	<1	1	1	9	3	41	
JAN 20...	342	1	1	30	2	<1	2	1	2	4	28	
MAR 01...	134	<1	<1	20	<1	3	4	2	5	6	81	
MAY 18...	298	1	1	50	2	<1	1	<1	3	1	38	
JUN 28...	--	--	--	--	--	--	--	--	--	--	--	
JUL 15...	339	2	1	40	<1	1	1	1	3	1	70	
AUG 17...	323	1	<1	40	1	2	3	<1	3	3	34	

09386900 RIO NUTRIA NEAR RAMAH, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 17...	10	<5	<0.10	<0.1	1	2	<10	15	52	0.04	70
JAN 20...	<5	<5	<0.10	<0.1	<1	<1	<10	<3	24	0.03	84
MAR 01...	<5	<5	<0.10	<0.1	<1	<1	10	27	46	0.73	97
MAY 18...	<5	<5	<0.10	<0.1	<1	<1	<10	6	34	0.12	71
JUN 28...	--	--	--	--	--	--	--	--	14500	282	94
JUL 15...	<5	<5	<0.10	<0.1	<1	<1	20	10	144	0.08	61
AUG 17...	<5	<5	<0.10	<0.1	<1	<1	10	12	--	--	--

LITTLE COLORADO RIVER BASIN

09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM

LOCATION.--Lat 35°06'03", long 108°45'03", in NE¼ sec.17, T.10 N., R.18 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank downstream from highway bridge on State Highway 36, 0.8 mi upstream from flow line of Black Rock Reservoir, 2.3 mi northeast of Black Rock, and 5.9 mi northeast of Zuni Pueblo.

DRAINAGE AREA.--848 mi², revised, of which 13 mi² is non contributing.

WATER-DISCHARGE RECORDS

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.--Estimated daily discharges: July 20 to Aug. 17 and Sept. 20-30. Water-discharge records good except for estimated daily discharges, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 13.7 ft³/s, 9,930 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft³/s, Aug. 4, 1974, gage height, 6.61 ft, from rating curve extended above 670 ft³/s on basis of slope-area measurements at gage heights 4.05 ft, 3.94 ft, 5.16 ft, and 6.61 ft; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 3	0600	*203	*3.97	No other peak greater than base discharge.			
No flow for many days.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	2.3	1.8	1.4	20	11	2.7	5.6	.47	.71	.40	11
2	.85	5.1	1.8	1.3	22	10	2.6	4.7	.46	.43	.04	4.9
3	1.1	3.9	2.0	1.3	157	9.9	2.5	4.2	.44	.63	.50	3.2
4	.69	2.0	2.1	1.4	61	9.8	2.2	4.2	.57	.30	.60	1.8
5	.44	1.6	2.2	1.7	17	9.8	2.0	4.0	.44	.29	.60	1.5
6	.22	3.5	2.2	2.7	8.2	9.8	1.9	3.6	.40	.21	.60	1.4
7	.26	3.4	2.0	3.7	8.0	9.4	1.8	3.0	.33	.17	1.0	1.4
8	.26	1.8	2.0	3.2	14	8.4	1.7	2.5	.21	.03	1.1	1.3
9	.16	1.5	1.9	2.3	12	8.1	1.5	2.2	.11	.00	1.2	1.2
10	.05	1.5	1.9	1.7	11	6.4	1.4	2.1	.04	.08	1.3	1.2
11	.00	1.5	2.0	1.7	10	5.2	1.4	2.0	.01	.39	1.4	1.5
12	.00	1.5	2.0	1.8	9.4	5.1	1.3	1.8	.04	.45	1.2	3.5
13	.01	1.5	2.0	1.7	8.5	5.3	1.3	1.7	.06	.37	1.0	7.1
14	.06	1.5	2.1	1.6	7.3	4.9	1.4	1.6	.03	.22	1.0	4.3
15	.09	1.9	1.8	1.6	6.2	4.9	1.4	1.5	.00	.29	1.0	2.7
16	.18	2.2	1.6	1.6	5.7	5.0	2.9	1.5	.00	.29	1.0	2.2
17	.34	1.9	1.7	1.6	5.3	4.6	4.3	1.5	.04	.31	1.2	2.8
18	.42	1.8	2.3	1.6	4.4	4.8	4.1	1.8	.12	.46	1.4	3.5
19	.36	1.7	2.6	1.6	4.6	4.4	3.0	1.8	.06	.65	1.4	3.1
20	.31	1.9	2.6	1.7	5.8	4.0	2.3	1.5	.03	.40	.86	1.0
21	.32	2.2	2.4	1.7	5.4	3.9	1.9	1.4	.01	.40	.66	.39
22	.33	2.1	2.4	1.9	5.0	3.6	2.2	1.2	.00	.30	.60	.89
23	.39	2.1	2.3	1.6	4.5	3.2	2.8	.91	.00	.40	2.5	1.0
24	.49	2.0	2.2	1.5	32	3.1	5.1	.80	.00	.40	.75	1.0
25	.52	2.0	2.1	1.4	57	3.0	6.4	.76	.30	.50	5.6	.80
26	.52	2.1	2.0	1.4	31	3.0	7.0	.79	.80	.40	1.7	.80
27	.53	2.1	1.9	1.5	25	2.9	7.4	.87	1.5	.30	6.8	1.0
28	.52	2.0	1.7	1.7	25	2.7	7.4	.76	2.0	.40	11	.70
29	.52	1.8	1.6	2.3	22	2.3	7.5	.50	2.5	.40	4.4	1.2
30	1.2	1.9	1.7	15	---	2.5	6.8	.39	1.4	.40	3.9	1.4
31	1.8	---	1.7	26	---	2.7	---	.43	---	.50	14	---
TOTAL	13.60	64.3	62.6	93.2	604.3	173.7	98.2	61.61	12.37	11.08	70.71	69.78
MEAN	.44	2.14	2.02	3.01	20.8	5.60	3.27	1.99	.41	.36	2.28	2.33
MAX	1.8	5.1	2.6	26	157	11	7.5	5.6	2.5	.71	14	11
MIN	.00	1.5	1.6	1.3	4.4	2.3	1.3	.39	.00	.00	.04	.39
AC-FT	27	128	124	185	1200	345	195	122	25	22	140	138
CAL YR 1987	TOTAL	6361.44		MEAN	17.4	MAX	347	MIN	.00	AC-FT	12620	
WTR YR 1988	TOTAL	1335.45		MEAN	3.65	MAX	157	MIN	.00	AC-FT	2650	

09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV												
17...	1515	2.0	800	801	8.20	8.30	7.5	1.5	12.4	260	63	68
JAN												
20...	1240	1.7	680	766	7.90	8.20	-4.0	0.0	12.4	270	0	72
MAR												
01...	1430	10	520	521	8.00	8.20	14.5	12.0	9.5	200	0	48
MAY												
18...	1220	2.0	630	666	8.20	8.30	30.5	15.0	8.0	250	40	59
JUL												
15...	1030	0.37	590	611	8.40	8.20	20.5	20.0	7.0	210	0	43
AUG												
17...	1400	1.2	370	375	8.30	7.80	31.0	21.5	6.4	140	0	40

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
NOV												
17...	23	69	2	6.2	350	0	287	202	110	23	0.40	15
JAN												
20...	23	67	2	3.8	182	0	149	307	98	18	0.40	17
MAR												
01...	19	37	1	4.6	195	0	160	214	52	13	0.40	7.2
MAY												
18...	24	14	0.4	1.4	314	5	265	206	61	16	0.40	11
JUL												
15...	25	61	2	4.7	295	22	278	271	45	11	0.40	2.8
AUG												
17...	9.6	33	1	5.5	172	0	141	152	39	6.5	0.30	11

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV											
17...	436	1	1	90	<1	<1	2	<1	2	<1	10
JAN											
20...	483	<1	<1	80	3	<1	2	2	5	8	16
MAR											
01...	310	1	<1	60	<1	2	2	2	2	3	24
MAY											
18...	310	1	1	110	2	<1	1	<1	4	1	25
JUL											
15...	356	1	2	110	<1	2	1	<1	6	1	21
AUG											
17...	236	<1	1	70	1	<1	15	<1	25	3	150

LITTLE COLORADO RIVER BASIN

09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 17...	<5	<5	<0.10	<0.1	<1	<1	<10	4	101	0.54	73
JAN 20...	<5	<5	<0.10	<0.1	<1	<1	<10	<3	31	0.14	87
MAR 01...	<5	<5	<0.10	--	<1	<1	20	5	52	1.5	98
MAY 18...	<5	<5	<0.10	<0.1	<1	<1	<10	8	54	0.30	94
JUL 15...	<5	<5	<0.10	<0.1	<1	<1	30	12	152	0.15	98
AUG 17...	12	<5	0.10	<0.1	<1	<1	60	8	--	--	--

LITTLE COLORADO RIVER BASIN

347

09387300 ZUNI RIVER AT NEW MEXICO-ARIZONA STATE LINE

LOCATION.--Lat 34°52'35", long 109°02'29", in SW¼SW¼ sec.34, T.7 N., R.21 W., Cibola County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on the left bank 0.2 mi upstream from the New Mexico-Arizona State line, 5 mi southwest of Ojo Caliente, and 14 mi southwest of Zuni.

DRAINAGE AREA.--1,314 mi², of which 13 mi² is noncontributing.

PERIOD OF RECORD.--October 1983 to April 1987 (annual maximum only), May 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,020 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 12, 1987 crest-stage gage at site 200 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Oct. 31 to Nov. 17. Records fair except for estimated daily discharges, which are poor. Flow partly regulated by Black Rock Reservoir 18 mi upstream. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 151 ft³/s, Aug. 23, 1988, gage height, 3.60 ft, from rating curve extended above 1.0 ft³/s on basis of step-backwater analysis; no flow most of time.

EXTREMES FOR 1987 WATER YEAR.--Maximum discharge, 130 ft³/s, Mar. 25, gage height, 3.55 ft, site then in use; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 151 ft³/s, Aug. 23, gage height, 3.60 ft, from rating curve extended above 1.0 ft³/s on basis of step-backwater analysis; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	.00	.00	1.2	.00
2								---	.00	.00	.12	.00
3								---	.00	.00	.10	.00
4								---	.00	.00	.15	.00
5								---	.00	.00	.24	.00
6								---	.00	.00	.00	.00
7								---	.00	.00	.00	.00
8								---	.11	.00	.52	.00
9								---	.02	.00	.76	.00
10								---	.00	.00	.23	.00
11								---	.00	.00	.04	.00
12								---	.00	.00	.18	.00
13								.00	.00	.00	.02	.00
14								.02	.00	.00	.00	.00
15								.00	.00	.00	.00	.00
16								.00	.00	.00	.00	.00
17								.00	.00	.00	.00	.00
18								.00	.00	.00	.00	.00
19								.00	.00	.00	.00	.00
20								.03	.00	.00	.00	.00
21								.18	.00	.00	.00	.00
22								.00	.00	.00	.10	.00
23								.00	.00	.00	.35	.00
24								.00	.00	.00	1.6	.00
25								.00	.00	.00	1.5	.00
26								.00	.00	.00	.86	.00
27								.00	.00	.00	.65	.00
28								.00	.00	.00	.34	.00
29								.00	.00	.00	.04	.00
30								.00	.00	.24	.00	.00
31								.00	---	.07	.00	---
TOTAL								---	.13	.31	9.00	.00
MEAN								---	.00	.01	.29	.00
MAX								---	.11	.24	1.6	.00
MIN								---	.00	.00	.00	.00
AC-FT								---	.3	.6	18	.00

LITTLE COLORADO RIVER BASIN

09387300 ZUNI RIVER AT NEW MEXICO-ARIZONA STATE LINE -- Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	6.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05
2	.00	2.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	1.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
4	.00	.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11
6	.00	8.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	3.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	1.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.40	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.71	.00
17	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.79	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.18	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.41	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.55	.00
30	2.1	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.50	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	2.60	23.70	.00	.00	.00	.00	.00	.00	.00	.00	40.46	.17
MEAN	.08	.79	.00	.00	.00	.00	.00	.00	.00	.00	1.31	.01
MAX	2.1	8.0	.00	.00	.00	.00	.00	.00	.00	.00	20	.11
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	5.2	47	.00	.00	.00	.00	.00	.00	.00	.00	80	.3
WTR YR 1988	TOTAL	66.93	MEAN	.18	MAX	20	MIN	.00	AC-FT	133		

LITTLE COLORADO RIVER BASIN

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09395381 FOSTER CANYON NEAR CONTINENTAL DIVIDE, NM

LOCATION.--Lat 35°28'46", long 108°21'59", in SW¼NW¼ sec.18, T.14 N., R.14 W., McKinley County, Hydrologic Unit 15020006, on left bank 250 ft upstream from Interstate Highway 40, 0.2 mi west of Coolidge, 10 mi east of Fort Wingate, and 22 mi east of Gallup.

DRAINAGE AREA.--16.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,090 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Mar. 10 to Apr. 15, May 2-19, and Sept. 1-30. Water-discharge records fair except for estimated daily discharges, which were poor. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 127 ft³/s, Aug. 31, 1988, gage height, 3.60 ft, from rating curve extended above 1.0 ft³/s on basis on step-backwater analysis; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 127 ft³/s, Aug. 31, gage height, 3.60 ft, from rating curve extended above 1.0 ft³/s on basis of step-backwater analysis; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	8.3	.00	.29	.00	.00	.39	1.3
2	.00	.00	.00	.00	.00	4.9	.00	.18	.00	1.5	2.7	.00
3	.00	.00	.00	.00	.18	3.6	.00	.00	.00	.17	.56	.00
4	.00	.00	.00	.00	.00	2.8	.00	.00	.00	.06	.00	.00
5	.00	.00	.00	.00	.00	3.1	.00	.00	.00	.00	.00	.00
6	.00	.11	.00	.00	.00	3.4	.00	.00	.00	.00	.11	.00
7	.00	.00	.00	.00	.00	2.8	.00	.00	.00	.00	.78	.00
8	.00	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	1.4	.00	.00	.21	.70	.00	.00
11	.00	.00	.00	.00	.00	1.3	.00	.00	.04	1.1	.00	.00
12	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	1.2	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.78	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	3.1	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	5.9	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	8.4	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	5.9	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	2.3	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	5.3	.00	.00	.00	.38	.00
23	.00	.00	.00	.00	.00	.00	6.7	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	7.6	.00	.00	.00	4.6	.00
25	.00	.00	.00	.00	.00	.00	4.7	.00	.03	.00	3.4	.00
26	.00	.00	.00	.00	.99	.00	2.2	.00	.56	.41	9.3	.00
27	.00	.00	.00	.00	6.5	.00	1.2	.00	.44	.00	1.5	.00
28	.00	.00	.00	.00	9.5	.00	.67	.00	.45	.00	.35	.00
29	.00	.00	.00	.00	9.8	.00	1.6	.00	.00	.00	.14	.00
30	.00	.00	.00	.00	---	.00	.74	.00	.00	1.6	9.2	.00
31	.00	---	.00	.00	---	.00	---	.00	---	1.9	11	---
TOTAL	.00	.11	.00	.00	26.97	38.68	56.31	.47	1.73	7.44	44.41	1.30
MEAN	.00	.00	.00	.00	.93	1.25	1.88	.01	.06	.24	1.43	.04
MAX	.00	.11	.00	.00	9.8	8.3	8.4	.29	.56	1.9	11	1.3
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.2	.00	.00	53	77	112	.9	3.4	15	88	2.6
WTR YR 1988	TOTAL	177.42		MEAN	.48	MAX	11	MIN	.00	AC-FT	352	

LITTLE COLORADO RIVER BASIN

09395381 FOSTER CANYON NEAR CONTINENTAL DIVIDE, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB TOT FLD WH WAT MG/L AS CACO3 (00902)	
MAR 02...	1200	5.4	125	140	7.60	8.30	12.0	6.0	10.8	25	61	0	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
MAR 02...	18	3.8	2.0	0.1	0.90	62	0	51	62	14	1.1	0.10	
DATE		SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, DIS- SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAR 02...	6.8	84	<0.100	0.050	0.35	0.050	7.0	10	24	562	8.2	72	

09395390 SIXMILE CANYON NEAR FORT WINGATE, NM

LOCATION.--Lat 35°28'59", long 108°27'25", in SE¼SE¼ sec.31 projected, T.15 N., R.15 W., McKinley County, Hydrologic Unit 15020006, on left bank 1,200 ft upstream from Interstate Highway 40, 1.5 mi west of Ciniza Refinery, 5.0 mi east of Fort Wingate, and 16 mi east of Gallup.

DRAINAGE AREA.--10.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,910 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 9-17, Dec. 22-27, Aug. 7-17, and Sept. 1-20. Water-discharge records fair, except for estimated daily discharges which are poor. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 384 ft³/s, Aug. 6, 1988, gage height, 5.66 ft, from rating curve extended above 1.0 ft³/s on basis of step-backwater analysis; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 384 ft³/s, at 2000 hours Aug. 6, gage height, 5.66 ft, from rating curve extended above 1.0 ft³/s on basis of step-backwater analysis; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.47	.00	.00	.32	.38	.00	.00	.00	.00	4.0	1.0
2	.00	.03	.00	.00	.79	.22	.00	.00	.00	.00	3.8	.50
3	.00	.69	.00	.00	1.3	.07	.00	.00	.00	.00	3.8	.30
4	.00	7.0	.00	.00	.42	.00	.00	.00	.00	.00	3.8	.00
5	.00	5.4	.00	.00	.26	.00	.00	.00	.00	.00	3.6	.00
6	.00	5.5	.00	.63	.25	.00	.00	.00	.00	.00	21	.00
7	.00	5.3	.00	.43	.17	.00	.00	.00	.00	.00	8.0	.00
8	.00	7.0	.00	.31	.18	.00	.00	.00	.00	.00	3.0	.00
9	.00	.00	.00	.26	.14	.00	.00	.00	.00	.00	2.0	.00
10	.00	.00	.00	.12	.14	.00	.00	.00	.00	.00	1.0	.00
11	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00	8.0	.00
12	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	3.0	.00
13	.00	.00	.00	.00	.17	.00	.00	.00	.00	.00	2.0	.00
14	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	1.0	.00
15	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	1.0	.00
16	.00	.00	.00	.00	.16	.00	.46	.00	.00	.00	.50	.00
17	.00	.00	.00	.00	.08	.00	1.2	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.27	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.01	.00	.00	.90	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00	.00
22	.00	.00	.00	.00	.03	.00	.24	.00	.00	.04	.00	.00
23	.00	.00	.00	.00	.14	.00	.22	.00	.00	.02	.00	.00
24	.00	.00	.00	.00	.19	.00	.10	.00	.00	.01	.00	.00
25	.00	.00	.00	.00	.17	.00	.01	.00	.00	.00	1.9	.00
26	.00	.00	.00	.00	.27	.00	.00	.00	.00	.26	.00	.00
27	.00	.00	.00	.00	.60	.00	.00	.00	.00	.23	1.6	.00
28	.00	.00	.00	.00	.52	.00	.00	.00	.00	.20	2.5	.00
29	.00	.00	.00	.59	.45	.00	.08	.00	.00	.19	1.5	.00
30	.00	.00	.00	.55	---	.00	.00	.00	.00	3.0	4.9	.00
31	.00	---	.00	.46	---	.00	---	.00	---	4.0	3.9	---
TOTAL	.00	31.39	.00	3.35	7.18	.67	2.89	.00	.00	8.98	85.80	1.80
MEAN	.00	1.05	.00	.11	.25	.02	.10	.00	.00	.29	2.77	.06
MAX	.00	7.0	.00	.63	1.3	.38	1.2	.00	.00	4.0	21	1.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	62	.00	6.6	14	1.3	5.7	.00	.00	18	170	3.6
WTR YR 1988	TOTAL	142.06		MEAN	.39	MAX	21	MIN	.00	AC-FT	282	

LITTLE COLORADO RIVER BASIN

09395390 SIXMILE CANYON NEAR FORT WINGATE, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1988.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
MAR 02...	0930	0.18	451	434	7.90	8.30	13.0	2.0	10.6	28
DATE		HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
MAR 02...		63	0	20	3.2	52	3	3.2	203	0
DATE		ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
MAR 02...		166	168	45	3.8	0.30	5.2	233	0.200	0.010
DATE		NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM (70331)
MAR 02...		0.79	1.0	0.130	12	50	17	1160	0.56	96

09430500 GILA RIVER NEAR GILA, NM

LOCATION.--Lat 33°03'40", long 108°32'12", in NE&NW¼ sec.30, T.14 S., R.16 W., Grant County, Hydrologic Unit 15040001, on left bank at Hooker damsite, 1.6 mi upstream from Mogollon Creek, 7 mi northeast of Gila, and at mile 572.5.

DRAINAGE AREA.--1,864 mi².

PERIOD OF RECORD.--April to December 1914, December 1927 to current year. Monthly discharge only December 1927 to September 1930, published in WSP 1313.

REVISED RECORDS.--WSP 1283: Drainage area. WSP 1313: 1944 (M), 1949 (M). WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 4,655.8 ft above National Geodetic Vertical Datum of 1929, (river-profile survey). Prior to Dec. 31, 1928, at site 5 mi upstream at different datum. Dec. 31, 1928, to Jan. 7, 1942, at site 200 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of about 500 acres upstream from station. Several observations of water temperature were made during the year. National Weather Service gage height and rain gage satellite telemeter at station.

AVERAGE DISCHARGE.--61 years (water years 1928-88), 151 ft³/s, 109,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,200 ft³/s, Dec. 28, 1984, gage height, 13.0 ft, from floodmark, from rating curve extended above 7,000 ft³/s on basis of slope-area measurement at gage height 12.5 ft; maximum gage height, 17.2 ft, from floodmark, Sept. 29, 1941; minimum, 14 ft³/s, July 15, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Other major floods occurred in November 1905, December 1906, and January 1916.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 4	0215	656	2.52	Aug. 18	2000	2,920	4.55
Feb. 28	1600	650	2.41	Aug. 29	1200	3,100	4.58
July 9	0130	952	3.02	Sept. 3	0645	3,680	4.92
Aug. 16	0015	6,090	6.14	Sept. 21	2300	*14,400	*8.50

Minimum daily discharge, 47 ft³/s, June 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	72	72	85	112	497	179	178	77	54	110	1830
2	69	73	71	84	116	471	171	180	75	65	127	1510
3	67	75	71	83	304	425	157	184	72	64	123	2600
4	66	77	71	84	582	384	147	175	69	59	195	1360
5	65	77	74	83	584	347	141	164	69	56	257	868
6	64	75	74	95	471	327	137	154	70	60	207	683
7	63	74	75	103	356	324	136	146	64	66	213	590
8	63	77	74	99	311	320	139	143	61	63	312	514
9	63	78	74	95	301	314	144	139	59	255	293	465
10	62	76	74	92	304	288	149	133	57	120	401	424
11	62	75	74	89	296	271	157	127	55	120	357	401
12	61	74	74	89	283	252	156	123	54	95	273	416
13	62	74	74	88	267	230	150	122	52	120	222	466
14	66	75	77	86	263	213	151	124	50	97	194	439
15	67	76	77	84	263	193	155	127	50	87	1440	407
16	66	77	76	84	251	182	181	131	51	81	3800	355
17	66	76	75	84	241	171	250	133	51	78	2170	325
18	65	75	85	93	244	161	317	135	53	76	1280	299
19	65	74	92	99	235	154	299	133	52	86	1250	277
20	65	74	90	97	220	150	307	133	50	93	1560	268
21	65	73	88	92	202	143	291	124	50	88	1760	3310
22	65	73	87	89	193	140	270	114	48	89	1250	6320
23	67	73	82	89	193	140	255	107	47	84	1040	1750
24	71	72	81	89	209	143	233	100	47	81	1030	894
25	72	73	85	89	232	146	213	95	48	77	778	548
26	69	72	90	91	272	153	196	93	54	74	603	400
27	68	73	86	93	424	165	183	91	55	71	569	322
28	70	72	83	96	572	179	176	86	57	70	797	277
29	69	71	81	98	524	193	176	83	56	75	2200	248
30	69	71	82	102	---	200	176	79	54	107	1720	226
31	69	---	83	107	---	192	---	79	---	136	1410	---
TOTAL	2053	2227	2452	2831	8825	7468	5792	3935	1707	2747	27941	28792
MEAN	66.2	74.2	79.1	91.3	304	241	193	127	56.9	88.6	901	960
MAX	72	78	92	107	584	497	317	184	77	255	3800	6320
MIN	61	71	71	83	112	140	136	79	47	54	110	226
AC-FT	4070	4420	4860	5620	17500	14810	11490	7810	3390	5450	55420	57110
CAL YR 1987	TOTAL	53415	MEAN	146	MAX	522	MIN	39	AC-FT	105900		
WTR YR 1988	TOTAL	96770	MEAN	264	MAX	6320	MIN	47	AC-FT	191900		

GILA RIVER BASIN

09430600 MOGOLLON CREEK NEAR CLIFF, NM
(Hydrologic bench-mark station)

LOCATION.--Lat 33°10'01", long 108°38'58", in SE¼SE¼ sec.13, T.13 S., R.18 W., Grant County, Hydrologic Unit 15040001, on right bank 0.3 mi downstream from Rain Creek, 0.8 mi downstream from Gila Wilderness Boundary, 12 mi upstream from mouth, and 14 mi north of Cliff.

DRAINAGE AREA.--69 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1967 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-7, Dec. 18, 19, and Dec. 26 to Jan. 1. Water-discharge records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--21 years, 31.2 ft³/s, 22,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s, Aug. 12, 1967, gage height, 13.7 ft, from floodmarks, from rating curve extended above 220 ft³/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage Height (ft)
Feb. 3	0715	218	2.64	Aug. 16	0500	216	2.64
July 15	1630	324	3.09	Sept. 21	1300	*2,210	*6.62

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	5.0	1.6	8.0	46	86	21	46	3.9	2.9	16	84
2	.10	14	1.6	8.7	44	68	17	39	3.4	6.6	15	58
3	.10	4.9	1.6	9.4	166	54	15	32	2.7	3.5	24	65
4	.10	3.5	1.6	8.6	122	45	14	27	2.5	2.6	46	50
5	.10	2.8	2.0	13	104	39	15	26	2.7	2.0	88	37
6	.08	6.1	2.3	29	78	37	17	25	2.3	1.4	54	28
7	.05	4.2	2.1	24	61	41	21	23	1.9	3.0	70	21
8	.01	3.3	2.1	16	54	42	27	20	1.5	9.3	83	17
9	.00	2.6	1.8	12	57	38	32	18	1.3	16	76	13
10	.00	2.2	2.0	9.4	56	35	27	16	1.2	18	88	11
11	.00	2.0	1.9	9.2	54	32	23	17	1.3	25	64	10
12	.01	1.8	1.9	9.2	49	28	20	20	1.1	12	42	33
13	.01	1.7	2.4	8.5	50	24	20	20	.81	8.3	29	30
14	.03	1.8	3.9	9.0	49	20	26	19	.68	6.0	24	24
15	.11	3.8	5.6	10	45	18	22	17	.61	25	39	19
16	.16	4.2	9.0	9.7	43	17	86	15	.71	15	152	15
17	.14	3.6	4.8	9.2	42	15	89	14	1.1	9.1	88	12
18	.11	3.1	6.0	14	36	14	90	13	1.0	6.3	90	10
19	.09	2.7	8.0	12	31	12	124	11	.77	9.3	82	8.9
20	.07	2.5	9.2	13	26	12	125	9.7	.48	13	83	14
21	.14	2.3	11	14	23	12	114	8.4	.30	9.5	55	808
22	.42	2.2	12	15	23	16	86	7.4	.17	5.5	40	432
23	1.5	2.2	15	21	28	19	65	6.5	.12	4.0	34	173
24	2.3	2.1	11	25	33	24	52	5.8	.11	2.6	45	97
25	1.5	2.0	8.6	31	38	29	45	5.5	.15	2.2	30	64
26	1.1	1.9	6.5	29	52	33	41	5.2	.36	2.1	25	46
27	.84	1.7	5.0	39	90	40	41	4.7	1.6	1.5	30	36
28	.68	1.6	5.5	40	94	41	41	4.2	2.2	2.1	32	29
29	.60	1.6	6.0	44	92	35	48	3.9	1.2	12	58	24
30	.77	1.5	6.5	51	---	29	47	3.8	.62	19	46	20
31	1.3	---	7.5	57	---	25	---	4.3	---	21	83	---
TOTAL	12.52	94.9	166.0	607.9	1686	980	1411	487.4	38.79	275.8	1731	2288.9
MEAN	.40	3.16	5.35	19.6	58.1	31.6	47.0	15.7	1.29	8.90	55.8	76.3
MAX	2.3	14	15	57	166	86	125	46	3.9	25	152	808
MIN	.00	1.5	1.6	8.0	23	12	14	3.8	.11	1.4	15	8.9
AC-FT	25	188	329	1210	3340	1940	2800	967	77	547	3430	4540
CAL YR 1987	TOTAL	5584.06		MEAN	15.3	MAX	108	MIN	.00	AC-FT	11080	
WTR YR 1988	TOTAL	9780.21		MEAN	26.7	MAX	808	MIN	.00	AC-FT	19400	

09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 03...	1230	5.7	100	102	--	8.30	17.0	13.0	0.40	9.1	37	0
MAR 17...	1030	16	78	78	8.00	8.00	7.5	2.0	1.3	12.6	29	3
MAY 02...	1330	40	65	68	8.40	7.60	15.5	10.5	2.0	9.5	29	6
JUL 18...	1415	7.0	115	120	7.80	8.10	23.0	21.5	2.8	7.0	50	2

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 03...	11	2.4	5.8	0.4	1.0	--	--	--	38	12	1.6
MAR 17...	8.2	2.0	4.4	0.4	0.60	--	--	--	26	9.7	1.3
MAY 02...	9.3	1.5	3.8	0.3	0.60	34	0	28	23	12	0.70
JUL 18...	15	3.0	6.2	0.4	1.1	57	0	47	48	11	1.1

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 03...	0.30	17	82	74	--	--	--	--	--	--	--
MAR 17...	0.30	19	69	61	<0.010	<0.100	0.030	0.030	0.27	0.010	<0.010
MAY 02...	0.30	18	61	60	<0.010	<0.100	0.030	0.020	0.27	0.020	0.010
JUL 18...	0.50	21	89	90	<0.010	0.360	0.600	0.030	2.6	0.250	0.140

DATE	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)	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)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
NOV 03...	20	<1	6	<0.5	7	<1	<3	8	20	<5	<4
MAR 17...	60	<1	3	<0.5	<1	<1	<3	<1	31	<5	<4
MAY 02...	110	1	11	<0.5	<1	<1	<3	4	31	20	<4
JUL 18...	40	2	20	<0.5	<1	<1	<3	6	18	<5	<4

GILA RIVER BASIN

09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)
NOV 03...	3	0.2	<10	3	<1	1.0	58	<6	17	<0.4	<0.4
MAR 17...	1	<0.1	<10	1	<1	1.0	45	<6	6	--	--
MAY 02...	5	0.1	<10	6	<1	<1.0	43	<6	27	--	--
JUL 18...	9	0.4	<10	2	<1	<1.0	76	<6	16	0.5	0.6
DATE	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 03...	1.0	0.8	0.9	0.8	0.04	0.05	11	0.17	63	48	35
MAR 17...	--	--	--	--	--	--	6	0.25	32	<1	K6
MAY 02...	--	--	--	--	--	--	6	0.66	81	K1	K11
JUL 18...	1.3	<0.4	1.1	<0.4	0.02	0.06	7	0.14	94	100	170

09431500 GILA RIVER NEAR REDROCK, NM
(National stream-quality accounting network and radiochemical network station)

LOCATION.--Lat 32°43'37", long 108°40'30", in W sec.23, T.18 S., R.18 W., Grant County, Hydrologic Unit 15040002, on left bank 0.2 mi downstream from Copper Canyon, 0.2 mi upstream from lower end of box canyon, 4.7 mi northeast of Redrock, 14 mi downstream from Mangas Creek, and at mile 539.2.

DRAINAGE AREA.--2,829 mi².

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. 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.--Estimated daily discharges: Oct. 10 to Dec. 16, June 4-14, and Aug. 11-23. Water-discharge records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 5,000 acres upstream from station. Gage height and rain gage satellite telemeter at station.

AVERAGE DISCHARGE.--72 years (water years 1906, 1909-10, 1913-55, 1963-88), 211 ft³/s, 152,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,800 ft³/s, Dec. 19, 1978, gage height, 29.8 ft, in gage well, 34.1, ft from floodmarks, from rating curve extended above 9,500 ft³/s on basis of slope-area measurement of peak flow; minimum, 2.2 ft³/s, Aug. 5, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug..16	unknown	unknown	unknown	Sept. 22	0530	*16,600	*16.50
Sept. 3	0100	4,570	10.44				

Minimum daily discharge, 19 ft³/s, June 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	60	66	108	154	483	180	201	67	31	278	1900
2	69	70	72	95	172	471	170	210	76	28	451	1910
3	51	73	74	91	239	454	151	220	69	32	304	2710
4	50	84	75	91	612	424	140	203	66	37	305	1670
5	50	95	74	98	781	390	127	170	60	35	707	1340
6	63	105	72	120	680	371	124	167	58	42	646	1160
7	78	83	71	128	472	374	129	151	55	45	800	1000
8	74	81	72	133	433	377	137	146	66	95	743	868
9	75	82	74	115	422	363	120	143	64	336	1100	756
10	53	83	76	108	424	351	124	146	61	206	848	665
11	52	93	78	111	417	329	127	147	56	164	720	608
12	54	96	76	127	409	292	140	140	49	183	415	782
13	63	95	76	123	391	269	145	130	43	167	305	787
14	68	78	78	121	379	241	149	109	34	114	260	697
15	74	73	77	117	375	213	149	108	23	91	1000	670
16	65	73	78	97	363	197	157	108	22	99	4280	620
17	59	78	77	93	365	190	248	102	26	88	2960	561
18	55	81	98	105	368	181	351	113	32	91	1540	500
19	57	89	106	113	361	178	352	129	27	131	1510	476
20	56	100	103	125	325	170	368	126	23	142	1500	468
21	57	86	104	135	302	180	357	107	21	208	1930	4080
22	60	82	103	128	278	168	334	92	22	95	1480	5920
23	72	80	106	104	262	164	315	88	20	88	1260	1610
24	64	84	112	100	248	161	285	96	19	81	1470	1000
25	64	93	114	106	282	162	273	102	22	71	1210	834
26	71	94	116	124	327	160	255	104	24	82	1060	729
27	83	98	101	127	377	150	222	98	25	64	999	646
28	86	76	93	128	538	158	197	76	29	67	1020	600
29	86	68	89	126	519	177	206	71	33	61	1910	564
30	79	63	86	115	---	192	202	63	33	98	1960	504
31	61	---	95	131	---	187	---	61	---	262	1660	---
TOTAL	2028	2496	2692	3543	11275	8177	6234	3927	1225	3334	36631	36635
MEAN	65.4	83.2	86.8	114	389	264	208	127	40.8	108	1182	1221
MAX	86	105	116	135	781	483	368	220	76	336	4280	5920
MIN	50	60	66	91	154	150	120	61	19	28	260	468
AC-FT	4020	4950	5340	7030	22360	16220	12370	7790	2430	6610	72660	72670
CAL YR 1987 TOTAL		65189		MEAN	179	MAX	748	MIN	29	AC-FT	129300	
WTR YR 1988 TOTAL		118197		MEAN	323	MAX	5920	MIN	19	AC-FT	234400	

GILA RIVER BASIN

09431500 GILA RIVER NEAR REDROCK, NM -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L) AS CACO3 (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
NOV 04...	1030	83	365	375	--	8.40	16.0	13.0	15	10.1	130	0
JAN 06...	0945	120	339	342	8.30	8.40	10.0	8.0	1.4	11.2	110	0
MAR 22...	1030	160	285	292	8.20	8.20	21.0	10.0	4.0	10.4	91	0
MAY 03...	1115	220	250	249	8.20	8.20	20.5	14.0	6.9	9.3	79	0
JUL 20...	1100	140	225	249	7.90	8.00	27.5	22.0	450	7.6	76	0
AUG 23...	1600	1280	210	213	8.00	7.50	37.0	25.0	340	7.0	76	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 04...	39	7.8	30	1	2.1	--	--	--	142	31	13	1.8
JAN 06...	33	7.0	28	1	2.2	161	0	132	127	28	12	2.1
MAR 22...	27	5.8	23	1	1.6	120	0	98	106	25	9.8	1.7
MAY 03...	23	5.1	21	1	1.5	110	0	90	90	25	7.6	1.6
JUL 20...	23	4.4	16	0.8	3.2	98	0	80	92	20	6.5	1.0
AUG 23...	22	5.1	13	0.7	2.1	100	0	82	87	15	4.2	0.80

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 04...	33	251	244	0.230	0.010	0.240	<0.010	0.030	--	0.020	0.030
JAN 06...	31	229	221	--	<0.010	0.330	0.010	<0.010	0.79	0.090	0.030
MAR 22...	30	194	188	--	<0.010	0.200	<0.010	<0.010	--	0.050	0.030
MAY 03...	31	166	171	--	<0.010	0.100	0.020	<0.010	0.28	0.050	0.030
JUL 20...	26	155	156	--	<0.010	<0.100	0.050	0.050	0.45	0.040	0.030
AUG 23...	34	156	149	--	<0.010	<0.100	0.030	0.030	0.47	0.110	0.080

09431500 GILA RIVER NEAR REDROCK, NM -- Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	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)	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)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
NOV 04...	10	1	19	<0.5	1	<1	<3	3	14	<5	23
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	60	2	18	<0.5	1	<1	<3	5	20	<5	19
JUL 20...	60	3	32	<0.5	<1	<1	<3	9	30	<5	11
AUG 23...	20	1	12	<0.5	<1	<1	<3	<1	24	<5	8

DATE	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)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)
NOV 04...	4	<0.1	<10	1	<1	<1.0	160	<6	7	1.4	<0.4
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	2	0.1	<10	3	<1	<1.0	97	<6	4	--	--
JUL 20...	2	<0.1	<10	2	<1	<1.0	100	<6	12	0.6	89
AUG 23...	5	--	<10	<1	<1	1.0	94	7	5	--	--

DATE	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 04...	2.5	1.6	1.8	1.6	0.03	1.5	41	9.2	90	58	24
JAN 06...	--	--	--	--	--	--	114	37	67	K89	76
MAR 22...	--	--	--	--	--	--	52	22	37	K3	110
MAY 03...	--	--	--	--	--	--	496	295	--	K11	22
JUL 20...	3.4	58	2.6	52	0.03	0.24	1720	650	--	--	4500
AUG 23...	--	--	--	--	--	--	2870	9920	--	--	--

09442680 SAN FRANCISCO RIVER NEAR RESERVE, NM

LOCATION.--Lat 33°44'12", long 108°46'14", in NE¼NW¼SE¼ sec.35, T.6 S., R.19 W., Catron County, Hydrologic Unit 15040004, on left bank 1,300 ft downstream from Rainbow Bridge Canyon, 1.7 mi northwest of Reserve, and at mile 563.1.

DRAINAGE AREA.--350 mi², approximately.

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

REVISED RECORDS.--WDR NM-78-1: 1977. WRD Nm-84-1: 1973, 1979-80.

GAGE.--Water-stage recorder. Elevation of gage is 5,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 15, 1972 at site 1,800 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Jan. 5 to Feb. 9 and Sept. 16-30. Records good except for estimated daily discharges, which are 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.

AVERAGE DISCHARGE.--29 years, 29.1 ft³/s, 21,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,830 ft³/s, Oct. 1, 1983, gage height, 11.71 ft recorded, 11.3 ft, from outside floodmarks, from rating curve extended above 1,400 ft³/s on basis of slope-area measurement of peak flow; minimum, 1.0 ft³/s, Mar. 16, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 15 ft, as determined in 1962 from old floodmarks. Major floods of Nov. 26, 1905 and Dec. 3, 1906, exceeded 20,000 ft³/s at Alma (downstream). See WSP 1313.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
July 31	1530	827	*3.52	Aug. 10	1745	533	2.75
Aug. 4	1530	551	2.78	Aug. 31	1945	*1,070	3.39

Minimum discharge, 3.1 ft³/s, June 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	24	11	14	19	305	28	55	16	13	16	499
2	10	20	12	15	21	223	28	47	17	18	16	330
3	11	16	11	15	55	169	27	42	16	12	15	229
4	11	13	12	16	57	137	22	37	18	11	39	143
5	11	11	13	16	50	124	20	31	22	8.2	18	100
6	10	16	13	17	45	123	18	27	18	7.0	17	76
7	10	23	13	17	40	127	17	26	16	6.8	14	60
8	10	18	12	16	41	114	17	24	16	5.0	18	51
9	9.7	15	12	16	42	89	17	22	16	6.8	17	45
10	9.7	12	12	16	42	91	16	20	15	11	35	32
11	10	12	12	15	42	74	15	19	13	10	11	29
12	10	12	12	14	41	61	14	17	12	7.5	8.4	154
13	9.7	12	13	15	44	56	13	14	7.5	7.2	8.4	98
14	9.6	12	12	15	47	47	18	17	7.3	6.9	7.6	54
15	9.6	12	12	15	44	47	21	16	5.8	7.4	9.5	39
16	9.6	12	12	16	46	43	141	13	11	6.6	11	25
17	9.5	12	13	16	48	38	222	12	10	8.8	9.8	20
18	9.4	12	19	18	44	34	163	12	14	10	10	17
19	9.6	11	17	18	44	33	250	16	18	12	13	15
20	9.5	11	17	15	37	32	194	15	10	10	25	15
21	9.6	12	15	14	36	33	129	21	8.8	8.2	42	16
22	9.3	12	15	14	36	33	121	22	5.1	11	34	16
23	11	11	15	16	41	33	158	21	5.6	10	20	14
24	9.8	11	15	17	54	33	121	18	9.6	9.9	35	13
25	10	12	15	14	74	33	97	24	20	13	25	13
26	11	12	14	16	104	33	81	24	23	13	22	14
27	8.5	11	14	17	213	34	68	21	15	12	32	13
28	8.9	11	14	17	279	35	59	21	15	11	32	13
29	9.9	12	14	17	301	30	67	19	26	15	42	13
30	13	11	13	18	---	27	66	21	14	30	76	13
31	11	---	14	19	---	28	---	22	---	44	424	---
TOTAL	310.9	401	418	494	1987	2319	2228	716	420.7	362.3	1102.7	2169
MEAN	10.0	13.4	13.5	15.9	68.5	74.8	74.3	23.1	14.0	11.7	35.6	72.3
MAX	13	24	19	19	301	305	250	55	26	44	424	499
MIN	8.5	11	11	14	19	27	13	12	5.1	5.0	7.6	13
AC-FT	617	795	829	980	3940	4600	4420	1420	834	719	2190	4300
CAL YR 1987	TOTAL	18729.7		MEAN	51.3	MAX	474	MIN	4.4	AC-FT	37150	
WTR YR 1988	TOTAL	12928.6		MEAN	35.3	MAX	499	MIN	5.0	AC-FT	25640	

LOCATION.--Lat 33°53'29", long 108°30'54", in NE¼NW¼ sec.9, T.5 S., R.16 W., Catron County, Hydrologic Unit 15040004, on right bank 0.4 mi upstream from first diversion, 1.4 mi northeast of Aragon, and 8 mi upstream from Apache Creek.

PERIOD OF RECORD.--July 1966 to current year. 1955 to 1965 at site 0.6 mi upstream (drainage area, 89 mi²), annual maximum only.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 2. Records good except for estimated daily discharges, which are fair. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 660 ft³/s, Oct. 2, 1983, gage height, 3.90 ft in gage well, 4.23 ft from floodmarks, from rating curve extended above 80 ft³/s on basis of slope-area measurements at gage heights 3.13 ft and 3.90 ft; minimum, 1.1 ft³/s July 22, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 3	1630	28	1.96	Apr. 18	2115	*140	*2.63

Minimum discharge, 2.3 ft³/s, July 20-27, Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	3.4	3.3	3.1	3.2	4.4	3.3	3.7	3.0	3.1	2.6	7.9
2	3.2	3.4	3.3	3.1	3.3	3.5	3.2	3.6	3.0	2.7	2.6	5.7
3	3.1	3.4	3.3	3.2	10 3.3	3.3	3.2	3.6	3.0	2.7	2.5	4.3
4	3.1	3.4	3.3	3.2	4.1	3.3	3.2	3.5	3.1	2.6	2.6	3.1
5	3.0	3.4	3.3	3.2	3.3	3.2	3.2	3.5	3.1	2.7	2.7	3.0
6	3.0	3.4	3.2	3.4	3.2	3.4	3.2	3.4	3.0	2.7	2.8	2.9
7	3.0	3.4	3.2	3.2	3.2	3.3	3.2	3.4	3.0	2.6	2.6	3.0
8	3.0	3.4	3.2	3.2	3.0	3.1	3.2	3.4	3.0	2.6	2.5	3.0
9	3.0	3.4	3.2	3.2	3.0	3.2	3.2	3.4	2.9	2.7	2.5	3.0
10	3.1	3.4	3.2	3.2	3.1	3.0	3.3	3.4	2.9	2.6	2.3	2.9
11	3.1	3.4	3.2	3.2	3.0	2.9	3.3	3.4	2.9	2.6	2.5	3.0
12	3.0	3.4	3.3	3.2	3.0	2.8	3.3	3.4	2.8	2.5	2.6	3.8
13	2.9	3.3	3.4	3.2	3.0	2.9	3.3	3.3	2.7	2.4	2.5	10
14	3.0	3.4	3.3	3.2	3.0	3.1	3.6	3.3	2.7	2.4	2.5	3.4
15	2.9	3.4	3.2	3.3	3.0	3.2	3.4	3.3	2.9	2.4	2.6	3.1
16	2.8	3.3	3.3	3.2	3.0	3.2	4.8	3.3	2.8	2.5	2.6	3.1
17	2.9	3.3	3.4	3.2	3.0	3.2	3.9	3.3	2.8	2.4	2.6	3.0
18	3.2	3.3	3.5	3.3	2.9	3.2	30	3.3	2.8	2.4	2.7	3.0
19	3.2	3.3	3.4	3.2	3.0	3.2	34	3.3	2.8	2.4	2.7	2.9
20	3.0	3.3	3.3	3.2	2.9	3.2	32	3.3	2.7	2.3	2.7	2.9
21	2.9	3.3	3.3	3.2	3.0	3.2	20	3.2	2.7	2.3	2.7	3.1
22	2.9	3.3	3.3	3.2	2.9	3.2	8.6	3.2	2.7	2.3	3.0	3.1
23	3.0	3.3	3.3	3.2	3.0	3.3	5.6	3.2	2.8	2.3	2.8	3.0
24	3.0	3.3	3.4	3.2	3.0	3.3	4.6	3.2	2.8	2.3	2.8	3.0
25	3.0	3.3	3.3	3.2	2.9	3.3	4.0	3.2	2.8	2.3	2.7	3.0
26	3.0	3.3	3.2	3.2	3.0	3.3	3.8	3.2	2.9	2.3	2.6	3.0
27	3.0	3.3	3.2	3.2	4.4	3.3	3.9	3.2	2.8	2.3	3.0	3.0
28	3.0	3.3	3.1	3.2	6.3	3.2	3.9	3.1	2.8	2.4	2.8	3.0
29	3.1	3.3	3.2	3.2	4.9	3.2	3.8	3.0	2.7	2.5	2.8	3.0
30	3.4	3.3	3.2	3.2	---	3.2	3.7	3.1	2.7	2.5	2.8	3.0
31	3.3	---	3.1	3.2	---	3.3	---	3.0	---	2.5	2.9	---
TOTAL	94.3	100.4	101.4	99.4	102.6	100.4	215.7	102.7	85.6	77.3	82.6	107.2
MEAN	3.04	3.35	3.27	3.21	3.54	3.24	7.19	3.31	2.85	2.49	2.66	3.57
MAX	3.4	3.4	3.5	3.4	10	4.4	34	3.7	3.1	3.1	3.0	10
MIN	2.8	3.3	3.1	3.1	2.9	2.8	3.2	3.0	2.7	2.3	2.3	2.9
AC-FT	187	199	201	197	204	199	428	204	170	153	164	213
CAL YR 1987	TOTAL	1635.8		MEAN	4.48	MAX	45	MIN	2.2	AC-FT	3240	
WTR YR 1988	TOTAL	1269.6		MEAN	3.47	MAX	34	MIN	2.3	AC-FT	2520	

GILA RIVER BASIN

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM

LOCATION.--Lat 33°14'48", long 108°52'47", in NE¼NW¼ sec.23, T.12 S., R.20 W., Catron County, Hydrologic Unit 15040004, on left bank 0.2 mi upstream from hot springs, 5 mi south of Glenwood, 6 mi downstream from Whitewater Creek, and at mile 511.5.

DRAINAGE AREA.--1,653 mi².

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1931, 1934, 1936-37, 1940-42, 1943-44(M), 1945-47. WSP 1283: Drainage area. WDR NM-78-1: 1977. WDR NM-79-1: 1973, 1975-77 (P).

GAGE.--Water-stage recorder. Elevation of gage is 4,560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Feb. 15, 1934, at site 4.5 mi upstream at datum 98.82 ft higher.

REMARKS.--Estimated daily discharges: Dec. 2-14 and Dec. 29 to Jan. 4. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 2,000 acres upstream from station. Gage height and rain gage satellite telemeter at station.

AVERAGE DISCHARGE.--61 years, 84.8 ft³/s, 61,440 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,100 ft³/s, Oct. 2, 1983, gage height, 18.15 ft recorded, 20.80 ft from outside floodmarks, from rating curve extended above 4,200 ft³/s on basis of slope-area measurements at gage heights 10.74 ft, 15.6 ft and 20.8 ft; minimum, 1.5 ft³/s Aug. 6, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred Jan. 19 and Oct. 14, 1916 when discharges of 60,000 ft³/s or greater were computed for station at Clifton, AZ. On Nov. 26, 1905, a peak of 25,000 ft³/s was measured (by float-area method) at station at Alma (about 12 mi upstream, drainage area, 1,560 mi²); a similar measurement of 21,000 ft³/s was made at the Alma station for peak of Dec. 3, 1906.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 10	2400	1,480	4.35	Sept. 12	1000	1,980	5.09
Sept. 2	0830	*2,480	*5.47				

Minimum discharge, 23 ft³/s, Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	79	63	56	62	426	86	184	39	40	83	1230
2	37	83	64	57	65	408	85	178	37	36	134	1630
3	33	74	64	58	170	327	80	160	38	35	131	1150
4	31	65	62	57	272	273	77	143	35	35	155	727
5	28	61	63	59	302	239	76	133	36	33	215	467
6	29	58	62	59	242	218	73	125	35	34	272	337
7	35	58	64	59	194	209	72	120	35	33	263	258
8	33	58	65	59	162	209	71	114	33	42	236	213
9	33	62	63	61	149	200	64	109	31	36	218	184
10	32	62	63	60	141	183	59	101	32	35	306	157
11	33	60	62	59	140	172	59	97	32	41	395	142
12	33	59	64	59	137	152	64	96	33	41	200	866
13	33	59	62	60	134	142	66	98	34	39	160	708
14	38	60	61	59	133	138	82	98	34	39	162	358
15	39	61	60	59	135	128	91	98	31	35	200	250
16	40	61	64	59	135	125	136	97	31	34	245	208
17	41	61	69	61	134	121	309	97	29	33	310	182
18	42	66	73	66	134	115	376	98	26	33	269	162
19	44	67	71	66	133	113	431	98	28	41	336	151
20	47	70	70	67	133	109	549	91	30	43	379	146
21	50	67	67	61	125	104	445	69	30	43	406	177
22	54	69	66	59	121	100	363	60	29	39	309	249
23	58	68	65	59	121	93	316	60	25	42	423	194
24	59	69	66	61	121	85	294	59	27	40	502	161
25	58	66	67	61	124	82	259	55	26	39	405	144
26	54	68	69	61	143	81	232	52	26	36	329	133
27	57	68	62	61	204	85	206	51	30	34	264	125
28	64	66	59	61	380	82	188	47	37	35	288	121
29	56	63	58	61	415	83	191	42	41	36	393	114
30	60	65	57	62	---	85	189	41	40	126	596	107
31	61	---	57	62	---	85	---	41	---	82	851	---
TOTAL	1350	1953	1982	1869	4861	4972	5589	2912	970	1290	9435	11051
MEAN	43.5	65.1	63.9	60.3	168	160	186	93.9	32.3	41.6	304	368
MAX	64	83	73	67	415	426	549	184	41	126	851	1630
MIN	28	58	57	56	62	81	59	41	25	33	83	107
AC-FT	2680	3870	3930	3710	9640	9860	11090	5780	1920	2560	18710	21920
CAL YR 1987 TOTAL		49842		MEAN	137	MAX	762	MIN	20	AC-FT	98860	
WTR YR 1988 TOTAL		48234		MEAN	132	MAX	1630	MIN	25	AC-FT	95670	

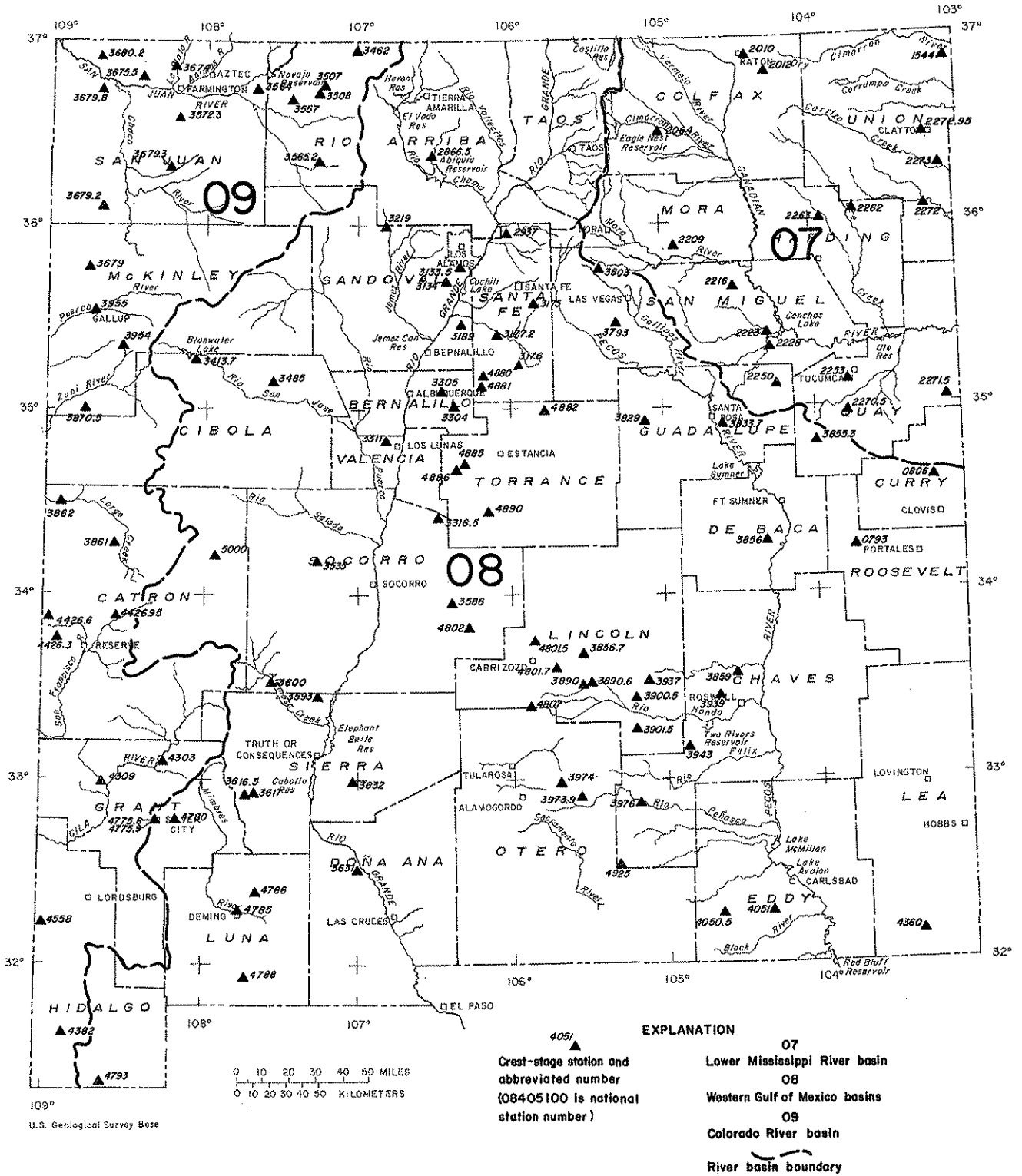


Figure 7.--Location of partial-record stations.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in floodflow analyses. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in the second table.

Crest-stage partial-record stations

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device that will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each year is given. Information on some lower floods may have been obtained, and discharge measurements made for purposes of establishing the stage-discharge relation, but these are not published herein. The year given in the period of record column represents the first year of a period extending through the current year unless otherwise noted. For some stations, publication of discharge is delayed pending definition of stage-discharge relationship. Published maximums are for water years.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Annual Maximum	
						Gage height (ft)	Discharge (ft ³ /s)
ARKANSAS RIVER BASIN							
07154400	Carrizozo Creek near Kenton, OK.	Lat 36°52'55", long 103°01'05", Union County, Hydrologic Unit 11040001, under bridge on New Mexico State Highway 18, 4 mi southwest of Kenton, OK.	111	1953-	07-05-88	4.27	1,260
07201000	Raton Creek at Raton.	Lat 36°55'38", long 104°26'22", Colfax County, Hydrologic Unit 11080001, 60 ft upstream from bridge on State Highway 72 at Raton.	14.4	1953-	03-12-88	1.45	297
07201200	Chicorica Creek tributary near Raton.	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.	5.18	1971-	08-10-88	4.92	47
07206400	Clear Creek near Ute Park.	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.	7.44	1962-67* 1968-	06-26-88	1.76	19
07220900	Dog Creek near Shoemaker.	Lat 36°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.	18.4	1954-	07-09-88	8.82	1,160
07221600	Lagartija Creek tributary near Sanchez.	Lat 35°39'21", long 104°24'57", San Miguel County, Hydrologic Unit 11080003, at bridge on State Highway 65, 0.9 mi northeast of Sanchez.	1.19	1961-	- -88	---	(k)
07222300	Trementina Creek at Trementina.	Lat 35°29'28", long 104°24'59", San Miguel County, Hydrologic Unit 11080005, at bridge on State Highway 65, at Trementina.	63.9	1959-	06-14-88	6.04	1,750
07222800	Garita Creek tributary near Variadero.	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.	23.0	1971-	09-14-88	10.61	1,670

Annual maximum discharge at crest-stage partial-record stations

						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (ft)	Discharge (ft ³ /s)
ARKANSAS RIVER BASIN - Continued							
07225000	Pajarito Creek at Newkirk.	Lat 35°04'20", long 104°14'50", Guadalupe County, Hydrologic Unit 11080006, downstream side of bridge on old U.S. Highway 66, 1 mi east of Newkirk.	55.0	1954-	07-07-88	3.08	648
07225300	Bluewater Creek near Tucumcari.	Lat 35°08'31", long 103°47'32", Quay County, Hydrologic Unit 11080006, in Tucumcari Metropolitan Park, 1,600 ft north of the park's southern boundary, and 4.8 mi southwest of Tucumcari.	15.2	1971-	09-14-88	8.14	659
07226200	Bueyeros Creek at Bueyeros.	Lat 35°58'10", long 103°41'05", in E $\frac{1}{2}$ sec.7, T.20 N., R.31 E., Harding County, Hydrologic Unit 11080007, on right upstream wingwall of culvert on State Road 102 at Bueyeros.	33.4	1957-	09-13-88	7.12	(+)
07226300	Carrizo Creek near Roy.	Lat 36°02'58", long 103°57'48", Harding County, Hydrologic Unit 11080007, 800 ft downstream from State Highway 120, and 15 mi northeast of Roy.	a68	1954-	06-27-88	6.07	1,160
07227050	Plaza Larga Creek tributary near Ragland.	Lat 34°48'29", long 103°45'35", Quay County, Hydrologic Unit 11080008, at culvert on State Highway 18, 1.2 mi northwest of Ragland.	0.36	1952-	06-14-88	8.79	468
07227150	Arroyo del Puerto near Endee.	Lat 35°03'32", long 103°06'04", Quay County, Hydrologic Unit 11090101, at bridge on State Highway 93, 5.4 mi south of Endee.	a25	1961-	06-13-88	7.62	900
07227200	Tramperos Creek near Stead.	Lat 36°04'15", long 103°12'10", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.10, T.21 N., R.35 E., Union County, Hydrologic Unit 11090102, at bridge on State Highway 18, 2.1 mi south of Stead, and 26 mi south of Clayton.	a556	1966-73* 1974-	09-13-88	5.74	469
07227295	Sand Draw tributary near Clayton.	Lat 36°23'20", long 103°19'05", Union County, Hydrologic Unit 11090103, upstream from culvert on State Highway 56, 8 mi southwest of Clayton.	1.25	1952-	09-13-88	0.90	40
07227300	Sand Draw near Clayton.	Lat 36°20'30", long 103°11'30", Union County, Hydrologic Unit 11090103, on downstream side of bridge on State Highway 18, 7.5 mi south of Clayton.	a42	1953-	- -88	---	(k)
BRAZOS RIVER BASIN							
08079300	Blackwater Draw tributary near Floyd.	Lat 34°14'52", long 103°44'51", Roosevelt County, Hydrologic Unit 12050001, 0.5 mi downstream from section road, and 10 mi west of Floyd.	a10	1963-	- -88	---	(k)
08080600	Running Water Draw near Clovis.	Lat 34°31'55", long 103°12'05", Curry County, Hydrologic Unit 12050005, 0.25 mi upstream from State Highway 18, and 8 mi north of Clovis.	109	1953-56 1957-64* 1965-	05-30-88	10.54	7,660

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Annual Maximum	
						Gage height (ft)	Discharge (ft ³ /s)
RIO GRANDE BASIN							
08286650	Canjilon Creek above Abiquiu Reservoir.	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.	144	1965-	08-05-88	3.90	j382
08293700	Arroyo Seco tributary near Pojoaque.	Lat 35°56'33", long 106°01'12", Santa Fe County, Hydrologic Unit 13020101, upstream from culvert on U.S. Highway 64-84-285, 3.5 mi north of Pojoaque.	0.72	1971-	09-13-88	7.81	230
08313350	Rito de los Frijoles in Bandelier National Monument.	Lat 35°46'35", long 106°16'06", Sandoval County, Hydrologic Unit 13020201, in Bandelier National Monument, downstream from Monument headquarters, 6.5 mi south of Los Alamos, and 18.5 mi northwest of Santa Fe.	18.1	1963-69* 1977-82* 1983-	09-10-88	2.56	23
08313400	Bland Canyon near Cochiti Pueblo.	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.	7.57	1962-	08-22-88	2.65	79
08317500	Galisteo Creek at Canoncito.	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.	11.3	1955-56 1959-	08-18-88	2.92	748
08317600	San Cristobal Arroyo near Galisteo.	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.	116	1955-	08-10-88	7.00	1,930
08317720	Canada de la Cueva near Galisteo.	Lat 35°26'13", long 106°00'45", Santa Fe County, Hydrologic Unit 13020201, 6.4 mi east of Cerrillos, and 4.8 mi northwest of Galisteo.	1.81	1970-	06-29-88	4.06	386
08318900	San Pedro Creek near Golden.	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.	45.2	1953-	07-29-88	2.01	1,400
08321900	Rio de las Vacas near Senorita.	Lat 35°59'35", long 106°47'45", Sandoval County, Hydrologic Unit 13020204, at bridge on side road, 0.1 mi south of State Highway 126, and 6.5 mi east of Senorita.	26.8	1957-	08-28-88	3.14	147
08330400	Juan Toro Canyon near Miera.	Lat 35°00'57", long 106°20'14", Bernalillo County, Hydrologic Unit 13020203, 150 ft east of State Highway 14, 1 mi southeast of Cedro, and 4.5 mi northwest of Miera.	1.57	1959-	07-06-88	1.23	36

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Annual Maximum	
						Gage height (ft)	Discharge (ft ³ /s)
RIO GRANDE BASIN - Continued							
08330500	Tijeras Arroyo at Albuquerque.	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.	75.3	1943-48* 1958-	07-09-88	3.31	1,830
08331100	Belen Highline Canal tributary near Los Lunas.	Lat 34°49'20", long 106°49'10", Valencia County, Hydrologic Unit 13020203, upstream from culvert on Highway 6, 5.0 mi west of Los Lunas.	0.16	1952-53 1955-	09-14-88	4.51	156
08331650	Canada Montoso near Scholle.	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.	a35	1961-	06-11-88	2.04	295
08341370	Pine Canyon near Thoreau.	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.	6.09	1969-	08-01-88	2.24	46
08348500	Encinal Creek near Casa Blanca.	Lat 35°08'35", long 107°27'55", Valencia County, Hydrologic Unit 13020207, 1.8 mi north of village of Encinal, and 6.8 mi north of Casa Blanca.	6.19	1937-39* 1959-	08-05-88	5.86	1,650
08353500	La Jencia Creek near Magdalena.	Lat 34°09'45", long 107°12'35", Socorro County, Hydrologic Unit 13020209, 3.5 mi northeast of Magdalena.	195	1957-	08-27-88	8.04	3,980
08358600	Chupadera Wash tributary at Bingham.	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.	1.29	1961-	06-11-88	2.25	195
08359300	San Jose Arroyo near Monticello.	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 downstream from culvert on old U.S. Highway 85, and 13 mi northeast of Monticello.	26.9	1959-	08-28-88	6.09	(+)
08360000	Alamosa Creek near Monticello.	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.	403	1931-42* 1956-58 1958-69* 1973-	06-10-88	5.62	1,550
08361650	Percha Creek near Kingston.	Lat 32°55'05", long 107°38'55", Sierra County, Hydrologic Unit 13030101, at bridge on State Highway 90, 3.3 mi east of Kingston.	21.5	1953-	07-07-88	3.27	350
08361700	Percha Creek near Hillsboro.	Lat 32°54'55", long 107°36'05", Sierra County, Hydrologic Unit 13030101, 150 ft south of State Highway 90, and 2 mi west of Hillsboro.	35.4	1957-78 1980-	07-07-88	3.33	540
08363100	Rio Grande tributary near Radium Springs.	Lat 32°30'05", long 106°57'05", Dona Ana County, Hydrologic Unit 13030102, upstream from culvert on U.S. Highway 85, 120 ft upstream from mouth, and 1.4 mi west of Radium Springs.	0.40	1955-	08-16-88	5.31	133

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Annual Maximum	
						Gage height (ft)	Discharge (ft ³ /s)
RIO GRANDE BASIN - Continued							
08363200	Aleman Draw at Aleman.	Lat 33°00'00", long 107°00'20", Sierra County, Hydrologic Unit 13030103, on Santa Fe Railroad bridge, 140 ft upstream from dip on Engle-Rincon road, and 0.26 mi west of Aleman.	25.5	1959-	08-28-88	7.00	2,150
08379300	Tecolote Creek at Tecolote.	Lat 35°27'20", long 105°16'55", San Miguel County, Hydrologic Unit 13060001, on bridge on old U.S. Highway 85 at Tecolote.	122	1954-	08-04-88	5.71	656
08380300	Sandoval Canyon at Gallinas.	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.	7.6	1957-1961-	07-18-88	1.01	18
08382900	Pecos River tributary near Pintada.	Lat 34°58'06", long 105°05'38", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, 1,500 ft south of Interstate Highway 40, and 6.8 mi north of Pintada.	0.16	1961-	06-17-88	1.32	72
08383370	Pecos River tributary near Puerto de Luna.	Lat 34°52'35", long 104°38'16", Guadalupe County, Hydrologic Unit 13060001, 25 ft upstream from culvert on State Highway 91, and 3.1 mi north of Puerto de Luna.	0.37	1961-	09-14-88	7.83	147
08385530	Alamosa Creek tributary near Jordan.	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.	9.71	1962-	08-23-88	3.14	128
08385600	Yeso Creek near Fort Sumner.	Lat 34°16'32", long 104°17'28", De Baca County, Hydrologic Unit 13060003, at abandoned bridge 1 mi downstream from State Highway 20, and 14.5 mi south of Fort Sumner.	242	1937-	07-06-88	0.94	435
08385670	Aragon Creek tributary near Encinoso.	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 48, and 4.3 mi west of Encinoso.	6.07	1961-	08-02-88	4.47	945
08385900	Salt Creek tributary near Roswell.	Lat 33°32'22", long 104°31'08", Chavez County, Hydrologic Unit 13060005, at culvert on U.S. Highway 285, 4.7 mi north of junction of U.S. Highways 70 and 285, and 10 mi north of Roswell.	0.04	1952-	- -88	0.39	<10
08389000	Rio Bonito near Fort Stanton.	Lat 33°31'05", long 105°29'10", Lincoln County, Hydrologic Unit 13060008, at bridge on U.S. Highway 380, 2.5 mi northeast of Fort Stanton.	85	1955-	07-20-88	5.84	1,340
08389060	Rio Bonito tributary near Fort Stanton.	Lat 33°31'15", long 105°28'05", Lincoln County, Hydrologic Unit 13060008, at culvert on U.S. Highway 380, 150 ft upstream from mouth, and 3.5 mi northeast of Fort Stanton.	0.72	1955-	- -88	---	(k)

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Annual Maximum	
						Gage height (ft)	Discharge (ft ³ /s)
RIO GRANDE BASIN - Continued							
08390050	Rio Hondo tributary at Tinnie.	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.	0.23	1971-	08-05-88	4.93	(+)
08390150	Gallo Canyon near Picacho.	Lat 33°17'23", long 105°10'49", Lincoln County, Hydrologic Unit 13060009, 500 ft east of road, 5 mi south of Arabela.	1.32	1962-	08-05-88	4.09	90
08393700	Pancho Canyon near Arabela.	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.	16.7	1962-	08-06-88	2.44	(+)
08393900	Eight Mile Draw near Roswell.	Lat 33°24'05", long 104°37'54", Chavez County, Hydrologic Unit 13060008, 6.5 mi west of Roswell.	397	1941-1952-	- -88	---	(k)
08394300	Twin Butte Canyon tributary near Roswell.	Lat 33°10'34", long 104°51'30", Chavez County, Hydrologic Unit 13060009, about 0.1 mi upstream from mouth, and about 22 mi southwest of Roswell.	5.01	1968-	07-07-88	4.64	860
08397390	Curtis Canyon near Mayhill.	Lat 32°51'52", long 105°31'05", Otero County, Hydrologic Unit 13060010, 0.26 mi upstream from SCS dam, 0.4 mi west of State Highway 130, and 2.5 mi southwest of Mayhill.	10.3	1959-	- -88	0.50	<20
08397400	Hyatt Canyon near Cloudcroft.	Lat 32°56'06", long 105°37'37", Otero County, Hydrologic Unit 13060010, 0.5 mi south of State Highway 83, and 7 mi east of Cloudcroft.	3.08	1953-	07-01-88	1.55	(+)
08397600	Rio Penasco near Dunken.	Lat 33°52'55", long 105°10'40", Chavez County, Hydrologic Unit 13060010, on bridge on State Highway 24, 5 mi north of Dunken.	583	1952-56 1956-62* 1963-	09-20-88	12.54	4,150
08405050	Last Chance Canyon tributary near Carlsbad Caverns.	Lat 32°17'30", long 104°36'20", Eddy County, Hydrologic Unit 13060011, upstream from culvert on State Highway 137, 0.1 mi north of road to Sitting Bull Falls, and 12.5 mi northwest of Carlsbad Caverns.	0.2	1959-	08-04-88	5.65	425
08405100	Mosley Canyon near White City.	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 White City.	14.6	1959-	08-04-88	6.95	2,950
08436000	Antelope Draw near Jal.	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.	a20	1963-	07-08-88	1.22	(+)
MIMBRES BASIN							
08477580	Silva Creek at Silver City.	Lat 32°46'41", long 108°16'41", Grant County, Hydrologic Unit 13030202, 190 ft upstream from Twelfth Street bridge in Silver City.	10.0	1958-	09-12-88	2.62	420

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Annual Maximum	
						Gage height (ft)	Discharge (ft ³ /s)
MIMBRES BASIN - Continued							
08477590	Pinos Altos Creek at Silver City.	Lat 32°46'52", long 108°16'04", Grant County, Hydrologic Unit 13030202, 2 blocks downstream from U.S. Highway 180 in Silver City.	4.63	1958-	09-27-88	2.12	660
08478000	Cameron Creek at Central.	Lat 32°47'38", long 108°08'58", Grant County, Hydrologic Unit 13030202, 0.5 mi upstream from culvert on U.S. Highway 180, at north edge of Central.	18.8	1954-	07-20-88	6.11	1,900
08478500	Mimbres River at Deming.	Lat 32°17'00", long 107°45'35", Luna County, Hydrologic Unit 13030202, at bridge on U.S. Highway 180, at north end of Deming.	1,370	1954-79 1983-	08-01-88	10.15	1,870
08478600	Mimbres basin tributary near Florida.	Lat 32°21'30", long 107°37'30", Luna County, Hydrologic Unit 13030202, upstream from culvert on State Highway 26, and 5 mi southwest of Florida.	0.55	1959-	08-17-88	3.67	320
08478800	Seventysix Draw tributary near Waterloo.	Lat 31°56'34", long 107°44'38", Luna County, Hydrologic Unit 13030202, upstream from culvert on State Road 11, 3.9 mi southeast of Waterloo, and 7.9 mi north of Columbus.	0.2	1967-	08-17-88	4.77	110
PLAYAS BASIN							
08479300	Deer Creek tributary near Antelope Wells.	Lat 31°23'00", long 108°42'15", Hidalgo County, Hydrologic Unit 13030201, 0.1 mi downstream from dip on State Highway 81, 2.5 mi east of San Luis Pass, and 12 mi west of Antelope Wells.	4.3	1959-	07-28-88	0.85	10
TULAROSA BASIN							
08480150	White Oaks Canyon near Carrizozo.	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.	31	1959- 1961-	08-06-88	2.22	<460
08480170	Nogal Creek tributary near Nogal.	Lat 33°34'54", long 105°41'10", Lincoln County, Hydrologic Unit 13050003, upstream from culvert on U.S. Highway 380, about 2.0 road mi west of Indian Divide, 7 mi northwest of Capitan, and 2 mi north of Nogal.	1.94	1968-	08-06-88	2.68	<10
08480200	Taylor Canyon tributary near Bingham.	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.	2.66	1961-	10-04-88	1.37	(+)
08480700	Indian Creek near Three Rivers.	Lat 33°22'10", long 105°53'25", Otero County, Hydrologic Unit 13050003, 150 ft upstream from diversion dam, and 12 mi east of Three Rivers.	6.8	1956-58* 1959-	08-06-88	5.83	664
ESTANCIA BASIN							
08488000	Estancia Valley tributary at Cedar Grove.	Lat 35°10'05", long 106°10'08", Santa Fe County, Hydrologic Unit 13050001, 50 ft upstream from culvert on State Highway 344, 0.1 mi south of Cedar Grove.	1.21	1955 1961-	08-10-88	7.36	(+)

Annual maximum discharge at crest-stage partial-record stations

						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (ft)	Discharge (ft ³ /s)
ESTANCIA BASIN - Continued							
08488100	Juan Tomas Canyon near Edgewood.	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.	a20	1962-	- -88	---	(k)
08488200	Osita Draw near Clines Corners.	Lat 35°00'18", long 105°48'00", Torrance County, Hydrologic Unit 13050001, 100 ft upstream from culvert on Interstate Highway 40, 7.5 mi west of Clines Corners.	a10	1961-	07-06-88	2.22	200
08488500	Canon de Torreon at Torreon.	Lat 34°43'20", long 106°17'50", Torrance County, Hydrologic Unit 13050001, at culvert on State Highway 14, in Torreon.	18.2	1954-	06-11-88	1.26	41
08488600	Arroyo del Cuervo near Torreon.	Lat 34°41'35", long 106°18'27", Torrance County, Hydrologic Unit 13050001, in Town of Torreon Grant, about 0.3 mi upstream from culvert on State Highway 14, and 2 mi south of Torreon.	11.8	1969-	09-16-88	3.36	520
08489000	Big Draw near Mountainair.	Lat 34°18'45", long 106°11'35", Torrance County, Hydrologic Unit 13050001, 0.25 mi upstream from culvert on State Highway 14, and 8.4 mi southeast of Mountainair.	4.06	1953-	06-11-88	4.88	270
SALT BASIN							
08492500	Fleming Draw near Pinon.	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.	16.6	1959-	07-07-88	6.10	1,950
SAN AUGUSTIN PLAINS BASIN							
08500000	Swingle Canyon near Datil.	Lat 34°11'17", long 107°53'55", Catron County, Hydrologic Unit 13020208, 0.3 mi upstream from U.S. Highway 60, and 4.3 mi northwest of Datil.	6.35	1970-72 1976-	07-19-88	3.71	1
SAN JUAN RIVER BASIN							
09346200	Rio Amargo at Dulce.	Lat 36°56'00", long 107°00'00", Rio Arriba County, Hydrologic Unit 14080101, under bridge on U.S. Highway 64, at Dulce.	168	1956-	08-17-88	6.16	1,050
09350700	Ruben Canyon near Gobernador.	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.	5.06	1970-	08-17-88	5.89	(+)
09350800	Vaqueros Canyon near Gobernador.	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.	60.5	1956-	08-17-88	9.10	1,900

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations

							Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (ft)	Discharge (ft ³ /s)	
SAN JUAN RIVER BASIN - Continued								
09355700	Gobernador Canyon near Gobernador.	Lat 36°41'05", long 107°25'10", San Juan County, Hydrologic Unit 14080101, 0.2 mi south of U.S. Highway 64, and 4 mi southwest of Gobernador.	19.8	1956-	08-08-88	5.06	540	
09356400	Manzanares Canyon near Turley.	Lat 36°44'15", long 107°42'15", San Juan County, Hydrologic Unit 14080101, 600 ft upstream from culvert on U.S. Highway 64, and 4.2 mi east of Turley.	3.20	1956-	08-08-88	3.36	750	
09356520	Burro Canyon near Lindrith.	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.	9.11	1970-	08-05-88	6.89	260	
09357230	West Draw near Farmington.	Lat 36°35'24", long 108°11'03", San Juan County, Hydrologic Unit 14080101, 15 ft upstream from culvert on State Highway 371, 11 mi south of Farmington.	0.32	1975-	08-25-88	3.74	44	
09367400	La Plata River tributary near Farmington.	Lat 36°47'10", long 108°13'31", San Juan County, Hydrologic Unit 14080105, about 700 ft upstream from culvert on State Highway 170, and 4.1 mi northwest of Farmington.	1.03	1970-	05-18-88	2.15	23	
09367550	Stevens Arroyo near Kirtland.	Lat 36°45'56", long 108°21'59", San Juan County, Hydrologic Unit 14080105, upstream from gravel road to Young's Lake, 0.6 mi north of El Paso Natural Gas, San Juan Plant, and 2.3 mi north of Kirtland.	4.52	1970-	02-03-88	12.93	420	
09367900	Black Springs Wash near Mexican Springs.	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.	7.05	1954-78 1979-82* 1983-	09-21-88	3.74	1,050	
09367920	Coyote Wash tributary near Naschitti.	Lat 36°05'56", long 108°41'48", San Juan County, Hydrologic Unit 14080106, on bridge on U.S. Highway 666, 2.4 mi north of Naschitti, and 39 mi north of Gallup.	12.0	1967-	08-27-88	3.16	(+)	
09367930	Hunter Wash at Bisti Trading Post.	Lat 36°16'37", long 108°15'12", San Juan County, Hydrologic Unit 14080106, on right bank upstream from road crossing at Bisti Trading Post.	45.6	1975-82* 1983-	06-27-88	5.86	1,360	
09367980	Rattlesnake Arroyo near Shiprock.	Lat 36°46'14", long 108°43'32", San Juan County, Hydrologic Unit 14080105, upstream from bridge on State Highway 504, 0.8 mi west of Shiprock.	---	1980-	02-02-88	2.50	90	
09368020	Malpais Arroyo near Shiprock.	Lat 36°55'33", long 108°43'26", San Juan County, Hydrologic Unit 14080105, upstream from bridge on U.S. Highway 666, 8.3 mi north of Shiprock.	---	1980-	08-06-88	1.87	190	
LITTLE COLORADO RIVER BASIN								
09386100	Largo Creek near Quemado.	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.	151	1954-	08-30-88	3.36	710	

Annual maximum discharge at crest-stage partial-record stations

						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (ft)	Discharge (ft ³ /s)
LITTLE COLORADO RIVER BASIN - Continued							
09386200	Carrizo Wash near Salt Lake.	Lat 34°30'39", long 109°01'35", Catron County, Hydrologic Unit 15020003, on left downstream wingwall of bridge, 1.3 mi east of New Mexico-Arizona State line, and 15 mi west of Salt Lake.	af560	1957-	08-30-88	3.71	1,220
09387050	Galestena Creek tributary near Black Rock.	Lat 34°58'45", long 108°40'00", McKinley County, Hydrologic Unit 15020004, 100 ft downstream from bridge on State Highway 32, and 10.5 mi southeast of Black Rock.	a19	1957-	08-31-88	1.34	34
09395400	Milk Ranch Canyon near Fort Wingate.	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.	14.0	1949-	06-28-88	1.52	500
09395500	Puerco River at Gallup.	Lat 35°31'49", long 108°44'23", McKinley County, Hydrologic Unit 15020006, near center of span on downstream side of Third St. bridge in Gallup.	558	1940-46* 1957-77 1977-82* 1983-	08-27-88	5.70	1,100
GILA RIVER BASIN							
09430300	Copperas Canyon near Pinos Altos.	Lat 33°04'42", long 108°12'14", Grant County, Hydrologic Unit 15040001, on east side of State Highway 15, and 15 mi north of Pinos Altos.	3.95	1963-	08-03-88	2.31	87
09430900	Duck Creek at Cliff.	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.	a228	1957-	08-16-88	7.54	4,150
09438200	Animas Creek near Cloverdale.	Lat 31°34'15", long 108°52'30", Hidalgo County, Hydrologic Unit 15040003, near head of small box canyon, 0.1 mi west of State Highway 338, and 11 mi north of Cloverdale.	157	1959-	09-01-88	2.39	35
09442630	Mail Hollow near Luna.	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.	4.20	1970-	09-12-88	1.74	9
09442660	Trout Creek at Luna.	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.	31.9	1954-	09-12-88	2.89	600
09442695	Negro Canyon at Aragon.	Lat 33°52'47", long 108°33'08", Catron County, Hydrologic Unit 15040004, upstream from culvert on State Highway 12, at west edge of Aragon.	9.62	1958-	04-18-88	2.14	340

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station Name	Location	Drainage area (mi ²)	Period of record	Date	<u>Annual Maximum</u>	
						Gage height (ft)	Discharge (ft ³ /s)

GILA RIVER BASIN - Continued

09455800	Steins Creek at Steins.	Lat 32°13'47", long 109°00'01", Hidalgo County, Hydrologic Unit 15040006, at culvert on Interstate Highway 10, 0.9 mi west of Steins.	1.26	1959-	- -88	---	(k)
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< 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.

Measurements of streamflow at points other than gaging stations are given in the following table.

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
RIO GRANDE BASIN						
Alamosa Creek 08360000	Rio Grande	Lat 33°34'09", long 107°35'33", in SE¼ sec.31, T.8 S., R.7 W., Socorro County, Hydrologic Unit 13020211, 0.9 mi downstream from Wildhorse Creek, and 15 mi northwest of Monticello.	403	1931-42 1958-71 1972-	11-24-87 04-19-88 08-04-88	6.11 6.35 6.20
Lea Lake Drain 08394018	Pecos River	Lat 33°18'56", long 104°19'56", in SW¼SE¼SW¼ sec.34, T.11 S., R.26 E., Chaves County, Hydrologic Unit 13060007, on downstream side of road crossing at Bottomless Lake State Park near Roswell.	---	1976-	10-21-87 01-12-88 04-12-88 07-08-88	4.57 5.33 4.66 4.45
Blue Springs 08405450	Black River	Lat 32°11'07", long 104°16'50", in SW¼NE¼SW¼ sec.27, T.24 S., R.26 E., Eddy County, Hydrologic Unit 13060011, upstream from all diversions, 5.5 mi east of White City.	---	1907 1919-20 1923 1935 1952-70 1974-	11-06-87 01-29-88 04-05-88 08-05-88	14.7 15.7 15.8 15.5
Castle Springs 08405490	Black River	Lat 32°11'59", long 104°15'13", in SW¼SW¼SW¼ 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 White City.	---	1975-	11-06-86 01-29-88 04-05-88 08-05-88	2.83 2.11 1.09 1.65
Scott Able Creek 08492910	Sacramento River	Lat 32°42'35", long 105°44'34", in SE¼NW¼SW¼ sec.29, T.18 S., R.12 E., Otero County, Hydrologic Unit 13050004, at mouth 7.0 mi southwest of Sunspot.	---	1985-	10-22-87 11-24-87 12-16-87 01-26-88 02-23-88 03-29-88 04-28-88 05-26-88 06-30-88 08-02-88 09-15-88	0.65 0.37 Dry <0.10 <0.10 0.32 0.50 0.44 0.22 0.46 6.48
LITTLE COLORADO RIVER BASIN						
Smith Canyon 09395384	Puerco River	Lat 35°27'10", long 108°22'48", in SE¼SW¼ sec.12, T.14 N., R.15 W., McKinley County, Hydrologic Unit 15020006, 70 ft upstream from culvert on Interstate Highway 40 and 21 mi east of Gallup.	---	1987-	03-22-88	0.20
GILA RIVER BASIN						
Mangas Creek 09431100	Gila River	Lat 32°50'48", long 108°30'57", in NW¼NE¼ sec.8, T.17 S., R.16 W., Grant County, Hydrologic Unit 15040002, 0.4 mi northwest of Mangas Springs.	177	1970-	05-02-88 08-24-88	2.88 4.68

Rio Grande Seepage Investigation

REACH.--The seepage investigation was conducted along a 62.4 mile reach from the Rio Grande below Leasburg Dam near Radium Springs, New Mexico to the Rio Grande at El Paso, Texas (08364000). The river has been channelized through much of this reach; gradient is quite flat. About 71,700 acres are irrigated in the Mesilla Valley between Leasburg Dam and El Paso with ground-water withdrawals used to supplement the surface water supply.

PREVIOUS INVESTIGATIONS.--A seepage investigation of the reach between the gaging station "below Caballo Dam" (08362500) and a site 0.3 mi upstream from the gaging station "at El Paso" (08364000) was conducted by the U.S. Geological Survey on February 12-13, 1974.

DATE.--January 5-6, 1988.

WEATHER.--Weather was favorable for the seepage investigation; there was no measurable precipitation 10 days prior to the investigation. Light precipitation occurred overnight during the investigation (0.11 inch at Las Cruces, New Mexico) with no significant accumulation. Precipitation did not affect streamflow conditions.

STREAMFLOW.--The seepage investigation was conducted during a period of constant base flow. Discharge measurements indicate a net seepage loss of 26.1 cubic feet per second from river mile 1,312.3 to river mile 1,249.9. Indicated gains and losses throughout the reach are shown in table 1. Tributary flow recorded as inflow is considered a contribution and not a gain; no outflow (diversions) occurred during the investigation. Evaporation from the water surface of the river in January is considered negligible.

REMARKS.--The seepage investigation is rated good based upon steady streamflow conditions and discharge measurement notes. Indicated gains or losses may be significantly in error as affected by small inaccuracies in open-channel discharge measurements.

River mile	Stream	Location	Time	Water Temp (°C)	Specific Conduc- tance (US/CM)	Discharge in ft ³ /s		
						Main Stream	Drain	Gain or Loss
January 5, 1988								
1,312.3	Rio Grande	Below Leasburg Dam near Radium Springs, NM Lat 32°28'41", long 106°55'10"	0900	6.0	1,100	95.1		--
1,310.2	do.	Near Leasburg, NM Lat 32°27'21", long 106°54'08"	1025	7.0	1,100	95.5		+0.4
*1,307.6	Selden Drain	Near Leasburg, NM Lat 32°25'38", long 106°52'50"	1125	7.0	1,450		1/ 0.3	--
1,306.3	Rio Grande	Near Hill, NM Lat 32°25'05", long 106°52'01"	1200	8.0	1,250	98.9		+3.1
1,302.7	do.	At Shalem Bridge near Dona Ana, NM Lat 32°22'34", long 106°51'16"	1305	8.5	1,300	105		+6.1
*1,301.2	Wasteway No. 5	Near Dona Ana, NM Lat 32°22'14", long 106°50'14"	1350	11.0	1,850		1/ 0.1	--
1,298.8	Rio Grande	Near Picacho, NM Lat 32°20'18", long 106°50'09"	0900	5.5	1,300	102		-3.1
1,295.6	do.	Below Picacho Bridge near Las Cruces, NM Lat 32°17'45", long 106°49'25"	1030	7.0	1,300	102		0
*1,295.4	Wastewater Inflow	City of Las Cruces, NM Lat 32°17'35", long 106°49'26"	1130	16.0	1,100		2/ 9.6	--
1,293.1	Rio Grande	At NM-359 Bridge near Mesilla, NM Lat 32°15'49", long 106°49'29"	1145	8.0	1,300	113		+1.4
*1,291.8	Picacho Drain	Above Mesilla Dam Lat 32°14'34", long 106°48'56"	1300	9.0	1,500		3.5	--
1,291.7	Rio Grande	Below Picacho Drain Lat 32°14'30", long 106°48'49"	1620	9.0	1,250	115		-1.5

* River mile at mouth of drain or point of discharge.

1/ Estimated discharge.

2/ Reported mean daily discharge.

Rio Grande Seepage Investigation -- Continued

River mile	Stream	Location	Time	Water Temp (°C)	Specific Conduc- tance (US/CM)	Discharge in ft. ³ /s		
						Main Stream	Drain	Gain or Loss
January 6, 1988								
1,289.5	Rio Grande	Below Mesilla Dam	0730	4.0	1,250	100		-15
1,287.3	do.	Lat 32°13'17", long 106°47'15" At NM-28 Bridge near San Pablo, NM	0930	6.0	1,250	103		+3
*1,283.6	Santo Tomas River Drain	Lat 32°12'24", long 106°45'32" Near San Miguel, NM	1035	--	--		0	--
1,282.7	Rio Grande	Lat 32°10'16", long 106°43'11" At NM-228 Bridge near San Miguel, NM	0930	8.0	1,250	100		-3
1,277.8	do.	Lat 32°09'43", long 106°42'58" At NM-227 Bridge near Vado, NM	0815	8.5	1,250	91.2		-8.8
*1,276.6	Del Rio Drain	Lat 32°06'48", long 106°40'05" Near Vado, NM	0955	13.0	1,300		36.4	--
1,273.8	Rio Grande	Lat 32°06'09", long 106°39'27" At NM-226 Bridge near Berino, NM	1105	12.0	1,300	131		+3.4
*1,271.6	La Mesa Drain	Lat 32°03'56", long 106°39'45" Near Chamberino, NM	1245	14.0	1,900		12.6	--
1,271.5	Rio Grande	Lat 32°02'15", long 106°39'23" Below La Mesa Drain near Chamberino, NM	1340	14.0	1,350	149		+5.4
1,268.5	do.	Lat 32°02'12", long 106°39'18" At NM-225 Bridge near Anthony, NM	1030	11.0	1,350	163		+14
*1,265.4	East Drain	Lat 31°59'58", long 106°38'07" Near Vinton, TX	1135	12.0	3,050		11.2	--
1,264.7	Rio Grande	Lat 31°58'09", long 106°36'17" At Vinton Bridge near Vinton, TX	1215	12.0	1,400			-4.2
1,261.6	do.	Lat 31°57'33", long 106°36'16" At TX-259 Bridge, Canutillo, TX	1315	12.0	1,500	171		+1
*1,260.8	Temporary Well	Lat 31°54'54", long 106°36'06" Near Canutillo, TX	--	--	--		3/ 7.6	--
1,259.3	Rio Grande	Lat 31°54'19", long 106°36'06" At Borderland Bridge near Borderland, TX	1415	13.5	1,500	160		-18.6
1,256.2	do.	Lat 31°53'09", long 106°35'55" At TX-260 Bridge near Santa Teresa, NM	1135	11.5	1,500	153		-7
*1,253.4	Wastewater Inflow	Lat 31°50'46", long 106°36'18" Riverside Plant, City of Sunland Park, NM	--	--	--		2/ 0.05	--
1,252.8	Rio Grande	Lat 31°48'46", long 106°35'11" Near Sunland Park, NM	1255	11.0	1,450	139		-14
*1,252.4	Wastewater Inflow	Lat 31°48'24", long 106°34'57" Sunland Plant, City of Sunland Park, NM	--	--	--		2/ 0.14	--
*1,250.3	Montoya Drain	Lat 31°48'05", long 106°34'44" Near Sunland Park, NM	1425	14.0	2,600		42.9	--
*1,250.3	Temporary Well Inflow	Lat 31°48'10", long 106°32'47" At Sunland Park, NM	1530	--	--		3/ 0.5	--
*1,250.1	Keystone Reservoir	Lat 31°48'08", long 106°32'45" Near El Paso, TX	1550	--	--		1/ 0.2	--
1,249.9	Rio Grande	Lat 31°48'18", long 106°32'39" At Courchesne Bridge, El Paso, TX	1530	13.0	1,900	194		+11.3
		Lat 31°48'09", long 106°32'26"						

* River mile at mouth of drain or point of discharge.

1/ Estimated discharge.

2/ Reported mean daily discharge.

3/ Temporary well inflow from shallow wells completed in the flood-plain alluvium within 500 ft of the Rio Grande. Wells were pumped for the purpose of dewatering at construction sites.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

Water-quality partial-record stations are particular sites where chemical data are collected systematically over a period of years for use in hydrological analyses. The data are collected less than quarterly, usually one to three times a year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN

08254400 LATIR CREEK OUTFLOW FROM LATIR LAKE 9 NR AMALIA, NM

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
JUN 09...	1545	11.0	498	1028	80020	1.1	39	8.4	8.66	8.20	16
JUL 19...	1300	14.0	497	1028	80020	0.26	34	--	8.54	--	15
AUG 16...	1215	14.5	497	1028	80020	0.24	37	--	7.38	--	--
SEP 20...	1330	7.0	--	1028	80020	1.1	38	--	7.21	8.30	--

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	BARIUM, DIS- SOLVED (MG/L AS BA) (01005)
JUN 09...	<0.010	<0.010	5.8	0.53	1.3	0.20	1.2	0.05	5.9	10
JUL 19...	0.020	<0.010	5.3	0.56	1.1	0.19	1.2	0.07	5.7	--
AUG 16...	0.020	<0.010	5.8	0.56	1.3	0.19	1.1	0.10	5.7	--
SEP 20...	0.060	<0.010	6.9	0.60	1.3	0.20	1.2	0.08	6.3	--

DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	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)
JUN 09...	<0.5	<1	<5	<3	<10	13	<10	2	<10	<10
JUL 19...	--	--	--	--	--	4	--	1	--	--
AUG 16...	--	--	--	--	--	<3	--	1	--	--
SEP 20...	--	--	--	--	--	9	--	11	--	--

DATE	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)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DRAIN- AGE AREA (SQ. MI.) (81024)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
JUN 09...	2.0	34	<6	<3	<4	16	<0.010	11880	0.25	40
JUL 19...	--	--	--	--	--	15	<0.010	11880	0.25	--
AUG 16...	--	--	--	--	--	15	<0.010	11880	0.25	--
SEP 20...	--	--	--	--	--	14	<0.010	11880	0.25	43

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

LATIR LAKE 5 NR AMALIA, NM (LAT 36°48'08" LONG 105°27'45" 10)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
JUN 09...	1100	11.0	1028	80020	52	8.38	8.30	22	<0.010	<0.010	8.5	0.57
JUL 20...	1545	16.0	1028	80020	55	8.44	--	27	0.010	<0.010	11	0.71
AUG 16...	1630	16.0	1028	80020	60	7.95	--	--	0.010	<0.010	11	0.76
SEP 21...	1115	7.0	1028	80020	59	6.88	8.00	--	0.010	<0.010	9.8	0.65

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	DRAIN- AGE AREA (SQ. MI.) (81024)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
JUN 09...	1.0	0.25	1.6	0.11	6.3	40	<1	22	<0.010	0.55	53
JUL 20...	1.4	0.19	1.8	0.16	6.0	3	1	27	<0.010	0.55	--
AUG 16...	1.7	0.22	1.7	0.20	6.5	7	2	30	<0.010	0.55	--
SEP 21...	1.5	0.25	1.8	0.15	6.8	14	<1	23	<0.010	0.55	61

08254425 LATIR CREEK OUTFLOW FROM LATIR LAKE 2 NR AMALIA, NM

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
JUN 10...	0850	11.5	511	1028	80020	4.4	72	7.4	8.07	8.00	34
JUL 21...	1100	15.5	515	1028	80020	1.6	70	6.6	8.27	--	31
AUG 17...	1030	14.5	512	1028	80020	1.2	77	6.3	8.85	--	--
SEP 21...	1530	9.5	--	1028	80020	3.2	80	8.0	7.64	8.40	--

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	BARIUM, DIS- SOLVED (MG/L AS BA) (01005)
JUN 10...	<0.010	<0.010	13	0.84	1.9	0.23	2.9	0.21	6.3	4
JUL 21...	0.030	<0.010	12	0.89	1.6	0.16	2.9	0.20	4.6	--
AUG 17...	0.030	<0.010	5.8	0.56	1.3	0.13	3.0	0.25	5.7	--
SEP 21...	<0.010	<0.010	14	1.0	1.9	0.21	3.0	0.23	6.3	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08254425 LATIR CREEK OUTFLOW FROM LATIR LAKE 2 NR AMALIA, NM-- Continued

DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	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)
JUN 10...	<0.5	<1	<5	<3	<10	15	<10	3	<10	<10
JUL 21...	--	--	--	--	--	13	--	7	--	--
AUG 17...	--	--	--	--	--	<3	--	1	--	--
SEP 21...	--	--	--	--	--	27	--	2	--	--

DATE	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)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DRAIN- AGE AREA (SQ. MI.) (81024)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
JUN 10...	<1.0	79	<6	3	<4	34	<0.010	11120	1.08	79
JUL 21...	--	--	--	--	--	31	<0.010	11120	1.08	--
AUG 17...	--	--	--	--	--	34	<0.010	11120	1.08	--
SEP 21...	--	--	--	--	--	33	<0.010	11120	1.08	85

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379175 TECOLOTE CREEK NR EL PORVENIR, NM

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- DUCT- ANCE (JCU) (00070)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
OCT												
27...	1200	3.0	12.0	566	1028	9735	0.22	<1	57	11.5	7.30	21
27...	1240	--	--	--	1028	9735	0.25	<1	65	--	7.22	24
APR												
07...	1340	2.5	12.0	560	1028	9735	0.80	2	44	9.7	7.40	16
MAY												
11...	1335	5.5	13.5	--	1028	9735	0.58	1	37	--	6.70	16
11...	1430	--	--	--	1028	1028	0.58	--	50	--	7.23	--
12...	1430	--	--	--	1028	1028	0.55	--	49	--	7.13	--
13...	1430	--	--	--	1028	1028	0.55	--	42	--	7.15	--
14...	1430	--	--	--	1028	1028	0.55	--	50	--	7.23	--
MAY												
15-16	1430	--	--	--	1028	9735	0.55	--	46	--	6.82	--
18...	1435	--	--	--	1028	1028	--	--	--	--	--	--
20...	1410	--	--	--	1028	1028	0.90	--	60	--	7.53	--
21...	1410	--	--	--	1028	1028	1.0	--	58	--	7.22	--
22...	1410	--	--	--	1028	1028	0.80	--	57	--	7.71	--
MAY												
22-24	1415	--	--	0	1028	9735	0.70	--	58	--	7.70	--
23...	1410	--	--	--	1028	1028	0.70	--	58	--	7.73	--
24...	1410	--	--	--	1028	1028	0.64	--	59	--	7.59	--
25...	1410	--	--	--	1028	1028	0.64	--	65	--	7.78	--
JUN												
10...	2100	--	--	--	1028	1028	0.42	--	50	--	--	--
10...	2200	--	--	--	1028	1028	0.72	--	50	--	--	--
JUN												
10-10	2230	--	--	--	1028	9735	1.3	--	48	--	--	--
10...	2300	--	--	--	1028	1028	1.5	--	50	--	--	--
10...	2400	--	--	--	1028	1028	1.3	--	48	--	--	--
JUN												
11-11	0030	--	--	--	1028	9735	1.1	--	45	--	--	16
11...	0100	--	--	--	1028	1028	1.1	--	45	--	--	--
11...	0200	--	--	--	1028	1028	0.95	--	45	--	--	--
11...	0300	--	--	--	1028	1028	0.84	--	50	--	--	--
14...	0400	--	--	--	1028	1028	0.28	--	48	--	--	--
14...	0500	--	--	--	1028	1028	0.28	--	50	--	--	--
14...	0600	--	--	--	1028	1028	0.28	--	50	--	--	--
14...	0700	--	--	--	1028	1028	0.30	--	50	--	--	--
14...	0800	--	--	--	1028	1028	0.30	--	50	--	--	--
14...	0900	--	--	--	1028	1028	0.30	--	50	--	--	--
28...	1145	10.0	18.0	--	1028	9735	0.88	25	48	--	7.40	16
30...	0100	--	--	--	1028	1028	0.95	--	52	--	6.99	--
30...	0130	--	--	--	1028	1028	1.5	--	46	--	6.83	--
AUG												
12...	1200	10.0	19.0	--	1028	9735	1.6	2	40	--	7.70	17
19...	1015	--	--	--	1028	1028	1.0	--	--	--	--	--
SEP												
15...	1140	--	--	--	1028	1028	3.0	--	--	--	--	--

DATE	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT												
27...	25	0	<3	<0.14	--	<0.100	<0.10	<0.040	<0.010	22	1	6.8
27...	29	0	<3	<0.14	--	<0.100	<0.10	<0.040	<0.010	28	4	10
APR												
07...	20	0	2	0.39	0.25	0.140	0.39	<0.040	<0.010	38	22	7.0
MAY												
11...	19	0	<3	0.47	0.01	0.160	0.17	0.300	<0.010	50	34	8.0
MAY												
15-16	--	--	--	0.42	0.12	0.300	0.42	<0.040	<0.010	--	--	--
MAY												
22-24	--	--	--	1.4	0.43	0.900	1.3	0.070	<0.010	--	--	--
JUN												
10-10	--	--	--	2.6	2.3	0.260	2.6	<0.040	--	--	--	--
JUN												
11-11	20	0	<3	--	--	--	--	--	--	60	44	8.0
28...	20	0	<3	0.41	--	<0.100	0.41	<0.040	<0.010	93	77	16
AUG												
12...	20	0	<3	0.24	--	<0.100	0.24	<0.040	<0.010	65	48	16

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379175 TECOLOTE CREEK NR EL PORVENIR, NM

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	
	OCT											
	27...	1.2	<5.0	<0.30	<5.0	7.2	0.43	<5	100	<1	<5	<50
	27...	0.49	6.9	0.78	<5.0	7.5	0.39	--	--	--	--	--
APR												
07...	4.9	<5.0	1.0	<5.0	7.8	0.34	--	--	--	--	--	
MAY												
11...	7.3	<5.0	1.0	<5.0	6.7	0.22	--	--	--	--	--	
JUN												
11-11	9.8	2.0	1.0	<5.0	6.0	0.21	--	--	--	--	--	
28...	13	3.0	1.0	<5.0	6.2	0.27	--	--	--	--	--	
AUG												
12...	6.1	3.0	1.0	<3.0	4.6	0.15	--	--	--	--	--	

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379178 TECOLOTE CREEK AT WRIGHT CANYON NR EL PORVENIR, NM

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (JCU) (00070)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
OCT												
27...	1600	5.0	7.5	575	1028	9735	0.28	<1	150	9.6	7.63	57
APR												
07...	1500	5.0	13.0	--	1028	9735	1.1	1	82	9.3	7.70	39
MAY												
11...	1100	6.0	11.5	--	1028	9735	0.79	<1	100	--	7.80	102
11...	1455	--	--	--	1028	1028	0.78	--	110	--	7.61	--
12...	1455	--	--	--	1028	1028	0.75	--	110	--	7.69	--
13...	1455	--	--	--	1028	1028	0.75	--	110	--	7.64	--
MAY												
14-15	1455	--	--	--	1028	9735	0.72	1	102	--	7.55	--
18...	1530	--	--	--	1028	1028	0.93	--	--	--	--	--
19...	1530	--	--	--	1028	1028	0.84	--	110	--	7.85	--
20...	1530	--	--	--	1028	1028	1.2	--	117	--	7.56	--
21...	1530	--	--	--	1028	1028	1.2	--	104	--	7.17	--
MAY												
21-25	1535	--	--	--	1028	9735	0.93	--	116	--	7.60	--
22...	1530	--	--	--	1028	1028	1.0	--	117	--	7.75	--
23...	1530	--	--	--	1028	1028	0.90	--	110	--	7.82	--
24...	1530	--	--	--	1028	1028	0.84	--	120	--	7.64	--
25...	1530	--	--	--	1028	1028	0.84	--	120	--	7.81	--
26...	1530	--	--	--	1028	1028	0.78	--	119	--	7.83	--
JUN												
10...	2200	--	--	--	1028	1028	0.66	--	120	--	--	--
11...	0230	--	--	--	1028	1028	1.2	--	120	--	--	--
JUN												
11-11	0300	--	--	--	1028	9735	1.1	--	122	--	--	--
11...	0330	--	--	--	1028	1028	1.1	--	122	--	--	--
11...	0430	--	--	--	1028	1028	0.97	--	125	--	--	--
11...	0530	--	--	--	1028	1028	0.87	--	125	--	--	--
14...	0500	--	--	--	1028	1028	0.48	--	120	--	--	--
14...	0600	--	--	--	1028	1028	0.48	--	120	--	--	--
14...	0700	--	--	--	1028	1028	0.48	--	122	--	--	--
14...	0800	--	--	--	1028	1028	0.50	--	118	--	--	--
14...	0900	--	--	--	1028	1028	0.50	--	123	--	--	--
14...	1000	--	--	--	1028	1028	0.50	--	120	--	--	--
15...	1300	--	--	--	1028	1028	0.72	--	120	--	--	--
15...	1400	--	--	--	1028	1028	0.80	--	120	--	--	--
15...	1500	--	--	--	1028	1028	0.84	--	120	--	--	--
15...	1600	--	--	--	1028	1028	0.78	--	122	--	--	--
15...	1700	--	--	--	1028	1028	0.72	--	125	--	--	--
15...	1800	--	--	--	1028	1028	0.69	--	125	--	--	--
15...	1900	--	--	--	1028	1028	0.66	--	128	--	--	--
15...	2000	--	--	--	1028	1028	0.64	--	125	--	--	--
24...	1400	--	--	--	1028	1028	0.75	--	122	--	7.38	--
24...	1430	--	--	--	1028	1028	2.7	--	125	--	7.41	--
24...	1500	--	--	--	1028	1028	2.5	--	128	--	7.67	--
24...	1530	--	--	--	1028	1028	2.4	--	128	--	7.63	--
24...	1600	--	--	--	1028	1028	2.5	--	128	--	7.66	--
24...	1630	--	--	--	1028	1028	2.4	--	130	--	7.62	--
24...	1700	--	--	--	1028	1028	2.5	--	130	--	7.56	--
24...	1730	--	--	--	1028	1028	2.7	--	130	--	7.67	--
24...	1800	--	--	--	1028	1028	3.2	--	128	--	7.65	--
24...	1830	--	--	--	1028	1028	5.2	--	130	--	7.55	--
24...	1900	--	--	--	1028	1028	5.2	--	129	--	7.65	--
24...	1930	--	--	--	1028	1028	4.3	--	128	--	7.34	--
24...	2000	--	--	--	1028	1028	3.8	--	125	--	7.78	--
24...	2030	--	--	--	1028	1028	3.4	--	128	--	7.55	--
24...	2100	--	--	--	1028	1028	3.1	--	125	--	7.67	--
28...	1415	12.0	18.0	--	1028	9735	1.1	20	90	--	7.40	37
30...	0200	--	--	--	1028	1028	1.2	--	98	--	7.40	--
30...	0300	--	--	--	1028	1028	2.6	--	90	--	7.30	--
30...	0400	--	--	--	1028	1028	4.2	--	72	--	7.07	--
30...	0500	--	--	--	1028	1028	4.8	--	68	--	7.02	--
30...	0600	--	--	--	1028	1028	4.3	--	68	--	7.06	--
30...	0700	--	--	--	1028	1028	3.7	--	70	--	7.21	--
30...	0800	--	--	--	1028	1028	3.4	--	72	--	7.22	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379178 TECOLOTE CREEK AT WRIGHT CANYON NR EL PORVENIR, NM -- Continued

DATE	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 27...	70	0	<3	0.64	--	<0.100	0.64	<0.040	<0.010	68	11	22
APR 07...	47	0	5	0.41	0.28	0.130	0.41	<0.040	<0.010	50	11	14
MAY 11...	120	0	<3	0.49	0.21	0.220	0.43	0.060	<0.010	170	69	40
MAY 14-15	--	--	--	0.54	0.17	0.270	0.44	0.100	<0.010	--	--	--
MAY 21-25	--	--	--	1.3	0.75	0.430	1.2	0.080	<0.010	--	--	--
JUN 11-11	--	--	--	0.73	0.19	0.540	0.73	<0.040	0.100	--	--	--
28...	45	0	3	0.26	--	<0.100	0.18	0.080	<0.010	83	46	24

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
OCT 27...	2.9	<5.0	0.39	<5.0	10	0.34	<5	100	<1	<5	<50
APR 07...	3.7	<5.0	1.0	<5.0	10	0.28	--	--	--	--	--
MAY 11...	17	<5.0	1.0	<5.0	9.1	0.22	--	--	--	--	--
28...	5.5	3.0	1.0	<5.0	8.3	0.23	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379178 TECOLOTE CREEK AT WRIGHT CANYON NR EL PORVENIR, NM -- Continued

DATE	TIME	TEMPER-	TEMPER-	AGENCY	AGENCY	STREAM-	TUR-	SPE-	PH	LINITY
		ATURE	ATURE	COL-	ANA-	FLOW,		CIFIC		WAT WH
		WATER	AIR	LECTING	LYZING	INSTAN-		CON-		TOT FET
		(DEG C)	(DEG C)	SAMPLE	SAMPLE	TANEOUS		DUCT-		FIELD
		(00010)	(00020)	(CODE	(CODE	(CFS)	ITY	ANCE	(STAND-	MG/L AS
				NUMBER)	NUMBER)	(00061)	(JCU)	(US/CM)	ARDS	CAC03
		(00010)	(00020)	(00027)	(00028)	(00061)	(00070)	(00095)	(00400)	(00410)
AUG										
11...	1145	11.0	15.0	1028	9735	2.7	4	88	7.70	35
12...	1300	12.0	--	1028	1028	2.2	--	--	--	--
19...	1130	--	--	1028	1028	1.3	--	--	--	--
SEP										
15...	1340	--	--	1028	1028	3.8	--	--	--	--
15...	1345	--	--	1028	1028	3.8	--	--	--	--

DATE	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00600)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)
AUG 11...	42	0	5	0.49	<0.100	0.49	<0.040	0.010	110	71

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379182 WRIGHT CANYON AT MILE 1.2 NR EL PORVENIR, NM

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (JCU) (00070)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
OCT												
27...	1345	5.5	13.0	567	1028	9735	E0.02	<1	370	9.5	8.32	144
APR												
07...	1630	4.0	12.0	--	1028	9735	0.12	<1	337	--	7.86	135
MAY												
11...	1640	6.5	14.0	--	1028	9735	0.19	1	250	--	8.00	121
12...	1130	--	--	--	1028	1028	0.15	--	250	--	8.00	--
13...	1130	--	--	--	1028	1028	0.15	--	260	--	8.07	--
14...	1130	--	--	--	1028	1028	0.13	--	250	--	8.02	--
15...	1130	--	--	--	1028	1028	0.13	--	245	--	8.02	--
16...	1130	--	--	--	1028	1028	0.11	--	240	--	8.25	--
MAY												
17-18	1130	--	--	--	1028	9735	0.18	--	235	--	8.14	--
18...	1115	--	--	--	1028	1028	--	--	--	--	--	--
19...	1230	--	--	--	1028	1028	0.20	--	250	--	8.09	--
20...	1230	--	--	--	1028	1028	0.25	--	252	--	8.14	--
21...	1230	--	--	--	1028	1028	0.28	--	238	--	8.14	--
MAY												
21-25	1235	--	--	--	1028	9735	0.20	--	247	--	8.20	--
22...	1230	--	--	--	1028	1028	0.22	--	250	--	8.17	--
23...	1230	--	--	--	1028	1028	0.17	--	245	--	8.19	--
24...	1230	--	--	--	1028	1028	0.15	--	250	--	8.21	--
25...	1230	--	--	--	1028	1028	0.17	--	252	--	8.23	--
26...	1230	--	--	--	1028	1028	0.15	--	250	--	8.13	--
JUN												
29...	1145	15.0	19.0	--	1028	9735	0.10	10	245	--	8.20	109
30...	0045	--	--	--	1028	1028	0.15	--	250	--	8.40	--
30...	0115	--	--	--	1028	1028	0.45	--	250	--	8.44	--
30...	0145	--	--	--	1028	1028	0.42	--	210	--	8.33	--
30...	0215	--	--	--	1028	1028	0.45	--	200	--	8.25	--
30...	0245	--	--	--	1028	1028	0.50	--	195	--	8.11	--
30...	0315	--	--	--	1028	1028	0.46	--	190	--	8.06	--
30...	0345	--	--	--	1028	1028	0.46	--	190	--	8.14	--
30...	0415	--	--	--	1028	1028	0.42	--	195	--	8.18	--
30...	0445	--	--	--	1028	1028	0.42	--	190	--	8.22	--
30...	0515	--	--	--	1028	1028	0.38	--	190	--	8.37	--
30...	0545	--	--	--	1028	1028	0.38	--	190	--	8.25	--
30...	0615	--	--	--	1028	1028	0.38	--	200	--	8.30	--
30...	0645	--	--	--	1028	1028	0.34	--	205	--	8.42	--
30...	0715	--	--	--	1028	1028	0.34	--	200	--	8.39	--
AUG												
12...	1330	12.0	21.0	--	1028	9735	1.2	4	170	--	7.90	79
19...	0800	--	--	--	1028	1028	0.60	--	--	--	--	--
SEP												
16...	1345	--	--	--	1028	1028	1.3	--	--	--	--	--
16...	1355	--	--	--	1028	1028	1.3	--	--	--	--	--

DATE	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT												
27...	180	0	3	<0.14	--	<0.100	<0.10	<0.040	<0.010	170	26	60
APR												
07...	160	2	7	0.44	0.29	0.150	0.44	<0.040	<0.010	160	25	58
MAY												
11...	140	4	<3	0.42	0.05	0.270	0.32	0.100	<0.010	250	130	48
MAY												
17-18	--	--	--	0.69	0.02	0.630	0.65	0.040	<0.010	--	--	--
MAY												
21-25	--	--	--	<0.23	--	<0.100	<0.10	0.130	<0.010	--	--	--
JUN												
29...	130	2	<3	0.50	0.36	0.140	0.50	<0.040	0.010	240	130	48
AUG												
12...	97	0	4	0.49	0.38	0.110	0.49	<0.040	0.020	180	100	32

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379182 WRIGHT CANYON AT MILE 1.2 NR EL PORVENIR, NM -- Continued

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
OCT 27...	4.9	<5.0	0.78	<5.0	16	0.19	<5	100	<1	<5	<50
APR 07...	3.7	<5.0	1.0	<5.0	15	0.11	--	--	--	--	--
MAY 11...	32	<5.0	1.0	<5.0	7.6	0.11	--	--	--	--	--
JUN 29...	30	2.0	1.0	<5.0	12	0.13	--	--	--	--	--
AUG 12...	24	3.0	1.0	<3.0	7.4	0.11	--	--	--	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379185 WRIGHT CANYON AT MILE .55 NR EL PORVENIR, NM

WATER QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (JCU) (00070)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
OCT												
27...	1425	7.5	12.0	--	1028	9735	0.02	<1	420	8.2	8.13	149
APR												
07...	1710	5.0	12.0	--	1028	9735	0.32	2	192	--	8.35	122
19...	1330	12.0	13.0	581	1028	9735	0.42	1	275	7.9	8.20	131
MAY												
11...	1540	10.5	16.0	--	1028	9735	0.25	1	285	--	8.00	159
12...	1150	--	--	--	1028	1028	0.27	--	290	--	8.06	--
13...	1150	--	--	--	1028	1028	0.25	--	290	--	8.13	--
14...	1150	--	--	--	1028	1028	0.25	--	290	--	8.15	--
15...	1150	--	--	--	1028	1028	0.23	--	290	--	8.15	--
16...	1150	--	--	--	1028	1028	0.23	--	290	--	8.21	--
MAY												
17-18	1150	--	--	--	1028	9735	0.27	--	292	--	8.15	--
18...	1200	--	--	--	1028	1028	--	--	--	--	--	--
19...	1310	--	--	--	1028	1028	0.30	--	300	--	8.26	--
20...	1310	--	--	--	1028	1028	0.35	--	320	--	8.29	--
21...	1310	--	--	--	1028	1028	0.38	--	293	--	8.25	--
MAY												
21-25	1315	--	--	--	1028	9735	0.30	--	300	--	8.30	--
22...	1310	--	--	--	1028	1028	0.30	--	298	--	8.29	--
23...	1310	--	--	--	1028	1028	0.27	--	305	--	8.31	--
24...	1310	--	--	--	1028	1028	0.25	--	305	--	8.33	--
25...	1310	--	--	--	1028	1028	0.27	--	315	--	8.31	--
JUN												
29...	1245	17.0	21.0	--	1028	9735	0.21	<1	315	--	8.20	152
30...	0145	--	--	--	1028	1028	0.25	--	340	--	8.45	--
30...	0215	--	--	--	1028	1028	0.56	--	270	--	8.09	--
30...	0245	--	--	--	1028	1028	0.52	--	225	--	8.04	--
30...	0315	--	--	--	1028	1028	0.56	--	225	--	8.14	--
30...	0345	--	--	--	1028	1028	0.60	--	230	--	8.07	--
30...	0415	--	--	--	1028	1028	0.56	--	250	--	7.99	--
30...	0445	--	--	--	1028	1028	0.56	--	260	--	8.22	--
30...	0515	--	--	--	1028	1028	0.52	--	275	--	8.31	--
30...	0545	--	--	--	1028	1028	0.52	--	290	--	8.43	--
30...	0615	--	--	--	1028	1028	0.48	--	300	--	8.34	--
30...	0645	--	--	--	1028	1028	0.48	--	300	--	8.52	--
30...	0715	--	--	--	1028	1028	0.48	--	300	--	8.31	--
30...	0745	--	--	--	1028	1028	0.44	--	300	--	8.34	--
30...	0815	--	--	--	1028	1028	0.44	--	300	--	8.44	--
JUL												
19...	2330	--	--	--	1028	1028	0.27	--	310	--	7.73	--
JUL												
19-20	2400	--	--	--	1028	9735	0.41	54	275	--	7.63	127
20...	0030	--	--	--	1028	1028	0.41	--	250	--	7.72	--
20...	0130	--	--	--	1028	1028	0.41	--	290	--	7.85	--
20...	0230	--	--	--	1028	1028	0.38	--	310	--	8.06	--
20...	0330	--	--	--	1028	1028	0.38	--	315	--	8.11	--
20...	0430	--	--	--	1028	1028	0.38	--	320	--	8.05	--
AUG												
11...	1330	11.0	17.0	--	1028	9735	1.4	7	263	--	8.30	120
12...	1400	12.0	--	--	1028	1028	1.2	--	--	--	--	--
19...	1300	--	--	--	1028	1028	0.74	--	--	--	--	--
SEP												
15...	1500	--	--	--	1028	1028	1.6	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379185 WRIGHT CANYON AT MILE .55 NR EL PORVENIR, NM -- Continued

DATE	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 27...	120	0	5	<0.17	--	<0.100	0.13	<0.040	<0.010	170	17	59
APR 07...	150	0	15	0.35	0.17	0.130	0.30	0.050	<0.010	150	33	52
19...	150	2	13	0.45	0.25	0.200	0.45	<0.040	<0.010	190	57	54
MAY 11...	190	3	3	0.44	0.17	0.170	0.34	0.100	<0.010	210	51	64
MAY 17-18	--	--	--	0.44	0.17	0.170	0.34	0.100	<0.010	--	--	--
MAY 21-25	--	--	--	0.43	--	<0.100	0.27	0.160	<0.010	--	--	--
JUN 29...	180	3	8	0.46	--	<0.100	0.41	0.050	0.020	210	61	80
JUL 19-20	150	0	108	--	--	--	--	--	--	250	120	56
AUG 11...	140	3	8	0.32	--	<0.100	0.32	<0.040	0.030	220	96	60

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
OCT 27...	4.4	<5.0	<0.30	<5.0	12	0.18	<5	<100	<5	<1	<50
APR 07...	6.1	<5.0	2.0	<5.0	16	0.11	--	--	--	--	--
19...	13	<5.0	1.0	<5.0	14	0.10	--	--	--	--	--
MAY 11...	12	<5.0	1.0	<5.0	15	0.11	--	--	--	--	--
JUN 29...	3.1	2.0	1.0	<5.0	15	0.14	--	--	--	--	--
JUL 19-20	26	2.0	1.0	<3.0	9.6	0.10	--	--	--	--	--
AUG 11...	16	2.0	1.0	<3.0	9.0	0.13	--	--	--	--	--

RIO GRANDE BASIN -- Continued

08379185 WRIGHT CANYON AT MILE .55 NR EL PORVENIR, NM -- Continued

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ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379187 TECOLOTE CREEK BL WRIGHT CANYON NR EL PORNENIR, NM

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	TEMPER- ATURE (DEG C) (00020)	BARO- METRIC PRES- SURE (MM HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (JCU) (00070)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
OCT												
28...	0920	3.5	8.0	583	1028	9735	0.37	<1	220	10.0	8.02	98
APR												
07...	1800	--	--	--	1028	9735	2.1	1	184	--	8.00	80
21...	1315	7.0	14.5	586	1028	9735	2.1	1	173	8.6	8.20	78
MAY												
12...	1200	8.0	19.0	--	1028	9735	0.31	<1	170	--	8.20	81
18...	1815	--	--	--	1028	1028	--	--	--	--	--	--
JUN												
10...	2345	--	--	--	1028	1028	1.0	--	215	--	--	--
11...	0045	--	--	--	1028	1028	1.2	--	210	--	--	--
JUN												
11-11	0115	--	--	--	1028	9735	1.5	1	213	--	--	100
11...	0145	--	--	--	1028	1028	1.5	--	215	--	--	--
11...	0245	--	--	--	1028	1028	2.0	--	210	--	--	--
30...	0630	--	--	--	1028	1028	5.9	--	130	--	7.39	--
30...	0730	--	--	--	1028	1028	5.3	--	132	--	7.47	--
30...	0830	--	--	--	1028	1028	4.8	--	130	--	7.53	--
30...	0930	--	--	--	1028	1028	4.4	--	130	--	7.54	--
30...	1030	--	--	--	1028	1028	4.1	--	138	--	7.68	--
30...	1130	--	--	--	1028	1028	3.9	--	135	--	7.66	--
JUL												
07...	2130	--	--	--	1028	1028	2.0	--	140	--	7.61	--
07...	2230	--	--	--	1028	1028	1.9	--	140	--	7.82	--
07...	2330	--	--	--	1028	1028	1.8	--	142	--	7.68	--
08...	0030	--	--	--	1028	1028	1.8	--	148	--	7.71	--
JUL												
08-08	0100	--	--	--	1028	9735	1.7	20	135	--	7.67	58
08...	0130	--	--	--	1028	1028	1.7	--	130	--	7.62	--
08...	0230	--	--	--	1028	1028	1.7	--	135	--	7.55	--
08...	0330	--	--	--	1028	1028	1.7	--	140	--	7.73	--
AUG												
11...	1315	12.0	18.0	--	1028	9735	6.5	8	180	--	8.30	83
19...	1400	--	--	--	1028	1028	3.6	--	--	--	--	--
SEP												
20...	1430	--	--	--	1028	1028	3.9	--	--	--	--	--
21...	1530	--	--	--	1028	1028	4.2	3	210	--	7.49	95
21...	1600	--	--	--	1028	1028	4.6	--	205	--	8.09	--
21...	1630	--	--	--	1028	1028	4.9	--	205	--	8.19	--
21...	1700	--	--	--	1028	1028	5.3	--	205	--	8.18	--
21...	1730	--	--	--	1028	1028	5.7	--	200	--	7.40	--
21...	1830	--	--	--	1028	1028	5.6	--	210	--	7.48	--
21...	1930	--	--	--	1028	1028	5.4	--	205	--	8.17	--

DATE	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT												
28...	120	1	<3	<0.14	--	0.170	<0.10	<0.040	<0.010	120	22	40
APR												
07...	93	2	4	0.39	0.22	0.170	0.39	<0.040	<0.010	95	15	34
21...	95	0	2	0.43	--	<0.100	0.43	<0.040	0.050	110	32	36
MAY												
12...	99	0	1	0.63	0.17	0.330	0.50	0.130	<0.010	130	49	48
JUN												
11-11	120	2	<3	0.51	--	<0.100	0.51	<0.040	0.110	180	82	40
29...	90	0	3	0.24	0.14	0.100	0.24	<0.040	0.020	120	48	32
JUN												
30-30	--	--	--	3.3	2.5	0.620	3.2	0.100	0.110	--	--	--
JUL												
08-08	70	0	17	--	--	--	--	--	--	170	110	24
AUG												
11...	100	0	9	0.39	0.28	0.110	0.39	<0.040	0.030	180	95	36
SEP												
21...	120	0	6	--	--	--	--	--	--	120	25	46

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379187 TECOLOTE CREEK BL WRIGHT CANYON NR EL PORNENIR, NM -- Continued

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
OCT 28...	4.9	6.9	1.2	<5.0	12	0.28	<5	100	<1	<5	<50
APR 07...	2.4	<5.0	1.0	<5.0	13	0.21	--	--	--	--	--
21...	4.9	<5.0	1.0	5.0	11	0.16	<5	<100	<1	<5	<50
MAY 12...	2.4	<5.0	1.0	<5.0	11	0.14	--	--	--	--	--
JUN 11-11	20	3.0	1.0	<5.0	12	0.26	--	--	--	--	--
JUN 29...	10	3.0	1.0	<5.0	9.8	0.20	--	--	--	--	--
JUL 08-08	26	3.0	1.0	<3.0	6.9	0.21	--	--	--	--	--
AUG 11...	21	3.0	1.0	<3.0	7.3	0.13	<5	100	<1	<5	<50
SEP 21...	1.2	3.0	1.0	<5.0	10	0.17	--	--	--	--	--

DATE	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)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 28...	<50	<10	<50	<1	<50	<5	142	74	<0.50	10	0.01
APR 07...	--	--	--	--	--	--	122	--	--	--	--
21...	140	<10	<50	<1	<50	<5	138	57	<0.50	2	0.01
MAY 12...	--	--	--	--	--	--	122	90	--	16	0.01
18...	--	--	--	--	--	--	--	87	--	11	0.0
JUN 10...	--	--	--	--	--	--	--	--	--	7	0.02
11...	--	--	--	--	--	--	--	--	--	7	0.02
JUN 11-11	--	--	--	--	--	--	130	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	6	0.02
11...	--	--	--	--	--	--	--	--	--	14	0.08
JUN 11...	--	--	--	--	--	--	--	--	--	10	0.05
11...	--	--	--	--	--	--	--	--	--	11	0.05
29...	--	--	--	--	--	--	110	--	--	3	0.01
30...	--	--	--	--	--	--	--	--	--	17	0.08
30...	--	--	--	--	--	--	--	--	--	36	0.27
30...	--	--	--	--	--	--	--	--	--	70	0.93
30...	--	--	--	--	--	--	--	--	--	134	2.1
JUN 30...	--	--	--	--	--	--	--	--	--	243	3.9
30...	--	--	--	--	--	--	--	--	--	149	2.1
30...	--	--	--	--	--	--	--	--	--	81	1.0
30...	--	--	--	--	--	--	--	--	--	54	0.64
30...	--	--	--	--	--	--	--	--	--	49	0.54
30...	--	--	--	--	--	--	--	--	--	32	0.34
JUL 07...	--	--	--	--	--	--	--	--	--	12	0.06
07...	--	--	--	--	--	--	--	--	--	3	0.01
07...	--	--	--	--	--	--	--	--	--	2	0.01
08...	--	--	--	--	--	--	--	--	--	5	0.02
JUL 08-08	--	--	--	--	--	--	80	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	8	0.04
08...	--	--	--	--	--	--	--	--	--	12	0.05
08...	--	--	--	--	--	--	--	--	--	0	0.0
AUG 11...	730	<10	<50	<1	<50	<5	134	--	<0.50	--	--
SEP 21...	--	--	--	--	--	--	136	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08379940 GALLINAS CREEK AB BURRO CANYON NR EL PORVENIR, NM

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (JCU) (00070)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	
OCT													
01...	0945	4.0	7.0	565	1028	9735	1.5	<1	108	9.4	8.16	49	
28...	1240	6.0	16.0	570	1028	9735	1.0	<1	118	9.3	7.50	50	
MAY													
17...	1145	7.0	16.0	--	1028	9735	6.5	3	80	--	6.80	36	
26...	1020	6.0	17.0	570	1028	9735	4.9	1	90	9.3	7.30	36	
JUN													
30...	1530	11.0	10.0	568	1028	9735	4.9	5	120	7.6	7.76	47	
AUG													
02...	1330	12.0	15.0	570	1028	9735	3.7	2	100	7.4	8.19	47	
10...	1300	11.0	21.0	570	1028	9735	9.1	6	100	8.7	7.90	45	
SEP													
15...	1500	--	--	--	1028	9735	15	5	90	--	7.60	38	
DATE	TIME	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT													
01...	60	0	<3	<0.20	0.06	<0.100	0.16	<0.040	<0.010	60	11	22	
28...	60	0	<3	<0.14	0.0	<0.100	<0.10	<0.040	<0.010	57	8	19	
MAY													
17...	44	0	9	0.87	0.10	0.670	0.77	0.100	<0.010	150	110	32	
26...	44	0	4	0.80	--	<0.100	0.62	0.180	<0.010	77	41	16	
JUN													
30...	57	0	4	0.46	0.27	0.190	0.46	<0.040	<0.010	120	76	24	
AUG													
02...	58	0	4	0.19	0.08	0.110	0.19	<0.040	0.020	130	81	20	
10...	55	0	8	0.51	0.40	0.110	0.51	<0.040	0.040	110	65	24	
SEP													
15...	47	0	4	0.52	--	<0.100	0.52	<0.040	0.210	130	88	24	
DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	
OCT													
01...	0.90	6.9	1.2	<5.0	8.3	0.28	<5	<100	<1	<5	<50		
28...	2.4	<5.0	0.40	<5.0	8.7	0.33	<5	<100	<1	<5	<50		
MAY													
17...	17	<5.0	1.0	<5.0	6.9	0.11	--	--	--	--	--		
26...	9.0	5.0	5.0	<5.0	8.0	--	<5	100	<1	<5	<50		
JUN													
30...	15	2.0	1.0	<5.0	7.4	0.13	<5	<100	<1	<5	<50		
AUG													
02...	19	2.0	1.0	<3.0	5.6	0.17	<5	<100	<1	<5	<50		
10...	12	2.0	1.0	<3.0	5.1	0.18	<5	<100	<1	<5	<50		
SEP													
15...	16	3.0	2.0	<5.0	6.3	0.19	--	--	--	--	--		
DATE	TIME	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)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SED. SUSP. SIEVE DIAM. 8 FINER THAN .062 MM (70331)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	
OCT													
01...	<50	<10	<50	<1	<50	<5	96	44	<0.50	2	0.01		
28...	130	<10	<50	<1	<50	<5	76	72	<0.50	21	0.06		
MAY													
17...	--	--	--	--	--	--	68	50	--	2	0.04		
26...	130	<10	<50	<1	<50	<5	72	81	<0.50	6	0.09		
JUN													
30...	<50	<10	<50	<1	<50	<5	70	--	<0.50	14	0.19		
AUG													
02...	250	<10	<50	<1	<50	<5	74	--	<0.50	--	--		
10...	330	<10	<50	<1	<50	<5	80	--	<0.50	--	--		
SEP													
15...	--	--	--	--	--	--	70	--	--	7	0.28		

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08380000 GALLINAS CREEK NR EL PORNENIR, NM

		TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (JCU) (00070)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	
DATE	TIME												
OCT													
01...	1110	8.0	20.5	590	1028	9735	3.5	<1	125	9.3	8.28	62	
29...	1300	10.0	20.0	593	1028	9735	2.1	<1	148	8.6	8.21	63	
MAY													
17...	1235	11.0	21.0	--	1028	9735	13	3	98	--	6.80	94	
26...	1130	9.5	19.5	595	1028	9735	10	2	105	9.1	7.50	46	
JUN													
30...	2200	11.0	10.0	595	1028	9735	21	40	110	9.0	7.78	52	
AUG													
02...	1430	15.0	16.0	594	1028	9735	6.4	3	120	8.2	8.49	60	
10...	1330	14.0	23.0	595	1028	9735	32	28	128	8.6	7.80	56	
SEP													
15...	1530	--	--	--	1028	9735	--	8	125	--	7.60	55	
DATE		BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT													
01...	75	0	3	<0.23	--	<0.100	0.19	<0.040	<0.010	66	4	21	
29...	77	0	<3	<0.14	--	0.200	<0.10	<0.040	<0.010	69	6	22	
MAY													
17...	110	0	9	0.50	0.20	0.200	0.40	0.100	<0.010	110	16	44	
26...	56	0	5	0.33	--	<0.100	0.20	0.130	<0.010	100	54	24	
JUN													
30...	63	0	47	0.68	0.54	0.140	0.68	<0.040	0.080	180	130	24	
AUG													
02...	73	0	5	0.62	--	<0.100	0.62	<0.040	0.010	160	100	32	
10...	68	0	27	0.67	0.50	0.170	0.67	<0.040	0.070	130	74	24	
SEP													
15...	66	0	8	0.58	--	<0.100	0.58	<0.040	0.310	140	81	28	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (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)
OCT													
01...	3.4	6.9	0.78	<5.0	8.8	0.31	<5	<100	<1	<5	<50	200	
29...	3.4	<5.0	0.78	<5.0	8.6	0.36	<5	<100	<1	<5	<50	210	
MAY													
17...	0.0	<5.0	1.0	<5.0	7.1	0.15	--	--	--	--	--	--	
26...	9.8	2.0	1.0	<5.0	7.5	0.17	<5	100	<1	<5	<50	170	
JUN													
30...	30	2.0	1.0	<5.0	7.2	0.14	<5	<100	<1	<5	<50	1900	
AUG													
02...	19	3.0	1.0	<3.0	5.8	0.22	--	--	--	--	--	--	
10...	17	2.0	1.0	<3.0	6.1	0.18	<5	<100	2	<5	<50	1600	
SEP													
15...	16	3.0	1.0	<5.0	7.2	0.18	--	--	--	--	--	--	
DATE		LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	
OCT													
01...	<10	<50	<1	<50	<5	--	94	63	<0.50	29	0.28		
29...	<10	<50	<1	<50	<5	--	96	68	<0.50	17	0.10		
MAY													
17...	--	--	--	--	--	--	78	87	--	8	0.27		
26...	<10	<50	<1	<50	<5	0	82	70	<0.50	12	0.33		
JUN													
30...	<10	100	<1	<50	<5	--	82	--	<0.50	54	3.1		
AUG													
02...	--	--	--	--	--	--	90	--	--	--	--		
10...	<10	50	<1	110	<5	--	108	--	<0.50	--	--		
SEP													
15...	--	--	--	--	--	--	96	--	--	12	0.0		

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08380075 PORVENIR CANYON NR EL PORVENIR, NM

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- DITY (JCU) (00070)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
OCT												
01...	1245	9.5	25.5	588	1028	9735	2.2	<1	152	9.0	8.15	74
29...	1100	8.0	19.5	593	1028	9735	1.2	<1	172	9.0	7.77	75
MAY												
17...	1330	10.0	21.0	--	1028	9735	14	2	95	--	7.00	44
26...	1315	8.0	15.5	593	1028	9735	12	1	100	8.9	7.40	44
JUN												
30...	2230	11.0	14.0	591	1028	9735	16	25	125	7.0	7.73	49
AUG												
02...	1545	15.0	15.0	593	1028	9735	7.6	4	130	8.1	8.28	62
10...	1420	12.0	20.0	593	1028	9735	--	25	95	9.2	7.80	37
SEP												
15...	1615	--	--	--	1028	9735	--	7	120	--	7.60	49

DATE	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L) AS N (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N (00605)	NITRO- GEN, AMMONIA TOTAL (MG/L) AS N (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) AS N (00630)	PHOS- PHOROUS TOTAL (MG/L) AS P (00665)	HARD- NESS TOTAL (MG/L) AS CACO3 (00900)	HARD- NESS NONCARB TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)
OCT												
01...	90	0	<3	<0.14	0.0	0.100	0.10	<0.040	<0.010	86	12	30
29...	92	0	<3	<0.14	0.0	<0.100	<0.10	<0.040	<0.010	84	9	28
MAY												
17...	53	0	7	0.42	0.23	0.190	0.42	<0.040	<0.010	130	86	24
26...	54	0	4	0.36	--	<0.100	0.23	0.130	<0.010	100	56	32
JUN												
30...	59	0	10	0.80	0.51	0.290	0.80	<0.040	0.030	100	54	24
AUG												
02...	76	0	4	0.38	--	<0.100	0.38	<0.040	0.010	150	88	16
10...	45	0	36	1.1	0.90	0.170	1.1	<0.040	0.090	100	63	20
SEP												
15...	60	0	3	0.24	--	<0.100	0.24	<0.040	0.260	150	97	32

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F (00950)	ARSENIC TOTAL (UG/L) AS AS (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L) AS BA (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L) AS CD (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L) AS CR (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU (01042)
OCT											
01...	2.4	6.9	1.2	<5.0	9.8	0.28	<5	<100	<1	<5	<50
29...	3.4	6.9	1.2	<5.0	11	0.29	<5	<100	<1	<5	<50
MAY											
17...	17	<5.0	1.0	<5.0	7.2	0.13	--	--	--	--	--
26...	4.9	2.0	1.0	<5.0	10	0.20	<5	<100	3	<5	<50
JUN											
30...	10	2.0	1.0	<5.0	7.3	0.25	<5	<100	<1	<5	<50
AUG											
02...	27	2.0	1.0	<3.0	5.9	0.20	<5	<100	<1	<5	<50
10...	12	2.0	1.0	<3.0	9.1	0.24	<5	<100	<1	7	<50
SEP											
15...	16	2.0	1.0	<5.0	28	0.22	--	--	--	--	--

DATE	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)	SILVER, TOTAL RECOV- ERABLE (UG/L) AS AG (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS ZN (01092)	SELE- NIUM, TOTAL (UG/L) AS SE (01147)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM (70331)	MERCURY TOTAL RECOV- ERABLE (UG/L) AS HG (71900)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT											
01...	140	<10	<50	<1	<50	<5	110	67	<0.50	17	0.10
29...	130	<10	<50	<1	<50	<5	116	76	<0.50	16	0.05
MAY											
17...	--	--	--	--	--	--	78	56	--	3	0.10
26...	80	<10	<50	<1	50	<5	70	--	<0.50	2	0.07
JUN											
30...	610	<10	<50	<1	<50	<5	88	--	<0.50	7	0.30
AUG											
02...	230	<10	<50	<1	<50	<5	98	--	<0.50	--	--
10...	1400	<10	<50	<1	<50	<5	100	--	<0.50	--	--
SEP											
15...	--	--	--	--	--	--	96	--	--	5	0.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08380090 PORNENIR CANYON AT MOUTH NR EL PORVENIR, NM

		TEMPER- ATURE WATER (DEG C) (00010)		TEMPER- ATURE AIR (DEG C) (00020)		BARO- METRIC PRES- SURE (MM OF HG) (00025)		AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)		AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)		TUR- BID- DITY (JCU) (00070)		SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)		OXYGEN, DIS- SOLVED (MG/L) (00300)		PH (STAND- ARD UNITS) (00400)		ALKA- LITY WAT WH TOT FET MG/L AS CACO3 (00410)		
DATE	TIME																							
OCT																								
01...	1355		14.0		26.0		595		1028		9735		2.3		<1		160		8.5		8.54		78	
29...	1225		12.0		21.5		598		1028		9735		0.67		<1		185		8.5		8.29		80	
MAY																								
17...	1410		14.0		20.0		--		1028		9735		13		1		103		--		6.90		46	
26...	1345		12.0		18.5		599		1028		9735		11		<1		105		8.4		7.70		47	
JUN																								
30...	2300		12.0		12.0		600		1028		9735		16		25		100		8.0		7.77		51	
AUG																								
02...	1630		20.0		18.0		598		1028		9735		6.5		3		140		6.5		8.55		66	
10...	1535		15.0		24.0		598		1028		9735		--		41		97		8.1		7.80		38	
SEP																								
15...	1700		--		--		--		1028		9735		--		8		120		--		7.60		49	
DATE		BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)											
OCT																								
01...	96		0	<3	2.1	0.02	0.100	0.12	1.99	<0.010	92	14	12											
29...	97		0	<3	<0.14	--	<0.100	<0.10	<0.040	<0.010	92	12	34											
MAY																								
17...	56		0	5	0.38	0.16	0.220	0.38	<0.040	<0.010	190	140	32											
26...	57		0	<3	0.77	--	<0.100	0.65	0.120	<0.010	140	93	24											
JUN																								
30...	62		0	10	0.50	0.17	0.330	0.50	<0.040	0.040	160	110	20											
AUG																								
02...	80		0	4	0.11	--	<0.100	0.11	<0.040	0.010	210	140	32											
10...	46		0	48	0.87	0.70	0.170	0.87	<0.040	0.130	130	87	16											
SEP																								
15...	59		0	5	0.58	--	<0.100	0.53	0.050	0.310	130	77	24											
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)												
OCT																								
01...	15		6.9	1.2	<5.0	10	0.33	<5	<100	<1	<5	<50												
29...	1.5		6.9	1.2	<5.0	11	0.35	<5	<100	<1	<5	<50												
MAY																								
17...	27		<5.0	1.0	<5.0	7.6	0.14	--	--	--	--	--												
26...	19		2.0	1.0	<5.0	7.4	0.20	<5	<100	<1	<5	<50												
JUN																								
30...	28		2.0	1.0	<5.0	7.6	0.19	<5	<100	<1	<5	<50												
AUG																								
02...	30		2.0	1.0	<3.0	6.0	0.22	<5	<100	<1	<5	<50												
10...	21		2.0	1.0	<3.0	12	0.27	<5	<100	<1	<5	<50												
SEP																								
15...	16		3.0	1.0	<5.0	7.1	0.27	--	--	--	--	--												
DATE		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)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)												
OCT																								
01...	50		<10	<50	<1	<50	<5	118	78	<0.50	9	0.06												
29...	50		<10	<50	<1	<50	<5	114	79	<0.50	12	0.02												
MAY																								
17...	--		--	--	--	--	--	82	83	--	8	0.28												
26...	60		<10	<50	<1	<50	<5	82	--	<0.50	6	0.18												
JUN																								
30...	390		<10	<50	<1	<50	<5	86	--	<0.50	7	0.30												
AUG																								
02...	1600		<10	<50	<1	130	<5	99	--	<0.50	--	--												
10...	2000		<10	50	<1	130	<5	118	--	<0.50	--	--												
SEP																								
15...	--		--	--	--	--	--	102	--	--	3	0.0												

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

08380500 GALLINAS CREEK NR MONTEZUMA, NM

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (JCU) (00070)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
OCT												
01...	1545	16.5	24.0	601	1028	9735	7.8	<1	238	8.4	8.63	125
29...	0950	9.0	16.5	607	1028	9735	5.0	<1	295	9.8	8.12	136
MAY												
17...	1500	15.0	20.0	--	1028	9735	29	3	140	--	8.00	111
26...	1455	13.5	21.5	606	1028	9735	27	4	140	8.0	7.90	124
JUL												
01...	0930	14.0	19.0	606	1028	9735	33	15	150	8.0	8.02	70
AUG												
03...	1030	14.0	22.0	606	1028	9735	21	3	200	6.8	8.79	96
10...	1630	15.0	26.0	606	1028	9735	163	52	122	8.6	7.85	53
DATE	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT												
01...	140	5	<3	<0.14	0.0	0.100	0.10	<0.040	<0.010	130	5	48
29...	160	3	<3	<0.14	0.0	<0.100	<0.10	<0.040	<0.010	150	14	52
MAY												
17...	130	0	9	0.55	0.21	0.210	0.42	0.130	<0.010	130	19	32
26...	150	1	72	1.2	--	<0.100	1.0	0.240	0.050	140	16	40
JUL												
01...	86	0	<3	0.53	--	<0.100	0.53	<0.040	0.030	150	83	30
AUG												
03...	110	3	<3	0.20	--	<0.100	0.20	<0.040	0.010	190	95	40
10...	65	0	52	0.87	0.65	0.220	0.87	<0.040	0.180	150	94	26
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (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)
OCT												
01...	2.4	6.9	0.78	<5.0	11	0.31	<5	<100	<1	<5	<50	60
29...	4.9	<5.0	0.78	<5.0	6.2	0.33	<5	100	<1	<5	<50	50
MAY												
17...	12	<5.0	1.0	<5.0	13	0.16	--	--	--	--	--	--
26...	9.8	2.0	1.0	<5.0	8.1	0.18	<5	100	<1	<5	<50	2700
JUL												
01...	19	3.0	1.0	<5.0	7.6	0.17	<5	<100	<1	<5	<50	250
AUG												
03...	22	3.0	1.0	<3.0	7.5	0.23	<5	<100	<1	<5	<50	310
10...	20	2.0	1.0	<3.0	6.4	0.25	<5	<100	<1	<5	<50	2300
DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM (70331)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	DRAIN- AGE AREA (SQ. MI.) (81024)
OCT												
01...	<10	<50	<1	<50	<5	104	81	<0.50	6875	26	0.55	84.0
29...	<10	<50	<1	<50	<5	180	88	<0.50	6875	38	0.51	84.0
MAY												
17...	--	--	--	--	--	104	80	--	6875	18	1.4	84.0
26...	<10	130	<1	<50	<5	98	98	<0.50	6875	41	3.0	84.0
JUL												
01...	<10	50	<1	<50	<5	100	--	<0.50	6875	24	2.1	84.0
AUG												
03...	<10	<50	<1	<50	<5	130	--	<0.50	6875	--	--	84.0
10...	<10	80	<1	<50	<5	134	--	<0.50	6875	--	--	84.0

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN BASIN

LONG LAKE SURFACE SAMPLE NR CRYSTAL, NM (LAT 36°00'22" LONG 108°50'04" 01)

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
MAY 24...	1400	14.0	550	1028	80020	0.90	182	6.1	8.12	7.80	0.360
DATE		NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHOROUS ORTH- DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHOROUS ORTH- DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
MAY 24...		0.010	1.4	<0.100	0.080	0.040	16	30	5.0	3.3	2.3
DATE		CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)
MAY 24...		2.3	3.3	0.30	12	2	100	<0.5	20	<1	<1
DATE		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)	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)
MAY 24...		<3	<1	43	<5	61	<10	4	1.0	170	<6
DATE		ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LITY WAT DIS TOT IT FIELD CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	ALKA- LITY LAB (MG/L AS CACO3) (90410)
MAY 24...		3	<10	4	<1	95	136	0.012	<0.1	202	97

WHISKEY LAKE SURFACE SAMPLE NR CRYSTAL, NM (LAT 35°59'08" LONG 108°48'39" 01)

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
MAY 24...	1100	14.5	550	1028	80020	1.0	148	7.2	8.08	7.80	0.030

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN BASIN -- Continued

WHISKEY LAKE SURFACE SAMPLE NR CRYSTAL, NM (LAT 35°59'08" LONG 108°48'39" 01)
-- Continued

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
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MAY 24...	<0.010	0.80	<0.100	0.030	<0.010	13	24	4.1	2.7	2.0
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DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)
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MAY 24...	2.0	4.8	0.20	8.6	1	76	<0.5	20	<1	<1
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DATE	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)	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)
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MAY 24...	<3	<1	49	<5	67	<10	3	<1.0	140	<6
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DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS) CACO3 (90410)
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MAY 24...	4	40	<4	<1	73	108	<0.010	<0.1	160	74
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BERLAND LAKE SURFACE SAMPLE NR CRYSTAL, NM (LAT 36°07'17" LONG 108°55'10" 01)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
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MAY 25...	1015	15.5	553	1028	80020	7.6	59	6.8	7.50	7.30	0.030
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DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
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MAY 25...	<0.010	0.20	<0.100	0.030	<0.010	12	9.2	1.8	1.3	0.60
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN BASIN -- Continued

BERLAND LAKE SURFACE SAMPLE NR CRYSTAL, NM (LAT 36°07'17" LONG 108°55'10" 01)
-- Continued

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)
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MAY 25...	1.3	12	0.20	17	<1	41	<0.5	10	<1	<1
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DATE	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)	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)
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MAY 25...	<3	1	210	<5	5	<10	<1	<1.0	54	<6
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DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
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MAY 25...	3	1200	<4	<1	23	82	0.050	<0.1	64	25
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LITTLE COLORADO RIVER BASIN

ASAAYI LAKE SURFACE SAMPLE NR CRYSTAL, NM (LAT 35°58'50" LONG 108°55'45" 01)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
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MAY 23...	1445	15.0	577	1028	80020	9.9	128	7.1	8.17	7.80	0.020
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DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
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MAY 23...	<0.010	0.50	<0.100	0.050	0.030	8.5	21	2.8	2.9	1.2
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DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)
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MAY 23...	1.8	13	0.20	25	1	62	<0.5	10	<1	<1
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ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

LITTLE COLORADO RIVER BASIN -- Continued

ASAAYI LAKE SURFACE SAMPLE NR CRYSTAL, NM (LAT 35°58'50" LONG 108°55'45" 01)
-- Continued

DATE	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)	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)
MAY 23...	<3	<1	160	<5	28	<10	5	<1.0	110	<6

DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
MAY 23...	<3	40	4	<1	57	112	0.020	<0.1	147	57

ASAAYI LAKE 25 FEET BELOW SURFACE NR CRYSTAL, NM (LAT 35°58'50" LONG 108°55'45" 25)

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)
MAY 23...	1430	25.0	8.5	577	1028	80020	19	116	5.2	7.64	7.60

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHOROUS ORTHOS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHOROUS ORTHOS DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
MAY 23...	0.110	<0.010	0.30	<0.100	0.060	0.040	20	2.6	2.5	1.2

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)
MAY 23...	1.6	12	0.20	23	1	60	<0.5	10	<1	<1

DATE	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)	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)
MAY 23...	<3	<1	81	<5	70	<10	5	1.0	100	<6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

LITTLE COLORADO RIVER BASIN -- Continued

ASAAIYI LAKE 25 FEET BELOW SURFACE NR CRYSTAL, NM (LAT 35°58'50" LONG 108°55'45" 25)
-- Continued

DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
MAY 23...	4	160	<4	<1	52	104	0.019	<0.1	127	54

TSAILE LAKE SURFACE SAMPLE NR TSAILE, AZ (LAT 36°16'30" LONG 109°12'25" 01)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
MAY 25...	1500	16.0	1028	80020	6.4	210	7.8	8.61	8.30	0.020

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
MAY 25...	<0.010	0.20	<0.100	0.030	<0.010	7.0	34	5.8	5.7	1.4

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)
MAY 25...	3.5	9.5	0.30	19	1	91	<0.5	20	<1	<1

DATE	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)	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)
MAY 25...	<3	3	25	<5	5	<10	4	<1.0	240	<6

DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
MAY 25...	4	40	10	<1	106	151	0.013	<0.1	227	106

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

LITTLE COLORADO RIVER BASIN -- Continued

TOADLENA LAKE NR TOADLENA, NM (LAT 36°14'10" LONG 108°57'03" 01)

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
MAY 26...	1100	16.0	550	1028	80020	0.60	190	7.6	8.53	8.00	0.030

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHOROUS ORTH, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
MAY 26...	<0.010	0.70	<0.100	0.020	<0.010	13	30	7.1	4.1	2.3

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)
MAY 26...	1.7	13	0.30	7.1	1	49	<0.5	30	<1	<1

DATE	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)	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)
MAY 26...	<3	1	13	<5	12	<10	1	<1.0	180	<6

DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	ALKA- LINITY LAB AS CACO3) (90410)
MAY 26...	<3	<10	8	<1	103	131	<0.010	<0.1	211	104

09395630 PUERCO RIVER NEAR MANUELITO, NM

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	TEMPER- ATURE (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)
AUG 31...	1400	17.0	17.5	711	1028	1028	97	17000	510	8.0	8.04

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

LITTLE COLORADO RIVER BASIN -- Continued

09395630 PUERCO RIVER NEAR MANUELITO, NM -- Continued

DATE	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00666)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
AUG 31...	7.90	0.240	0.030	0.70	1.20	0.330	0.040	36	6.9	60
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)
AUG 31...	4.1	12	140	0.60	6.8	1	1	42	<100	<10
DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR) (01032)	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)
AUG 31...	110	2	1	2	10	41	<10	2	4	4
DATE	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
AUG 31...	<1.0	480	810	2	18	1	2	324	61	69
DATE	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)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
AUG 31...	85	95	99	100	0.040	<0.1	0.50	37800	585	147

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN

RIO GRANDE CONVEYANCE CHANNEL AT INFLOW TO BDANWR, NM (B1) (335213106520210)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)
NOV 19...	1000	12.5	12.5	652	1028	80020	57	0.60	790	7.5	8.20
FEB 18...*	1145	--	--	--	1028	80020	--	--	--	--	--
SEP 01...	1100	17.0	23.0	635	1028	80020	80	--	750	7.8	8.00
DATE	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 19...	8.20	--	--	<0.100	62	11	93	5.1	69	140	0.60
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	8.40	0	195	<0.100	64	12	80	4.8	50	150	--
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	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)
NOV 19...	25	6	150	<1	1	2	<5	5	680	<1	<3
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	6	120	2	1	1	<5	4	--	1	21
DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)
NOV 19...	<1	<0.1	1.2	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	--	<1.0
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	<1	--	--	--	--	--	--	--	--	160	--
DATE	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)
NOV 19...	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<10
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

RIO GRANDE CONVEYANCE CHANNEL AT INFLOW TO BDANWR, NM (B1) (335213106520210) -- Continued

DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	MALA- THION, TOTAL (UG/L) (39530)	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	TOTAL TRI- THION (UG/L) (39786)
NOV 19...	<0.1	<0.1	<0.1	<1	<0.01	<0.01	<0.01	<0.01	<0.10	<0.1	<0.01
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	METHYL TRI- THION, TOTAL (UG/L) (39790)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)	AME- TRYNE TOTAL (UG/L) (82184)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
NOV 19...	<0.01	510	0.1	<0.10	<0.10	<1.00	<0.10	<0.1	<0.1	812	167
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	479	<0.1	--	--	--	--	--	--	738	160

SOCORRO MAIN CANAL AT INFLOW TO BDANWR, NM (B13) (335213106521510)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
MAY 03...	1500	--	--	--	--	80020	E6.0	--	--	--	--	--
SEP 06...	1045	19.5	22.5	635	1028	80020	E50	860	7.8	8.40	8.30	7

DATE	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	203	0.360	79	16	90	5.0	60	190	4	140	1	1

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)
MAY 03...	--	--	--	--	--	--	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1
SEP 06...	2	<5	5	3	4	<1	--	--	--	--	--	--

* Bottom material analysis available in District files.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

SOCORRO MAIN CANAL AT INFLOW TO BDANWR, NM (B13) (335213106521510) -- Continued

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ETHION, TOTAL (UG/L) (39398)	MALA- THION, TOTAL (UG/L) (39530)	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	TOTAL TRI- THION (UG/L) (39786)
MAY 03...	--	<0.01	<0.01	<0.01	0.01	<0.01	<0.10	<0.01	<0.01	<0.01	<0.01
SEP 06...	178	--	--	--	--	--	--	--	--	--	--

DATE	METHYL TRI- THION, TOTAL (UG/L) (39790)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	2, 4-DP TOTAL (UG/L) (82183)	AME- TRYNE TOTAL (82184)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
MAY 03...	<0.01	--	--	<0.10	<0.10	<0.01	<0.10	<0.1	<0.1	--	--
SEP 06...	--	582	<0.1	--	--	--	--	--	--	860	177

ELMENDORF DRAIN AT INFLOW TO BDANWR, NM (B5) (335212106514010)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)
NOV 18...	1345	10.5	11.0	648	1028	80020	3.0	5.8	1720	10.8	8.15	8.00
FEB 18...*	1000	--	--	--	1028	80020	E1.0	--	--	--	--	--
MAY 03...	1430	--	--	--	1028	80020	E8.0	--	--	--	--	--
SEP 01...	1500	20.0	23.0	635	1028	80020	E1.5	--	1770	7.7	8.30	8.00

DATE	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
NOV 18...	--	--	0.170	140	25	220	7.2	130	370	0.60	32	1
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	0	449	0.140	140	28	220	7.3	130	400	--	--	2

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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 18...	290	<1	1	3	<5	6	1200	<1	6	<1	<0.1	2.6
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	270	3	2	1	<5	6	--	2	12	<1	--	--

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

ELMENDORF DRAIN AT INFLOW TO BDANWR, NM (B5) (335212106514010) -- Continued

DATE	PRO-PAZINE TOTAL (UG/L) (39024)	TRI-FLURALIN TOTAL RECOVER (UG/L) (39030)	SIME-TRYNE TOTAL (UG/L) (39054)	SIMA-ZINE TOTAL (UG/L) (39055)	PROME-TONE TOTAL (UG/L) (39056)	PROME-TRYNE TOTAL (UG/L) (39057)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	CHLOR-DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)
NOV 18...	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	--	<1.0	<0.1	<0.1	3.0	1.7
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	--	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	368	--	--	--	--	--
DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI-ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO-SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	TOXA-PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	HEPTA-CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATH. (UG/KG) (39423)	METH-OXY-CHLOR, TOT. IN BOTTOM MATH. (UG/KG) (39481)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	
NOV 18...	1.3	<0.1	<0.1	<0.1	<0.1	<0.01	<10	<0.1	<0.1	<0.1	2	
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	
MAY 03...	--	--	--	--	--	<0.01	--	--	--	--	--	
SEP 01...	--	--	--	--	--	--	--	--	--	--	--	
DATE	MALA-THION, TOTAL (UG/L) (39530)	PARA-THION, TOTAL (UG/L) (39540)	DI-AZINON, TOTAL (UG/L) (39570)	METHYL PARA-THION, TOTAL (UG/L) (39600)	ATRA-ZINE, TOTAL (UG/L) (39630)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	SILVEX, TOTAL (UG/L) (39760)	TOTAL TRI-THION (UG/L) (39786)	METHYL TRI-THION, TOTAL (UG/L) (39790)	
NOV 18...	<0.01	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	
MAY 03...	<0.01	<0.01	0.01	<0.01	<0.10	<0.01	<0.01	--	<0.01	<0.01	<0.01	
SEP 01...	--	--	--	--	--	--	--	--	--	--	--	
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	ALA-CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN-AZINE TOTAL (UG/L) (81757)	PER-THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)	2, 4-DP TOTAL (UG/L) (82183)	AME-TRYNE TOTAL (82184)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	SPE-CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKALINITY LAB (MG/L AS CACO3) (90410)	
NOV 18...	1130	<0.1	<0.10	<0.10	<1.00	<0.01	<0.10	<0.1	<0.1	1730	319	
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	
MAY 03...	--	--	<0.10	<0.10	--	<0.01	<0.10	<0.1	<0.1	--	--	
SEP 01...	1190	<0.1	--	--	--	--	--	--	--	1700	352	

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

SAN ANTONIO DRAIN AT INFLOW TO BDANWR, NM (B4) (335211106512710)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- DITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)
NOV 18...	1100	13.0	10.0	650	1028	80020	83	17	790	7.7	8.25	8.20
FEB 18...*	1100	--	--	--	1028	1028	E50	--	--	--	--	--
MAY 03...	1330	--	--	--	--	80020	E60	--	--	--	--	--
SEP 01...	1330	18.0	24.0	635	1028	80020	E150	--	830	7.9	8.30	8.40
DATE	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
NOV 18...	--	--	<0.100	68	12	83	4.9	56	140	0.60	24	6
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	7	198	0.170	70	13	86	5.0	59	180	--	--	6
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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	URANIUM DIS- SOLVED (UG/L AS U) (22703)
NOV 18...	140	<1	1	7	<5	5	660	<1	9	<1	<0.1	1.9
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	140	1	1	1	5	4	--	2	6	<1	--	--
DATE	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)
NOV 18...	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	--	<1.0	<0.1	<0.1	3.0	<0.1
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	--	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	174	--	--	--	--	--

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

SAN ANTONIO DRAIN AT INFLOW TO BDANWR, NM (B4) (335211106512710) -- Continued

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)
NOV 18...	0.4	<0.1	<0.1	<0.1	<0.1	<0.01	<10	<0.1	<0.1	<0.1	2
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	<0.01	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	MALA- THION, TOTAL (UG/L) (39530)	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	SILVEX, TOTAL (UG/L) (39760)	TOTAL TRI- THION (UG/L) (39786)	METHYL TRI- THION, TOTAL (UG/L) (39790)
NOV 18...	<0.01	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	<0.01	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01	--	<0.01	<0.01	<0.01
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	PER- THANE TOM MA- TERIAL (UG/KG) (81886)	2, 4-DP TOTAL (UG/L) (82183)	AME- TRYNE TOTAL (82184)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L) AS CACO3 (90410)
NOV 18...	504	<0.1	<0.10	<0.10	<1.00	<0.01	<0.10	<0.1	<0.1	793	173
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	<0.10	<0.10	--	<0.01	<0.10	<0.1	<0.1	--	--
SEP 01...	564	<0.1	--	--	--	--	--	--	--	829	174

BDANWR INTERIOR DRAIN 1.2 MI NORTH BDANWR HQ, NM (B6) (334928106525010)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)
NOV 19...	1450	13.5	14.5	--	--	80020	9.6	2.5	1410	8.2	8.20	8.10
FEB 18...*	1300	--	--	--	1028	1028	E5.0	--	--	--	--	--
MAY 03...	1245	--	--	--	--	80020	E80	--	--	--	--	--
SEP 06...	1245	19.5	29.0	635	1028	80020	E20	--	980	7.6	8.30	8.20

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

BDANWR INTERIOR DRAIN 1.2 MI NORTH BDANWR HQ, NM (B6) (334928106525010) -- Continued

DATE	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
NOV 19...	--	--	<0.100	120	25	160	7.0	140	290	0.60	38	3
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	0	238	0.310	85	17	100	5.4	74	210	--	--	4
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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	URANIUM DIS- SOLVED (UG/L AS U) (22703)
NOV 19...	210	<1	<1	1	<5	5	1400	<1	7	<1	0.1	1.2
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	160	4	1	1	<5	4	--	3	5	<1	--	--
DATE	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)
NOV 19...	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	--	<1.0	<0.1	<0.1	<1.0	<0.1
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	--	--	--	--	--	--
SEP 06...	--	--	--	--	--	--	195	--	--	--	--	--
DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	
NOV 19...	<0.1	0.1	<0.1	<0.1	<0.1	<0.01	<10	<0.1	<0.1	<0.1	<1	
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	
MAY 03...	--	--	--	--	--	<0.01	--	--	--	--	--	
SEP 06...	--	--	--	--	--	--	--	--	--	--	--	

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

BDANWR INTERIOR DRAIN 1.2 MI NORTH BDANWR HQ, NM (B6) (334928106525010) -- Continued

DATE	MALA- THION, TOTAL (UG/L) (39530)	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	SILVEX, TOTAL (UG/L) (39760)	TOTAL TRI- THION (UG/L) (39786)	METHYL TRI- THION, TOTAL (UG/L) (39790)
NOV 19...	<0.01	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	<0.01	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01	--	<0.01	<0.01	<0.01
SEP 06...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)	2, 4-DP TOTAL (UG/L) (82183)	AME- TRYNE TOTAL (82184)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LITY LAB (MG/L) AS CAC03 (90410)
NOV 19...	963	<0.1	<0.10	<0.10	<1.00	<0.01	<0.10	<0.1	<0.1	1470	263
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	<0.10	<0.10	--	<0.01	<0.10	<0.1	<0.1	--	--
SEP 06...	647	<0.1	--	--	--	--	--	--	--	949	194

FIELD UNIT 17A IN NW SECTION AT BDANWR, NM (B11F) (334907106520520)

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)
FEB 17...*	1400	1028	80020	<1.0	<0.1	<0.1	<1.0	<0.1	0.1	<0.1

DATE	TIME	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)
FEB 17...*		<0.1	<0.1	<0.1	<10	<0.1	<0.1	<0.1	<1	<0.1	<1.00

TRENCH POND IN FIELD UNIT 18C AT BDANWR, NM (B8) (334832106525720)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
FEB 18...*	1330	--	--	--	--	80020	--	--	--	--	--
25...	1300	12.0	16.0	650	1028	80020	2500	7.8	8.05	7.70	0
SEP 06...	1600	25.0	30.0	634	1028	80020	1070	7.9	8.50	8.30	7

* Bottom material analysis available in District files.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

TRENCH POND IN FIELD UNIT 18C AT BDANWR, NM (B8) (334832106525720) -- Continued

DATE	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
------	--	--	---	---	---	--	--	--	---	---	---

FEB											
18...*	--	--	--	--	--	--	--	--	--	--	--
25...	320	<0.100	140	40	350	9.5	390	410	5	290	<1
SEP											
06...	222	<0.100	79	18	130	8.0	110	210	6	170	3

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	URANIUM DIS- SOLVED (UG/L AS U) (22703)	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)
------	--	---	---	--	---	---	--	--	--	--	--

FEB											
18...*	--	--	--	--	--	--	--	--	--	--	--
25...	1	4	<5	6	6	10	<1	0.2	1.4	<0.10	<0.10
SEP											
06...	1	2	<5	8	2	14	<1	--	--	--	--

DATE	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)
------	--	---	--	---	--	---	--	--	--	---

FEB										
18...*	--	--	--	--	--	<1.0	<0.1	<0.1	<1.0	0.1
25...	<0.1	<0.10	<0.1	<0.1	262	--	--	--	--	--
SEP										
06...	--	--	--	--	194	--	--	--	--	--

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)
------	---	---	---	---	--	---------------------------------------	--	---	--	---

FEB										
18...*	0.2	<0.1	<0.1	<0.1	<0.1	--	<10	<0.1	<0.1	<0.1
25...	--	--	--	--	--	<0.01	--	--	--	--
SEP										
06...	--	--	--	--	--	--	--	--	--	--

DATE	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	MALA- THION, TOTAL (UG/L) (39530)	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	TOTAL TRI- THION (UG/L) (39786)	METHYL TRI- THION, TOTAL (UG/L) (39790)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
------	---	---	---	--	---	--	---	---	--	---

FEB										
18...*	<1	--	--	--	--	--	<0.1	--	--	--
25...	--	<0.01	<0.01	<0.01	<0.01	<0.10	--	<0.01	<0.01	1620
SEP										
06...	--	--	--	--	--	--	--	--	--	689

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

TRENCH POND IN FIELD UNIT 18C AT BDANWR, NM (B8) (334832106525720) -- Continued

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)	AME- TRYNE TOTAL (82184)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
FEB 18...*	--	--	--	--	<1.00	--	--	--	--	--
25...	<0.1	1.50	<0.10	<0.10	--	<0.10	<0.1	<0.1	2610	271
SEP 06...	<0.1	--	--	--	--	--	--	--	1040	195

SAN ANTONIO DRAIN 1.6 MI EAST BDANWR, NM (B14) (334828106514710)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
MAY 03...	1130	--	--	--	--	80020	E30	--	--	--	--	--
SEP 06...	1500	21.0	27.0	634	1028	80020	E5.0	860	7.3	8.20	8.40	0
DATE	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	212	0.170	74	14	91	5.1	59	180	6	140	3	1
DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)
MAY 03...	--	--	--	--	--	--	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1
SEP 06...	1	<5	5	2	<3	<1	--	--	--	--	--	--
DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ETHION, TOTAL (UG/L) (39398)	MALA- THION, TOTAL (UG/L) (39530)	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	TOTAL TRI- THION (UG/L) (39786)	
MAY 03...	--	<0.01	<0.01	<0.01	0.01	<0.01	<0.10	<0.01	<0.01	<0.01	<0.01	
SEP 06...	174	--	--	--	--	--	--	--	--	--	--	

* Bottom material analysis available in District files.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

SAN ANTONIO DRAIN 1.6 MI EAST BDANWR, NM (B14) (334828106514710) -- Continued

DATE	METHYL- TRITHION, TOTAL (UG/L) (39790)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	2, 4-DP TOTAL (UG/L) (82183)	AME- TRYNE TOTAL (82184)	METRI- BUZIN WATER WHOLE (UG/L) (82611)	METOLA- CHLOR WATER WHOLE (UG/L) (82612)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINEITY LAB (MG/L) AS CACO3 (90410)
MAY 03...	<0.01	--	--	<0.10	<0.10	<0.01	<0.10	<0.1	<0.1	--	--
SEP 06...	--	562	<0.1	--	--	--	--	--	--	837	174

FIELD UNIT 188-EAST TRIANGLE AT BDANWR, NM (B9) (334810106522520)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)
FEB 17...*	1330	--	--	--	1028	80020	--	--	--	--	--
24...	1115	9.0	10.0	650	1028	80020	710	7.2	7.94	7.60	0

DATE	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)	ARSENIC DIS- SOLVED (UG/L) AS AS (01000)	BORON, DIS- SOLVED (UG/L) AS B (01020)	CADMIUM DIS- SOLVED (UG/L) AS CD (01025)
FEB 17...*	--	--	--	--	--	--	--	--	--	--	--
24...	188	<0.100	58	12	85	5.2	57	140	3	150	<1

DATE	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR (01030)	COPPER, DIS- SOLVED (UG/L) AS CU (01040)	LEAD, DIS- SOLVED (UG/L) AS PB (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L) AS MO (01060)	VANA- DIUM, DIS- SOLVED (UG/L) AS V (01085)	ZINC, DIS- SOLVED (UG/L) AS ZN (01090)	SELE- NIUM, DIS- SOLVED (UG/L) AS SE (01145)	RA-226, DIS- SOLVED, PLAN- CHET (UG/L) COUNT (09510)	URANIUM NATURAL DIS- SOLVED (UG/L) AS U (22703)	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)
FEB 17...*	--	--	--	--	--	--	--	--	--	--	--
24...	1	2	<5	7	<1	9	<1	<0.1	1.6	<0.10	<0.10

DATE	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	ALKA- LINEITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)
FEB 17...*	--	--	--	--	--	<1.0	0.1	<0.1	<1.0	<0.1
24...	<0.1	<0.10	<0.1	<0.1	154	--	--	--	--	--

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

FIELD UNIT 188-EAST TRIANGLE AT BDANWR, NM (B9) (334810106522520) -- Continued

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)
FEB 17...*	0.2	<0.1	<0.1	<0.1	<0.1	--	<10	<0.1	<0.1	<0.1
24...	--	--	--	--	--	<0.01	--	--	--	--
DATE	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	MALA- THION, TOTAL (UG/L) (39530)	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	TOTAL TRI- THION (UG/L) (39786)	METHYL TRI- THION, TOTAL (UG/L) (39790)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
FEB 17...*	<1	--	--	--	--	--	<0.1	--	--	--
24...	--	<0.01	<0.01	<0.01	<0.01	<0.10	--	<0.01	<0.01	465
DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	DEPTH BELOW SURFACE (WATER LEVEL) (FEET) (72019)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)	AME- TRYNE TOTAL (UG/L) (82184)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LITY LAB (MG/L AS CACO3) (90410)
FEB 17...*	--	--	--	--	<1.00	--	--	--	--	--
24...	<0.1	1.75	<0.10	<0.10	--	<0.10	<0.1	<0.1	781	172

FIELD UNIT 180 IN SE SECTION AT BDANWR, NM (B12F) (334800106530020)

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39251)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39343)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39363)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39373)	
FEB 17...*	1115	1028	80020	<1.0	<0.1	<0.1	1.0	0.1	0.5	<0.1	
DATE		DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39383)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39393)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39403)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39413)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39519)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39758)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG) (81886)
FEB 17...*		<0.1	<0.1	<0.1	<10	<0.1	<0.1	<0.1	<1	<0.1	<1.00

SPRING POND IN UNIT 24B AT BDANWR, NM (B15) (334719106531620)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
SEP 07...	0900	19.0	25.0	634	1028	80020	1390	7.8	8.40	8.40	5	210

* Bottom material analysis available in District files.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

SPRING POND IN UNIT 24B AT BDANWR, NM (B15) (334719106531620) -- Continued

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)
SEP 07...	<0.100	35	9.4	230	5.6	210	190	16	250	2	1
DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LITY LAB (MG/L AS CACO3) (90410)
SEP 07...	<1	<5	4	39	20	<1	180	859	<0.1	1390	181

SOUTH MARSH IN FIELD UNIT 25A AT BDANWR, NM (B10) (334616106540720)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
FEB 17...*	1500	--	--	--	1028	80020	--	--	--	--	--
SEP 07...	1210	23.5	28.0	634	1028	80020	2450	7.4	8.70	8.70	24
DATE	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
FEB 17...*	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	298	<0.100	47	36	450	14	330	480	5	510	1
DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)
FEB 17...*	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	1	4	<5	7	3	7	<1	0.1	2.0	<0.10	<0.10

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

SOUTH MARSH IN FIELD UNIT 25A AT BDANWR, NM (B10) (334616106540720) -- Continued

DATE	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	PCN, IN BOT- TOM MA- TERRIAL (UG/KG) (39251)	ALDRIN, IN BOT- TOM MA- TERRIAL (UG/KG) (39333)	LINDANE IN BOT- TOM MA- TERRIAL (UG/KG) (39343)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39363)	DDE, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39368)
FEB 17...*	--	--	--	--	--	<1.0	<0.1	<0.1	1.0	0.2	0.6
25...	<0.1	<0.10	<0.1	<0.1	88	--	--	--	--	--	--
SEP 07...	--	--	--	--	284	--	--	--	--	--	--

DATE	DDT, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39403)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39481)	PCB, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39519)	MALA- THION, TOTAL (UG/L) (39530)
FEB 17...*	<0.1	<0.1	<0.1	<0.1	--	<10	<0.1	<0.1	<0.1	2	--
25...	--	--	--	--	<0.01	--	--	--	--	--	<0.01
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

DATE	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	MIREX, TOTAL IN BOT- TOM MA- TERRIAL (UG/KG) (39758)	TOTAL TRI- THION (UG/L) (39786)	METHYL TRI- THION, TOTAL (UG/L) (39790)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)
FEB 17...*	--	--	--	--	<0.1	--	--	--	--	--
25...	<0.01	<0.01	<0.01	<0.10	--	<0.01	<0.01	1000	<0.1	0.0
SEP 07...	--	--	--	--	--	--	--	1560	<0.1	--

DATE	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	PER- THANE IN BOT- TOM MA- TERRIAL (UG/KG) (81886)	AME- TRYNE TOTAL (UG/L) (82184)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L) AS CACO3 (90410)
FEB 17...*	--	--	--	--	<1.00	--	--	--	--	--
25...	3.0	3.00	<0.10	<0.10	--	<0.10	<0.1	<0.1	1680	306
SEP 07...	--	--	--	--	--	--	--	--	2390	293

BDANWR INTERIOR DRAIN NR OUTFLOW, BDANWR, NM (B7) (334612106540510)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- DITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)
NOV 19...	1245	8.5	9.0	652	1028	80020	30	9.3	1520	9.8	8.20	8.10
FEB 18...*	1400	--	--	--	1028	1028	E10	--	--	--	--	--
SEP 07...	1030	18.0	24.5	635	1028	80020	E65	--	1010	7.5	8.20	8.20

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

BDANWR INTERIOR DRAIN NR OUTFLOW, BDANWR, NM (B7) (334612106540510) -- Continued

DATE	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
NOV 19...	--	--	<0.100	110	24	200	11	190	260	0.80	26	5
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	0	242	0.470	85	17	110	5.6	81	220	--	--	5

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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 19...	250	<1	8	2	<5	7	1300	2	20	<1	<0.1	1.7
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	160	4	2	1	<5	4	--	3	4	<1	--	--

DATE	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39251)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)
NOV 19...	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	--	<1.0	<0.1	<0.1	<1.0	<0.1
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	--	--	--	--	--	--	198	--	--	--	--	--

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39398)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOT. IN BOTTOM MATL. (UG/KG) (39423)	METH- OXY- CHLOR, TOT. IN BOT. IN BOTTOM MATL. (UG/KG) (39481)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)
NOV 19...	<0.1	0.1	<0.1	<0.1	<0.1	<0.01	<10	<0.1	<0.1	<0.1	<1
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

DATE	MALA- THION, TOTAL (UG/L) (39530)	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	SILVEX, TOTAL (UG/L) (39760)	TOTAL TRI- THION (UG/L) (39786)	METHYL TRI- THION, TOTAL (UG/L) (39790)
NOV 19...	<0.01	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

* Bottom material analysis available in District files.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

BDANWR INTERIOR DRAIN NR OUTFLOW, BDANWR, NM (B7) (334612106540510) -- Continued

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)	2, 4-DP TOTAL (UG/L) (82183)	AME- TRYNE TOTAL (82184)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LITY LAB (MG/L) AS CACO3 (90410)
NOV 19...	995	<0.1	<0.10	<0.10	<1.00	<0.01	<0.10	<0.1	<0.1	1570	259
FEB 18...*	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	671	<0.1	--	--	--	--	--	--	--	986	197

RIO GRANDE BELOW LEASBURG DAM, NM (322841106551010)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
JAN 05...	0930	5.5	6.0	1028	80020	95	1.9	1180	8.50	8.10	2
DATE	TIME	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00610)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N (00613)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	PHOS- PHOROUS DIS- SOLVED (MG/L) AS P (00665)	PHOS- PHOROUS DIS- SOLVED (MG/L) AS P (00666)	PHOS- PHOROUS DIS- SOLVED (MG/L) AS P (00671)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)
JAN 05...	225	0.050	0.040	<0.010	0.30	0.180	0.010	0.020	0.010	100	20
DATE	TIME	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F (00950)	SILICA, DIS- SOLVED (MG/L) AS SiO2 (00955)	ARSENIC DIS- SOLVED (UG/L) AS AS (01000)	BARIUM, DIS- SOLVED (UG/L) AS BA (01005)	BERYL- LIUM, DIS- SOLVED (UG/L) AS BE (01010)	CADMIUM DIS- SOLVED (UG/L) AS CD (01025)
JAN 05...	120	6.7	100	290	0.60	14	2	85	<0.5	<1	
DATE	TIME	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)	SILVER, DIS- SOLVED (UG/L) AS AG (01075)	STRON- TIUM, DIS- SOLVED (UG/L) AS SR (01080)
JAN 05...		<1	<3	3	4	<5	22	10	<1	<1.0	1100
DATE	TIME	VANA- DIUM, DIS- SOLVED (UG/L) AS V (01085)	ZINC, DIS- SOLVED (UG/L) AS ZN (01090)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL (01106)	LITHIUM DIS- SOLVED (UG/L) AS LI (01130)	SELE- NIUM, DIS- SOLVED (UG/L) AS SE (01145)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LITY LAB (MG/L) AS CACO3 (90410)
JAN 05...		<6	11	<10	96	<1	188	784	0.2	1180	192

* Bottom material analysis available in District files.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

RIO GRANDE BELOW PICACHO BRIDGE NR LAS CRUCES, NM (321745106492510)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
JAN 05...	1145	8.0	17.0	1028	80020	102	1.8	1350	8.30	8.00	7
DATE		BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00610)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00625)	PHOS- PHOROUS TOTAL (MG/L AS P) (00631)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHOROUS ORTHOS- SOLVED (MG/L AS P) (00666)	CALCIUM DIS- SOLVED (MG/L AS CA) (00671)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00915)
JAN 05...	237	0.070	0.080	<0.010	0.20	0.160	<0.010	<0.010	<0.010	110	21
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
JAN 05...	140	8.6	120	300	0.60	15	3	91	<0.5	<1	
DATE		CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)
JAN 05...	1	<3	5	3	<5	7	<10	<1	<1.0	1200	
DATE		VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (90095)	ALKA- LINITY LAB AS CACO3 (90410)
JAN 05...	<6	<3	<10	120	<1	206	845	0.2	1290	203	

RIO GRANDE BELOW MESILLA DAM NR SANTO TOMAS, NM (321317106471510)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
JAN 05...	1345	10.0	16.0	1028	80020	100	2.3	1360	8.40	7.90	12

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

RIO GRANDE BELOW MESILLA DAM NR SANTO TOMAS, NM (321317106471510) -- Continued

DATE	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITROGEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITROGEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITROGEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DIS- SOLVED (MG/L AS P) (00666)	PHOSPHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
JAN 05...	232	0.770	0.780	0.040	0.280	1.1	0.320	0.440	0.450	0.400	110

DATE	MAGNESIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTASSIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLORIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUORIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)
JAN 05...	20	140	9.3	130	290	0.60	16	1	91	<0.5	<1

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS- SOLVED (UG/L AS SR) (01080)
JAN 05...	1	<3	3	4	<5	3	<10	2	<1.0	1200

DATE	VANADIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALUMINUM, DIS- SOLVED (UG/L AS AL) (01106)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELENIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKALINITY WAT DIS TOT IT MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPECTROPHOTOMETRIC CONDUCTANCE LAB (US/CM) (90095)	ALKALINITY LAB (MG/L AS CACO3) (90410)
JAN 05...	<6	25	<10	120	<1	210	847	0.1	1290	203

RIO GRANDE AT NM 227 BRIDGE NEAR VADO, NM (320648106400510)

DATE	TIME	TEMPERATURE WATER (DEG C) (00010)	TEMPERATURE AIR (DEG C) (00020)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	STREAMFLOW, INSTANTANEOUS (CFS) (00061)	TURBIDITY (FTU) (00076)	SPECTROPHOTOMETRIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	PH LAB (STANDARD UNITS) (00403)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
JAN 06...	0915	8.0	9.5	1028	80020	91	2.9	1300	8.40	7.90	12

DATE	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITROGEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITROGEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITROGEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DIS- SOLVED (MG/L AS P) (00666)	PHOSPHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
JAN 06...	225	0.560	0.570	0.060	0.590	1.1	0.650	0.570	0.570	0.510	110

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

RIO GRANDE AT NM 227 BRIDGE NEAR VADO, NM (320648106400510) -- Continued

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
JAN 06...	20	140	9.2	130	290	0.60	16	1	98	<0.5	<1

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	
JAN 06...		<1	<3	7	5	<5	6	10	2	<1.0	1200

DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
JAN 06...	<6	19	<10	110	<1	204	832	0.2	1270	201

RIO GRANDE AT TX 259 BRIDGE AT CANUTILLO, TX (315454106360610)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TUR- BID- ITY (FTU) (00076)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
JAN 06...	1115	11.0	15.5	1028	80020	171	6.2	1540	8.50	8.10	10

DATE	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
JAN 06...	256	0.290	0.270	0.060	0.600	0.70	0.660	0.400	0.380	0.350	110

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
JAN 06...	23	180	11	160	340	0.60	18	2	82	<0.5	<1

RIO GRANDE BASIN -- Continued

RIO GRANDE AT TX 259 BRIDGE AT CANUTILLO, TX (315454106360610) -- Continued

[illegible]

RIO GRANDE BASIN -- Continued

[illegible]

DATE	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34699)	CIS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34704)	1,2-DIBROMO-ETHYL-ENE TOTAL (UG/L) (39082)	VINYL-CHLO-RIDE TOTAL (UG/L) (39175)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L) (39180)	MERCURY-DIS-SOLVED (UG/L) AS HG (71890)	STYRENE TOTAL (UG/L) (77128)	XYLENE-TOTAL WATER WHOLE TOT REC (UG/L) (81551)	SPE-CIFIC-CON-DUCT-ANCE LAB (US/CM) (90095)	ALKA-LINITY LAB (MG/L) AS CACO3 (90410)
MAY 25...	<3.0	<3.0	<3.0	<3.0	<3.0	0.2	<3.0	<3.0	195000	132

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	
		MAY 25...	1000	23.0	30.0	80020	>50000	5.90	7.10	0.890	250	12000
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
MAY 25...	700	180000	25000	<0.10	8.6	58	1000	1	4	4	1400	

[illegible][illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

RIO GRANDE BASIN -- Continued

LAGUNA GATUNA NO. 2, 33 MI NE OF CARLSBAD, NM (323433103412810) -- Continued

DATE	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	1,1,2,2 TETRA- CHLORO- ETHANE TOTAL (UG/L) (34516)	1,2-DI- CHLORO- BENZENE TOTAL (UG/L) (34536)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	1,2- TRANS- DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34561)	1,3-DI- CHLORO- BENZENE TOTAL (UG/L) (34566)	1,4-DI- CHLORO- BENZENE TOTAL (UG/L) (34571)	2- CHLORO- ETHYL- VINYL- ETHER TOTAL (UG/L) (34576)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)
MAY 25...	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

DATE	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	1,2- DIBROMO ETHYL- ENE TOTAL (UG/L) (39082)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	MERCURY DIS- SOLVED AS HG (71890)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L) (81551)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
MAY 25...	<3.0	<3.0	<3.0	<3.0	<3.0	<0.1	<3.0	<3.0	189000 204

SAN JUAN BASIN

SAN JUAN RIVER UPSTREAM OF LEE ACRES, NM (364129108051310)
(LOCAL IDENTIFIER-29N.12W.27.344)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DI- CHLORO- BROMO- METHANE TOTAL (UG/L) (32101)	CARBON- TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	BROMO- FORM TOTAL (UG/L) (32104)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- FORM TOTAL (UG/L) (32106)
OCT 06...	1630	6.0	11.0	1028	80020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- ETHANE TOTAL (UG/L) (34311)	ETHYL- BENZENE TOTAL (UG/L) (34371)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)	METHYL- ENE CHLO- RIDE TOTAL (UG/L) (34423)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)
OCT 06...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	1,1,2,2 TETRA- CHLORO- ETHANE TOTAL (UG/L) (34516)	1,2-DI- CHLORO- BENZENE TOTAL (UG/L) (34536)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	1,2- TRANS- DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34561)	1,3-DI- CHLORO- BENZENE TOTAL (UG/L) (34566)
OCT 06...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	1,4-DI- CHLORO- BENZENE TOTAL (UG/L) (34571)	2- CHLORO- ETHYL- VINYL- ETHER TOTAL (UG/L) (34576)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	1,2- DIBROMO ETHYL- ENE TOTAL (UG/L) (39082)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L) (81551)
OCT 06...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.2	<0.2

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN BASIN -- Continued

SAN JUAN RIVER DOWNSTREAM OF LEE ACRES, NM (364140108061610)
(LOCAL IDENTIFIER-29N.12W.28.342)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	DI- CHLORO- BROMO- METHANE TOTAL (UG/L) (32101)	CARBON- TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	BROMO- FORM TOTAL (UG/L) (32104)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- FORM TOTAL (UG/L) (32106)
OCT 06...	1730	6.0	10.0	1028	80020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
DATE	TIME	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- ETHANE TOTAL (UG/L) (34311)	ETHYL- BENZENE TOTAL (UG/L) (34371)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)	METHYL- ENE CHLO- RIDE TOTAL (UG/L) (34423)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TRI- CHLORO- FLUORO- BENZENE TOTAL (UG/L) (34488)
OCT 06...		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
DATE	TIME	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	1,1,2,2 TETRA- CHLORO- ETHANE TOTAL (UG/L) (34516)	1,2-DI- CHLORO- BENZENE TOTAL (UG/L) (34536)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	1,2- TRANS DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34561)	1,3-DI- CHLORO- BENZENE TOTAL (UG/L) (34566)
OCT 06...		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
DATE	TIME	1,4-DI- CHLORO- BENZENE TOTAL (UG/L) (34571)	2- CHLORO- ETHYL- VINYL- ETHER TOTAL (UG/L) (34576)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	1,2- DIBROMO ETHYL- ENE TOTAL (UG/L) (39082)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	STYRENE TOTAL (UG/L) (77128)	XYLENE TOTAL WATER TOT REC (UG/L) (81551)
OCT 06...		<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.2	<0.2	<0.2

SAN JUAN R AB HOGBACK INFLUENCE NR WATERFLOW, NM (364510108295010)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	
DEC 01...	0941	1.5	1028	80020	E995	610	8.52	8.40	130	150	
DATE	TIME	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
DEC 01...	6	6	146	75	15	44	2.4	15	180	0.30	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN BASIN -- Continued

SAN JUAN R AB HOGBACK INFLUENCE NR WATERFLOW, NM (364510108295010) -- Continued

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
DEC 01...	9.2	<1	66	<0.5	50	<1	10	40	870	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34 / S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
DEC 01...	28	<1	130	437	0.028	-99.5	-13.65	0.40	656

IRRIGATION DRAINOUT BL HOGBACK MONOCLINE NR WATERFLOW, NM (364550108360310)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)
DEC 01...	1230	6.5	1028	80020	<10	3100	8.09	7.60	415	510

DATE	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
DEC 01...	0	0	506	350	160	220	9.1	41	1800	0.40

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
DEC 01...	17	<1	<100	<10	480	<10	20	620	5000	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34 / S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
DEC 01...	240	22	415	3080	0.073	-100.0	-13.30	-16.70	3140

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN BASIN -- Continued

EAGLE NEST ARROYO WEST OF THE HOGBACK NR SHIPROCK, NM (364627108353210)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)
DEC 03...	1255	7.0	1028	80020	<1.0	38000	8.15	8.00	420	510

DATE	TIME	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
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DEC 03...	0	0	513	390	1000	7600	29	7100	13000	0.30
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DATE	TIME	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
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DEC 03...	6.3	<1	<100	<10	900	50	120	50	12000	61
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DATE	TIME	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34 / S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
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DEC 03...	770	160	420	34100	9.8	-62.5	-6.65	-18.00	37000
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SAN JUAN R AB CONFLUENCE WITH CHACO RIVER, NM (364629108385910)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
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DEC 01...	1430	5.0	1028	80020	E1000	620	8.63	8.10	78	16	49
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DATE	TIME	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
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DEC 01...	2.6	15	190	0.30	8.9	<1	7	<0.5	50	<1	13
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN BASIN -- Continued

SAN JUAN R AB CONFLUENCE WITH CHACO RIVER, NM (364629108385910) -- Continued

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L AS BR) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34 / S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
DEC 01...	41	910	<1	25	1	455	0.040	-100.5	-13.60	-0.7	691

SAN JUAN RIVER AT HWY 666 BRIDGE AT SHIPROCK, NM (364650108412110)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR- BONATE WATER WH FET FIELD MG/L AS CO3 (00445)
DEC 01...	1615	4.0	80020	E1000	630	8.83	8.40	135	140	10
04...	1615	--	80020	--	--	--	--	--	--	--

DATE	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
DEC 01...	10	145	78	16	50	2.5	15	190	0.30	8.7
04...	--	--	--	--	--	--	--	--	--	--

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
DEC 01...	<1	66	<0.5	40	<1	8	40	910	<1
04...	--	--	--	--	--	--	--	--	--

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT IT TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34 / S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
DEC 01...	27	1	135	450	0.039	-98.5	-13.70	--	661
04...	--	--	--	--	--	--	--	-0.9	--

IRRIGATION DRAINOUT FROM MALPAIS ARROYO NEAR CUDAI, NM (365211108461010)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH LAB (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
DEC 03...	1017	3.5	8.5	657	1028	80020	<1.0	2700	7.90	7.80	286

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN BASIN -- Continued

IRRIGATION DRAINOUT FROM MALPAIS ARROYO NEAR CUDAI, NM (365211108461010) -- Continued

DATE	BICAR-BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR-BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
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DEC 03...	350	0	0	349	350	140	170	4.7	37	1600
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DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)
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DEC 03...	0.60	18	<1	<100	<10	380	<10	20	100	4900
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DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34 / S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
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DEC 03...	<1	180	20	286	2700	0.14	-99.5	-13.40	-18.50	2910
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UNNAMED CREEK NEAR CUDAI, NM (365248108472410)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
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DEC 02...	1618	4.5	8.0	653	1028	80020	<1.0	8500	8.27	8.10	313
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DATE	BICAR-BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR-BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
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DEC 02...	340	22	22	338	300	410	1900	11	200	6200
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DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)
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DEC 02...	0.30	14	<1	<100	<10	580	10	40	10	4600
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN BASIN -- Continued

UNNAMED CREEK NEAR CUDAI, NM (365248108472410) -- Continued

DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34 / S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
DEC 02...	<1	910	340	313	9660	0.22	-95.0	-12.45	-21.20	9290

SAN JUAN R 10 RIVER MILES AB FOUR CORNERS, NM (365515108560410)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)
DEC 03...	1115	3.5	1028	80020	E955	660	8.97	8.10	144	120

	CAR- BONATE WATER WH FET FIELD DATE	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00445)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
DEC 03...	29	29	117	79	17	50	2.4	14	200	0.30

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
DEC 03...	8.6	<1	69	<0.5	50	<1	4	19	930	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34 / S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CACO3) (99430)
DEC 03...	25	1	144	464	0.033	-100.0	-13.60	-1.90	701	144

MANCOS RIVER AT MOUTH NEAR FOUR CORNERS, NM (365856108584510)

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	BICAR- BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)
DEC 03...	1420	1.5	1028	80020	E34	2200	8.40	8.00	240	260

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN BASIN -- Continued

MANCOS RIVER AT MOUTH NEAR FOUR CORNERS, NM (365856108584510) -- Continued

DATE	CAR- BONATE WATER FIELD MG/L AS CO3 (00445)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
DEC 03...	18	18	256	190	110	150	3.4	22	1100	0.30

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
DEC 03...	140	<1	100	<10	110	<10	20	80	2200	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34 / S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
DEC 03...	90	14	240	1910	0.076	-96.0	-12.90	-17.60	2200

The chemical analyses for atmospheric precipitation samples include wet deposition, snowpack, and snowmelt. The specific conductance (00095) and alkalinity (39086) have been rounded to the nearest integer.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

WET DEPOSITION

WHISKEY CREEK DEPOSITION STATION NR WASHINGTON PASS, NM (361100108570001)

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 07- NOV 12	1200	--	80020	--	--	--	0.090	<0.010	2.1	0.10	<0.20	0.05
NOV 12- DEC 08	1517	--	80020	--	--	--	0.460	<0.010	2.7	0.13	<0.20	0.09
DEC 08- 22 1987-	1300	--	80020	--	--	--	0.090	<0.010	1.3	0.04	<0.20	0.04
JAN 12 1988	1102	--	80020	--	--	--	0.120	<0.010	0.80	0.09	<0.20	0.06
JAN 12- FEB 04	1110	--	80020	--	--	6.10	0.070	<0.010	0.52	<0.01	<0.20	0.10
APR 05- MAY 06	1400	1028	80020	8	5.06	8.30	0.140	<0.010	3.0	0.07	<0.20	0.09
MAY 06- 26	1300	1028	80020	18	5.19	8.60	0.610	0.040	1.4	0.14	0.40	0.45
MAY 26- JUL 18	1410	1028	80020	12	5.26	7.70	0.430	0.020	0.74	0.03	<0.20	0.20
JUL 18- AUG 03	1040	1028	80020	12	4.71	8.40	0.280	<0.010	0.61	0.03	<0.20	0.07
AUG 03- 23	1206	1028	80020	12	5.32	--	0.330	<0.010	3.9	0.02	<0.20	0.12

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
OCT 07- NOV 12	0.73	0.01	0.04	16	<0.5	<1	<5	<3	<10	<3	<10
NOV 12- DEC 08	1.2	0.02	0.02	3	<0.5	<1	<5	<3	<10	13	<10
DEC 08- 22 1987-	0.27	0.01	<0.01	<2	<0.5	<1	<5	<3	<10	<3	<10
JAN 12 1988	0.40	<0.01	<0.01	3	<0.5	<1	<5	<3	<10	5	<10
JAN 12- FEB 04	0.36	<0.01	<0.01	<2	<0.5	<1	<5	<3	<10	<3	<10
APR 05- MAY 06	0.79	<0.01	0.06	<2	<0.5	2	<5	<3	<10	8	<10
MAY 06- 26	3.1	0.07	0.20	7	<0.5	2	<5	<3	<10	5	<10
MAY 26- JUL 18	1.9	0.02	0.09	4	<0.5	<1	<5	<3	<10	3	<10
JUL 18- AUG 03	0.80	0.02	0.03	<2	<0.5	<1	<5	<3	<10	4	<10
AUG 03- 23	0.85	0.02	<0.01	3	<0.5	<1	<5	<3	<10	5	10

CHEMICAL ANALYSES OF ATMOSPHERIC PRECIPITATION

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

WET DEPOSITION

WHISKEY CREEK DEPOSITION STATION NR WASHINGTON PASS, NM (361100108570001) -- Continued

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)	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)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	ALKA- LITY WAT DIS TOT IT MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
OCT 07-											
NOV 12	12	<10	<10	2.0	6	<6	190	<4	--	<0.010	--
NOV 12-											
DEC 08	9	<10	<10	2.0	5	<6	<3	<4	--	<0.010	--
DEC											
08-22	1	<10	<10	2.0	1	<6	<3	<4	--	<0.010	--
DEC 22 1987-											
JAN 12 1988	5	<10	<10	2.0	4	<6	270	<4	--	<0.010	--
JAN 12-											
FEB 04	<1	<10	<10	<1.0	<0	<6	<3	<4	--	<0.010	4
APR 05-											
MAY 06	5	<10	<10	<1.0	2	<6	52	<4	0	<0.010	6
MAY											
06-26	14	<10	<10	<1.0	6	<6	27	<4	0	<0.010	21
MAY 26-											
JUL 18	8	<10	<10	<1.0	3	<6	<3	<4	1	<0.010	12
JUL 18-											
AUG 03	3	<10	<10	<1.0	1	<6	9	<4	0	<0.010	7
AUG											
03-23	5	<10	<10	<1.0	2	<6	58	<4	0	<0.010	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

WET DEPOSITION

COSTILLA WEATHER STATION NR AMALIA, NM (365122105274201)

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 13-20	1545	1028	80020	6	5.05	5.02	0	--	0.060	<0.010	0.87
OCT 20-28	1200	1028	80020	9	4.97	4.85	0	--	0.120	<0.010	0.13
OCT 28- NOV 05	1200	1028	80020	4	5.47	4.23	0	--	0.050	<0.010	0.13
OCT 28- NOV 13	1200	1028	80020	7	4.99	5.01	0	--	0.130	<0.010	1.1
NOV 13-25	1200	1028	80020	5	5.30	5.25	0	--	0.120	<0.010	0.08
NOV 25- DEC 02	1400	1028	80020	5	5.41	5.28	0	--	0.250	<0.010	0.46
DEC 16 1987- JAN 13 1988	1515	1028	80020	4	5.29	--	1	--	--	--	0.05
JAN 13-21	1400	1028	80020	6	5.07	5.09	0	--	0.160	<0.010	0.35
JAN 28- FEB 05	1045	1028	80020	4	5.09	5.09	0	--	0.080	<0.010	0.05
MAR 09-13	0930	--	80020	6	5.03	--	0	--	0.190	<0.010	0.20
MAR 13-24	1400	--	80020	6	5.87	--	0	--	0.330	<0.010	1.1
MAR 24-31	1030	--	80020	12	6.63	--	--	--	0.430	<0.010	1.5
MAR 31- APR 08	1000	1028	80020	5	6.30	6.30	--	0	0.110	<0.010	0.70
APR 08-18	1200	--	80020	4	6.06	6.70	--	--	0.120	<0.010	1.0
APR 25- MAY 02	1100	1028	80020	3	6.22	6.10	--	0	0.060	<0.010	0.73
MAY 17-24	1200	--	80020	6	5.12	5.20	0	--	0.140	<0.010	0.63
MAY 24- JUN 01	1120	--	80020	18	4.75	5.20	0	--	0.490	0.010	--
JUN 01-27	1600	1028	80020	11	4.90	5.00	0	--	0.260	<0.010	0.30
JUN 27- JUL 07	1030	--	80020	9	4.87	--	--	--	0.220	<0.010	1.3
JUL 07-12	1126	1028	80020	8	4.92	--	--	--	<0.010	<0.010	0.58
JUL 12-20	0850	1028	80020	9	4.93	--	--	--	0.240	<0.010	0.33
JUL 20-27	1035	1028	80020	9	5.16	6.30	--	--	0.230	<0.010	0.70
JUL 27- AUG 09	1220	1028	80020	9	4.88	6.90	--	--	0.230	<0.010	0.49
AUG 09-18	0724	1028	80020	9	4.85	--	--	--	0.220	<0.010	0.41
AUG 18-24	0730	1028	80020	4	5.51	--	--	--	0.130	<0.010	0.34
AUG 24- SEP 04	0930	1028	80020	7	5.13	--	--	--	0.130	<0.010	0.52

CHEMICAL ANALYSES OF ATMOSPHERIC PRECIPITATION

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

WET DEPOSITION

COSTILLA WEATHER STATION NR AMALIA, NM (365122105274201) -- Continued

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LIVITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (90095)
OCT 13-20	0.04	<0.07	0.04	1.0	<0.01	0.03	6	2	0	<0.010	7
OCT 20-28	0.06	<0.01	0.07	1.0	0.01	0.03	13	4	0	<0.010	9
OCT 28- NOV 05	<0.01	<0.00	<0.01	0.37	0.02	0.02	<3	4	0	<0.010	4
OCT 28- NOV 13	0.03	<0.05	0.04	0.53	0.01	0.02	<3	4	0	<0.010	7
NOV 13-25	<0.01	<0.11	0.05	0.38	0.04	0.02	<3	4	0	<0.010	5
NOV 25- DEC 02	0.08	0.20	0.08	0.40	0.09	0.04	<3	4	0	<0.010	5
DEC 16 1987- JAN 13 1988	0.02	0.20	--	--	--	0.03	<3	4	1	--	--
JAN 13-21	0.04	<0.06	0.05	0.38	0.02	0.02	<3	4	0	<0.010	5
JAN 28- FEB 05	0.10	<0.06	0.06	0.40	0.05	0.04	<3	4	0	<0.010	5
MAR 09-13	<0.01	<0.20	0.06	0.35	0.01	<0.01	<3	<1	0	<0.010	--
MAR 13-24	0.06	0.30	0.16	0.59	0.02	0.02	<3	5	0	<0.010	--
MAR 24-31	0.06	0.50	0.28	1.2	0.03	0.10	4	12	2	<0.010	--
MAR 31- APR 08	0.07	0.31	0.21	0.87	0.03	0.36	59	15	0	<0.010	7
APR 08-18	0.05	0.25	0.06	0.44	<0.01	0.03	6	5	1	<0.010	4
APR 25- MAY 02	<0.01	0.26	0.08	0.34	0.01	0.05	4	5	0	<0.010	3
MAY 17-24	0.01	<0.10	0.05	0.75	0.02	0.09	13	2	0	<0.010	6
MAY 24- JUN 01	--	--	0.26	2.3	0.04	--	--	--	0	<0.010	15
JUN 01-27	0.03	<0.20	0.10	1.3	0.02	0.04	<3	<1	0	<0.010	11
JUN 27- JUL 07	0.14	<0.20	0.10	0.71	0.03	0.08	<3	6	0	<0.010	--
JUL 07-12	0.08	<0.20	0.10	0.68	0.02	0.06	<3	4	0	<0.010	--
JUL 12-20	0.04	<0.20	0.11	0.74	<0.01	0.02	<3	3	0	<0.010	--
JUL 20-27	0.01	<0.07	0.12	0.85	0.06	0.05	<3	7	0	<0.010	8
JUL 27- AUG 09	<0.01	<0.06	0.08	0.65	0.02	0.01	<3	2	0	<0.010	6
AUG 09-18	0.02	<0.20	0.14	0.67	0.06	0.05	<3	2	0	<0.010	--
AUG 18-24	0.06	<0.20	0.05	0.34	<0.01	<0.01	9	6	0	<0.010	--
AUG 24- SEP 04	<0.01	<0.20	0.05	0.36	0.01	<0.01	4	1	0	<0.010	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SNOWPACK

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274204)
(2"-4" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 06...	1400	80020	6	5.70	0.190	<0.010	0.27	0.04	<0.20

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)
APR 06...	0.08	0.48	0.02	0.01	4	4	0	<0.010

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274207)
(5"-7" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
JAN 21...	1530	80020	5.03	5.80	0.100	<0.010	0.35	<0.01	<0.20

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
JAN 21...	0.04	0.37	0.02	0.05	<3	5	0	<0.010	4

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274209)
(0"-9" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
FEB 24...	1400	80020	5	5.19	6.70	0.180	<0.010	0.36	<0.01	<0.20

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
FEB 24...	0.08	0.36	0.04	0.02	3	1	0	<0.010	6

CHEMICAL ANALYSES OF ATMOSPHERIC PRECIPITATION

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SNOWPACK

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274213)
(9"-13" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
JAN 21...	1530	80020	5.29	6.00	0.080	<0.010	0.18	<0.01	<0.20

DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
JAN 21...	0.06	0.24	0.02	0.05	<3	4	0	<0.010	3	

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274214)
(10"-14" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
MAR 17...	1530	80020	5.52	6.00	0.060	<0.010	0.15	0.01	<0.20

DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
MAR 17...	0.04	0.16	0.01	0.03	3	1	0	<0.010	3	

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274218)
(9"-18" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
FEB 24...	1400	80020	4	5.14	6.40	0.080	<0.010	0.12	0.02	<0.20

DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
FEB 24...	0.05	0.24	0.07	0.01	<3	5	0	<0.010	4	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SNOWPACK

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274218)
(16"-18" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 06...	1400	80020	3	5.80	--	0.090	<0.010	0.23	<0.01	<0.20

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
APR 06...	0.04	0.21	0.01	<0.01	<3	<1	0	<0.010	--

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274219)
(17"-19" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
JAN 21...	1530	80020	5.88	7.10	<0.010	<0.010	0.98	<0.01	<0.20

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
JAN 21...	0.05	0.19	0.01	0.03	5	5	0	<0.010	3

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274221)
(18"-21" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 06...	1400	80020	10	6.71	0.260	<0.010	1.3	0.06	0.30

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)
APR 06...	0.16	0.70	0.03	0.71	6	12	2	<0.010

CHEMICAL ANALYSES OF ATMOSPHERIC PRECIPITATION

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SNOWPACK

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274224)
(20"-24" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
MAR 17...	1530	80020	5.05	5.50	0.080	<0.010	0.29	<0.01	<0.20

DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
MAR 17...	0.03	0.47	0.02	0.03	4	3	0	<0.010	4	

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274226)
(18"-26" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
FEB 24...	1400	80020	4	5.26	5.50	0.090	<0.010	0.18	<0.01	<0.20

DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
FEB 24...	0.09	0.37	0.01	0.03	4	4	0	<0.010	4	

RIO COSTILLA SNOWPACK NR AMALIA, NM (365122105274228)
(24"-28" ABOVE LAND SURFACE)

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
MAR 17...	1530	80020	5.89	6.20	0.210	<0.010	0.56	0.01	<0.20

DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
MAR 17...	0.01	0.61	0.02	0.07	<3	3	0	<0.010	6	

CHEMICAL ANALYSES OF ATMOSPHERIC PRECIPITATION

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SNOWMELT

RIO COSTILLA SNOWMELT NR AMALIA, NM (365122105274270)

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 06-06	1000	--	80020	34	7.17	7.80	--	0.450	0.020	7.3	0.23	0.50
APR 06-11	1500	--	80020	9	6.63	6.80	--	0.170	<0.010	1.5	0.05	<0.20
APR 11-12	1630	--	80020	5	6.43	7.20	--	0.080	<0.010	1.1	0.02	<0.20
APR 12-13	1615	--	80020	4	6.43	7.00	--	0.060	<0.010	1.9	<0.01	<0.05
APR 13-14	1517	--	80020	5	6.43	6.90	--	0.080	<0.010	0.90	0.05	<0.05
APR 14-15	1615	--	80020	13	6.50	6.60	--	0.320	<0.010	2.3	0.12	<0.18
APR 15-18	1110	--	80020	10	6.79	6.90	--	0.130	<0.010	2.7	0.08	<0.08
APR 18- MAY 06	--	1028	80020	11	6.52	7.80	3	0.060	<0.010	1.6	0.07	0.30

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM, DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
APR 06-06	0.26	2.1	0.05	0.45	4	<0.5	<1	<5	<3	<10	11	<10
APR 06-11	0.11	0.57	0.01	0.11	<2	<0.5	<1	<5	<3	<10	<3	<10
APR 11-12	0.08	0.26	<0.01	0.04	<2	<0.5	<1	<5	<3	<10	4	<10
APR 12-13	0.03	0.08	<0.01	0.11	--	--	--	--	--	--	5	--
APR 13-14	0.04	0.15	<0.01	0.38	--	--	--	--	--	--	8	--
APR 14-15	0.09	0.94	0.02	0.21	3	<0.5	<1	<5	<3	<10	6	<10
APR 15-18	0.05	0.41	0.03	0.14	3	<0.5	<1	<5	<3	<10	5	<10
APR 18- MAY 06	0.15	1.0	0.02	0.10	2	<0.5	<1	<5	<3	<10	<3	<10

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)	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)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 (39086)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)
APR 06-06	8	<10	<10	1.0	9	<6	68	<4	12	<0.010	36
APR 06-11	6	<10	<10	2.0	5	<6	8	<4	3	<0.010	10
APR 11-12	5	<10	<10	2.0	2	<6	13	<4	2	<0.010	6
APR 12-13	1	--	--	--	--	--	--	--	1	<0.010	4
APR 13-14	5	--	--	--	--	--	--	--	2	<0.010	6
APR 14-15	10	<10	<10	2.0	5	<6	9	<4	3	<0.010	16
APR 15-18	7	<10	<10	1.0	4	<6	16	<4	3	<0.010	11
APR 18- MAY 06	5	<10	<10	<1.0	4	<6	7	<4	3	<0.010	13

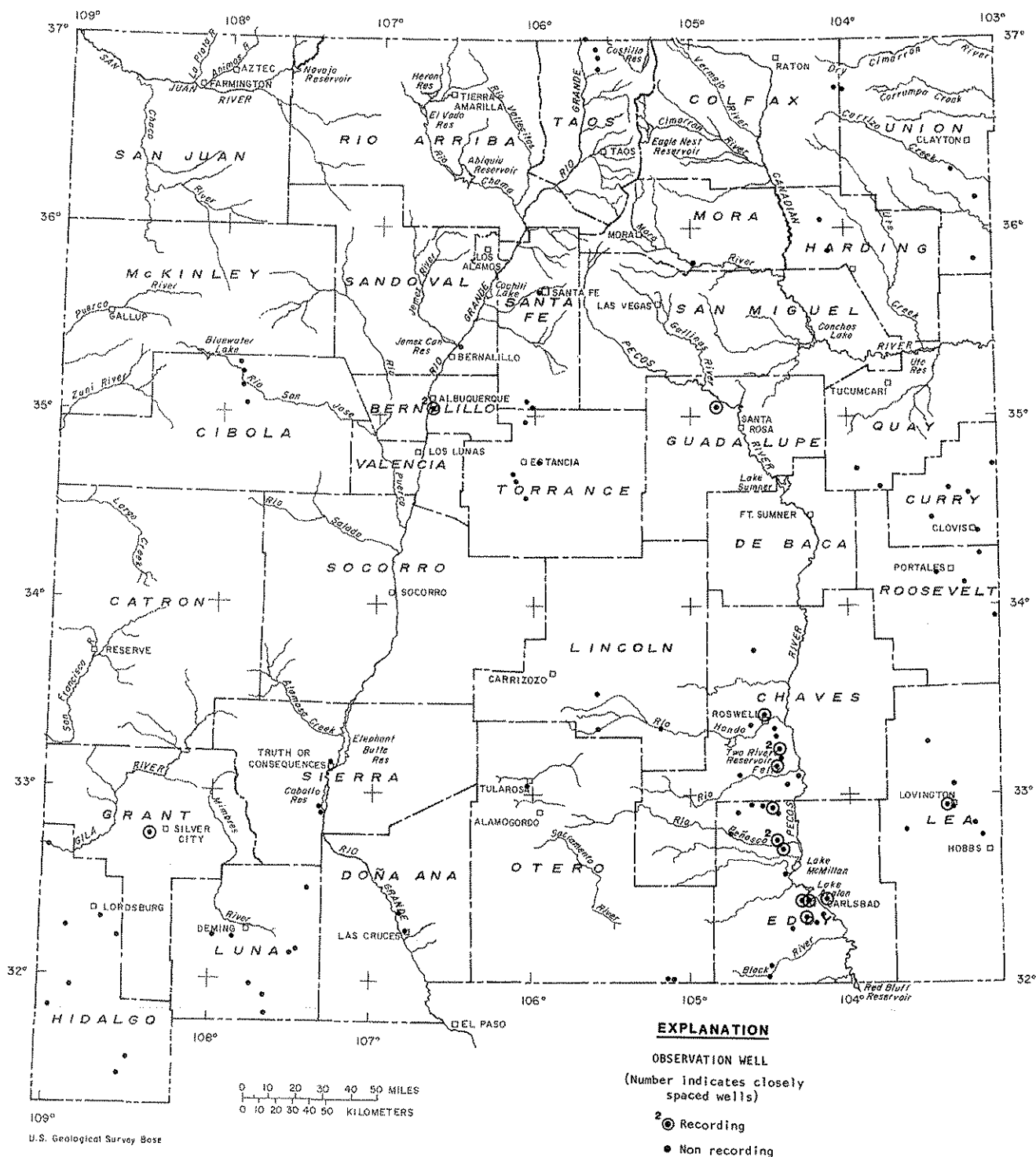


Figure 8.—Location of observation wells.

BERNALILLO COUNTY
Albuquerque Area

350256106390801. Local number, 10N.03E.32.314.

LOCATION.--Lat 35°02'56", long 106°39'08", Hydrologic Unit 13020203. Owner: City of Albuquerque.

AQUIFER.--Alluvium and Santa Fe Group.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 16 in., depth 764 ft, perforated 188-764 ft.

INSTRUMENTATION.--Digital recorder, 1-hr. punch.

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, 40.62 ft below land-surface datum, Aug. 19, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.39	28.24	28.50	27.07	28.35	29.87	30.06	32.71	35.25	33.77	34.57	32.30
10	30.66	27.56	28.06	28.29	28.16	30.32	32.54	34.18	36.35	32.75	35.30	34.21
15	29.75	28.86	27.44	28.00	28.26	29.34	33.18	35.91	33.73	32.89	34.84	33.90
20	29.87	28.74	27.67	28.72	28.91	30.05	30.59	34.32	35.96	34.63	32.29	33.96
25	30.02	28.49	28.00	27.32	30.43	31.71	30.78	32.12	37.36	36.06	33.26	31.90
BOM	28.52	27.42	27.85	28.64	29.65	31.64	32.90	34.09	33.97	33.98	31.70	32.60

WTR YEAR 1988 HIGHEST 26.92 DEC 28, 1987 LOWEST 36.96 JUL 28, 1988

350304106383401. Local number, 10N.03E.32.421.

LOCATION.--Lat 35°03'04", long 106°38'34", Hydrologic Unit 13020203. Owner: City of Albuquerque.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 16 in., depth 503 ft, perforated 360-503.

INSTRUMENTATION.--Digital recorder, 1-hr. punch.

DATUM.--Elevation of land-surface datum is 4,954 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.98 ft below land-surface datum, Dec. 22, 1986, lowest measured, 76.04 ft below land-surface datum, Aug. 19, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	53.86	48.66	48.55	45.97	47.75	49.61	51.25	55.20	60.00	56.51	58.34	54.50
10	52.49	48.13	47.72	47.91	48.25	50.73	55.60	57.06	60.93	54.92	59.40	57.56
15	51.06	49.71	46.97	47.05	47.66	49.75	55.48	60.51	56.86	56.28	58.15	56.58
20	51.72	49.01	46.33	48.65	48.22	51.62	51.41	56.33	61.18	58.43	54.38	56.52
25	51.02	48.69	47.65	45.87	51.39	53.45	51.81	54.35	62.55	61.00	56.18	53.20
BOM	49.25	46.39	47.73	48.78	50.07	54.44	54.91	56.71	56.75	56.85	53.60	54.77

WTR YEAR 1988 HIGHEST 45.63 DEC 28, 1987 LOWEST 62.99 JUN 24, 1988

CHAVES COUNTY
Roswell Basin

334645104344501. Local number, 07S.23E.23.244.

LOCATION.--Lat 33°46'45", long 104°34'45", Hydrologic Unit 13060005. Owner: Jess Corn.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian irrigation well, diameter 14 in., depth 426 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, 290.80 ft below land-surface datum, Aug. 21, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 22	271.47
Aug. 18	282.57

GROUND-WATER LEVELS

CHAVES COUNTY
Roswell Basin

332615104303601. Local number, 10S.24E.21.212.

LOCATION.--Lat 33°26'15", long 104°30'36", Hydrologic Unit 13060008. Owner: Pecos Valley Artesian Conservancy District.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well completed in San Andres Limestone, diameter 10 in., depth 324 ft.

INSTRUMENTATION.--Digital recorder, 1-hour punch.

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.--Lost record, several days, due to recorder malfunction.

PERIOD OF RECORD.--June 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.06 ft below land-surface datum, Jan. 19, 1946; lowest, 74.40 ft below land-surface datum, July 30, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.73	46.37	44.41	42.80	41.63	41.18	44.04	---	45.51	47.98	49.28	48.68
10	48.62	46.03	44.17	42.57	41.22	41.28	43.37	46.26	46.62	47.55	49.20	48.82
15	47.99	45.46	43.97	42.21	41.00	41.64	---	44.93	47.55	47.83	48.65	48.91
20	47.76	45.30	43.67	42.12	40.97	42.17	---	45.91	47.81	47.00	49.72	48.71
25	47.34	44.95	43.39	41.94	41.11	43.22	---	45.81	49.09	46.53	50.03	47.43
EOB	46.83	44.67	43.10	41.58	40.99	43.82	---	45.32	48.52	48.47	49.70	47.05

WTR YEAR 1988 HIGHEST 40.78 FEB 22, 1987 LOWEST 52.51 AUG 23, 1988

332255104360401. Local number, 11S.23E.03.342.

LOCATION.--Lat 33°22'55", long 104°36'04", Hydrologic Unit 13060008. Owner: J. L. Mask.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 28	181.36
Aug. 18	not measured

331930104261001. Local number, 11S.25E.29.34333.

LOCATION.--Lat 33°19'30", long 104°26'10", Hydrologic Unit 13060007. Owner: Valle Ranch.

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, 15.43 ft below land-surface datum, Feb. 12, 1987; lowest measured, 21.72 ft below land-surface datum, Aug. 26, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 28	15.69
Aug. 18	not measured

332200104270001. Local number, 12S.25E.09.422.

LOCATION.--Lat 33°22'00", long 104°27'00", Hydrologic Unit 13060007. Owner: Cumberland Townsite.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 28	70.85
Aug. 18	72.19

GROUND-WATER LEVELS

447

CHAVES COUNTY
Roswell Basin

331525104245201. (formerly 331205104245101) Local number, 12S.25E.23.344.

LOCATION.--Lat 33°12'05", long 104°24'51", Hydrologic Unit 13060007. Owner: Pecos Valley Artesian Conservancy District.

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 punch.

DATUM.--Elevation of land-surface datum is 3,539 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.90 ft above land-surface datum.

REMARKS.--Lost record, several days, due to recorder malfunction.

PERIOD OF RECORD.--Jan. 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.35 ft below land-surface datum, Feb. 19, 1988; lowest, 199.68 ft below land-surface datum, June 20, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.07	22.32	18.95	15.12	14.43	16.69	---	---	78.38	---	135.40	68.47
10	33.34	21.33	17.44	15.84	14.17	25.50	---	---	77.51	127.21	135.45	---
15	29.49	20.43	17.37	15.29	15.10	33.83	---	66.23	68.63	127.50	111.74	---
20	26.95	19.91	16.85	14.52	14.94	---	---	62.10	90.20	126.34	116.32	---
25	25.35	18.96	16.30	14.22	13.62	---	89.34	50.94	---	127.32	105.17	87.79
EOM	24.25	18.93	15.91	15.95	13.67	---	---	68.87	---	128.54	67.31	77.14

WTR YEAR 1988 HIGHEST 12.35 FEB 19, 1988 LOWEST 129.24 JUNE 30, 1988

331524104245101. Local number, 12S.25E.23.344A.

LOCATION.--Lat 33°15'24", long 104°24'51", Hydrologic Unit 13060007. Owner: Pecos Valley Artesian Conservancy District.

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 punch.

DATUM.--Elevation of land-surface datum is 3,540 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf 2.90 ft above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 102.79 ft below land-surface datum, April 6 and 14, 1969; lowest, 111.17 below land-surface datum, Sept. 22, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	104.81	104.73	104.35	104.12	103.91	103.65	103.19	103.00	103.10	103.24	103.35	103.51
10	104.85	104.71	104.36	104.11	103.73	103.56	103.16	103.08	103.14	103.27	103.38	103.55
15	104.77	104.61	104.39	103.91	103.72	103.41	103.15	103.08	103.17	103.29	103.39	103.61
20	104.84	104.54	104.38	104.05	103.73	103.32	103.15	103.14	103.18	103.40	103.42	103.65
25	104.73	104.48	104.33	103.87	103.69	103.17	103.15	103.13	103.18	103.34	103.46	---
EOM	104.75	104.51	104.27	103.83	103.65	103.13	103.15	103.14	103.17	103.31	103.46	---

WTR YEAR 1988 HIGHEST 102.99 MAY 29, 1988 LOWEST 104.97 OCT 10, 1987

331216104241701. Local number, 13S.25E.12.311.

LOCATION.--Lat 33°12'16", long 104°24'17", Hydrologic Unit 13060007. Owner: Hal Bogle.

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.

PERIOD OF RECORD.--Jan. 1939 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.23 ft below land-surface datum, Feb. 3, 1942; lowest measured, 90.13 ft below land-surface datum, Aug. 27, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 10	78.20
Aug. 18	not measured

GROUND-WATER LEVELS

CHAVES COUNTY
Roswell Basin

331002104254701. (formerly 331002104272001) Local number, 13S.25E.27.211.

LOCATION.--Lat 33°10'02", long 104°27'20", Hydrologic Unit 13060007. Owner: Hal Bogle.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well completed in San Andres Limestone, diameter 10 in., depth 880 ft.

INSTRUMENTATION.--Continuous strip-chart recorder.

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.--Records good.

PERIOD OF RECORD.--1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.05 ft above land-surface datum, Feb. 20, 1988; lowest, 198.30 ft below land-surface datum, July 18, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	58.00	29.35	15.42	10.02	5.60	12.20	109.21	98.56	96.20	117.18	153.00	102.65
10	53.58	24.80	17.77	8.31	4.37	26.64	97.54	87.21	126.90	124.00	146.55	103.50
15	55.67	19.25	12.80	7.07	4.69	33.52	104.71	76.06	128.24	128.35	121.90	118.34
20	47.93	19.18	11.21	6.55	4.05	44.02	102.60	92.68	111.46	100.00	131.30	115.37
25	37.31	18.87	10.16	6.04	8.39	79.01	87.14	78.41	100.11	94.60	131.13	76.91
EOM	34.30	16.67	10.56	5.43	9.27	100.20	103.55	74.20	100.80	108.25	131.66	71.58

WTR YEAR 1988 HIGHEST 4.05 FEB 20, 1988 LOWEST 159.07 AUG 5, 1988

330700104402501. Local number, 14S.23E.08.144.

LOCATION.--Lat 33°07'00", long 104°40'25", Hydrologic Unit 13060009. Owner: M. D. Kincaid.

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 3,900 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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 19	293.96
Aug. 18	302.89

330640104174501. Local number, 14S.26E.12.433B.

LOCATION.--Lat 33°06'40", long 104°17'45", Hydrologic Unit 13060007. Owner: C. B. Donaghy.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 10	16.19
Aug. 18	18.60

330404104221201. Local number, 14S.26E.30.444.

LOCATION.--Lat 33°04'04", long 104°22'12", Hydrologic Unit 13060007. Owner: Bartlett.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 5/8 in, depth 1150 ft, cased to 740 ft, open hole 740-1150 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, 65.19 ft below land-surface datum, Feb. 10, 1988; lowest measured, 261.75 ft below land-surface datum, Aug. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 10	65.19
Aug. 18	261.75

CIBOLA COUNTY
Grants-Bluewater Area

350400107510501. Local number, 10N.10W.26.331.

LOCATION.--Lat 35°04'00", long 107°51'05", Hydrologic Unit 13020207 Owner: Monico Mirabal.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 6	30.02
Sept. 29	30.37

350925107523001. Local number, 11N.10W.27.241.

LOCATION.--Lat 35°09'25", long 107°52'30", Hydrologic Unit 13020207. Owner: City of Grants.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled water-table industrial well, diameter 16 to 12 in., depth 158 ft, perforated to 50 to 150 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,840 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, 39.08 ft below land-surface datum, Aug. 1, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 6	19.37
Sept. 29	19.23

351400107524201. Local number, 12N.10W.29.434.

LOCATION.--Lat 35°14'00", long 107°52'42", Hydrologic Unit 13020207. Owner: A. R. Card.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 6	73.57
Sept. 29	73.74

351650107535001. Local number, 12N.11W.09.424.

LOCATION.--Lat 35°16'50", long 107°53'50", Hydrologic Unit 13020207. Owner: Tom Yager.

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. 1949 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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	WATER LEVEL
Jan. 6	89.85
Sept. 29	86.69

GROUND-WATER LEVELS

COLFAX COUNTY
Capulin Basin

364500104031501. Local number, 29N.27E.16.222.

LOCATION.--Lat 36°45'00", long 104°03'15", Hydrologic Unit 11040001. Owner: John King.

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 and Aug. 24, 1960; lowest measured, 9.37 ft below land-surface datum, Aug. 13, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Apr. 13	7.67
Aug. 16	8.45

COSTILLA COUNTY (in Colorado)
Sunshine Valley

370009105410001. Local number, 01N.74W.33.322.

LOCATION.--Lat 37°00'09", long 105°41'00", Hydrologic Unit 13020101. Owner: Waller and Allen.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Mar. 15	135.28
Aug. 17	134.37

CURRY COUNTY
Clovis area

342358103093601. Local number, 02N.36E.15.111.

LOCATION.--Lat 34°23'58", long 103°09'36", Hydrologic Unit 12050001. Owner: Unknown.

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 1.00 ft above land-surface datum.

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, 291.29 ft below land-surface datum, Aug. 6, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 12	280.80
Aug. 2	not measured

342815103270001. Local number, 03N.34E.23.433.

LOCATION.--Lat 34°28'15", long 103°27'00", Hydrologic Unit 12050001. Owner: Monte Matlock.

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, 356.29 ft below land-surface datum, Aug. 3, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan.	not measured
Aug. 3	356.29

GROUND-WATER LEVELS

451

CURRY COUNTY
Clovis area

343743103201501. Local number, 05N.34E.21.443.
 LOCATION.--Lat 34°37'43", long 103°20'15", Hydrologic Unit 11120101. Owner: Garrett Farms.
 AQUIFER.--Ogallala Formation.
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 510 ft.
 INSTRUMENTATION.--Periodic steel-tape measurements.
 DATUM.--Elevation of land-surface datum is 4,632 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 4 ft X 4 ft concrete pump base, 0.50 ft above land-surface datum.
 PERIOD OF RECORD.--Jan. 6, 1971 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 440.14 ft below land-surface datum, Jan. 6, 1971; lowest measured, 448.41 ft below land-surface datum, Jan. 6, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 11	440.84
Aug. 3	440.26

343615103123801. Local number, 05N.35E.35.313.
 LOCATION.--Lat 34°36'15", long 103°12'38", Hydrologic Unit 11120101. Owner: S. W. Pipkin.
 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 Mar. 26, 1954; lowest measured, 444.02 ft Sept. 4, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 11	443.40
Aug. 3	not measured

344500103032001. Local number, 06N.37E.08.333.
 LOCATION.--Lat 34°45'00", long 103°03'20", Hydrologic Unit 11120101. Owner: Paul Harrison.
 AQUIFER.--Ogallala Formation.
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 400 ft, casing information not available.
 INSTRUMENTATION.--Periodic steel-tape measurements.
 DATUM.--Elevation of land-surface datum is 4,430 ft above National Geodetic Vertical Datum of 1929. Measuring point: Southeast anchor bolt hole, 0.70 ft above land-surface datum.
 PERIOD OF RECORD.--Jan. 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 288.50 ft below land-surface datum, Jan. 11, 1988; lowest measured, 295.98 ft below land-surface datum, Aug. 15, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 11	288.50
Aug. 3	not measured

DONA ANA COUNTY
Rincon and Mesilla Valleys

322210106483001. Local number, 22S.01E.26.411.
 LOCATION.--Lat 32°22'10", long 106°48'30", Hydrologic Unit 13030102. Owner: H. Wortheim.
 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, 10.12 ft below land-surface datum, Jan. 27, 1977; lowest measured, 25.57 ft below land-surface datum, Apr. 25, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 3	11.77
Aug.	not measured

GROUND-WATER LEVELS

DONA ANA COUNTY
Rincon and Mesilla Valleys

321620106461501. Local number, 23S.02E.31.213.
 LOCATION.--Lat 32°16'20", long 106°46'15", Hydrologic Unit 13030102. Owner: New Mexico State University.
 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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 8	17.84
Aug.	not measured

EDDY COUNTY
Roswell Basin

325510104410001. Local number, 16S.23E.15.323.
 LOCATION.--Lat 32°55'10", long 104°41'00", Hydrologic Unit 13060007. Owner: D. .W. Runyan.
 AQUIFER.--Yeso.
 WELL CHARACTERISTICS.--Drilled oil test well, used for stock water, diameter 10 in., depth 1,458 ft, cased.
 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 casing 0.70 ft above land-surface datum.
 PERIOD OF RECORD.--Jan. 1951 to Jan. 1965, Feb. 1970 to Aug. 1971, Jan. 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 225.16 ft below land-surface datum, Jan. 12, 1951; lowest measured, 277.60 ft below land-surface datum, Aug. 5, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 10	241.54
Aug. 19	242.65

325735104360701. Local number, 16S.24E.04.23123.
 LOCATION.--Lat 32°57'35", long 104°36'07", Hydrologic Unit 13060007. Owner: Ellis Hunlic.
 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 3,623 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, 62.36 ft below land-surface datum, Feb. 10, 1988; lowest measured, 100.54 ft below land-surface datum, Aug. 27, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 10	62.36
Aug. 19	67.84

325712104314501. Local number, 16S.25E.06.313.
 LOCATION.--Lat 32°57'12", long 104°31'45", Hydrologic Unit 13060007. Owner: Frank Childress.
 AQUIFER.--Valley Fill.
 WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 20 in., depth 39 ft.
 INSTRUMENTATION.--Periodic steel-tape measurements.
 DATUM.--Elevation of land-surface datum is 3,600 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of cribbing 0.40 ft above land-surface datum.
 PERIOD OF RECORD.--Sept. 1937 to Jan. 1966, Aug. 1968 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.56 ft below land-surface datum, Aug. 18, 1988; lowest measured, 31.66 ft below land-surface datum, Aug. 8, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 10	26.60
Aug. 18	22.56

GROUND-WATER LEVELS

453

EDDY COUNTY
Roswell Basin

325638104274801. Local number, 16S.25E.11.111A.

LOCATION.--Lat 32°56'38", long 104°27'48", Hydrologic Unit 13060007. Owner: Pecos Valley Artesian Conservancy District.

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.--Digital recorder, 1-hour punch.

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.

REMARKS.--Records good.

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, 64.72 ft below land-surface datum, July 24, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	59.47	58.26	56.96	55.92	55.11	54.54	55.43	56.30	56.43	57.15	56.94	57.32
10	59.28	58.04	56.83	55.76	54.93	54.44	55.65	56.38	56.49	57.22	57.05	57.34
15	59.06	57.77	56.67	55.58	54.81	54.62	55.81	56.43	56.60	57.24	57.16	57.38
20	58.86	57.59	56.48	55.49	54.74	54.83	55.98	56.47	56.72	57.26	57.21	57.36
25	58.69	57.36	56.31	55.35	54.64	54.99	56.15	56.41	56.87	57.03	57.28	57.14
EOM	58.50	57.17	56.13	55.17	54.55	55.17	56.30	56.39	57.02	56.91	57.29	56.86
WTR YEAR 1988	HIGHEST		54.44	MAR 10, 1988	LOWEST	59.53	OCT 1, 1987					

325445104253501. Local number, 16S.26E.19.211.

LOCATION.--Lat 32°54'45", long 104°25'35", Hydrologic Unit 13060007. Owner: H. V. Parker.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 12 in., depth 175 ft, cased to 107 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,397.9 ft above National Geodetic Vertical Datum of 1929. Measuring point: 5/8" hole in pump base, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1938 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.34 ft below land-surface datum, Jan. 15, 1942; lowest measured, 112.85 ft below land-surface datum, Sept. 13, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 10	94.60
Aug. 19	102.48

324831104435701. Local number, 17S.23E.30.13244

LOCATION.--Lat 32°48'31", long 104°43'57", Hydrologic Unit 13060007. Owner: Village of Hope.

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 4,095 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2 in. pipe extension 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, 514.85 ft below land-surface datum, Jan. 27, 1988; lowest measured, 553.18 ft below land-surface datum, Aug. 7, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 27	514.85
Aug. 17	533.65

324620104255001. (formerly 324624104244501) Local number, 18S.26E.06.442A.

LOCATION.--Lat 32°46'24", long 104°24'45", Hydrologic Unit 13060007. Owner: Pecos Valley Artesian Conservancy District.

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 punch.

DATUM.--Elevation of land-surface datum is 3,402.1 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 3.40 ft above land-surface datum.

REMARKS.--Records good.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 64.40 ft below land-surface datum, Feb. 22, 1988; lowest, 209.15 ft below land-surface datum, July 31-Aug. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	112.62	92.75	82.05	74.04	68.36	66.34	100.81	115.86	107.23	109.07	129.83	121.58
10	108.35	90.06	80.14	72.14	66.14	68.44	112.28	112.73	117.74	108.69	133.22	121.71
15	104.31	87.02	78.59	72.12	66.38	72.17	115.18	113.08	118.11	104.60	131.81	124.25
20	100.27	84.56	78.06	70.34	64.62	78.02	118.63	110.55	119.20	104.80	131.58	124.36
25	96.06	84.44	76.06	70.04	66.24	86.81	114.22	106.76	127.21	104.05	136.66	107.67
EOM	93.65	82.50	74.43	68.06	66.02	96.52	115.44	101.37	121.15	117.71	131.56	104.43
WTR YEAR 1988	HIGHEST		64.40	FEB 21, 1988	LOWEST	142.31	AUG 27, 1988					

GROUND-WATER LEVELS

EDDY COUNTY
Roswell Basin

324620104255101. Local number, 18S.26E.06.442B.

LOCATION.--Lat 32°46'20", long 104°25'51", Hydrologic Unit 13060007. Owner: Pecos Valley Artesian Conservancy District.

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 punch.

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 good.

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, 140.59 ft below land-surface datum, Sept. 13, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	125.18	120.72	116.66	113.73	111.60	109.65	112.62	118.54	119.49	121.00	120.65	124.95
10	124.70	120.07	116.20	113.40	110.91	109.01	114.52	118.80	120.07	120.69	121.62	124.89
15	123.83	119.15	115.87	112.75	110.57	109.08	115.87	119.14	120.25	120.15	122.45	124.84
20	123.22	118.53	115.37	112.68	110.45	109.42	117.02	119.83	120.46	120.02	123.22	124.87
25	122.26	117.88	114.87	112.16	110.11	110.27	117.72	119.89	121.00	119.38	124.05	124.20
EOM	121.45	117.39	114.30	111.65	109.80	111.34	118.17	119.84	121.18	119.68	124.85	123.28

WTR YEAR 1988 HIGHEST 109.01 MAR 10, 1988 LOWEST 125.66 OCT 3, 1987

324325104233001. Local number, 18S.26E.28.122.

LOCATION.--Lat 32°43'25", long 104°23'30", Hydrologic Unit 13060011. Owner: Town of Dayton.

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.--Digital recorder, 1-hour punch.

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.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.79 ft below land-surface datum, Feb. 5, 1952; lowest, 124.87 ft below land-surface datum, Feb. 25, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	122.42	122.51	122.39	122.37	122.37	122.22	122.18	122.20	122.17	122.18	122.16	122.21
10	122.47	122.53	122.41	122.40	122.23	122.10	122.27	122.21	122.21	122.16	122.17	122.21
15	122.42	122.38	122.46	122.30	122.23	122.15	122.19	122.14	122.23	122.18	122.17	122.20
20	122.47	122.48	122.36	122.38	122.27	122.17	122.18	122.15	122.20	122.17	122.15	122.21
25	122.48	122.43	122.40	122.36	122.28	122.17	122.22	122.19	122.19	122.15	122.18	122.22
EOM	122.45	122.41	122.32	122.24	122.24	122.11	122.17	122.10	122.13	122.15	122.17	122.20

WTR YEAR 1988 HIGHEST 122.07 MAY 29, 1988 LOWEST 122.59 NOV 18, 1987

323540104233001. Local number, 20S.26E.08.1211.

LOCATION.--Lat 32°35'40", long 104°23'20", Hydrologic Unit 13060011. Owner: Moutry.

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 2,386 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, 25.87 ft below land-surface datum, Jan. 2, 1943; lowest measured, 90.25 ft below land-surface datum, Aug. 8, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 15	62.79
Aug. 16	70.34

EDDY COUNTY
Carlsbad Area

322637104142301. (formerly 322652104141901) Local number, 21S.26E.36.221.

LOCATION.--Lat 32°26'52", long 104°14'19", Hydrologic Unit 13060011. Owner: City of Carlsbad.

AQUIFER.--Capitan Limestone.

WELL CHARACTERISTICS.--Drilled water-table municipal well, diameter 20 in., depth 327 ft, casing 0-290 ft.

INSTRUMENTATION.--Digital recorder, 1-hr punch.

DATUM.--Elevation of land-surface datum is 3,121.84 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 4.14 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.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.54	19.56	19.56	19.42	18.62	18.19	19.10	20.32	20.97	21.15	21.07	20.89
10	19.76	19.62	19.63	19.25	18.27	18.13	19.52	20.53	21.51	21.09	20.86	21.04
15	19.53	19.38	19.71	18.98	18.18	18.31	19.76	20.74	21.26	21.38	20.72	21.17
20	19.58	19.59	19.66	18.93	18.20	18.54	19.88	20.62	21.29	21.13	20.82	21.18
25	19.51	19.54	19.62	18.81	18.16	18.79	20.01	20.83	21.55	21.06	21.10	20.49
EOM	19.58	19.60	19.59	18.55	18.14	18.85	20.01	20.73	21.03	21.26	20.89	20.45

WTR YEAR 1988 HIGHEST 18.03 FEB 22, 1988 LOWEST 21.70 JUNE 24, 1988

322640104165801. Local number, 21S.27E.32.112.

LOCATION.--Lat 32°26'40", long 104°16'58", Hydrologic Unit 13060011. Owner: L. E. Loman.

AQUIFER.--Capitan Limestone.

WELL CHARACTERISTICS.--Drilled artesian domestic and irrigation well, diameter 12 in., reported depth 305 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,112 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.40 ft above land-surface datum.

PERIOD OF RECORD.--Oct. 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.64 ft below land-surface datum, Jan. 17, 1950; lowest measured, 17.35 ft below land-surface datum, Aug. 9, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 25	9.34
Aug. 16	11.47

322712104074501. (formerly 322710104073901) Local number, 21S.28E.30.141.

LOCATION.--Lat 32°27'10", long 104°07'39", Hydrologic Unit 13060011. Owner: Forrest Miller.

AQUIFER.--Capitan Limestone.

WELL CHARACTERISTICS.--Drilled exploration well, diameter 8 5/8 - 5 1/2 in., reported depth 1,060 ft, plugged back, total depth 906 ft.

INSTRUMENTATION.--Digital recorder, 1-hour punch.

DATUM.--Elevation of land-surface datum is 3,181.71 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 1.64 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.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	90.77	90.86	90.82	90.69	89.92	89.47	90.41	91.56	92.30	92.52	92.36	92.17
10	91.06	90.95	90.91	90.59	89.58	89.43	90.77	91.81	92.76	92.36	92.13	92.36
15	90.84	90.69	90.97	90.26	89.41	89.51	90.95	91.97	92.52	92.69	91.96	92.48
20	90.93	90.90	90.90	90.25	89.45	89.76	91.14	91.96	92.67	92.53	92.05	92.45
25	90.81	90.84	90.89	90.13	89.43	90.05	91.24	92.10	92.82	92.35	92.33	91.83
EOM	90.87	90.87	90.88	89.84	89.36	90.03	91.22	92.04	92.29	92.52	92.20	91.81

WTR YEAR 1988 HIGHEST 89.23 MAR 1, 1988 LOWEST 93.02 JUN 25, 1988

GROUND-WATER LEVELS

EDDY COUNTY
Carlsbad Area

322120104151501. Local number, 22S.26E.25.3333. (formerly 22S.26E.36.111A)

LOCATION.--Lat 32°21'20", long 104°15'15", Hydrologic Unit 13060011. Owner: Carlsbad Airfield.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 12 in., depth 260 ft, cased to 260 ft.

INSTRUMENTATION.--Digital recorder, 1-hour punch.

DATUM.--Elevation of land-surface datum is 3,225 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder platform, 2.70 ft above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--July 1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 131.50 ft below land-surface datum, Oct. 14, 1942; lowest, 214.82 ft below land-surface datum, Sept. 15, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	141.30	139.48	138.21	138.38	138.94	139.77	144.36	149.98	152.41	154.03	153.64	152.36
10	141.63	139.33	138.25	138.45	138.75	139.58	146.48	150.12	152.31	153.82	153.03	152.07
15	141.02	138.68	138.34	138.29	138.81	140.02	147.84	150.20	152.98	153.25	151.92	152.32
20	140.78	138.78	138.25	138.52	139.01	141.12	148.36	150.75	153.80	153.20	151.41	152.76
25	140.20	138.45	138.24	138.64	139.21	141.71	148.98	151.13	154.93	152.24	152.11	152.33
EOM	139.75	138.36	138.35	138.54	139.56	142.95	149.27	152.03	154.95	152.53	152.25	151.18

WTR YEAR 1988 HIGHEST 138.03 DEC 23, 1987 LOWEST 155.34 JUN 28, 1988

322231104131001. Local number, 22S.27E.22.421.

LOCATION.--Lat 32°22'31", long 104°13'10", Hydrologic Unit 13060011. Owner: Enea Grandi.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 25	28.28
Aug. 16	29.55

321741104204901. (formerly 321721104204801) Local number, 23S.25E.24.213.

LOCATION.--Lat 32°17'21", long 104°20'48", Hydrologic Unit 13060011. Owner: City of Carlsbad.

AQUIFER.--Capitan Limestone.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 16 in. 0-20 ft, open hole 20-900 ft.

INSTRUMENTATION.--Digital recorder, 1-hr punch.

DATUM.--Elevation of land-surface datum is 3,501.7 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.17 ft above land-surface datum.

REMARKS.--Lost record, several days, due to recorder malfunction.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 369.53 ft below land-surface datum, June 27, 1986; lowest measured, 404.06 ft below land-surface datum, July 10, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	396.33	396.39	396.38	396.40	395.90	395.48	395.96	397.02	397.77	398.02	397.37	---
10	396.51	396.41	396.45	396.29	395.63	395.48	396.27	397.44	398.36	398.11	---	---
15	396.38	396.17	396.51	396.11	---	395.70	396.44	397.46	398.05	---	---	---
20	396.37	396.45	396.44	396.02	395.47	---	396.56	397.44	398.09	391.05	397.99	---
25	396.29	396.37	396.42	396.00	395.53	395.70	396.76	397.75	398.48	397.64	398.33	---
EOM	396.38	396.37	396.50	395.79	395.54	395.70	396.85	397.53	397.94	397.97	---	396.85

WTR YEAR 1988 HIGHEST 395.39 FEB 22, 1988 LOWEST 398.65 JUN 24, 1988

GROUND-WATER LEVELS

457

EDDY COUNTY
Carlsbad Area

321930104113301. Local number, 23S.27E.09.211.

LOCATION.--Lat 32°19'30", long 104°11'33", Hydrologic Unit 13060011. Owner: H. C. Bindel.

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 3,150 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, 60.92 ft below land-surface datum, Jan. 13, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 25	55.99
Aug. 16	54.07

320602104285201. Local number, 25S.24E.27.421.

LOCATION.--Lat 32°06'02", long 104°28'52", Hydrologic Unit 13060011. Owner: Walker Hood.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 26	52.13
Aug. 22	50.12

320257104295201. Local number, 26S.24E.09.441.

LOCATION.--Lat 32°02'57", long 104°29'52", Hydrologic Unit 13060011. Owner: John Mayes.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 26	35.41
Aug. 22	35.31

GRANT COUNTY
Silver City Area

324600108222501. Local number, 18S.15W.11.323.

LOCATION.--Lat 32°46'00", long 108°22'25", Hydrologic Unit 15040002. Owner: Town of Silver City.

AQUIFER.--Gila Conglomerate.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 12 in., depth 580 ft.

INSTRUMENTATION.--Digital recorder, 1-hour punch.

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.

REMARKS.--Records good.

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, 294.52 ft below land-surface datum, Apr. 20, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	288.95	288.76	288.86	288.59	288.55	288.31	288.27	288.05	288.15	288.70	288.53	288.42
10	288.96	288.94	288.94	288.73	288.35	287.89	288.45	288.16	288.53	288.76	288.41	288.47
15	288.80	288.42	288.86	288.41	288.28	288.01	288.14	288.12	288.71	288.80	288.02	288.60
20	288.97	288.77	288.79	288.55	288.44	288.25	288.08	288.12	288.59	288.84	288.32	288.53
25	288.96	288.48	288.48	288.72	288.41	288.15	288.16	288.23	288.58	288.72	288.41	288.92
EOB	288.76	288.63	288.73	288.40	288.23	287.87	288.04	288.15	288.51	288.64	288.27	288.72

WTR YEAR 1988 HIGHEST 287.87 MAR 30,31, 1988 LOWEST 289.01 SEPT 25, 1988

GROUND-WATER LEVELS

GUADALUPE COUNTY
Santa Rosa Area

350414104485101. Local number, 10N.20E.28.2214.

LOCATION.--Lat 35°04'14", long 104°48'51", Hydrologic Unit 13060001. Owner: Town of Santa Rosa.

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 punch.

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, 345.67 ft below land-surface datum, July 4, 1985; lowest measured, 362.36 ft below land-surface datum, Apr. 12, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	346.15	347.07	347.82	348.79	349.56	350.26	350.66	350.56	349.75	349.37	348.55	346.73
10	346.17	347.26	348.02	348.98	349.52	350.20	350.69	350.60	349.75	348.78	347.86	346.59
15	346.29	347.21	348.14	349.02	349.68	350.35	350.61	350.42	349.46	348.71	347.70	346.28
20	346.57	347.47	348.37	349.24	349.81	350.52	350.43	350.33	349.22	348.62	347.44	346.12
25	346.65	347.58	348.47	349.37	350.00	350.63	350.37	350.13	349.25	348.84	347.25	345.99
EOM	346.84	347.70	348.67	349.41	350.09	350.63	350.43	349.87	349.11	348.60	346.81	345.87

WTR YEAR 1988 HIGHEST 345.75 OCT 1, 1987 LOWEST 351.48 MAY 21, 1988

HARDING COUNTY
Roy Area

355352104054201. Local number, 19N.27E.05.334.

LOCATION.--Lat 35°53'52", long 104°05'42", Hydrologic Unit 11080007. Owner: Town of Roy.

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" 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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Apr. 14	51.83
Aug. 15	51.28

360340104085001. Local number, 21N.26E.03.4443.

LOCATION.--Lat 36°03'40", long 104°08'50", Hydrologic Unit 11080007. Owner: Unknown.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 5 in., depth 120 ft, cased to 120 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 5,870 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 5 in. galvanized casing, 0.30 ft above land-surface datum on east side.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.92 ft below land-surface datum, Jan. 28, 1976; lowest measured, 84.45 ft below land-surface datum, Sept. 3, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Apr. 14	83.42
Aug. 15	83.33

HIDALGO COUNTY
Virden Valley

324053108594101. Local number, 19S.21W.03.414.

LOCATION.--Lat 32°40'53", long 108°59'41", Hydrologic Unit 15040002. Owner: Jones, Clouse, and Jensen.

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. 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.27 ft below land-surface datum, Jan. 12, 1979; lowest measured, 14.54 ft below land-surface datum, Sept. 12, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 11	11.40
July 13	12.77

GROUND-WATER LEVELS

459

HIDALGO COUNTY
Lordsburg Area

321848108391401. Local number, 23S.18W.12.333.

LOCATION.--Lat 32°18'48", long 108°39'14", Hydrologic Unit 15040003. Owner: R. I. McDonald.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 12 in., depth and casing information not available.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,365 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.--Jan. 1958 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. 2, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 11	168.29
July 14	171.67

321540108514101. Local number, 23S.20W.25.422.

LOCATION.--Lat 32°15'40", long 108°51'41", Hydrologic Unit 15040003. Owner: Kerr Cattle Co.

AQUIFER.--Bolson deposits.

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 0.80 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, 50.49 ft below land-surface datum, Jan. 13, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 13	50.49
July 14	50.25

321257108331201. Local number, 24S.17W.14.442.

LOCATION.--Lat 32°12'57", long 108°33'12", Hydrologic Unit 15040003. Owner: E. W. Richens.

AQUIFER.--Bolson deposits.

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 4,276 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 1.00 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 78.97 ft below land-surface datum, Jan. 7, 1981; lowest measured, 114.90 ft below land-surface datum, Jan. 15, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 11	88.79
July 14	88.77

Animas Valley

315645108493501. Local number, 27S.19W.20.343.

LOCATION.--Lat 31°56'45", long 108°49'35", Hydrologic Unit 15040003. Owner: Felix Gauthier.

AQUIFER.--Bolson deposits.

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 4,420 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.--Jan. 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 132.12 ft below land-surface datum, Jan. 19, 1950; lowest measured, 198.50 ft below land-surface datum, Aug. 1, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 13	176.35
July 13	not measured

GROUND-WATER LEVELS

HIDALGO COUNTY
San Simon Valley

315010108570001. Local number, 28S.21W.30.222.
 LOCATION.--Lat 31°50'10", long 108°57'00", Hydrologic Unit 15040006. Owner: C. L. Johnston.
 AQUIFER.--Bolson deposits
 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 4,440 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. 1971 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 112.62 ft below land-surface datum, Jan. 19, 1971; lowest measured, 124.20 ft below land-surface datum, July 15, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 12	122.79
July 13	122.86

Playas Valley

313502108275001. Local number, 31S.16W.33.233.
 LOCATION.--Lat 31°35'02", long 108°27'50", Hydrologic Unit 13030201. Owner: U-Bar Ranch.
 AQUIFER.--Bolson deposits.
 WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 16 in., depth 654 ft, 16 in. casing.
 INSTRUMENTATION.--Periodic steel-tape measurements.
 DATUM.--Elevation of land-surface datum is 4,400 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. 1971 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.66 ft below land-surface datum, Apr. 18-20, and 30, 1973; lowest, 54.95 ft below land-surface datum, Sept. 4, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 14	47.21
July 15	46.94

312938108302301. Local number, 32S.16W.30.134.
 LOCATION.--Lat 31°29'38", long 108°30'23", Hydrologic Unit 13030201. Owner: C. C. Edwards.
 AQUIFER.--Bolson deposits.
 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 4,490 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 3/4" pipe nipple inside pump shell, 1.45 ft above land-surface datum.
 REMARKS.--a indicates pumping water level.
 PERIOD OF RECORD.--Mar. 1952 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 85.11 ft below land-surface datum, Mar. 27, 1952; lowest measured, 129.10a ft below land-surface datum, Aug. 20, 1962.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 14	87.84
July 15	87.45

LEA COUNTY
Tatum-Lovington-Hobbs Area

331740103285001. Local number, 12S.34E.11.421.
 LOCATION.--Lat 33°17'40", long 103°28'50", Hydrologic Unit 12080006. Owner: A. D. Jones.
 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 4,150 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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 7	31.20
Aug. 3	31.13

LEA COUNTY
Tatum-Lovington-Hobbs Area

330400103193401. Local number, 14S.36E.32.121.

LOCATION.--Lat 33°04'00", long 103°19'34", Hydrologic Unit 12080003. Owner: E. T. Howell.

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, 70.07 ft below land-surface datum, Jan. 14, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 7	67.03
Aug. 3	67.27

325730103213901. (formerly 325703103213201) Local number, 16S.36E.04.322.

LOCATION.--Lat 32°57'03", long 103°21'32", Hydrologic Unit 12080003. Owner: City of Lovington.

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 punch.

DATUM.--Elevation of land-surface datum is 3,926 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelf, 4.00 ft above land-surface datum.

REMARKS.--Lost record, many days, due to lost digital tape.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 60.38 ft below land-surface datum, Sept. 30, 1988; lowest measured, 67.11 ft below land-surface datum, Aug. 24, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	61.15	61.02	60.90	60.88	60.81	---	---	60.69	60.68	60.67	60.57	60.49
10	61.14	61.02	60.92	60.86	60.78	---	60.72	60.70	60.69	60.66	60.56	60.48
15	61.10	60.97	60.92	60.83	60.76	---	60.70	60.69	60.69	60.61	60.55	60.47
20	61.10	60.98	60.93	60.86	60.78	---	60.68	60.70	60.68	60.66	60.55	60.45
25	61.04	60.94	60.90	60.82	60.76	---	60.69	60.70	60.67	60.60	60.54	60.43
EOB	61.04	60.93	60.91	60.79	60.74	---	60.69	60.69	60.67	60.59	60.50	60.38

WTR YEAR 1988 HIGHEST 60.38 SEP 30, 1988 LOWEST 61.21 OCT 3, 1987

325658103200001. Local number, 16S.37E.11.111.

LOCATION.--Lat 32°56'58", long 103°20'00", Hydrologic Unit 12080003. Owner: H. J. Taylor.

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, 78.64 ft below land-surface datum, Jan. 3, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 7	66.41
Aug. 3	65.91

324947103371001. Local number, 17S.33E.13.341.

LOCATION.--Lat 32°49'47", long 103°37'10", Hydrologic Unit 12080003. Owner: Potash Co. of America.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table observation well, diameter 6 in., depth 252 ft, cased to 252 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,124 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 1.10 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 146.00 ft below land-surface datum, Jan. 21, 1953; lowest measured, 174.15 ft below land-surface datum, Jan. 6, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 7	170.35
Aug. 3	170.60

GROUND-WATER LEVELS

LEA COUNTY
Tatum-Lovington Hobbs Area

325132103112501. Local number, 17S.38E.07.111A.
 LOCATION.--Lat 32°51'32", long 103°11'25", Hydrologic Unit 12080003. Owner: L. R. Seblings.
 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 small pipe projecting from west side of pump, 1.91 ft above land-surface datum.
 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, 74.15 ft below land-surface datum, July 22, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 8	68.07
Aug. 3	66.53

324745103082001. Local number, 17S.38E.34.113.
 LOCATION.--Lat 32°47'45", long 103°08'20", Hydrologic Unit 12080003. Owner: W. E. Busby.
 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 1/2 in. hole in pump base, 0.54 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, 62.29 ft below land-surface datum, Sept. 4, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 8	61.08
Aug. 3	61.34

LINCOLN COUNTY
Hondo Valley

333242105340701. Local number, 09S.14E.10.132.
 LOCATION.--Lat 33°32'42", long 105°34'07", Hydrologic Unit 13060008. Owner: Village of Capitan.
 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.
 PERIOD OF RECORD.--June 1955 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.34 ft below land-surface datum, Aug. 30, 1979; lowest measured, 69.77 ft below land-surface datum, Nov. 28, 1956.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 27	38.83
Aug. 18	38.05

332145105333001. Local number, 11S.14E.15.432.
 LOCATION.--Lat 33°21'45", long 105°33'30", Hydrologic Unit 13060008. Owner: E. H. Fuchs.
 AQUIFER.--Alluvium.
 WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 8 in., depth 90 ft, casing information not available.
 INSTRUMENTATION.--Periodic steel-tape measurements.
 DATUM.--Elevation of land-surface datum is 6,200 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 1.00 ft above land-surface datum.
 PERIOD OF RECORD.--July 1955 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.16 ft below land-surface datum, Mar. 26, 1958; lowest measured, 63.75 ft below land-surface datum, Aug. 10, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 27	60.06
Aug. 18	not measured

LINCOLN COUNTY
Hondo Valley

332157105094101. Local number, 11S.18E.15.333.

LOCATION.--Lat 33°21'57", long 105°09'41", Hydrologic Unit 13060008. Owner: Lincoln County Livestock Co.

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 5,010 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.5 ft above land-surface datum.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 28	47.46
Aug. 18	44.43

LUNA COUNTY
Nutt-Hockett

322930107221001. Local number, 21S.05W.08.444.

LOCATION.--Lat 32°29'30", long 107°22'10", Hydrologic Unit 13030202. Owner: Leonard Farms.

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 NE 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, 181.13 ft below land-surface datum, Aug. 19, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan.	not measured
Aug.	not measured

Mimbres Valley

321352107493901. Local number, 24S.10W.12.431.

LOCATION.--Lat 32°13'52", long 107°49'39", Hydrologic Unit 13030202. Owner: Steve Hrna.

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 4,330 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelter shelf, 1.36 ft above land-surface datum.

REMARKS.--Recorder removed June 30, 1986.

PERIOD OF RECORD.--Apr. 1939 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 71.61 ft below land-surface datum, May 6-13, 1940; lowest, 113.30 ft below land-surface datum, Aug. 12 and 20, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	LEVEL
Jan. 20	100.23
July 8	103.45

321415107565501. Local number, 24S.11W.14.122.

LOCATION.--Lat 32°14'15", long 107°56'55", Hydrologic Unit 13030202. Owner: Charles Waldrop.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 25	170.22
July 15	171.04

GROUND-WATER LEVELS

LUNA COUNTY
Mimbres Valley

321015107260501. Local number, 25S.06W.02.111.

LOCATION.--Lat 32°10'15", long 107°26'05", Hydrologic Unit 13030202. Owner: C. W. Johnson, Jr.

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 4,220 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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 25	18.27
July 19	18.29

320915104294501. Local number, 25S.06W.07.211.

LOCATION.--Lat 32°09'15", long 104°29'45", Hydrologic Unit 13030202. Owner: H. C. Telles.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 25	85.10
July 19	85.27

315525107374501. Local number, 27S.08W.35.122.

LOCATION.--Lat 31°55'25", long 107°37'45", Hydrologic Unit 13030202. Owner: M. M. Gibson.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 25	72.76
July 19	76.69

315905107425001. Local number, 27S.09W.01.431.

LOCATION.--Lat 31°59'05", long 107°42'50", Hydrologic Unit 13030202. Owner: I. G. Burns.

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, 47.26 ft below land-surface datum, Aug. 11, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 25	38.35
July 19	38.55

LUNA COUNTY
Mimbres Valley

314938107371401. Local number, 28S.08W.36.411.

LOCATION.--Lat 31°49'38", long 107°37'14", Hydrologic Unit 13030202. Owner: M. R. Hemley.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., depth 250 ft, cased to 250 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,008 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.85 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.18 ft below land-surface datum, Aug. 2, 1983; lowest measured, 27.85 ft below land-surface datum, Jan. 14, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 25	11.45
July 19	10.37

MORA COUNTY
Watrous Area

354840104590301. Local number, 18N.18E.01.333.

LOCATION.--Lat 35°48'40", long 104°59'03", Hydrologic Unit 11080004. Owner: Sellman Bros.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 14 in., depth 100 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,420 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in southeast corner of pump base, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.21 ft below land-surface datum, July 17, 1984; lowest measured, 6.74 ft below land-surface datum, Feb. 14, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Apr. 13	not measured
Aug. 17	3.90

OTERO COUNTY
Tularosa-Alamogordo Area

330324106011201. Local number, 14S.10E.31.144.

LOCATION.--Lat 33°03'24", long 106°01'12", Hydrologic Unit 13050003. Owner: Luther Watson.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Mar. 31	95.91
Aug. 10	113.38

GROUND-WATER LEVELS

OTERO COUNTY
Crow Flats Basin
(Salt Basin)

320657105061501. Local number, 25S.18E.21.233.

LOCATION.--Lat 32°06'57", long 105°06'15", Hydrologic Unit 13050004. Owner: Gene Lewis.

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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 26	91.99
Aug. 22	94.01

320650105034801. Local number, 26S.18E.21.331.

LOCATION.--Lat 32°06'50", long 105°03'48", Hydrologic Unit 13050004. Owner: Frank Gentry.

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 4,000 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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 26	57.48
Aug. 22	65.35

QUAY COUNTY
House Area

343810103463001. Local number, 05N.30E.18.331.

LOCATION.--Lat 34°38'10", long 103°46'30", Hydrologic Unit 13060004. Owner: W. C. and H. J. Lee.

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 4,640 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 LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 14	43.52
Aug. 1	43.63

344350103553001. Local number, 06N.28E.24.233.

LOCATION.--Lat 34°43'50", long 103°55'30", Hydrologic Unit 13060004. Owner: G. B. Irwin.

AQUIFER.--Ogallala formation.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 16 in., reported depth 131 ft, cased to 131 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,790 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2 in. opening in concrete base, 1.21 ft above land-surface datum.

PERIOD OF RECORD.--Mar. 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 77.97 ft below land-surface datum, Mar. 27, 1944; lowest measured, 113.50 ft below land-surface datum, Aug. 20, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 14	103.19
Aug. 1	110.19

ROOSEVELT COUNTY
Portales Valley

341852103090701. Local number, 01N.36E.21.213.

LOCATION.--Lat 34°18'52", long 103°09'07", Hydrologic Unit 12050001. Owner: Unknown.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, casing data and depth unknown.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,141 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1 in. hole in west side of pump base, 1.45 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 141.57 ft below land-surface datum, Jan. 30, 1963; lowest measured, 211.19 ft below land-surface datum, Aug. 18, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 13	209.57
Aug. 1	not measured

341037103254501. Local number, 01S.33E.36.23111.

LOCATION.--Lat 34°10'37", long 103°25'45", Hydrologic Unit 12050002. Owner: State of New Mexico.

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.

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, 86.42 ft below land-surface datum, Jan. 17, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 11	85.32
Aug. 1	not measured

340740103145501. Local number, 02S.35E.23.111.

LOCATION.--Lat 34°07'40", long 103°14'55", Hydrologic Unit 12050001. Owner: P. O. Dozier.

AQUIFER.--Valley Fill.

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 3,963 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of concrete pump base, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.32 ft below land-surface datum, Mar. 27, 1951; lowest measured, 51.90 ft below land-surface datum, Jan. 9, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 13	47.85
Aug. 1	48.43

Causey-Lingo Area

335655103032001. Local number, 06S.38E.21.233.

LOCATION.--Lat 33°56'55", long 103°03'20", Hydrologic Unit 12050001. Owner: C. C. Harvey.

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 3,927 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.

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, 115.21 ft below land-surface datum, Aug. 11, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 10	94.53
Aug. 3	94.16

GROUND-WATER LEVELS

SANDOVAL COUNTY
Bernalillo Area

352235106282401. Local number, 13N.04E.12.112.

LOCATION.--Lat 35°22'35", long 106°28'24", Hydrologic Unit 13020201. Owner: John Bowers.

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 6,265 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, 20.94 ft below land-surface datum, Sept. 9, 1987; lowest measured, 25.27 ft below land-surface datum, Jan. 31, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 14	23.16
Sept. 29	22.93

SANTA FE COUNTY
Estancia Valley

350525106025001. Local number, 10N.08E.13.133.

LOCATION.--Lat 35°05'25", long 106°02'50", Hydrologic Unit 13050001. Owner: W. R. Irby.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter unknown, reported depth 513 ft, casing information not available.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,265 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.--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, 150.00 ft below land-surface datum, July 17, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 9	134.59
Aug. 12	not measured

350340106005001. Local number, 10N.09E.29.133.

LOCATION.--Lat 35°03'40", long 106°00'50", Hydrologic Unit 13050001. Owner: Glen Terry.

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 6,240 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.

PERIOD OF RECORD.--Feb. 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.96 ft below land-surface datum, Feb. 16, 1951; lowest measured, 124.26 ft below land-surface datum, Aug. 12, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 9	104.51
Aug. 12	124.26

SANTA FE COUNTY
Santa Fe Area

354005105574501. Local number, 17N.09E.27.441.

LOCATION.--Lat 35°40'05", long 105°57'45", Hydrologic Unit 13020201. Owner: U.S. Indian School.

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 6,848 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 2.40 ft above land-surface datum.

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, 215.60 ft below land-surface datum, July. 28, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Mar. 28	209.39
July 28	215.60

SIERRA COUNTY
Hot Springs Area

331002107150001. Local number, 13S.04W.21.213.

LOCATION.--Lat 33°10'02", long 107°15'00", Hydrologic Unit 13030101. Owner: Unknown.

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 1/2 in. hole in top of discharge pipe, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--Feb. 25, 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.20 ft below land-surface datum, Aug. 31, 1987; lowest measured, 65.56 ft below land-surface datum, Feb. 25, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 21	53.16
Aug.	not measured

325550107184001. Local number, 15S.05W.24.312.

LOCATION.--Lat 32°55'50", long 107°18'40", Hydrologic Unit 13030101. Owner: William M. Dawson.

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, 25.13 ft below land-surface datum, Sept. 11, 1975; lowest, 41.97 ft below land-surface datum, Feb. 29, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 3	40.68
Aug.	not measured

Rincon Valley

325350107175501. Local number, 16S.05W.25.211.

LOCATION.--Lat 32°53'35", long 107°17'55", Hydrologic Unit 13030102. Owner: U.S. Government.

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 4,050 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.29 ft below land-surface datum, Feb. 12, 1987; lowest measured, 27.78 ft below land-surface datum, Jan. 6, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 21	12.46
Sept. 27	not measured

GROUND-WATER LEVELS

TAOS COUNTY
Sunshine Valley

365036105355301. Local number, 30N.13E.18.1121.

LOCATION.--Lat 36°50'36", long 105°35'53", Hydrologic Unit 13020101. Owner: Unknown.

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 7,600 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, 66.52 ft below land-surface datum, Jan. 21, 1985; lowest measured, 77.33 ft below land-surface datum, Aug. 9, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Mar. 15	70.38
Aug. 17	70.58

365650105370001. Local number, 01S.74W.24.244.

LOCATION.--Lat 36°56'50", long 105°37'00", Hydrologic Unit 13020101. Owner: Dimmitt.

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 7,620 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, 187.24 ft below land-surface datum, Mar. 14, 1988; lowest measured, 213.53 ft below land-surface datum, Aug. 10, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Mar. 14	187.24
Aug. 17	187.76

365410105354501. Local number, 02S.73W.05.222.

LOCATION.--Lat 36°54'10", long 105°35'45", Hydrologic Unit 13020101. Owner: Unknown.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled water-table domestic and stock well, diameter 6 in., depth unknown.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 7,587 ft above National Geodetic Vertical Datum of 1929. Measuring point: 1 in. hole in plate over casing, 0.10 ft above land-surface datum.

PERIOD OF RECORD.--Feb. 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 72.77 ft below land-surface datum, Aug. 17, 1988; lowest measured, 84.78 ft below land-surface datum, Jan. 27, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Mar. 15	72.92
Aug. 17	72.77

TORRANCE COUNTY
Estancia Valley

343443106024401. Local number, 04N.09E.07.334.

LOCATION.--Lat 34°34'43", long 106°02'44", Hydrologic Unit 13050001. Owner: Franklin Development.

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, 93.91 ft below land-surface datum, Aug. 11, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 28	80.79
Aug. 11	93.91

TORRANCE COUNTY
Estancia Valley

344016106064701. Local number, 05N.08E.08.424.

LOCATION.--Lat 34°40'16", long 106°06'47", Hydrologic Unit 13050001. Owner: J. J. Spangler.

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 6,214 ft above National Geodetic Vertical Datum of 1929. Measuring point: .75 inch plug in south side of discharge pipe, 1.80 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 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, 129.74 ft below land-surface datum, Sept. 17, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 28	123.85
Aug. 11	127.52

344234106074901. Local number, 06N.08E.32.212.

LOCATION.--Lat 34°42'34", long 106°07'49", Hydrologic Unit 13050001. Owner: Robert Mc Math.

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 6,165 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.

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, 83.51 ft below land-surface datum, Sept. 4, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 28	78.16
Aug. 11	82.46

344622105575501. Local number, 06N.09E.11.211.

LOCATION.--Lat 34°46'22", long 105°57'55", Hydrologic Unit 13050001. Owner: Paragon Corp.

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.--Feb. 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.80 ft below land-surface datum, Feb. 8, 1950; lowest measured, 28.25 ft below land-surface datum, July 19, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Jan. 28	13.95
Aug. 17	15.05

345900106034301. Local number, 09N.08E.24.334.

LOCATION.--Lat 34°59'00", long 106°03'43", Hydrologic Unit 13050001. Owner: Unknown.

AQUIFER.--Valley Fill

WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 16 in., depth unknown.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,200 ft above National Geodetic Vertical Datum of 1929. Measuring point: Anchor bolt hole, northwest corner, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--Feb. 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 72.08 ft below land-surface datum, Jan. 30, 1980; lowest measured, 85.77 ft below land-surface datum, Aug. 12, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Feb. 9	80.82
Aug. 12	85.77

GROUND-WATER LEVELS

UNION COUNTY
Clayton Area

360940103083501. Local number, 19N.36E.23.244.
 LOCATION.--Lat 36°09'40", long 103°08'35", Hydrologic Unit 11090102. Owner: Stevens.
 AQUIFER.--Dakota and Purgatoire Sandstone.
 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.--c indicated nearby well being pumped.
 PERIOD OF RECORD.--Mar. 1970 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 145.22 ft below land-surface datum, Mar. 17, 1971; lowest measured, 158.58c ft below land-surface datum, Aug. 19, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Apr. 14	147.63
Aug. 16	151.13

361015103075201. Local number, 22N.36E.05.131.
 LOCATION.--Lat 36°10'15", long 103°07'52", Hydrologic Unit 11090104. Owner: James Parker.
 AQUIFER.--Ogallala Formation.
 WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 14 in., depth 224 ft, cased to 224 ft, perforated 144-224 ft.
 INSTRUMENTATION.--Periodic steel-tape measurements.
 DATUM.--Elevation of land-surface datum is 4,646 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 0.40 ft above land-surface datum.
 PERIOD OF RECORD.--Dec. 1965 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 190.34 ft below land-surface datum, Dec. 8, 1965; lowest measured, 219.13 ft below land-surface datum, Aug. 16, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Apr. 14	211.59
Aug. 16	219.13

361910103170501. Local number, 24N.36E.17.244.
 LOCATION.--Lat 36°19'10", long 103°17'05", Hydrologic Unit 11090103. Owner: Glen Burrows.
 AQUIFER.--Ogallala Formation.
 WELL CHARACTERISTICS.--Drilled water-table unused well, diameter 10 in., depth 231 ft.
 INSTRUMENTATION.--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, 1.30 ft above land-surface datum.
 PERIOD OF RECORD.--May 1971 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.99 ft below land-surface datum, Jan. 8, 1972; lowest measured, 93.73 ft below land-surface datum, Aug. 16, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Apr. 14	93.49
Aug. 16	93.73

Capulin Area

364430103595501. Local number, 29N.28E.18.341.
 LOCATION.--Lat 36°44'30", long 103°59'55", Hydrologic Unit 11040001. Owner: City of Raton.
 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 6,821.2 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.
 PERIOD OF RECORD.--July 1951, Feb. 1957 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.01 ft below land-surface datum, Feb. 8, 1974; lowest measured, 37.59 ft below land-surface datum, Sept. 9, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DATE	WATER LEVEL
Apr. 13	34.13
Aug. 16	35.90

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; 211 ClFH-Mesozoic, Upper Cretaceous, Cliff House Sandstone (Includes La Ventana Tongues in NW Sandoval Co) 211 DKOT-Mesozoic, Upper Cretaceous, Dakota Sandstone; 211 GLIP-Mesozoic, Upper Cretaceous, Gallup Sandstone; 211 PNLK-Mesozoic, Upper Cretaceous, Point Lookout Sandstone; 221 MRSN-Mesozoic, Upper Jurassic, Morrison Formation; 221 WSRC-Mesozoic, Upper Jurassic, Westwater Canyon Sandstone Member of Morrison Formation.

BERNALILLO COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
09N.02E.23.233	345939106415901	001	GW	11-02-87	1730	110AVMB	140.00	4915	482	
LOCAL IDENT- I- FIER	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH LAB (STAND- ARD UNITS) (00403)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	
09N.02E.23.233	479	8.00	170	52	9.5	26	0.9	7.0	102	
LOCAL IDENT- I- FIER	SULFIDE TOTAL (MG/L AS S) (00745)	SULFATE SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	
09N.02E.23.233	<0.5	90	22	0.30	50	319	<0.100	46	800	
CIBOLA COUNTY										
LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
05N.16W.23.411	343842108293401	006	GW	06-13-88	1330	211DKOT	--	7330	550	
07N.14W.22.214	344933108174901	006	GW	03-29-88	1400	211GLLP	536.00	7595	355	
07N.15W.19.200	344931108270201	006	GW	11-17-87	1230	211GLLP	--	7370	450	
07N.16W.10.111	345112108310701	006	GW	11-17-87	1415	211GLLP	460.00	7300	660	
07N.16W.21.300	344903108314601	006	GW	03-29-88	1615	110AVMB	589.00	7200	680	
08N.14W.17.314	345511108202101	006	GW	11-17-87	1600	211DKOT	361.00	7306	2500	
08N.15W.05.233	345710108262801	006	GW	06-16-88	1515	211DKOT	820.00	7275	--	
08N.15W.27.342	345332108245001	006	GW	11-17-87	0950	211GLLP	446.00	7452	420	
10N.15W.20.122	350522108264001	006	GW	06-27-88	1130	211DKOT	565.00	7070	810	
12N.15W.29.231 BOND	351442108265101	006	GW	06-14-88	1310		100.00	--	409	

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

CIBOLA COUNTY -- Continued

LOCAL IDENT- I- FIER	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	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)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
05N.16W.23.411		585	8.72	8.73	15.5	15	4.0	1.2	140	1.6
07N.14W.22.214		363	7.45	7.93	13.0	120	37	6.3	30	7.0
07N.15W.19.200		442	9.35	8.98	5.0	14	3.6	1.2	100	0.78
07N.16W.10.111		712	9.27	9.18	5.5	10	3.6	0.24	160	0.39
07N.16W.21.300		674	8.78	9.18	14.0	22	6.0	1.7	160	1.2
08N.14W.17.314		2530	7.76	7.12	12.0	570	150	48	400	8.2
08N.15W.05.233		667	9.09	8.98	--	14	4.0	0.97	140	0.78
08N.15W.27.342		407	9.51	8.79	11.5	26	4.8	3.4	85	2.4
10N.15W.20.122		856	8.11	8.61	--	160	39	15	140	2.0
12N.15W.29.231 BOND		406	7.54	7.47	15.0	230	84	4.1	0.0	0.0

LOCAL IDENT- I- FIER	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	
05N.16W.23.411		277	15	252	250	40	12	1.7	357	351	<1
07N.14W.22.214		200	0	164	160	24	10	0.11	207	211	1
07N.15W.19.200		215	32	230	234	26	4.5	0.32	273	278	<1
07N.16W.10.111		268	42	290	296	79	5.0	1.2	424	427	<1
07N.16W.21.300		261	19	246	240	110	5.9	0.88	419	430	<1
08N.14W.17.314		271	0	222	224	1200	15	0.61	1890	1970	2
08N.15W.05.233		192	17	185	183	130	5.1	0.60	376	392	2
08N.15W.27.342		195	36	220	208	34	3.4	0.37	254	258	<1
10N.15W.20.122		288	0	236	234	220	11	0.28	545	568	<1
12N.15W.29.231 BOND		254	0	208	207	18	4.1	0.18	242	239	2

LOCAL IDENT- I- FIER	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	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 DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	
05N.16W.23.411		55	980	<1	<1	20	<1	4	<0.2	<2	<1.0
07N.14W.22.214		200	280	<1	<1	580	6	34	<0.2	<2	<1.0
07N.15W.19.200		15	0	<1	<1	440	<1	<4	<0.2	<2	<1.0
07N.16W.10.111		25	260	<1	<1	20	<1	<4	<0.2	<2	<1.0
07N.16W.21.300		20	560	<1	<1	20	14	<4	<0.2	<2	<1.0
08N.14W.17.314		880	390	<1	<1	8300	<1	66	<0.2	<2	<1.0
08N.15W.05.233		30	840	<1	<1	20	3	8	<0.2	<2	<1.0
08N.15W.27.342		50	0	<1	<1	15	<1	<4	<0.2	<2	<1.0
10N.15W.20.122		190	550	<1	<1	20	<1	82	<0.2	<2	<1.0
12N.15W.29.231 BOND		750	1300	<1	<1	1900	2	480	<0.2	<2	<1.0

QUALITY OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DONA ANA COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE	TIME	GEO- LOGIC UNIT	SAM- PLING DEPTH (FEET) (00003)	DEPTH OF WELL, TOTAL (FEET) (72008)
21S.05E.32.222 T-13	322635106264401	013	GW	09-12-88	--	110BLSN	320	522.00	
22S.04E.01.431 T-9	322503106290801	013	GW	09-12-88	--	110BLSN	550	598.00	
22S.04E.11.224 T-8	322434106295001	013	GW	09-14-88	--	110BLSN	650	1060.00	
		013	GW	09-14-88	1200	110BLSN	915	1060.00	
22S.04E.14.133 T-6	322339106304301	013	GW	09-13-88	--	110BLSN	350	515.00	
22S.04E.23.214 OS-12	322250106302501	013	GW	09-12-88	--	110BLSN	350	570.00	
22S.05E.05.313 T-10	322510106274101	013	GW	09-15-88	--	110BLSN	513	555.00	
22S.05E.07.342 T-7	322415106281801	013	GW	09-15-88	--	110BLSN	440	970.00	
		013	GW	09-15-88	1200	110BLSN	960	970.00	
22S.05E.15.221 T-14	321401106245201	013	GW	09-13-88	--	110BLSN	250	370.00	
22S.05E.16.111 T-4	322403106263901	013	GW	09-13-88	--	110BLSN	325	336.00	
22S.05E.20.111 T-5	322311106274101	013	GW	09-13-88	--	110BLSN	330	351.00	
22S.05E.29.412 T-11	322155106270201	013	GW	09-13-88	--	110BLSN	570	576.00	
22S.05E.33.244 T-15	322108106254701	013	GW	09-13-88	--	110BLSN	448	670.00	
23S.04E.15.221 PINE SPRING	321849106305501	013	SP	07-07-88	--		--	--	
23S.05E.05.321 T-18	322010106272701	013	GW	09-13-88	--	110BLSN	635	704.00	
23S.05E.10.413 T-16	321910106250701	013	GW	09-13-88	--	110BLSN	480	710.00	
23S.05E.27.142 T-17	321647106251301	013	GW	09-13-88	--	110BLSN	440	564.00	

LOCAL IDENT- I- FIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
21S.05E.32.222 T-13	4057	487	--	7.72	--	27.5	--	--
22S.04E.01.431 T-9	4410	830	--	7.53	--	27.5	--	--
22S.04E.11.224 T-8	4442	670	--	7.64	--	26.0	--	--
	4442	620	--	7.89	--	27.0	--	--
22S.04E.14.133 T-6	4507	442	--	7.55	--	24.5	--	--
22S.04E.23.214 OS-12	4369	469	--	7.30	--	24.0	--	--
22S.05E.05.313 T-10	4160	329	--	8.00	--	26.0	--	--
22S.05E.07.342 T-7	4185	357	--	7.88	--	26.5	--	--
	4185	580	--	8.22	--	28.0	--	--
22S.05E.15.221 T-14	3950	1840	--	8.81	--	24.5	--	--
22S.05E.16.111 T-4	4051	310	--	7.96	--	26.0	--	--
22S.05E.20.111 T-5	4150	378	--	8.01	--	26.5	--	--
22S.05E.29.412 T-11	4000	257	--	8.25	--	27.0	--	--
22S.05E.33.244 T-15	3990	280	--	8.12	--	25.0	--	--
23S.04E.15.221 PINE SPRING	5830	490	522	--	7.50	21.5	230	75
23S.05E.05.321 T-18	4065	720	--	8.10	--	27.0	--	--
23S.05E.10.413 T-16	3980	322	--	7.96	--	25.0	--	--
23S.05E.27.142 T-17	4020	245	--	7.74	--	25.5	--	--

LOCAL IDENT- I- FIER	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
23S.04E.15.221 PINE SPRING	11	19	0.6	1.6	138	110	12	0.60

LOCAL IDENT- I- FIER	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	BORON, DIS- SOLVED (MG/L AS B) (01020)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	LITHIUM DIS- SOLVED (MG/L AS LI) (01130)	STRON- TIUM, DIS- SOLVED (MG/L AS SR) (01080)
23S.04E.15.221 PINE SPRING	32	353	344	<0.100	10	4	11	390

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MCKINLEY COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
09N.16W.34.412 MILLER	345754108301801	031	GW	05-19-88	1630	211GLLP	125.00	--	--	
10N.16W.32.144 ECW-13	350328108324601	031	GW	05-18-88	1530	211DKOT	707.00	--	--	
10N.17W.09.242 ECW-22	350649108381101	031	GW	06-14-88	1000	211GLLP	282.00	--	2200	
11N.16W.35.443 RAMAH HS	350818108313401	031	GW	11-18-87	1445	211DKOT	227.00	--	1190	
11N.17W.28.143 ECW-10	350925108375901	031	GW	05-18-88	1130	211DKOT	760.00	--	--	
11N.18W.27.411 16T-567	351430108443301	031	GW	11-19-87	1300	211GLLP	635.00	--	520	
11N.19W.08.312 PINO	351131108512201	031	GW	03-30-88	1030	110AVMB	94.00	--	298	
13N.15W.29.224 JEKIELEK	352012108264401	031	GW	06-14-88	1208	110AVMB	75.00	--	405	
13N.16W.24.431B	352018108290202	031	GW	06-14-88	0950		190.00	7922	550	
13N.19W.32.144 16T-568	351823108515101	031	GW	11-20-87	1030	211DKOT	832.00	--	488	
13N.19W.36.441 16T-580	351853108482701	031	GW	11-19-87	1000	211GLLP	497.00	--	600	
15N.18W.30.323	352955108471801	031	GW	06-30-88	1330	211GLLP	667.00	6515	700	
16N.11W.05.1212	353908108024201	031	GW	10-02-87	1900	221MRSN	2605.00	6795	800	
		031	GW	10-02-87	1901	221MRSN	2605.00	6795	--	
19N.17W.09.2322A	355345108385301	031	GW	07-15-88	1030	211GLLP	1239.00	5990	860	
20N.10W.16.4413	355734107535301	031	GW	10-22-87	1200	221MRSN	3988.00	6330	1600	
		031	GW	10-22-87	1201	221MRSN	3988.00	6330	--	
NR087.0961X1297 14T-583	354842108401901	031	GW	02-19-88	1800	211GLLP	1743.00	6048	--	
		031	GW	06-28-88	1300	211GLLP	1743.00	6048	1780	
NR106.0815X0850	354346108374401	031	GW	06-30-88	1700	211GLLP	1082.00	6379	900	
NR106.0820X1070 16T-534	353548108383801	031	GW	07-14-88	1430	221WSRC	410.00	6825	1050	
NR107.0120X0300	354233108462201	031	GW	06-28-88	1100	211GLLP	1850.00	6365	600	

LOCAL IDENT- I- FIER	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (FTU) (00076)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)
09N.16W.34.412 MILLER	1320	8.62	8.44	15.0	--	57	14	5.4	270	16
10N.16W.32.144 ECW-13	2650	--	8.64	--	--	78	22	5.6	470	24
10N.17W.09.242 ECW-22	2460	8.12	8.87	--	--	82	30	1.7	560	28
11N.16W.35.443 RAMAH HS	1180	7.27	6.89	12.0	--	660	210	34	23	0.4
11N.17W.28.143 ECW-10	1980	--	7.77	--	--	160	39	14	350	13
11N.18W.27.411 16T-567	520	--	7.28	--	--	200	62	10	32	1
11N.19W.08.312 PINO	325	7.66	7.73	13.0	--	150	50	5.1	4.6	0.2
13N.15W.29.224 JEKIELEK	401	7.48	7.38	15.5	--	210	51	19	6.9	0.2
13N.16W.24.431B	563	6.61	7.77	11.0	--	260	94	7.1	21	0.6
13N.19W.32.144 16T-568	463	8.91	8.53	15.0	--	15	3.6	1.5	110	13
13N.19W.36.441 16T-580	654	6.82	6.74	10.0	--	310	100	15	18	0.5
15N.18W.30.323	754	9.20	9.00	17.0	--	1	0.28	0.06	170	79
16N.11W.05.1212	899	9.05	9.00	30.5	--	5	1.4	0.32	200	41
	--	--	--	--	--	--	--	--	--	--
19N.17W.09.2322A	916	8.57	8.70	24.5	--	4	1.2	0.28	220	49
20N.10W.16.4413	1670	8.31	8.40	37.5	--	36	13	0.15	340	27
	--	--	--	--	--	--	--	--	--	--
NR087.0961X1297 14T-583	1810	8.81	8.70	25.0	--	10	3.6	0.15	400	59
NR106.0815X0850	997	8.99	9.00	20.0	--	7	1.7	0.62	230	40
NR106.0820X1070 16T-534	1070	7.64	7.80	15.5	--	200	51	17	180	6
NR107.0120X0300	613	9.01	8.90	20.5	0.30	7	2.3	0.29	140	24

QUALITY OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MCKINLEY COUNTY -- Continued

LOCAL IDENT- I- FIER	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)
09N.16W.34.412 MILLER	2.7	300	13	268	266	--	330	17	1.2	--
10N.16W.32.144 ECW-13	3.9	324	11	284	277	--	450	300	2.5	--
10N.17W.09.242 ECW-22	4.7	308	31	304	303	--	500	390	2.9	--
11N.16W.35.443 RAMAH HS	0.78	366	0	300	300	--	400	23	0.33	--
11N.17W.28.143 ECW-10	4.7	412	0	338	339	--	580	11	0.36	--
11N.18W.27.411 16T-567	3.1	--	--	--	--	--	16	43	0.16	--
11N.19W.08.312 PINO	1.2	177	0	145	142	--	10	4.6	0.13	--
13N.15W.29.224 JEKIELEK	1.2	222	0	182	182	--	19	7.8	0.25	--
13N.16W.24.431B	2.0	2	0	2	3	--	24	32	0.82	--
13N.19W.32.144 16T-568	2.4	222	17	210	206	--	54	10	0.35	--
13N.19W.36.441 16T-580	3.5	339	0	278	273	--	48	28	0.12	--
15N.18W.30.323	0.70	290	17	266	--	260	85	20	0.80	0.068
16N.11W.05.1212	0.90	308	22	288	288	289	150	6.5	0.40	0.035
19N.17W.09.2322A	1.1	451	14	394	--	392	84	4.1	1.2	0.034
20N.10W.16.4413	2.0	188	5	162	162	164	580	17	1.6	0.081
NR087.0961X1297 14T-583	--	--	--	--	--	--	--	--	--	--
NRI06.0815X0850	0.90	288	17	264	--	--	550	45	1.1	--
NRI06.0815X0850	0.70	336	22	311	--	348	180	5.0	0.70	0.054
NRI06.0820X1070 16T-534	2.4	344	0	282	--	--	310	7.2	0.20	--
NRI07.0120X0300	0.70	222	14	206	--	206	84	9.5	0.30	0.056

LOCAL IDENT- I- FIER	IODIDE, DIS- SOLVED (MG/L AS I) (71865)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
09N.16W.34.412 MILLER	--	--	860	801	--	--	--	--	--	--
10N.16W.32.144 ECW-13	--	--	1450	1420	--	--	--	--	--	--
10N.17W.09.242 ECW-22	--	--	1590	1680	--	--	--	--	--	--
11N.16W.35.443 RAMAH HS	--	--	868	867	--	--	--	--	--	--
11N.17W.28.143 ECW-10	--	--	1230	1200	--	--	--	--	--	--
11N.18W.27.411 16T-567	--	--	302	168	--	--	--	--	--	--
11N.19W.08.312 PINO	--	--	200	162	--	--	--	--	--	--
13N.15W.29.224 JEKIELEK	--	--	237	215	--	--	--	--	--	--
13N.16W.24.431B	--	--	344	184	--	--	--	--	--	--
13N.19W.32.144 16T-568	--	--	281	305	--	--	--	--	--	--
13N.19W.36.441 16T-580	--	--	394	377	--	--	--	--	--	--
15N.18W.30.323	0.005	9.9	--	444	--	<0.010	<0.100	0.070	0.23	0.120
16N.11W.05.1212	0.006	14	--	547	--	<0.010	<0.100	0.090	0.21	0.020
19N.17W.09.2322A	0.005	12	--	559	--	<0.010	<0.100	0.030	--	<0.010
20N.10W.16.4413	0.012	25	--	1080	--	<0.010	<0.100	0.020	--	0.020
NR087.0961X1297 14T-583	--	--	--	--	--	--	--	--	--	--
NRI06.0815X0850	--	12	--	1010	--	--	--	--	--	--
NRI06.0815X0850	0.005	11	--	639	--	<0.010	<0.100	0.180	0.32	0.020
NRI06.0820X1070 16T-534	--	17	--	588	--	--	--	--	--	--
NRI07.0120X0300	0.005	13	383	375	0.110	0.020	0.130	0.040	0.16	0.030

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MCKINLEY COUNTY -- Continued

LOCAL IDENT- I- FIER	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	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)
09N.16W.34.412 MILLER	--	--	<1	160	--	960	<1	<1	--
10N.16W.32.144 ECW-13	--	--	<1	170	--	1900	<1	<1	--
10N.17W.09.242 ECW-22	--	--	<1	130	--	980	<1	<1	--
11N.16W.35.443 RAMAH HS	--	--	<1	350	--	0	<1	<1	--
11N.17W.28.143 ECW-10	--	--	<1	310	--	960	<1	<1	--
11N.18W.27.411 16T-567	--	--	<1	400	--	0	<1	<1	--
11N.19W.08.312 PINO	--	--	3	650	--	280	<1	<1	--
13N.15W.29.224 JERIELEK	--	--	2	350	--	690	<1	<1	--
13N.16W.24.431B	--	--	5	370	--	550	<1	<1	--
13N.19W.32.144 16T-568	--	--	3	50	--	0	<1	<1	--
13N.19W.36.441 16T-580	--	--	<1	380	--	0	<1	<1	--
15N.18W.30.323	0.8	<10	<1	14	<0.5	--	<1	<1	<3
16N.11W.05.1212	--	<10	<1	34	<0.5	--	<1	<1	<3
19N.17W.09.2322A	1.6	<10	<1	26	<0.5	--	<1	<1	<3
20N.10W.16.4413	0.3	<10	6	42	<0.5	--	<1	<1	<3
NR087.0961X1297 14T-583	--	10	--	--	--	--	--	--	--
NR106.0815X0850	--	<10	--	--	--	110	--	--	--
NR106.0815X0850	--	<10	<1	31	<0.5	--	<1	2	<3
NR106.0820X1070 16T-534	--	<10	--	--	--	120	--	--	--
NR107.0120X0300	1.0	<10	<1	38	<0.5	--	<1	1	<3

LOCAL IDENT- I- FIER	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY 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)
09N.16W.34.412 MILLER	--	10	<1	--	42	<0.2	--	--	<2
10N.16W.32.144 ECW-13	--	15	<1	--	6	<0.2	--	--	<2
10N.17W.09.242 ECW-22	--	10	<1	--	6	<0.2	--	--	<2
11N.16W.35.443 RAMAH HS	--	1200	<1	--	260	<0.2	--	--	<2
11N.17W.28.143 ECW-10	--	10	<1	--	220	<0.2	--	--	<2
11N.18W.27.411 16T-567	--	1600	<1	--	48	<0.2	--	--	<2
11N.19W.08.312 PINO	--	25	<1	--	<4	<0.2	--	--	<2
13N.15W.29.224 JERIELEK	--	15	<1	--	4	<0.2	--	--	<2
13N.16W.24.431B	--	15	<1	--	<4	<0.2	--	--	<2
13N.19W.32.144 16T-568	--	10	<1	--	10	<0.2	--	--	<2
13N.19W.36.441 16T-580	--	<10	<1	--	34	<0.2	--	--	<2
15N.18W.30.323	44	640	<5	10	20	<0.1	<10	<1	<1
16N.11W.05.1212	1	14	<5	33	7	<0.1	<10	1	<1
19N.17W.09.2322A	--	<10	--	--	<10	--	--	--	--
19N.17W.09.2322A	2	22	<5	14	4	<0.1	<10	<1	<1
20N.10W.16.4413	<1	100	<5	110	10	<0.1	30	1	<1
NR087.0961X1297 14T-583	--	70	--	--	<10	--	--	--	--
NR106.0815X0850	--	30	--	--	5	--	--	--	--
NR106.0815X0850	1	17	<5	12	6	<0.1	<10	1	<1
NR106.0820X1070 16T-534	--	620	--	--	130	--	--	--	--
NR107.0120X0300	5	16	5	<4	4	<0.1	<10	4	<1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

MCKINLEY COUNTY -- Continued

LOCAL IDENT- I- FIER	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)	TRITIUM TOTAL (PCI/L) (07000)	C-13 / C-12 STABLE ISOTOPE RATIO PER MIL (82081)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	CARBON 14 PERCENT MODERN (82172)
09N.16W.34.412 MILLER	<1.0	--	--	--	--	--	--	--	--
10N.16W.32.144 ECW-13	<1.0	--	--	--	--	--	--	--	--
10N.17W.09.242 ECW-22	<1.0	--	--	--	--	--	--	--	--
11N.16W.35.443 RAMAH HS	<1.0	--	--	--	--	--	--	--	--
11N.17W.28.143 ECW-10	<1.0	--	--	--	--	--	--	--	--
11N.18W.27.411 16T-567	<1.0	--	--	--	--	--	--	--	--
11N.19W.08.312 PINO	<1.0	--	--	--	--	--	--	--	--
13N.15W.29.224 JEKIELEK	<1.0	--	--	--	--	--	--	--	--
13N.16W.24.431B	<1.0	--	--	--	--	--	--	--	--
13N.19W.32.144 16T-568	<1.0	--	--	--	--	--	--	--	--
13N.19W.36.441 16T-580	<1.0	--	--	--	--	--	--	--	--
15N.18W.30.323	<1.0	18	<6	590	<0.3	--	-106.5	-14.30	--
16N.11W.05.1212	<1.0	100	<6	5	<0.3	-12.20	-108.0	-14.55	0.80
19N.17W.09.2322A	1.0	97	<6	5	<0.3	--	-105.0	-14.15	--
20N.10W.16.4413	<1.0	2200	<6	<3	<0.3	-11.70	-108.0	-14.40	<0.40
NR087.0961X1297 14T-583	--	--	--	--	<0.3	--	--	--	--
NR106.0815X0850	<1.0	89	<6	19	1.5	--	-104.5	-13.95	--
NR106.0820X1070 16T-534	--	2100	--	--	--	--	--	--	--
NR107.0120X0300	<1.0	52	<6	<3	<0.3	--	-111.0	-14.95	--

SANDOVAL COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
16N.03W.17.33	353642107110201	043	GW	12-03-87	1630	211DKOT	1840.00	6130	2780	
16N.04W.26.4423	353458107132201	043	GW	12-03-87	1100	211GLLP	969.00	6430	2750	
		043	GW	12-03-87	1101	211GLLP	969.00	6430	---	

LOCAL IDENT- I- FIER	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	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)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
16N.03W.17.33	2910	8.91	8.80	19.5	820	170	95	270	4	2.2
16N.04W.26.4423	2920	8.73	8.60	18.5	22	5.2	2.0	630	61	2.4

LOCAL IDENT- I- FIER	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	IODIDE, DIS- SOLVED (MG/L AS I) (71865)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
16N.03W.17.33	--	--	--	--	980	78	1.6	--	--	11
16N.04W.26.4423	252	10	223	224	1200	23	0.60	0.11	0.004	12

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SANDOVAL COUNTY -- Continued

LOCAL IDENT- I- FIER	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L) (00607)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L) (00681)	ALUM- INUM, DIS- SOLVED (UG/L) (01106)	ARSENIC DIS- SOLVED (UG/L) (01000)	BARIUM, DIS- SOLVED (UG/L) (01005)
16N.03W.17.33	1610	<0.010	<0.100	0.730	0.07	<0.010	--	<10	--	--
16N.04W.26.4423	2010	<0.010	<0.100	0.060	--	<0.010	0.8	<10	<1	<100
	--	--	--	--	--	--	--	<10	--	--

LOCAL IDENT- I- FIER	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)	LITHIUM DIS- SOLVED (UG/L) AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)
16N.03W.17.33	--	200	--	--	--	--	--	17	--	--
16N.04W.26.4423	<10	--	<1	<1	<1	<1	430	<5	100	20
	--	--	--	--	--	--	10	--	--	10

LOCAL IDENT- I- FIER	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)	H-2 / H-1 STABLE RATIO PER MIL (82082)	O-18 / O-16 STABLE RATIO PER MIL (82085)
16N.03W.17.33	--	--	--	--	--	3300	--	--	--	--
16N.04W.26.4423	0.1	3	<1	<1	<1.0	360	<1	<10	-96.9	-13.00
	--	--	--	--	--	--	--	--	--	--

SAN JUAN COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
21N.10W.21.3444	360152107541401	045	GW	10-21-87	1500	211GLLP	3090.00	6195	2800	
21N.10W.21.3444A	360152107541301	045	GW	11-10-87	1300	211PNLK	1872.00	6200	5500	
		045	GW	11-10-87	1301	211PNLK	1872.00	6200	5500	
24N.19W.24.41 12T-640	361805108484001	045	GW	06-29-88	1340	221MRSN	2349.00	5905	440	
26N.19W.12.311 12T-644	363009108493301	045	GW	06-11-88	1700	221WSRC	1912.00	5735	370	
NR-ALLUVIAL WATER AT CHACO	364331108352801	045	GW	12-01-87	1430	110AVMB	--	--	6100	
NR-CANAL CREEK WELL, NM	365347108522601	045	GW	12-02-87	1630	110AVMB	--	--	12000	
NR-CHACO ALLUVIAL WATER AB	363454108342701	045	GW	12-02-87	1038	110AVMB	--	--	1400	
NR-CHACO ALLUVIAL WATER ON	364238108315201	045	GW	12-01-87	1209	110AVMB	--	--	13900	
NR-CLIFF HOUSE RK SEEP N O	364250108315201	045	SP	12-04-87	1013	211CLFH	--	--	16000	
NR-DEAD BUNNY WELL, NM	365301108481401	045	GW	12-02-87	1319	110AVMB	--	--	15500	
NR-GW SEEP FROM N BANK SJR	365048108444301	045	GW	12-02-87	1120	110AVMB	--	--	2740	
NR-HOGBACK MONOCLINE NR IN	364440108321201	045	GW	12-03-87	1412	110AVMB	--	--	5500	
NR-LITTLE GEYSER SP S OF C	364220108315201	045	SP	12-04-87	1040	211CLFH	--	--	5000	
NR018.0670X1050 12T-637	365052108521901	045	GW	06-08-88	1200	221MRSN	2000.00	5120	--	
NR019.0200X0900	365248109021001	045	GW	06-10-88	1800	221MRSN	604.00	5545	600	
NR032.1280X0895 12T-638	363713108434101	045	GW	02-18-88	1630	221MRSN	2682.00	5270	--	
NR032.1320X1305 12K-320	363338108443201	045	GW	07-01-88	0730	221MRSN	1992.00	5522	510	
NR033.0120X0389	362637108461701	045	GW	06-29-88	0830	221MRSN	1912.00	5670	500	
NR034.0030X0610	363948109001301	045	GW	03-09-88	1000	221MRSN	555.00	5831	--	
		045	GW	06-10-88	1100	221MRSN	555.00	5831	500	
NR034.0100X1300	363345109011001	045	GW	03-09-88	1200	221MRSN	702.00	6206	--	
		045	GW	06-09-88	1400	221MRSN	702.00	6206	330	
NR049.1285X0335 12T-620	362706108435301	045	GW	07-01-88	1600	221MRSN	2034.00	5595	700	
NR050.0220X0690 12T-651	362359108473501	045	GW	06-11-88	1300	221MRSN	1691.00	5830	290	
NR050.0348X1350	361814108484501	045	GW	07-01-88	1100	211GLLP	150.00	5890	700	
NR050.0670X0660	362436108515501	045	GW	06-29-88	1700	211DKOT	521.00	6062	440	

QUALITY OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN COUNTY -- Continued

LOCAL IDENT- I- FIER	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
21N.10W.21.3444	2850	8.33	8.40	--	33.0	--	29	7.4	2.4	670
21N.10W.21.3444A	5790	8.13	8.80	--	--	--	24	3.0	1.8	1400
	--	8.13	--	--	--	--	--	--	--	--
24N.19W.24.41 12T-640	509	9.53	9.40	--	--	--	2	0.85	0.04	120
26N.19W.12.311 12T-644	376	9.65	9.50	--	24.0	--	--	0.90	<0.01	88
NR-ALLUVIAL WATER AT CHACO	6670	7.71	8.10	6.0	13.0	--	640	140	69	1200
NR-CANAL CREEK WELL, NM	10500	9.15	8.80	--	13.0	--	1100	11	250	2300
NR-CHACO ALLUVIAL WATER AB	1480	7.59	8.40	--	9.0	--	320	110	11	210
NR-CHACO ALLUVIAL WATER ON	14000	7.97	7.70	7.0	10.0	--	1200	270	120	3200
NR-CLIFF HOUSE RK SEEP N O	16800	8.25	8.00	11.0	3.0	--	1500	200	230	3700
NR-DEAD BUNNY WELL, NM	16200	7.75	7.80	8.0	10.0	--	4000	390	740	3100
NR-GW SEEP FROM N BANK SJR	2820	7.34	7.60	--	9.0	--	1100	300	96	270
NR-HOGBACK MONOCLINE NR IN	5860	6.90	7.20	10.0	11.0	--	310	25	60	1200
NR-LITTLE GEYSER SP S OF C	5970	7.19	7.40	--	6.0	--	380	110	25	1200
NR018.0670X1050 12T-637	583	9.37	9.20	--	20.0	--	3	1.2	0.06	140
NR019.0200X0900	595	7.56	8.20	--	17.0	--	240	75	13	42
NR032.1280X0895 12T-638	--	--	--	--	--	--	--	--	--	--
NR032.1320X1305 12K-320	--	9.33	--	--	27.0	--	3	0.98	0.09	120
NR033.0120X0389	505	9.51	9.50	--	23.5	--	2	0.73	0.03	110
NR034.0030X0610	--	--	--	--	--	--	--	--	--	--
	503	9.65	9.30	--	17.0	--	4	1.3	0.06	120
NR034.0100X1300	--	--	--	--	--	--	--	--	--	--
	347	8.87	8.50	30.0	17.0	5.0	61	14	5.9	54
NR049.1285X0335 12T-620	756	9.26	9.40	--	21.5	--	7	2.1	0.37	160
NR050.0220X0690 12T-651	303	9.42	9.20	--	23.5	--	3	0.95	0.06	71
NR050.0348X1350	730	7.26	7.90	28.5	16.5	1.2	180	42	17	96
NR050.0670X0660	432	8.78	8.80	--	18.0	--	6	2.0	0.16	100
LOCAL IDENT- I- FIER	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD CACO3 (39086)	ALKA- LINITY WAT WH TOT FET FIELD CACO3 (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
21N.10W.21.3444	57	3.2	334	10	290	290	303	1100	49	1.6
21N.10W.21.3444A	160	5.4	2000	0	--	1640	1620	4.6	840	3.4
	--	--	--	--	--	1640	--	--	--	--
24N.19W.24.41 12T-640	36	0.50	168	34	194	--	--	38	12	0.60
26N.19W.12.311 12T-644	--	0.30	166	29	184	--	--	10	0.80	0.30
NR-ALLUVIAL WATER AT CHACO	21	9.2	598	0	490	490	--	2500	540	1.7
NR-CANAL CREEK WELL, NM	31	16	708	96	740	740	--	5000	620	0.50
NR-CHACO ALLUVIAL WATER AB	5	4.7	200	0	164	164	--	610	15	0.80
NR-CHACO ALLUVIAL WATER ON	42	15	659	0	540	540	--	6600	1300	0.70
NR-CLIFF HOUSE RK SEEP N O	43	17	478	24	432	432	--	9800	750	2.7
NR-DEAD BUNNY WELL, NM	22	18	576	0	472	472	--	11000	590	0.30
NR-GW SEEP FROM N BANK SJR	4	3.9	445	0	365	365	--	1400	38	0.20
NR-HOGBACK MONOCLINE NR IN	30	10	207	0	170	170	--	1700	820	0.30
NR-LITTLE GEYSER SP S OF C	28	21	398	0	326	326	--	3100	180	2.9
NR018.0670X1050 12T-637	36	0.90	273	14	248	--	--	33	11	2.8
NR019.0200X0900	1	1.3	286	0	234	--	182	79	11	0.60
NR032.1280X0895 12T-638	--	--	--	--	--	--	--	--	--	--
NR032.1320X1305 12K-320	33	0.40	159	43	202	--	--	48	3.9	0.30
NR033.0120X0389	36	0.40	200	36	224	--	226	24	2.5	0.80
NR034.0030X0610	--	--	--	--	--	--	--	--	--	--
	29	0.70	176	26	188	--	189	37	23	0.80
NR034.0100X1300	--	--	--	--	--	--	--	--	--	--
	3	2.1	156	7	140	--	147	21	10	0.50
NR049.1285X0335 12T-620	28	0.90	171	34	196	--	--	90	37	0.60
NR050.0220X0690 12T-651	20	0.50	149	19	154	--	--	5.2	1.1	0.30
NR050.0348X1350	3	6.4	310	0	254	--	249	120	7.8	0.30
NR050.0670X0660	19	1.1	215	10	192	--	197	25	2.6	0.30

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN COUNTY -- Continued

LOCAL IDENT- I- FIER	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	IODIDE, DIS- SOLVED (MG/L AS I) (71865)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)
21N.10W.21.3444	0.066	0.005	16	--	2020	--	<0.010	<0.100	0.460	1.7
21N.10W.21.3444A	0.35	0.059	13	--	3270	--	<0.010	<0.100	1.20	0.30
24N.19W.24.41 12T-640	--	--	18	--	190	--	--	--	--	--
26N.19W.12.311 12T-644	--	--	18	--	--	--	--	--	--	--
NR-ALLUVIAL WATER AT CHACO	0.94	--	16	4990	4780	--	--	--	--	--
NR-CANAL CREEK WELL, NM	0.80	--	1.9	9160	8740	--	--	--	--	--
NR-CHACO ALLUVIAL WATER AB	0.022	--	12	1050	1070	--	--	--	--	--
NR-CHACO ALLUVIAL WATER ON	1.5	--	16	12400	11900	--	--	--	--	--
NR-CLIFF HOUSE RK SEEP N O	1.0	--	8.5	15900	15000	--	--	--	--	--
NR-DEAD BUNNY WELL, NM	0.41	--	17	17700	16200	--	--	--	--	--
NR-GW SEEP FROM N BANK SJR	0.066	--	6.4	2590	2340	--	--	--	--	--
NR-HOGBACK MONOCLINE NR IN	1.0	--	0.90	4070	3940	--	--	--	--	--
NR-LITTLE GEYSER SP S OF C	0.32	--	13	4980	4850	--	--	--	--	--
NR018.0670X1050 12T-637	--	--	17	--	206	--	--	--	--	--
NR019.0200X0900	--	--	28	--	361	--	0.010	<0.100	0.040	--
NR032.1280X0895 12T-638	--	--	--	--	--	--	--	--	--	--
NR032.1320X1305 12K-320	--	--	18	--	192	--	--	--	--	--
NR033.0120X0389	0.030	0.003	16	--	290	--	--	--	--	--
NR034.0030X0610	--	--	--	--	--	--	--	--	--	--
NR034.0100X1300	--	--	11	--	309	0.210	0.020	0.230	0.010	--
NR049.1285X0335 12T-620	--	--	16	--	214	--	<0.010	0.220	0.010	--
NR050.0220X0690 12T-651	--	--	18	--	309	--	--	--	--	--
NR050.0348X1350	0.074	0.006	14	--	455	--	<0.010	<0.100	0.220	0.18
NR050.0670X0660	0.038	0.005	12	--	262	--	--	--	--	--
LOCAL IDENT- I- FIER	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	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)
21N.10W.21.3444	0.020	0.6	<10	<1	<100	<10	--	<1	<1	2
21N.10W.21.3444A	0.010	1.0	<10	<1	10000	<10	--	<1	1	1
24N.19W.24.41 12T-640	--	--	20	--	--	--	--	--	--	--
26N.19W.12.311 12T-644	--	--	20	--	--	--	110	--	--	--
NR-ALLUVIAL WATER AT CHACO	--	--	--	2	100	<10	1500	10	--	--
NR-CANAL CREEK WELL, NM	--	--	--	<1	<100	<10	570	10	--	--
NR-CHACO ALLUVIAL WATER AB	--	--	--	1	64	<0.5	60	<1	--	--
NR-CHACO ALLUVIAL WATER ON	--	--	--	1	100	<10	650	20	--	--
NR-CLIFF HOUSE RK SEEP N O	--	--	--	<1	<100	<10	1300	20	--	--
NR-DEAD BUNNY WELL, NM	--	--	--	<1	<100	<10	480	20	--	--
NR-GW SEEP FROM N BANK SJR	--	--	--	<1	<100	<10	380	<10	--	--
NR-HOGBACK MONOCLINE NR IN	--	--	--	<1	<100	<10	320	<10	--	--
NR-LITTLE GEYSER SP S OF C	--	--	--	<1	<100	<10	460	<10	--	--
NR018.0670X1050 12T-637	--	--	<10	--	--	--	180	--	--	--
NR019.0200X0900	<0.010	--	<10	1	19	<0.5	--	<1	3	<3
NR032.1280X0895 12T-638	--	--	--	--	--	--	--	--	--	--
NR032.1320X1305 12K-320	--	--	10	--	--	--	30	--	--	--
NR033.0120X0389	--	--	20	2	9	<0.5	--	<1	1	<3
NR034.0030X0610	--	--	--	--	--	--	--	--	--	--
NR034.0100X1300	<0.010	--	<10	3	26	<0.5	--	<1	1	<3
NR049.1285X0335 12T-620	<0.010	0.6	<10	2	120	<0.5	--	<1	1	<3
NR050.0220X0690 12T-651	--	--	30	--	--	--	20	--	--	--
NR050.0348X1350	<0.010	--	<10	2	33	<0.5	--	<1	<1	<3
NR050.0670X0660	--	--	<10	1	24	<0.5	--	<1	<1	<3

QUALITY OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SAN JUAN COUNTY -- Continued

LOCAL IDENT- I- FIER	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY 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)
21N.10W.21.3444	1	250	<5	120	<10	<0.1	<1	5	<1
21N.10W.21.3444A	1	30	<5	140	<10	0.2	<1	2	<1
24N.19W.24.41 12T-640	--	20	--	--	<10	--	--	--	--
26N.19W.12.311 12T-644	--	6	--	--	3	--	--	--	--
	--	7	--	--	<1	--	--	--	--
NR-ALLUVIAL WATER AT CHACO	--	360	--	350	1800	--	--	--	<1
NR-CANAL CREEK WELL, NM	--	70	--	770	50	--	--	--	<1
NR-CHACO ALLUVIAL WATER AB	--	610	--	19	2	--	--	--	<1
NR-CHACO ALLUVIAL WATER ON	--	40	--	340	10	--	--	--	<1
NR-CLIFF HOUSE RK SEEP N O	--	60	--	1200	30	--	--	--	<1
NR-DEAD BUNNY WELL, NM	--	70	--	820	30	--	--	--	1300
NR-GW SEEP FROM N BANK SJR	--	20	--	160	1200	--	--	--	17
NR-HOGBACK MONOCLINE NR IN	--	14000	--	270	1200	--	--	--	<1
NR-LITTLE GEYSER SP S OF C	--	520	--	390	70	--	--	--	<1
NR018.0670X1050 12T-637	--	12	--	--	<1	--	--	--	--
NR019.0200X0900	6	440	<5	15	61	<0.1	<10	5	<1
NR032.1280X0895 12T-638	--	--	--	--	--	--	--	--	--
NR032.1320X1305 12K-320	--	3	--	--	<1	--	--	--	--
NR033.0120X0389	<1	8	<5	15	2	<0.1	<10	<1	5
NR034.0030X0610	--	--	--	--	--	--	--	--	--
	<1	140	<5	33	3	<0.1	<10	6	3
NR034.0100X1300	--	--	--	--	--	--	--	--	--
	1	85	<5	37	2	<0.1	<10	5	27
NR049.1285X0335 12T-620	--	<3	--	--	<1	--	--	--	--
NR050.0220X0690 12T-651	--	19	--	--	<1	--	--	--	--
	<1	330	<5	46	150	<0.1	<10	<1	<1
NR050.0348X1350	--	--	--	--	--	--	--	--	--
NR050.0670X0660	1	53	<5	24	7	<0.1	<10	<1	<1

LOCAL IDENT- I- FIER	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)	TRITIUM TOTAL (PCI/L) (07000)	C-13 / C-12 STABLE ISOTOPE RATIO PER MIL (82081)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	CARBON 14 PERCENT MODERN (82172)
21N.10W.21.3444	<1.0	350	<1	<10	<0.3	-9.80	--	--	<0.40
21N.10W.21.3444A	<1.0	1700	13	<10	<0.3	-11.80	-96.0	-13.00	<0.40
24N.19W.24.41 12T-640	--	45	--	--	--	--	--	--	--
26N.19W.12.311 12T-644	--	76	--	--	--	--	--	--	--
NR-ALLUVIAL WATER AT CHACO	--	4000	5	--	--	--	-60.5	-6.10	--
NR-CANAL CREEK WELL, NM	--	320	7	--	--	--	-86.5	-11.05	--
NR-CHACO ALLUVIAL WATER AB	--	2	<1	--	--	--	-66.0	-9.25	--
NR-CHACO ALLUVIAL WATER ON	--	7300	21	--	--	--	-92.0	-11.70	--
NR-CLIFF HOUSE RK SEEP N O	--	8200	11	--	--	--	-81.5	-10.65	--
NR-DEAD BUNNY WELL, NM	--	9300	9	--	--	--	-88.5	-11.05	--
NR-GW SEEP FROM N BANK SJR	--	3600	60	--	--	--	-101.0	-13.65	--
NR-HOGBACK MONOCLINE NR IN	--	530	8	--	--	--	-80.0	-10.00	--
NR-LITTLE GEYSER SP S OF C	--	5000	<1	--	--	--	-94.5	-12.55	--
NR018.0670X1050 12T-637	--	66	--	--	--	--	--	--	--
NR019.0200X0900	<1.0	1100	<6	180	--	--	-96.4	-13.05	--
NR032.1280X0895 12T-638	--	--	--	--	<0.3	--	--	--	--
NR032.1320X1305 12K-320	--	71	--	--	--	--	--	--	--
NR033.0120X0389	<1.0	47	<6	<3	--	--	-116.0	-15.60	--
NR034.0030X0610	--	--	--	--	<0.3	--	--	--	--
	<1.0	100	<6	27	--	--	-119.5	-15.90	--
NR034.0100X1300	--	--	--	--	<0.3	--	--	--	--
	<1.0	1100	<6	94	--	--	-98.5	-13.15	--
NR049.1285X0335 12T-620	--	380	--	--	--	--	--	--	--
NR050.0220X0690 12T-651	--	41	--	--	--	--	--	--	--
	<1.0	920	<6	31	<0.3	--	-101.0	-13.65	--
NR050.0670X0660	<1.0	140	<6	34	--	--	-106.0	-14.40	--

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SIERRA COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE	GEO- LOGIC UNIT	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)
12S.02E.27.211A HARDIN RAN	331423106432602	051	GW	09-09-88	6430	1080	8.10	18.5		
LOCAL IDENT- I- FIER	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
12S.02E.27.211A HARDIN RAN	550	100	72	43	0.8	2.9	301	220	42	0.40
LOCAL IDENT- I- FIER	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	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)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
12S.02E.27.211A HARDIN RAN	0.28	35	738	703	1.30	1	27	60	<1	1
LOCAL IDENT- I- FIER	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	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)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
12S.02E.27.211A HARDIN RAN	2	<3	<5	34	5	0.1	7	<1.0	930	71

SOCORRO COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE	TIME	GEO- LOGIC UNIT	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)
06S.01E.05.334 FIELD 17A S	334836106520001	053	GW	02-25-88	1030	110AVMB	10.0	14.5	
06S.01E.07.213 WARM H2O WE	334821106523401	053	GW	02-24-88	1500	110AVMB	33.0	19.0	
LOCAL IDENT- I- FIER	BARO- METRIC PRES- SURE (MM OF HG) (00025)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
06S.01E.05.334 FIELD 17A S	651	1028	80020	1580	4.0	7.48	7.60	0	390
06S.01E.07.213 WARM H2O WE	640	1028	80020	4450	0.7	7.22	7.40	0	400
LOCAL IDENT- I- FIER	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)
06S.01E.05.334 FIELD 17A S	0.110	110	30	220	8.4	140	360	<1	250
06S.01E.07.213 WARM H2O WE	1.00	120	41	790	35	910	550	53	890

QUALITY OF GROUND WATER

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

SOCORRO COUNTY -- Continued

LOCAL IDENT- I- FIER	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)
06S.01E.05.334 FIELD 17A S	<1	1	<1	<5	9	1	8	<1	<0.1
06S.01E.07.213 WARM H2O WE	<1	1	<1	<5	11	18	20	<1	0.4
LOCAL IDENT- I- FIER	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	PRO- PAZINE TOTAL (UG/L) (39024)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ETHION, TOTAL (UG/L) (39398)
06S.01E.05.334 FIELD 17A S	0.90	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	320	<0.01
06S.01E.07.213 WARM H2O WE	<0.40	<0.10	<0.10	<0.1	<0.10	<0.1	<0.1	328	<0.01
LOCAL IDENT- I- FIER	MALA- THION, TOTAL (UG/L) (39530)	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	TOTAL TRI- THION TOTAL (UG/L) (39786)	METHYL TRI- THION, TOTAL (UG/L) (39790)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
06S.01E.05.334 FIELD 17A S	<0.01	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01	1110	<0.1
06S.01E.07.213 WARM H2O WE	<0.01	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01	2870	0.2
LOCAL IDENT- I- FIER	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	CYAN- AZINE TOTAL (UG/L) (81757)	AME- TRYNE TOTAL (UG/L) (82184)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
06S.01E.05.334 FIELD 17A S	--	--	<0.10	<0.10	<0.10	<0.1	<0.1	1700	319
06S.01E.07.213 WARM H2O WE	4507	100.00	<0.10	<0.10	<0.10	<0.1	<0.1	4630	338

TORRANCE COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)
06N.09E.16.433	344423105595701	057	GW	11-18-87	1430	110AVMB	27.00	6083	
LOCAL IDENT- I- FIER	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	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)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
06N.09E.16.433	4860	4940	7.95	7.70	12.5	1000	140	170	650

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

TORRANCE COUNTY -- Continued

LOCAL IDENT- I- FIER	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
06N.09E.16.433	9	16	531	0	435	424	434	1200
LOCAL IDENT- I- FIER	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	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)
06N.09E.16.433	780	1.1	28	3250	1.30	390	10	70

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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