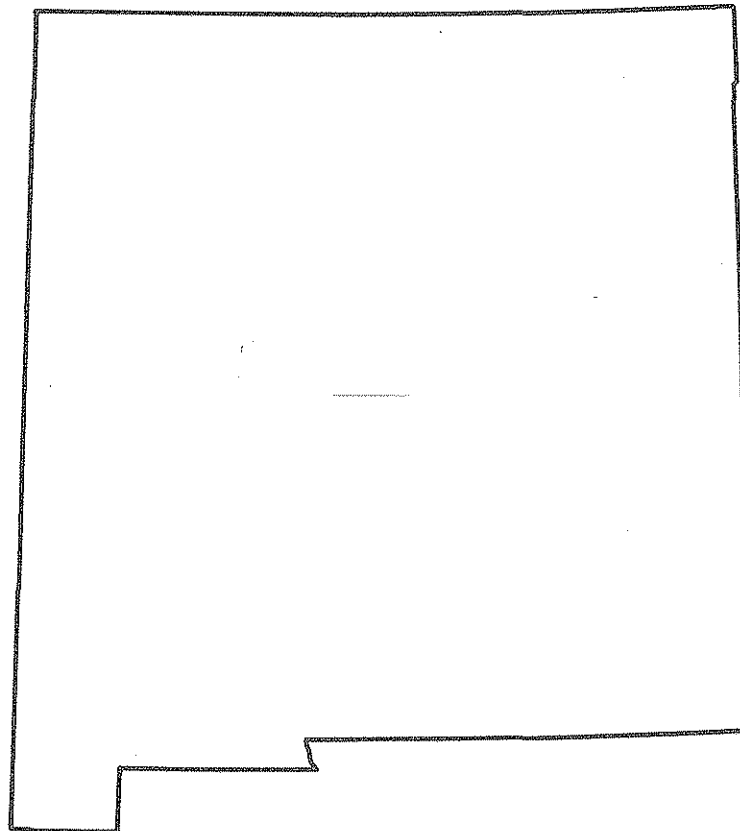


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# CALENDAR FOR WATER YEAR 1985

1984

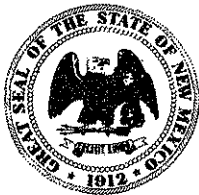
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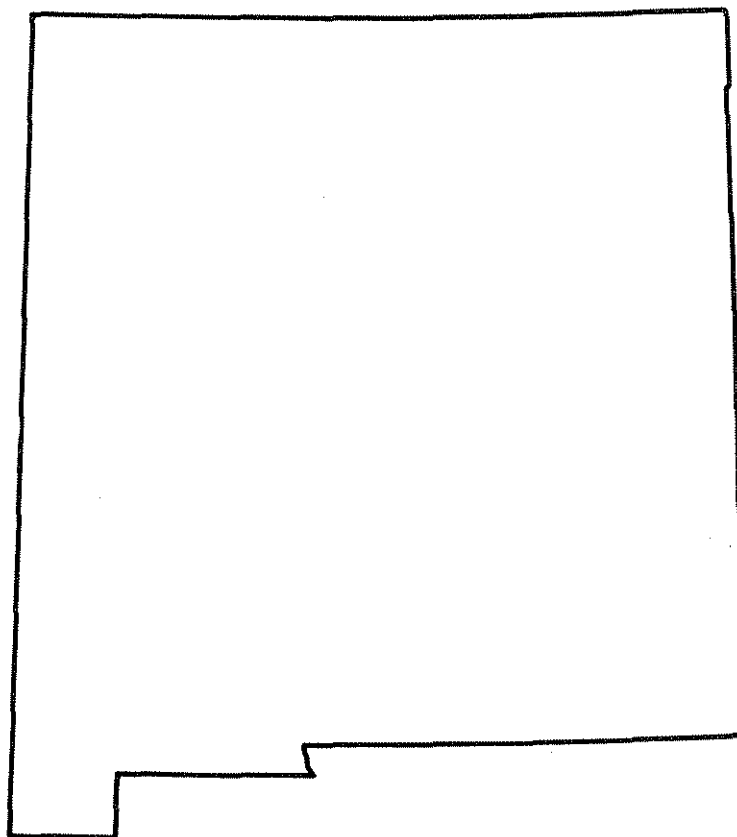


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# Water Resources Data New Mexico

## Water Year 1985

by Louis P. Denis, Linda V. Beal and Harriet R. Allen



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NM-85-1  
Prepared in cooperation with the State of New Mexico  
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD P. HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information on the  
water program in New Mexico write to  
District Chief, Water Resources Division  
U.S. Geological Survey  
505 Marquette NW, Room 720  
Albuquerque, New Mexico 87102



#### 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 Alfred Ciebsch, Jr., 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 Phillip Cohen, Chief Hydrologist, U.S. Geological Survey, and James F. Daniel, Assistant Chief Hydrologist for Scientific Publications and Data Management.

#### ACKNOWLEDGMENTS

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CHAVES COUNTY

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CIBOLA COUNTY

WELL 350400107510501	Local number	10N.10W.26.331.....	425
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WELL 351400107524201	Local number	12N.10W.29.434.....	426
WELL 351650107535001	Local number	12N.11W.09.424.....	426
WELL 351610107513501	Local number	12N.11W.14.213.....	426

COLFAX COUNTY

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COSTILLA COUNTY (COLORADO)

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CURRY COUNTY

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WELL 324620104255101	Local number	18S.26E.06.442B.....	431
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WELL 321741104204901	(formerly 321721104204801) Local number	23S.25E.24.213...	434
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GRANT COUNTY

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HARDING COUNTY

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HIDALGO COUNTY

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WELL 315645108493501	Local number	27S.19W.20.343.....	436
WELL 315010108570001	Local number	28S.21W.30.222.....	437
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QUAY COUNTY

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WELL 335655103032001	Local number	06S.38E.21.233.....	444

SANDOVAL COUNTY

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SANTA FE COUNTY

WELL 350525106025001	Local number	10N.08E.13.133.....	445
WELL 350340106005001	Local number	10N.09E.29.130.....	445
WELL 353810106025501	Local number	16N.08E.12.131.....	445
WELL 354005105574501	Local number	17N.09E.27.441.....	446

SIERRA COUNTY

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TAOS COUNTY

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TORRANCE COUNTY

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WELL 344016106064701	Local number	05N.08E.08.424.....	448
WELL 344234106074901	Local number	06N.08E.32.212.....	448
WELL 344622105575501	Local number	06N.09E.11.211.....	448
WELL 344937106092201	Local number	07N.07E.13.4312.....	448
WELL 345900106034301	Local number	09N.08E.24.334.....	449

UNION COUNTY

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## INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount 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 the current year for New Mexico consist of records of discharge and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This report contains discharge records for 168 gaging stations (3 of which are low flow only); stage and contents for 25 lakes and reservoirs; water quality for 65 gaging stations, 2 partial-record stations, 2 reservoirs, 9 springs, 4 miscellaneous sampling sites, and 179 wells; and water levels at 111 observation wells. Also included are 138 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 State and Federal 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, then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, 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 may be consulted in the libraries of the principal cities of the United States or may be purchased from Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, Virginia 22304.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a state-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released in separate reports. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a state-boundary basis.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey 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-85-1." These water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

## COOPERATION

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

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

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

Pecos River Commission, H. M. Babcock, Federal representative and Chairman;  
W. Gerrells, Commissioner for New Mexico;  
B. L. Moody, Commissioner for Texas.

New Mexico State Highway Department, L. A. Larranaga, Chief Administrator.

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

Albuquerque Metropolitan Arroyo Flood Control Authority, R. E. Leonard,  
Executive Engineer.

City of Raton, Donald M. Romero, Mayor.

Vermejo Conservancy District, Neil C. Stillinger,  
Attorney at Law.

City of Alamogordo, Dan Malone, City Manager.

Alamo Chapter/Alamo Navajo School Board, Inc., Lee J. Abeyta, President.

Financial assistance for the collection of water resources data published in this report was provided by the Corps of Engineers, U.S. Army, for 33 gaging stations; by the Bureau of Reclamation, U.S. Department of Interior, for 8 gaging stations; by the Bureau of Indian Affairs, U.S. Department of Interior, for 6 gaging stations; and by the Bureau of Land Management, U.S. Department of Interior, for 5 gaging stations.

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 recognized in the station description.

## SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Perennial streams in New Mexico generally are in mountainous regions in the north-central, south-central, and southwestern parts of the State. Other perennial streams include the San Juan and Animas Rivers in northwestern New Mexico, which originate in the San Juan Mountains of southwestern Colorado. Several reaches of the Pecos River south of Santa Rosa have perennial flow under natural conditions that is maintained by relatively large spring discharges. Large discharges in perennial streams normally are the result of spring snowmelt in the mountains, which may last several months. The high runoff in most of the State during water year 1985 was the result of a two to five times greater-than-average snowpack.

Ephemeral streams are present in the remainder of the State. Some of these streams, such as the Rio Puerco, have deeply incised channels; whereas others, especially those on the eastern plains, are 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.

During water year 1985, stream discharge in the southwestern, northwestern, and northeastern quadrants of the State was greater than normal (in the highest 25 percent of record for water years 1951-80). The streamflow in the southeastern quadrant of the State, however, generally was less than 50 percent of the normal.

At station 09430500, Gila River near Gila, where records have been collected for 57 years, the maximum recorded mean-daily discharge (23,400 cubic feet per second) and instantaneous peak discharge (35,200 cubic feet per second) occurred on December 28, 1984. The discharge for the water year was the third greatest recorded. In addition, the discharge during March was the greatest recorded for this station and for station 08378500, Pecos River near Pecos, which has 65 years of record.

On June 13, 1985, Rio Grande Compact representatives of Colorado, New Mexico, and Texas celebrated a "paper spill" at Elephant Butte Dam, which cancelled Colorado's and New Mexico's water debt to Texas in accordance with provisions of the Rio Grande Compact between the three States. The "paper spill" was a computed capacity figure at which Elephant Butte Reservoir would have spilled under pre-1942 conditions.

Discharge for water year 1985 at four index streamflow-gaging stations compared to median annual discharge for water years 1951-80 at the same stations is listed in the table below:

Station number	Station name	Discharge for water year 1985, in acre-feet	Median annual discharge for water years 1951-80, in acre-feet	Percent of median
08276500	Rio Grande below Taos Junction Bridge	1,158,000	388,700	298
09430500	Gila River near Gila	305,900	79,950	383
08378500	Pecos River near Pecos	120,800	56,090	215
08408500	Delaware River near Red Bluff	3,840	7,570	51

The combined storage in the 12 major reservoirs in the State increased by 1,070,000 acre-feet during water year 1985. The storage totaled 5,187,000 acre-feet on September 30, 1985. The total combined capacity of these reservoirs is 7,623,000 acre-feet.

Water-Quality Conditions

Dissolved-solids concentrations in surface water at gaging stations continued to be near normal throughout the State during the water year with the exceptions of the NASQAN stations 08358300 (Rio Grande Conveyance Channel at San Marcial) and 08358400 (Rio Grande Floodway at San Marcial), which are immediately upstream from Elephant Butte Reservoir. The median specific conductance at these two stations was about one-half normal.

Median values of specific conductance for water year 1985 at selected daily stations compared to median values of specific conductance for water years 1974-83 at the same stations are listed in the table below:

Station number	Station name	Median specific conductance, in microsiemens per centimeter at 25° Celsius, for water year 1985	Median specific conductance, in microsiemens per centimeter at 25° Celsius, for water years 1974-83	Percent of median
08313000	Rio Grande at Otowi	310	341	91
08330000	Rio Grande at Albuquerque	375	427	88
08358300	Rio Grande CC at San Marcial	733	1,150	64
08358400	Rio Grande FW at San Marcial	383	734	52
08405000	Pecos River at Carlsbad	3,670	3,560	103
09368000	San Juan River at Shiprock	419	551	76

Suspended-sediment loads for water year 1985 at four index stations compared to median suspended-sediment loads for water years 1974-83 at the same stations are listed in the table below:

Station number	Station name	Suspended-sediment load for water year 1985, in tons	Median suspended-sediment load for water years 1974-83, in tons	Percent of median
08313000	Rio Grande at Otowi	2,727,140	1,497,000	182
08330000	Rio Grande at Albuquerque	1,443,353	949,500	152
08396500	Pecos River near Artesia	275,394	333,100	83
09368000	San Juan River at Shiprock	4,889,201	4,821,000	101

#### Ground-Water Levels

Ground-water levels are measured periodically in a network of about 6,000 observation wells in order to record changes in water levels and 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 (or the period of record available for the Union County well). The well in Cibola County is in an area where the mining industry has acquired most of the water rights. A decrease in ground-water withdrawals for agriculture and mining operations may be responsible for the general rise in water levels in the Cibola County well. The wells in Luna, Union, and Chaves Counties are in areas of intensive irrigation. The water level in the Luna County recorder well (Mimbres Valley) remained about the same as the previous year and continued to be higher than the average for the past 20 years. The water level in the Union County well continued to decline, which is typical of wells on the High Plains of northeastern New Mexico. The water level in the Chaves County recorder well has yearly fluctuations that are typical of the Roswell artesian basin. The general trend for the water level in the vicinity of this well since the mid-1970's has been a decrease in depth to water. During this time the average annual precipitation at the Roswell and Artesia weather stations has increased several inches, which may have resulted in a decrease in withdrawals for irrigation and an increase in recharge to the aquifer.

#### SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network includes 57 sites in small drainage basins around the country whose purpose is to provide hydrologic and water-quality data for basins in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade 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 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the USGS Office of Water Data Coordination 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 such that the data may be used (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 07227140, Canadian River above New Mexico-Texas State line; 08251500, Rio Grande near Lobatos, CO; 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, TX; 08370500, Rio Grande below Old Fort Quitman, TX; 08384500, Pecos River below Sumner Dam; 08407500, Pecos River near Red Bluff; 08477110, Mimbres River at Mimbres; 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; 09368000, San Juan River at Shiprock; and 09431500, Gila River near Redrock.

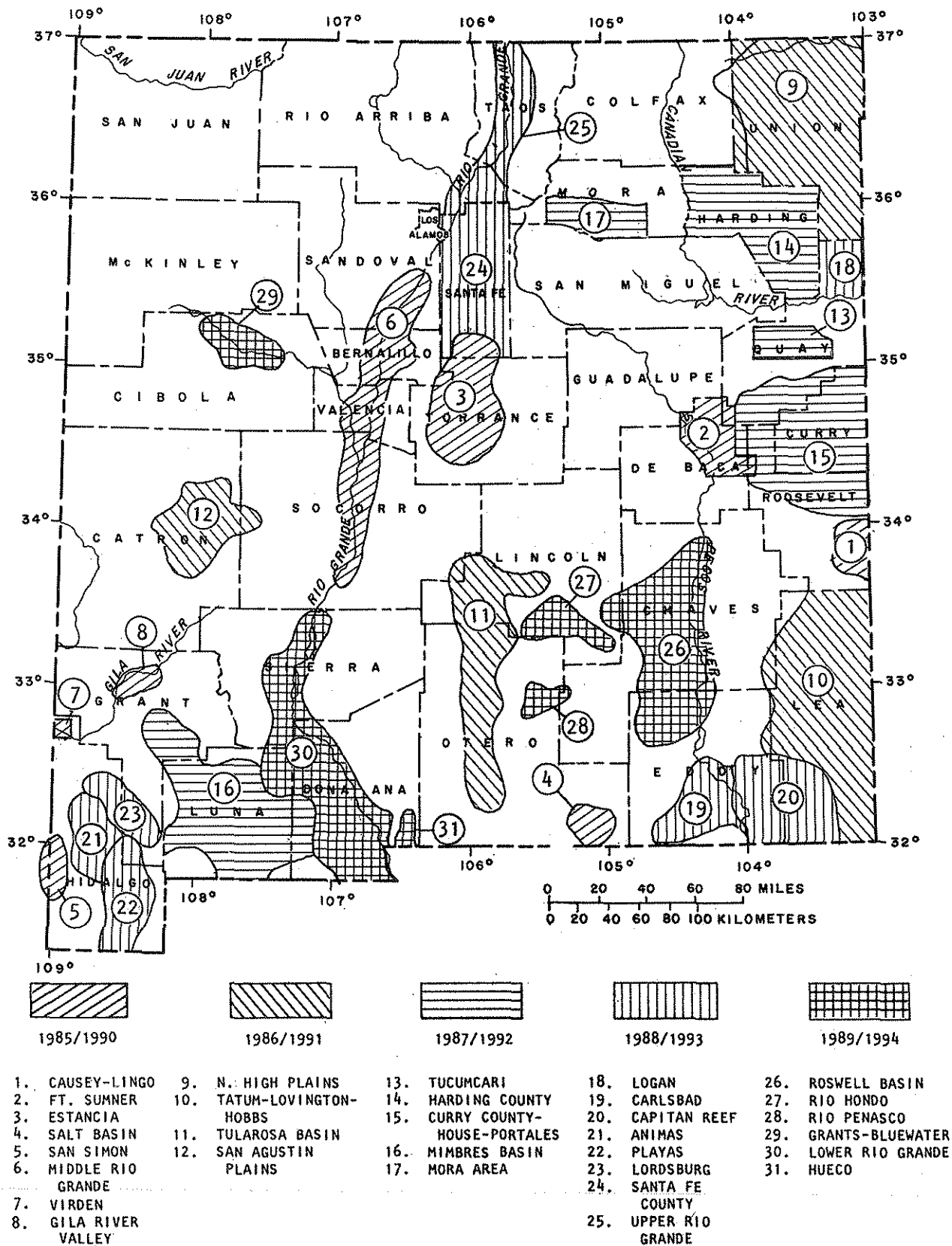


Figure 1.--Areas of 5-year ground-water level monitoring in New Mexico showing years measured or scheduled for measurement.

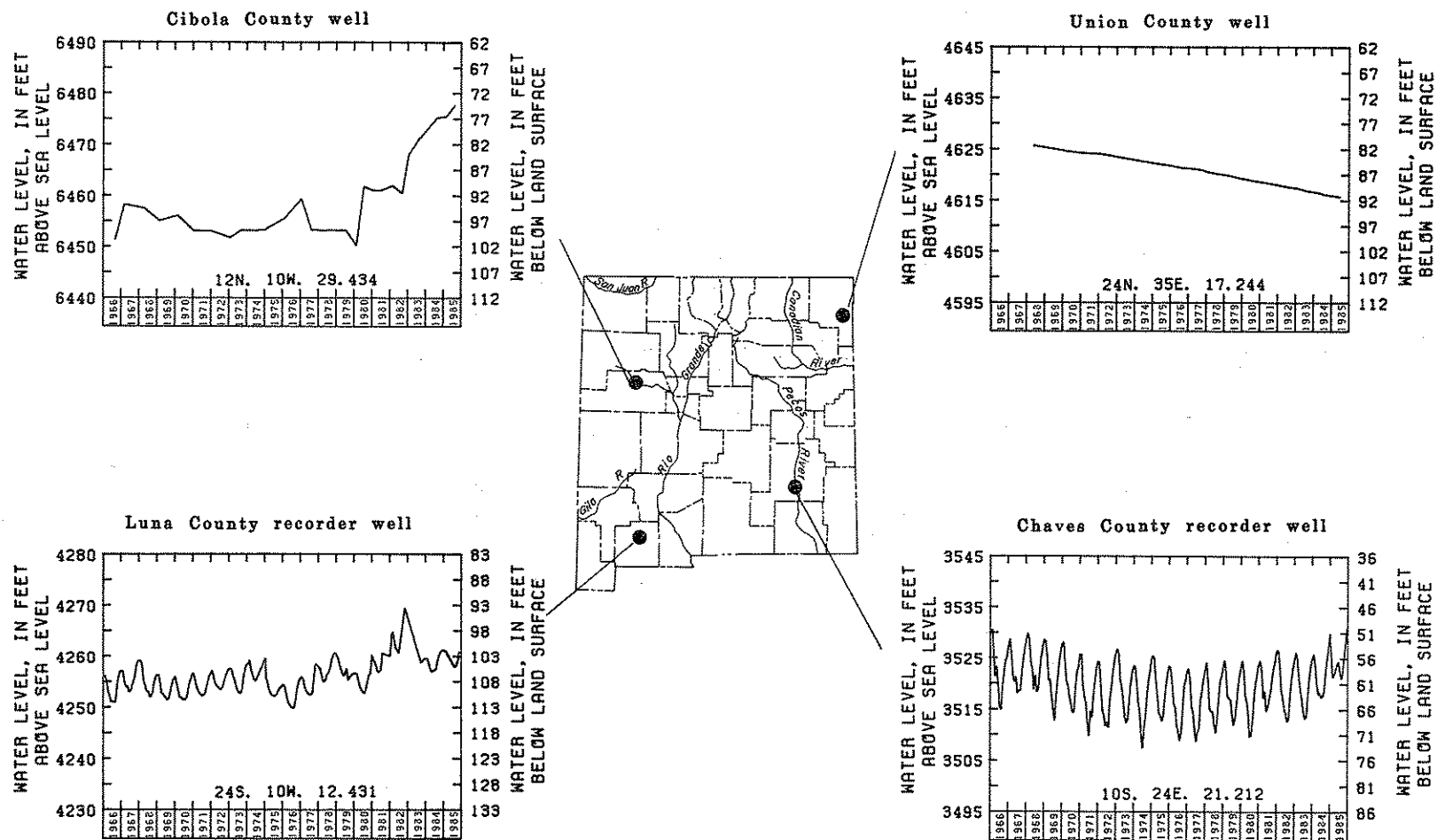


Figure 2.--Ground-water levels for the last 20 years or period of record.

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 1985 water year which began October 1, 1984, and ended September 30, 1985. 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.

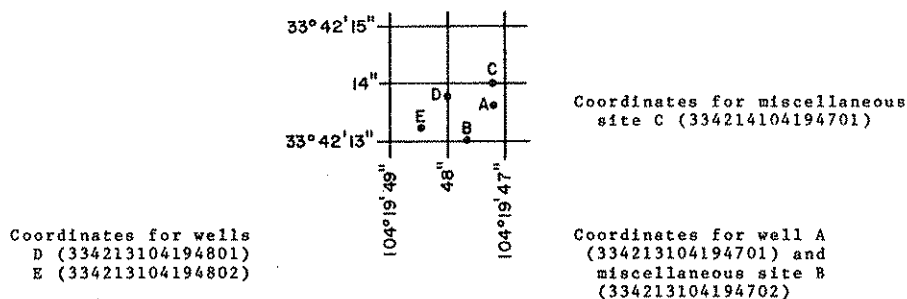


Figure 3.--System for numbering wells, springs, and miscellaneous sites.

## 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 ft<sup>3</sup>/s; to the nearest tenth between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to three significant figures above 1,000 ft<sup>3</sup>/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 ( $\text{g}/\text{m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g}/\text{m}^2$ ).

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 [ $(\text{ft}^3/\text{s})/\text{mi}^2$ ] 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 ( $\text{FT}^3/\text{S}$ ,  $\text{ft}^3/\text{s}$ , 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  $\mu\text{m}$  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 ( $\text{CaCO}_3$ ).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 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 ( $\mu\text{g/g}$ ) 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 ( $\mu\text{g/L}$ ,  $\mu\text{g/L}$ ) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

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 ( $1 \times 10^{-12}$ ) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields  $3.7 \times 10^{10}$  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/(m<sup>2</sup>.time)] for periphyton and macrophytes and [mg C/(m<sup>3</sup>.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/(m<sup>2</sup>.time)] for periphyton and macrophytes and [mg O/(m<sup>3</sup>.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 planimetered. All areas shown are those for the stage when the planimetered 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  $\mu$ m membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures 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  $\mu$ m 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.....Arthropods  
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.

## PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (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. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 Pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage 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-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-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 text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.



Figure 4.-- Map of New Mexico showing location of hydrologic units.

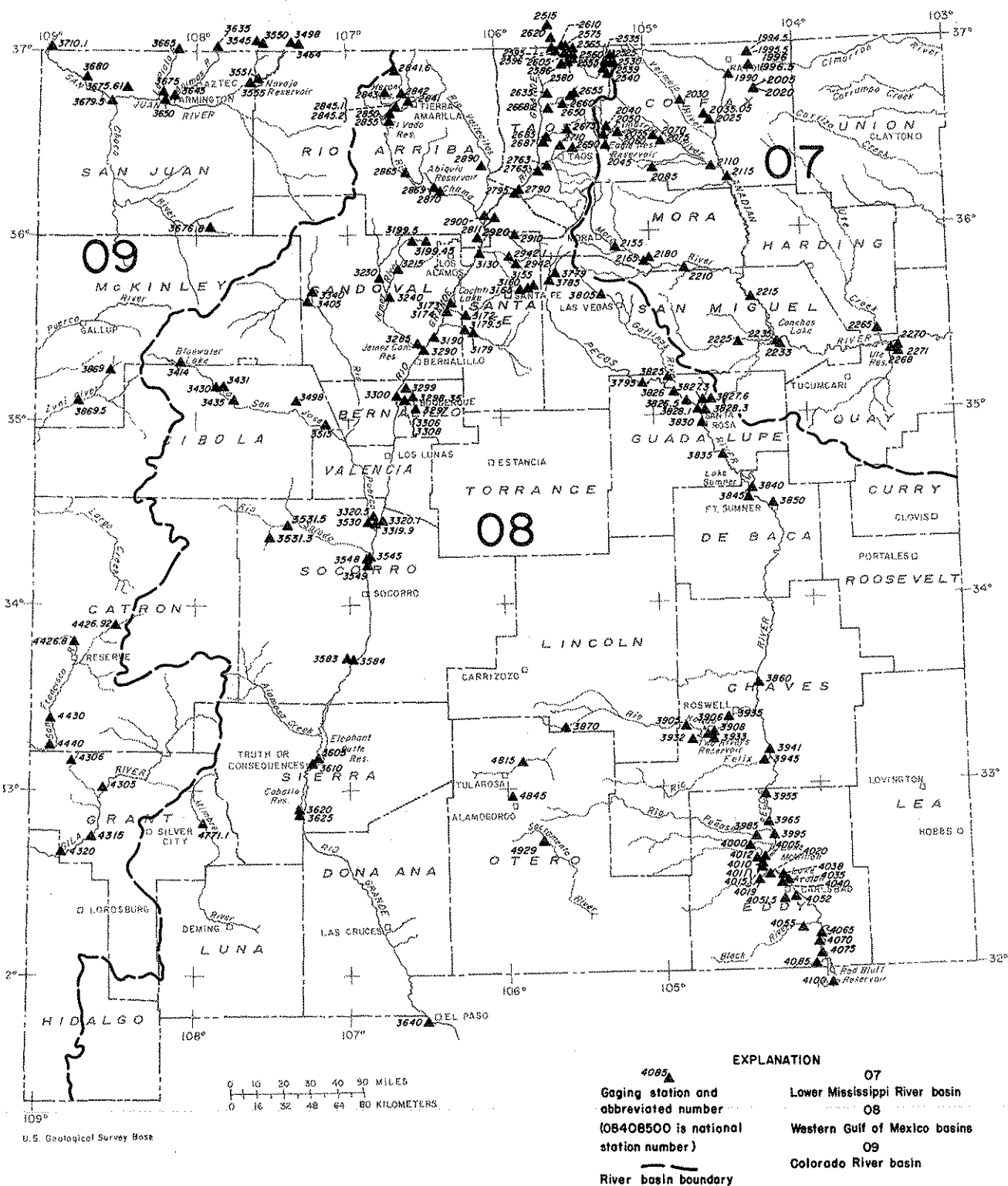
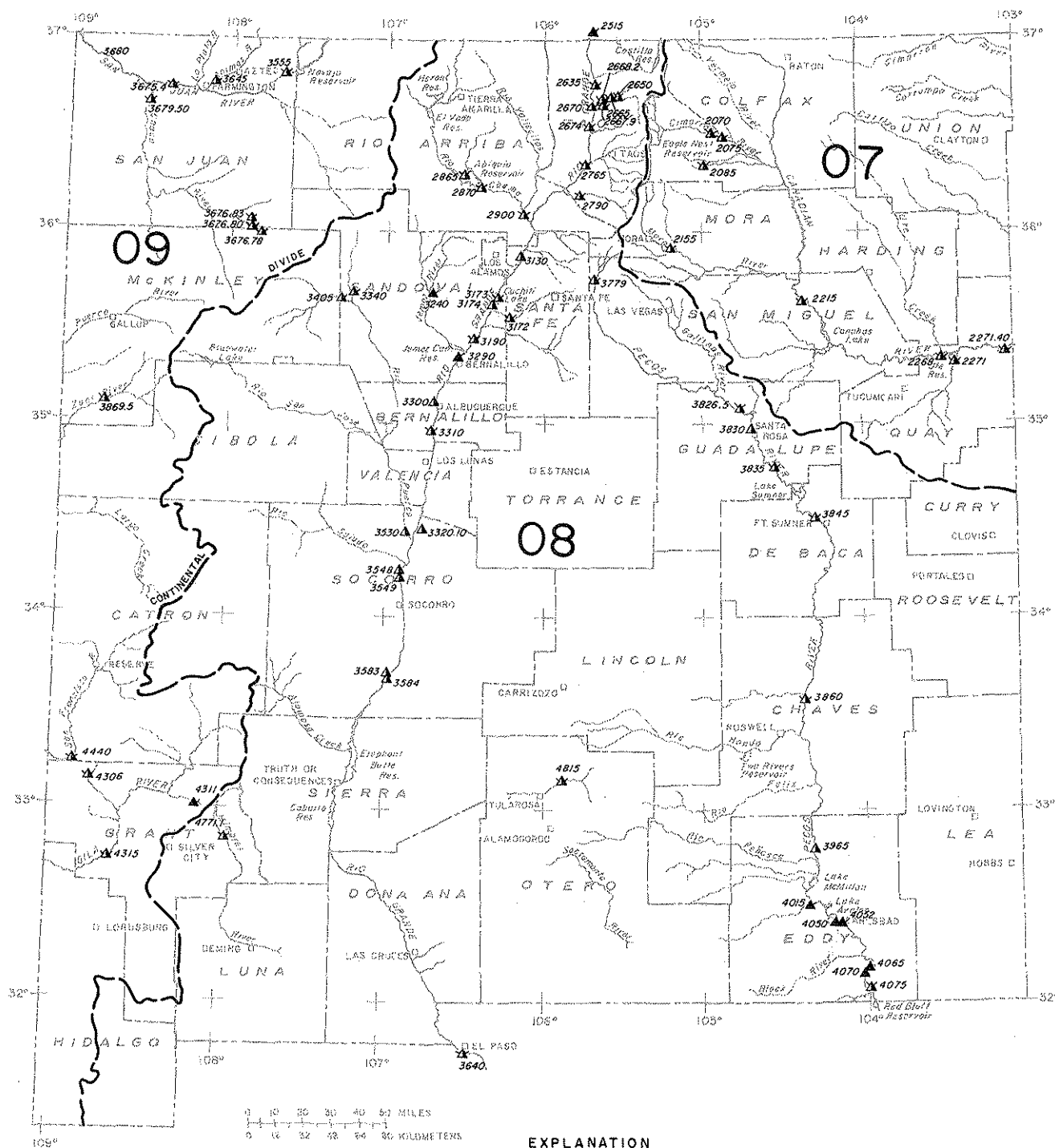


Figure 5. -- Map of New Mexico showing location of surface-water gaging stations.



## EXPLANATION

## STATION AND SAMPLING FREQUENCY

Chemical quality: ▲ daily ▲ other than daily  
 Suspended sediment: △ daily △ other than daily  
 Chemical quality and  
 Suspended sediment: ▲ both daily ★ both other than daily  
 ▲ daily chemical quality and other than daily suspended sediment  
 ▲ daily suspended sediment and other than daily chemical quality

## BASIN AND STATION NUMBER

River basin boundary: ————  
 Lower Mississippi River basin number: 07  
 Western Gulf of Mexico basin number: 08  
 Colorado River basin number: 09  
 Number by symbol is abbreviated station number. Complete station number of example is:  
 07 227140  
 Basin no. Station no.

Figure 6.-- Map of New Mexico showing location of water-quality gaging stations.

## HYDROLOGIC-DATA STATION RECORDS

## LOWER MISSISSIPPI RIVER BASIN

## ARKANSAS RIVER BASIN

07199000 CANADIAN RIVER NEAR HEBRON, NM

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

DRAINAGE AREA.--229 mi<sup>2</sup>.

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

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

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

REMARKS.--Estimated daily discharges: Nov. 26 to Dec. 1, Dec. 3, Dec. 5-7, Dec. 12-23, Jan. 1-6, Jan. 11-18, 20-25, Jan. 30 to Feb. 14, Feb. 24, Mar. 4, 5, June 7-19, July 7-14, July 17-29, Aug. 17 to Sept. 8, Sept. 17-27, and Sept. 30. Records poor. Diversions upstream from station for irrigation of a few hundred acres. Part or all of low flow can be diverted to left bank 1.6 mi upstream from station for stock water, off-channel storage and irrigation. Several observations of water temperature taken during year.

AVERAGE DISCHARGE.--39 years, 8.38 ft<sup>3</sup>/s, 6,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,400 ft<sup>3</sup>/s, June 17, 1965, gage height, 28.2 ft, from floodmarks, present datum, from rating curve extended above 1,300 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow for many days most years.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 6	2245	2,660	5.79	Sept. 11	1315	1,070	4.84
July 15	1515	*2,830	*5.99				

No flow several days.

DISCHARGE, IN 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	3.7	9.5	3.3	2.1	2.0	1.7	13	36	34	7.8	.04	.00
2	3.7	9.5	3.1	1.6	1.0	1.5	12	32	22	7.1	.28	.00
3	5.7	9.7	3.5	1.3	1.0	1.4	12	25	8.5	8.0	.03	.00
4	4.6	9.7	3.9	1.1	1.1	1.3	6.4	19	10	7.6	4.7	.00
5	35	9.6	3.7	.98	1.3	1.0	3.4	15	27	9.2	9.9	.00
6	9.5	9.5	3.6	1.4	1.6	.68	11	327	35	12	.08	.00
7	9.5	9.3	2.9	2.5	2.2	.25	6.1	670	35	20	29	.00
8	7.3	9.1	3.1	2.5	3.0	.22	3.4	148	24	10	12	.00
9	58	8.7	2.9	2.9	4.0	.21	.39	38	15	6.0	19	.00
10	20	8.6	2.3	9.4	4.9	.21	4.8	27	9.0	4.0	27	.03
11	10	8.5	1.0	8.0	4.1	.35	4.6	18	5.8	3.0	11	99
12	7.9	8.6	.80	7.4	3.8	9.9	3.9	5.5	3.6	2.5	7.8	79
13	6.5	8.7	.70	7.0	3.8	9.9	.59	11	2.2	2.0	1.8	7.0
14	12	8.7	.60	8.0	5.6	13	3.4	19	1.4	1.6	1.4	4.3
15	10	8.9	.50	9.0	7.5	14	2.3	11	.95	102	14	58
16	9.6	9.1	.65	10	4.5	13	3.3	4.5	.55	1.4	6.9	27
17	9.8	8.6	.90	9.4	1.7	9.0	.31	3.3	.34	2.0	6.0	4.5
18	9.3	8.7	1.2	9.6	1.0	18	.17	21	.21	.35	4.0	2.0
19	8.8	8.9	2.0	10	1.2	31	.14	40	.13	.40	2.5	.90
20	8.7	8.6	4.0	10	1.0	21	.11	34	.07	.17	1.5	.50
21	8.4	8.5	3.4	8.0	1.2	16	.09	45	.05	.15	.90	.35
22	8.6	8.4	2.5	7.0	1.2	14	.11	305	.05	.14	.25	.25
23	8.3	8.1	5.0	6.7	1.5	10	.13	328	.04	.13	.15	.20
24	7.9	9.2	16	6.4	2.4	17	.11	162	.04	.13	.05	.18
25	7.7	8.9	12	6.3	1.5	19	.42	147	35	.12	.00	.13
26	8.1	7.1	8.9	7.9	1.7	25	4.8	99	11	.12	.00	.11
27	8.9	5.9	2.8	6.2	1.3	26	7.2	72	12	.11	.00	.09
28	8.9	5.0	2.9	5.7	1.6	24	7.9	58	12	.11	.00	28
29	8.9	4.2	2.7	9.2	---	23	26	43	9.9	.11	.00	21
30	9.0	3.6	2.8	9.0	---	16	43	38	9.1	.03	.00	6.0
31	9.3	---	2.4	4.5	---	14	---	38	---	.02	.00	---
TOTAL	343.6	249.4	106.05	191.08	68.7	351.62	181.07	2839.3	323.93	208.29	160.28	338.54
MEAN	11.1	8.31	3.42	6.16	2.45	11.3	6.04	91.6	10.8	6.72	5.17	11.3
MAX	58	9.7	16	10	7.5	31	43	670	35	102	29	99
MIN	3.7	3.6	.50	.98	1.0	.21	.09	3.3	.04	.02	.00	.00
AC-FT	682	495	210	379	136	697	359	5630	643	413	318	671
CAL YR 1984	TOTAL	4825.53		MEAN	13.2	MAX	771	MIN	.00	AC-FT	9570	
WTR YR 1985	TOTAL	5361.86		MEAN	14.7	MAX	670	MIN	.00	AC-FT	10640	



## 07199450 LAKE MALOYA NEAR RATON, NM

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

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

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

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

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

COOPERATION.--Month-end elevations provided by city of Raton. Capacity table provided by New Mexico Interstate Stream Commission.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 3,970 acre-ft, May 31, 1975, elevation, 7,510.79 ft; maximum elevation observed, 7,512.00 ft, April 30, 1983; minimum observed, 911 acre-ft, Feb. 28, 1979, elevation, 7,479.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,790 acre-ft, April 30, elevation, 7,511.80 ft; minimum observed, 3,450 acre-ft, Aug. 31, elevation, 7,509 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 mi<sup>2</sup>.

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 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.

## MONTHEND ELEVATION AND CONTENTS AND MONTHLY DIVERSIONS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Monthly diversions from Lake Maloya and Lake Alice (acre-feet)
	07199450 LAKE MALOYA			07199550 LAKE ALICE			
Sept. 30, 1984....	7,510.35	3,610	-	7,089.60	71	-	-
Oct. 31.....	7,510.78	3,660	+50	7,089.60	71	0	91
Nov. 30.....	7,510.70	3,650	-10	7,089.60	71	0	85
Dec. 31.....	7,510.83	3,670	+20	7,089.60	71	0	90
CAL YR 1984	-	-	+320	-	-	0	1,560
Jan. 31, 1985....	7,510	3,570	-100	7,089.60	71	0	90
Feb. 28.....	7,510	3,570	0	7,089.60	71	0	102
Mar. 31.....	7,511.53	3,750	+180	7,089.60	71	0	180
Apr. 30.....	7,511.80	3,790	+40	7,089.60	71	0	121
May 31.....	7,511.28	3,720	-70	7,089.60	71	0	144
June 30.....	7,510.50	3,630	-90	7,089.60	71	0	118
July 31.....	7,509.70	3,530	-100	7,089.60	71	0	238
Aug. 31.....	7,509	3,450	-80	7,089.60	71	0	182
Sept. 30.....	7,509.35	3,490	+40	7,089.60	71	0	145
WTR YR 1985	-	-	-120	-	-	0	1,586

## ARKANSAS RIVER BASIN

07199600 CHICORICA CREEK NEAR YANKEE, NM

LOCATION.--Lat 36°55'50", long 104°22'24", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, on right bank 1.0 mi upstream from East Fork, 1.8 mi downstream from Lake Alice, 2.8 mi southwest of Yankee, 4.2 mi northeast of Raton, 4.1 mi downstream from Lake Maloya, and at mile 17.4.

DRAINAGE AREA.--32.5 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1975 to September 1979, October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 25, 1983 to Jan. 4, 1984, Jan. 21, 24, 1984, Feb. 1-9, 1984, Dec. 14-16, 1984, and Jan. 13 to Feb. 13, 1985. Records fair. Flow regulated by Lake Maloya (station 07199450) and Lake Alice (station 07199550). See tabulation of monthly diversion from these reservoirs for municipal supply of city of Raton published with reservoir records.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 152 ft<sup>3</sup>/s, May 5, 1984, gage height, 3.05 ft, from rating curve extended above 70 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 9.25 ft; no flow for several days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 17, 1965, reached a stage of 9.25 ft, present datum, from floodmarks (discharge, 2,230 ft<sup>3</sup>/s, by slope-area measurements).

The flood of May 18, 1955, was computed as 2,230 ft<sup>3</sup>/s by a flow-over-dam measurement of peak flow at Lake Maloya (4.1 mi upstream) and according to a local resident, exceeded the flood of June 1965 at present site.

EXTREMES FOR 1984 WATER YEAR.--Maximum discharge, 152 ft<sup>3</sup>/s, May 5, gage height, 3.05 ft, from rating curve extended as described above; no flow Oct. 1-4.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 137 ft<sup>3</sup>/s, Mar. 10, gage height, 2.96, from rating curve extended as described above; no flow Sept. 10.

DISCHARGE, IN 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	.00	.19	.31	.13	.19	1.1	10	65	17	2.7	.53	.24
2	.00	.18	.32	.12	.18	1.1	9.9	74	16	2.7	.43	.31
3	.00	.18	.32	.12	.18	1.6	8.7	77	15	3.2	.46	.19
4	.00	.17	.30	.12	.17	1.0	14	87	15	3.0	.30	.15
5	.02	.18	.28	.18	.16	1.3	26	122	14	2.1	.28	.10
6	.03	.20	.36	.20	.16	1.4	45	134	12	1.9	.66	.08
7	.03	.18	.29	.21	.16	1.0	72	113	9.7	1.3	.61	.07
8	.03	.19	.28	.22	.16	1.0	69	80	9.0	.96	.41	.07
9	.04	.23	.27	.22	.17	1.4	75	75	7.7	.77	.29	.05
10	.08	.16	.27	.19	.22	1.2	75	84	6.5	.83	.26	.05
11	.09	.20	.25	.21	.23	1.3	70	91	5.7	.74	.22	.12
12	.11	.21	.22	.25	.22	1.5	67	100	4.9	.60	.20	.09
13	.12	.21	.23	.20	.25	8.7	65	92	9.5	.49	.18	.12
14	.12	.23	.22	.33	.31	15	54	86	18	.41	.30	.13
15	.12	.16	.21	.21	1.4	17	54	93	13	.57	.30	.22
16	.13	.18	.23	.21	.68	16	67	112	13	.75	.19	.19
17	.12	.19	.22	.20	.72	27	74	112	11	.85	.16	.11
18	.14	.22	.21	.24	1.6	22	85	86	18	.76	1.1	.08
19	.19	.60	.23	.41	.43	15	85	75	21	.85	2.1	.05
20	.16	.28	.22	.34	.50	17	91	67	15	.74	.47	.04
21	.16	.35	.22	.28	.56	20	74	56	11	.58	.35	.06
22	.14	.32	.22	.25	.65	17	59	50	8.8	.40	.32	.05
23	.16	.23	.21	.22	.51	15	58	47	7.9	.22	.45	.04
24	.27	.25	.20	.20	.48	18	72	47	5.9	.22	.29	.04
25	.15	.26	.18	.21	.45	20	87	39	6.4	.21	.93	.06
26	.12	.31	.17	.19	2.6	18	86	34	5.9	.33	.36	.12
27	.15	4.1	.16	.17	3.6	18	65	32	4.3	.44	.24	.48
28	.20	7.8	.15	.18	.87	13	59	28	4.0	.39	.21	.54
29	.14	2.5	.15	.21	.86	11	63	24	3.3	.85	.20	.27
30	.13	.33	.14	.21	---	10	57	22	2.7	2.0	.16	.27
31	.17	---	.13	.20	---	11	---	19	---	.76	.14	---
TOTAL	3.32	20.79	7.17	6.63	18.67	323.6	1796.6	2223	311.2	32.62	13.10	4.39
MEAN	.11	.69	.23	.21	.64	10.4	59.9	71.7	10.4	1.05	.42	.15
MAX	.27	7.8	.36	.41	3.6	27	91	134	21	3.2	2.1	.54
MIN	.00	.16	.13	.12	.16	1.0	8.7	19	2.7	.21	.14	.04
AC-FT	6.6	41	14	13	37	642	3560	4410	617	65	26	8.7
WTR YR 1984	TOTAL	4761.09		MEAN	13.0	MAX	134	MIN	.00	AC-FT	9440	

07199600 CHICORICA CREEK NEAR YANKEE, NM -- Continued

DISCHARGE, IN 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	.24	.41	.43	.59	.30	2.7	8.0	79	8.4	.16	.81	.02
2	.20	.42	.41	1.1	.30	3.4	7.5	52	7.6	.22	.51	.05
3	.73	.45	.33	.40	.31	4.5	8.0	33	6.4	.14	.31	.06
4	.68	.40	.32	.31	.31	3.2	9.6	24	6.7	.51	.27	.08
5	.35	.38	.32	.36	.30	2.5	10	19	8.5	.65	.24	.07
6	.35	.38	.29	.37	.30	2.4	12	28	9.3	.76	.18	.05
7	.30	.38	.41	.34	.30	3.4	13	42	7.7	1.1	.13	.03
8	.35	.38	.44	.34	.31	3.9	12	27	6.0	1.1	.18	.01
9	1.1	.43	.51	.56	.31	6.3	12	19	5.0	1.0	.26	.00
10	.53	.32	.57	.37	.31	37	13	15	4.9	.41	.16	.00
11	.47	.40	.39	.35	.31	25	12	12	3.4	.59	.12	4.3
12	.40	.37	.52	.31	.32	21	11	12	3.5	.61	.11	3.5
13	.46	.37	.67	.31	.36	13	10	25	4.0	.67	.08	.55
14	.60	.46	.30	.31	.43	10	10	17	3.7	.64	.17	.33
15	.66	.26	.28	.32	.75	9.2	8.7	29	3.0	.28	.25	.30
16	1.0	.34	.34	.31	1.2	9.9	7.6	27	2.3	.15	.19	.31
17	.92	.54	.39	.31	1.3	8.0	6.3	25	1.9	.09	.13	.20
18	.93	.74	.41	.32	.81	8.4	6.0	24	1.5	.08	.35	.21
19	.58	.38	.40	.31	.82	9.0	5.2	24	1.2	.07	.23	.25
20	.54	.34	.38	.30	1.6	8.5	4.4	24	1.2	.07	.12	.33
21	.46	.32	.41	.30	2.3	7.1	3.4	21	1.1	.11	.09	.28
22	.58	.35	.48	.30	2.3	7.9	3.6	46	.82	.07	.08	.25
23	.59	.37	.63	.30	2.4	7.6	4.9	66	.73	.19	.08	.18
24	.60	.63	.47	.30	7.5	9.0	3.8	49	.55	1.1	.05	.21
25	.89	.48	.36	.30	3.2	18	4.3	35	.85	.35	.04	.19
26	.81	.31	.34	.29	2.5	16	5.2	27	.66	.20	.04	.21
27	.67	.54	.42	.29	1.8	13	7.6	21	.67	.15	.08	.20
28	.55	.52	1.2	.29	2.2	11	16	17	.28	.52	.06	.50
29	.49	.50	1.8	.29	---	11	33	14	.26	.33	.05	.57
30	.46	.57	1.2	.30	---	11	69	11	.23	.21	.04	.34
31	.43	---	.73	.30	---	8.3	---	9.5	---	.14	.02	---
TOTAL	17.92	12.74	16.15	11.15	35.15	311.2	337.1	873.5	102.35	12.67	5.43	13.58
MEAN	.58	.42	.52	.36	1.26	10.0	11.2	28.2	3.41	.41	.18	.45
MAX	1.1	.74	1.8	1.1	7.5	37	69	79	9.3	1.1	.81	4.3
MIN	.20	.26	.28	.29	.30	2.4	3.4	9.5	.23	.07	.02	.00
AC-FT	36	25	32	22	70	617	669	1730	203	25	11	27
CAL YR 1984	TOTAL	4776.62		MEAN	13.1	MAX	134	MIN	.04	AC-FT	9470	
WTR YR 1985	TOTAL	1748.94		MEAN	4.79	MAX	79	MIN	.00	AC-FT	3470	

## 07199650 EAST FORK CHICORICA CREEK NEAR YANKEE, NM

LOCATION.--Lat 36°55'18", long 104°21'44", in NW¼ sec.14, T.31 N., R.24 E., Colfax County, Hydrologic Unit 11080001, on right bank 600 ft downstream from bridge on State Highway 72, 0.6 mi upstream from mouth and 2.6 mi southeast of Yankee.

DRAINAGE AREA.--23.9 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Elevation of gage is 6,730 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-11, 1983, Dec. 18-27, 1984, Jan. 1-9, 1985, and Jan. 25 to Feb. 7, 1985. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 128 ft<sup>3</sup>/s, Apr. 7, 1984, gage height, 3.90 ft; no flow many days most years.

EXTREMES FOR 1984 WATER YEAR.--Maximum discharge, 128 ft<sup>3</sup>/s, Apr. 7, gage height, 3.90 ft; no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 77 ft<sup>3</sup>/s, May 22, gage height, 3.59 ft; no flow at times.

DISCHARGE, IN 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	.00	.00	.00	.00	.00	.01	7.0	33	5.9	1.1	.26	1.3
2	.00	.00	.00	.00	.00	.16	6.1	39	5.6	1.1	.19	.66
3	.00	.00	.00	.00	.00	.30	6.2	43	5.7	.93	.19	.23
4	.00	.00	.00	.00	.00	.15	8.4	39	5.3	.83	.17	.22
5	.00	.00	.00	.00	.00	.47	21	77	4.7	.78	.17	.20
6	.00	.00	.00	.00	.00	.08	38	52	4.2	.71	.22	.19
7	.00	.00	.00	.00	.00	.07	51	32	3.9	.62	.19	.19
8	.00	.00	.00	.00	.00	.19	70	23	3.7	.60	.16	.19
9	.00	.00	.00	.00	.00	.39	48	25	3.3	.59	.15	.17
10	.00	.00	.00	.00	.00	.85	56	25	2.9	.56	.12	.17
11	.00	.00	.00	.00	.00	.94	55	24	3.1	.61	.11	.16
12	.00	.00	.00	.00	.00	1.6	45	24	3.0	.54	.10	.15
13	.00	.00	.00	.00	.00	2.4	44	20	5.0	.37	.09	.15
14	.00	.00	.00	.00	.00	6.7	35	20	4.6	.29	1.3	.21
15	.00	.00	.00	.00	.00	10	31	21	3.2	.32	.20	.23
16	.00	.00	.00	.00	.00	8.7	34	34	3.7	.37	.14	.23
17	.00	.00	.00	.00	.00	11	43	26	2.8	.38	.11	.20
18	.00	.00	.00	.00	.00	8.2	41	19	8.7	.31	.12	.19
19	.00	.00	.00	.00	.00	20	43	17	5.0	.44	.83	.18
20	.00	.00	.00	.00	.00	12	37	14	3.2	.25	.16	.17
21	.00	.00	.00	.00	.00	19	28	13	2.6	.22	.13	.18
22	.00	.00	.00	.00	.00	14	31	13	2.2	.20	.16	.16
23	.00	.00	.00	.00	.00	11	36	13	2.0	.19	.17	.16
24	.00	.00	.00	.00	.00	14	43	14	2.1	.19	.18	.07
25	.00	.00	.00	.00	.00	15	51	11	2.1	.18	.82	.13
26	.00	.00	.00	.00	.00	13	47	10	1.6	.17	.24	.20
27	.00	.00	.00	.00	.00	7.5	31	9.4	1.5	.17	.21	.21
28	.00	.00	.00	.00	.00	11	24	8.1	1.4	.15	.20	.24
29	.00	.00	.00	.00	.00	9.4	28	7.4	1.2	.14	.20	.23
30	.00	.00	.00	.00	---	6.1	26	7.0	1.1	.67	.19	.23
31	.00	---	.00	.00	---	6.2	---	6.3	---	.22	.18	---
TOTAL	.00	.00	.00	.00	.00	210.41	1064.7	719.2	105.3	14.20	7.66	7.20
MEAN	.00	.00	.00	.00	.00	6.79	35.5	23.2	3.51	.46	.25	.24
MAX	.00	.00	.00	.00	.00	20	70	77	8.7	1.1	1.3	1.3
MIN	.00	.00	.00	.00	.00	.01	6.1	6.3	1.1	.14	.09	.07
AC-FT	.00	.00	.00	.00	.00	417	2110	1430	209	28	15	14
WTR YR 1984	TOTAL	2128.67	MEAN	5.82	MAX	77	MIN	.00	AC-FT	4220		

07199650 EAST FORK CHICORICA CREEK NEAR YANKEE, NM -- Continued

DISCHARGE, IN 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	.21	.24	.43	1.5	.00	1.4	1.8	16	1.9	.38	.30	.00
2	.20	.24	.23	.20	.00	1.9	1.7	8.4	1.6	.33	.13	.00
3	.69	.24	.01	.10	.00	1.7	2.9	6.1	1.5	.27	.07	.00
4	.51	.24	.00	.08	.00	1.2	2.9	5.1	1.7	.24	.06	.00
5	.27	.23	.32	.80	.00	.79	2.8	4.6	1.9	.22	.04	.00
6	.38	.23	.24	1.7	.00	.79	3.6	12	1.7	.20	.02	.00
7	.24	.24	.00	2.3	.00	.73	3.2	11	1.4	.19	.02	.00
8	.25	.23	1.0	1.5	.00	.94	2.6	6.4	1.2	.17	.01	.00
9	.90	.24	2.2	.60	.15	.72	2.8	4.9	1.1	.16	.03	.00
10	.54	.22	1.2	.10	.30	11	3.1	3.9	1.1	.16	.01	.00
11	.47	.21	.71	.07	.15	19	2.6	3.5	1.1	.14	.00	.21
12	.28	.19	.46	.05	.13	5.3	2.3	3.4	1.3	.11	.00	.58
13	.25	.18	.14	.05	.40	4.9	2.1	5.3	1.2	.11	.00	.02
14	.28	.19	.12	1.0	.70	3.4	2.0	7.2	1.0	.13	2.1	.00
15	.35	.11	.66	6.0	35	3.0	1.9	9.2	1.0	.13	.58	.05
16	.40	.12	.87	5.0	19	2.5	1.7	7.0	.97	.11	.08	.03
17	.37	.15	.38	4.0	6.7	3.1	1.7	6.2	.90	.08	.04	.00
18	.35	.09	.25	12	5.7	2.8	1.7	6.0	1.1	.02	.14	.00
19	.25	.08	.06	8.8	5.0	2.8	1.7	5.7	1.0	.01	.11	.01
20	.24	.07	.00	8.5	2.5	2.1	1.5	5.0	.95	.06	.03	.00
21	.24	.08	.00	.35	2.4	1.9	1.4	4.7	.83	.06	.02	.02
22	.25	.08	.00	.25	1.4	2.4	1.5	27	.79	.03	.00	.00
23	.25	.04	.50	.23	.30	2.8	1.3	14	.75	.04	.00	.00
24	.29	.14	.35	.30	.58	3.9	1.1	8.7	.75	.18	.00	.00
25	.35	.07	.31	.40	.87	9.9	1.1	5.7	5.6	.11	.00	.00
26	.29	.00	.25	.45	.98	7.2	1.3	4.7	1.6	.07	.00	.00
27	.26	.00	.15	.40	.65	4.3	2.0	3.9	.90	.04	.00	.00
28	.25	.00	4.1	.25	.81	3.6	3.9	3.2	.68	.05	.00	.06
29	.25	.30	5.2	.15	---	3.0	8.2	2.8	.55	.12	.00	.14
30	.24	.29	5.4	.10	---	5.9	17	2.4	.44	.05	.00	.08
31	.25	---	5.4	.08	---	2.3	---	2.1	---	.02	.00	---
TOTAL	10.35	4.74	30.94	57.31	83.72	117.27	85.4	216.1	38.51	3.99	3.79	1.20
MEAN	.33	.16	1.00	1.85	2.99	3.78	2.85	6.97	1.28	.13	.12	.04
MAX	.90	.30	5.4	12	35	19	17	27	5.6	.38	2.1	.58
MIN	.20	.00	.00	.05	.00	.72	1.1	2.1	.44	.01	.00	.00
AC-FT	21	9.4	61	114	166	233	169	429	76	7.9	7.5	2.4
CAL YR 1984	TOTAL	2174.70		MEAN	5.94	MAX	77	MIN	.00	AC-FT	4310	
WTR YR 1985	TOTAL	653.32		MEAN	1.79	MAX	35	MIN	.00	AC-FT	1300	

## 07200500 CHICORICA CREEK NEAR RATON, NM

LOCATION.--Lat 36°48'32", long 104°23'35", in N½ sec.28, T.30 N., R.24 E., (projected), Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, on left bank 400 ft upstream from St. Louis, Rocky Mountain and Pacific Railroad crossing (abandoned), 1.3 mi upstream from Raton Creek, 4.0 mi upstream from Una de Gato Creek, 6.9 mi southeast of Raton, and at mile 8.5.

DRAINAGE AREA.--87.0 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--July 10, 1910 to June 9, 1914, at site 500 ft downstream, at different datum. June 9 to July 14, 1914, October 1983 to current year. Discharge measurements and gage heights only for some periods.

GAGE.--Water-stage recorder. Elevation of gage is 6,265 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-10, 1983, Dec. 21, 1983 to Jan., 25, 1984, Jan. 28 to Feb. 9, 1984, and Jan. 11 to Feb. 12, 1985. Records poor. Flow partly regulated by Lake Maloya and Lake Alice.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6.100 ft<sup>3</sup>/s, June 12, 1913, gage height, 11.2 ft, site and datum then in use; no flow at times.

EXTREMES FOR 1984 WATER YEAR.--Maximum discharge, 313 ft<sup>3</sup>/s, Aug. 14, gage height, 5.98 ft, from rating curve extended above 100 ft<sup>3</sup>/s; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 216 ft<sup>3</sup>/s, July 23, gage height, 5.38 ft, from rating curve extended above 100 ft<sup>3</sup>/s; minimum not determined.

DISCHARGE, IN 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	.05	.27	.30	.20	.10	.74	21	101	25	11	27	.80
2	.05	.27	.59	.15	.07	.64	19	123	23	6.1	6.8	.70
3	.06	.31	.76	.21	.05	.62	18	129	22	6.4	1.2	1.7
4	.06	.23	.61	.26	.07	.36	17	136	22	5.7	.61	1.6
5	.06	.24	.26	.35	.05	.26	28	196	20	5.2	.42	1.4
6	.06	.23	.20	.50	.04	.37	59	218	18	4.8	.21	1.2
7	.07	.21	.67	.33	.03	.66	82	180	16	4.6	.32	1.1
8	.07	.23	.71	.22	.03	.88	136	125	15	4.5	.12	.94
9	.08	.22	.56	.15	.02	.83	116	114	12	4.4	.08	.82
10	.09	.22	.46	.10	.05	.75	112	124	9.6	4.3	.06	.70
11	.12	.20	.37	.12	.03	.76	135	132	8.8	3.8	.52	.76
12	.12	.23	.32	.10	.02	.82	121	144	7.9	2.0	.06	.79
13	.16	.17	.15	.20	.02	.77	117	132	11	1.2	.13	.82
14	.17	.19	.14	.34	.02	4.1	109	119	26	.71	23	.85
15	.17	.17	.18	.25	.03	25	92	131	18	11	4.2	.90
16	.19	.18	.46	.23	.04	30	92	158	17	4.0	.67	.94
17	.19	.17	.42	.25	.04	26	113	168	14	2.7	.37	1.0
18	.22	.23	.49	.30	.04	28	135	127	35	1.1	4.9	1.1
19	.24	.68	.52	.40	.06	25	138	108	28	.74	14	1.1
20	.16	.49	.62	.25	.07	22	111	92	22	.59	1.4	1.2
21	.11	.32	.54	.23	.25	30	120	76	17	.37	.78	1.3
22	.10	.26	.45	.25	.33	43	97	66	14	.23	1.1	1.6
23	.11	.30	.50	.30	.17	29	102	62	13	.16	2.4	1.5
24	.12	.25	1.1	.23	.11	26	122	63	10	.09	1.8	1.5
25	.08	.26	.90	.28	.09	38	141	54	11	.08	2.2	1.3
26	.11	.12	.80	.35	.03	36	155	45	9.7	.08	2.6	1.1
27	.11	.05	.71	1.1	.06	32	111	42	17	.19	1.6	1.2
28	.13	.06	.62	.50	.41	26	95	36	8.7	.07	1.2	1.4
29	.11	.28	.53	.30	.80	23	100	32	2.6	.05	1.1	1.5
30	.16	.28	.41	.20	---	22	94	30	6.6	.71	1.2	1.6
31	.20	---	.30	.14	---	19	---	27	---	1.8	.91	---
TOTAL	3.73	7.32	15.65	8.79	3.13	492.56	2908	3290	479.9	88.67	102.96	34.42
MEAN	.12	.24	.50	.28	.11	15.9	96.9	106	16.0	2.86	3.32	1.15
MAX	.24	.68	1.1	1.1	.80	43	155	218	35	11	27	1.7
MIN	.05	.05	.14	.10	.02	.26	17	27	2.6	.05	.06	.70
AC-FT	7.4	15	31	17	6.2	977	5770	6530	952	176	204	68
WTR YR 1984	TOTAL	7435.13		MEAN	20.3	MAX	218	MIN	.02	AC-FT	14750	

## 07200500 CHICORICA CREEK NEAR RATON, NM -- Continued

DISCHARGE, IN 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	1.7	.62	.61	.80	.30	2.9	9.4	92	8.8	2.9	4.2	2.6
2	2.0	.62	.69	.50	.20	3.8	8.9	64	5.6	2.9	1.1	5.8
3	12	.76	.78	.40	.17	6.3	9.2	42	4.6	2.8	.07	4.3
4	9.7	.62	.77	.80	.15	5.1	11	30	4.0	2.6	.07	4.6
5	6.7	.49	.53	1.2	.13	4.2	12	23	6.7	2.7	.05	4.2
6	.36	.62	.59	1.2	.12	4.2	13	34	9.6	2.1	.05	3.4
7	.49	.62	.75	1.5	.11	5.3	13	53	8.2	1.8	6.0	2.4
8	.49	.49	.77	2.0	.15	6.1	12	30	5.4	1.8	2.3	1.8
9	4.0	.36	.39	.90	.90	6.9	12	21	4.3	2.0	21	1.0
10	1.4	.24	.26	.40	2.0	16	13	18	3.4	1.5	12	.03
11	.91	.09	.17	.35	1.2	48	12	15	4.1	.80	5.3	18
12	1.2	.36	.33	.30	1.5	28	11	14	2.9	.47	3.8	22
13	.76	.24	.23	.26	1.1	12	9.7	23	3.5	.24	2.1	5.6
14	.91	.36	.11	.80	1.3	9.9	9.4	21	2.8	.16	3.2	4.0
15	1.2	.09	.53	.90	1.1	9.7	8.6	31	2.6	.37	28	11
16	1.4	.49	.36	1.3	1.0	9.6	7.2	30	2.1	.26	11	13
17	1.4	.49	.46	.80	.72	9.4	6.3	32	1.5	.17	4.6	6.7
18	1.0	.13	.49	.90	.39	9.0	5.7	25	1.3	.07	2.2	5.5
19	1.0	.49	.59	1.6	.52	8.6	5.2	25	1.4	.07	3.0	5.0
20	.91	.62	.78	2.5	.51	8.5	1.7	25	.63	.06	3.0	4.8
21	.62	.49	.66	.50	.82	8.3	1.1	24	.34	.06	2.8	4.8
22	.62	.49	.52	.40	1.3	7.8	.50	66	.02	.06	2.7	4.6
23	.91	.24	.61	.30	1.6	7.4	1.6	83	.01	21	2.8	4.4
24	1.2	.49	.87	.60	1.4	7.0	.47	57	.01	3.6	2.9	4.3
25	1.2	1.0	.83	.80	1.8	11	.55	39	26	1.6	2.9	4.1
26	1.0	.91	1.1	1.0	2.4	24	1.6	27	7.5	.08	2.9	4.1
27	1.2	.91	1.2	1.2	2.6	18	6.0	20	7.0	.02	3.2	4.1
28	1.0	1.2	1.6	.90	2.5	15	19	17	5.4	.41	4.3	11
29	.91	.93	2.2	.78	---	15	35	14	3.6	.36	3.6	12
30	.91	.60	1.8	.65	---	12	76	12	2.9	.05	3.0	8.6
31	.76	---	1.7	.50	---	10	---	9.9	---	.02	2.7	---
TOTAL	59.86	16.06	23.28	27.04	27.99	349.0	332.12	1016.9	136.21	53.03	146.84	187.73
MEAN	1.93	.54	.75	.87	1.00	11.3	11.1	32.8	4.54	1.71	4.74	6.26
MAX	12	1.2	2.2	2.5	2.6	48	76	92	26	21	28	22
MIN	.36	.09	.11	.26	.11	2.9	.47	9.9	.01	.02	.05	.03
AC-FT	119	32	46	54	56	692	659	2020	270	105	291	372
CAL YR 1984	TOTAL	7507.63		MEAN	20.5	MAX	218	MIN	.02	AC-FT	14890	
WTR YR 1985	TOTAL	2376.06		MEAN	6.51	MAX	92	MIN	.01	AC-FT	4710	

## 07202000 CHICORICA CREEK NEAR HEBRON, NM

LOCATION.--Lat 36°46'11", long 104°23'42", in SW¼NE¼SE¼ sec.4, T.29 N., R.24 E., Colfax County, Hydrologic Unit 11080001, on downstream wingwall of left abutment of highway bridge near east boundary of Maxwell Grant, 900 ft downstream from Una de Gato Creek, 4.4 mi northeast of Hebron, 9.5 mi south of Raton, and at mile 5.0.

DRAINAGE AREA.--381 mi<sup>2</sup>.

PERIOD OF RECORD.--January 24, 1945 to January 10, 1952. October 1983 to current year.

REVISED RECORDS.--WSP 1177 1948 (M).

GAGE.--Water-stage recorder. Elevation of gage is 6.200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 18, 1983 to Jan. 25, 1984 and Jan. 30, 1984 to Feb. 8, 1984. Records fair. Diversion for 2,500 acres upstream from station for irrigation.

AVERAGE DISCHARGE.--8 years (1946-51, 1984-85), 14.1 ft<sup>3</sup>/s, 10.220 acre-ft/vr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,530 ft<sup>3</sup>/s, May 31, 1948, from rating curve extended above 600 ft<sup>3</sup>/s on basis of contracted opening determination; minimum daily, 0.09 ft<sup>3</sup>/s, at times during 1984 and 1985 water years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 20 ft, from floodmarks (discharge about 15,000 ft<sup>3</sup>/s), date unknown.

EXTREMES FOR 1984 WATER YEAR.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 14	2030	*2,060	*8.58	No other peak greater than base discharges.			

Minimum daily discharge, 0.09 ft<sup>3</sup>/s, July 22-27.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 6	2330	*359	*4.69				

Minimum daily discharge, 0.09 ft<sup>3</sup>/s, Sept. 13.

DISCHARGE, IN 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	.52	1.8	2.7	3.3	4.9	4.7	18	104	24	70	108	2.9
2	.54	1.1	3.6	3.3	5.0	4.2	16	127	21	26	32	3.2
3	.54	1.0	4.1	3.3	4.9	4.4	15	140	22	23	7.0	4.3
4	.54	.97	3.8	3.2	5.1	3.3	12	154	20	21	2.6	3.8
5	.54	.93	3.1	3.0	5.1	6.6	20	220	17	18	1.1	3.7
6	.55	.92	3.0	3.0	4.2	1.5	53	307	16	16	2.7	3.4
7	.56	.96	3.6	3.0	4.1	1.5	87	228	14	14	4.4	3.3
8	.58	2.0	3.9	3.0	3.9	2.0	173	144	12	14	1.3	3.1
9	.64	2.2	3.8	3.0	2.3	2.6	150	121	10	13	.43	2.9
10	.70	2.3	3.4	3.0	3.0	2.1	128	127	7.0	13	.26	2.8
11	.96	1.8	3.0	3.0	2.1	2.9	160	135	5.6	12	.23	3.0
12	1.0	2.5	3.1	3.0	1.8	2.4	132	148	4.3	10	.53	3.0
13	1.1	2.5	3.1	3.0	1.8	2.3	120	133	6.7	3.8	5.7	3.2
14	1.3	2.3	2.5	3.0	2.3	3.6	111	125	31	2.6	356	3.3
15	1.4	1.9	2.7	3.0	1.6	25	91	130	14	15	87	3.6
16	1.5	2.3	3.2	3.0	2.4	28	87	158	19	3.9	17	4.0
17	1.9	3.2	2.9	3.0	2.9	23	103	177	11	2.7	11	4.1
18	2.1	3.2	3.2	2.8	3.3	26	138	129	45	.38	7.7	4.3
19	3.0	3.0	3.2	2.9	2.3	21	137	109	25	.17	53	5.1
20	2.1	3.6	3.3	2.9	2.2	21	176	94	17	.10	12	5.7
21	1.4	4.1	3.1	2.9	2.5	26	185	81	13	.10	9.2	5.7
22	1.5	3.0	3.3	2.9	2.3	43	112	72	11	.09	9.6	7.9
23	1.9	2.7	3.3	2.9	2.0	27	109	66	9.8	.09	8.1	7.5
24	1.7	2.8	3.3	2.9	.92	21	120	67	7.9	.09	13	6.1
25	2.1	3.9	3.3	3.0	1.3	36	182	58	6.1	.09	4.0	5.5
26	2.2	3.3	3.3	3.8	1.1	34	247	49	4.6	.09	4.2	5.3
27	1.7	1.3	3.3	4.6	.53	31	161	46	9.7	.09	6.5	5.7
28	1.7	1.8	3.3	5.1	1.1	23	120	39	10	.58	4.1	5.8
29	1.6	2.7	3.1	5.2	2.6	20	112	33	4.9	.10	3.6	7.3
30	2.0	2.3	3.2	5.2	---	19	102	30	3.2	.27	3.2	7.7
31	2.0	---	3.3	5.1	---	16	---	27	---	2.8	3.0	---
TOTAL	41.87	68.38	101.0	104.3	79.55	484.1	3377	3578	421.8	283.04	778.45	137.2
MEAN	1.35	2.28	3.26	3.36	2.74	15.6	113	115	14.1	9.13	25.1	4.57
MAX	3.0	4.1	4.1	5.2	5.1	43	247	307	45	70	356	7.9
MIN	.52	.92	2.5	2.8	.53	1.5	12	27	3.2	.09	.23	2.8
AC-FT	83	136	200	207	158	960	6700	7100	837	561	1540	272

WTR YR 1984 TOTAL 9454.69 MEAN 25.8 MAX 356 MIN .09 AC-FT 18750



07202000 CHICORICA CREEK NEAR HEBRON, NM -- Continued

DISCHARGE, IN 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	6.5	5.2	4.2	3.0	1.5	6.3	11	81	14	1.2	5.2	2.6
2	6.1	4.8	4.0	2.5	1.0	7.4	11	62	9.9	.98	4.1	3.3
3	7.1	4.8	3.8	2.0	.75	9.6	11	41	8.5	.88	.89	2.8
4	17	4.8	4.0	3.0	1.0	8.7	12	31	7.5	.77	1.2	1.1
5	11	4.7	4.0	3.5	3.3	6.5	14	25	16	.62	1.5	3.0
6	10	4.8	3.6	3.7	3.0	4.6	14	46	17	.75	1.5	3.8
7	7.1	4.7	4.0	3.2	3.3	4.4	15	102	12	.30	33	5.0
8	6.1	4.9	4.0	3.3	3.8	4.5	14	40	8.5	.16	11	4.8
9	17	3.6	4.0	2.2	5.1	5.3	14	28	6.8	.15	13	3.6
10	11	3.8	3.9	1.3	5.8	10	15	21	6.2	.17	63	3.6
11	8.6	4.1	3.7	1.0	4.9	72	14	17	6.5	.11	7.3	26
12	8.4	4.4	3.5	.80	5.2	42	13	16	5.7	.10	6.4	65
13	7.1	4.7	2.7	1.0	6.1	25	12	24	6.5	.11	5.3	.09
14	7.2	4.4	1.5	2.5	6.1	24	11	27	4.9	.10	4.3	.51
15	10	4.5	1.7	3.0	6.8	21	11	35	4.5	.99	45	46
16	10	4.3	2.0	3.1	7.5	22	8.7	34	4.0	.15	18	32
17	11	4.2	2.5	1.5	11	24	7.8	37	3.2	.10	4.7	8.2
18	8.8	4.1	3.0	2.7	9.8	24	6.9	34	3.3	.10	3.6	4.7
19	7.6	4.1	3.7	4.3	5.9	24	6.3	32	3.7	.10	5.6	12
20	6.8	4.3	4.1	6.7	5.8	25	3.4	31	2.7	.10	3.5	18
21	6.6	4.3	4.0	2.0	8.1	24	2.2	34	1.8	.10	3.7	20
22	6.3	4.6	3.7	1.3	6.4	21	1.8	108	.80	.10	3.1	17
23	6.3	4.8	3.8	1.2	5.3	19	2.5	106	.81	12	2.6	8.2
24	6.2	6.8	3.7	1.1	4.1	16	1.7	81	.59	9.6	2.3	6.0
25	7.9	8.1	3.6	2.5	4.7	18	1.5	71	36	4.0	2.6	5.5
26	7.2	5.8	3.3	5.9	4.5	31	2.1	53	16	5.1	2.8	5.2
27	6.3	5.5	4.3	6.7	4.9	25	12	40	4.7	.96	2.4	5.0
28	6.0	5.7	9.8	5.3	4.5	23	12	31	3.2	.94	2.7	10
29	5.8	5.3	7.1	5.0	---	17	31	24	2.2	2.8	2.7	14
30	6.3	4.5	5.9	4.5	---	14	61	19	1.5	.96	2.4	13
31	6.8	---	4.9	2.0	---	12	---	16	---	.61	7.4	---
TOTAL	256.1	144.6	122.0	91.80	140.15	590.3	352.9	1347	219.00	45.11	272.79	350.00
MEAN	8.26	4.82	3.94	2.96	5.01	19.0	11.8	43.5	7.30	1.46	8.80	11.7
MAX	17	8.1	9.8	6.7	11	72	61	108	36	12	63	65
MIN	5.8	3.6	1.5	.80	.75	4.4	1.5	16	.59	.10	.89	.09
AC-FT	508	287	242	182	278	1170	700	2670	434	89	541	694
CAL YR 1984	TOTAL	9766.14		MEAN	26.7	MAX	356	MIN	.09	AC-FT	19370	
WTR YR 1985	TOTAL	3931.75		MEAN	10.8	MAX	108	MIN	.09	AC-FT	7800	

## 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.--No estimated daily discharges. Records fair except those for winter period, 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.--14 years (water years 1946-49, 1976-85), 6.58 ft<sup>3</sup>/s, 4,770 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 217 ft<sup>3</sup>/s, Aug. 27, 1946, from rating curve extended above 85 ft<sup>3</sup>/s; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 112 ft<sup>3</sup>/s, May 1, from rating curve extended above 85 ft<sup>3</sup>/s; no flow many days.

DISCHARGE, IN 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	6.0	4.0	3.3	2.3	2.2	.90	.00	112	15	.00	.01	.37
2	5.1	3.7	3.4	1.7	2.1	2.0	.00	102	9.9	.00	5.4	.18
3	5.3	3.8	3.2	1.2	2.1	3.6	.00	67	6.6	.00	1.8	1.7
4	16	3.8	2.9	1.0	1.7	2.1	.30	45	5.7	.00	.35	1.4
5	9.4	3.9	3.0	3.6	1.2	.99	.46	31	5.7	.00	.03	.55
6	14	3.9	2.4	3.9	1.0	.40	5.0	23	21	.00	.15	.50
7	7.3	3.9	1.8	3.0	1.1	.12	11	97	14	.00	.28	.83
8	6.1	3.9	3.1	3.4	1.9	.03	16	53	9.1	.00	32	1.0
9	9.9	3.7	3.7	3.5	2.4	.00	16	15	6.4	.00	7.2	.91
10	19	3.9	3.5	2.9	3.3	.00	15	7.0	5.2	.00	56	.69
11	9.2	3.8	3.5	1.1	3.7	.00	20	18	4.8	.00	10	1.7
12	8.4	4.4	3.2	.96	3.5	.03	19	15	5.5	.00	5.4	53
13	7.9	5.7	2.3	.86	3.0	.03	24	18	5.2	.00	4.2	16
14	6.2	6.7	.42	1.1	5.6	.00	26	33	5.0	.00	2.9	4.7
15	8.1	6.1	.54	1.4	8.2	.00	24	32	4.0	.40	.49	4.2
16	8.1	5.8	.64	1.6	8.5	.16	18	39	3.6	5.0	43	57
17	9.0	7.9	.78	1.4	13	.52	13	38	3.7	.35	3.2	10
18	6.8	3.1	.96	1.9	14	.33	12	44	2.7	.01	.69	5.7
19	5.6	3.0	1.2	2.2	11	.08	10	35	2.9	.00	.32	5.7
20	5.1	2.9	1.1	2.7	5.8	.01	9.7	34	3.0	.00	1.2	4.5
21	4.6	2.9	1.0	2.8	4.5	.00	7.6	38	2.0	.00	.35	3.3
22	4.5	2.9	1.1	2.0	6.8	.00	5.0	63	1.7	.00	.17	2.8
23	4.3	2.9	1.3	1.5	4.2	.00	4.2	98	1.1	.00	1.7	2.2
24	4.2	3.1	1.2	2.0	1.8	.00	3.8	30	.96	16	.22	1.9
25	4.3	3.5	1.4	2.5	.84	.00	4.1	31	.98	3.3	.12	1.8
26	4.9	3.8	2.0	3.0	.86	.00	1.8	18	40	3.7	.75	1.6
27	4.4	3.5	2.5	3.8	.78	.00	.65	10	4.8	1.5	.81	1.5
28	3.9	3.4	4.2	8.3	.45	.00	14	17	.25	.26	.66	1.3
29	3.8	3.1	4.5	7.4	---	.67	42	28	.00	.02	.68	19
30	3.7	3.1	3.7	4.2	---	3.3	67	21	.00	.50	.91	9.0
31	3.9	---	3.0	3.6	---	.49	---	17	---	.29	.43	---
TOTAL	219.0	120.1	70.84	82.82	115.53	15.76	389.61	1229.0	190.79	31.33	181.42	215.03
MEAN	7.06	4.00	2.29	2.67	4.13	.51	13.0	39.6	6.36	1.01	5.85	7.17
MAX	19	7.9	4.5	8.3	14	3.6	67	112	40	16	56	57
MIN	3.7	2.9	.42	.86	.45	.00	.00	7.0	.00	.00	.01	.18
AC-FT	434	238	141	164	229	31	773	2440	378	62	360	427
CAL YR 1984	TOTAL	6896.56		MEAN	18.8	MAX	176	MIN	.00	AC-FT	13680	
WTR YR 1985	TOTAL	2861.23		MEAN	7.84	MAX	112	MIN	.00	AC-FT	5680	

## 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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Estimated daily discharges: Nov. 10, 11, Nov. 19 to Jan. 7, Jan. 9-11, 15-26, Jan. 28 to Feb. 9, and Feb. 12, 13. Water-discharge records fair except those for winter period, which are poor. Diversions for irrigation of small acreage and mountain meadows upstream from station.

AVERAGE DISCHARGE.--61 years (water years 1916-17, 1920, 1928-85), 18.3 ft<sup>3</sup>/s, 13,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1926).--Maximum discharge, 12,600 ft<sup>3</sup>/s, June 17, 1965, gage height, 15.25 ft, from rating curve extended above 400 ft<sup>3</sup>/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 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 22	2100	*221	*4.68				

Minimum discharge, 1.6 ft<sup>3</sup>/s, Feb. 1-4.

DISCHARGE, IN 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	15	12	3.6	7.5	1.6	13	19	90	78	36	18	9.3
2	15	12	3.8	5.0	1.6	12	18	96	73	37	24	9.3
3	14	12	3.8	4.0	1.6	12	17	96	64	38	26	9.5
4	22	12	4.3	4.5	1.6	16	18	106	61	33	37	9.0
5	18	11	4.4	6.0	1.7	13	20	120	64	32	35	11
6	16	11	4.7	10	1.7	10	21	121	64	31	23	9.0
7	16	11	5.1	14	1.8	11	22	126	58	29	20	7.9
8	16	11	5.3	10	1.8	11	25	114	64	28	19	7.7
9	18	11	5.4	10	1.9	11	25	108	64	31	21	7.5
10	16	9.0	5.6	9.2	2.9	12	26	109	63	26	17	7.2
11	12	8.0	5.6	7.5	8.7	13	27	117	59	25	18	9.0
12	11	11	5.6	7.8	8.1	18	29	106	61	22	17	14
13	9.9	11	5.6	8.9	16	19	30	101	60	25	15	10
14	10	9.6	3.0	10	36	15	30	91	55	25	12	8.9
15	15	8.8	2.5	9.2	54	15	31	84	52	25	11	9.3
16	15	8.6	2.3	6.8	40	17	30	78	49	44	12	23
17	13	8.3	2.3	7.9	39	17	31	84	48	37	12	11
18	13	8.2	2.6	7.9	20	17	31	90	63	30	11	9.1
19	13	7.0	2.8	6.9	29	23	33	93	58	56	11	9.6
20	12	6.0	3.0	8.7	17	23	31	90	54	31	10	11
21	12	5.5	3.3	7.2	17	20	29	84	49	30	9.6	13
22	12	5.2	3.7	5.7	15	21	29	162	52	31	9.8	12
23	13	5.6	3.9	7.9	14	19	24	159	53	33	17	13
24	14	12	4.1	8.7	14	20	22	156	45	39	14	12
25	14	5.2	4.3	6.4	17	20	21	131	44	28	13	11
26	14	4.0	4.8	8.7	17	22	24	118	43	27	12	10
27	14	3.1	5.1	11	14	22	31	108	42	22	10	9.6
28	14	2.4	5.4	7.2	13	21	36	98	40	22	10	9.4
29	13	2.6	5.6	5.0	---	21	60	84	37	22	10	9.7
30	12	3.0	5.7	6.4	---	23	69	79	37	21	9.5	11
31	12	---	6.0	4.5	---	20	---	73	---	18	9.5	---
TOTAL	433.9	247.1	133.2	240.5	407.0	527	859	3272	1654	934	493.4	313.0
MEAN	14.0	8.24	4.30	7.76	14.5	17.0	28.6	106	55.1	30.1	15.9	10.4
MAX	22	12	6.0	14	54	23	69	162	78	56	37	23
MIN	9.9	2.4	2.3	4.0	1.6	10	17	73	37	18	9.5	7.2
AC-FT	861	490	264	477	807	1050	1700	6490	3280	1850	979	621
CAL YR 1984	TOTAL	5501.6		MEAN	15.0	MAX	259	MIN	2.3	AC-FT	10910	
WTR YR 1985	TOTAL	9514.1		MEAN	26.1	MAX	162	MIN	1.6	AC-FT	18870	

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 6,155 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.--No estimated daily discharges. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 124 ft<sup>3</sup>/s, June 14, 1983; no flow several days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 117 ft<sup>3</sup>/s, May 7; no flow Nov. 29 to Dec. 5.

DISCHARGE, IN 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	11	7.2	.00	8.0	3.0	2.1	21	84	45	10	14	3.2
2	11	7.3	.00	6.0	3.2	1.8	21	92	70	9.1	18	3.0
3	15	6.9	.00	4.1	3.6	1.7	20	92	61	8.3	23	2.6
4	25	6.5	.00	5.0	3.9	3.8	20	95	67	7.6	29	2.6
5	17	6.0	.00	6.0	4.3	1.4	22	105	70	7.1	41	2.6
6	12	6.1	2.5	7.0	4.0	1.1	22	107	70	6.6	22	2.5
7	11	5.8	9.6	8.0	4.5	1.3	23	117	61	6.2	20	2.3
8	11	5.5	6.2	9.0	5.0	1.4	25	116	64	7.8	19	2.2
9	15	5.4	7.3	10	3.8	.59	26	112	69	19	28	2.1
10	18	4.1	2.3	4.3	4.2	.36	27	61	69	20	18	2.6
11	11	3.0	4.5	1.6	3.8	.78	27	42	61	17	14	2.6
12	8.4	4.7	2.8	6.1	3.4	6.9	29	51	68	16	15	2.5
13	6.3	3.6	3.4	5.0	4.3	6.3	31	33	63	15	12	1.3
14	6.0	4.0	.64	4.7	6.6	4.6	31	37	56	17	11	1.2
15	11	2.7	3.8	7.0	7.8	5.1	31	45	52	18	9.2	1.0
16	13	2.6	12	10	7.0	7.7	31	58	49	32	8.0	2.1
17	11	4.2	14	7.0	4.8	9.0	31	83	44	36	6.8	1.4
18	9.2	3.8	18	11	6.5	5.3	31	89	39	30	5.8	1.3
19	10	3.5	5.5	10	4.2	5.0	32	90	21	50	5.2	1.2
20	9.3	3.4	5.6	7.0	4.1	26	33	87	10	34	4.5	1.1
21	9.3	1.8	9.7	4.2	4.2	23	30	62	8.6	29	4.0	1.4
22	9.5	.26	8.5	9.2	3.6	22	31	64	11	28	3.2	1.4
23	10	.20	9.0	11	1.4	23	26	32	16	31	8.9	1.2
24	11	.17	9.0	12	.55	19	22	26	15	37	11	1.3
25	11	.14	8.0	11	.81	21	22	15	18	30	9.3	1.2
26	11	.11	9.0	11	1.5	22	24	9.5	14	24	7.2	1.0
27	10	.13	10	16	1.7	23	30	5.3	12	24	6.7	8.6
28	9.5	.08	12	17	2.5	22	31	21	13	22	5.4	7.8
29	9.1	.00	12	8.8	---	22	53	33	12	19	4.5	7.6
30	7.9	.00	12	1.9	---	21	71	30	12	17	3.6	7.5
31	7.4	---	10	1.1	---	22	---	29	---	15	3.4	---
TOTAL	346.9	99.19	207.34	240.0	108.26	332.23	874	1922.8	1240.6	642.7	390.7	289.2
MEAN	11.2	3.31	6.69	7.74	3.87	10.7	29.1	62.0	41.4	20.7	12.6	9.64
MAX	25	7.3	18	17	7.8	26	71	117	70	50	41	26
MIN	6.0	.00	.00	1.1	.55	.36	20	5.3	8.6	6.2	3.2	2.1
AC-FT	688	197	411	476	215	659	1730	3810	2460	1270	775	574
CAL YR 1984	TOTAL	3967.73		MEAN	10.8	MAX	122	MIN	.00	AC-FT	7870	
WTR YR 1985	TOTAL	6693.92		MEAN	18.3	MAX	117	MIN	.00	AC-FT	13280	

## 07204000 MORENO CREEK AT EAGLE NEST, NM

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

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

PERIOD OF RECORD.--April 1928 to October 1955 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.--No estimated daily discharges. 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 ft<sup>3</sup>/s, Sept. 1, 1946, gage height, 3.10 ft, site and datum then in use; maximum gage height, 3.55 ft, May 12, 1973; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35 ft<sup>3</sup>/s and maximum (\*);

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 14	0045	78	2.85	May 22	1630	64	2.88
May 5	1045	*100	*3.14				

Minimum discharge determined, 1.0 ft<sup>3</sup>/s, Oct. 1, 2, 3.

DISCHARGE, IN 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	1.0	4.2					---	90	30	5.5	6.4	2.3
2	1.1	---					---	89	26	4.4	7.5	2.4
3	1.2	---					52	85	24	4.4	7.3	2.4
4	2.1	---					56	87	22	4.2	10	2.8
5	2.1	---					53	93	24	4.1	12	2.5
6	1.8	---					52	93	21	4.2	7.4	2.1
7	1.6	---					54	90	18	4.2	6.2	2.1
8	1.6	---					58	86	16	3.9	5.7	2.0
9	1.5	---					63	84	15	4.1	5.6	1.9
10	1.4	---					64	85	14	4.6	4.9	1.8
11	1.4	---					62	79	11	4.2	4.6	2.2
12	1.5	---					61	73	15	4.2	4.3	3.0
13	1.6	---					58	76	13	7.1	3.9	2.4
14	1.7	---					57	71	12	9.2	3.7	2.1
15	1.9	---					57	58	11	7.7	3.6	2.1
16	2.2	---					57	49	9.4	8.2	3.5	2.3
17	3.9	---					59	49	8.3	6.7	3.2	2.0
18	5.0	---					60	47	9.2	9.7	3.1	2.1
19	3.1	---					63	43	13	10	2.9	3.0
20	3.3	---					56	44	11	7.3	2.8	3.3
21	3.2	---					47	46	9.1	6.3	2.9	5.3
22	3.2	---					47	53	8.3	10	2.8	3.9
23	3.4	---					43	52	7.7	12	2.7	4.7
24	3.6	---					39	50	7.5	12	2.8	3.4
25	3.9	---					35	44	8.7	8.4	2.9	2.9
26	3.9	---					43	43	7.9	8.4	2.5	2.7
27	4.3	---					52	41	6.6	7.1	3.0	2.6
28	4.1	---					60	39	6.6	6.4	3.3	2.6
29	4.0	---					81	36	6.2	8.2	2.8	3.0
30	4.0	---					77	31	5.8	7.8	2.7	2.7
31	4.1	---					---	30	---	6.5	2.6	---
TOTAL	82.7	---					---	1936	397.3	211.0	139.6	80.6
MEAN	2.67	---					---	62.5	13.2	6.81	4.50	2.69
MAX	5.0	---					---	93	30	12	12	5.3
MIN	1.0	---					---	30	5.8	3.9	2.5	1.8
AC-FT	164	---					---	3840	788	419	277	160

## 07204500 CIENEGUILLA CREEK NEAR EAGLE NEST, NM

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

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

PERIOD OF RECORD.--April 1928 to September 1955 and June 1964 to current year (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 8,195 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.--No estimated daily discharges. 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 ft<sup>3</sup>/s, June 16, 1965, gage height, 5.61 ft, from rating curve extended above 110 ft<sup>3</sup>/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft<sup>3</sup>/s and maximum (\*);

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 12	0045	121	4.54	May 22	21.5	85	4.09
Apr. 29	0330	*179	*4.93				

Minimum discharge determined, 0.80 ft<sup>3</sup>/s, Aug. 27, 28.

DISCHARGE, IN 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	1.7	4.2						171	24	5.9	3.0	1.4
2	1.6							171	22	6.1	4.3	1.3
3	1.8							162	20	5.8	3.9	1.2
4	3.7						51	156	19	5.4	7.1	1.8
5	3.4						53	152	23	4.6	5.7	1.6
6	2.8						54	141	27	4.3	4.2	1.4
7	2.7						60	127	21	4.4	3.5	1.3
8	2.5						75	111	20	3.6	3.2	1.3
9	2.3						92	99	18	3.9	3.1	1.2
10	2.1						97	95	17	3.9	3.4	1.2
11	2.1						101	82	15	3.3	3.4	1.7
12	2.4						109	74	15	3.2	3.3	3.2
13	2.7						102	84	14	3.3	2.8	2.5
14	2.5						101	82	14	3.3	2.1	2.2
15	2.9						103	72	12	4.0	2.0	2.2
16	2.7						100	58	11	4.2	1.9	2.1
17	5.6						95	55	11	3.9	1.6	1.9
18	8.1						97	55	14	3.5	1.4	2.5
19	6.4						100	50	19	3.7	1.3	3.6
20	4.5						84	50	14	3.4	1.2	3.9
21	4.8						71	47	11	4.1	1.4	7.7
22	5.1						69	68	9.4	4.5	1.5	4.4
23	5.0						64	68	8.5	3.6	1.2	3.5
24	4.6						55	51	8.1	3.1	1.4	3.0
25	5.5						49	46	12	3.4	1.4	2.7
26	5.8						62	40	9.9	4.6	1.0	2.6
27	6.6						84	36	7.8	3.6	.94	2.5
28	5.2						118	33	7.0	3.6	.89	2.4
29	4.4						172	30	6.4	4.5	.99	2.6
30	4.2						167	27	6.0	3.9	1.2	2.3
31	4.2							25		3.2	1.7	
TOTAL	119.9							2518	436.1	125.8	76.02	73.2
MEAN	3.87							81.2	14.5	4.06	2.45	2.44
MAX	8.1							171	27	6.1	7.1	7.7
MIN	1.6							25	6.0	3.1	.89	1.2
AC-FT	238							4990	865	250	151	145

## 07205000 SIXMILE CREEK NEAR EAGLE NEST, NM

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

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

PERIOD OF RECORD.--April 1928 to September 1955 (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.--No estimated daily discharges. 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 ft<sup>3</sup>/s, 1,820 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 19	1315	33	1.72	May 5	0930	*39	1.77
Apr. 28	1800	38	*1.78	May 22	1100	17	1.29

Minimum discharge determined, 0.23 ft<sup>3</sup>/s, July 28.

DISCHARGE, IN 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	.48	3.2					---	29	11	2.2	1.5	.51
2	.47	---					---	29	11	2.3	1.8	.52
3	.59	---					---	30	10	2.1	2.2	.52
4	.72	---					9.8	33	9.9	1.9	2.8	.53
5	.73	---					8.7	36	10	1.9	2.4	.48
6	.70	---					9.0	34	9.2	1.9	2.1	.42
7	.64	---					9.3	32	8.5	1.9	2.0	.39
8	.58	---					11	30	8.6	1.9	1.9	.38
9	.55	---					13	29	8.5	1.9	1.9	.35
10	.53	---					14	29	7.4	1.9	1.9	.35
11	.52	---					15	27	6.4	1.8	1.9	.43
12	.53	---					16	21	6.4	1.4	1.7	.59
13	.55	---					16	20	6.2	1.2	1.6	.46
14	.58	---					16	17	5.9	1.3	1.4	.44
15	.64	---					18	14	5.5	1.5	.85	.46
16	1.0	---					20	11	5.2	1.3	.80	.46
17	1.8	---					23	12	5.1	1.1	.74	.44
18	2.6	---					26	11	5.3	.74	.70	.60
19	3.0	---					30	11	5.3	.70	.68	.76
20	2.1	---					24	11	4.6	.72	.63	.80
21	2.1	---					19	10	3.9	.95	.60	1.5
22	2.2	---					18	13	3.6	1.1	.54	3.3
23	2.4	---					16	11	3.3	1.2	.50	3.1
24	2.5	---					14	9.9	3.1	.86	.60	2.9
25	2.6	---					14	9.8	3.2	.66	.59	2.8
26	2.6	---					17	9.3	2.6	.56	.53	2.7
27	2.6	---					20	9.9	2.5	.37	.54	2.6
28	2.5	---					25	12	2.4	.27	.54	2.6
29	2.4	---					31	12	2.8	.78	.48	2.9
30	2.4	---					28	11	2.6	.87	.54	2.7
31	2.6	---					---	12	---	1.5	.57	---
TOTAL	46.21	---					---	585.9	180.0	40.78	37.53	36.99
MEAN	1.49	---					---	18.9	6.00	1.32	1.21	1.23
MAX	3.0	---					---	36	11	2.3	2.8	3.3
MIN	.47	---					---	9.3	2.4	.27	.48	.35
AC-FT	92	---					---	1160	357	81	74	73

## ARKANSAS RIVER BASIN

07205500 EAGLE NEST LAKE NEAR EAGLE NEST, NM

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

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

PERIOD OF RECORD.--December 1927 to December 1944 (monthend contents only, published in WSP 1311), May 1950 to September 1965 (monthend contents only), October 1965 to current year. Prior to January 1972 published as Eagle Nest Reservoir.

REVISED RECORDS.--WSP 1281: Drainage area.

GAGE.--Nonrecording gage usually read several times a month at random intervals. Datum of gage is 8,056.8 ft above National Geodetic Vertical Datum of 1929. Prior to October 1964 gage heights were raised by addition of 8,000 ft and called elevations.

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents 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, 77,770 acre-ft, June 26, gage height, 136.44 ft; minimum observed, 52,860 acre-ft, Dec. 1, gage height, 124.90 ft.

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

105	22,850	115	35,920	125	53,050
110	28,900	120	43,940	130	63,170

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52860	52900	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	76120	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	61600	---	---	---	---	---
11	---	---	53200	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	75580	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	64210	---	---	---	---	72870
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	69600	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	77770	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	55390	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	52860	---	---	---	---	68640	---	77650	---	---	72030
31	52900	---	53730	53920	---	59620	---	76950	---	76120	74000	---
(†)	---	124.90	125.35	125.45	---	128.30	132.50	136.10	136.39	135.75	134.85	134.00
(††)	+40	-40	+870	+190	+1470	+4230	+9020	+8310	+700	-1530	-2120	-1970

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



## 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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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. 16 to Mar. 4. Water-discharge records good except for estimated daily discharges, which are poor. Flow regulated by Eagle Nest Lake (station 07205500). Diversions for irrigation of 2,500 acres upstream from station.

AVERAGE DISCHARGE.--35 years, 13.6 ft<sup>3</sup>/s, 9,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 205 ft<sup>3</sup>/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, 115 ft<sup>3</sup>/s, May 28; minimum daily, 0.17 ft<sup>3</sup>/s, many days.

DISCHARGE, IN 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	8.6	6.8	.50	.50	.17	.50	.76	.63	15	19	24	38
2	8.6	6.8	.50	.17	.17	.50	.77	.52	15	21	24	38
3	12	6.2	.50	.17	.17	.50	.77	.52	15	21	24	38
4	15	6.0	.50	.17	.17	.50	.75	.51	15	21	24	38
5	7.3	6.0	.50	.17	.17	3.1	.76	.45	15	21	24	38
6	1.2	6.0	.50	.17	.17	4.6	.76	19	15	21	24	38
7	1.2	6.0	.50	.17	.17	5.2	.76	32	16	22	23	38
8	1.2	6.1	.50	.17	.17	5.3	5.9	36	16	22	23	39
9	1.2	6.1	.50	.17	.17	5.3	10	38	16	24	24	34
10	9.1	6.0	.50	.17	.17	5.2	6.0	38	16	29	24	31
11	15	6.0	.50	.17	.17	5.2	2.4	38	16	34	23	31
12	15	6.0	.50	.17	.17	5.3	2.1	38	16	50	32	31
13	15	6.1	.50	.17	.17	5.3	1.9	31	16	58	39	34
14	15	6.0	.50	.17	.17	5.3	1.9	24	16	58	39	38
15	15	4.2	.50	.17	.17	5.3	3.0	24	16	58	39	38
16	15	.50	.50	.17	.50	5.3	6.0	17	16	47	39	38
17	15	.50	.50	.17	.50	5.3	6.5	10	16	38	39	38
18	15	.50	.50	.17	.50	5.2	6.8	10	16	38	39	38
19	9.1	.50	.50	.17	.50	5.1	6.8	10	16	38	39	30
20	1.6	.50	.50	.17	.50	5.3	6.8	10	16	38	39	25
21	1.4	.50	.50	.17	.50	5.2	6.8	10	16	38	39	25
22	1.4	.50	.50	.17	.50	5.3	6.6	4.5	16	38	39	25
23	1.4	.50	.50	.17	.50	5.3	6.4	.42	16	38	39	19
24	1.4	.50	.50	.17	.50	5.3	11	13	15	38	39	14
25	1.4	.50	.50	.17	.50	5.3	14	17	15	38	39	14
26	1.4	.50	.50	.17	.50	5.3	13	17	15	29	39	14
27	1.6	.50	.50	.17	.50	5.3	7.2	69	15	24	39	14
28	1.6	.50	.50	.17	.50	5.3	1.0	115	15	24	39	14
29	1.6	.50	.50	.17	---	4.1	.90	55	15	24	39	14
30	4.4	.50	.50	.17	---	.85	.70	15	15	24	39	14
31	6.8	---	.50	.17	---	.76	---	15	---	24	38	---
TOTAL	220.5	97.80	15.50	5.60	9.05	131.31	139.03	708.55	467	1017	1033	878
MEAN	7.11	3.26	.50	.18	.32	4.24	4.63	22.9	15.6	32.8	33.3	29.3
MAX	15	6.8	.50	.50	.50	5.3	14	115	16	58	39	39
MIN	1.2	.50	.50	.17	.17	.50	.70	.42	15	19	23	14
AC-FT	437	194	31	11	18	260	276	1410	926	2020	2050	1740
CAL YR 1984	TOTAL	5050.20		MEAN	13.8	MAX	107	MIN	.50	AC-FT	10020	
WTR YR 1985	TOTAL	4722.34		MEAN	12.9	MAX	115	MIN	.17	AC-FT	9370	

## ARKANSAS RIVER BASIN

07207000 CIMARRON RIVER NEAR CIMARRON, NM

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

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

## 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: Nov. 28-30, Dec. 2-8, 10, Dec. 16-20, 22-27, Jan. 3-7, 9-18, Jan. 20 to Feb. 19, Feb. 24-27, and Mar. 27 to May 6. 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.--35 years, 21.0 ft<sup>3</sup>/s, 15,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft<sup>3</sup>/s, June 17, 1965, gage height, 12.42 ft, from floodmark, from rating curve extended above 800 ft<sup>3</sup>/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, 227 ft<sup>3</sup>/s, at 1600 hours July 25, gage height, 2.70 ft; minimum daily, 1.0 ft<sup>3</sup>/s, Feb. 1-4.

DISCHARGE, IN 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	11	8.2	6.1	11	1.0	2.9	6.4	90	82	34	31	38
2	11	8.4	6.0	4.4	1.0	2.9	6.4	100	79	33	31	38
3	12	8.4	5.8	4.3	1.0	2.0	6.6	115	74	33	30	32
4	17	8.2	5.5	4.4	1.0	1.2	7.0	125	75	32	31	32
5	18	8.1	5.3	4.7	1.1	1.7	7.4	135	73	31	30	31
6	13	8.1	4.9	5.0	1.2	1.2	7.8	140	68	31	31	28
7	9.0	8.9	5.1	5.6	1.4	2.4	8.0	143	63	31	29	28
8	7.4	9.8	5.2	6.5	1.6	2.5	10	142	59	29	28	28
9	6.3	9.9	5.4	6.4	1.5	2.8	14	165	63	27	28	27
10	5.9	9.8	5.1	6.0	1.5	3.3	20	168	68	27	27	23
11	8.5	10	4.7	5.4	1.4	4.8	30	173	68	30	27	24
12	14	10	4.9	5.0	1.4	6.4	38	164	71	33	25	25
13	15	10	5.3	4.5	1.3	6.6	36	151	66	48	30	24
14	15	9.8	6.0	5.4	1.3	8.6	36	114	64	50	31	28
15	17	9.8	6.3	5.7	1.2	9.8	35	104	60	57	31	28
16	18	10	6.7	5.6	1.2	10	34	92	55	54	31	28
17	18	7.7	6.2	5.6	1.4	9.3	43	79	53	44	30	27
18	20	6.6	6.5	5.6	1.7	11	50	76	50	40	30	28
19	19	6.0	6.0	6.5	2.1	13	64	74	48	36	30	27
20	14	5.7	5.5	6.2	2.8	14	64	74	47	33	30	21
21	10	6.9	3.2	6.0	2.7	15	64	74	45	34	31	22
22	9.3	7.1	3.1	6.0	2.7	16	60	116	44	41	32	20
23	8.7	5.3	3.1	6.3	2.5	15	50	82	43	44	33	19
24	8.4	5.3	3.2	6.6	2.3	17	40	84	41	45	33	13
25	8.4	5.1	3.4	7.3	2.0	20	32	97	41	66	34	11
26	7.9	7.0	3.8	6.0	1.9	23	30	96	39	51	33	11
27	8.2	4.7	4.5	4.7	2.2	17	35	115	38	34	33	11
28	8.0	7.8	6.7	4.7	2.9	10	45	156	37	34	36	10
29	7.8	9.6	13	4.6	---	6.0	54	139	36	33	39	11
30	7.5	7.7	6.8	4.3	---	6.0	70	91	35	32	39	13
31	7.3	---	6.8	4.0	---	6.0	---	88	---	30	38	---
TOTAL	360.6	239.9	170.1	174.3	47.3	267.4	1003.6	3562	1685	1177	972	706
MEAN	11.6	8.00	5.49	5.62	1.69	8.63	33.5	115	56.2	38.0	31.4	23.5
MAX	20	10	13	11	2.9	23	70	173	82	66	39	38
MIN	5.9	4.7	3.1	4.0	1.0	1.2	6.4	74	35	27	25	10
AC-FT	715	476	337	346	94	530	1990	7070	3340	2330	1930	1400
(†)	0	0	0	0	0	0	0	0	0	131	254	305
(††)	0	0	0	0	0	0	40	72	120	398	354	564
CAL YR 1984	TOTAL	6781.5	MEAN	18.5	MAX	195	MIN	2.4	AC-FT	13450		
WTR YR 1985	TOTAL	10363.2	MEAN	28.4	MAX	173	MIN	1.0	AC-FT	20560	(†)	690
											(††)	1593

(†) 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

07207000 CIMARRON RIVER NEAR CIMARRON, NM -- Continued

## WATER-QUALITY RECORDS

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (MG/L AS CACO3) (00900)
NOV 30...	1250	5.5	--	403	8.0	8.2	9.0	.5	11.6	12	170
MAR 26...	1100	23	220	--	8.1	--	15.0	9.0	--	--	61
JUN 18...	1100	49	210	258	7.0	8.3	23.0	12.0	9.6	<10	110
SEP 13...	1000	23	300	358	8.9	8.5	24.0	12.0	9.2	--	160

DATE	HARD- NESS, NONCAR- BONATE (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)	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)
NOV 30...	13	50	10	16	.6	1.3	46	7.0	.30	12	230
MAR 26...	0	16	5.0	30	2	1.4	18	2.1	.20	9.1	150
JUN 18...	15	35	5.9	8.5	.4	1.2	21	4.9	.30	11	150
SEP 13...	14	48	9.0	13	.5	2.3	24	5.3	.40	10	200

DATE	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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	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)
NOV 30...	<.10	<.10	<.010	--	.020	<.010	2.6	57	.85	--
MAR 26...	--	--	--	--	--	--	--	509	32	97
JUN 18...	<.10	<.10	.030	.47	.030	.020	5.0	38	5.0	--
SEP 13...	--	--	--	--	--	--	--	15	.93	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)
NOV 30...	1250	<1	<1	30	<1	2	10	<10	5	1
MAR 26...	1100	--	--	<10	--	--	--	--	--	--
JUN 18...	1100	--	--	20	--	--	--	--	--	--
SEP 13...	1000	--	--	20	--	--	--	--	--	--

07207000 CIMARRON RIVER NEAR CIMARRON, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[illegible]

## 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 mi<sup>2</sup>.

## 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. 14-26 and Jan. 1 to Feb. 17. Water-discharge records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 250 acres upstream from station. Diversions 1,000 ft downstream from station for irrigation of about 300 acres.

AVERAGE DISCHARGE.--46 years (water years 1916-25, 1928, 1951-85), 11.2 ft<sup>3</sup>/s, 8,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,630 ft<sup>3</sup>/s, June 17, 1965, gage height, 11.13 ft, from rating curve extended above 230 ft<sup>3</sup>/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 ft<sup>3</sup>/s by State Engineer.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 30	0045	*240	*3.35	No other peak greater than base discharge.			
Minimum discharge, 0.23 ft <sup>3</sup> /s, Feb. 19.							

DISCHARGE, IN 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	1.3	9.7	2.9	4.2	2.0	.73	14	223	65	9.1	6.1	1.4
2	1.2	9.3	2.6	4.1	2.1	.80	15	192	57	10	6.5	1.3
3	1.8	8.6	3.5	4.0	2.3	1.1	21	168	51	9.5	7.1	1.2
4	3.0	7.8	2.6	4.0	2.4	.83	31	166	51	7.7	11	1.5
5	2.7	6.9	2.1	4.0	2.6	.78	39	174	57	7.1	14	1.4
6	2.5	6.3	3.0	4.0	2.7	1.1	40	164	47	6.3	9.9	1.1
7	2.5	5.8	2.7	4.0	3.0	1.0	46	140	40	5.9	7.8	.88
8	2.1	5.3	2.8	4.0	3.3	.82	55	119	37	4.9	8.7	.89
9	2.2	4.9	2.0	4.0	3.0	.90	68	107	37	6.7	8.1	.78
10	2.0	3.9	2.3	3.9	2.6	1.1	73	99	37	8.2	5.5	.75
11	2.0	4.0	1.8	3.8	2.4	3.4	78	93	36	5.7	5.2	1.2
12	1.9	4.2	1.8	3.5	2.1	6.1	85	84	38	4.6	4.5	1.9
13	1.8	4.1	2.9	4.4	1.9	5.1	78	80	35	6.3	3.5	1.6
14	2.0	3.6	1.3	5.3	1.7	8.2	77	71	32	6.4	3.1	1.3
15	2.8	3.4	1.2	5.8	1.5	7.9	82	68	29	7.4	3.0	1.0
16	3.6	3.1	1.2	6.4	1.3	8.1	83	64	26	9.4	2.8	1.0
17	3.1	3.7	1.2	7.3	1.2	6.1	83	63	25	7.9	2.4	.79
18	4.8	3.3	1.2	9.7	1.0	9.7	86	68	26	13	2.0	.85
19	3.9	3.0	1.3	7.3	.92	15	85	65	28	9.4	1.9	1.3
20	3.8	3.1	1.5	5.6	.90	14	70	65	24	6.9	1.8	2.0
21	4.3	2.9	1.4	4.8	.80	12	57	70	20	6.0	1.7	4.4
22	4.0	3.4	1.3	4.0	.68	16	48	121	19	14	1.6	3.2
23	4.7	3.5	1.6	3.6	.60	14	40	178	19	24	1.4	3.9
24	4.7	3.4	1.9	3.1	.53	16	34	178	17	17	1.2	3.5
25	5.4	3.1	2.4	2.6	.75	20	31	162	16	17	1.6	2.7
26	5.6	2.6	2.9	2.3	.60	25	34	142	15	12	1.8	2.5
27	8.0	2.7	3.8	2.0	.53	22	38	125	13	9.2	1.5	2.2
28	9.3	3.2	4.7	1.6	.70	19	61	108	11	8.6	1.8	2.0
29	8.9	3.0	6.0	1.7	---	20	223	93	10	8.7	2.2	2.8
30	8.6	2.5	5.8	1.8	---	15	216	82	9.3	8.7	1.7	3.3
31	9.0	---	5.5	1.9	---	14	---	71	---	6.4	1.9	---
TOTAL	123.5	134.3	79.2	128.7	46.11	285.76	1991	3603	927.3	284.0	133.3	54.64
MEAN	3.98	4.48	2.55	4.15	1.65	9.22	66.4	116	30.9	9.16	4.30	1.82
MAX	9.3	9.7	6.0	9.7	3.3	25	223	223	65	24	14	4.4
MIN	1.2	2.5	1.2	1.6	.53	.73	14	63	9.3	4.6	1.2	.75
AC-FT	245	266	157	255	91	567	3950	7150	1840	563	264	108
CAL YR 1984	TOTAL	2891.42		MEAN	7.90	MAX	130	MIN	.56	AC-FT	5740	
WTR YR 1985	TOTAL	7790.81		MEAN	21.3	MAX	223	MIN	.53	AC-FT	15450	

07207500 PONIL CREEK NEAR CIMARRON, NM -- Continued

## WATER-QUALITY RECORDS

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 30...	1050	2.9	280	283	7.5	8.4	4.5	.5	11.6	120	7	34
MAR 26...	1500	25	190	--	7.3	--	9.0	7.0	--	130	21	40
JUN 18...	1335	26	190	--	8.6	--	23.0	17.0	9.4	--	--	--
SEP 10...	1300	.93	220	289	8.9	8.5	24.0	18.0	8.1	110	0	31

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)	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)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 30...	8.7	14	.6	.90	26	3.0	.30	10	170	7	.05	80
MAR 26...	8.0	12	.5	2.0	29	7.4	.30	11	180	502	34	93
JUN 18...	--	--	--	--	--	--	--	--	--	26	1.8	--
SEP 10...	7.6	16	.7	1.9	23	3.2	.40	9.9	160	11	.03	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 30...	1050	10	25
MAR 26...	1500	20	400
SEP 10...	1300	10	56

## 07208500 RAYADO CREEK AT SAUBLE RANCH, NEAR CIMARRON, NM

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

DRAINAGE AREA.--65 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Estimated daily discharges: Nov. 25-27, Nov. 29 to Jan. 14, Jan. 20-23, and Jan. 28 to Feb. 13. Water-discharge records good except for estimated daily discharges, which are poor. No diversion upstream from station.

AVERAGE DISCHARGE.--66 years (water years 1912, 1914, 1916-20, 1924, 1928-85), 13.8 ft<sup>3</sup>/s, 10,000 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 7	2300	112	3.40	May 1	2300	*229	*3.77

Minimum discharge, 0.65 ft<sup>3</sup>/s, Dec. 15, result of freezeup.

DISCHARGE, IN 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	3.7	6.9	3.2	4.0	2.7	5.4	18	195	52	12	9.6	5.3
2	3.6	6.7	3.2	3.8	2.5	5.9	18	186	47	12	18	5.4
3	4.8	6.3	3.2	3.9	2.6	6.1	22	174	46	12	13	5.9
4	7.0	6.0	3.1	4.0	2.7	4.6	29	165	44	11	16	5.5
5	5.3	5.7	2.8	4.2	2.8	8.0	41	170	49	11	12	4.7
6	4.7	5.5	2.9	4.3	2.9	6.4	54	160	42	10	11	4.4
7	4.5	5.3	2.9	4.4	3.0	5.8	71	137	37	9.9	9.7	4.1
8	4.2	5.0	3.1	4.2	3.6	5.6	78	122	33	9.5	8.9	4.0
9	4.0	4.9	3.2	4.3	3.8	6.2	73	115	33	9.5	8.7	3.9
10	3.7	3.0	3.3	4.2	3.5	8.8	67	112	34	12	8.7	3.9
11	3.7	4.6	3.2	4.1	3.5	20	65	106	30	9.9	9.3	5.5
12	3.9	4.9	3.1	4.0	3.8	22	68	98	29	9.0	8.0	7.2
13	3.9	4.5	3.1	5.0	4.2	19	67	91	31	9.2	7.3	5.1
14	3.9	4.5	3.1	5.6	5.4	17	68	89	27	9.6	7.2	4.7
15	4.4	3.9	2.7	5.0	5.2	16	71	84	24	11	7.0	4.8
16	4.8	4.1	2.7	4.0	3.7	15	75	71	22	11	6.5	4.5
17	4.9	4.9	2.8	5.0	4.3	14	75	64	22	10	6.0	4.1
18	5.8	4.3	2.9	4.0	4.0	14	78	59	22	8.8	6.4	4.5
19	4.7	3.8	2.8	3.7	4.5	13	80	62	26	11	5.9	5.9
20	5.2	3.8	2.8	3.5	4.0	13	72	61	21	9.0	5.6	6.0
21	5.5	2.9	2.9	3.2	4.2	16	66	60	19	8.9	5.9	9.1
22	5.0	4.8	3.0	2.9	4.4	16	62	75	18	8.6	5.6	6.7
23	5.6	5.2	3.0	3.3	4.2	16	58	84	16	9.5	5.5	6.2
24	5.6	4.9	2.9	3.9	5.5	16	54	71	16	9.0	5.2	5.2
25	5.7	4.2	2.8	4.1	5.4	18	52	68	18	8.1	6.0	4.8
26	6.4	3.4	2.9	4.5	4.6	20	56	63	15	13	5.7	4.7
27	7.5	2.8	3.2	3.7	4.8	20	61	60	14	9.5	5.2	4.5
28	6.9	2.9	3.5	3.5	5.2	21	112	62	13	12	6.1	4.4
29	6.4	3.0	3.7	3.2	---	21	151	60	13	9.9	5.6	5.2
30	6.2	3.1	4.0	3.0	---	19	157	58	12	9.1	5.0	5.2
31	6.5	---	4.2	2.8	---	25	---	56	---	8.2	6.8	---
TOTAL	158.0	135.8	96.2	123.3	111.0	433.8	2019	3038	825	313.2	247.4	155.4
MEAN	5.10	4.53	3.10	3.98	3.96	14.0	67.3	98.0	27.5	10.1	7.98	5.18
MAX	7.5	6.9	4.2	5.6	5.5	25	157	195	52	13	18	9.1
MIN	3.6	2.8	2.7	2.8	2.5	4.6	18	56	12	8.1	5.0	3.9
AC-FT	313	269	191	245	220	860	4000	6030	1640	621	491	308
CAL YR 1984	TOTAL	3820.4		MEAN	10.4	MAX	96	MIN	2.6	AC-FT	7580	
WTR YR 1985	TOTAL	7656.1		MEAN	21.0	MAX	195	MIN	2.5	AC-FT	15190	

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

## WATER-QUALITY RECORDS

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 27...	1450	2.8	165	173	7.3	8.3	.5	1.0	--	77	2	21
MAR 25...	1430	21	95	--	8.3	--	17.0	9.0	--	66	23	20
JUN 17...	1400	21	100	110	5.6	8.0	23.0	15.0	9.8	48	5	13
SEP 10...	1030	4.1	138	162	9.7	8.5	26.0	14.0	9.2	65	0	18

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)	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)	SEDI- MENT, 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 27...	5.9	5.8	.3	1.5	9.2	1.4	.30	22	110	5	.04	74
MAR 25...	3.9	5.3	.3	1.9	11	1.8	.30	17	87	36	2.0	84
JUN 17...	3.8	4.4	.3	1.5	8.5	.80	.20	21	79	32	1.8	--
SEP 10...	4.9	4.9	.3	1.8	7.7	1.3	.20	19	99	10	.11	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 27...	1450	<10	45
MAR 25...	1430	<10	480
JUN 17...	1400	<10	110
SEP 10...	1030	<10	29



## 07211000 CIMARRON RIVER AT SPRINGER, NM

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

DRAINAGE AREA.--1,032 mi<sup>2</sup>.

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: Dec. 28 to Jan. 7. 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.--61 years (water years 1921, 1925, 1927-85), 17.2 ft<sup>3</sup>/s, 12,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1930).--Maximum discharge, 29,500 ft<sup>3</sup>/s, June 18, 1965, gage height, 19.96 ft, from floodmarks, from rating curve extended above 1,800 ft<sup>3</sup>/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 ft<sup>3</sup>/s, but probably were less than the 1965 flood.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 5	2315	522	5.01	May 23	0415	*595	*5.10

Minimum discharge, 0.29 ft<sup>3</sup>/s, Sept. 10.

DISCHARGE, IN 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	.49	2.7	4.2	7.5	4.4	3.0	3.7	369	264	5.9	6.3	2.8
2	.42	2.6	3.7	2.4	4.1	3.1	3.8	469	246	6.1	6.4	2.2
3	2.2	2.8	3.5	4.2	3.4	3.1	3.3	448	222	8.2	5.0	2.4
4	1.5	2.6	4.1	10	3.1	2.8	2.7	442	178	8.8	4.9	2.7
5	.90	2.7	3.4	9.3	3.4	2.8	2.0	473	207	8.2	4.8	2.8
6	.96	2.8	3.5	8.7	3.7	2.6	1.7	490	212	7.7	4.3	3.5
7	.70	2.6	3.8	8.0	4.0	2.6	1.5	442	175	7.1	3.9	2.2
8	.59	2.5	4.3	7.4	4.2	2.2	1.1	396	149	6.3	3.9	1.3
9	.51	2.2	5.1	7.1	4.4	2.7	19	365	137	5.7	4.2	.79
10	.52	1.9	5.3	6.4	4.1	2.9	38	350	110	7.1	4.5	.49
11	1.2	2.1	5.1	6.4	4.6	2.8	39	322	74	7.5	4.8	.94
12	1.8	2.2	4.8	6.2	4.2	6.3	40	263	59	7.5	4.1	12
13	1.4	2.2	6.4	6.2	4.5	7.4	40	262	58	6.9	3.5	5.3
14	1.4	2.3	6.7	5.0	4.3	7.1	37	313	89	6.5	3.8	4.4
15	2.1	1.7	6.7	4.8	4.6	5.2	35	254	80	6.4	4.0	16
16	3.3	1.7	5.5	5.4	4.6	5.2	58	206	60	6.8	3.8	46
17	4.3	1.9	5.6	4.7	4.0	4.9	101	178	52	7.1	2.7	14
18	3.3	1.9	4.4	5.2	3.7	5.7	110	130	48	6.7	4.2	8.1
19	1.9	2.1	4.8	5.3	3.7	5.7	122	145	42	5.8	5.4	7.2
20	4.0	3.3	5.8	4.9	3.8	7.4	158	167	39	4.7	3.4	6.8
21	5.5	3.6	6.1	5.4	3.7	15	142	197	30	4.4	2.2	8.0
22	7.0	2.5	5.6	5.0	3.8	9.6	120	291	25	3.6	1.2	8.2
23	8.7	2.1	5.2	4.4	3.7	7.0	93	486	21	2.1	.74	6.8
24	8.7	4.6	5.2	4.4	3.8	5.3	79	390	17	.97	4.0	7.8
25	8.9	5.9	5.1	4.4	3.7	4.5	57	398	15	1.2	5.9	6.6
26	8.3	4.7	5.4	4.8	3.3	3.7	40	393	15	1.5	3.9	6.8
27	7.8	4.3	5.5	5.3	3.3	3.1	55	373	15	1.8	4.7	6.3
28	5.9	3.4	9.2	4.9	3.2	2.7	60	376	11	2.0	3.3	6.0
29	4.5	3.1	13	4.3	---	2.8	169	396	8.0	2.5	2.8	6.1
30	3.2	3.6	8.6	3.8	---	3.3	430	352	6.5	2.9	4.2	6.4
31	3.0	---	7.5	4.7	---	3.5	---	286	---	3.1	3.5	---
TOTAL	104.99	84.6	173.1	176.5	109.3	146.0	2061.8	10422	2664.5	163.07	124.34	210.92
MEAN	3.39	2.82	5.58	5.69	3.90	4.71	68.7	336	88.8	5.26	4.01	7.03
MAX	8.9	5.9	13	10	4.6	15	430	490	264	8.8	6.4	46
MIN	.42	1.7	3.4	2.4	3.1	2.2	1.1	130	6.5	.97	.74	.49
AC-FT	208	168	343	350	217	290	4090	20670	5290	323	247	418
CAL YR 1984	TOTAL	1248.50		MEAN	3.41	MAX	34	MIN	.13	AC-FT	2480	
WTR YR 1985	TOTAL	16441.12		MEAN	45.0	MAX	490	MIN	.42	AC-FT	32610	

## 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 mi<sup>2</sup>.

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

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

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

REMARKS.--Estimated daily discharges: Jan. 1-7 and May 4-14. Records fair. Diversions for irrigation of about 30,000 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--40 years (water years 1940-58, 1965-85), 78.7 ft<sup>3</sup>/s, 57,020 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 162,000 ft<sup>3</sup>/s, June 18, 1965, gage height, 47.4 ft, from floodmarks, from rating curve extended above 7,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s in WSP 842, 847.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 23	0700	*1,760	*4.37	No other peak greater than base discharge.			
Minimum discharge, 1.3 ft <sup>3</sup> /s, Sept. 11.							

DISCHARGE, IN 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	12	19	21	26	11	15	33	426	370	24	9.9	6.9
2	12	18	26	26	10	17	36	387	310	27	28	3.5
3	14	19	24	27	11	17	34	292	253	29	20	4.1
4	27	18	21	27	12	15	36	295	191	26	15	5.0
5	23	17	18	27	15	15	28	280	257	23	19	7.7
6	21	18	19	28	18	15	21	280	237	20	17	8.2
7	24	18	23	29	21	14	23	284	194	19	17	8.6
8	15	17	27	30	25	14	23	290	170	17	16	7.3
9	13	16	26	29	30	12	27	298	147	18	25	4.8
10	17	15	21	19	34	13	55	260	114	19	26	4.3
11	50	16	21	19	43	13	51	270	70	16	33	3.0
12	49	16	20	28	51	53	56	285	77	11	22	2.6
13	28	16	19	33	39	51	57	300	84	10	17	2.7
14	22	16	18	29	31	40	49	315	113	9.6	13	45
15	23	15	20	29	31	34	44	334	83	9.1	16	196
16	35	15	23	30	31	33	59	262	59	22	21	53
17	34	16	30	33	26	36	112	216	56	22	28	24
18	29	16	40	29	22	38	119	165	84	13	28	39
19	24	15	37	23	19	45	125	183	61	11	14	30
20	23	14	67	21	19	54	169	241	78	7.8	12	23
21	25	15	43	22	19	51	154	294	68	7.3	9.7	24
22	25	16	44	23	18	43	124	1020	60	6.0	6.3	23
23	28	19	44	24	17	35	98	1530	56	7.1	5.8	20
24	29	28	45	24	15	30	85	1030	50	4.5	7.2	19
25	29	31	45	25	17	28	68	944	41	49	30	18
26	27	28	43	26	15	31	48	854	48	15	17	17
27	26	22	48	32	14	45	71	759	63	7.6	8.2	17
28	23	28	48	19	13	42	93	706	39	5.6	6.7	16
29	22	26	46	14	---	42	185	645	32	5.7	5.3	16
30	20	22	32	11	---	38	489	536	28	7.5	3.9	25
31	20	---	31	9.5	---	34	---	432	---	8.8	8.1	---
TOTAL	769	565	990	771.5	627	963	2572	14413	3493	477.6	505.1	673.7
MEAN	24.8	18.8	31.9	24.9	22.4	31.1	85.7	465	116	15.4	16.3	22.5
MAX	50	31	67	33	51	54	489	1530	370	49	33	196
MIN	12	14	18	9.5	10	12	21	165	28	4.5	3.9	2.6
AC-FT	1530	1120	1960	1530	1240	1910	5100	28590	6930	947	1000	1340
CAL YR 1984	TOTAL	20670.7		MEAN	56.5	MAX	1500	MIN	1.2	AC-FT	41000	
WTR YR 1985	TOTAL	26819.9		MEAN	73.5	MAX	1530	MIN	2.6	AC-FT	53200	

## 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 mi<sup>2</sup>.

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

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

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

REMARKS.--Estimated daily discharges: Nov. 25-27 to Dec. 3-5, 17-19, 21-24, Jan. 2-6, 10-15, 20-22, Jan. 31 to Feb. 8, Feb. 11-12, Mar. 4, Mar. 11-16, and June 29 to Aug. 5. 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.--58 years (water years 1907-10, 1932-85), 27.8 ft<sup>3</sup>/s, 20,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1930).--Maximum discharge, 1,530 ft<sup>3</sup>/s, Sept. 23, 1941, gage height, 7.58 ft, site and datum then in use, from rating curve extended above 400 ft<sup>3</sup>/s; no flow at times.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 29	0100	391	4.00	June 5	0615	*512	*4.33

Minimum discharge, 3.4 ft<sup>3</sup>/s, Feb. 5.

DISCHARGE, IN 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	9.5	38	19	15	14	5.4	67	208	162	60	100	32
2	9.7	36	18	20	15	5.8	73	221	155	56	90	29
3	13	28	17	17	13	6.4	75	224	146	62	76	30
4	15	21	16	23	15	6.4	77	242	154	47	74	34
5	13	20	15	30	13	7.0	86	269	385	43	72	31
6	14	19	24	25	15	10	87	277	271	38	72	29
7	18	17	17	13	13	11	90	277	238	37	62	27
8	18	16	17	11	12	13	95	262	232	37	65	25
9	18	14	17	12	19	14	96	250	244	36	69	26
10	21	13	17	15	14	17	104	251	234	35	61	23
11	21	13	17	13	12	17	106	256	228	34	59	25
12	22	13	17	16	12	18	111	232	219	33	59	30
13	23	13	16	24	12	19	115	206	208	32	47	26
14	24	18	16	22	10	25	118	184	195	32	44	24
15	28	21	17	20	11	29	117	168	184	34	47	27
16	31	20	17	14	11	35	126	140	182	52	48	33
17	40	20	15	16	10	38	126	126	177	43	46	27
18	38	20	14	14	9.4	49	127	125	187	36	45	28
19	32	19	13	18	9.1	46	139	134	187	42	44	32
20	32	19	12	13	8.5	40	137	137	160	38	43	39
21	37	18	12	11	5.1	56	122	156	150	46	49	50
22	38	19	12	12	5.3	66	111	183	153	41	42	36
23	38	21	12	15	5.1	63	102	173	145	38	43	33
24	39	22	12	15	4.9	65	90	164	143	80	51	32
25	41	20	12	15	5.2	67	80	169	177	100	52	30
26	45	18	12	15	5.2	73	77	180	155	87	40	30
27	50	17	16	15	5.4	67	84	197	140	82	41	28
28	42	17	45	14	5.8	65	174	195	120	66	39	27
29	38	18	24	13	---	67	292	176	100	64	39	23
30	38	18	16	13	---	60	215	171	77	88	36	26
31	38	---	14	12	---	61	---	163	---	123	34	---
TOTAL	884.2	586	518	501	290.0	1122.0	3419	6116	5508	1642	1689	892
MEAN	28.5	19.5	16.7	16.2	10.4	36.2	114	197	184	53.0	54.5	29.7
MAX	50	38	45	30	19	73	292	277	385	123	100	50
MIN	9.5	13	12	11	4.9	5.4	67	125	77	32	34	23
AC-FT	1750	1160	1030	994	575	2230	6780	12130	10930	3260	3350	1770
(†)	146	345	240	287	380	243	172	147	257	325	595	261

CAL YR 1984	TOTAL	11183.42	MEAN	30.6	MAX	197	MIN	.83	AC-FT	22180	(†)	3398
WTR YR 1985	TOTAL	23167.2	MEAN	63.5	MAX	385	MIN	4.9	AC-FT	45950	(†)	4000

(†) DIVERSION, IN ACRE-FEET, BY LA CUEVA CANAL

## ARKANSAS RIVER BASIN

07215500 MORA RIVER AT LA CUEVA, NM -- Continued

## WATER-QUALITY RECORDS

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 16...	1215	31	460	485	7.9	8.3	4.0	3.5	10.7	220	34	64
JAN 09...	1020	12	560	--	8.7	--	1.0	1.0	10.8	--	--	--
FEB 21...	1215	5.1	510	514	7.7	7.9	11.0	6.0	9.8	280	87	84
APR 03...	1415	75	--	276	8.6	8.3	21.0	11.0	8.8	140	24	45
JUN 25...	1430	177	--	376	--	8.2	19.5	11.0	9.1	180	49	54
AUG 06...	1345	72	540	484	--	8.4	28.5	18.0	9.1	240	60	72

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)	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)	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 16...	14	11	.3	1.4	61	4.1	.40	9.1	280	40	3.3	42
JAN 09...	--	--	--	--	--	--	--	--	--	71	2.3	30
FEB 21...	16	13	.4	1.0	78	4.8	.50	8.2	320	12	.17	69
APR 03...	5.6	6.1	.2	.90	21	4.4	.20	13	160	156	32	92
JUN 25...	11	5.9	.2	1.1	49	2.5	.20	7.3	210	373	178	69
AUG 06...	15	8.4	.2	1.1	43	2.6	.20	9.3	260	46	8.9	68

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 16...	1215	30	9
FEB 21...	1215	30	16
APR 03...	1415	20	120
JUN 25...	1430	40	24
AUG 06...	1345	50	17

## 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 Golondrin, 1.9 mi upstream from Coyote Creek, 4.7 mi downstream from Rito Cebolla, and at mile 75.8.

DRAINAGE AREA.--267 mi<sup>2</sup>.

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

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

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

REMARKS.--Estimated daily discharges: Dec. 5, 6, 13-16, Jan. 2-15, 20-22, and Jan. 31 to Feb. 1-10. Records good except for estimated daily discharges, which are poor. 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.--68 years (water years 1916-20, 1922, 1924-85), 33.8 ft<sup>3</sup>/s, 24,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft<sup>3</sup>/s, Aug. 22, 1952, gage height, 14.4 ft, site and datum then in use, from rating curve extended above 660 ft<sup>3</sup>/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 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 28	2100	*761	*3.55	June 19	2300	450	2.97
June 5	0945	595	3.25				

Minimum discharge, 4.3 ft<sup>3</sup>/s, Dec. 21, but may have been less during periods of ice effect.

DISCHARGE, IN 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	9.4	42	24	23	17	12	115	299	179	66	129	33
2	8.3	40	30	22	19	12	132	303	173	69	115	29
3	10	35	24	21	17	12	155	298	164	87	105	31
4	21	24	22	26	18	13	139	309	151	59	117	36
5	17	23	21	31	17	11	143	325	455	52	106	33
6	16	24	21	27	16	15	139	334	348	43	87	30
7	19	23	23	23	17	15	137	324	289	44	76	28
8	20	21	22	21	19	17	141	301	268	40	76	26
9	20	19	19	18	21	18	140	293	283	43	96	28
10	20	18	19	16	22	20	149	292	276	41	74	26
11	21	17	19	17	24	25	152	297	264	43	73	28
12	21	19	19	20	27	36	156	262	254	37	71	35
13	23	18	17	24	20	31	159	236	239	36	57	31
14	23	19	17	23	16	34	161	209	220	38	47	28
15	24	24	18	25	16	40	157	180	204	39	52	29
16	29	23	19	28	17	46	166	164	201	73	57	38
17	37	24	21	23	16	50	167	147	191	47	54	32
18	41	24	22	25	16	72	169	145	207	40	50	31
19	32	22	30	24	15	90	184	153	228	57	47	37
20	27	20	26	19	16	63	179	157	218	43	45	44
21	32	20	21	19	12	109	162	182	174	53	58	84
22	34	19	25	22	12	149	150	221	168	44	47	43
23	36	21	30	25	12	139	140	215	162	42	43	39
24	38	24	31	20	11	172	124	201	152	67	71	37
25	40	24	25	20	11	172	111	198	198	61	70	35
26	50	23	25	20	12	167	108	201	173	148	46	33
27	75	21	18	21	12	138	119	212	155	99	42	28
28	62	24	87	19	12	121	339	216	132	97	42	28
29	48	21	47	19	---	124	514	200	111	93	47	28
30	45	21	27	19	---	103	338	191	90	92	39	27
31	43	---	23	18	---	106	---	184	---	96	36	---
TOTAL	941.7	697	792	678	460	2132	5145	7249	6327	1889	2075	1015
MEAN	30.4	23.2	25.5	21.9	16.4	68.8	172	234	211	60.9	66.9	33.8
MAX	75	42	87	31	27	172	514	334	455	148	129	84
MIN	8.3	17	17	16	11	11	108	145	90	36	36	26
AC-FT	1870	1380	1570	1340	912	4230	10210	14380	12550	3750	4120	2010
CAL YR 1984	TOTAL	12882.7		MEAN	35.2	MAX	216	MIN	4.9	AC-FT	25550	
WTR YR 1985	TOTAL	29400.7		MEAN	80.5	MAX	514	MIN	8.3	AC-FT	58320	

## 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 Golondrinás, and at mile 2.7.

DRAINAGE AREA.--215 mi<sup>2</sup>.

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

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

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

REMARKS.--Estimated daily discharges: Apr. 28 to June 5. Records fair except those for winter period, 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.--57 years, 11.7 ft<sup>3</sup>/s, 8,480 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,050 ft<sup>3</sup>/s, Aug. 17, 1961, gage height, 9.60 ft, from rating curve extended above 250 ft<sup>3</sup>/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.--Peaks discharges greater than base discharge of 180 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 7	----	*260	unknown	No other peak greater than base discharge.			
Minimum discharge, 2.0 ft <sup>3</sup> /s, Aug. 5.							

DISCHARGE, IN 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	6.1	11	9.6	11	9.0	32	53	165	104	13	8.2	6.6
2	6.0	10	9.5	10	8.3	34	50	170	97	14	8.8	6.4
3	7.8	9.4	9.2	9.0	8.0	38	47	180	89	13	9.4	8.8
4	9.9	8.1	9.0	9.7	7.8	35	49	192	84	10	10	10
5	8.0	8.0	8.7	11	10	31	52	204	215	11	11	7.2
6	7.2	8.6	10	12	13	39	55	206	197	9.9	11	7.0
7	6.3	9.1	17	13	16	34	55	203	175	9.7	12	7.1
8	6.8	9.2	8.1	15	18	31	54	198	160	11	13	7.4
9	6.8	9.5	8.2	12	18	32	52	180	154	12	13	7.4
10	6.7	9.8	7.6	9.1	18	34	54	158	140	11	12	7.8
11	7.0	10	7.8	8.0	18	39	56	134	125	8.2	12	8.6
12	8.4	11	8.0	7.5	17	43	58	115	118	6.5	11	14
13	6.7	11	8.1	8.0	19	42	59	99	103	4.9	11	9.6
14	7.0	11	8.1	10	19	43	54	88	95	4.3	10	8.5
15	8.2	10	8.1	15	19	47	57	62	80	9.6	9.3	8.4
16	11	11	8.2	18	20	46	58	61	65	29	9.5	14
17	12	11	9.0	35	19	44	61	65	52	9.4	9.9	9.2
18	13	11	12	25	19	47	57	70	62	9.2	9.9	9.8
19	9.0	11	15	21	20	48	46	64	46	11	12	15
20	8.7	11	8.5	15	25	47	42	63	39	9.4	10	19
21	11	11	11	11	26	49	38	80	36	10	9.2	23
22	11	11	18	12	27	50	37	90	33	7.8	7.5	17
23	11	10	15	16	27	50	34	97	30	7.3	8.6	15
24	16	11	11	19	25	51	29	99	27	9.1	16	13
25	17	13	9.1	24	28	52	32	110	31	7.6	10	12
26	20	11	7.3	23	28	52	29	130	31	12	7.5	13
27	25	13	10	26	29	52	38	130	22	8.6	6.7	12
28	19	10	29	20	31	53	80	126	18	8.1	6.7	12
29	13	10	21	19	---	53	255	122	15	9.2	8.2	13
30	10	10	16	20	---	53	195	118	14	9.5	8.1	14
31	11	---	14	19	---	52	---	112	---	9.3	6.6	---
TOTAL	326.6	310.7	351.1	483.3	542.1	1353	1836	3891	2457	314.6	308.1	335.8
MEAN	10.5	10.4	11.3	15.6	19.4	43.6	61.2	126	81.9	10.1	9.94	11.2
MAX	25	13	29	35	31	53	255	206	215	29	16	23
MIN	6.0	8.0	7.3	7.5	7.8	31	29	61	14	4.3	6.6	6.4
AC-FT	648	616	696	959	1080	2680	3640	7720	4870	624	611	666
CAL YR 1984 TOTAL	4580.0			MEAN	12.5	MAX	221	MIN	2.3	AC-FT	9080	
WTR YR 1985 TOTAL	12509.3			MEAN	34.3	MAX	255	MIN	4.3	AC-FT	24810	

## 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 mi<sup>2</sup>, of which 71 mi<sup>2</sup> is probably noncontributing.

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

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

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

REMARKS.--Estimated daily discharges: Dec. 16-18, Jan. 20, and Feb. 3-6. 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.--67 years (water years 1915-18, 1920-24, 1928-85), 56.3 ft<sup>3</sup>/s, 40,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft<sup>3</sup>/s, June 3, 1948, gage height, 12.79 ft, from rating curve extended above 2,800 ft<sup>3</sup>/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 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 29	0845	*1,590	*5.02	No other peak greater than base discharge.			
Minimum discharge, 8.7 ft <sup>3</sup> /s, Oct. 1, 2, 3.							

DISCHARGE, IN 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	9.1	77	40	92	32	33	312	706	279	86	67	17
2	8.8	74	40	60	36	30	349	663	268	77	79	21
3	13	71	38	56	37	28	454	652	237	68	74	21
4	21	65	38	78	40	28	422	622	219	68	76	20
5	27	53	35	90	45	30	389	607	355	62	78	31
6	32	46	40	85	45	31	373	601	628	47	73	28
7	30	47	43	74	47	30	354	598	496	41	70	28
8	25	47	52	77	52	29	339	562	450	35	66	32
9	21	51	54	72	60	19	331	520	427	22	62	31
10	23	51	53	61	62	21	325	497	422	19	67	29
11	21	49	50	57	70	22	342	476	403	17	62	29
12	18	49	51	43	58	20	351	477	374	18	65	30
13	18	49	56	69	58	80	357	428	361	17	66	32
14	19	48	52	63	56	86	354	390	324	25	58	32
15	21	48	51	61	53	110	333	329	287	29	58	29
16	31	51	50	65	53	126	308	273	262	33	57	34
17	42	49	50	59	54	132	321	250	252	43	53	49
18	50	48	50	59	49	139	315	275	220	35	28	51
19	49	50	50	62	45	202	323	280	238	23	29	55
20	45	48	54	54	43	242	336	268	356	21	23	61
21	52	46	49	58	44	276	304	282	308	25	20	86
22	58	45	44	70	45	421	279	354	229	26	19	96
23	64	45	42	87	43	442	241	408	215	23	16	74
24	75	53	46	84	42	392	208	435	207	17	15	67
25	84	55	46	62	41	456	178	435	188	38	47	63
26	87	52	51	65	41	482	173	413	230	46	41	61
27	91	44	50	62	39	442	193	396	194	77	23	57
28	101	43	82	63	32	370	256	374	146	60	17	52
29	90	43	262	56	---	347	1220	360	117	60	18	56
30	82	40	132	53	---	330	921	312	101	60	20	55
31	79	---	98	40	---	310	---	286	---	61	21	---
TOTAL	1386.9	1537	1849	2037	1322	5706	10961	13529	8793	1279	1468	1327
MEAN	44.7	51.2	59.6	65.7	47.2	184	365	436	293	41.3	47.4	44.2
MAX	101	77	262	92	70	482	1220	706	628	86	79	96
MIN	8.8	40	35	40	32	19	173	250	101	17	15	17
AC-FT	2750	3050	3670	4040	2620	11320	21740	26830	17440	2540	2910	2630
CAL YR 1984	TOTAL	16344.9		MEAN	44.7	MAX	352	MIN	4.7	AC-FT	32420	
WTR YR 1985	TOTAL	51194.9		MEAN	140	MAX	1220	MIN	8.8	AC-FT	101500	

## ARKANSAS RIVER BASIN

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

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

DRAINAGE AREA.--6,015 mi<sup>2</sup>, of which 303 mi<sup>2</sup> 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 4,495 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 2121 for history of changes prior to November 1966. Supplemental water-stage recorder at site 0.5 mi upstream used at various times since 1966.

REMARKS.--Estimated daily discharges: Oct. 7-9 and May 17 to June 3. Water-discharge records fair. Diversions for irrigation of about 56,000 acres upstream from station.

AVERAGE DISCHARGE.--52 years (water years 1913-14, 1936-85), 184 ft<sup>3</sup>/s, 133,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft<sup>3</sup>/s, June 18, 1965, gage height, about 36.6 ft, from floodmarks, present site and datum, from rating curve extended above 91,000 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 24	1000	*2,080	*6.35				

Minimum discharge, not determined.

DISCHARGE, IN 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	14	114	68	162	62	56	288	1110	720	153	91	27
2	13	109	69	143	74	53	283	1060	650	140	386	25
3	12	105	67	109	65	47	297	1140	580	123	169	25
4	21	99	61	99	53	46	355	1090	490	111	122	20
5	16	94	66	91	63	42	330	1010	440	100	112	24
6	17	86	51	101	77	41	311	1020	635	94	125	24
7	33	75	57	113	75	43	298	1050	673	83	122	24
8	59	66	60	122	69	43	287	1080	555	67	117	31
9	62	64	71	119	70	45	277	1080	489	59	98	26
10	48	64	76	117	76	48	271	882	466	50	88	30
11	45	67	79	107	72	47	270	765	461	41	98	36
12	36	69	84	79	89	52	278	757	554	31	102	165
13	34	66	84	95	85	50	300	690	399	29	89	134
14	62	66	90	75	82	52	308	612	372	19	98	136
15	70	63	98	81	89	106	307	636	344	22	228	111
16	67	61	86	97	87	159	292	548	334	20	200	182
17	58	61	65	95	85	173	276	530	358	28	115	482
18	58	64	75	101	85	178	281	465	543	25	93	233
19	72	62	74	97	91	188	317	440	272	42	82	167
20	92	61	83	95	83	442	340	463	288	30	62	132
21	97	63	91	69	78	463	348	509	359	25	65	130
22	93	64	87	89	75	348	356	575	291	23	65	123
23	100	63	72	94	71	397	333	1370	254	54	47	139
24	129	93	70	88	69	387	298	1950	239	72	752	124
25	145	88	65	106	67	347	268	1450	228	39	222	107
26	147	86	77	108	65	376	243	1380	219	208	125	99
27	142	85	79	103	60	384	240	1270	238	96	87	94
28	136	89	80	104	61	354	245	1150	205	126	72	88
29	136	81	82	102	---	315	462	1080	191	123	51	84
30	136	76	208	103	---	313	1200	1000	177	100	36	80
31	123	---	193	79	---	299	---	850	---	89	32	---
TOTAL	2273	2304	2568	3143	2078	5894	9959	29012	12024	2222	4151	3102
MEAN	73.3	76.8	82.8	101	74.2	190	332	936	401	71.7	134	103
MAX	147	114	208	162	91	463	1200	1950	720	208	752	482
MIN	12	61	51	69	53	41	240	440	177	19	32	20
AC-FT	4510	4570	5090	6230	4120	11690	19750	57550	23850	4410	8230	6150
CAL YR 1984	TOTAL	35364.1		MEAN	96.6	MAX	2530	MIN	5.5	AC-FT	70140	
WTR YR 1985	TOTAL	78730		MEAN	216	MAX	1950	MIN	12	AC-FT	156200	



07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued

## WATER-QUALITY RECORDS

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

CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
NOV 16...	1245	64	880	880	8.0	8.2	11.0	7.0	10.7	<10	350	170
JAN 28...	1610	109	1420	--	8.6	--	12.0	6.0	10.8	17	--	--
MAR 04...	1515	48	1100	--	8.4	--	10.0	9.5	10.0	24	490	300
AUG 20...	1300	55	340	371	8.2	8.0	25.0	33.0	8.1	22	150	20

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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L AS CACO3) (99430)	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...	79	38	61	1	2.3	230	.000	--	190	280	14	.40
JAN 28...	--	--	--	--	--	200	16	--	--	--	--	--
MAR 04...	110	53	87	2	2.4	198	17	184	190	420	19	.40
AUG 20...	41	12	17	.6	2.6	161	.000	131	132	60	5.6	.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, 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- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHATE DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 16...	9.6	600	<.10	.23	<.010	--	.010	.140	2.6	14	2.4	82
JAN 28...	--	--	--	<.10	--	--	--	<.010	1.9	37	11	76
MAR 04...	7.5	830	<.10	<.10	.030	.87	.010	<.010	4.9	12	1.6	96
AUG 20...	8.6	230	<.10	<.10	.020	.38	.020	<.010	5.8	140	21	99

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)
NOV 16...	1245	<1	<1	70	<1	2	<10	30	5	3
MAR 04...	1515	--	--	70	--	--	--	--	--	--
AUG 20...	1300	3	3	50	3	1	50	<10	6	2

## ARKANSAS RIVER BASIN

07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	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 16...	11	<1	4	<.1	.2	<1	<1	10	9
MAR 04...	10	--	--	--	--	--	--	--	--
AUG 20...	25	4	1	.2	.3	<1	<1	100	30

## CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01029)
NOV 16...	1245	<2.0	3.5	70	3	<1	3
DATE	TIME	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 AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
NOV 16...	10	5	1900	30	130	<.10	6

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 16...	1245	<15	<.4	<7.4	<.4	<6.4	<.4	.11	4.2

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
MAR 04...	1515	.01	<.01	<.01

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 16...	1245	--	K68
MAR 04...	1515	<1	<1

## 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 mi<sup>2</sup>, of which 130 mi<sup>2</sup> 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: Jan. 2 to Mar. 7, May 5 to June 4, and Aug. 24, 25. Records poor. Diversions for irrigation of about 300 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--49 years, 14.1 ft<sup>3</sup>/s, 10,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,000 ft<sup>3</sup>/s, Sept. 1, 1942, gage height, 19.96 ft, present datum, from rating curve extended above 760 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 25	0015	*1,110	*3.94				

No flow at times.

DISCHARGE, IN 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	.00	.23	.43	.09	.02	.00	.20	4.0	.00	.90	11	.23
2	.00	.14	.27	.06	.02	.00	.14	2.5	.00	.73	22	.20
3	.91	.11	.20	.06	.02	.00	.09	2.0	.00	.78	5.8	.17
4	8.8	.06	.17	.06	.01	.00	.06	1.4	2.2	1.1	3.1	.11
5	8.7	.04	.17	.06	.01	.00	.02	.84	39	.57	1.8	.01
6	7.8	.04	.11	.06	.01	.00	.01	.60	20	.31	1.2	.00
7	3.9	.03	.11	.05	.01	.00	.01	.50	5.9	.11	1.6	.00
8	6.9	.00	.11	.05	.01	.00	.01	.40	2.8	.03	3.9	.00
9	4.0	.00	.09	.05	.01	.00	.01	.30	2.6	.00	2.4	.00
10	1.7	.00	.06	.05	.01	.00	.02	.20	1.9	12	1.7	.00
11	14	.00	.04	.04	.01	.00	.01	.10	1.1	3.6	.73	.00
12	7.2	.00	.03	.04	.01	.03	.00	.00	1.8	1.2	.52	.00
13	2.2	.00	.04	.04	.01	.04	.00	.00	1.6	.52	.35	.00
14	1.1	.01	.06	.04	.01	.02	.00	.00	.84	.35	.70	.00
15	2.4	.00	.35	.04	.01	.02	.00	.00	.39	.14	116	.00
16	2.0	.01	.27	.04	.00	.03	.00	.00	.17	16	15	19
17	3.0	.01	.17	.04	.00	.02	.00	.00	.09	7.6	4.3	12
18	2.8	.02	.14	.03	.00	.02	.00	.00	.06	2.1	1.9	8.0
19	1.6	.01	.11	.03	.00	.14	.00	.00	.03	.85	4.7	3.5
20	.97	.01	.17	.03	.00	5.6	.00	.10	.02	.33	4.5	5.7
21	.85	.01	.20	.03	.00	11	.00	1.0	.00	.13	1.9	4.2
22	.79	.01	.14	.03	.00	3.3	.00	.80	.00	.06	1.1	5.2
23	.73	.01	.14	.03	.00	2.4	.00	.60	.00	.53	.78	2.8
24	1.2	3.2	.11	.03	.00	1.9	.00	.50	.00	.36	.25	1.6
25	1.8	6.6	.27	.02	.00	.96	.00	.50	136	.06	.10	.96
26	2.9	4.4	.35	.02	.00	.52	.00	.40	221	52	1.6	.78
27	2.2	2.2	.31	.02	.00	.27	.00	.30	14	9.0	2.8	.52
28	1.4	1.3	.27	.02	.00	.11	.14	.25	4.7	17	1.6	.39
29	.85	.84	.20	.02	---	.09	72	.25	2.3	22	.90	.39
30	.63	.62	.14	.02	---	.20	11	.20	1.4	59	.52	.31
31	.39	---	.11	.02	---	.23	---	.10	---	10	.31	---
TOTAL	93.72	19.91	5.34	1.22	.18	26.90	83.72	17.84	459.90	219.36	215.06	66.07
MEAN	3.02	.66	.17	.04	.01	.87	2.79	.58	15.3	7.08	6.94	2.20
MAX	14	6.6	.43	.09	.02	11	72	4.0	221	59	116	19
MIN	.00	.00	.03	.02	.00	.00	.00	.00	.00	.00	.10	.00
AC-FT	186	39	11	2.4	.4	53	166	35	912	435	427	131
CAL YR 1984	TOTAL	1639.82		MEAN	4.48	MAX	600	MIN	.00	AC-FT	3250	
WTR YR 1985	TOTAL	1209.22		MEAN	3.31	MAX	221	MIN	.00	AC-FT	2400	

## 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 ft<sup>3</sup>/s, Aug. 31, 1961; no flow many days each year.

## MONTHLY DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Month	Mean	Diversion in acre-feet
October.....	82.5	5,070
November.....	-	0
December.....	-	0
January.....	-	0
February.....	-	0
March.....	1.44	89
April.....	137	8,180
May.....	148	9,070
June.....	244	14,530
July.....	258	15,850
August.....	205	12,590
September.....	179	10,680
WTR YR 1985.....	105	76,050

## 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 mi<sup>2</sup>, of which 433 mi<sup>2</sup>, 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.

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, 302,500 acre-ft, June 26, elevation, 4,198.03 ft; minimum, 196,300 acre-ft, Oct. 20, elevation, 4,183.87 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 (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199000	198300	201400	205200	209800	212600	225000	236600	283900	301600	284300	278400
2	199000	198500	201400	205400	209800	212700	225500	238200	284700	301500	284500	277600
3	198700	198600	201400	205600	209900	212700	226000	239800	285700	301300	284800	277000
4	198500	198700	201400	205800	210000	212600	226000	241300	287900	300800	284800	276600
5	198200	198700	201600	206000	210000	212600	227300	242800	289200	300400	284500	275700
6	198100	198800	201600	206100	210100	212600	227700	244300	290100	299900	284200	274800
7	198000	198900	201600	206300	210200	212600	228300	245600	291600	299400	284000	274000
8	197800	199000	201700	206400	210300	212600	229000	247100	292500	298800	283900	273300
9	197700	199000	201700	206600	210300	212700	229800	248400	293400	298100	282200	272600
10	198000	199000	201800	206800	210400	212800	230300	249600	294000	297400	283000	272100
11	197400	199000	201900	206900	210400	213000	230800	250500	295000	296700	282800	272000
12	197100	199000	201900	207100	210500	213000	231000	251300	296500	296000	282400	272200
13	197000	199000	202000	207300	210500	213200	231100	252300	297400	295000	282000	271800
14	196600	199100	202200	207500	210700	213200	231400	253200	298100	294200	282500	271600
15	197100	199100	202500	207600	210900	213200	231800	253600	298600	293500	283700	271400
16	197000	199100	202600	207600	211000	213400	232000	254600	298900	292800	284100	271300
17	196900	199200	202700	207800	211200	213700	232100	255700	299800	291900	283700	271700
18	196600	199200	202700	208000	211300	214000	232700	257600	300500	291000	283300	272400
19	196500	199300	202900	208000	211500	214700	232400	258500	300700	290100	282800	272700
20	196300	199500	203100	208200	211700	215800	232500	259300	300700	289400	282200	273100
21	196400	199500	203200	208300	211800	217100	232600	264400	300900	288800	281600	273200
22	196400	199600	203300	208400	212000	217800	232700	266500	301200	288000	280800	273100
23	196500	199700	203400	208500	212100	218500	232900	268400	301200	287300	281400	273000
24	196700	200500	203500	208700	212200	219500	232900	271400	301200	286600	282200	272800
25	196400	200800	203600	208900	212200	220400	232800	273700	302400	285900	282400	272600
26	197200	200900	203700	209000	212300	221000	232600	275800	302500	285400	282100	272300
27	197400	201100	203900	209300	212400	221700	232600	277600	302500	285100	281600	272100
28	197600	201200	204000	209400	212600	222300	233100	279100	302400	284600	280900	271800
29	197700	201200	204200	209500	---	223000	233400	280700	302300	284500	280400	271700
30	197900	201300	204400	209600	---	223600	234900	282000	302000	284100	279900	271500
31	198200	---	204900	209700	---	224300	---	283000	---	284100	279200	---
MAX	199000	201300	204900	209700	212600	224300	234900	283000	302500	301600	284800	278400
MIN	196300	198300	201400	205200	209800	212600	225000	236600	264000	284100	279200	271300
(+)	4184.17	4184.68	4185.25	4186.01	4186.45	4188.19	4189.70	4195.82	4197.99	4195.95	4195.37	4194.44
(++)	+1200	+3100	+3600	+4804	+2859	+11705	+10673	+48067	+18984	-17878	-4907	-7711
CAL YR 1984	MAX	225300	MIN	194600	(++)	-18200						
WTR YR 1985	MAX	302500	MIN	196300	(++)	+72096						

(+) 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 NW¼Sec. 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 mi<sup>2</sup>, of which 617 mi<sup>2</sup> is probably noncontributing.

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

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

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

REMARKS.--Estimated daily discharges: Feb. 1 to Mar. 5, May 26 to June 4, Aug. 4, 7-23, Aug. 25 to Sept. 11, Sept. 15, 18, and Sept. 21-30. 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.--43 years, 23.2 ft<sup>3</sup>/s, 16,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 25	1600	*1,120	*2.98				

No flow most of time.

DISCHARGE, IN 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	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	68	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	57	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.82	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	133	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	8.5	.00	80	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	5.5	.00	9.4	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.05	.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	.33
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.3
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.17
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	27
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.9
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	.67
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	11
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.70
22	.00	.00	.00	.00	.00	.00	.00	16	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	123	.00	.00	74	.00
24	.00	.00	.00	.00	.00	.00	.00	64	.00	.00	7.9	.00
25	.00	.00	.00	.00	.00	.00	.00	17	8.9	102	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.50	7.1	18	.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	220.50	163.05	120.00	297.12	61.07
MEAN	.00	.00	.00	.00	.00	.00	.00	7.11	5.43	3.87	9.58	2.04
MAX	.00	.00	.00	.00	.00	.00	.00	123	133	102	80	27
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	437	323	238	589	121

CAL YR 1984	TOTAL	1739.28	MEAN	4.75	MAX	799	MIN	.00	AC-FT	3450
WTR YR 1985	TOTAL	861.74	MEAN	2.36	MAX	133	MIN	.00	AC-FT	1710

## 07226800 UTE RESERVOIR NEAR LOGAN, NM

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.

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

## WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. 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.--Estimated daily capacity: Apr. 16-30. 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, 119,900 acre-ft, June 17, 1969, elevation, 3,762.4 ft; minimum since reservoir first filled in September 1965, 68,680 acre-ft, Apr. 12, 1977, elevation, 3,753.59 ft; minimum elevation observed, 3,752.8 ft, May 29, 1966, contents, 82,360 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 53,000 acre-ft, Aug. 27, elevation, 3,748.79 ft; minimum, 40,400 acre-ft, Oct. 1, 2, elevation, 3,743.7 ft.

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

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985												
INSTANTANEOUS OBSERVATIONS AT 2400												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
				3,738	29,370		3,744		41,110			
				3,740	32,960		3,746		45,770			
				3,742	36,840							
1	40400	42600	43000	43600	43700	44100	45800	46100	49900	51000	49900	52700
2	40400	42600	43000	43600	43800	44200	45800	46100	49800	50900	50300	52600
3	40500	42600	43000	43600	43700	44100	45800	46200	49700	51000	50300	52600
4	40600	42500	43100	43600	43700	44000	45700	46200	51300	50900	50400	52600
5	40700	42600	43100	43600	43800	44000	45700	46200	51400	50900	50600	52500
6	40600	42500	43000	43600	43700	44000	45700	46200	51600	50900	50800	52400
7	40600	42600	43100	43700	43800	44000	45700	46100	51800	50800	50700	52300
8	40600	42700	43200	43600	43900	44000	45700	46200	51800	50800	50700	52300
9	40600	42500	43200	43700	43800	44100	45700	46100	51700	50700	50600	52200
10	40600	42600	43200	43700	43800	44200	45700	46200	51800	50700	50600	52200
11	40600	42500	43300	43600	43800	44200	45600	46200	51800	50700	50500	52100
12	40600	42500	43200	43600	43800	44200	45700	46100	51700	50600	50500	52200
13	40600	42500	43200	43600	43800	44200	45700	46000	51700	50500	50400	52300
14	40600	42400	43200	43700	43800	44200	45700	46000	51800	50400	50300	52400
15	40900	42500	43300	43700	43800	44200	45700	46000	51800	50300	50500	52400
16	41100	42400	43300	43700	43900	44200	45700	46000	51800	50300	51600	52500
17	41700	42400	43300	43700	43900	44300	45800	46100	51600	50300	51900	52600
18	41700	42400	43300	43800	43900	44300	45800	46100	51600	50200	51900	52600
19	41700	42400	48200	43700	43900	44400	45800	46200	51500	50100	51900	52700
20	41800	42400	43700	43700	44000	44900	45800	46300	51500	50000	51900	52700
21	41900	42400	43400	43700	44000	45500	45900	46300	51400	49900	51900	52800
22	41900	42400	43500	43700	44000	45700	45900	47600	51300	49900	51900	52800
23	42000	42400	43500	43800	44000	45800	45900	49400	51300	49600	52100	52800
24	42100	42600	43500	43700	44100	45900	45900	49800	51300	49500	52300	52800
25	42300	42900	43500	43800	44100	46000	46000	50000	51300	49700	52800	52800
26	42600	43000	43600	43800	44000	45900	46000	50100	51300	49700	52900	52800
27	42600	43100	43600	43800	44100	46100	46000	50100	51400	49600	53000	52800
28	42600	43200	43600	44000	44000	45800	46000	50100	51300	49600	52900	52700
29	42600	43000	43600	43800	---	45700	46100	50100	51200	49600	52900	52600
30	42500	43000	43600	43800	---	45700	46100	50100	51000	49600	52900	52700
31	42600	---	43600	43700	---	45700	---	49900	---	49600	52800	---
MAX	42600	43200	48200	44000	44100	46100	46100	50100	51800	51000	53000	52800
MIN	40400	42400	43000	43600	43700	44000	45600	46000	49700	49500	49900	52100
(+)	3744.66	3744.84	3745.08	3745.14	3745.27	3745.98	---	3747.62	3748.07	3747.53	3748.73	3748.68
(++)	+260	+400	+600	+100	+300	+1700	+400	+3800	+1100	-1400	+3200	-100
CAL YR 1984	MAX	48200	MIN	32010	(++)	+9990						
WTR YR 1985	MAX	53000	MIN	40400	(++)	+12360						

(+) 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 semiannually at surface and/or bottom levels of selected sites. Site locations are as follows: Site A, 0.4 mi upstream from Ute Dam; Site B, 0.6 mi upstream from Ute Dam; Site C, 1.9 mi upstream from Ute Dam; Site D, on the Ute Creek arm, 5.7 mi upstream from Ute Dam; Site E, 3.8 mi upstream from Ute Dam at confluence of Ute Creek and Canadian River arms; Site F, on the Canadian River arm, 9.1 mi upstream from Ute Dam; Site G, on the Ute Creek arm, 6.9 mi upstream from Ute Dam; Site H, on the Canadian River arm, 12.8 mi upstream from Ute Dam; Site I, on the Canadian River arm, 5.0 mi upstream from Ute Dam.

07226510 - UTE RE AT SITE F, 9.1 MILES AB UTE DAM, NM (LAT 35°20'21" LONG 103°33'07")

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
AUG								
22...	1100	10.0	15.0	820	8.1	32.0	24.0	5.4
22...	1101	5.00	15.0	--	--	--	24.5	5.6
22...	1102	1.00	15.0	--	--	--	25.0	6.6
22...	1103	.50	15.0	--	--	--	26.0	8.6

07226515 - UTE RE AT SITE I, 5.0 MILES AB UTE DAM, NM (LAT 35°21'03" LONG 103°31'00")

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
AUG								
22...	1130	30.0	31.0	--	--	--	24.5	5.7
22...	1131	25.0	31.0	--	--	--	24.5	5.9
22...	1132	20.0	31.0	--	--	--	24.5	5.7
22...	1133	15.0	31.0	--	--	--	24.5	6.0
22...	1134	10.0	31.0	--	--	--	24.5	6.0
22...	1135	5.00	31.0	1010	8.2	28.5	24.5	6.1
22...	1136	1.00	31.0	--	--	--	25.5	6.6
22...	1137	.50	31.0	--	--	--	25.5	6.6

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (HG/L AS CAC03) (00900)
AUG											
22...	0930	39.0	44.0	1030	1060	8.1	8.4	28.0	24.5	7.4	210
22...	0931	35.0	44.0	--	--	--	--	--	25.0	6.0	--
22...	0932	30.0	44.0	--	--	--	--	--	25.0	6.0	--
22...	0933	25.0	44.0	--	--	--	--	--	25.0	5.9	--
22...	0934	20.0	44.0	--	--	--	--	--	25.0	6.0	--
22...	0935	15.0	44.0	--	--	--	--	--	25.0	6.0	--
22...	0936	10.0	44.0	--	--	--	--	--	25.0	6.2	--
22...	0937	5.00	44.0	--	--	--	--	--	25.0	6.4	--
22...	0938	1.00	44.0	--	--	--	--	--	25.0	6.5	--



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")

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	HARD- NESS, NONCAR- BONATE (MG/L 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 IT-FLD AS HCO3 (99440)	CAR- BONATE IT-FLD AS CO3 (99445)	ALKA- LITY FIELD AS CACO3 (00410)	ALKA- LITY, CARBON- ATE IT-FLD (MG/L - CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
AUG											
22...	0	40	26	160	5	6.1	270	1.0	220	220	230
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--

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 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- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
AUG											
22...	65	.70	2.5	670	<.10	<.10	.050	.45	.030	.010	19
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
AUG								
22...	0930	3	220	<1	<1	<10	2	2

DATE	TIME	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 DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
AUG								
22...		3	4	1	.3	<1	<10	7

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)
AUG										
22...	0930	<.1	<.010	<.1	<.010	<.010	<.010	<.01	<.010	<.010

## ARKANSAS RIVER BASIN

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")

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
AUG 22...	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01	<.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)
AUG 22...	<.01	<1	<.01	.02	<.01	.02	<.1	<.10	<.01

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCT FECAL, KF AGAR (COLS. PER 100 ML) (31673)
AUG 22...	0930	39.0	44.0	3	24

## 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 mi<sup>2</sup>, of which 1,100 mi<sup>2</sup> is probably noncontributing.

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

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

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

REMARKS.--Estimated daily discharges: Oct. 4-10 and Oct. 17 to Nov. 15. Records fair. 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 ft<sup>3</sup>/s, 284,000 acre-ft/yr, prior to completion of Conchas dam.

24 years (water years 1939-62), 257 ft<sup>3</sup>/s, 186,200 acre-ft/yr, prior to completion of Ute Dam.

23 years (water years 1963-85), 36.4 ft<sup>3</sup>/s, 26,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1925).--Maximum discharge, 219,000 ft<sup>3</sup>/s, Sept. 22, 1941, gage height, 29.3 ft, from floodmarks, from rating curve extended above 75,000 ft<sup>3</sup>/s; no flow at times prior to completion of Ute Dam.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 254 ft<sup>3</sup>/s, Nov. 29, gage height, 3.16 ft; minimum, 1.0 ft<sup>3</sup>/s, Mar. 3.

DISCHARGE, IN 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	1.8	1.7	2.6	1.9	2.2	1.5	1.7	4.1	5.6	3.9	5.9	2.6
2	1.8	1.7	2.2	1.9	2.2	1.5	1.7	4.1	5.7	4.0	5.0	2.7
3	2.2	1.7	2.2	1.8	2.0	1.4	1.8	4.1	5.8	4.2	5.1	2.7
4	2.0	1.7	2.3	1.8	1.8	1.4	1.7	4.1	6.5	4.2	4.5	2.6
5	1.9	1.6	2.2	1.8	1.8	1.4	1.7	4.1	4.9	4.3	4.5	2.6
6	1.8	1.6	2.1	1.8	1.7	1.5	1.8	4.2	3.6	4.4	4.3	2.4
7	1.7	1.6	2.1	1.8	1.7	1.5	1.8	4.2	3.5	4.3	4.2	2.5
8	1.7	1.6	2.1	1.8	1.6	1.5	1.8	4.2	3.4	4.4	4.0	2.3
9	1.6	1.6	2.0	1.9	1.6	1.8	1.8	4.2	3.4	4.3	3.9	2.3
10	1.6	1.6	1.9	1.8	1.7	1.7	1.8	4.1	3.4	4.4	3.8	2.4
11	1.7	1.6	1.9	2.0	1.7	1.6	1.8	4.2	3.2	4.6	4.0	3.4
12	1.7	1.7	1.8	2.4	1.6	1.6	1.8	4.3	3.5	4.5	4.0	2.4
13	1.6	1.7	2.0	1.9	1.6	1.5	1.9	4.3	3.5	4.6	3.7	2.4
14	1.7	1.6	2.1	1.8	1.6	1.5	1.8	4.3	3.5	4.6	3.6	2.6
15	2.5	1.6	2.0	1.8	1.6	1.5	1.9	4.3	3.6	4.8	3.7	2.7
16	3.1	1.6	1.9	1.8	1.6	1.6	1.9	4.3	3.6	4.9	3.5	2.9
17	2.6	1.6	1.9	1.9	1.5	1.6	1.8	4.5	3.5	4.8	3.2	2.6
18	2.1	1.6	1.8	1.8	1.5	1.6	1.9	4.5	3.7	4.6	3.3	2.7
19	1.9	1.6	1.8	1.9	1.6	1.9	1.9	4.5	3.7	4.5	3.2	3.3
20	1.9	1.6	1.9	1.8	1.6	2.4	1.8	4.5	3.5	4.7	3.3	3.3
21	1.8	1.6	1.8	1.8	1.6	1.8	1.8	4.8	3.5	4.8	3.3	3.1
22	1.8	1.6	1.8	1.8	1.8	1.7	1.9	6.4	3.7	5.0	3.1	2.8
23	1.8	1.6	1.8	1.8	1.6	1.6	2.0	5.5	3.7	5.2	3.1	2.8
24	1.8	2.2	1.8	1.8	1.6	1.7	2.1	5.5	3.7	5.4	3.2	2.8
25	1.8	1.7	1.8	1.8	1.6	1.7	2.2	5.5	4.6	5.5	3.1	2.7
26	1.8	1.5	1.8	1.8	1.6	1.6	2.3	5.5	14	5.3	3.0	2.7
27	1.8	1.6	1.8	1.9	1.5	1.5	2.3	5.5	4.2	5.2	3.0	2.7
28	1.7	1.5	1.8	1.9	1.5	1.4	3.3	5.6	3.8	5.1	2.8	2.6
29	1.7	47	1.8	1.8	---	1.7	4.3	5.6	3.7	5.7	2.8	2.8
30	1.7	3.5	1.8	1.8	---	1.7	4.2	5.6	3.8	5.0	2.8	2.7
31	1.7	---	1.8	2.1	---	1.8	---	5.6	---	9.8	2.6	---
TOTAL	58.3	96.4	60.6	57.7	47.0	50.2	62.5	146.2	129.8	151.0	113.5	81.1
MEAN	1.88	3.21	1.95	1.86	1.68	1.62	2.08	4.72	4.33	4.87	3.66	2.70
MAX	3.1	47	2.6	2.4	2.2	2.4	4.3	6.4	14	9.8	5.9	3.4
MIN	1.6	1.5	1.8	1.8	1.5	1.4	1.7	4.1	3.2	3.9	2.6	2.3
AC-FT	116	191	120	114	93	100	124	290	257	300	225	161
CAL YR 1984 TOTAL	728.4		MEAN	1.99	MAX	47	MIN	1.2	AC-FT	1440		
WTR YR 1985 TOTAL	1054.3		MEAN	2.89	MAX	47	MIN	1.4	AC-FT	2090		

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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

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

REMARKS.--No estimated daily discharges. Water-discharge records fair. Low flows supplemented by surface and ground-water return from irrigation in vicinity of Tucumcari.

AVERAGE DISCHARGE.--26 years, 44.1 ft<sup>3</sup>/s, 31,950 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft<sup>3</sup>/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 ft<sup>3</sup>/s, Sept. 18, 1946, gage height, 9.04 ft, at site 180 ft downstream at different datum, from unpublished records collected by U.S. Bureau of Reclamation.

A peak of 26,100 ft<sup>3</sup>/s, date unknown, gage height, 12.9 ft at former site and datum, was measured by slope-area method in May 1957.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 22	0300	*3,020	*5.60				

Minimum discharge, 0.01 ft<sup>3</sup>/s, June 24.

DISCHARGE, IN 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	67	103	3.0	4.0	2.8	2.7	5.1	139	.36	.18	70	4.0
2	60	40	2.5	3.0	3.9	2.6	4.5	91	.18	.17	2.8	3.6
3	209	21	4.3	3.3	5.8	1.7	3.6	65	.13	.21	2.1	4.6
4	335	12	3.0	5.8	6.4	.93	2.3	47	186	.14	.18	276
5	76	14	2.3	3.0	17	.83	1.5	33	569	.12	.80	40
6	51	14	4.0	2.5	27	.90	1.3	28	264	.11	3.0	27
7	31	11	3.0	2.3	27	.99	1.3	29	95	.11	1.9	19
8	18	9.0	2.5	2.3	11	1.0	1.3	28	32	.08	.42	11
9	13	7.1	2.1	3.3	14	32	1.3	28	11	.07	.15	7.2
10	14	5.7	1.7	2.5	5.5	18	1.5	25	7.9	.06	.10	9.9
11	12	5.1	1.4	2.2	4.4	6.0	1.4	21	19	.05	4.4	23
12	11	4.8	1.1	2.9	6.6	6.3	1.1	22	18	.11	6.4	86
13	9.8	4.3	1.0	3.8	4.7	7.2	.90	26	4.1	.08	18	56
14	19	4.3	1.1	11	3.2	5.1	1.2	26	1.8	.06	10	53
15	57	3.3	3.3	20	2.8	4.5	1.2	31	1.1	.04	7.6	45
16	418	3.3	36	8.9	2.6	5.7	.82	34	.78	.46	50	246
17	102	5.9	73	5.4	2.4	6.4	.52	112	.41	9.1	18	163
18	60	9.8	17	5.2	2.5	12	.84	198	.29	1.5	18	119
19	33	19	10	4.4	2.7	36	12	142	.27	1.7	1.9	199
20	21	8.0	13	3.9	2.9	793	9.1	115	.07	3.3	1.4	426
21	26	6.2	34	1.9	4.0	346	6.2	159	.03	3.3	8.6	111
22	25	5.2	10	2.8	12	167	7.3	1110	.02	3.0	9.2	51
23	22	5.2	8.0	5.6	9.6	71	9.1	399	.02	9.6	8.0	36
24	110	218	5.4	8.2	15	32	9.3	175	.01	8.7	43	23
25	166	122	4.0	5.4	8.5	19	9.3	52	232	55	41	19
26	118	76	5.4	4.1	5.2	11	11	19	47	19	27	12
27	80	28	4.0	6.0	3.8	7.2	12	7.1	2.6	12	41	9.6
28	45	11	4.0	6.2	3.1	4.5	87	5.1	1.2	9.3	22	7.2
29	30	5.8	3.3	3.9	---	3.6	190	3.2	.42	13	14	10
30	24	3.6	2.8	2.6	---	5.1	184	1.3	.24	30	10	18
31	317	---	2.5	2.2	---	5.5	---	.52	---	10	4.7	---
TOTAL	2579.8	785.6	268.7	148.6	216.4	1615.75	577.98	3171.22	1494.93	190.55	445.65	2115.1
MEAN	83.2	26.2	8.67	4.79	7.73	52.1	19.3	102	49.8	6.15	14.4	70.5
MAX	418	218	73	20	27	793	190	1110	569	55	70	426
MIN	9.8	3.3	1.0	1.9	2.4	.83	.52	.52	.01	.04	.10	3.6
AC-FT	5120	1560	533	295	429	3200	1150	6290	2970	378	884	4200
CAL YR 1984	TOTAL	15375.26		MEAN	42.0	MAX	2620	MIN	.03	AC-FT	30500	
WTR YR 1985	TOTAL	13610.28		MEAN	37.3	MAX	1110	MIN	.01	AC-FT	27000	

07227100 REVUELTO CREEK NEAR LOGAN, NM -- Continued

## WATER-QUALITY RECORDS

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 15...	1600	2.9	1750	1880	8.4	8.5	10.5	14.5	7.6	340	130	68
MAR 06...	1210	1.1	--	2880	8.4	8.2	15.0	15.0	9.3	420	240	78
AUG 21...	1130	7.4	1100	1180	8.5	8.0	33.5	26.0	7.3	240	54	55

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)	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)	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 15...	42	290	7	4.2	560	130	.60	8.8	1200	9	.07	81
MAR 06...	55	490	11	4.5	770	360	.60	8.0	1900	27	.08	34
AUG 21...	25	170	5	5.2	320	53	.60	9.7	750	304	6.1	98

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 15...	1600	320	4
MAR 06...	1210	420	50
AUG 21...	1130	270	5

## ARKANSAS RIVER BASIN

07227140 CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE, NM  
(National stream-quality accounting network station)

## WATER-QUALITY RECORDS

LOCATION.--Lat 35°23'35", long 103°02'30", in SW¼ sec.32, T.14 N., R.37 E., Quay County, Hydrologic Unit 11080006,  
0.1 mi upstream from New Mexico-Texas State line, 5.5 mi downstream from Rana Canyon, and 14.7 mi north of  
Glenrio.

DRAINAGE AREA.--12,616 mi<sup>2</sup>.

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

REMARKS.--Water-discharge measurements were made at the time water-quality samples were collected.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (000095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (900095)	PH (STAND- ARD UNITS) (004000)	PH LAB (STAND- ARD UNITS) (004003)	TEMPER- ATURE, AIR (DEG C) (000020)	TEMPER- ATURE (DEG C) (000010)	TUR- BID- ITY (NTU) (000076)	OXYGEN, DIS- SOLVED (MG/L) (003000)	HARD- NESS (MG/L AS CACO3) (009000)
NOV 14...	1115	14	>8000	7040	8.1	8.3	23.5	12.0	80	10.3	580
JAN 29...	1100	16	>8000	7720	8.4	8.0	20.0	6.0	28	10.9	680
MAR 05...	1045	9.0	8900	8970	8.3	8.1	20.0	14.0	16	9.8	720
SEP 11...	1100	10	4080	4490	8.5	8.0	22.5	21.0	180	--	570

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (009002)	CALCIUM DIS- SOLVED (MG/L AS CA) (009115)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (009225)	SODIUM, DIS- SOLVED (MG/L AS NA) (009300)	SODIUM AD- SORP- TION RATIO (009311)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (009335)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (994440)	CAR- BONATE IT-FLD (MG/L AS CO3) (994445)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CACO3) (994430)	SULFATE DIS- SOLVED (MG/L AS SO4) (009445)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (009440)
NOV 14...	290	120	67	1300	24	8.2	310	19	290	500	2000
JAN 29...	400	140	80	1500	26	7.4	--	--	--	280	2200
MAR 05...	430	140	89	1700	28	8.6	320	14	--	590	2600
SEP 11...	360	63	100	820	15	7.7	240	8.0	210	410	1100

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (009550)	SILICA, DIS- SOLVED (MG/L AS SiO2) (009555)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (703000)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (703011)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (006311)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (006608)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (006665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (006671)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (703311)
NOV 14...	.50	12	4130	4200	.33	.050	.100	<.010	80	3.0	98
JAN 29...	.50	11	4610	4400	.36	.080	.020	<.010	72	3.1	71
MAR 05...	.50	12	5290	5300	.42	.040	<.010	<.010	23	.56	86
SEP 11...	.50	9.3	2570	2600	<.10	.050	.170	<.010	425	11	79

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 14...	1115	10	1	<100	<10	2	<1	3	4	30	7
MAR 05...	1045	10	<1	300	<10	1	1	1	2	30	3
SEP 11...	1100	20	3	400	<10	2	<1	<1	3	60	<1

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

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 14...	160	30	.2	2	3	<1	<1	2800	31	10
MAR 05...	210	90	<.1	<1	1	1	1	3000	23	10
SEP 11...	120	10	.2	1	3	<1	<1	940	28	40

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 14...	1115	K10	K60
JAN 29...	1100	K0	K0
MAR 05...	1045	<1	130
SEP 11...	1100	240	450

## WESTERN GULF OF MEXICO BASINS

## RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO

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, 14 mi east of Antonito and at mile 1,722.1.

DRAINAGE AREA.--7,700 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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).

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. 25 to Mar. 1, and Mar. 3-5. 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 ft<sup>3</sup>/s, 612,900 acre-ft/yr, includes period of extensive development for irrigation.  
55 years (water years 1931-1985), 433 ft<sup>3</sup>/s, 313,700 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 13,200 ft<sup>3</sup>/s, June 8, 1905, gage height, 9.1 ft, from rating curve extended above 8,000 ft<sup>3</sup>/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, 6,240 ft<sup>3</sup>/s, at 2230 June 13, gage height, 6.42 ft; minimum daily, 40 ft<sup>3</sup>/s, Sept. 10.

DISCHARGE, IN 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	92	160	310	410	295	485	664	2330	4400	2470	706	67
2	108	174	325	330	305	502	685	2700	4180	2190	601	65
3	142	216	355	330	275	450	713	2530	3890	1920	615	65
4	139	410	340	300	260	480	744	2770	3560	1500	664	60
5	164	484	355	295	245	510	889	3360	3500	1160	685	58
6	157	532	350	310	260	496	1110	3940	3600	1100	636	51
7	151	550	325	345	265	502	1250	4520	3760	1210	526	50
8	133	580	345	345	275	514	1460	4890	3850	907	430	46
9	128	622	380	330	295	580	1780	5190	4080	736	400	43
10	120	615	480	315	280	574	2050	5300	4520	650	365	40
11	118	587	440	385	275	699	2120	5350	5010	622	320	43
12	133	556	490	360	295	1020	2260	5500	5530	556	302	50
13	133	568	405	330	300	1110	2520	5520	6040	466	294	51
14	133	615	340	340	305	889	2710	5300	6080	430	266	56
15	142	608	355	335	320	832	2880	4690	5740	415	242	98
16	151	594	305	315	345	800	3160	3940	5410	400	220	115
17	167	580	290	310	355	760	3310	3140	5100	380	198	95
18	188	550	385	315	365	720	3420	2810	4830	390	178	115
19	164	568	430	320	395	720	3660	2940	4760	360	167	148
20	157	562	375	330	415	706	3770	3210	4690	330	145	130
21	154	526	325	350	420	678	3560	3370	4500	310	139	166
22	154	478	335	380	420	671	3340	3230	4360	315	130	380
23	154	450	300	375	395	650	3210	3020	4350	355	128	380
24	160	460	275	370	405	615	2940	2740	4300	435	115	345
25	167	450	265	370	415	587	2680	2460	4210	490	102	274
26	184	440	285	375	420	615	2530	2540	4080	440	95	216
27	223	285	340	370	440	728	2490	2730	4010	395	88	195
28	212	290	375	360	460	752	2540	3020	3840	335	80	238
29	195	330	400	350	---	664	2630	3420	3500	325	76	274
30	170	295	425	325	---	629	2700	3970	2850	365	73	254
31	160	---	460	310	---	594	---	4380	---	514	69	---
TOTAL	4753	14135	11165	10585	9500	20532	69775	114810	132530	22471	9055	4168
MEAN	153	471	360	341	339	662	2326	3704	4418	725	292	139
MAX	223	622	490	410	460	1110	3770	5520	6080	2470	706	380
MIN	92	160	265	295	245	450	664	2330	2850	310	69	40
AC-FT	9430	28040	22150	21000	18840	40730	138400	227700	262900	44570	17960	8270
CAL YR 1984	TOTAL	209272	MEAN	572	MAX	3310	MIN	82	AC-FT	415100		
WTR YR 1985	TOTAL	423479	MEAN	1160	MAX	6080	MIN	40	AC-FT	840000		



08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued

## WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to 1981.

WATER TEMPERATURES: October 1975 to 1981.

INSTRUMENTATION.--Water-quality monitor October 1975 to 1981.

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

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT 16...	1000	--	380	345	8.3	8.3	2.0	3.5	7.6
APR 23...	1000	--	195	198	7.9	7.9	14.0	16	7.5
JUN 26...	1300	--	199	213	7.8	7.9	20.0	9.0	5.9
AUG 27...	1300	88	800	--	8.7	--	22.0	--	5.7

DATE	HARD- NESS (MG/L) AS CAC03 (00900)	HARD- NESS, NONCAR- BONATE (MG/L) AS CA (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 FIELD (MG/L) AS CAC03 (00410)	SULFATE DIS- SOLVED (MG/L) AS S04 (00945)
OCT 16...	110	0	34	6.5	30	1	4.3	--	51
APR 23...	72	21	22	4.2	11	.6	3.0	--	38
JUN 26...	74	73	22	4.5	16	.8	3.4	1	34
AUG 27...	--	--	--	--	--	--	--	0	--

DATE	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F (00950)	SILICA, DIS- SOLVED (MG/L) AS SiO2 (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	PHOS- PHORUS, TOTAL (MG/L) AS P (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L) AS P (00671)
OCT 16...	9.2	<.10	24	238	230	.10	.030	.130	.110
APR 23...	3.2	.20	23	148	140	<.10	.030	.120	.060
JUN 26...	4.2	.20	19	160	100	--	--	.130	--
AUG 27...	--	--	--	--	--	.12	.060	.230	.100

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	LEAD, DIS- SOLVED (UG/L) AS PB (01049)
OCT 16...	1000	20	2	30	.0	<1	2	<3	4	42	2
JUN 26...	1300	90	<1	37	<.5	1	<1	<3	5	190	8

## RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 16...	8	6	<.1	<10	<1	<1	<1	270	<6	11
JUN 26...	5	26	<.1	<10	1	<1	<1	180	<6	19

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
OCT 16...	1000	<6.9	<.4	4.2	.5	3.6	.5	.04	1.5
JUN 26...	1300	<2.4	<.5	3.0	<.7	2.6	<.6	.04	<.4

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 16...	K18	K14
APR 23...	K12	100

## 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 mi<sup>2</sup>.

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 9,429 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 ft<sup>3</sup>/s, July 22, 1954, gage height, about 4.8 ft, from floodmarks, site and datum then in use, on basis of slope-area measurement of peak flow; minimum not determined. The flood in 1954 destroyed the gaging station and is highest since about 1909, from information by local range rider.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 15	1900	51	2.74	June 5	2015	61	2.88
May 5	2130	*95	*3.14	June 18	2315	46	2.71
May 15	1800	87	3.08	July 15	1445	48	2.71
May 22	1930	80	3.03				

Minimum discharge, not determined.

DISCHARGE, IN 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	4.0						---	44	48	11	7.9	5.3
2	4.6						---	47	45	12	8.8	6.0
3	6.8						---	56	44	12	11	5.4
4	8.6						---	70	43	11	11	5.2
5	9.2						---	74	45	10	8.8	4.6
6	8.7						---	76	39	11	7.4	4.3
7	7.4						---	71	40	10	7.1	4.3
8	6.8						---	72	50	10	6.8	4.2
9	8.2						---	74	57	10	7.1	4.1
10	7.8						29	80	52	11	6.4	4.1
11	---						24	65	49	9.4	6.3	5.3
12	---						23	54	44	8.9	6.7	6.1
13	---						24	49	39	8.7	5.8	4.4
14	---						27	58	36	8.9	5.6	4.3
15	---						31	55	33	17	5.5	4.8
16	---						30	44	31	13	5.2	7.4
17	---						31	45	31	9.6	5.0	4.5
18	---						32	39	31	15	5.4	5.7
19	---						29	39	32	13	5.4	7.0
20	---						25	37	26	14	5.5	7.3
21	---						23	42	24	13	5.4	8.5
22	---						22	57	23	11	4.9	9.3
23	---						20	46	22	11	4.9	10
24	---						19	44	21	9.6	5.2	7.3
25	---						19	48	20	8.5	4.8	6.0
26	---						20	57	17	8.3	4.5	5.3
27	---						27	60	15	7.8	4.8	5.0
28	---						31	59	14	7.6	4.8	5.2
29	---						24	59	13	9.7	4.8	5.5
30	---						45	52	12	8.0	5.0	4.9
31	---						---	50	---	7.6	5.1	---
TOTAL	---						---	1723	996	327.6	192.9	171.3
MEAN	---						---	55.6	33.2	10.6	6.22	5.71
MAX	---						---	80	57	17	11	10
MIN	---						---	37	12	7.6	4.5	4.1
AG-FT	---						---	3420	1980	650	383	340

## RIO GRANDE BASIN

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 mi<sup>2</sup>.

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 9,404 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 fair. Diversion 3.5 mi upstream for irrigation of about 1,300 acres, part of which is in Costilla Creek basin. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft<sup>3</sup>/s, July 20, 1971, gage height, 2.07 ft, from rating curve extended above 85 ft<sup>3</sup>/s; minimum, not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 30	1530	58	1.24	June 11	2200	*92	*1.48
May 14	1845	63	1.27	July 19	0115	40	1.12

Minimum discharge, not determined.

DISCHARGE, IN 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	5.0							21	65	39	20	9.3
2	4.8							20	64	36	21	9.3
3	6.1							21	65	36	22	9.0
4	8.2							27	65	35	27	8.7
5	7.4							33	66	32	23	8.1
6	7.2							36	64	32	20	7.8
7	6.3							38	69	31	20	7.7
8	5.8							43	81	29	17	7.4
9	6.4							47	89	31	16	7.1
10	5.9						12	50	86	33	15	6.8
11	---						9.7	49	89	28	16	7.7
12	---						9.1	46	86	26	15	8.3
13	---						9.9	47	85	26	15	7.0
14	---						11	49	79	25	15	6.9
15	---						12	48	78	29	15	8.5
16	---						12	41	75	26	13	9.9
17	---						14	39	72	24	13	7.6
18	---						15	37	71	28	14	9.3
19	---						15	36	69	30	13	10
20	---						15	36	65	24	13	9.9
21	---						15	40	60	25	12	11
22	---						13	47	58	23	11	12
23	---						13	41	55	23	11	12
24	---						12	40	53	23	11	9.6
25	---						12	41	52	22	10	9.0
26	---						13	46	51	22	9.5	8.5
27	---						17	52	48	22	9.9	8.3
28	---						21	55	44	22	9.4	8.6
29	---						17	60	40	20	9.5	8.7
30	---						28	62	41	20	9.2	7.7
31	---						---	64	---	20	8.6	---
TOTAL	---						---	1312	1985	842	454.1	261.7
MEAN	---						---	42.3	66.2	27.2	14.6	8.72
MAX	---						---	64	89	39	27	12
MIN	---						---	20	40	20	8.6	6.8
AC-FT	---						---	2600	3940	1670	901	519

## 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 mi<sup>2</sup>.

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 9,487 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 fair. No diversions upstream from station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 13	1345	8.0	0.89	July 15	0045	9.8	0.99
June 11	1715	*16	*1.35	Aug. 3	1515	8.8	0.84

Minimum discharge, not determined.

DISCHARGE, IN 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	1.5						---	2.6	9.8	7.6	4.0	2.1
2	1.4						---	2.8	9.8	7.4	3.9	2.1
3	1.6						---	3.2	10	7.1	4.6	2.1
4	1.6						---	4.0	10	6.9	4.2	2.1
5	1.7						---	4.8	10	6.7	3.9	2.0
6	1.6						---	5.2	11	6.5	3.8	2.0
7	1.6						---	5.3	11	6.0	3.5	2.0
8	1.6						---	5.4	12	6.0	3.6	1.9
9	1.6						---	5.6	14	6.1	3.4	1.9
10	1.5						1.4	6.4	14	5.9	3.2	1.8
11	---						1.5	6.7	15	5.5	3.1	2.0
12	---						1.4	6.8	15	5.3	3.0	1.9
13	---						1.5	7.0	15	5.1	3.0	1.8
14	---						1.7	6.9	15	5.6	3.1	1.8
15	---						1.8	6.7	14	6.2	3.0	2.1
16	---						1.9	6.4	14	5.1	2.9	1.9
17	---						2.0	6.3	14	4.9	2.9	1.7
18	---						2.2	6.2	14	5.5	2.9	1.9
19	---						2.2	6.2	13	5.1	2.7	1.9
20	---						2.2	6.1	12	5.1	2.7	1.9
21	---						2.1	6.3	12	5.1	2.6	1.9
22	---						2.1	6.4	11	4.8	2.5	1.8
23	---						2.1	6.3	11	4.6	2.5	1.8
24	---						1.8	6.2	11	4.5	2.5	1.8
25	---						1.8	6.5	10	4.4	2.3	1.6
26	---						2.1	6.9	9.7	4.3	2.3	1.5
27	---						2.5	7.3	9.2	4.1	2.3	1.5
28	---						3.0	7.8	8.9	4.2	2.2	1.6
29	---						2.5	8.3	8.4	4.2	2.2	1.6
30	---						3.5	8.9	8.0	4.0	2.3	1.4
31	---						---	9.5	---	3.8	2.2	---
TOTAL	---						---	191.0	351.8	167.6	93.3	55.4
MEAN	---						---	6.16	11.7	5.41	3.01	1.85
MAX	---						---	9.5	15	7.6	4.6	2.1
MIN	---						---	2.6	8.0	3.8	2.2	1.4
AC-FT	---						---	379	698	332	185	110

## 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 mi<sup>2</sup>.

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

REVISED RECORDS.--WSP 1923: Drainage area.

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

REMARKS.--Estimated daily discharges: Oct. 11 to Apr. 24. 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.--39 years (water years 1945-47, 1950-85), 17.9 ft<sup>3</sup>/s, 12,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 301 ft<sup>3</sup>/s, June 19, 1979, gage height, 3.04 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 158 ft<sup>3</sup>/s, June 9-12, gage height, 2.25 ft; minimum, not determined.

DISCHARGE, IN 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	.03	.03	.03	.03	.03	.03	.03	.03	85	67	113	30
2	.03	.03	.03	.03	.03	.03	.03	.03	85	67	62	81
3	.03	.03	.03	.03	.03	.03	.03	.03	99	59	32	81
4	.03	.03	.03	.03	.03	.03	.03	.03	114	53	35	71
5	.03	.03	.03	.03	.03	.03	.03	.03	114	48	50	45
6	.03	.03	.03	.03	.03	.03	.03	.03	114	45	48	24
7	.03	.03	.03	.03	.03	.03	.03	.03	114	67	48	14
8	.03	.03	.03	.03	.03	.03	.03	24	114	127	48	23
9	.03	.03	.03	.03	.03	.03	.03	48	136	127	33	61
10	.03	.03	.03	.03	.03	.03	.03	42	158	126	24	67
11	.03	.03	.03	.03	.03	.03	.03	42	158	126	38	67
12	.03	.03	.03	.03	.03	.03	.03	63	158	126	99	67
13	.03	.03	.03	.03	.03	.03	.03	76	136	126	107	33
14	.03	.03	.03	.03	.03	.03	.03	76	119	131	107	9.6
15	.03	.03	.03	.03	.03	.03	.03	76	99	131	106	22
16	.03	.03	.03	.03	.03	.03	.03	76	88	122	51	60
17	.03	.03	.03	.03	.03	.03	.03	76	88	121	19	60
18	.03	.03	.03	.03	.03	.03	.03	76	88	119	36	60
19	.03	.03	.03	.03	.03	.03	.03	76	101	66	100	59
20	.03	.03	.03	.03	.03	.03	.03	76	108	37	100	30
21	.03	.03	.03	.03	.03	.03	.03	76	108	59	100	14
22	.03	.03	.03	.03	.03	.03	.03	93	108	147	99	20
23	.03	.03	.03	.03	.03	.03	.03	100	108	142	45	20
24	.03	.03	.03	.03	.03	.03	.03	100	99	135	14	9.5
25	.03	.03	.03	.03	.03	.03	.03	100	85	135	30	10
26	.03	.03	.03	.03	.03	.03	.03	100	85	68	87	9.5
27	.03	.03	.03	.03	.03	.03	.03	100	85	26	93	9.9
28	.03	.03	.03	.03	.03	.03	.03	100	73	45	92	9.7
29	.03	.03	.03	.03	---	.03	.03	100	68	114	92	9.9
30	.03	.03	.03	.03	---	.03	.03	100	68	114	44	4.5
31	.03	---	.03	.03	---	.03	---	92	---	113	16	---
TOTAL	.93	.90	.93	.93	.84	.93	.90	1888.21	3163	2989	1968	1081.6
MEAN	.03	.03	.03	.03	.03	.03	.03	60.9	105	96.4	63.5	36.1
MAX	.03	.03	.03	.03	.03	.03	.03	100	158	147	113	81
MIN	.03	.03	.03	.03	.03	.03	.03	.03	68	26	14	4.5
AC-FT	1.8	1.8	1.8	1.8	1.7	1.8	1.8	3750	6270	5930	3900	2150
CAL YR 1984	TOTAL	11887.26		MEAN	32.5	MAX	145	MIN	.02	AC-FT	23580	
WTR YR 1985	TOTAL	11096.17		MEAN	30.4	MAX	158	MIN	.03	AC-FT	22010	

## 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 mi<sup>2</sup>.

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: Jan. 15 to Feb. 20. 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.--44 years (water years 1942-85), 43.6 ft<sup>3</sup>/s, 31,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,150 ft<sup>3</sup>/s, May 11, 1942, gage height, 5.37 ft, site and datum then in use; minimum, 0.34 ft<sup>3</sup>/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, 341 ft<sup>3</sup>/s, May 23, gage height, 3.76 ft; minimum, not determined, probably occurred during period of ice effect.

DISCHARGE, IN 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	13	23	9.5	15	8.0	15	23	196	284	111	138	32
2	13	20	11	8.0	7.0	16	24	183	271	109	123	83
3	13	21	12	8.0	8.0	16	41	186	266	106	71	94
4	21	19	10	8.5	9.0	13	68	220	272	95	73	96
5	25	18	9.5	9.5	8.0	15	82	240	275	91	81	65
6	19	19	13	9.5	8.0	15	96	260	260	84	74	54
7	19	19	15	9.5	9.0	14	106	247	256	83	73	27
8	17	18	16	11	9.0	13	121	245	265	145	71	25
9	18	17	14	11	10	18	117	280	272	152	69	54
10	17	10	17	10	13	50	101	289	289	153	49	70
11	16	15	20	8.5	8.0	128	96	275	287	148	49	75
12	17	15	18	8.5	8.0	48	90	267	287	141	98	79
13	18	16	18	8.0	9.5	21	87	287	270	148	117	67
14	18	17	14	8.0	11	25	92	284	236	145	119	27
15	20	13	19	8.0	11	26	101	278	216	169	120	26
16	18	13	8.0	8.5	11	24	110	249	192	153	100	66
17	22	17	7.5	8.5	11	20	114	248	182	143	42	71
18	25	13	8.0	9.0	11	22	122	244	180	150	40	77
19	22	10	9.5	9.0	11	20	126	245	188	129	100	86
20	24	9.0	15	10	11	20	109	243	188	83	113	73
21	22	8.0	10	10	15	19	100	245	183	86	114	49
22	21	9.0	9.5	11	15	19	94	288	181	158	113	44
23	21	13	11	11	15	16	86	304	177	172	93	61
24	21	16	20	11	14	19	78	293	173	168	36	39
25	21	10	32	11	13	25	80	284	162	166	33	32
26	22	3.0	47	11	13	34	90	296	155	140	81	30
27	25	5.5	40	12	13	27	97	301	145	68	102	28
28	23	6.5	65	12	14	28	129	306	132	63	104	29
29	22	9.5	43	11	---	30	148	311	117	128	104	30
30	23	7.0	25	10	---	22	156	300	114	138	87	28
31	23	---	24	9.0	---	21	---	294	---	136	36	---
TOTAL	619	409.5	590.5	305.0	303.5	799	2884	8188	6475	3961	2623	1617
MEAN	20.0	13.7	19.0	9.84	10.8	25.8	96.1	264	216	128	84.6	53.9
MAX	25	23	65	15	15	128	156	311	289	172	138	96
MIN	13	3.0	7.5	8.0	7.0	13	23	183	114	63	33	25
AC-FT	1230	812	1170	605	602	1580	5720	16240	12840	7860	5200	3210
CAL YR 1984	TOTAL	24382.5		MEAN	66.6	MAX	271	MIN	3.0	AC-FT	48360	
WTR YR 1985	TOTAL	28774.5		MEAN	78.8	MAX	311	MIN	3.0	AC-FT	57070	

## RIO GRANDE BASIN

## 08260500 COSTILLA CREEK BELOW DIVERSION DAM, AT COSTILLA, NM

LOCATION.--Lat 36°58'03", long 105°31'00", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on right bank 600 ft downstream from diversion dam, 1.1 mi southeast of Costilla, and at mile 15.3.

DRAINAGE AREA.--197 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1952 to current year (no winter records).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,861 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: June 25 to July 15 and July 24 to Aug. 1. Records poor. Flow partly regulated by Costilla Reservoir (station 08253900) 20 mi upstream, and by canal headgates or sluice gates at diversion dam. Diversions upstream from station for irrigation of about 5,000 acres, 3,000 acres of which are downstream from station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 540 ft<sup>3</sup>/s, June 9, 1979, gage height, 4.66 ft, from rating curve extended above 220 ft<sup>3</sup>/s; maximum gage height, 6.77 ft, May 30, 1983 (backwater from debris); no flow Oct. 14, 1963, Aug. 6, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in 1886, from information by local residents. Flood of May 11, 1942, probably exceeded 1,000 ft<sup>3</sup>/s, based on records for upstream station (station 08255500).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 535 ft<sup>3</sup>/s, May 10, gage height, 5.47 ft; no flow at times.

DISCHARGE, IN 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	2.0						---	179	147	11	4.2	1.9
2	1.5						---	168	131	11	14	3.1
3	1.5						---	168	107	10	15	2.1
4	3.0						---	197	89	9.7	18	1.0
5	4.0						---	219	102	11	14	.24
6	3.0						---	239	87	22	11	12
7	3.0						---	213	77	20	10	8.7
8	2.5						---	197	78	18	9.5	4.7
9	2.5						---	233	80	14	9.0	.00
10	.07						89	222	105	11	8.2	.00
11	.10						84	191	128	5.7	8.1	.12
12	---						80	185	102	1.0	8.8	.49
13	---						77	204	77	6.4	8.7	.71
14	---						86	207	62	4.7	7.0	.00
15	---						82	200	68	5.4	5.0	.00
16	---						86	152	53	2.8	11	.15
17	---						91	152	26	2.1	3.1	.09
18	---						98	166	18	1.1	2.1	1.0
19	---						102	171	20	12	3.1	3.3
20	---						86	145	28	20	.43	5.0
21	---						77	145	31	19	.37	6.4
22	---						72	185	7.5	10	.37	1.4
23	---						62	219	8.1	8.2	5.0	3.1
24	---						54	219	9.3	7.3	3.1	.04
25	---						56	207	12	6.4	3.1	.03
26	---						66	219	12	7.9	3.1	.04
27	---						73	174	10	11	3.1	.87
28	---						105	182	11	12	3.1	1.4
29	---						122	171	9.5	5.5	1.0	1.4
30	---						133	155	11	2.8	4.0	1.6
31	---						---	155	---	3.0	3.0	---
TOTAL	---						---	5839	1706.4	292.0	199.47	60.88
MEAN	---						---	188	56.9	9.42	6.43	2.03
MAX	---						---	239	147	22	18	12
MIN	---						---	145	7.5	1.0	.37	.00
AC-FT	---						---	11580	3380	579	396	121



## 08261000 COSTILLA CREEK AT GARCIA, CO

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

DRAINAGE AREA.--200 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder. Concrete control since Oct. 9, 1956. Elevation of gage is 7,758 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.--Estimated daily discharges: Aug. 21, 22, Aug. 24 to Sept. 17, Sept. 19, 20, and Sept. 24-30. Records fair. 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 ft<sup>3</sup>/s, June 1, 1983, gage height, 4.91 ft; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in 1886, from information by local residents. Flood of May 11, 1942, probably reached a discharge of 1,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 294 ft<sup>3</sup>/s, May 10, gage height, 4.21 ft; no flow several days.

DISCHARGE, IN 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	1.6						---	195	143	7.7	8.4	.00
2	1.3						---	186	132	7.4	18	.00
3	1.2						---	169	111	6.9	15	.00
4	3.0						---	196	100	5.1	16	.00
5	3.9						---	212	108	4.8	11	.00
6	3.0						---	229	96	13	8.1	8.0
7	2.6						---	200	86	12	7.4	6.0
8	2.3						---	197	86	15	7.0	1.0
9	2.3						95	217	90	13	7.0	.50
10	---						93	204	115	12	5.3	.00
11	---						91	163	132	11	5.2	.00
12	---						80	155	115	11	7.1	.50
13	---						76	180	93	9.8	6.4	2.0
14	---						83	173	75	9.6	6.7	1.0
15	---						87	174	76	8.3	6.6	.50
16	---						90	145	57	6.1	11	.00
17	---						96	148	33	5.5	2.0	.00
18	---						109	157	24	7.8	1.7	.00
19	---						110	154	28	20	2.9	2.0
20	---						89	136	35	19	1.5	1.5
21	---						77	136	36	20	1.0	3.8
22	---						72	174	16	20	.50	1.8
23	---						65	189	14	8.2	5.0	6.8
24	---						59	184	14	7.3	1.0	1.0
25	---						56	188	13	6.4	.50	.00
26	---						64	202	12	7.9	.00	.00
27	---						69	173	12	9.2	.00	.00
28	---						88	172	11	7.9	.00	.00
29	---						123	167	8.3	13	.00	.00
30	---						111	150	7.8	11	2.0	.00
31	---						---	151	---	9.3	.00	---
TOTAL	---						---	5476	1879.1	325.2	164.30	36.40
MEAN	---						---	177	62.6	10.5	5.30	1.21
MAX	---						---	229	143	20	18	8.0
MIN	---						---	136	7.8	4.8	.00	.00
AC-FT	---						---	10860	3730	645	326	72

## PRINCIPAL DIVERSIONS FROM COSTILLA CREEK, NEW MEXICO-COLORADO

Records of discharge are collected at 5 gaging stations on 3 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 ft<sup>3</sup>/s, June 25, 1944, July 31, 1945; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 33 ft<sup>3</sup>/s, June 11-13; no flow at times.

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 ft<sup>3</sup>/s, June 9, 1985; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 164 ft<sup>3</sup>/s, June 9; minimum daily, 11 ft<sup>3</sup>/s, Sept. 7.

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, 83 ft<sup>3</sup>/s, June 9, 1985; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 83 ft<sup>3</sup>/s, June 9; minimum daily, 3.3 ft<sup>3</sup>/s, Sept. 30.

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, 71 ft<sup>3</sup>/s, July 23, 25, 1985; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 71 ft<sup>3</sup>/s, July 23, 25; minimum daily, 1.7 ft<sup>3</sup>/s, Sept. 30.

08262000 EASTDALE NO. 1 INTAKE CANAL NEAR JAROSO, CO.--Lat 37°02'25", long 105°36'18", Costilla County, Hydrologic Unit 13020101, on left bank 750 ft downstream from headgate, and 2.8 mi north of Jaroso. PERIOD OF RECORD, June 1944 to current year. GAGE, water-stage recorder and Parshall flume. Elevation of gage is 7,585 ft above National Geodetic Vertical Datum of 1929, from topographic map. Canal diverts from right bank of Costilla Creek to Eastdale Reservoir No. 1 for irrigation in Colorado.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 112 ft<sup>3</sup>/s, May 16, 1958; no flow for long periods.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 46 ft<sup>3</sup>/s, Mar. 11; no flow many days.

## MONTHLY DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	08256000 Acequia Madre	08258000 Cerro Canal at Costilla	08258600 Cerro Canal below Association ditch	08259600 Cerro Canal at State line nr Jaroso	08262000 Eastdale No. 1 intake canal
October .....	-	-	-	-	76
November .....	-	-	-	-	189
December .....	-	-	-	-	0
January .....	-	-	-	-	0
February .....	-	-	-	-	0
March .....	-	-	-	-	242
April .....	-	-	-	-	154
May .....	739	3910	2410	2030	907
June .....	1180	8260	3920	3140	825
July .....	1020	6270	3260	2820	198
August .....	771	4040	2480	2210	265
September .....	547	2530	1400	1040	77

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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

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: July 21-23, 29, 30 and Aug. 12 to Sept. 18. Water-discharge records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 7,000 acres in New Mexico.

AVERAGE DISCHARGE.--37 years, 429 ft<sup>3</sup>/s, 310,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,740 ft<sup>3</sup>/s, June 22, 1949, gage height, 15.78 ft; minimum, about 40 ft<sup>3</sup>/s, Sept. 10, 11, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 13	1230	1,260	6.82	May 13	0845	5,640	12.72
Apr. 20	2200	3,850	10.95	June 14	0400	*6,280	*13.27

Minimum daily discharge, 111 ft<sup>3</sup>/s, Oct. 1.

DISCHARGE, IN 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	114	187	326	489	332	510	678	2490	4240	2490	709	155
2	120	187	340	459	319	526	779	2530	4130	2240	751	153
3	135	210	356	374	328	532	789	2640	3890	2000	685	150
4	171	269	386	375	300	486	797	2700	3600	1730	720	163
5	171	469	370	346	282	520	885	3200	3440	1360	744	145
6	190	537	384	339	271	549	1120	3790	3490	1170	762	140
7	182	582	383	353	283	538	1300	4380	3600	1270	666	140
8	175	604	357	390	293	538	1460	4790	3680	1120	558	140
9	159	642	376	389	303	577	1750	5140	3810	904	480	140
10	152	668	409	374	319	627	2010	5280	4180	802	442	135
11	151	663	509	359	308	661	2110	5320	4710	710	386	135
12	151	624	471	423	303	924	2220	5500	5280	703	330	145
13	170	618	523	399	325	1160	2400	5570	5850	589	310	135
14	171	637	438	365	329	1020	2650	5410	6160	519	300	130
15	171	666	373	371	334	942	2800	4890	5810	474	280	130
16	177	654	385	363	348	916	3050	4160	5440	468	260	130
17	188	633	334	346	375	876	3300	3460	5060	434	240	130
18	200	615	319	338	386	825	3360	3020	4730	419	230	130
19	207	603	415	339	395	808	3630	3030	4550	424	220	141
20	189	620	461	344	424	799	3780	3230	4490	391	210	177
21	192	589	407	350	447	774	3660	3380	4320	370	200	164
22	187	542	355	370	456	759	3380	3320	4180	360	190	234
23	186	495	367	398	457	738	3270	3210	4140	350	180	432
24	196	504	333	395	436	718	3030	3030	4100	388	180	432
25	209	531	308	391	448	669	2750	2750	4020	519	180	367
26	214	481	294	388	463	652	2580	2730	3880	531	170	291
27	232	468	317	394	465	699	2480	2830	3810	481	165	231
28	251	317	369	392	486	770	2550	3010	3660	425	165	208
29	234	322	407	380	---	777	2610	3320	3400	370	160	262
30	215	361	430	370	---	710	2690	3690	2910	350	160	290
31	197	---	458	350	---	704	---	4150	---	447	155	---
TOTAL	5657	15298	11960	11713	10215	22304	69868	115950	128560	24808	11188	5755
MEAN	182	510	386	378	365	719	2329	3740	4285	800	361	192
MAX	251	668	523	489	486	1160	3780	5570	6160	2490	762	432
MIN	114	187	294	338	271	486	678	2490	2910	350	155	130
AC-FT	11220	30340	23720	23230	20260	44240	138600	230000	255000	49210	22190	11420
CAL YR 1984	TOTAL	226536		MEAN	619	MAX	3160	MIN	114	AC-FT	449300	
WTR YR 1985	TOTAL	433276		MEAN	1187	MAX	6160	MIN	114	AC-FT	859400	

## RIO GRANDE BASIN

08263500 RIO GRANDE NEAR CERRO, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977, 1979 to current year.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)
OCT 09...	1430	157	280	299	9.1	8.7	13.0
JAN 16...	1130	355	185	--	7.9	--	1.0
JUN 13...	1300	5840	190	--	8.1	--	17.0
JUL 10...	1300	809	355	--	8.5	--	19.0

DATE	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINEITY FIELD (MG/L AS CACO3) (00410)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 09...	--	--	80	2.3	--	26	11
JAN 16...	--	--	--	1.9	<.01	--	--
JUN 13...	40	.000	--	7.1	--	--	--
JUL 10...	76	.000	--	9.0	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 09...	1430	--	4	17	7	1	1	50	7
JAN 16...	1130	0	2	33	14	<1	<1	<10	8
JUN 13...	1300	0	6	160	12	<1	1	60	18
JUL 10...	1300	0	3	59	9	<1	<1	20	7

## 08265000 RED RIVER NEAR QUESTA, NM

LOCATION.--Lat 36°42'12", long 105°34'04", in NE&SE¼ 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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to October 1910 and January to September 1911 (gage heights and discharge measurements only), October 1912 to March 1924, May 1924 to September 1925, January to March 1926, September 1926 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as Rio Colorado above 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: Apr. 3-18. Water-discharge records good except for estimated daily discharges and those for May and June, 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). See tabulation below for bypass flow of water.

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

20 years (water years 1966-85), 38.1 ft<sup>3</sup>/s, 27,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1929).--Maximum discharge, 886 ft<sup>3</sup>/s, May 25, 1942, from rating curve extended above 450 ft<sup>3</sup>/s; maximum gage height, 5.80 ft, June 8, 1979; minimum discharge, 0.60 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 10	2000	*337	4.38	June 10	2145	*337	*4.39
May 30	0345	305	4.24	July 18	1930	215	3.82

Minimum discharge, 6.4 ft<sup>3</sup>/s, Jan. 2.

DISCHARGE, IN 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	23	23	16	19	12	14	23	142	277	147	65	37
2	23	22	10	10	11	15	27	149	271	148	73	40
3	25	21	16	11	12	15	33	167	264	140	71	37
4	32	20	13	11	12	14	35	211	256	134	75	36
5	30	20	14	11	12	14	37	262	253	131	72	32
6	30	19	16	12	12	13	41	286	230	128	65	30
7	28	19	21	15	12	12	50	283	235	125	60	29
8	24	19	17	19	13	13	59	287	270	120	58	27
9	22	19	14	18	13	14	67	289	300	117	59	27
10	22	16	14	13	14	15	70	319	311	115	54	26
11	21	18	15	12	13	22	72	304	322	109	52	27
12	23	17	15	12	14	14	74	275	320	104	51	38
13	26	17	16	11	14	17	76	266	311	102	50	31
14	28	15	18	12	14	18	83	238	294	99	48	32
15	27	14	19	13	15	19	97	213	284	107	48	32
16	24	14	18	13	16	17	110	200	282	111	47	33
17	27	15	17	12	16	19	120	200	275	103	47	31
18	29	14	17	12	15	20	141	201	261	123	47	37
19	26	13	16	13	14	18	139	202	248	115	46	47
20	27	14	16	13	16	17	126	193	234	102	47	45
21	27	14	14	11	15	17	114	191	228	99	46	51
22	28	15	15	13	15	16	108	205	220	92	41	48
23	26	14	19	15	15	17	95	204	211	87	38	46
24	26	15	19	16	13	20	86	207	198	84	40	43
25	26	15	19	15	14	20	83	219	219	80	41	36
26	23	15	28	15	14	20	90	241	208	79	37	35
27	25	14	19	15	14	17	94	267	183	77	35	34
28	24	12	40	13	14	17	114	283	169	73	35	36
29	24	13	23	13	---	19	128	287	159	77	36	37
30	23	14	18	13	---	18	132	292	151	73	42	35
31	22	---	20	13	---	19	---	287	---	66	40	---
TOTAL	791	490	552	414	384	520	2524	7370	7444	3267	1566	1075
MEAN	25.5	16.3	17.8	13.4	13.7	16.8	84.1	238	248	105	50.5	35.8
MAX	32	23	40	19	16	22	141	319	322	148	75	51
MIN	21	12	10	10	11	12	23	142	151	66	35	26
AC-FT	1570	972	1090	821	762	1030	5010	14620	14770	6480	3110	2130
(†)	785	478	680	514	606	485	507	545	477	330	519	391
GAL YR 1984	TOTAL	18112.9		MEAN	49.5	MAX	377	MIN	7.0	AC-FT	35930	
WTR YR 1985	TOTAL	26397		MEAN	72.3	MAX	322	MIN	10	AC-FT	52360	

(†) BYPASS FLOW, IN ACRE-FEET, THROUGH TAILING PIPELINES, RECORDS PROVIDED BY MOLYCORP

08265000 RED RIVER NEAR QUESTA, NM -- Continued

## WATER-QUALITY RECORDS

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)
JAN 16...	1000	8.8	350	--	6.9	--	.0	--
JUN 12...	1000	332	155	--	7.4	--	7.0	--
JUL 12...	1400	93	225	--	8.2	--	14.0	--
20...	1905	108	420	355	4.7	4.6	12.0	130

DATE	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CACO3) (99430)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
JAN 16...	--	--	--	--	1.0	<.01	--	--
JUN 12...	--	--	30	--	4.3	<.01	215	193
JUL 12...	44	.000	--	--	1.3	--	19	4.8
20...	--	--	0	<20	--	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01090)
JAN 16...	1000	2	44	200	1700	4	4	370	340
JUN 12...	1000	0	27	35	280	1	2	190	46
JUL 12...	1400	0	16	11	<1	2	2	120	11
20...	1905	--	320	32	860	100	<1	670	260

## 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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Water-discharge 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.--42 years, 10.3 ft<sup>3</sup>/s, 7,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 204 ft<sup>3</sup>/s, June 2, 1983, gage height, 4.82 ft; minimum, 0.44 ft<sup>3</sup>/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, 147 ft<sup>3</sup>/s, May 10, gage height, 4.27 ft; minimum, 2.3 ft<sup>3</sup>/s, Jan. 2, result of freezeup.

DISCHARGE, IN 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	7.2	7.9	6.7	7.7	3.5	5.9	7.9	50	101	14	13	12
2	7.1	7.9	7.2	3.6	4.9	6.0	8.2	55	92	12	13	12
3	7.4	8.1	6.8	5.1	5.0	6.0	8.1	60	83	11	13	12
4	8.7	8.1	7.1	6.7	5.9	5.3	8.5	83	79	10	13	12
5	9.6	8.0	6.8	7.1	6.6	5.1	10	100	74	11	13	11
6	9.3	8.1	6.3	7.3	6.8	6.1	12	117	63	12	13	11
7	8.7	8.4	6.8	7.1	6.6	6.0	15	121	62	12	13	11
8	8.4	8.5	6.5	7.0	6.4	6.0	19	126	67	12	13	11
9	8.2	8.6	6.2	7.5	6.2	6.2	22	121	71	12	13	11
10	8.0	7.7	6.2	7.4	6.1	6.6	23	134	68	12	12	10
11	8.0	7.8	6.5	6.9	6.2	7.1	26	134	65	12	12	10
12	8.0	7.7	6.9	6.5	5.9	6.4	27	130	64	12	12	11
13	8.3	7.7	7.0	5.2	5.8	5.8	27	121	60	12	13	10
14	8.4	7.8	7.0	5.9	5.8	6.5	30	106	53	12	14	9.9
15	8.8	7.8	7.1	6.4	5.8	7.3	35	94	47	12	14	10
16	7.8	7.7	7.0	7.2	5.9	7.3	41	87	40	13	13	11
17	6.5	7.7	6.9	6.2	5.9	6.7	45	85	37	12	11	10
18	6.5	7.5	6.8	7.0	5.9	7.2	48	82	34	13	12	11
19	6.5	7.4	6.7	6.8	5.9	7.5	49	82	33	13	14	13
20	6.5	7.4	6.9	6.7	6.1	7.6	45	73	29	13	13	13
21	6.5	7.0	6.1	6.5	5.9	7.5	42	70	26	14	13	13
22	6.5	7.0	4.1	6.5	5.9	7.4	40	69	24	13	13	13
23	6.6	7.4	4.8	6.3	5.9	6.6	37	73	22	12	13	13
24	6.7	7.2	5.2	6.3	5.3	7.4	35	78	21	12	14	13
25	6.7	7.2	6.2	6.2	5.7	8.1	35	84	21	13	14	12
26	6.9	6.7	7.2	6.2	6.0	8.8	35	91	20	12	14	12
27	7.2	5.5	7.6	6.2	5.8	8.5	34	102	18	12	13	12
28	7.3	6.4	9.1	6.1	6.0	8.4	37	108	15	13	13	11
29	7.4	7.5	8.3	6.0	---	8.0	40	111	14	14	12	11
30	7.6	7.1	8.0	5.9	---	7.0	42	107	15	14	12	11
31	7.8	---	7.9	4.4	---	7.2	---	103	---	13	12	---
TOTAL	235.1	226.8	209.9	197.9	163.7	213.5	883.7	2957	1418	384	400	342.9
MEAN	7.58	7.56	6.77	6.38	5.85	6.89	29.5	95.4	47.3	12.4	12.9	11.4
MAX	9.6	8.6	9.1	7.7	6.8	8.8	49	134	101	14	14	13
MIN	6.5	5.5	4.1	3.6	3.5	5.1	7.9	50	14	10	11	9.9
AC-FT	466	450	416	393	325	423	1750	5870	2810	762	793	680
(+)	0	---	---	---	---	---	---	320	1060	657	469	11
CAL YR 1984 TOTAL	5790.1			MEAN	15.8	MAX	147	MIN	4.1	AC-FT	11480	
WTR YR 1985 TOTAL	7632.5			MEAN	20.9	MAX	134	MIN	3.5	AC-FT	15140	

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

## RIO GRANDE BASIN

08266500 RED RIVER BELOW QUESTA, NM

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°41'34", long 105°36'42", in SW¼NE¼ sec. 1, T. 28N., R. 12E., Taos County, Hydrologic Unit 13020101, at bridge on State Highway 3, 1.3 mi southwest of Questa.

DRAINAGE AREA.--160 mi<sup>2</sup>.

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)
JAN 16...	1300	E30	285	7.5	1.0	--	--
MAR 29...	1400	E38	332	7.7	2.0	--	--
JUL 14...	1045	109	232	8.2	11.0	--	72
AUG 20...	1730	E57	280	8.1	13.5	7.6	40

DATE	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (T/DAY) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (T/DAY) (80155)
JAN 16...	--	--	.90	<.01	35	--
MAR 29...	--	39	1.3	<.01	244	--
JUL 14...	.000	--	1.3	--	12	3.5
AUG 20...	.000	--	4.2	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
JAN 16...	1300	0	25	13	770	4	2	170	140
MAR 29...	1400	--	32	4	1100	4	4	250	160
JUL 14...	1045	0	16	10	450	4	3	110	96
AUG 20...	1730	0	20	<3	510	12	5	110	51



08266790 RED RIVER ABOVE STATE FISH HATCHERY, NEAR QUESTA, NM

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°41'12", long 105°38'40", in SE¼SE¼ sec. 3, T.28N., R.12E., Taos County, Hydrologic Unit 130020101, 0.5 mi upstream from Red River State Fish Hatchery and 3.0 mi southwest of Questa.

DRAINAGE AREA.--175 mi<sup>2</sup>.

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
JAN 15...	1430	E34	395	8.0	3.0	--	--	--	.80	<.01	37
JUL 12...	1520	75	258	8.2	16.0	<10	50	.000	1.8	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
JAN 15...	1430	0	14	6	520	90	96	100	69
JUL 12...	1520	0	12	<3	390	22	26	100	37

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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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: May 19-22 and June 22-27. Water-discharge records good. Diversions for irrigation of about 3,000 acres upstream from station.

AVERAGE DISCHARGE.--7 years, 90.5 ft<sup>3</sup>/s, 65,570 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 755 ft<sup>3</sup>/s, June 8, 1979, gage height, 5.30 ft, site and datum then in use; minimum, 24 ft<sup>3</sup>/s, Feb. 7, 1982 and Jan. 19, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 165 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 19	0215	253	3.24	June 11	0330	426	3.83
May 10	2245	*540	*4.18	July 18	2100	243	3.11
May 30	0730	435	3.86				

Minimum discharge, 28 ft<sup>3</sup>/s, Feb. 2.

DISCHARGE, IN 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	50	51	42	50	34	46	62	239	398	186	92	62
2	50	49	43	35	32	43	62	265	374	188	98	64
3	52	48	41	32	33	43	64	277	355	181	97	64
4	58	48	43	35	36	41	67	331	344	173	101	64
5	57	49	45	38	36	44	70	392	343	171	99	63
6	56	51	40	37	36	48	77	443	317	169	94	60
7	55	52	40	40	35	47	90	445	317	165	91	59
8	51	50	44	46	41	49	115	441	349	160	88	58
9	50	51	45	50	44	48	142	453	388	156	89	57
10	49	47	44	50	44	47	150	489	404	154	86	58
11	49	48	45	48	40	53	160	486	413	148	84	60
12	50	48	45	45	37	56	159	439	408	143	83	67
13	53	49	47	38	39	48	152	432	401	141	81	62
14	54	49	53	38	39	50	164	393	377	139	78	61
15	54	47	55	39	40	51	177	359	348	143	77	62
16	53	47	51	41	47	53	189	335	345	148	77	62
17	53	48	47	39	50	51	194	331	337	143	77	61
18	55	47	46	41	47	53	198	324	317	158	78	63
19	54	45	50	41	47	59	229	322	303	155	76	72
20	54	45	52	41	51	60	193	310	276	139	77	72
21	54	43	46	40	47	58	176	299	270	136	76	80
22	55	44	35	45	47	58	164	303	266	129	71	75
23	54	46	35	47	46	57	155	301	260	124	69	74
24	52	47	36	46	41	59	145	308	254	118	68	71
25	52	47	37	47	45	60	141	322	259	108	68	66
26	50	44	41	47	46	62	145	351	254	105	62	64
27	50	37	45	47	46	60	151	386	230	99	61	63
28	50	37	69	43	45	66	160	397	214	96	61	65
29	50	43	56	41	---	64	180	411	203	101	60	66
30	50	42	50	39	---	57	188	417	193	99	62	64
31	50	---	50	36	---	58	---	408	---	94	63	---
TOTAL	1624	1399	1418	1302	1171	1649	4319	11409	9517	4369	2444	1939
MEAN	52.4	46.6	45.7	42.0	41.8	53.2	144	368	317	141	78.8	64.6
MAX	58	52	69	50	51	66	229	489	413	188	101	80
MIN	49	37	35	32	32	41	62	239	193	94	60	57
AC-FT	3220	2770	2810	2580	2320	3270	8570	22630	18880	8670	4850	3850
CAL YR 1984	TOTAL	31646		MEAN	86.5	MAX	566	MIN	26	AC-FT	62770	
WTR YR 1985	TOTAL	42560		MEAN	117	MAX	489	MIN	32	AC-FT	84420	

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

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.

REMARKS.--Replaces station 08266800 Red River at Fish Hatchery near Questa, NM. Samples collected at this location (08266820) since July 1974, but published under 08266800 until 1978 calendar year.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)
JAN 15...	1530	52	350	--	8.1	--	7.0	--
MAR 29...	1100	61	485	--	7.3	--	7.0	--
JUN 12...	1530	404	170	--	7.9	--	16.0	--
JUL 12...	1000	134	265	--	8.3	--	11.0	--
JUL 20...	2045	138	358	346	7.3	6.7	12.0	360
AUG 20...	1430	77	315	--	8.4	--	16.0	--

DATE	TIME	OXYGEN, DIS- SOLVED (MG/L) (00300)	BICAR- BONATE IT-FLD (MG/L) AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L) AS CO3) (99445)	ALKA- LINITY FIELD (MG/L) AS CACO3) (00410)	CARBON, ORGANIC TOTAL (MG/L) AS C) (00680)	CYANIDE TOTAL (MG/L) AS CN) (00720)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
JAN 15...	--	--	--	--	--	1.4	<.01	38	5.3
MAR 29...	--	--	--	--	58	7.2	<.01	27	4.4
JUN 12...	--	--	--	--	--	3.2	<.01	285	311
JUL 12...	--	--	--	--	--	1.3	--	27	9.8
JUL 20...	--	--	--	--	18	--	--	--	--
AUG 20...	8.4	71	--	.000	--	6.2	<.01	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L) AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU) (01042)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L) AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L) AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L) AS ZN) (01090)
JAN 15...	1530	0	9	10	300	59	60	60	31
MAR 29...	1100	0	12	6	470	96	110	110	47
JUN 12...	1530	0	18	34	180	11	12	70	25
JUL 12...	1000	0	13	9	370	22	26	80	75
JUL 20...	2045	--	90	42	530	64	13	440	36
AUG 20...	1430	0	13	6	250	42	41	80	19

## RIO GRANDE BASIN

08267000 RED RIVER AT MOUTH, NEAR QUESTA, NM

## WATER-QUALITY RECORDS

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

DRAINAGE AREA.--190 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1966-69, 1979 to current year.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	ALKA- LITY FIELD (MG/L AS CAC03) (00410)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 09...	1000	61	328	8.6	10.0	11.0	74	.70	<.01	28	4.6

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, TOTAL DIS- SOLVED (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 09...	1000	0	<1	5	240	61	<1	70	15

08267400 RIO GRANDE ABOVE RIO HONDO AT DUNN BRIDGE, NM

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°32'06", long 105°42'30", in NW¼ sec. 31, T.27N., R.12E., Taos County, Hydrologic Unit 13020101, at Dunn Bridge on county road, 50 ft upstream from mouth of Arroyo Hondo, 2.2 mi west of Arroyo Hondo, 11.6 mi northwest of Taos, and at mile 1,677.4.

DRAINAGE AREA.--Undetermined.

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)
OCT 09...	1830	287	280	8.8	15.0	7.6	--
JAN 15...	1700	468	200	8.3	2.0	10.4	--
MAR 28...	1500	884	240	8.1	8.0	--	--
JUN 12...	1445	6330	185	8.0	18.0	--	--
JUL 13...	1600	676	342	8.8	20.0	--	80
JUL 19...	0900	--	--	--	--	--	--
AUG 20...	1230	322	500	7.5	18.0	8.1	115

DATE	TIME	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)	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 09...	--	--	89	2.2	--	25	19	--
JAN 15...	--	--	--	1.9	<.01	--	--	--
MAR 28...	--	--	--	3.8	--	86	205	--
JUN 12...	--	--	--	16	--	169	2890	--
JUL 13...	.000	--	--	5.7	--	41	75	--
JUL 19...	--	--	--	--	--	1390	--	15
AUG 20...	.000	--	--	--	--	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 09...	1830	0	<1	9	26	13	<1	20	13
JAN 15...	1700	0	3	27	13	7	4	<10	4
MAR 28...	1500	0	7	49	12	7	7	20	<3
JUN 12...	1445	0	7	200	15	<1	2	80	23
JUL 13...	1600	0	4	26	30	4	4	10	11
JUL 19...	0900	--	--	--	--	--	--	--	--
AUG 20...	1230	0	4	4	29	8	12	20	15

## RIO GRANDE BASIN

08267500 RIO HONDO NEAR VALDEZ, NM

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

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

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

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

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

REMARKS.--No estimated daily discharges. Records good. No diversions upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--51 years, 34.9 ft<sup>3</sup>/s, 25,280 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 541 ft<sup>3</sup>/s, May 13, 1941; maximum gage height, 4.81 ft, Jan. 5, 1970 (ice jam); minimum discharge, about 1 ft<sup>3</sup>/s, Jan. 27, 1942, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than peak discharge of 80 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 18	2130	105	2.47	June 10	0145	*330	*3.44
May 10	1945	272	3.21				

Minimum discharge, 6.0 ft<sup>3</sup>/s, Feb. 2.

DISCHARGE, IN 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	15	19	14	14	8.4	14	19	88	219	96	45	24
2	15	19	13	8.4	6.0	16	19	101	216	93	47	25
3	16	19	12	9.0	7.4	16	22	122	219	92	45	23
4	21	19	13	11	7.8	15	28	145	218	89	45	24
5	22	18	13	11	7.2	14	30	171	210	86	43	23
6	21	17	11	12	7.6	14	35	192	195	82	41	22
7	20	17	13	12	7.4	13	41	192	219	78	40	22
8	18	17	12	12	7.8	13	51	199	267	75	40	21
9	18	17	12	12	8.9	13	62	210	298	72	40	21
10	17	15	12	11	8.7	14	67	247	308	72	38	20
11	17	16	13	11	8.2	17	71	249	295	68	37	21
12	18	16	14	10	8.7	20	71	213	292	65	36	25
13	18	16	14	8.6	8.4	19	69	182	289	64	35	21
14	18	16	14	9.8	8.3	18	71	143	269	62	34	20
15	18	15	13	10	8.7	18	78	126	270	61	33	20
16	18	15	13	10	9.3	18	86	123	257	60	32	21
17	19	16	13	10	10	17	93	125	235	58	31	20
18	19	15	13	11	11	18	97	131	212	63	30	25
19	19	15	13	10	12	20	98	132	183	60	30	31
20	19	14	13	10	13	19	84	125	165	57	29	29
21	19	14	13	11	13	19	75	124	156	55	29	33
22	18	14	11	11	12	18	69	123	142	53	28	28
23	18	14	9.0	11	12	19	60	126	135	55	28	26
24	18	14	9.6	11	12	19	55	128	133	52	27	23
25	19	14	10	11	12	22	55	143	152	51	27	23
26	19	13	12	11	11	26	58	175	142	49	26	23
27	19	12	12	11	12	25	59	203	130	47	26	22
28	19	13	19	11	13	23	70	222	123	46	25	23
29	19	15	16	11	---	21	77	233	112	49	25	25
30	20	14	14	11	---	20	79	240	101	46	24	24
31	19	---	14	9.2	---	21	---	232	---	44	24	---
TOTAL	573	468	397.6	332.0	271.8	559	1849	5165	6162	2000	1040	708
MEAN	18.5	15.6	12.8	10.7	9.71	18.0	61.6	167	205	64.5	33.5	23.6
MAX	22	19	19	14	13	26	98	249	308	96	47	33
MIN	15	12	9.0	8.4	6.0	13	19	88	101	44	24	20
AC-FT	1140	928	789	659	539	1110	3670	10240	12220	3970	2060	1400
CAL YR 1984	TOTAL	14050.6		MEAN	38.4	MAX	259	MIN	9.0	AC-FT	27870	
WTR YR 1985	TOTAL	19525.4		MEAN	53.5	MAX	308	MIN	6.0	AC-FT	38730	

## 08268500 ARROYO HONDO AT ARROYO HONDO, NM

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

DRAINAGE AREA.--65.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--No estimated daily discharges. Water-discharge records good. Diversions upstream from station for irrigation of about 2,500 acres, of which about 1,700 acres is a transbasin diversion to Rio Lucero.

AVERAGE DISCHARGE.--69 years (water years 1913-28, 1933-85), 27.2 ft<sup>3</sup>/s, 19,710 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 18	2245	87	3.09	June 11	0930	*169	*3.56
May 10	2100	157	3.51				

Minimum discharge, 6.6 ft<sup>3</sup>/s, Sept. 16.

DISCHARGE, IN 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	12	26	25	23	14	26	25	77	130	81	19	11
2	12	26	25	15	12	26	25	82	126	76	20	12
3	13	25	25	16	17	25	25	90	126	66	18	11
4	14	25	27	21	20	24	29	114	124	59	18	13
5	13	25	27	20	17	24	32	132	127	56	18	12
6	12	25	26	20	19	24	35	136	120	51	19	11
7	12	24	27	22	19	23	40	136	123	48	19	11
8	12	24	27	22	21	23	47	139	132	47	19	11
9	12	24	27	21	23	23	55	137	143	45	18	11
10	12	24	26	20	23	24	60	146	151	45	18	11
11	12	24	27	19	20	26	61	143	153	45	18	12
12	13	24	26	18	22	35	60	129	150	43	17	12
13	13	24	26	16	23	30	58	123	149	41	16	11
14	13	24	25	16	23	29	57	108	143	39	16	10
15	14	24	26	16	24	28	61	92	136	36	16	11
16	13	24	25	18	24	29	67	88	135	29	16	11
17	14	25	24	15	26	27	73	92	130	29	15	11
18	14	24	24	17	26	27	79	98	119	28	15	15
19	14	23	24	17	26	28	81	102	116	25	15	13
20	22	23	24	17	28	27	72	96	112	24	15	17
21	26	22	24	17	27	27	65	91	110	23	15	14
22	26	22	19	19	27	25	61	88	107	21	14	12
23	25	22	20	19	25	24	54	87	103	24	14	12
24	27	23	21	19	24	24	51	89	102	22	13	12
25	27	24	23	19	24	27	51	96	114	21	13	11
26	27	25	25	19	24	29	53	109	106	21	13	11
27	27	24	23	20	24	29	53	121	99	20	13	11
28	26	27	30	19	25	27	61	127	94	20	12	11
29	25	27	26	19	---	26	71	133	90	21	12	11
30	25	25	24	19	---	26	72	137	86	20	12	11
31	26	---	23	17	---	25	---	138	---	20	11	---
TOTAL	553	728	771	575	627	817	1634	3476	3656	1146	487	353
MEAN	17.8	24.3	24.9	18.5	22.4	26.4	54.5	112	122	37.0	15.7	11.8
MAX	27	27	30	23	28	35	81	146	153	81	20	17
MIN	12	22	19	15	12	23	25	77	86	20	11	10
AC-FT	1100	1440	1530	1140	1240	1620	3240	6890	7250	2270	966	700
CAL YR 1984	TOTAL	11322.8		MEAN	30.9	MAX	208	MIN	9.8	AC-FT	22460	
WTR YR 1985	TOTAL	14823		MEAN	40.6	MAX	153	MIN	10	AC-FT	29400	

## 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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.--No estimated daily discharges. 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.--22 years, 643 ft<sup>3</sup>/s, 465,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,940 ft<sup>3</sup>/s, June 14, 1985, gage height, 8.08 ft; minimum, 136 ft<sup>3</sup>/s, Aug. 2, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 20	2215	4,310	6.02	June 1	1315	5,190	6.72
May 13	1315	6,350	7.62	June 14	0645	*6,940	8.08

Minimum discharge, 199 ft<sup>3</sup>/s, Sept. 10.

DISCHARGE, IN 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	251	360	498	641	482	653	794	2910	5120	2830	771	221
2	253	358	489	590	457	662	889	2880	4960	2510	925	220
3	269	369	486	511	480	674	903	3110	4690	2250	834	220
4	316	396	525	505	461	653	921	3200	4370	1960	820	233
5	324	594	518	489	438	644	980	3840	4190	1580	851	220
6	339	676	521	479	425	684	1220	4520	4220	1380	866	213
7	335	719	535	492	428	678	1440	5070	4320	1410	798	211
8	327	740	491	535	450	673	1640	5480	4430	1350	689	204
9	308	770	509	545	466	707	1960	5820	4620	1130	610	201
10	297	798	536	526	486	772	2200	6040	5020	1020	569	201
11	292	794	615	509	471	771	2260	6100	5550	929	530	206
12	294	770	620	541	451	1030	2420	6170	6090	902	492	219
13	314	749	629	540	487	1280	2690	6260	6580	837	470	215
14	326	760	610	501	490	1160	3020	6120	6840	753	459	214
15	323	795	524	501	492	1050	3220	5620	6540	699	425	221
16	327	785	557	512	515	1030	3490	4860	6200	678	403	250
17	339	765	508	489	546	987	3760	4130	5840	658	376	298
18	352	755	438	480	571	948	3890	3530	5480	627	361	287
19	369	725	539	490	583	925	4180	3550	5300	660	336	289
20	369	745	598	493	638	923	4290	3770	5200	600	326	355
21	363	720	581	502	639	905	4150	3950	5050	572	312	356
22	366	685	490	529	628	880	3800	3920	4880	552	295	332
23	359	640	504	560	623	858	3630	3790	4800	558	281	582
24	369	629	476	558	582	847	3380	3620	4750	592	276	560
25	381	657	460	559	607	811	3050	3310	4710	667	274	502
26	388	626	452	552	622	787	2860	3310	4550	720	253	414
27	399	635	463	564	623	805	2720	3480	4430	678	244	349
28	427	484	550	556	630	887	2830	3710	4280	631	236	319
29	414	452	571	544	---	908	2950	4170	3990	590	228	350
30	398	503	581	525	---	855	3050	4540	3390	568	225	394
31	378	---	608	507	---	811	---	5020	---	599	223	---
TOTAL	10566	19454	16482	16325	14771	26258	78587	135800	150390	31490	14758	8856
MEAN	341	648	532	527	528	847	2620	4381	5013	1016	476	295
MAX	427	798	629	641	639	1280	4290	6260	6840	2830	925	582
MIN	251	358	438	479	425	644	794	2880	3390	552	223	201
AC-FT	20960	38590	32690	32380	29300	52080	155900	269400	298300	62460	29270	17570
CAL YR 1984	TOTAL	294649		MEAN	805	MAX	3880	MIN	251	AC-FT	584400	
WTR YR 1985	TOTAL	523737		MEAN	1435	MAX	6840	MIN	201	AC-FT	1039000	



## 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 mi<sup>2</sup>.

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: Nov. 21 to Dec. 13. Records good except for estimated daily discharges, which are fair. No diversions upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--40 years (water years 1911-16, 1941-51, 1963-85), 29.8 ft<sup>3</sup>/s, 21,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft<sup>3</sup>/s, May 26, 1979, gage height, 3.42 ft, from rating curve extended above 370 ft<sup>3</sup>/s; maximum gage height, 3.90 ft, from floodmark, May 14, 1941, site and datum then in use; minimum discharge, about 0.9 ft<sup>3</sup>/s, Jan. 9, 1964, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 11	2300	63	1.27	May 30	0300	207	1.91
Apr. 18	2330	260	2.15	June 10	0230	189	1.84
May 4	2400	*453	*2.55	July 2	0145	63	1.28

Minimum daily discharge, 6.6 ft<sup>3</sup>/s, Feb. 11.

DISCHARGE, IN 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	12	19	13	11	8.0	13	27	241	183	46	24	13
2	12	19	13	11	6.8	14	28	267	171	50	27	13
3	12	19	14	9.2	7.1	14	36	286	164	44	24	13
4	20	17	14	13	7.6	12	56	375	156	42	26	13
5	19	16	9.8	14	8.0	14	66	415	148	41	24	13
6	16	16	10	13	7.8	13	74	406	130	40	23	12
7	15	16	12	11	7.7	12	88	373	136	39	23	12
8	14	15	11	9.8	7.6	11	111	338	156	36	22	11
9	12	15	10	9.7	7.4	11	138	333	178	35	21	11
10	12	12	10	9.3	7.2	16	151	362	181	36	20	11
11	12	14	10	8.8	6.6	52	164	335	174	34	22	12
12	13	13	10	8.2	7.0	54	165	268	162	32	20	17
13	14	13	10	7.6	7.6	45	164	239	150	31	18	13
14	13	13	10	8.4	7.0	34	173	192	137	31	18	12
15	14	13	10	9.0	7.6	31	190	168	122	35	18	12
16	13	12	9.8	8.5	8.0	28	207	160	116	33	17	12
17	15	13	10	8.4	9.0	24	215	160	112	32	16	12
18	17	12	9.8	8.3	9.9	25	235	164	104	30	16	14
19	15	10	9.7	8.2	9.9	30	230	164	95	30	16	20
20	15	12	9.8	8.1	10	28	177	157	88	32	15	17
21	15	11	9.3	7.9	11	27	143	149	83	32	16	22
22	14	12	11	7.9	10	27	118	153	79	29	15	17
23	14	12	10	7.9	9.9	26	94	144	74	29	14	15
24	14	12	8.4	8.2	9.2	28	88	138	72	28	14	14
25	14	11	8.8	8.4	10	35	88	147	79	29	16	13
26	14	10	9.0	8.2	9.8	45	96	166	70	28	14	13
27	16	9.4	9.1	8.4	10	42	102	189	64	25	14	13
28	15	10	17	8.4	12	38	140	195	58	24	14	13
29	15	11	16	8.2	---	36	209	197	54	30	13	15
30	16	12	12	8.4	---	32	219	197	49	27	14	13
31	17	---	11	8.9	---	30	---	192	---	24	14	---
TOTAL	449	399.4	337.5	285.3	239.7	847	3992	7270	3545	1034	568	411
MEAN	14.5	13.3	10.9	9.20	8.56	27.3	133	235	118	33.4	18.3	13.7
MAX	20	19	17	14	12	54	235	415	183	50	27	22
MIN	12	9.4	8.4	7.6	6.6	11	27	138	49	24	13	11
AC-FT	891	792	669	566	475	1680	7920	14420	7030	2050	1130	815
CAL YR 1984	TOTAL	15997.6		MEAN	43.7	MAX	465	MIN	8.4	AC-FT	31730	
WTR YR 1985	TOTAL	19377.9		MEAN	53.1	MAX	415	MIN	6.6	AC-FT	38440	

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 mi<sup>2</sup>.

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

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

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

REMARKS.--No estimated daily discharges. Records good. No diversions upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years (water years 1911-15, 1934-51, 1963-85), 22.0 ft<sup>3</sup>/s, 15,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 310 ft<sup>3</sup>/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 ft<sup>3</sup>/s, Nov. 2, 1951, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 10	2315	149	1.95	June 25	0100	123	1.92
June 9	2130	*180	*2.09				

Minimum discharge, 4.5 ft<sup>3</sup>/s, Feb. 2.

DISCHARGE, IN 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	9.6	12	8.2	7.3	5.6	8.4	9.4	45	126	57	28	12
2	9.5	12	8.6	6.8	5.2	8.8	9.7	49	131	55	28	12
3	10	13	8.6	6.6	5.2	8.7	12	63	130	52	28	12
4	13	13	8.4	7.0	5.4	8.4	16	93	119	50	27	12
5	14	12	7.9	8.0	5.6	8.7	18	109	116	48	27	12
6	12	12	8.8	9.6	5.7	7.6	21	123	105	47	26	12
7	12	12	9.7	8.6	5.5	7.3	26	116	120	45	25	12
8	12	12	9.3	6.9	5.6	7.2	31	117	143	42	25	11
9	12	11	8.0	6.8	5.5	7.4	35	119	155	40	23	11
10	12	11	7.9	6.5	5.5	8.1	36	133	145	40	22	11
11	12	11	8.0	6.5	5.2	9.8	37	131	162	38	22	12
12	13	10	7.9	6.4	5.2	12	37	111	139	36	21	14
13	13	10	8.1	6.4	5.8	12	37	94	143	34	20	11
14	13	10	7.9	6.4	5.7	12	39	72	147	33	19	10
15	13	9.6	7.9	6.4	5.9	12	45	64	143	34	19	10
16	12	9.6	7.8	6.4	6.2	11	52	64	139	32	18	11
17	13	9.7	7.7	6.2	6.7	11	54	65	138	31	17	10
18	12	9.3	7.6	6.2	7.1	11	54	70	124	31	17	13
19	11	9.5	7.5	6.2	7.2	13	51	70	118	30	16	15
20	12	9.2	7.3	6.2	7.5	12	43	65	112	30	16	15
21	12	9.7	6.8	6.1	7.5	12	36	61	113	30	16	17
22	11	10	6.6	6.0	7.3	11	32	60	109	29	16	15
23	11	9.2	6.4	6.0	7.2	11	28	61	98	30	15	14
24	11	9.0	6.4	6.0	6.9	11	27	66	93	28	15	13
25	11	8.2	6.8	6.0	7.1	13	27	83	112	30	15	12
26	11	8.0	7.2	5.9	7.1	14	27	104	97	29	14	12
27	11	7.4	7.1	6.0	7.3	14	29	113	78	27	14	12
28	11	7.4	9.4	6.0	7.9	13	35	119	69	27	14	12
29	11	7.8	8.0	5.8	---	12	42	135	64	30	14	12
30	11	8.2	7.5	6.0	---	12	43	134	59	28	13	12
31	12	---	7.5	6.1	---	10	---	127	---	26	12	---
TOTAL	363.1	302.8	242.8	203.3	175.6	329.4	989.1	2836	3547	1119	602	369
MEAN	11.7	10.1	7.83	6.56	6.27	10.6	33.0	91.5	118	36.1	19.4	12.3
MAX	14	13	9.7	9.6	7.9	14	54	135	162	57	28	17
MIN	9.5	7.4	6.4	5.8	5.2	7.2	9.4	45	59	26	12	10
AC-FT	720	601	482	403	348	653	1960	5630	7040	2220	1190	732
CAL YR 1984	TOTAL	9330.3		MEAN	25.5	MAX	218	MIN	5.9	AC-FT	18510	
WTR YR 1985	TOTAL	11079.1		MEAN	30.4	MAX	162	MIN	5.2	AC-FT	21980	

## 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 mi<sup>2</sup>.

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

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

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

REMARKS.--No estimated daily discharges. 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.--28 years, 59.9 ft<sup>3</sup>/s, 43,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,380 ft<sup>3</sup>/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 ft<sup>3</sup>/s; minimum, 1.9 ft<sup>3</sup>/s, July 31, Aug. 1, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 12	0645	260	5.82	May 10	2315	*1,150	*7.04
Apr. 18	2400	542	6.31	June 25	0830	243	5.75

Minimum daily discharge, 22 ft<sup>3</sup>/s, Aug. 27 and Sept. 1-6.

DISCHARGE, IN 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	24	45	39	54	43	58	105	503	474	98	38	22
2	23	44	42	49	38	59	102	526	440	96	46	22
3	23	45	39	45	38	58	106	575	405	89	41	22
4	33	44	42	42	40	51	132	674	380	75	41	23
5	31	44	42	48	43	46	150	816	406	66	44	22
6	28	44	38	52	44	53	174	913	375	62	42	22
7	28	43	38	52	45	49	201	914	359	60	41	23
8	28	40	40	53	45	47	241	889	379	57	39	24
9	27	39	43	52	45	46	271	908	403	51	40	23
10	27	36	40	53	46	49	278	1010	407	51	38	23
11	27	36	43	49	46	81	307	1040	401	51	44	25
12	29	39	49	50	52	193	309	877	386	49	41	32
13	34	39	49	44	56	146	286	831	362	41	38	28
14	28	41	48	49	53	134	311	641	335	37	37	26
15	32	39	50	50	59	126	379	537	307	42	34	25
16	37	40	47	44	69	132	397	492	300	51	34	28
17	41	44	45	39	90	106	439	461	288	48	29	27
18	52	44	48	45	70	104	471	492	265	39	27	34
19	40	43	47	43	65	110	485	499	248	39	28	39
20	43	43	48	43	69	104	412	484	239	37	28	48
21	44	40	45	41	63	107	353	451	222	39	28	49
22	43	41	37	41	63	95	334	476	206	34	27	37
23	41	44	40	43	58	86	302	472	197	33	27	36
24	42	48	44	45	52	85	274	456	184	37	24	33
25	51	49	45	49	53	90	258	468	215	38	25	33
26	47	42	46	48	54	106	289	496	197	38	23	33
27	46	36	46	52	54	107	311	524	170	37	22	33
28	45	37	94	50	58	100	335	533	147	37	25	33
29	43	43	75	50	---	103	530	528	126	42	26	33
30	43	41	60	47	---	94	496	522	111	40	25	32
31	43	---	57	45	---	96	---	497	---	37	23	---
TOTAL	1123	1253	1466	1467	1511	2821	9038	19505	8934	1551	1025	890
MEAN	36.2	41.8	47.3	47.3	54.0	91.0	301	629	298	50.0	33.1	29.7
MAX	52	49	94	54	90	193	530	1040	474	98	46	49
MIN	23	36	37	39	38	46	102	451	111	33	22	22
AC-FT	2230	2490	2910	2910	3000	5600	17930	38690	17720	3080	2030	1770
CAL YR 1984	TOTAL	49637		MEAN	136	MAX	1350	MIN	18	AC-FT	98450	
WTR YR 1985	TOTAL	50584		MEAN	139	MAX	1040	MIN	22	AC-FT	100300	

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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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: July 27-31. 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.--60 years, 742 ft<sup>3</sup>/s, 537,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft<sup>3</sup>/s, June 7, 1948, gage height, 9.18 ft, and June 22, 1949, gage height, 9.23 ft; minimum, 155 ft<sup>3</sup>/s, Sept. 21, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1888, about 14,000 ft<sup>3</sup>/s June 19, 1903, from records for Rio Grande at Embudo and estimated inflow. Other floods exceeding 10,000 ft<sup>3</sup>/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 1600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 10	0530	4,740	7.28	June 1	0215	6,070	7.97
May 11	0800	7,560	8.67	June 14	0945	*7,710	*8.69

Minimum discharge, 245 ft<sup>3</sup>/s, Sept. 11.

DISCHARGE, IN 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	291	401	578	729	534	714	871	3280	5910	3660	736	274
2	291	396	563	687	506	729	933	3200	5690	3310	959	276
3	300	402	555	612	555	740	967	3500	5340	2990	861	275
4	345	427	598	597	536	716	1010	3610	4850	2680	869	288
5	367	574	601	590	504	687	1070	4290	4630	2310	920	278
6	371	688	612	576	492	737	1320	5240	4590	1950	926	267
7	372	739	619	583	491	722	1610	6280	4600	1700	884	263
8	363	761	580	620	518	716	1850	6770	4740	1600	780	259
9	349	784	601	645	543	744	2240	7040	4970	1450	707	254
10	334	820	631	625	564	795	2600	7280	5420	1270	649	252
11	329	819	702	606	541	825	2850	7360	6030	1120	625	256
12	330	809	730	616	526	1170	2950	7230	6680	1010	582	276
13	351	782	723	612	559	1380	3090	7200	7180	948	547	268
14	358	791	717	580	564	1350	3420	6920	7510	874	539	266
15	360	823	631	573	579	1190	3650	6260	7120	811	502	267
16	370	825	651	603	644	1160	3870	5300	6690	763	476	293
17	379	817	609	562	757	1090	4110	4350	6280	721	448	320
18	408	810	521	565	800	1040	4270	3840	5830	694	424	325
19	404	779	621	566	731	1010	4590	3770	5580	676	404	336
20	410	799	691	570	772	1000	4650	3840	5440	658	390	384
21	401	783	694	570	770	979	4510	4060	5270	637	380	427
22	408	750	579	585	716	939	4210	4170	4990	610	365	366
23	398	709	581	620	711	910	3930	4090	4900	579	351	565
24	405	692	569	627	652	900	3630	3950	4840	571	338	603
25	423	715	552	632	673	874	3260	3820	4830	574	340	586
26	428	708	551	627	703	856	3080	3780	4670	602	320	517
27	428	701	549	639	691	859	2930	3850	4490	598	305	450
28	454	552	679	631	695	931	3020	4070	4360	595	300	409
29	449	545	687	623	---	975	3360	4420	4120	593	295	420
30	437	571	687	599	---	926	3370	4850	3890	591	286	471
31	416	---	700	582	---	863	---	5720	---	584	280	---
TOTAL	11729	20772	19362	18852	17327	28527	87221	153340	161440	37729	16788	10491
MEAN	378	692	625	608	619	920	2907	4946	5381	1217	542	350
MAX	454	825	730	729	800	1380	4650	7360	7510	3660	959	603
MIN	291	396	521	562	491	687	871	3200	3890	571	280	252
AC-FT	23260	41200	38400	37390	34370	56580	173000	304100	320200	74840	33300	20810

GAL YR 1984	TOTAL	344940	MEAN	942	MAX	4920	MIN	290	AC-FT	684200
WTR YR 1985	TOTAL	583578	MEAN	1599	MAX	7510	MIN	252	AC-FT	1158000

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

## WATER-QUALITY RECORDS

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV 19...	1115	1130	246	252	7.6	8.4	5.0	4.5	7.2	11.8
JAN 08...	1045	650	280	268	7.2	8.2	4.0	3.0	3.3	--
MAR 28...	1030	901	290	279	7.6	8.3	13.0	7.0	--	9.9
MAY 29...	1100	4540	190	186	7.9	8.2	35.0	14.5	28	8.7
JUL 19...	1145	867	365	377	8.0	7.7	--	18.0	360	--
AUG 05...	1430	1090	345	--	8.4	--	32.0	20.0	15	8.6
SEP 17...	1030	346	400	398	8.5	8.4	27.0	16.0	4.0	8.8

DATE	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (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 IT-FLD (MG/L AS HC03) (99440)	CAR- BONATE IT-FLD (MG/L AS C03) (99445)
NOV 19...	13	93	11	28	5.5	14	.7	2.8	100	.000
JAN 08...	--	--	--	--	--	--	--	--	--	--
MAR 28...	16	110	18	33	6.2	18	.8	2.9	110	.000
MAY 29...	42	74	9	23	4.0	10	.5	1.8	79	.000
JUL 19...	--	--	--	--	--	--	--	--	--	--
AUG 05...	13	--	--	--	--	--	--	--	--	--
SEP 17...	<10	140	22	40	8.9	29	1	3.9	130	5.0

DATE	ALKA- LITY FIELD (MG/L AS CAC03) (00410)	ALKA- LITY, CARBON- ATE IT-FLD (MG/L - CAC03) (99430)	SULFATE DIS- SOLVED (MG/L AS S04) (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...	--	85	28	4.2	.40	25	160	.20	.22	.050
JAN 08...	--	--	--	--	--	--	--	.40	.40	.040
MAR 28...	--	94	36	6.1	.40	26	180	.30	.30	.050
MAY 29...	65	65	24	2.6	.20	17	120	<.10	<.10	.060
JUL 19...	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	<.10	<.10	.020
SEP 17...	120	120	65	8.8	.70	25	260	.10	.11	.020

## RIO GRANDE BASIN

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

## WATER-QUALITY RECORDS

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOSPHATE, SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)	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)
NOV 19...	.55	.80	.110	.070	1.5	--	29	88	53
JAN 08...	.16	.60	.080	.060	--	<.01	15	26	--
MAR 28...	.75	1.1	.170	.080	4.2	<.01	54	131	93
MAY 29...	.24	--	.080	.030	5.8	<.01	201	2460	45
JUL 19...	--	--	--	--	--	--	1360	3180	100
AUG 05...	.68	--	.210	.100	4.7	<.01	39	115	84
SEP 17...	.58	.70	.070	.020	2.2	<.01	12	11	99

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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 19...	1115	1	1	30	1	<1	<10	30	8	4	41
JAN 08...	1045	--	--	--	--	--	--	--	--	--	--
MAR 28...	1030	--	--	30	--	--	--	--	--	--	60
MAY 29...	1100	--	--	20	--	--	--	--	--	--	32
JUL 19...	1145	--	--	--	--	--	--	--	130	--	10
AUG 05...	1430	--	--	--	--	--	--	--	--	--	--
SEP 17...	1030	4	4	70	2	<1	<10	<10	4	4	6

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	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)
NOV 19...	7	2	--	<.1	<.1	--	--	<1	<1	20	14
JAN 08...	--	--	--	--	--	--	89	--	--	--	--
MAR 28...	--	--	--	--	--	--	5	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
JUL 19...	--	--	52	--	--	67	10	--	--	440	16
AUG 05...	--	--	--	--	--	--	5	--	--	--	--
SEP 17...	<1	<1	--	--	.1	--	10	<1	<1	120	18

## CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)
NOV 19...	1115	7.0	19	190	3	<1	10

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

## WATER-QUALITY RECORDS

## CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	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 AS HG) (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)
NOV 19...	20	19	5800	10	200	<.10	40

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90) (80060)	RADIUM 226, DIS- SOLVED (PCI/L METHOD (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 19...	1115	5.0	.7	4.8	.8	4.1	.7	.05	1.7

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
SEP 17...	1030	<.1	<.010	<.1	<.010	<.010	<.010	<.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)
SEP 17...	<.010	<.010	<.010	<.01	<.010	<.010	<.010	<.01	<.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 TOTAL (UG/L) (39786)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
SEP 17...	<.01	<.01	<.01	<.1	<.01	.1	<.10	<.01

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JAN 08...	1045	3	23
MAR 28...	1030	22	10
MAY 29...	1100	62	100
AUG 30...	1430	40	50
SEP 17...	1030	23	8

## 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 mi<sup>2</sup>.

## 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: Aug. 7 to Sept. 5. Water-discharge records good. Diversions upstream from station for irrigation of about 6,500 acres, a small part of which are downstream from gage.

AVERAGE DISCHARGE.--54 years (water years 1924-25, 1927-55, 1963-85), 80.4 ft<sup>3</sup>/s, 58,250 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1941).--Maximum discharge, 4,200 ft<sup>3</sup>/s, Aug. 29, 1977, gage height, 7.10 ft, from rating curve extended above 1,600 ft<sup>3</sup>/s; maximum gage height, 7.6 ft, Aug. 4, 1967; minimum discharge, 0.06 ft<sup>3</sup>/s, June 26, 27, 1950.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 28	2145	880	4.33	June 5	0215	*1,210	*4.75
May 10	0445	1,110	4.66				

Minimum discharge, 18 ft<sup>3</sup>/s, Jan. 3.

DISCHARGE, IN 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	23	60	37	42	34	49	125	565	740	150	77	29
2	24	57	44	27	36	50	142	590	696	135	87	29
3	32	59	38	42	34	54	177	589	643	123	79	29
4	44	57	46	48	38	42	217	654	640	110	96	28
5	46	55	45	49	41	43	237	808	1020	104	88	28
6	44	55	37	47	39	53	259	927	881	94	72	29
7	45	55	39	51	40	48	286	914	834	91	72	28
8	44	54	47	54	38	45	327	876	841	92	70	27
9	42	54	50	51	39	48	386	954	873	90	68	27
10	39	43	45	49	40	56	411	1050	862	91	66	26
11	36	45	47	43	35	110	421	946	842	92	67	26
12	37	51	49	40	38	247	421	791	788	89	63	31
13	67	48	47	37	39	194	401	709	747	88	59	34
14	55	48	46	39	38	180	396	574	713	88	56	34
15	54	46	47	44	39	169	430	480	667	83	52	35
16	56	44	40	45	42	151	464	452	635	82	48	35
17	55	50	34	39	47	130	446	454	602	78	47	37
18	69	46	48	42	50	127	492	461	553	76	46	64
19	59	43	47	41	49	129	535	489	507	78	45	71
20	62	45	52	41	60	125	455	505	475	78	45	79
21	65	38	45	38	54	126	396	563	423	80	42	111
22	63	41	31	39	50	127	372	607	388	78	40	73
23	64	45	33	42	47	117	313	599	346	76	38	67
24	64	45	37	42	41	114	277	588	325	77	38	63
25	66	45	42	41	42	118	268	603	407	77	36	60
26	62	33	61	41	44	131	303	639	331	86	33	56
27	61	27	50	43	44	142	348	706	283	77	32	55
28	61	31	115	41	51	145	529	718	247	75	31	55
29	59	45	65	39	---	156	753	710	205	82	31	55
30	58	40	44	37	---	132	620	679	184	82	30	54
31	58	---	44	35	---	129	---	681	---	78	30	---
TOTAL	1614	1405	1452	1309	1189	3487	11207	20881	17698	2780	1684	1375
MEAN	52.1	46.8	46.8	42.2	42.5	112	374	674	590	89.7	54.3	45.8
MAX	69	60	115	54	60	247	753	1050	1020	150	96	111
MIN	23	27	31	27	34	42	125	452	184	75	30	26
AC-FT	3200	2790	2880	2600	2360	6920	22230	41420	35100	5510	3340	2730
CAL YR 1984	TOTAL	52243		MEAN	143	MAX	1350	MIN	13	AC-FT	103600	
WTR YR 1985	TOTAL	66081		MEAN	181	MAX	1050	MIN	23	AC-FT	131100	



08279000 EMBUDO CREEK AT DIXON, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 19...	1340	40	348	358	8.0	8.4	10.5	7.5	10.2	170	10	55
JAN 18...	1400	37	250	--	--	--	6.0	5.0	10.0	--	--	--
APR 02...	0900	130	--	440	8.5	8.3	12.5	4.0	10.8	230	86	68
MAY 29...	1430	700	160	154	7.8	8.3	30.0	12.0	8.5	49	0	16
JUL 30...	1445	84	385	366	8.1	8.4	30.0	20.0	8.2	180	17	60
SEP 23...	1100	71	390	--	8.2	--	20.0	12.0	9.2	--	--	--

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)	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)	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 19...	6.9	7.7	.3	1.2	21	4.5	.30	12	200	4	.43	81
JAN 18...	--	--	--	--	--	--	--	--	--	--	--	--
APR 02...	15	8.3	.2	1.0	77	3.9	.30	8.4	270	--	--	--
MAY 29...	2.1	1.7	.1	.70	12	1.3	.10	12	82	--	--	--
JUL 30...	6.9	7.6	.3	1.4	23	3.6	.30	14	210	22	5.0	30
SEP 23...	--	--	--	--	--	--	--	--	--	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 19...	1340	20	4
APR 02...	0900	30	26
MAY 29...	1430	<10	49
JUL 30...	1445	20	8

## RIO GRANDE BASIN

08279500 RIO GRANDE AT EMBUDO, NM

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

DRAINAGE AREA.--10,400 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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.--No estimated daily discharges. Records good. Diversions upstream from station for irrigation 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 at station.

AVERAGE DISCHARGE.--41 years (water years 1890-1930), 1,238 ft<sup>3</sup>/s, 896,900 acre-ft/yr.  
55 years (water years 1931-85), 807 ft<sup>3</sup>/s, 584,700 acre-ft/yr, subsequent to upstream development.

EXTREMES FOR PERIOD OF RECORD (1889-1903 AND SINCE 1911).--Maximum discharge, 16,200 ft<sup>3</sup>/s, June 19, 1903, gage height, about 15.9 ft; minimum daily, 130 ft<sup>3</sup>/s, June 30, 1902. A flood of about 14,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 20	0415	5,080	8.65	June 14	1130	8,160	11.38
May 11	0600	*8,420	*11.60				

Minimum discharge, 291 ft<sup>3</sup>/s, Sept. 9, 10.

DISCHARGE, IN 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	328	472	611	764	578	787	1070	4100	6320	3330	807	327
2	329	462	603	719	553	798	1110	3980	6150	3020	1070	323
3	346	464	588	646	600	818	1200	4360	5840	2760	985	324
4	390	486	642	619	594	787	1300	4490	5480	2480	1000	328
5	427	580	635	628	555	745	1360	5200	5590	2060	1040	339
6	424	725	643	609	543	803	1600	6120	5440	1750	1030	321
7	431	778	639	618	530	792	1950	6810	5400	1660	991	311
8	419	810	627	655	551	779	2220	7310	5520	1700	881	305
9	406	827	644	682	576	812	2610	7800	5720	1410	799	299
10	387	850	667	661	606	857	2970	8250	6040	1250	736	295
11	379	859	729	640	580	945	3210	8320	6550	1160	738	302
12	381	860	777	629	570	1420	3310	8150	7110	1100	683	330
13	429	826	759	642	590	1620	3430	8090	7640	1060	637	326
14	424	828	767	614	599	1640	3690	7740	8070	952	626	318
15	430	854	689	601	612	1440	3940	7070	7750	898	594	314
16	439	863	675	645	668	1380	4200	6210	7280	900	561	337
17	439	864	646	599	782	1300	4490	5350	6860	876	532	376
18	490	850	566	603	911	1260	4680	4740	6420	823	504	436
19	472	816	640	604	835	1220	5000	4610	6050	860	483	453
20	480	834	702	606	905	1190	5000	4760	5890	798	465	493
21	482	818	724	608	926	1170	4830	4940	5620	766	454	607
22	484	789	612	623	813	1130	4490	5060	5380	724	429	494
23	475	757	593	660	800	1090	4250	4950	5220	707	408	607
24	478	733	599	676	730	1080	3980	4800	5130	731	392	692
25	495	756	587	674	724	1070	3650	4600	5130	763	391	684
26	500	749	603	666	746	1080	3510	4560	4960	888	379	616
27	497	716	590	676	741	1080	3470	4760	4760	830	360	550
28	516	598	800	671	762	1130	3670	4960	4600	779	354	503
29	518	593	760	665	---	1190	4260	5260	4330	747	350	500
30	504	604	734	641	---	1130	4190	5570	3880	714	340	544
31	485	---	731	627	---	1050	---	6040	---	698	334	---
TOTAL	13684	22021	20582	19971	18980	33593	98640	178960	176130	39194	19353	12654
MEAN	441	734	664	644	678	1084	3288	5773	5871	1264	624	422
MAX	518	864	800	764	926	1640	5000	8320	8070	3330	1070	692
MIN	328	462	566	599	530	745	1070	3980	3880	698	334	295
AC-FT	27140	43680	40820	39610	37650	66630	195700	355000	349400	77740	38390	25100
CAL YR 1984 TOTAL		391518		MEAN	1070	MAX	5840	MIN	325	AC-FT	776600	
WTR YR 1985 TOTAL		653762		MEAN	1791	MAX	8320	MIN	295	AC-FT	1297000	

## 08281100 RIO GRANDE ABOVE SAN JUAN PUEBLO, NM

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

DRAINAGE AREA.--10,550 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

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

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

REMARKS.--No estimated daily discharges. Records good. Diversions upstream from station for irrigation of about 620,000 acres in Colorado and 42,000 acres in New Mexico. Several observations of water temperature were made during the year. San Juan lateral (station 08280100 - discontinued, Sept. 1984) and San Juan Pueblo ditch (station 08280200), both on left bank, and Guique ditch (station 08280700), on right bank, bypass gage for irrigation of several hundred acres downstream from station. See tabulation below for monthly diversion, as provided by U.S. Bureau of Reclamation.

AVERAGE DISCHARGE.--22 years, 782 ft<sup>3</sup>/s, 566,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,220 ft<sup>3</sup>/s, June 9, 1979, gage height, 6.94 ft; minimum, 92 ft<sup>3</sup>/s, Aug. 10-11, 1977.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 10	1415	*7,600	*6.55	June 14	1000	7,250	6.33

Minimum discharge, 193 ft<sup>3</sup>/s, Sept. 9.

DISCHARGE, IN 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	273	491	604	737	550	801	1220	4060	5610	2740	750	221
2	267	479	585	704	480	813	1240	3930	5500	2470	1010	220
3	291	469	572	635	522	835	1350	4300	5150	2270	972	236
4	358	486	620	592	544	812	1430	4400	4780	2040	960	237
5	430	554	633	593	534	761	1500	5080	4960	1750	977	257
6	422	742	609	568	513	823	1690	5970	4820	1500	949	240
7	436	800	607	575	502	824	1990	6600	4790	1410	931	220
8	422	829	598	614	519	804	2200	6870	4880	1460	838	209
9	399	840	611	651	529	839	2510	7140	5090	1240	756	203
10	375	860	635	629	566	878	2830	7470	5420	1110	796	201
11	358	876	684	603	540	966	3050	7470	5880	1030	715	230
12	357	877	760	582	523	1400	3140	7150	6380	957	662	252
13	415	841	739	603	537	1600	3260	7000	6870	929	610	259
14	421	832	755	592	561	1670	3510	6650	7170	838	595	238
15	439	852	676	578	570	1490	3740	6080	6930	790	564	236
16	462	866	632	596	613	1420	4020	5280	6430	795	521	255
17	445	868	609	551	725	1370	4310	4420	6060	782	491	302
18	503	853	549	544	922	1330	4560	3770	5610	733	461	405
19	508	827	577	544	842	1310	4920	3570	5220	758	419	435
20	511	835	678	548	892	1290	4980	3720	5090	742	375	485
21	518	831	706	548	957	1270	4850	3940	4830	714	386	566
22	522	801	598	557	824	1240	4530	4090	4590	677	353	457
23	520	770	545	597	816	1200	4260	4020	4450	655	328	509
24	517	742	595	621	749	1180	4030	3910	4380	653	305	652
25	533	759	543	617	733	1180	3690	3770	4400	666	294	680
26	541	760	545	613	751	1200	3550	3780	4250	787	283	628
27	529	704	546	619	748	1200	3530	3930	4020	778	266	564
28	546	630	731	620	765	1240	3640	4140	3860	742	273	510
29	560	570	743	613	---	1320	4280	4460	3610	729	290	489
30	537	583	709	589	---	1280	4180	4800	3220	725	251	526
31	515	---	710	575	---	1200	---	5270	---	702	227	---
TOTAL	13930	22227	19704	18608	18327	35546	97990	157040	154250	34172	17608	10922
MEAN	449	741	636	600	655	1147	3266	5066	5142	1102	568	364
MAX	560	877	760	737	957	1670	4980	7470	7170	2740	1010	680
MIN	267	469	543	544	480	761	1220	3570	3220	653	227	201
AC-FT	27630	44090	39080	36910	36350	70510	194400	311500	306000	67780	34930	21660
(+)	140	0	0	0	0	0	0	112	360	310	240	243
(++)	264	0	0	0	0	0	5	465	488	198	411	492
CAL YR 1984 TOTAL	392275			MEAN	1072	MAX	5730	MIN	227	AC-FT	778100	
WTR YR 1985 TOTAL	600324			MEAN	1645	MAX	7470	MIN	201	AC-FT	1191000	

(+) ESTIMATED DIVERSION, IN ACRE-FEET, BY SAN JUAN PUEBLO DITCH

(++) ESTIMATED DIVERSION, IN ACRE-FEET, BY GUIQUE DITCH

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

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

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

REMARKS.--Estimated daily discharges: Nov. 28 to Dec. 11, Dec. 22 to Feb. 27, and Mar. 10-20. 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.--30 years, 345 ft<sup>3</sup>/s; 250,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s, May 28, 1979, gage height, 6.35 ft, from rating curve extended above 5,400 ft<sup>3</sup>/s; maximum gage height, 6.46 ft, May 14, 1984; minimum, 4.0 ft<sup>3</sup>/s, Sept. 19, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of about 9,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 15	2345	3,780	5.17	May 17	2345	5,110	5.55
May 9	0030	*10,700	*6.49	May 26	2345	6,000	5.73

Minimum discharge, 34 ft<sup>3</sup>/s, Dec. 6.

DISCHARGE, IN 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	60	176	103	77	56	138	342	1810	2720	360	195	46
2	101	175	100	80	46	139	399	2080	2540	336	381	54
3	155	181	102	74	43	133	600	2660	2390	343	355	68
4	216	173	100	54	45	114	859	3720	2120	310	343	63
5	266	160	85	48	48	114	979	5520	1960	288	244	61
6	186	162	70	60	50	128	1140	6450	1810	281	197	57
7	142	154	66	79	54	120	1320	5600	1860	255	175	52
8	122	155	60	52	60	122	1500	7050	1900	249	162	52
9	111	146	58	45	66	146	1620	6910	1970	247	159	52
10	105	104	67	48	70	282	1620	7720	1760	274	145	50
11	100	126	77	79	82	815	1810	6650	1650	230	185	59
12	103	132	88	67	75	1880	1990	4860	1470	207	195	144
13	133	130	87	57	77	1070	2140	3640	1360	197	161	94
14	136	134	86	46	79	703	2550	2720	1220	182	136	71
15	141	115	86	52	82	611	2990	2500	1160	183	126	66
16	120	112	80	61	86	500	3000	3020	1120	211	119	99
17	130	129	82	55	90	437	2920	3640	1030	185	107	88
18	145	113	77	54	94	411	3180	4230	942	194	100	83
19	150	105	77	55	82	453	2990	4040	870	194	90	262
20	162	96	84	56	82	410	2230	3620	779	174	85	245
21	162	90	70	56	80	435	1890	3320	728	164	93	408
22	161	96	77	56	80	471	1590	3190	684	171	86	306
23	162	107	85	59	78	407	1340	3430	641	158	78	235
24	163	112	92	59	76	436	1340	3750	612	144	72	172
25	156	107	100	60	80	593	1320	4210	901	152	72	144
26	152	89	103	52	92	679	1200	4720	723	160	67	129
27	171	91	100	48	102	501	1150	4420	555	145	66	119
28	156	95	103	51	133	429	1400	4180	483	139	64	120
29	153	112	101	54	---	437	1960	3880	435	343	64	235
30	164	100	92	60	---	353	1790	3350	396	340	65	166
31	173	---	85	73	---	336	---	3140	---	231	49	---
TOTAL	4557	3777	2643	1827	2088	13803	51159	130030	38789	7047	4436	3800
MEAN	147	126	85.3	58.9	74.6	445	1705	4195	1293	227	143	127
MAX	266	181	103	80	133	1880	3180	7720	2720	360	381	408
MIN	60	89	58	45	43	114	342	1810	396	139	49	46
AC-FT	9040	7490	5240	3620	4140	27380	101500	257900	76940	13980	8800	7540
CAL YR 1984	TOTAL	178551		MEAN	488	MAX	7420	MIN	40	AC-FT	354200	
WTR YR 1985	TOTAL	263956		MEAN	723	MAX	7720	MIN	43	AC-FT	523600	

## 08284160 AZOTEA TUNNEL AT OUTLET, NEAR CHAMA, NM

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

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

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

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

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

AVERAGE DISCHARGE.--15 years, 138 ft<sup>3</sup>/s, 99,980 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,052 ft<sup>3</sup>/s, May 4, gage height, 7.34 ft; no flow many days.

DISCHARGE, IN 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	10	.00	.00	.00	.00	.00	22	680	401	44	.00	.00
2	.00	.00	.00	.00	.00	.00	86	755	412	51	.00	.00
3	.00	.00	.00	.00	.00	.00	140	916	414	59	.00	.00
4	.00	.00	.00	.00	.00	.00	198	966	388	57	.00	.00
5	.00	.00	.00	.00	.00	.00	300	962	328	57	.00	.00
6	.00	.00	.00	.00	.00	.00	480	890	267	56	.00	.00
7	.00	.00	.00	.00	.00	.00	605	987	135	51	.00	.00
8	.00	.00	.00	.00	.00	.00	730	1000	45	49	.00	.00
9	.00	.00	.00	.00	.00	.00	780	1010	48	48	.00	.00
10	.00	.00	.00	.00	.00	.00	800	1010	45	48	.00	.00
11	.00	.00	.00	.00	.00	.00	846	1010	38	48	.00	.00
12	.00	.00	.00	.00	.00	.00	874	905	30	43	8.0	.00
13	.00	.00	.00	.00	.00	.00	908	806	26	38	9.8	.00
14	.00	.00	.00	.00	.00	.00	920	676	24	37	.00	.00
15	.00	.00	.00	.00	.00	.00	962	630	23	35	.00	.00
16	.00	.00	.00	.00	.00	.00	958	615	22	24	.00	.00
17	.00	.00	.00	.00	.00	.00	875	510	31	17	.00	.00
18	.00	.00	.00	.00	.00	.00	992	424	42	17	.00	.00
19	.00	.00	.00	.00	.00	.00	977	484	38	17	.00	.00
20	.00	.00	.00	.00	.00	.00	842	413	33	16	.00	.00
21	.00	.00	.00	.00	.00	.00	726	403	34	16	.00	.00
22	.00	.00	.00	.00	.00	.00	616	373	36	19	.00	.00
23	.00	.00	.00	.00	.00	.00	550	534	34	42	.00	.00
24	.00	.00	.00	.00	.00	.00	563	621	43	83	.00	.00
25	.00	.00	.00	.00	.00	.00	562	756	57	141	.00	.00
26	.00	.00	.00	.00	.00	.00	493	856	49	93	.00	.00
27	.00	.00	.00	.00	.00	.00	460	979	47	42	.00	.00
28	.00	.00	.00	.00	.00	.00	515	979	47	43	.00	.00
29	.00	.00	.00	.00	---	.00	612	725	47	26	.00	.00
30	.00	.00	.00	.00	---	.00	612	422	46	.33	.00	.00
31	.00	---	.00	.00	---	.00	---	412	---	.00	.00	---
TOTAL	10.00	.00	.00	.00	.00	.00	19004	22703	3230	1317.33	17.80	.00
MEAN	.32	.00	.00	.00	.00	.00	633	732	108	42.5	.57	.00
MAX	10	.00	.00	.00	.00	.00	992	1010	414	141	9.8	.00
MIN	.00	.00	.00	.00	.00	.00	22	373	22	.00	.00	.00
AC-FT	20	.00	.00	.00	.00	.00	37690	45030	6410	2610	35	.00
CAL YR 1984	TOTAL	57282.30		MEAN	157	MAX	1010	MIN	.00	AC-FT	113630	
WTR YR 1985	TOTAL	46282.13		MEAN	127	MAX	1010	MIN	.00	AC-FT	91800	

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

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

DRAINAGE AREA.--112 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Concrete control since June 6, 1963. Datum of gage is 7,196.29 ft above National Geodetic Vertical Datum of 1929 (levels by 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 ft<sup>3</sup>/s, 7,610 acre-ft/yr, prior to completion of Azotea tunnel.  
15 years (water years 1971-85), 152 ft<sup>3</sup>/s, 110,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,610 ft<sup>3</sup>/s, Mar. 12, 1985, gage height, 6.65 ft; no flow at times most years prior to 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,610 ft<sup>3</sup>/s, Mar. 12, gage height, 6.65 ft; minimum daily, 0.05 ft<sup>3</sup>/s, Sept. 1, 2.

DISCHARGE, IN 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	8.7	12	.72	8.2	2.2	46	239	834	371	46	2.5	.05
2	7.0	9.5	.67	5.1	2.2	60	265	879	393	49	18	.05
3	2.2	10	.56	4.6	2.4	32	371	1040	393	60	19	.08
4	13	4.1	.63	6.6	2.8	16	425	1070	375	60	7.8	.11
5	18	3.2	.72	3.7	2.5	15	462	1070	332	60	4.0	.11
6	4.1	2.5	.63	3.6	2.2	23	608	975	290	59	2.4	.09
7	2.1	2.3	.59	3.1	1.8	16	721	1090	176	55	1.8	.10
8	1.0	2.1	.63	3.1	1.8	17	829	1100	45	51	1.4	.10
9	.76	2.1	.88	3.1	1.8	113	912	1100	48	51	.90	.10
10	.72	1.7	.96	2.9	2.0	392	901	1090	48	49	.76	.07
11	.56	1.5	1.7	2.6	1.8	779	929	1070	43	48	.52	.08
12	.40	1.5	2.5	2.5	1.8	1170	958	907	34	43	.89	.16
13	.38	1.6	2.6	2.6	1.7	384	986	857	29	34	13	.12
14	.96	1.5	2.6	2.0	1.8	249	868	721	27	34	2.5	.10
15	1.4	1.4	2.6	1.9	1.8	214	1030	648	24	36	.76	.12
16	1.8	1.2	1.8	2.1	2.2	210	1020	664	23	24	.42	.40
17	2.4	1.2	1.8	2.0	3.4	176	890	563	21	13	.29	.32
18	19	1.4	1.4	1.8	32	210	1040	429	38	34	.22	.29
19	15	1.3	1.8	1.8	24	195	1060	504	40	28	.18	.52
20	9.0	1.1	1.8	1.8	38	155	924	429	36	15	.13	3.1
21	9.5	.96	1.4	1.7	40	195	818	416	34	13	.16	19
22	7.4	.88	.96	1.8	25	176	769	375	36	13	.19	4.1
23	13	.80	.80	1.8	20	120	628	533	36	33	.13	2.2
24	24	1.0	.59	1.8	18	191	653	538	34	68	.10	1.4
25	25	1.4	.45	2.2	18	286	653	711	55	144	.08	.76
26	24	1.5	.63	2.6	19	226	578	824	66	100	.07	.52
27	27	.96	1.1	2.9	22	113	533	924	53	43	.06	.40
28	17	.80	5.0	2.5	32	123	726	929	48	51	.06	.32
29	17	.96	32	2.5	---	134	705	705	49	55	.06	.32
30	16	.76	12	2.5	---	96	846	402	49	7.4	.06	.40
31	14	---	9.5	2.2	---	91	---	389	---	3.2	.06	---
TOTAL	302.38	73.22	92.02	89.6	324.2	6223	22552	23786	3246	1379.6	78.50	35.49
MEAN	9.75	2.44	2.97	2.89	11.6	201	752	767	108	44.5	2.53	1.18
MAX	27	12	32	8.2	40	1170	1060	1100	393	144	19	19
MIN	.38	.76	.45	1.7	1.7	15	239	375	21	3.2	.06	.05
AC-FT	600	145	183	178	643	12340	44730	47180	6440	2740	156	70
CAL YR 1984	TOTAL	63906.72		MEAN	175	MAX	1030	MIN	.38	AC-FT	126800	
WTR YR 1985	TOTAL	58182.01		MEAN	159	MAX	1170	MIN	.05	AC-FT	115400	

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

LOCATION.--Lat 36°42'24", long 106°44'42", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on right bank 3.7 mi northwest of Heron Dam, 7.8 mi downstream from Horse Lake, and 9.9 mi west of Los Ojos.

DRAINAGE AREA.--45 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October and November 1962 (monthly discharge only), December 1962 to current year. 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.--Diversions 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 ft<sup>3</sup>/s, 797 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 213 ft<sup>3</sup>/s, Mar. 12, gage height, 3.26 ft; no flow many days.

DISCHARGE, IN 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	.08	1.9				26	33	36	8.1	5.8	4.0	3.0
2	.14	1.8				12	30	30	7.1	5.4	11	3.4
3	1.2	1.5				7.6	30	20	7.0	4.8	12	3.9
4	7.2	1.4				6.3	33	18	7.1	4.8	6.7	3.8
5	4.7	1.4				6.3	33	14	7.9	5.3	4.8	3.5
6	1.7	1.3				6.3	33	13	7.7	5.1	3.8	3.1
7	1.2	1.3				5.5	26	12	7.1	5.2	4.0	3.1
8	.68	1.4				7.5	22	11	6.6	5.0	3.6	3.1
9	.51	1.2				34	21	11	6.6	5.1	3.7	3.0
10	.39	1.3				82	19	11	6.6	5.1	3.6	2.9
11	.39	1.2				130	15	10	6.4	4.8	3.6	3.5
12	.54	1.1				174	13	10	6.4	4.5	3.6	4.3
13	1.0	1.1				95	11	11	6.4	4.5	3.6	3.3
14	1.1	1.1				51	10	11	6.4	4.8	3.6	3.0
15	1.2	1.1				38	9.8	10	6.4	5.4	3.2	3.1
16	1.3	.96				56	9.2	9.8	6.2	1.3	3.2	4.7
17	2.0	1.0				35	9.0	10	6.3	5.7	3.0	3.7
18	8.8	1.2				30	10	9.8	6.6	11	2.9	3.7
19	7.3	1.3				31	15	11	6.9	11	2.9	7.1
20	4.2	1.2				23	11	10	6.5	6.3	3.0	6.4
21	4.8	.96				28	12	11	6.2	5.7	3.2	9.2
22	4.0	.88				25	43	11	5.9	5.7	3.1	4.5
23	6.3	.92				19	19	10	5.9	6.2	2.9	4.0
24	6.6	1.2				25	15	9.0	5.9	5.0	2.9	3.7
25	6.6	1.4				36	13	8.7	7.5	4.5	2.9	3.5
26	7.3	1.2				30	13	8.1	6.6	4.5	3.1	3.7
27	7.2	.96				21	15	7.6	6.0	4.5	2.9	3.6
28	5.2	.80				21	71	7.3	5.7	4.8	3.0	4.1
29	4.9	.76				23	130	7.3	5.4	11	3.1	4.3
30	3.1	.72				19	71	7.2	5.4	8.7	3.2	3.3
31	2.0	---				17	---	7.7	---	6.3	3.0	---
TOTAL	103.63	35.56				1120.5	795.0	373.5	196.8	177.8	123.1	119.5
MEAN	3.34	1.19				36.1	26.5	12.0	6.56	5.74	3.97	3.98
MAX	8.8	1.9				174	130	36	8.1	11	12	9.2
MIN	.08	.72				5.5	9.0	7.2	5.4	1.3	2.9	2.9
AC-FT	206	71				2220	1580	741	390	353	244	237

## 08284510 HERON RESERVOIR NEAR LOS OJOS, NM

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

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

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

GAGE.--Water-stage recorder. 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, 401,600 acre-ft, Aug. 2, elevation, 7,186.14 ft; minimum, 317,100 acre-ft, Apr. 4, 5, elevation, 7,170.88 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 (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	385600	385800	374600	362600	346600	333300	318400	355800	397100	400500	401400	398800
2	385700	385700	374200	362400	346100	332700	318400	356000	397800	400700	401600	398800
3	385800	385500	373800	362000	345700	332000	317800	357400	398500	400700	401500	398800
4	386000	385300	373300	361600	345000	331300	317100	359300	399200	400800	401400	398800
5	386000	385100	372900	361000	344400	330700	317100	361200	399800	400800	401100	398700
6	385900	384900	372400	360400	343900	329300	318000	362800	400300	400800	401000	398600
7	385800	384600	372000	359800	343200	327500	318900	364700	400700	400900	400900	398400
8	385800	384400	371500	359600	342700	325700	320500	366900	400700	400900	400700	398300
9	385700	384100	371100	359000	342300	324100	322200	368900	400800	400800	400700	398200
10	385500	383700	370700	358500	341800	323600	323600	370900	400800	400900	400500	398100
11	385400	383400	370300	358100	341300	323800	325300	372800	400700	401000	400600	398200
12	385500	383100	369900	357600	340800	323700	327000	374500	400700	401000	400400	398100
13	385400	382600	369700	357200	340400	320800	328800	376000	400700	401000	400400	398000
14	385400	382200	369300	356700	339800	319000	330500	377400	400700	401000	400300	398000
15	385400	381500	369000	356000	339300	318400	332200	378600	400700	401100	400200	398000
16	385300	381100	368500	355500	338700	318600	334200	379900	400700	401100	400100	398000
17	386000	380700	368100	354700	338100	318300	335700	381500	400700	401200	400000	397900
18	386000	380300	367700	354200	337600	318200	337700	381600	400800	401300	400000	398100
19	386100	379900	367300	353600	337200	318100	339600	382600	401400	401300	399800	398100
20	386000	379500	366800	353000	337200	318000	341300	383600	400700	401100	399800	398400
21	386000	379100	366300	352500	337300	318100	343000	384300	400700	400800	399700	398400
22	386000	378700	365800	352000	337100	318200	334700	385100	400600	400500	399700	398300
23	386000	378300	365400	351500	336500	318200	346100	386300	400500	400400	399500	398200
24	386100	377900	364900	351000	336000	318400	346900	387300	400500	400400	399500	398000
25	386000	377500	364400	350400	335500	318700	347900	388700	400700	400600	399400	397900
26	386000	377000	363900	350000	335000	318700	348900	390300	400600	400800	399300	397800
27	386000	376500	363600	349500	334400	318200	349800	392200	400500	400800	399200	397800
28	386000	376000	363300	349000	333800	318100	351900	394000	400500	400900	399100	397800
29	386000	375600	363400	348500	---	318100	354300	395400	400400	401500	399000	397600
30	385900	375100	362800	347900	---	317900	355200	396000	400500	401500	399000	397600
31	386000	---	362600	347300	---	317900	---	396600	---	401300	398900	---
MAX	386100	385800	374600	362600	346600	333300	355200	396600	401400	401500	401600	398800
MIN	385300	375100	362600	347300	333800	317900	317100	355800	397100	400400	398900	397600
(+)	7183.47	7181.58	7179.36	7176.57	7174.07	7171.03	7178.02	7185.29	7185.96	7186.10	7185.69	7185.46
(++)	400	-10900	-12500	-154300	-13500	-15900	37300	41400	3900	800	-2400	-1300
CAL YR 1984	MAX	401300	MIN	315400	(++)	-5400						
WTR YR 1985	MAX	401600	MIN	317100	(++)	11600						

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



## 08284520 WILLOW CREEK BELOW HERON DAM, NM

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

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

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

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

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

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

AVERAGE DISCHARGE.--14 years, 119 ft<sup>3</sup>/s, 86,220 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,160 ft<sup>3</sup>/s, Mar. 12; no flow many days.

DISCHARGE, IN 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	19	32	224	63	293	391	.00	627	23	.00	19	.00
2	27	52	224	132	293	391	384	726	.00	.00	57	.00
3	27	71	224	192	293	391	728	363	.00	.00	92	.00
4	27	71	224	252	306	391	794	102	.00	.00	71	.00
5	27	82	224	314	323	391	471	102	.00	.00	24	.00
6	27	92	224	314	318	783	256	41	.00	.00	.00	.00
7	27	92	224	303	312	1030	256	.00	.00	.00	.00	.00
8	27	92	224	293	304	1020	170	.00	.00	.00	.00	.00
9	27	128	224	281	295	1020	147	.00	.00	.00	.00	.00
10	27	162	224	257	295	1020	148	.00	.00	.00	.00	.00
11	12	162	224	238	263	1170	127	.00	.00	.00	.00	.00
12	.00	162	199	217	231	2160	128	.00	.00	.00	.00	.00
13	.00	192	177	218	264	2140	128	.00	.00	.00	.00	.00
14	.00	234	203	270	295	1300	128	.00	.00	.00	.00	.00
15	.00	242	228	315	302	622	128	.00	.00	.00	.00	.00
16	.00	221	228	311	309	340	128	.00	.00	.00	.00	.00
17	.00	202	228	326	309	446	128	.00	14	11	.00	.00
18	.00	202	227	310	309	375	128	.00	25	31	.00	.00
19	16	196	227	314	263	327	52	.00	25	80	.00	.00
20	31	190	225	314	136	282	.00	.00	25	109	.00	.00
21	31	196	228	290	61	189	.00	.00	25	108	.00	.00
22	31	202	227	267	232	146	.00	.00	25	47	.00	.00
23	31	214	227	267	356	146	68	.00	25	.00	.00	.00
24	32	225	243	268	356	146	115	.00	25	.00	.00	.00
25	32	225	257	268	319	200	115	.00	24	.00	.00	.00
26	32	225	257	268	293	315	114	.00	25	.00	.00	.00
27	32	224	257	268	343	368	113	.00	25	.00	.00	.00
28	32	224	195	282	391	251	113	37	10	.00	.00	.00
29	32	224	151	293	---	247	281	70	.00	7.0	.00	.00
30	32	224	151	293	---	242	539	67	.00	46	.00	.00
31	32	---	105	294	---	77	---	64	---	36	.00	---
TOTAL	670.00	5060	6704	8292	8064	18317	5887.00	2199.00	296.00	475.00	263.00	.00
MEAN	21.6	169	216	267	288	591	196	70.9	9.87	15.3	8.48	.00
MAX	32	242	257	326	391	2160	794	726	25	109	92	.00
MIN	.00	32	105	63	61	77	.00	.00	.00	.00	.00	.00
AC-FT	1330	10040	13300	16450	15990	36330	11680	4360	587	942	522	.00
CAL YR 1984	TOTAL	66226.30		MEAN	181	MAX	1080	MIN	.00	AC-FT	131400	
WTR YR 1985	TOTAL	56227.00		MEAN	154	MAX	2160	MIN	.00	AC-FT	111500	

## 08285000 EL VADO RESERVOIR NEAR TIERRA AMARILLA, NM

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

DRAINAGE AREA.--873 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> probably is noncontributing.

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

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

REMARKS.--Reservoir is formed by rockfill dam, steel faced. Storage began in January 1935. Capacity 196,500 acre-ft between gage heights 6,759.0 ft and 6,902.0 ft, top of spillway gate. Dead storage, 1,060 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 ft<sup>3</sup>/s to about 6,000 ft<sup>3</sup>/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, 177,500 acre-ft, Sept. 29, 30, gage height, 6,896.19 ft; minimum, 124,900 acre-ft, Feb. 25, gage height, 6,877.67 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)  
(Based on survey by U.S. Bureau of Reclamation in 1966)

6,865	96,490	6,880	130,800
6,870	107,000	6,900	158,500

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124900	125200	125200	125300	125200	125300	133000	132700	138300	169800	176600	176400
2	125100	125200	125200	125100	125100	125300	133200	133100	138500	170200	177200	176400
3	125500	125300	125200	125000	125200	125200	133300	133300	138800	170700	177700	176400
4	125600	125300	125200	124900	125200	125100	133100	133700	139600	171000	177500	176400
5	125700	125300	125200	125000	125300	125000	133000	134600	140100	171400	177100	176300
6	125600	125300	125200	125100	125300	125700	132900	135100	140100	171600	177000	176200
7	125400	125300	125200	125200	125300	127000	132900	134400	140000	171900	177000	176100
8	125200	125300	125200	125400	125400	128200	133000	133400	140100	172100	177000	176100
9	125200	125300	125200	125400	125400	129500	133100	134600	140100	172300	177000	176100
10	125100	125200	125200	125400	125400	131200	133000	136800	141000	172500	177000	176100
11	125100	125200	125300	125400	125400	134000	133000	137200	143500	172700	177100	176200
12	125200	125100	125300	125200	125200	139400	133200	136900	146100	172900	177200	176300
13	125300	125100	125300	125100	125200	140700	133100	137300	148500	173000	177300	176400
14	125300	125200	125300	125000	125200	138600	133200	137500	150600	173000	177300	176400
15	125200	125300	125300	125100	125200	134800	133100	137000	152500	173100	177200	176300
16	125100	125300	125300	125100	125200	133000	132800	137100	154400	173300	177100	176300
17	125400	125400	125300	125200	125300	132900	132900	137500	156000	173400	177100	176300
18	125400	125400	125200	125200	125500	133000	133100	137200	157600	173600	177100	176400
19	125400	125400	125300	125300	125600	133200	132800	137000	159000	173800	177000	176700
20	125500	125300	125400	125300	125700	133000	132800	137000	160300	174200	177000	177000
21	125700	125200	125300	125300	125400	133000	133100	136900	161300	174400	177000	177400
22	125800	125200	125200	125300	125300	133100	133100	137100	162300	174600	177000	177400
23	125600	125200	125200	125300	125200	133000	132900	137500	163200	174700	176900	177300
24	125500	125300	125100	125300	125000	133000	132900	137100	164200	174700	176900	177100
25	125300	125300	125200	125200	124900	133200	132900	136800	165700	174800	176800	177200
26	125300	125300	125200	125200	125100	133200	132900	136800	166800	174800	176800	177200
27	125300	125300	125400	125200	125300	132900	133000	136800	167700	174800	176700	177300
28	125400	125200	125600	125100	125300	133000	133700	136900	168300	174800	176700	177300
29	125400	125300	125700	125200	---	133100	134700	136900	168900	175300	176600	177500
30	125300	125200	125700	125200	---	132900	133700	137200	169400	175800	176600	177500
31	125200	---	125400	125200	---	132900	---	138100	---	176200	176500	---
MAX	125800	125400	125700	125400	125700	140700	134700	138100	169400	176200	177700	177500
MIN	124900	125100	125100	124900	124900	125000	132800	132700	138300	169800	176500	176100
(+)	6877.78	6877.79	6877.87	6877.78	6877.81	6880.78	6881.11	6882.75	6893.61	6895.79	6895.88	6896.19
(++)	+400	0	+200	-200	+100	+7600	+800	+4400	+31300	+6800	+300	1000
CAL YR 1984	MAX	146700	MIN	124800	(++)	-7200						
WTR YR 1985	MAX	177700	MIN	124900	(++)	52300						

(+) GAGE HEIGHT, 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 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> 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 ft<sup>3</sup>/s, 324,600 acre-ft/yr, prior to completion of El Vado Dam.

35 years (water years 1936-70), 373 ft<sup>3</sup>/s, 270,200 acre-ft/yr, prior to release of transmountain water.

15 years (water years 1971-85), 461 ft<sup>3</sup>/s, 334,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft<sup>3</sup>/s, May 22, 1920, gage height, 12 ft, site and datum then in use, from rating curve extended above 3,500 ft<sup>3</sup>/s; no flow Mar. 25, 26, 31, 1955.

Maximum discharge since construction of El Vado Dam in 1935, 6,010 ft<sup>3</sup>/s, May 17, 1941, gage height, 6.89 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4 or 5, 1911, was greater than floods in September 1904 and May 1920, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,610 ft<sup>3</sup>/s, May 7, gage height, 7.08 ft; minimum daily, 41 ft<sup>3</sup>/s, Sept. 8, 9.

DISCHARGE, IN 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	65	249	310	320	406	595	314	2950	2360	156	100	64
2	47	230	311	323	412	593	572	2580	2230	157	95	66
3	106	267	313	321	419	629	1220	2920	1960	155	295	73
4	188	261	316	350	415	642	1670	3670	1620	153	513	77
5	246	265	314	380	419	630	1510	4380	1600	148	444	82
6	268	258	316	380	396	572	1380	4770	1790	146	238	71
7	264	254	322	372	385	577	1540	5460	1790	144	150	49
8	221	245	323	374	389	596	1580	5650	1760	138	138	41
9	165	284	327	381	393	560	1650	4640	1900	134	134	41
10	136	308	315	386	398	561	1770	4090	1320	164	119	45
11	119	312	313	385	398	725	1870	4290	327	163	114	57
12	99	315	299	378	401	1470	1900	3770	134	151	109	66
13	94	318	301	377	400	2660	2130	2750	194	138	113	62
14	92	319	304	381	399	3190	2410	2310	227	134	123	70
15	167	326	299	382	403	3280	2840	2460	244	117	133	87
16	183	328	300	375	404	1880	3240	2510	261	90	144	90
17	142	330	302	371	406	1120	3080	2800	252	92	155	96
18	200	330	304	373	410	785	3270	3460	248	99	147	100
19	197	328	304	378	406	736	3240	3450	279	100	134	101
20	160	330	304	384	411	826	2220	3050	279	100	120	136
21	163	332	304	397	407	651	1760	2890	278	99	118	230
22	227	330	302	407	490	528	1670	2650	281	109	119	314
23	287	331	306	420	573	565	1570	2610	277	103	112	338
24	287	330	305	428	595	553	1470	3310	252	103	118	234
25	285	328	302	438	502	630	1510	3270	220	91	121	124
26	236	328	304	430	393	904	1370	3530	199	100	118	102
27	193	327	309	417	476	984	1320	3520	190	131	112	99
28	193	325	307	421	609	630	1350	3470	190	135	104	99
29	212	329	305	427	---	591	1830	3410	180	137	97	126
30	252	322	309	433	---	728	3030	2790	161	121	71	182
31	270	---	314	401	---	445	---	2370	---	104	66	---
TOTAL	5764	9139	9564	11990	12115	29836	56286	105780	23003	3912	4674	3322
MEAN	186	305	309	387	433	962	1876	3412	767	126	151	111
MAX	287	332	327	438	609	3280	3270	5650	2360	164	513	338
MIN	47	230	299	320	385	445	314	2310	134	90	66	41
AC-FT	11430	18130	18970	23780	24030	59180	111600	209800	45630	7760	9270	6590
CAL YR 1984	TOTAL	235572		MEAN	644	MAX	4910	MIN	47	AC-FT	467300	
WTR YR 1985	TOTAL	275385		MEAN	754	MAX	5650	MIN	41	AC-FT	546200	

## 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 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> is probably noncontributing.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 6,275 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated by El Vado Reservoir (station 08285000). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions for irrigation of about 15,000 acres upstream from station.

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

15 years (water years 1971-85), 493 ft<sup>3</sup>/s, 357,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,680 ft<sup>3</sup>/s, May 8, 1985, gage height, 7.67 ft; maximum gage height, 8.70 ft, May 20, 1973; minimum, 7.5 ft<sup>3</sup>/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, 6,680 ft<sup>3</sup>/s, May 8, gage height, 7.67 ft; minimum daily, 43 ft<sup>3</sup>/s, Sept. 10.

DISCHARGE, IN 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	91	266	318	340	362	756	357	3700	2250	149	121	64
2	71	221	322	332	360	687	431	2890	2240	150	149	62
3	74	246	320	322	360	620	1100	3160	2090	154	154	74
4	253	255	321	322	362	552	1700	3680	1730	151	518	70
5	248	257	324	362	364	518	1740	4470	1530	150	540	73
6	286	257	322	362	364	526	1420	5060	1530	150	285	72
7	285	257	321	362	355	484	1610	5740	1530	149	189	63
8	276	256	323	365	357	485	1690	6170	1530	149	146	53
9	200	261	332	365	360	506	1700	5490	1530	150	145	45
10	147	317	326	362	362	602	1800	4580	1380	148	132	43
11	144	319	334	359	356	736	1970	5000	576	147	113	46
12	119	321	334	359	357	2290	1960	4560	177	147	110	80
13	142	321	341	362	360	2900	2100	3320	158	148	110	68
14	114	322	325	362	361	3230	2470	2250	210	147	110	65
15	113	319	325	362	362	3410	2830	2530	211	153	129	72
16	244	320	319	356	365	2450	3440	2520	222	118	133	83
17	159	323	319	356	431	1110	3330	2710	219	101	112	86
18	267	322	319	356	689	963	3300	3460	234	101	102	96
19	273	320	316	356	716	755	3760	3820	221	99	96	119
20	186	319	319	359	1020	894	2600	3270	221	101	86	136
21	194	318	322	362	821	855	1880	2960	218	103	89	303
22	208	320	316	362	557	569	1720	2740	215	108	83	280
23	328	322	316	362	611	626	1770	2600	212	107	81	306
24	308	325	313	365	548	597	1520	2700	211	101	72	280
25	308	325	319	372	541	645	1610	2680	166	98	78	141
26	292	318	319	375	425	892	1470	2680	157	106	83	103
27	202	316	329	372	452	1110	1370	2680	154	116	83	95
28	200	318	437	372	734	832	1490	2680	151	153	76	96
29	198	320	448	368	---	542	2130	2680	150	162	79	115
30	235	319	397	368	---	799	3270	2620	149	158	74	160
31	266	---	340	362	---	610	---	2250	---	118	63	---
TOTAL	6431	9000	10336	11121	13312	32551	59538	107650	21572	4092	4341	3349
MEAN	207	300	333	359	475	1050	1985	3473	719	132	140	112
MAX	328	325	448	375	1020	3410	3760	6170	2250	162	540	306
MIN	71	221	313	322	355	484	357	2250	149	98	63	43
AC-FT	12760	17850	20500	22060	26400	64560	118100	213500	42790	8120	8610	6640
CAL YR 1984	TOTAL	272088		MEAN	743	MAX	6480	MIN	71	AC-FT	539700	
WTR YR 1985	TOTAL	283293		MEAN	776	MAX	6170	MIN	43	AC-FT	561900	

08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, NM -- Continued

## WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to December 1974.

WATER TEMPERATURES: October 1962 to December 1974.

SUSPENDED-SEDIMENT DISCHARGES: October 1962 to December 1974.

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (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 16...	1410	244	333	--	470	310	99
JUN 11...	1045	576	229	14.0	137	213	62
JUL 24...	1500	101	397	18.0	367	100	97

## 08286900 ABIQUIU RESERVOIR NEAR ABIQUIU, NM

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

DRAINAGE AREA.--2,146 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> 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, 1,212,000 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.

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, 382,720 acre-ft, June 11, elevation, 6,256.22 ft; minimum, 147,400 acre-ft, Oct. 29, elevation, 6,206.36 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by U.S. Army Corps of Engineers in 1978)

6,200	125,400	6,240	292,600
6,220	199,900	6,250	346,600
6,230	243,700	6,260	405,500

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148700	148100	154400	159600	167400	180200	184500	220400	362500	374400	360200	340500
2	148700	147900	154900	160000	167900	181000	185200	223100	366200	373600	360300	339000
3	148800	147900	155200	160100	168500	181700	186200	226100	369000	373200	360300	337100
4	148800	147900	155700	160200	169000	182000	186800	230400	371700	373000	360400	335400
5	148700	147800	156200	160300	169600	182300	187100	236400	373000	372700	360400	333300
6	148700	147900	156400	160500	170200	182800	186900	243400	374900	372500	360100	331700
7	148600	148000	156400	160800	170800	183100	187000	250600	376600	372500	359900	330200
8	148400	148100	156400	161000	171300	183500	187300	257100	378300	372200	359900	328400
9	148500	148200	156400	161100	171900	184100	187700	264000	380400	371800	359800	326600
10	148500	148500	156400	161100	172400	184600	188400	269100	382500	371500	359800	324900
11	148500	148800	156400	161100	173000	185200	189400	273900	382700	371300	359700	323200
12	148600	149100	156300	161300	173400	188700	190600	279300	382400	370800	359400	321500
13	148600	149500	156100	161400	174000	191000	191600	281500	381800	369600	359300	320500
14	148600	149500	156000	161500	174400	194000	193600	281600	381200	368300	359300	319700
15	148500	149500	156000	161400	174900	197900	196200	282100	380700	363300	359200	318900
16	148400	149600	155900	161400	175800	199500	199800	282900	380400	367100	359100	318500
17	148600	149900	155800	161300	176600	198700	202800	284500	380100	365900	359100	318300
18	148500	150300	155900	161600	178100	197600	206300	288400	379600	364900	359000	318000
19	148500	150600	155500	162100	179100	195800	210200	292800	379400	363700	358900	317800
20	148500	151000	155600	162500	180500	194100	211300	297600	379200	362500	358300	319100
21	148400	151200	155800	161000	180800	192900	212000	302500	378800	361400	357400	319500
22	148300	151400	156100	161500	180400	190200	211700	307600	378300	360800	354800	319400
23	148200	151700	156300	162100	180100	188300	211400	312400	377900	360800	353100	318700
24	148300	152300	156500	162700	179300	186200	210700	317800	377300	360600	351300	318300
25	148500	152600	156800	163100	178900	185200	210100	324100	376800	360400	349900	318200
26	148400	152800	157100	163600	178500	185800	209300	330300	376200	360300	348300	318200
27	147800	153000	157500	164200	178800	186100	209000	337200	375400	360200	346600	318000
28	147600	153400	158200	165200	179500	185400	209500	343600	375000	360200	345700	318000
29	147400	153700	158500	165800	---	185300	212100	349300	374700	360300	344000	317900
30	147700	154200	158800	166300	---	185800	216400	354900	374600	360300	334200	317900
31	148000	---	159300	166800	---	184700	---	358600	---	360200	342400	---
MAX	148800	154200	159300	166800	180800	199500	216400	358600	382700	374400	360400	351800
MIN	147400	147800	154400	159600	167400	180200	184500	220400	362500	360200	334200	317800
(+)	6206.53	6208.22	6209.63	6211.63	6214.94	6216.26	6223.90	6251.45	6254.85	6252.39	6249.25	6244.81
(++)	-680	+6140	+5160	+7500	+12700	+5220	+31660	+142200	+16000	-14360	-17890	-24490
CAL YR 1984	MAX	235000	MIN	102400	(++)	+57500						
WTR YR 1985	MAX	382700	MIN	147400	(++)	+169160						

(+) 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 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> is probably noncontributing.

## WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Water-discharge 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 at station.

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

15 years (water years 1971-85), 497 ft<sup>3</sup>/s, 360,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft<sup>3</sup>/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 ft<sup>3</sup>/s, Mar. 17, 1966, Jan. 28, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,680 ft<sup>3</sup>/s, May 14, gage height, 5.52 ft; minimum daily, 18 ft<sup>3</sup>/s, Feb. 16-18.

DISCHARGE, IN 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	75	200	110	169	84	420	686	2190	471	254	125	890
2	66	264	104	169	84	323	258	2190	471	252	99	890
3	79	254	82	184	86	320	686	2190	471	250	183	934
4	205	254	60	227	86	318	1590	2040	710	250	466	1010
5	300	243	98	261	86	318	1980	1830	953	250	594	942
6	298	218	165	258	86	318	1880	1840	953	250	480	876
7	296	194	246	270	85	318	1940	2060	962	250	272	848
8	296	195	305	342	84	318	2060	2150	967	250	195	848
9	205	176	335	380	84	318	2050	2150	967	250	156	866
10	132	140	360	380	84	318	2050	2160	673	250	155	883
11	121	140	372	380	84	422	2010	2180	432	250	185	883
12	122	140	375	380	84	825	1920	2310	432	448	155	757
13	121	174	380	380	108	1310	1980	2440	430	648	95	499
14	121	265	385	380	193	1560	2040	2560	430	644	89	445
15	173	296	382	380	146	1670	2040	2660	434	645	105	445
16	207	244	385	380	18	1620	2050	2420	435	644	121	234
17	117	146	388	383	18	1620	2050	1990	435	644	111	181
18	201	146	390	267	18	1740	2050	1640	435	644	98	205
19	237	146	390	138	53	1830	1980	1370	437	644	77	106
20	234	146	300	136	300	1810	1980	1040	431	639	375	145
21	234	168	185	136	648	1830	2200	570	430	637	670	273
22	273	186	185	106	853	1810	2310	332	430	416	650	392
23	321	165	180	79	939	1830	2310	331	430	127	776	610
24	222	136	177	77	939	1830	2320	383	430	127	904	532
25	211	134	175	78	775	1820	2310	449	432	120	899	113
26	291	163	172	84	624	852	2310	456	435	91	885	102
27	365	219	170	84	393	1010	2310	460	359	94	862	102
28	370	105	165	84	343	1200	2040	460	254	94	862	102
29	270	108	164	84	---	797	1560	462	254	101	604	102
30	130	110	165	84	---	557	1870	466	254	154	892	102
31	94	---	166	84	---	1200	---	468	---	181	892	---
TOTAL	6387	5475	7516	6824	7385	32432	56820	46247	15637	10498	13032	15317
MEAN	206	183	242	220	264	1046	1894	1492	521	339	420	511
MAX	370	296	390	383	939	1830	2320	2660	967	648	904	1010
MIN	66	105	60	77	18	318	258	331	254	91	77	102
AC-FT	12670	10860	14910	13540	14650	64330	112700	91730	31020	20820	25850	30380
CAL YR 1984	TOTAL	240843		MEAN	658	MAX	2520	MIN	45	AC-FT	477700	
WTR YR 1985	TOTAL	223570		MEAN	613	MAX	2660	MIN	18	AC-FT	443500	

## RIO GRANDE BASIN

08287000 RIO CHAMA BELOW ABIQUIU DAM, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to July 1985 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to December 1974.

WATER TEMPERATURES: October 1962 to December 1974.

SUSPENDED-SEDIMENT DISCHARGES: October 1962 to December 1974.

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (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							
16...	1230	207	310	13.5	27	15	96
NOV							
27...	1315	219	343	8.0	11	6.5	92
JUN							
11...	1400	432	284	23.0	16	19	92
JUL							
24...	1215	127	245	15.0	58	20	83



## 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 mi<sup>2</sup>.

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.--No estimated daily discharges. Records good. 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.--53 years, 69.2 ft<sup>3</sup>/s, 50,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,140 ft<sup>3</sup>/s, Apr. 21, 1958, gage height, 6.42 ft, from rating curve extended above 1,300 ft<sup>3</sup>/s; maximum gage height, 7.25 ft, from floodmarks, June 19, 1966; minimum discharge, 0.2 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 12	0800	705	5.24	May 6	0300	*1,770	*6.26
Apr. 19	0200	1,330	5.77				

Minimum discharge, 3.4 ft<sup>3</sup>/s, Sept. 5.

DISCHARGE, IN 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	9.3	26	22	36	18	46	118	844	268	18	19	6.5
2	10	26	24	27	19	46	178	872	205	15	20	7.1
3	12	26	21	28	21	47	307	969	173	14	21	7.6
4	11	25	24	31	22	40	432	1280	152	13	27	7.7
5	12	25	24	31	21	39	470	1430	244	11	29	8.8
6	14	25	21	29	21	47	512	1450	196	11	25	9.0
7	15	25	22	29	21	44	613	1240	157	8.8	21	8.6
8	14	26	24	29	22	43	686	1130	135	8.0	17	8.0
9	15	26	25	28	24	48	780	1080	123	8.3	17	7.9
10	17	23	23	26	24	61	866	1170	108	7.7	17	7.9
11	17	23	26	26	23	144	896	897	94	7.6	17	9.0
12	17	26	27	27	24	447	974	719	80	7.8	18	9.7
13	18	27	27	24	25	218	946	602	70	7.5	19	12
14	20	26	27	25	26	170	976	538	62	9.1	17	11
15	21	25	26	25	26	154	1040	487	54	9.1	18	12
16	19	24	25	26	28	139	1060	482	47	9.6	8.9	12
17	20	25	23	24	31	129	1020	499	39	10	6.7	11
18	22	25	26	24	35	135	1170	539	37	11	6.1	11
19	22	23	25	24	37	135	1080	524	36	11	6.2	13
20	23	24	29	24	39	114	763	458	34	15	6.9	18
21	24	21	26	23	39	121	694	443	29	15	8.1	36
22	25	22	22	24	38	118	590	465	22	16	7.6	31
23	25	25	23	23	37	102	478	479	24	19	6.9	24
24	27	26	24	24	34	106	455	480	24	23	9.3	20
25	27	26	26	23	36	140	489	431	31	19	8.7	19
26	27	23	28	23	38	200	526	417	34	17	6.5	18
27	26	18	28	24	38	158	544	391	29	22	6.5	25
28	27	20	34	23	44	127	681	339	24	21	6.5	20
29	27	25	38	23	---	127	978	295	23	21	6.5	21
30	27	23	33	23	---	100	901	251	21	22	6.5	23
31	27	---	35	20	---	104	---	237	---	20	6.5	---
TOTAL	617.3	730	808	796	811	3649	21223	21438	2575	427.5	416.4	434.8
MEAN	19.9	24.3	26.1	25.7	29.0	118	707	692	85.8	13.8	13.4	14.5
MAX	27	27	38	36	44	447	1170	1450	268	23	29	36
MIN	9.3	18	21	20	18	39	118	237	21	7.5	6.1	6.5
AC-FT	1220	1450	1600	1580	1610	7240	42100	42520	5110	848	826	862
CAL YR 1984	TOTAL	27882.1		MEAN	76.2	MAX	942	MIN	5.9	AC-FT	55300	
WTR YR 1985	TOTAL	53926.0		MEAN	148	MAX	1450	MIN	6.1	AC-FT	107000	

## 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 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> 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.--No estimated daily discharges. Water-discharge records good. 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; see tabulation below for monthly diversion during irrigation season. Flow regulated by El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900), 74.9 mi and 29.3 mi upstream respectively. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 83.0 mi upstream. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--58 years (water years 1913-70), 541 ft<sup>3</sup>/s, 392,000 acre-ft/yr, prior to release of transmountain water.  
15 years (water years 1971-85), 553 ft<sup>3</sup>/s, 400,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft<sup>3</sup>/s, May 22, 1920, from rating curve extended above 2,300 ft<sup>3</sup>/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 ft<sup>3</sup>/s. Another major flood occurred in 1884, from newspaper accounts.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,920 ft<sup>3</sup>/s, May 5, gage height, 6.81 ft; minimum daily, 50 ft<sup>3</sup>/s, Aug. 20.

DISCHARGE, IN 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	102	146	143	226	100	404	999	3080	636	312	82	773
2	96	307	141	220	122	369	312	3300	571	294	81	783
3	122	290	142	223	116	333	401	3240	544	292	78	801
4	163	282	110	268	133	317	1460	3530	636	285	193	887
5	300	286	103	318	112	313	2380	3570	1140	275	229	860
6	309	268	178	318	111	309	2310	3340	1110	266	433	804
7	307	233	273	323	116	306	2440	3370	1050	258	286	752
8	304	228	359	366	118	306	2740	3400	1010	250	222	769
9	282	230	368	431	116	295	2860	3380	1010	249	218	772
10	164	192	380	430	128	295	2880	3460	925	215	300	814
11	148	183	416	424	123	333	3010	3240	486	180	303	843
12	140	181	420	429	123	858	2960	3000	454	213	250	833
13	143	183	424	424	120	1200	2910	3000	433	655	218	502
14	137	273	429	428	153	1490	3050	3000	424	667	148	430
15	143	339	437	425	221	1660	3100	3060	414	741	64	432
16	274	342	429	433	131	1690	3190	2910	411	713	108	407
17	163	206	428	426	80	1670	3130	2540	402	672	80	119
18	172	185	431	418	76	1690	3320	2230	396	700	66	268
19	280	178	432	204	77	1940	3250	1950	428	665	63	161
20	270	174	430	192	118	1960	2620	1550	483	666	50	212
21	273	173	260	192	495	1980	2680	1160	438	677	611	377
22	283	220	225	192	657	1960	2720	783	417	665	643	376
23	362	225	226	140	796	1930	2530	797	402	167	584	519
24	342	179	224	135	819	1910	2490	814	386	70	850	775
25	229	173	230	134	810	1890	2490	842	477	67	765	259
26	369	167	221	133	648	933	2550	815	441	67	751	201
27	412	160	221	135	505	874	2570	795	426	65	666	170
28	413	150	239	135	328	1180	2810	720	363	65	682	135
29	397	144	238	134	---	1130	2950	684	338	88	518	132
30	218	141	225	130	---	316	2900	625	326	72	623	133
31	143	---	225	130	---	1010	---	601	---	73	745	---
TOTAL	7460	6438	9007	8516	7452	32851	76012	68786	16977	10644	10910	15299
MEAN	241	215	291	275	266	1060	2534	2219	566	343	352	510
MAX	413	342	437	433	819	1980	3320	3570	1140	741	850	887
MIN	96	141	103	130	76	295	312	601	326	65	50	119
AC-FT	14800	12770	17870	16890	14780	65160	150800	136400	33670	21110	21640	30350
(†)	---	---	---	---	---	---	236	945	1533	a 489	a 734	827
(††)	---	---	---	---	---	---	a 733	919	1485	761	a 375	229
CAL YR 1984	TOTAL	268790	---	MEAN	734	MAX	3070	MIN	40	AC-FT	533100	---
WTR YR 1985	TOTAL	270352	---	MEAN	741	MAX	3570	MIN	50	AC-FT	536200	---

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

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

a Estimated

08290000 RIO CHAMA NEAR CHAMITA, NM -- Continued

## WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to December 1974.

WATER TEMPERATURES: October 1950 to December 1974.

SUSPENDED-SEDIMENT DISCHARGES: October 1947 to December 1974.

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (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 16...	1335	274	417	9.0	635	470	14
JUN 17...	1330	402	355	18.0	101	110	70
JUL 23...	1415	167	303	18.0	121	55	92

## DIVERSIONS FROM RIO CHAMA

During the irrigation season records of discharge are collected on all 18 ditches and 2 pumps which divert from Rio Chama downstream from El Vado Dam. All sites are located in Hydrologic Unit 13020102. All measuring devices consist of totalizing type flowmeters. All ditches are also equipped with Parshall flumes. In most cases meters on ditches are located downstream from the most downstream wasteway and upstream from any irrigated land. Flows tabulated represent water that is delivered to each ditch or portion thereof and may include waste water from another ditch. No attempt is made to credit for water returned to Rio Chama or delivered to another ditch.

- 08286300 MONASTERY PUMP NEAR ALIRE, NM.--Lat 36°22'45", long 106°40'55", in SE¼SW¼, sec.24, T.25 N., R.2 E., Rio Arriba County, in Santa Fe National Forest, totalizing flowmeter on discharge pipe of pump on left bank of Rio Chama, at Christ of the Desert Monastery, 8.8 mi southwest of Alire, and 24 mi northwest of Abiquiu. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08287020 ABEYTA TRUJILLO DITCH NEAR ABIQUIU, NM.--Lat 36°14'03", long 106°23'22", Rio Arriba County, in Carson National Forest, totalizing flowmeter and Parshall flume on left bank 0.9 mi downstream from heading located on left bank of Rio Chama, and 4.5 mi northeast of Abiquiu. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08287040 WINFIELD MORTON PUMP NEAR ABIQUIU, NM.--Lat 36°12'40", long 106°20'48", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter on discharge pipe of pump on left bank of Jose Pablo Gonzales ditch 700 ft downstream from ditch heading located on left bank of Rio Chama, and 1.4 mi west of Abiquiu. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08287060 JOSE PABLO GONZALES DITCH NEAR ABIQUIU, NM.--Lat 36°12'25", long 106°20'35", Rio Arriba County, in Town of Abiquiu Grant, totalizing flowmeter and Parshall flume on left bank 0.5 mi downstream from Winfield Morton pump, 0.6 mi downstream from heading located on left bank of Rio Chama, and 1.2 mi west of Abiquiu. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08287150 GONZALES DITCH AT ABIQUIU, NM.--Lat 36°12'46", long 106°19'16", Rio Arriba County, in Town of Abiquiu Grant, totalizing flowmeter and Parshall flume on right bank 0.2 mi downstream from heading located on right bank of Rio Chama, and 0.4 mi northwest of Abiquiu. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08287200 LA PUENTE DITCH NEAR ABIQUIU, NM.--Lat 36°12'52", long 106°16'27", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on left bank 100 ft downstream from culvert on U.S. Highway 84, 0.4 mi downstream from heading located on right bank of Rio Chama, and 2.5 mi east of Abiquiu. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08287250 QUINTANA DITCH NEAR ABIQUIU, NM.--Lat 36°12'55", long 106°16'26", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank 100 ft upstream from culvert on U.S. Highway 84, 0.2 mi downstream from heading located on right bank of Rio Chama, and 2.6 mi east of Abiquiu. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08287270 VALENTINE MARTINEZ DITCH NEAR ABIQUIU, NM.--Lat 36°12'55", long 106°16'12", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank on north side of U.S. Highway 84, 0.2 mi downstream from heading located on left bank of Quintana ditch (station 08287250), and 2.8 mi east of Abiquiu. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08287300 MARIANO DITCH NEAR ABIQUIU, NM.--Lat 36°13'05", long 106°16'09", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on left bank 0.5 mi downstream from heading located on left bank of Rio Chama, and 2.9 mi east of Abiquiu. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08287400 FERRAN DITCH NEAR ABIQUIU, NM.--Lat 36°12'57", long 106°14'34", Rio Arriba County, in Carson National Forest, totalizing flowmeter and Parshall flume on left bank just downstream from siphon, 40 ft upstream from forest boundary, 0.2 mi downstream from culvert on State Highway 96, 0.4 mi downstream from tail of Mariano ditch (station 08287300), 0.9 mi downstream from heading located on left bank of Rio Chama, and 4.4 mi east of Abiquiu. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08287600 TIERRA AZUL DITCH NEAR MEDANALES, NM.--Lat 36°12'06", long 106°14'11", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank 1.1 mi downstream from heading located on right bank of Rio Chama, and 3.5 mi northwest of Medanales. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08288050 JOSE V. MARTINEZ DITCH NEAR MEDANALES, NM.--Lat 36°11'44", long 106°13'39", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on left bank 0.1 mi downstream from heading located on left bank of Rio Chama, and 2.9 mi northwest of Medanales. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08288100 MANZANARES AND MONTOYA DITCH NEAR MEDANALES, NM.--Lat 36°11'13", long 106°12'35", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank 0.2 mi downstream from heading located on right bank of Rio Chama, and 1.7 mi northeast of Medanales. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08288150 RIO DE CHAMA DITCH NEAR MEDANALES, NM.--Lat 36°11'13", long 106°12'02", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on left bank 0.5 mi downstream from tail of Jose V. Martinez ditch (station 08288050), 0.7 mi downstream from heading located on left bank of Rio Chama, and 1.3 mi northwest of Medanales. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).

## DIVERSIONS FROM RIO CHAMA --Continued

- 08288200 MARTINEZ AND DURANES DITCH (UPPER) NEAR MEDANALES, NM.--Lat 36°10'55", long 106°11'59", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank 300 ft downstream from tail of Manzanares and Montoya ditch (station 08288100), 0.7 mi downstream from heading located on right bank of Rio Chama, and 1.1 mi northwest of Medanales. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08288250 MARTINEZ AND DURANES DITCH (LOWER) NEAR MEDANALES, NM.--Lat 36°09'26", long 106°10'24", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank 0.9 mi downstream from culvert on State Highway 233, 1.4 mi south of Medanales, 2.5 mi downstream from "upper" gage (station 08288200), and 3.2 mi downstream from heading located on right bank of Rio Chama. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08288300 CHILE DITCH NEAR HERNANDEZ, NM.--Lat 36°07'00", long 106°09'11", in SW¼SW¼ sec.24, T.22 N., R.7 E., Rio Arriba County, totalizing flowmeter and Parshall flume on left bank, 0.4 mi downstream from heading located on right bank of Rio Chama, 0.5 mi upstream from siphon under Rio del Oso, and 4.1 mi northwest of Hernandez. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).
- 08289500 CHAMITA DITCH NEAR CHAMITA, NM.--Lat 36°04'57", long 106°06'54", in SW¼NE¼ sec.5, T.21 N., R.8 E., in Rio Arriba County, in San Juan Pueblo Grant, totalizing flowmeter and Parshall flume on left bank 30 ft upstream from flume over Arroyo de la Penita, 0.7 mi downstream from heading located on left bank of Rio Chama, and 1.0 mi northwest of Chamita. PERIOD OF RECORD, March 1936 to April 1941, February 1963 to Sept. 1985 (discontinued) (records provided by U.S. Bureau of Reclamation August 1966 to December 1972).
- 08289800 HERNANDEZ DITCH AT HERNANDEZ, NM.--Lat 36°04'52", long 106°07'16", Rio Arriba County, in Bartolome Sanchez Grant, totalizing flowmeter and Parshall flume on right bank 0.7 mi downstream from heading located on right bank of Rio Chama, 1.1 mi north of Hernandez, and 1.3 mi northwest of Chamita. PERIOD OF RECORD, March 1963 to Sept. 1985 (discontinued) (records provided by U.S. Bureau of Reclamation July 1965 to December 1971).
- 08290100 SALAZAR DITCH AT HERNANDEZ, NM.--Lat 36°03'44", long 106°06'31", in SE¼SE¼ sec.8, T.21 N., R.8 E., Rio Arriba County, in San Juan Pueblo Grant, totalizing flowmeter and Parshall flume on right bank 0.1 mi downstream from heading located on right bank of Rio Chama, and 0.6 mi east of Hernandez. PERIOD OF RECORD, April 1972 to Sept. 1985 (discontinued).

## DIVERSIONS FROM RIO CHAMA, IN ACRE-FEET, IRRIGATION SEASON 1985

	Diversion	APR	MAY	JUN	JUL	AUG	SEP
08286300	Monastery pump	0	0	0	.2	0	0
08287020	Abeyta Trujillo ditch	a0	a119	a295	a236	a100	a29
08287040	Winfield Morton pump	0	0	0	0	0	0
08287060	Jose Pablo Gonzales ditch	521	573	555	574	580	437
08287150	Gonzales ditch	a380	a30.0	a44.0	a43.0	a27.0	a14.0
08287200	La Puente ditch	a0	a30.0	a137	a153	a164	a12.0
08287250	Quintana ditch	1.8	11	46.0	13.7	32.0	25.0
08287270	Valentine Martinez ditch	2.0	28	a53.0	33.4	68.0	64.0
08287300	Mariano ditch	139	130	356	139	a199	
08287400	Ferran ditch	124	132	a0	99.1	35	1.6
08287600	Tierra Azul ditch	a69.0	a486	a900	a354	97.0	a97.0
08288050	Jose V. Martinez ditch	a98.0	150	514	463	a234	a234
08288100	Manzanares and Montoya ditch	a14.0	a73.0	a67.0	a0	a0	a0
08288150	Rio de Chama ditch	a415	a530	a212	a354	a694	a720
08288200	Martinez and Duranes ditch (upper)	a793	a1240	a1270	a1090	a967	222
08288250	Martinez and Duranes ditch (lower)	278	297	537	a511	a643	a661
08288300	Chili ditch	a254	a581	a663	a693	a491	a451
08289500	Chamita ditch	236	945	1533	a489	a734	824
08289800	Hernandez ditch	a733	919	1485	761	a375	229
08290100	Salazar ditch	28.0	348	a675	a637	a536	287

a Estimated

## 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 mi<sup>2</sup>, 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: Nov. 28 to Jan. 22, Jan. 27 to Feb. 18, and Feb. 24 to Mar. 25. 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.--55 years, 30.2 ft<sup>3</sup>/s, 21,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft<sup>3</sup>/s, Sept. 24, 1931, gage height, 7.80 ft, site and datum then in use, from rating curve extended above 170 ft<sup>3</sup>/s; minimum, 0.19 ft<sup>3</sup>/s, Mar. 13, 1954, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 12	1445	156	2.63	June 1	0030	327	3.24
Apr. 29	0100	*381	*3.40	Sept. 15	2000	214	2.83
May 27	0115	307	3.23	Sept. 20	1945	130	2.54

Minimum discharge, 5.4 ft<sup>3</sup>/s, Nov. 26, result of freezeup.

DISCHARGE, IN 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	20	26	15	25	12	28	42	236	274	87	33	17
2	19	25	14	21	15	27	47	231	271	85	37	16
3	23	24	16	23	17	27	58	234	253	81	36	20
4	29	23	15	25	16	27	68	247	253	74	44	22
5	33	22	12	23	14	30	76	260	253	71	38	23
6	27	22	15	19	13	29	82	260	247	67	33	18
7	24	21	17	18	12	30	89	263	246	64	30	16
8	22	20	15	16	12	32	96	270	259	65	28	16
9	21	19	12	16	11	35	107	286	262	61	35	16
10	20	11	13	15	10	37	112	310	272	61	31	15
11	19	21	12	14	11	42	115	298	260	62	39	20
12	27	20	12	14	11	100	123	269	258	56	34	29
13	30	20	12	17	11	65	126	243	257	54	30	19
14	29	19	11	15	10	59	131	219	245	51	27	17
15	26	18	9.4	14	10	58	132	196	238	49	27	25
16	22	18	12	13	11	57	146	186	224	55	25	36
17	26	20	17	15	13	56	151	184	211	48	24	22
18	25	19	16	15	15	56	154	187	199	45	23	26
19	22	17	16	14	16	57	148	191	185	44	23	43
20	23	16	13	14	16	61	133	197	171	52	32	51
21	23	12	12	17	18	66	113	202	161	48	39	78
22	22	20	9.5	16	19	64	102	202	149	45	27	46
23	23	19	20	14	19	66	89	205	140	44	26	36
24	23	18	20	14	20	68	81	212	130	41	24	31
25	22	16	18	13	21	70	81	227	145	51	22	28
26	22	8.7	14	13	22	67	85	241	120	54	22	26
27	25	9.8	14	12	24	63	93	256	112	46	20	25
28	25	13	66	12	27	58	171	267	104	42	18	25
29	25	18	62	12	---	55	297	265	97	40	19	26
30	25	16	47	11	---	49	249	270	93	35	22	24
31	26	---	32	10	---	46	---	271	---	33	21	---
TOTAL	748	551.5	588.9	490	426	1585	3497	7385	6089	1711	889	812
MEAN	24.1	18.4	19.0	15.8	15.2	51.1	117	238	203	55.2	28.7	27.1
MAX	33	26	66	25	27	100	297	310	274	87	44	78
MIN	19	8.7	9.4	10	10	27	42	184	93	33	18	15
AC-FT	1480	1090	1170	972	845	3140	6940	14650	12080	3390	1760	1610
CAL YR 1984	TOTAL	18773.0		MEAN	51.3	MAX	270	MIN	8.2	AC-FT	37240	
WTR YR 1985	TOTAL	24772.4		MEAN	67.9	MAX	310	MIN	8.7	AC-FT	49140	

08292000 SANTA CLARA CREEK NR ESPANOLA, NM

LOCATION.--Lat 35°58'40", long 106°10'20", in SW¼SW¼ sec.11, T.20 N., R.7 E., Rio Arriba County, Santa Clara Indian Reservation, on right bank 5.5 mi upstream from mouth, and 5.5 mi southwest of Espanola.

DRAINAGE AREA.--34.5 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1936 to September 1941, August 1949 to October 1950, April 26, 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: Dec. 17 to Feb. 11, Mar. 6 to Apr. 29, and, July 26 to Aug. 10. 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.--7 years (1937-1941) 1950, 1985 4.72 ft<sup>3</sup>/s, 3,420 ac-ft/year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 970 ft<sup>3</sup>/s, Sept. 22, 1941, from rating curve extended above 35 ft<sup>3</sup>/s on basis of slope-area determination, gage height, 5.65 ft; no flow Aug. 8-13, 1984 possibly from extreme diversion.

EXTREMES FOR 1984 WATER YEAR.--Maximum discharge during period April to September, 24 ft<sup>3</sup>/s, Aug. 6, gage height, 2.27 ft; no flow Aug. 8-13.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 7	1115	31	2.34	Sept. 4	1745	21	2.15
June 4	1845	25	2.27	Sept. 20	1945	16	2.03
Aug. 11	1645	*41	*2.47				

Minimum discharge, 0.32 ft<sup>3</sup>/s, Oct. 11.

DISCHARGE, IN 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							---	4.0	4.5	2.6	2.5	1.8
2							---	4.5	4.7	2.6	2.5	1.8
3							---	5.1	4.7	2.5	2.6	1.9
4							---	5.2	4.3	2.4	2.5	2.0
5							---	5.2	4.4	2.3	2.5	2.0
6							---	5.1	4.9	2.3	3.6	2.0
7							---	5.0	4.4	2.2	2.4	2.0
8							---	4.8	4.1	2.2	.00	1.9
9							---	4.8	3.9	2.2	.00	1.9
10							---	5.0	4.0	2.4	.00	1.9
11							---	5.2	3.8	2.7	.00	1.9
12							---	5.4	3.7	2.5	.00	2.0
13							---	5.5	3.6	2.6	.00	2.0
14							---	5.4	3.6	2.7	1.6	2.0
15							---	5.5	4.0	2.7	2.1	2.0
16							---	5.7	4.2	3.5	3.0	2.2
17							---	5.3	4.2	4.4	1.7	2.7
18							---	4.9	3.0	3.2	1.6	2.4
19							---	4.5	2.7	3.3	1.7	1.8
20							---	4.3	2.7	3.0	1.8	1.9
21							---	4.0	2.6	2.8	1.8	2.3
22							---	3.8	2.5	2.7	1.8	1.9
23							---	3.6	2.5	2.7	2.5	1.9
24							---	3.5	2.4	2.7	1.0	1.9
25							---	3.3	2.8	2.7	3.6	1.9
26							---	5.2	3.2	2.7	2.3	2.2
27							---	4.9	3.1	2.4	1.9	2.5
28							---	4.7	3.7	2.4	1.7	2.3
29							---	4.4	4.7	2.5	1.7	2.2
30							---	4.1	4.5	2.6	1.8	2.2
31							---	4.5	---	2.6	1.7	---
TOTAL							---	142.3	104.8	84.5	53.90	61.4
MEAN							---	4.59	3.49	2.73	1.74	2.05
MAX							---	5.7	4.9	4.4	3.6	2.7
MIN							---	3.1	2.4	2.2	.00	1.8
AC-FT							---	282	208	168	107	122

08292000 SANTA CLARA CREEK NR ESPANOLA, NM -- Continued

DISCHARGE, IN 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	2.2	3.4	3.2	1.7	1.6	4.1	6.4	20	9.1	3.0	3.3	3.2
2	2.1	3.4	3.2	1.8	1.7	4.4	6.7	21	8.7	2.9	3.1	3.3
3	2.7	3.4	3.2	1.9	1.8	4.1	7.1	20	8.2	3.0	3.1	4.6
4	3.9	3.7	3.1	2.1	2.2	3.9	7.3	21	9.8	2.9	3.2	4.9
5	2.8	3.5	3.1	2.3	2.7	3.7	7.7	22	9.4	2.9	3.4	3.8
6	2.7	3.4	2.8	2.4	3.2	4.0	8.0	26	7.9	2.8	3.2	3.6
7	2.6	3.4	2.8	2.4	3.8	3.9	8.0	29	7.1	2.6	3.4	3.5
8	2.6	3.4	3.4	2.4	4.2	3.8	8.4	27	6.7	2.6	3.2	3.5
9	2.5	3.5	4.2	2.2	4.1	4.2	8.7	27	6.8	2.8	3.1	3.4
10	1.8	4.0	4.6	2.0	3.8	4.8	8.9	26	6.3	2.9	3.2	3.4
11	.32	4.1	4.2	1.8	3.5	5.9	9.2	25	6.2	2.7	18	3.6
12	2.2	3.6	4.4	1.7	3.2	9.6	9.4	23	5.8	2.6	4.2	3.8
13	2.8	3.5	4.3	1.7	4.7	6.9	9.6	22	5.4	2.7	3.5	3.6
14	2.6	3.5	4.2	1.8	3.3	6.1	9.8	20	5.1	3.1	3.2	3.5
15	2.8	3.5	2.1	1.8	4.0	5.9	10	18	4.9	3.2	3.3	3.6
16	3.1	3.7	3.4	1.9	4.1	5.9	10	17	4.3	3.7	3.2	4.3
17	3.1	3.6	2.8	2.0	3.6	5.5	11	16	4.0	3.4	3.1	4.1
18	4.0	3.6	2.5	2.2	3.7	5.4	11	16	4.0	3.0	3.3	4.0
19	3.4	3.5	2.4	2.4	3.6	5.9	13	16	4.5	3.7	3.2	5.1
20	3.3	3.6	2.4	2.7	4.1	5.5	14	14	3.9	3.0	3.2	7.2
21	3.4	3.9	2.4	2.0	3.9	5.4	14	14	3.6	3.0	3.4	8.3
22	3.4	3.6	2.3	2.2	4.1	5.5	13	13	3.5	3.1	3.2	4.8
23	3.6	3.5	2.2	2.4	3.6	5.6	13	13	3.5	3.6	3.0	4.3
24	3.6	3.8	2.2	2.5	4.2	5.8	13	13	3.4	3.8	3.1	4.6
25	3.6	3.9	2.2	2.7	4.3	6.3	13	12	4.4	3.1	3.7	4.5
26	3.5	4.1	2.2	3.0	4.0	6.0	14	12	3.6	3.2	3.4	4.4
27	3.6	4.2	2.2	2.9	3.8	6.6	15	11	3.4	3.4	3.3	4.3
28	3.5	4.1	2.1	2.8	4.1	6.2	16	10	3.3	3.6	4.1	4.3
29	3.5	3.9	2.0	2.8	---	6.1	18	9.7	3.2	3.2	3.5	4.4
30	3.5	3.2	1.8	2.5	---	5.8	20	9.4	3.1	3.3	3.3	4.3
31	3.5	---	1.8	2.0	---	6.0	---	9.2	---	3.6	3.2	---
TOTAL	92.22	109.5	89.7	69.0	98.9	168.8	333.2	552.3	163.1	96.4	117.6	128.2
MEAN	2.97	3.65	2.89	2.23	3.53	5.45	11.1	17.8	5.44	3.11	3.79	4.27
MAX	4.0	4.2	4.6	3.0	4.7	9.6	20	29	9.8	3.8	18	8.3
MIN	.32	3.2	1.8	1.7	1.6	3.7	6.4	9.2	3.1	2.6	3.0	3.2
AC-FT	183	217	178	137	196	335	661	1100	324	191	233	254
WTR YR 1985	TOTAL	2018.92		MEAN	5.53	MAX	29	MIN	.32	AC-FT	4000	



## 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, in Nambé Indian Reservation, 300 ft upstream from Nambé Falls, 2.6 mi upstream from Rio En Medio, 4.4 mi southeast of Nambé Pueblo, and 5.4 mi southeast of Nambé.

DRAINAGE AREA.--34.1 mi<sup>2</sup>.

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

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by 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, 2,040 acre-ft, June 10, 11, elevation, 6,826.95 ft; minimum, 1,420 acre-ft, Sept. 14, 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 (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	1330	1390	1710	2000	1960	2020	2040	2040	2030	1960	1600
2	1110	1340	1400	1720	2000	1970	2020	2040	2040	2030	1960	1550
3	1110	1350	1410	1730	2000	1980	2020	2040	2040	2030	1960	1530
4	1110	1350	1420	1750	1990	1990	2020	2040	2040	2030	1960	1530
5	1110	1350	1430	1770	1980	2000	2020	2040	2040	2020	1960	1530
6	1110	1350	1430	1790	1970	2000	2020	2040	2040	2030	1950	1530
7	1110	1350	1440	1810	1950	2000	2030	2040	2040	2020	1940	1530
8	1110	1340	1450	1810	1940	2000	2030	2040	2040	2020	1890	1530
9	1120	1340	1460	1820	1930	1990	2030	2040	2040	2020	1880	1510
10	1110	1330	1470	1820	1920	1990	2030	2040	2040	2020	1840	1480
11	1110	1320	1480	1830	1910	1990	2030	2040	2040	2020	1840	1460
12	1130	1320	1480	1840	1890	2020	2030	2040	2040	2020	1850	1440
13	1140	1310	1490	1840	1880	2030	2030	2040	2040	2020	1860	1430
14	1160	1310	1500	1860	1870	2030	2030	2040	2040	2020	1870	1420
15	1170	1300	1510	1870	1870	2020	2030	2040	2040	2020	1890	1430
16	1180	1300	1510	1890	1880	2020	2030	2040	2040	2020	1900	1430
17	1190	1290	1530	1910	1880	2020	2030	2040	2040	2020	1920	1440
18	1200	1290	1540	1920	1880	2020	2030	2040	2040	2020	1930	1460
19	1210	1290	1550	1930	1890	2020	2030	2040	2040	2010	1940	1490
20	1220	1300	1560	1930	1890	2020	2030	2040	2040	1980	1940	1520
21	1230	1310	1570	1940	1900	2020	2030	2040	2040	1940	1950	1560
22	1240	1320	1580	1950	1910	2020	2030	2040	2030	1920	1950	1580
23	1240	1330	1590	1950	1910	2020	2030	2030	2030	1920	1930	1600
24	1260	1340	1600	1960	1920	2020	2030	2040	2040	1930	1910	1620
25	1270	1350	1620	1960	1930	2020	2030	2040	2030	1940	1890	1640
26	1280	1350	1630	1970	1930	2020	2030	2040	2030	1940	1860	1660
27	1280	1360	1640	1970	1940	2020	2030	2040	2030	1950	1810	1660
28	1290	1370	1650	1980	1950	2020	2030	2040	2030	1960	1770	1660
29	1300	1380	1670	1980	---	2020	2040	2040	2030	1960	1740	1660
30	1310	1380	1680	1990	---	2020	2040	2040	2030	1960	1700	1670
31	1320	---	1690	2000	---	2020	---	2040	---	1960	1650	---
MAX	1320	1380	1690	2000	2000	2030	2040	2040	2040	2030	1960	1670
MIN	1110	1290	1390	1710	1870	1960	2020	2030	2030	1920	1650	1420
(+)	6812.74	6814.20	6820.66	6826.15	6825.26	6826.57	6826.86	6826.89	6826.70	6825.52	6819.76	6820.16
(++)	190	60	320	300	-50	70	20	0	-10	-70	-310	20
CAL YR 1984		MAX	2040	MIN	1110	(++)	-270					
WTR YR 1985		MAX	2040	MIN	1110	(++)	+350					

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

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

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

LOCATION.--Lat 35°50'46", long 105°54'17", in NE¼SW¼ sec.29, T.19 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, in Nambe Indian Reservation, in outlet conduits of Nambe Falls Dam, 300 ft upstream from Nambe Falls, 2.6 mi upstream from Rio En Medio, 4.4 mi southeast of Nambe Pueblo and 5.4 mi southeast of Nambe.

DRAINAGE AREA.--34.1 mi<sup>2</sup>.

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

GAGE.--Totalizing flowmeters in each of three outlet conduits in Nambe Falls Dam.

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 312 ft<sup>3</sup>/s June 9, 1979, gage height, 1.96 ft at site 1,100 ft downstream (maximum release and spill computed at Nambe Falls Dam, 250 ft<sup>3</sup>/s, June 9, 1979); minimum daily discharge, 0.13 ft<sup>3</sup>/s May 3, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 112 ft<sup>3</sup>/s, June 10, 11; minimum daily, 0.55 ft<sup>3</sup>/s many days.

DISCHARGE, IN 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	13	2.2	.55	.55	3.5	3.2	18	74	101	58	16	32
2	11	2.2	.55	.55	6.2	3.2	17	85	96	57	16	32
3	12	2.2	.55	.55	6.2	3.2	17	87	96	47	16	17
4	10	2.2	.55	.55	7.2	3.7	20	91	98	45	16	6.8
5	6.9	4.8	.55	.55	7.8	4.1	20	89	101	42	18	6.8
6	5.0	6.6	.55	.55	7.8	4.1	23	93	101	39	16	6.5
7	5.0	6.4	.55	.55	7.8	7.9	27	93	104	39	19	6.3
8	5.0	6.5	.55	.55	7.8	10	32	89	104	37	30	6.2
9	4.0	6.6	.55	.55	7.8	10	37	89	106	35	33	15
10	3.3	6.5	.51	.55	7.8	11	40	89	112	33	26	21
11	2.7	6.5	.48	.55	6.9	10	40	87	112	32	15	21
12	2.2	6.5	.48	.55	6.1	11	45	89	101	29	6.4	17
13	2.2	6.5	.48	.55	6.7	39	47	85	98	27	4.1	13
14	2.2	6.5	.48	.55	6.4	38	48	79	96	25	4.1	12
15	2.2	6.5	.48	.55	4.4	35	51	74	96	27	2.8	12
16	2.2	6.5	.48	.55	3.2	33	60	72	101	30	2.1	7.7
17	2.2	6.5	.52	.55	3.2	28	60	76	98	29	2.1	2.2
18	2.2	6.5	.54	.55	3.2	18	58	76	93	27	2.1	.50
19	2.2	2.9	.54	.55	3.2	25	65	79	89	39	5.9	.50
20	2.2	.55	.54	.55	3.2	22	54	79	87	36	9.6	.50
21	2.2	.55	.54	.55	3.2	19	51	81	91	36	9.7	.50
22	2.0	.55	.54	.55	3.2	19	47	79	89	29	9.8	.50
23	2.2	.55	.54	.55	3.2	17	42	76	87	18	15	.50
24	2.2	.55	.54	.55	3.2	19	38	79	85	16	20	.50
25	2.2	.55	.54	.55	3.2	21	35	81	96	16	20	.50
26	2.2	.55	.54	.55	3.2	23	37	88	87	16	26	.50
27	2.3	.55	.54	.55	3.2	21	38	91	79	16	29	5.2
28	2.3	.55	.54	.55	3.2	22	54	98	76	16	27	9.9
29	2.2	.55	.54	.55	---	22	77	98	67	19	26	9.9
30	2.2	.55	.54	.55	---	21	71	101	65	18	30	6.5
31	2.2	---	.54	.75	---	17	---	101	---	16	32	---
TOTAL	121.9	107.15	16.42	17.25	142.0	540.4	1269	2648	2812	949	504.7	270.50
MEAN	3.93	3.57	.53	.56	5.07	17.4	42.3	85.4	93.7	30.6	16.3	9.02
MAX	13	6.6	.55	.75	7.8	39	77	101	112	58	33	32
MIN	2.0	.55	.48	.55	3.2	3.2	17	72	65	16	2.1	.50
AC-FT	242	213	33	34	282	1070	2520	5250	5580	1880	1000	537
CAL YR 1984	TOTAL	5946.81		MEAN	16.2	MAX	111	MIN	.48	AC-FT	11800	
WTR YR 1985	TOTAL	9398.32		MEAN	25.7	MAX	112	MIN	.48	AC-FT	18640	

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM  
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 35°52'29", long 106°08'30", in SW¼SW¼ sec.18, T.19 N., R.8 E., Santa Fe County, Hydrologic Unit 13020101, in San Ildefonso Pueblo Grant, near right bank on downstream end of pier of former railway bridge, 400 ft downstream from bridge on State Highway 4, 1.8 mi southwest of San Ildefonso Pueblo, 2.5 mi downstream from Pojoaque River, 6.8 mi west of Pojoaque, and at mile 1,614.2.

DRAINAGE AREA.--14,300 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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.--No estimated daily discharges. 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 at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft<sup>3</sup>/s, May 23, 1920; maximum gage height, 14.5 ft, Sept. 29, 1904, present site and datum; minimum daily discharge, 60 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 19	1100	9,310	8.69	June 14	2015	8,480	8.31
May 10	1745	*12,400	*9.96				

Minimum discharge, 386 ft<sup>3</sup>/s, Oct. 2.

DISCHARGE, IN 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	417	707	817	1080	718	1310	2380	8340	7150	3540	919	1190
2	403	839	811	1040	668	1290	1650	8480	7070	3140	1180	1210
3	423	852	805	936	714	1270	1890	8570	6740	2870	1160	1220
4	582	862	800	919	791	1240	3110	8850	6350	2560	1270	1350
5	724	901	822	1010	728	1180	4050	9520	7000	2200	1440	1380
6	755	1080	841	1020	687	1200	4160	10200	6860	1860	1590	1240
7	759	1120	968	1020	682	1220	4610	10900	6690	1710	1270	1180
8	749	1140	1070	1080	725	1200	5160	11300	6720	1780	1100	1150
9	744	1150	1070	1230	765	1210	5690	11500	6880	1550	992	1140
10	585	1100	1080	1190	794	1270	6220	11900	7100	1360	1270	1180
11	541	1090	1160	1160	750	1430	6590	12000	7040	1280	1510	1270
12	566	1110	1290	1140	742	2630	6610	11600	7470	1180	1090	1320
13	659	1070	1270	1150	748	3340	6780	11300	7910	1460	947	1010
14	607	1130	1320	1130	803	3640	7190	11100	8330	1470	820	856
15	646	1240	1250	1140	806	3580	7550	10400	8270	1400	768	886
16	765	1270	1140	1150	857	3420	7980	9480	7780	1480	769	838
17	681	1170	1140	1160	857	3300	8290	8180	7320	1390	727	570
18	675	1110	1110	1150	1050	3230	8800	7140	6780	1360	666	847
19	804	1080	1090	944	978	3370	9150	6610	6380	1340	630	817
20	815	1060	1200	896	1020	3310	8710	6390	6300	1350	536	978
21	836	1080	1070	877	1500	3240	8500	6330	5960	1300	1040	1280
22	835	1080	942	844	1700	3120	8210	6150	5690	1310	1090	961
23	915	1060	854	837	1870	3060	7630	6060	5500	918	1050	1110
24	931	1000	868	851	1790	3030	7270	5920	5420	800	1240	1530
25	802	994	856	840	1720	3050	6780	5700	5590	797	1380	1070
26	912	1000	865	844	1520	2280	6650	5540	5370	898	1280	859
27	983	974	882	846	1350	2230	6730	5680	5080	893	1220	804
28	999	934	1090	855	1150	2540	7170	5830	4800	814	1200	751
29	1010	801	1160	845	---	2580	8520	6080	4480	858	1160	701
30	821	783	1070	821	---	1640	8330	6310	4100	861	1020	716
31	745	---	1050	787	---	2310	---	6730	---	850	1190	---
TOTAL	22689	30787	31761	30792	28583	72720	192360	260090	194130	46579	33524	31414
MEAN	732	1026	1025	993	1021	2346	6412	8390	6471	1503	1081	1047
MAX	1010	1270	1320	1230	1870	3640	9150	12000	8330	3540	1590	1530
MIN	403	707	800	787	668	1180	1650	5540	4100	797	536	570
AC-FT	45000	61070	63000	61080	56690	144200	381500	515900	385100	92390	66490	62310
CAL YR 1985	TOTAL	695764		MEAN	1901	MAX	9450	MIN	372	AC-FT 1380000		
WTR YR 1985	TOTAL	975429		MEAN	2672	MAX	12000	MIN	403	AC-FT 1935000		

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.

INSTRUMENTATION.--Continuous water-temperature recorder since April 1954. Continuous specific-conductance recorder since October 1978.

REMARKS.--Daily mean temperature is computed by averaging the maximum and minimum temperatures for each day.

## 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, 465 microsiemens Mar. 1; minimum daily, 177 microsiemens May 8.

WATER TEMPERATURES: Maximum, 23.0°C Aug. 3; minimum, 0.0°C Jan. 3, Feb. 1, 3.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 14,500 mg/L Aug. 25; minimum daily mean, 73 mg/L Feb. 1.

SEDIMENT LOADS: Maximum daily, 55,400 tons Mar. 14; minimum daily, 99 tons Oct. 2.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
NOV 09...	1000	1160	300	310	7.6	8.6	12.5	7.5	2.6	10.2	120	10
JAN 07...	1115	1010	305	287	7.6	8.2	5.5	3.0	9.5	12.5	130	12
MAR 01...	1100	1340	465	329	8.3	8.1	14.0	8.5	28	9.0	120	14
JUN 04...	1430	6020	205	199	7.9	8.2	23.0	13.0	35	8.4	75	18
AUG 01...	1230	970	380	367	8.6	8.3	30.0	23.0	31	8.6	140	15
SEP 17...	1315	541	390	390	8.4	8.3	30.0	20.0	80	8.4	160	47

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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD - (MG/L - CACO3) (99430)	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 09...	36	6.5	17	.7	3.2	130	.000	--	110	42	5.1	.40
JAN 07...	40	6.5	17	.7	2.3	140	.000	--	--	48	4.9	.30
MAR 01...	38	7.1	20	.8	2.5	94	20	--	110	60	5.3	.30
JUN 04...	23	4.2	10	.5	2.4	69	.000	56	56	27	2.9	.20
AUG 01...	42	7.5	23	.9	3.4	140	4.0	120	120	51	7.1	.40
SEP 17...	49	8.2	25	.9	3.4	130	2.0	110	--	64	7.9	.60

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

## WATER-QUALITY RECORDS

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SILICA, DIS- SOLVED (MG/L SI02) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CYANIDE TOTAL (MG/L AS CN) (00720)
NOV 09...	20	179	190	<.10	.010	.150	.030	--
JAN 07...	52	207	240	.20	<.010	.070	.030	--
MAR 01...	19	213	240	.19	.070	.130	.030	--
JUN 04...	17	131	120	<.10	.020	.050	.040	<.01
AUG 01...	21	229	230	<.10	.060	.110	.010	<.01
SEP 17...	19	239	250	<.10	.110	.170	.010	<.01

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	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)	
JAN 07...	1115	20	1	110	<.5	--	1	3	<3	5	26	
MAR 01...	1100	--	--	--	--	30	--	--	--	--	32	
JUN 04...	1430	250	<1	37	<.5	10	<1	<1	<3	6	55	
AUG 01...	1230	20	2	70	<.5	--	<1	<1	<3	6	10	
SEP 17...	1315	20	2	91	<.5	50	<1	<1	<3	3	19	
DATE	TIME	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)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
JAN 07...	4	21	14	<.1	<10	3	<1	<1	210	8	6	
MAR 01...	--	--	--	--	--	--	--	--	--	--	--	
JUN 04...	8	6	2	<.1	<10	<1	<1	<1	160	<6	13	
AUG 01...	3	15	4	.1	<10	1	<1	<1	330	<6	19	
SEP 17...	<1	18	6	<.1	<10	1	<1	<1	350	<6	71	

## CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	BORON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS B) (01023)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR) (01029)
NOV 09...	1000	35	8.0	170	1	40	<1	3

DATE	TIME	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 AS MN) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS MO) (01063)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
NOV 09...		<10	2	830	<10	46	<.10	<1.0	4

## RIO GRANDE BASIN

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

## WATER-QUALITY RECORDS

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 09...	1000	4.9	5.8	<2.6	7.4	<2.2	6.4	.09	2.7
JUN 04...	1430	<3.3	4.9	3.1	4.2	2.7	3.6	.06	1.1

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
JUN 04...	1430	--	--	--	--	--	--	--	--	--
SEP 17...	1315	<.1	<.010	<.1	<.010	<.010	<.010	<.01	<.010	<.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)
JUN 04...	--	--	--	--	--	--	--	--	--
SEP 17...	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01	<.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)
JUN 04...	--	--	--	<.01	<.01	<.01	--	--	--
SEP 17...	<.01	<1	<.01	--	--	--	<.1	<.10	<.01

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 09...	1000	42	160
JAN 07...	1115	13	27
MAR 01...	1100	0	65
JUN 04...	1430	48	68
AUG 01...	1230	170	280
SEP 17...	1315	330	110

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

## WATER-QUALITY RECORDS

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)
NOV									
09...	1000	1160	7.5	1190	3730	--	--	--	19
JAN									
07...	1115	1010	3.0	258	704	--	--	--	--
MAR									
01...	1100	1340	8.5	1480	5350	--	--	--	11
14...	0630	3820	5.0	7240	74700	36	47	59	67
APR									
29...	0635	8520	8.5	2120	48800	16	18	28	51
MAY									
02...	0635	8590	10.0	2130	49400	--	--	--	40
JUN									
04...	1430	6020	13.0	412	6700	--	--	--	36
JUL									
16...	0630	1430	19.0	8460	32700	64	69	91	--
30...	0630	878	18.5	1600	3790	--	--	--	--
AUG									
01...	1230	970	23.0	96	251	--	--	--	--
11...	0720	1480	18.0	11000	44000	45	58	84	97
25...	0740	1300	17.5	18800	66000	46	57	81	97
SEP									
17...	1315	541	20.0	307	448	--	--	--	--
19...	0830	793	15.0	7290	15600	50	62	80	92
20...	1830	1080	15.0	8280	24100	23	28	43	66
21...	1700	1060	18.0	5490	15700	33	38	56	72

DATE	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM (70335)
NOV									
09...	56	83	97	100	--	--	--	--	--
JAN									
07...	--	--	--	--	13	30	85	99	100
MAR									
01...	45	83	97	100	--	--	--	--	--
14...	83	99	100	--	--	--	--	--	--
APR									
29...	75	93	100	--	--	--	--	--	--
MAY									
02...	62	83	100	--	--	--	--	--	--
JUN									
04...	52	77	98	100	--	--	--	--	--
JUL									
16...	--	--	--	--	99	99	100	--	--
30...	--	--	--	--	98	99	99	100	--
AUG									
01...	--	--	--	--	81	--	--	--	--
11...	99	100	--	--	--	--	--	--	--
25...	99	100	--	--	--	--	--	--	--
SEP									
17...	--	--	--	--	66	--	--	--	--
19...	99	100	--	--	--	--	--	--	--
20...	90	97	100	--	--	--	--	--	--
21...	86	91	96	100	--	--	--	--	--

## RIO GRANDE BASIN

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

## WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	401	364	357	307	224	331	307	248	190	255	352	308
2	386	372	331	290	221	314	289	258	196	273	363	305
3	388	360	369	290	237	307	280	256	199	279	377	305
4	397	364	364	298	218	302	292	240	200	285	332	298
5	375	368	329	307	214	304	302	232	216	298	312	302
6	364	382	341	308	222	305	299	226	208	309	327	305
7	368	386	346	308	229	317	299	222	203	335	326	302
8	361	318	323	310	223	326	285	177	203	348	338	303
9	357	302	323	308	215	320	274	220	199	356	335	302
10	368	300	313	316	265	324	261	231	196	315	356	298
11	376	298	341	321	313	320	254	224	185	334	413	294
12	377	290	311	319	237	373	239	228	190	350	373	302
13	368	286	308	316	297	303	243	231	215	352	396	315
14	374	277	305	308	242	349	240	237	219	346	414	326
15	376	286	301	293	288	318	232	241	230	333	432	323
16	371	286	317	308	267	320	228	252	220	400	446	328
17	375	289	316	305	228	326	226	257	211	335	436	359
18	416	286	323	303	273	329	225	263	207	332	435	389
19	373	284	319	300	260	401	223	263	207	329	444	372
20	364	298	314	303	224	338	218	252	211	333	449	380
21	363	291	314	305	215	328	231	240	211	331	451	356
22	363	288	314	316	290	328	237	224	220	328	356	366
23	367	290	314	305	317	325	247	213	224	340	355	353
24	362	293	319	313	312	326	250	215	220	370	339	330
25	369	298	323	313	345	326	256	208	238	385	464	339
26	367	298	316	310	321	311	256	211	225	391	330	323
27	368	309	323	313	327	295	256	208	232	396	326	328
28	363	302	316	313	297	308	250	201	232	384	322	337
29	360	315	335	313	---	308	249	197	227	349	327	346
30	368	324	321	310	---	276	234	190	242	360	370	359
31	368	---	316	313	---	305	---	187	---	359	313	---
MEAN	373	313	325	308	261	321	256	227	213	338	374	328
WTR YR 1985	MEAN	304	MAX	464	MIN	177						

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	364	354	359	---	---	---	---	---	---
2	---	---	---	380	358	368	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	320	306	313
8	---	---	---	---	---	---	---	---	---	320	312	314
9	---	---	---	304	294	300	---	---	---	318	304	312
10	---	---	---	314	296	306	---	---	---	320	308	315
11	---	---	---	312	288	300	---	---	---	324	314	320
12	---	---	---	300	280	290	---	---	---	326	316	322
13	---	---	---	300	282	291	---	---	---	328	306	318
14	---	---	---	298	282	291	---	---	---	326	306	315
15	---	---	---	298	292	294	---	---	---	316	268	299
16	---	---	---	302	292	297	---	---	---	322	302	313
17	---	---	---	298	282	290	---	---	---	316	300	307
18	---	---	---	296	284	290	---	---	---	318	300	309
19	---	---	---	---	---	---	---	---	---	320	296	308
20	---	---	---	---	---	---	---	---	---	318	308	312
21	---	---	---	---	---	---	---	---	---	320	308	313
22	---	---	---	---	---	---	---	---	---	326	314	321
23	---	---	---	---	---	---	---	---	---	332	308	318
24	364	362	364	---	---	---	---	---	---	326	320	324
25	370	362	366	---	---	---	---	---	---	326	314	322
26	376	362	368	---	---	---	---	---	---	326	322	323
27	370	360	365	---	---	---	---	---	---	326	322	324
28	368	356	361	---	---	---	---	---	---	328	320	323
29	364	350	357	---	---	---	---	---	---	330	322	327
30	368	358	363	---	---	---	---	---	---	330	318	324
31	368	354	360	---	---	---	---	---	---	334	318	324
MONTH	376	350	363	380	280	306				334	268	317



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

## WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	344	330	336	324	310	316	256	246	251
2	---	---	---	332	320	326	314	266	285	258	248	254
3	---	---	---	330	316	322	286	252	268	256	246	252
4	---	---	---	318	306	312	304	270	284	256	246	251
5	---	---	---	324	304	312	306	282	294	250	228	237
6	---	---	---	326	316	322	308	284	296	230	218	224
7	---	---	---	332	324	328	304	282	291	230	212	221
8	---	---	---	334	326	329	290	266	275	228	214	222
9	---	---	---	332	328	330	298	266	283	226	214	221
10	---	---	---	334	326	330	286	264	276	226	218	223
11	---	---	---	332	306	319	280	258	269	226	212	219
12	---	---	---	318	260	292	276	244	261	228	218	223
13	---	---	---	304	266	282	254	242	250	234	220	228
14	---	---	---	316	288	302	256	242	249	238	226	232
15	---	---	---	324	302	314	258	244	253	272	222	249
16	---	---	---	334	318	325	254	242	248	---	---	---
17	---	---	---	338	326	333	266	234	249	---	---	---
18	---	---	---	340	324	332	268	244	255	---	---	---
19	---	---	---	340	328	333	248	242	246	---	---	---
20	---	---	---	336	326	331	250	232	240	---	---	---
21	---	---	---	340	324	333	246	240	243	---	---	---
22	320	296	306	340	328	334	250	246	249	---	---	---
23	324	308	318	340	324	330	260	248	252	---	---	---
24	340	322	329	336	320	328	260	246	254	---	---	---
25	344	336	340	336	324	328	260	254	258	---	---	---
26	346	334	339	328	294	307	262	250	257	---	---	---
27	348	328	339	312	296	300	260	250	255	---	---	---
28	342	324	334	316	310	313	260	252	256	---	---	---
29	---	---	---	316	310	314	258	242	251	---	---	---
30	---	---	---	310	280	288	252	238	245	---	---	---
31	---	---	---	324	288	310	---	---	---	---	---	---
MONTH	348	296	329	344	260	319	324	232	264	272	212	234

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.5	8.0	1.5	2.0	.0	10.0	6.0	11.0	14.0	18.0	20.0	16.0
2	14.5	7.0	5.0	2.0	.5	6.0	7.0	10.0	14.0	19.0	20.0	17.0
3	15.0	9.0	4.0	.0	.0	6.0	8.0	11.0	14.5	18.5	23.0	14.0
4	12.0	6.0	3.0	2.0	1.5	7.0	8.0	12.5	14.5	19.0	19.0	15.5
5	12.0	11.0	4.5	.5	2.0	8.0	7.0	13.0	13.5	19.0	19.0	15.0
6	13.0	9.0	4.0	2.0	3.0	5.0	8.5	13.0	13.0	19.0	19.0	14.5
7	12.0	5.5	4.0	2.5	3.0	5.0	8.0	12.0	15.0	19.0	19.0	14.0
8	12.0	6.0	4.0	4.0	4.5	8.0	8.0	12.0	16.0	19.5	20.0	13.5
9	15.0	6.0	5.0	4.0	2.0	7.0	9.0	13.0	17.0	19.0	19.0	14.0
10	16.0	6.0	6.0	3.5	3.5	8.0	9.0	12.5	17.0	19.0	20.0	14.0
11	15.0	4.0	6.0	2.0	5.0	7.5	9.0	12.0	16.5	20.0	18.0	14.5
12	15.0	4.0	6.0	1.0	6.0	7.0	8.5	11.0	17.0	20.0	18.0	15.5
13	16.0	8.0	5.0	1.5	7.0	4.0	9.0	11.0	16.5	21.0	17.5	13.0
14	14.0	5.5	4.0	2.0	7.0	5.0	9.5	9.0	16.0	19.5	18.0	16.0
15	9.5	5.0	2.5	2.0	8.0	5.0	9.0	9.0	17.0	19.5	19.0	16.5
16	9.5	4.0	2.5	4.0	4.5	5.0	10.0	11.0	17.0	19.0	18.0	15.0
17	11.5	5.5	1.0	3.0	4.5	5.0	10.5	12.0	17.5	19.5	18.0	15.5
18	11.0	5.0	3.0	4.5	5.5	5.5	11.0	12.0	17.0	19.5	19.0	17.0
19	7.5	4.5	2.5	2.0	8.0	6.5	9.5	11.0	17.5	18.5	18.0	15.0
20	6.5	6.5	4.5	2.0	8.5	5.0	8.0	11.0	17.0	19.0	20.0	15.0
21	8.0	6.0	4.5	2.0	7.5	5.5	9.5	11.0	18.0	18.5	19.5	18.0
22	9.5	3.5	1.0	4.5	7.0	6.0	8.0	11.5	18.5	18.5	18.0	17.0
23	7.0	4.0	1.5	5.5	3.0	5.0	7.0	11.0	18.0	19.0	18.0	12.0
24	8.0	5.5	1.0	4.5	3.0	6.0	8.0	12.0	18.5	19.0	18.0	10.0
25	11.0	5.0	.5	5.5	7.5	6.5	9.5	13.0	19.0	19.0	17.5	11.0
26	10.5	3.5	4.0	3.0	8.0	8.0	10.0	14.5	17.0	19.0	18.0	11.0
27	9.0	3.0	3.5	4.0	9.0	7.0	9.5	14.5	19.0	19.0	17.0	11.0
28	7.0	4.0	6.5	6.0	10.0	6.5	10.0	14.0	21.0	20.0	17.0	13.0
29	7.0	4.5	5.0	6.0	---	7.0	8.5	14.5	21.0	18.5	16.5	12.5
30	13.0	4.0	4.0	5.0	---	5.0	8.0	15.0	21.0	18.5	18.0	10.5
31	10.0	---	2.0	1.0	---	4.5	---	15.0	---	19.0	16.5	---
MEAN	11.5	5.5	3.5	3.0	5.0	6.0	8.5	12.0	17.0	19.0	18.5	14.0
WTR YR 1985		MEAN	10.5	MAX	23.0	MIN	.0					

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

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	17.0	13.0	15.0	12.0	7.5	10.0	3.0	.5	2.0	3.5	.5	2.0
2	18.5	14.0	16.0	11.0	7.0	9.0	4.5	1.0	2.5	1.5	---	---
3	16.5	12.5	14.0	10.5	6.5	8.5	3.5	1.0	2.5	.5	---	---
4	14.0	11.5	13.0	10.0	6.0	8.0	3.0	1.5	2.0	1.5	---	---
5	16.5	11.5	14.0	9.5	5.5	7.5	4.0	1.0	2.0	2.5	---	---
6	15.5	12.0	14.0	8.5	5.5	7.0	4.0	1.0	2.5	2.5	.0	1.5
7	16.5	12.0	14.5	9.0	5.5	7.5	3.5	.5	2.5	2.5	1.0	2.5
8	16.5	12.0	14.5	9.0	6.0	7.5	3.5	1.5	2.5	3.5	2.5	3.0
9	16.0	12.0	14.5	8.5	5.5	7.0	6.0	3.0	4.0	4.0	2.0	3.0
10	16.0	11.5	14.0	6.5	3.5	5.0	5.5	2.5	4.0	3.5	1.5	2.5
11	16.0	11.5	14.0	6.5	3.0	5.0	6.0	4.5	5.0	3.0	1.0	1.5
12	15.0	13.0	14.0	7.0	3.5	5.0	5.5	4.5	5.0	2.5	---	---
13	15.5	10.5	13.0	7.0	4.0	5.5	5.0	3.5	4.5	2.0	---	---
14	14.5	11.5	12.5	8.0	5.0	6.5	4.5	2.5	3.5	1.5	---	---
15	11.5	8.0	9.0	7.5	4.5	6.0	3.0	1.0	2.0	2.0	---	---
16	9.5	5.5	7.5	6.5	4.0	5.5	3.0	.5	2.0	3.5	.5	2.0
17	11.0	7.0	8.5	6.0	5.5	5.5	2.5	---	---	3.0	.0	1.5
18	10.5	7.0	9.0	6.5	4.5	5.5	2.5	---	---	3.5	.0	2.0
19	8.5	5.5	7.0	7.0	4.5	5.5	2.5	1.0	1.5	3.5	.5	2.0
20	9.5	6.0	7.5	6.0	3.5	5.0	4.0	2.0	2.5	2.5	.0	1.5
21	9.0	7.5	8.0	5.5	3.0	4.5	4.0	1.0	3.0	2.0	---	---
22	9.5	6.5	8.0	5.0	3.0	4.0	3.5	---	---	3.5	.0	2.0
23	8.5	7.0	8.0	6.0	3.0	4.5	1.5	---	---	5.0	2.0	3.0
24	8.0	6.5	7.5	6.0	5.5	5.5	1.5	---	---	4.0	2.0	3.0
25	10.5	6.0	8.0	6.0	4.5	5.5	1.5	---	---	5.5	2.5	3.5
26	10.0	6.5	8.5	5.0	2.5	3.0	3.0	.0	1.5	3.5	3.0	3.0
27	11.0	8.5	9.5	3.0	.5	2.0	3.0	1.5	2.5	5.0	3.0	4.0
28	10.5	6.5	9.0	3.0	---	---	6.0	3.5	4.5	6.0	2.5	4.0
29	11.0	7.0	9.0	4.0	1.5	2.5	6.0	4.0	5.0	6.0	3.0	4.0
30	11.5	7.0	9.5	3.5	1.0	2.5	5.0	2.5	3.5	5.0	2.5	3.5
31	12.0	7.5	10.0	---	---	---	4.5	1.5	3.0	2.5	---	---
MONTH	18.5	5.5	11.0	12.0	.5	5.5	6.0	.0	3.0	6.0	.0	2.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	.0	---	---	8.5	5.0	7.0	9.5	5.5	7.5	11.5	10.0	11.0
2	.0	---	---	8.5	5.0	7.0	11.5	6.5	9.0	13.5	9.5	11.5
3	.0	---	---	7.0	4.5	6.0	12.5	8.0	10.5	14.0	11.0	12.5
4	1.5	---	---	6.5	2.5	4.5	11.0	7.5	9.5	14.0	12.0	13.0
5	1.5	---	---	7.0	2.0	5.0	11.0	6.5	9.0	14.5	12.0	13.0
6	2.5	---	---	6.0	4.5	5.5	11.5	7.0	9.5	14.5	12.0	13.0
7	3.0	---	---	6.0	4.0	5.0	11.5	7.5	9.5	14.5	11.5	13.0
8	3.5	---	---	7.0	3.5	5.5	11.0	7.5	9.5	15.0	12.0	13.5
9	4.5	1.0	2.5	9.0	5.5	7.5	11.5	8.5	10.0	14.0	12.0	13.0
10	5.5	2.5	3.5	9.0	6.5	8.0	11.5	8.5	10.0	14.5	12.0	13.0
11	4.5	.5	2.5	9.0	7.0	8.0	11.5	8.5	10.0	13.0	10.5	12.0
12	5.0	1.0	3.0	8.5	4.5	6.5	11.0	8.5	10.0	13.0	10.0	11.5
13	6.5	1.5	4.0	8.0	3.0	5.5	12.0	8.0	10.0	11.5	10.0	10.5
14	6.5	2.5	4.5	7.5	4.0	6.0	12.0	8.5	10.5	12.5	8.5	10.5
15	7.0	2.5	5.0	6.5	4.5	5.5	12.5	9.0	10.5	13.0	9.0	11.0
16	7.5	3.0	5.5	8.5	4.0	6.0	11.5	9.5	10.5	13.0	11.0	12.0
17	8.0	3.5	5.5	9.0	4.5	7.0	12.5	10.0	11.0	13.5	11.5	12.5
18	6.5	4.5	5.5	9.5	5.0	7.5	12.0	10.0	11.0	13.0	11.5	12.5
19	7.0	3.0	5.0	7.5	5.5	6.0	10.5	9.0	10.0	13.5	11.0	12.5
20	8.0	4.5	6.5	9.0	4.5	6.5	11.0	8.0	9.5	13.5	11.0	12.5
21	6.5	5.5	6.0	8.5	5.0	7.0	10.0	8.5	9.0	13.0	11.0	12.0
22	6.5	4.0	5.5	8.5	5.0	7.0	9.0	8.0	8.5	13.0	11.5	12.0
23	5.0	2.5	4.0	9.0	4.0	6.5	10.5	6.5	8.5	14.5	11.5	13.0
24	6.5	3.0	4.5	9.5	5.0	7.5	11.5	8.0	10.0	15.0	12.0	13.5
25	6.5	3.0	5.0	9.5	6.0	8.0	11.5	9.0	10.5	15.5	13.0	14.5
26	7.0	3.5	5.5	9.5	7.0	8.5	10.5	9.5	10.0	17.0	14.0	15.5
27	8.0	4.0	6.0	8.0	6.5	7.5	12.0	8.5	10.5	16.5	14.0	15.5
28	9.5	5.5	7.5	10.0	6.0	8.0	11.0	9.0	9.5	16.5	13.5	15.0
29	---	---	---	8.5	5.5	6.5	10.0	8.0	9.0	16.5	14.0	15.5
30	---	---	---	7.0	3.0	5.0	12.5	8.0	10.0	16.5	14.5	15.0
31	---	---	---	8.0	4.0	6.0	---	---	---	15.5	14.0	15.0
MONTH	9.5	.5	5.0	10.0	2.0	6.5	12.5	5.5	10.0	17.0	8.5	13.0

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

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	16.0	13.5	15.0	20.5	16.0	18.0	23.0	18.5	20.5	18.0	14.5	16.5
2	16.5	13.5	15.0	19.5	16.5	18.0	20.0	18.5	19.0	18.0	15.0	16.5
3	16.0	13.5	15.0	20.5	16.0	18.0	22.0	18.0	19.5	17.0	14.0	15.5
4	14.5	12.5	14.0	21.5	16.5	19.0	21.5	17.5	19.5	17.5	13.5	15.5
5	12.5	11.5	12.0	22.0	17.0	19.5	21.5	17.5	19.5	17.5	13.0	15.5
6	15.5	11.0	13.0	22.0	17.5	19.5	20.0	17.0	18.5	17.0	13.0	15.0
7	17.0	13.5	15.5	21.0	17.5	19.5	21.5	17.5	19.5	16.0	12.5	14.5
8	17.0	15.5	16.0	21.0	18.0	19.5	21.0	18.5	19.5	16.5	12.0	14.5
9	17.5	15.5	16.5	21.0	17.5	19.5	22.5	17.5	20.0	15.5	12.5	14.5
10	18.0	15.5	16.5	22.5	17.5	20.0	22.5	17.5	20.5	16.0	12.5	14.5
11	17.5	15.5	16.5	22.0	19.0	20.5	20.5	16.0	18.0	15.0	12.5	13.5
12	18.0	15.5	16.5	23.0	19.0	21.0	21.5	16.0	19.0	16.5	12.5	14.5
13	18.0	15.5	16.5	22.0	19.0	20.5	22.0	16.5	19.0	17.5	12.0	14.5
14	18.0	15.0	16.5	21.0	18.0	19.5	22.0	16.5	19.5	19.0	13.5	16.0
15	19.0	16.0	17.5	20.5	17.5	19.0	20.5	17.5	19.0	19.0	15.0	16.5
16	19.0	16.0	17.5	21.0	17.0	19.0	21.5	16.5	19.0	18.5	14.0	16.0
17	19.0	16.5	17.5	20.0	18.0	19.0	22.0	17.0	20.0	20.0	14.0	17.0
18	18.5	16.5	17.0	20.0	18.0	19.0	20.5	17.5	19.0	18.0	15.0	16.5
19	18.5	16.5	17.0	20.5	17.0	18.5	22.5	16.0	19.0	16.5	14.0	15.0
20	19.0	15.5	17.0	18.5	17.0	18.0	22.5	18.0	20.5	15.5	12.0	14.0
21	19.5	16.0	17.5	21.0	16.5	18.5	20.0	17.5	19.0	16.0	11.5	13.5
22	18.5	16.5	17.5	20.5	17.0	19.0	21.0	16.5	18.5	15.5	11.5	14.0
23	19.0	16.0	17.5	21.0	17.5	19.0	20.5	16.5	19.0	15.0	10.5	13.0
24	19.5	16.5	18.0	22.0	17.5	20.0	19.5	16.0	18.0	14.0	10.0	12.0
25	19.5	17.5	18.5	21.5	17.5	19.5	19.0	15.5	17.5	15.0	10.0	12.5
26	18.5	16.0	17.0	22.0	17.5	19.5	19.0	15.5	17.5	16.0	10.0	13.0
27	18.5	15.0	16.5	21.5	17.5	19.5	18.0	15.5	17.0	15.0	10.5	13.0
28	19.0	15.5	17.0	20.0	18.0	19.0	17.5	15.0	16.5	15.5	11.5	13.5
29	19.0	16.0	17.5	19.5	17.0	18.0	19.0	14.5	17.0	15.5	11.5	13.5
30	19.5	16.5	18.0	21.0	16.5	18.5	19.5	16.5	18.0	14.0	9.0	11.5
31	---	---	---	22.0	17.5	19.5	19.0	15.0	17.0	---	---	---
MONTH	19.5	11.0	16.5	23.0	16.0	19.0	23.0	14.5	19.0	20.0	9.0	14.5
YEAR	23.0	.0	11.0									

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	93	105	474	905	490	1080	310	904	73	142	1020	3610
2	91	99	797	1810	420	920	349	980	202	364	562	1960
3	520	594	534	1230	435	945	323	816	299	576	579	1990
4	2210	3470	600	1400	309	667	339	841	422	901	510	1710
5	772	1510	446	1080	333	739	451	1230	385	757	229	730
6	538	1100	802	2340	343	779	236	650	353	655	298	966
7	508	1040	1140	3450	332	868	226	622	353	650	296	975
8	351	710	1260	3880	556	1610	102	297	269	527	219	710
9	346	695	1050	3260	582	1680	745	2470	260	537	142	464
10	1640	2590	1080	3210	498	1450	443	1420	231	495	213	730
11	1730	2530	733	2160	614	1920	525	1640	212	429	493	1900
12	1200	1830	589	1770	441	1540	633	1950	226	453	3690	26200
13	1480	2630	427	1230	697	2390	540	1680	162	327	4080	36800
14	1580	2590	648	1980	682	2430	483	1470	262	568	5640	55400
15	808	1410	919	3080	384	1300	557	1710	401	981	2880	27800
16	1110	2290	842	2890	244	751	448	1390	327	757	1940	17900
17	521	958	696	2200	452	1390	396	1240	365	845	2180	19400
18	443	807	855	2560	329	986	250	776	553	1570	2350	20500
19	769	1670	746	2180	303	892	302	770	1900	5020	2450	22300
20	869	1910	349	999	602	1950	201	486	938	2580	1850	16500
21	829	1870	394	1150	610	1760	336	796	1260	5100	1120	9800
22	653	1470	659	1920	263	669	268	611	1230	5650	564	4750
23	899	2220	390	1120	305	703	242	547	1510	7620	1350	11200
24	845	2120	271	732	439	1030	264	607	1500	7250	1180	9630
25	642	1390	457	1230	332	767	215	488	968	4500	1750	14400
26	702	1730	363	980	212	495	283	645	755	3100	1700	10500
27	837	2220	281	739	309	736	324	740	692	1790	2150	12900
28	1180	3180	236	595	471	1390	257	593	549	1700	2440	16700
29	1580	4310	295	638	688	2150	213	486	---	---	1310	9130
30	617	1370	430	909	345	997	155	344	---	---	1050	4650
31	455	915	---	---	367	1040	77	164	---	---	1370	8540
TOTAL	---	53333	---	53627	---	38024	---	29363	---	55844	---	370765



## 08315500 MCCLURE RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'18", long 105°50'06", in NE&SW¼, sec.24, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, at McClure Dam on Santa Fe River, 2.1 mi upstream from Nichols Reservoir, 5.8 mi east of Santa Fe, and at mile 37.1.

DRAINAGE AREA.--17.4 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Elevation of gage is 7,788 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.--Estimated contents: Jan. 4-6. 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 YEARS.--Maximum contents, 2,690 acre-ft, Apr. 28, 29, May 4, 5; maximum gage height, 97.50 ft, Apr. 28; minimum, 1,580 acre-ft, Sept. 18, 19, gage height, 80.42 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)  
(Based on survey by Public Service Co. of New Mexico in 1947)

75	1,280	90	2,160
80	1,550	95	2,500
85	1,840	100	2,860

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1940	1890	2000	2200	2530	2640	2640	2680	2670	2650	2580	1990
2	1920	1890	2000	2250	2540	2640	2650	2690	2680	2650	2570	1960
3	1910	1901	2000	2300	2540	2640	2650	2680	2670	2650	2550	1930
4	1900	1910	2000	2350	2540	2640	2650	2690	2670	2650	2550	1900
5	1890	1910	2010	2350	2550	2640	2660	2690	2670	2650	2540	1870
6	1870	1920	2010	2360	2550	2640	2660	2680	2670	2650	2520	1840
7	1860	1920	2010	2380	2550	2640	2660	2680	2670	2650	2510	1810
8	1850	1920	2010	2390	2560	2640	2660	2680	2680	2650	2500	1770
9	1830	1930	2010	2400	2560	2640	2660	2680	2680	2650	2490	1740
10	1820	1930	2020	2400	2560	2650	2670	2680	2680	2650	2470	1710
11	1810	1940	2020	2410	2560	2660	2670	2680	2680	2650	2460	1690
12	1810	1940	2020	2420	2570	2670	2670	2680	2670	2650	2440	1660
13	1810	1940	2030	2420	2570	2660	2670	2670	2670	2640	2420	1640
14	1810	1950	2040	2430	2570	2660	2670	2670	2670	2650	2410	1620
15	1820	1950	2040	2440	2580	2650	2670	2670	2670	2650	2390	1610
16	1820	1950	2040	2440	2590	2650	2670	2670	2670	2640	2370	1600
17	1820	1950	2040	2440	2600	2650	2670	2660	2670	2640	2350	1590
18	1820	1960	2050	2450	2610	2650	2670	2660	2660	2640	2340	1580
19	1830	1960	2050	2460	2610	2650	2670	2660	2660	2630	2320	1580
20	1830	1960	2060	2460	2640	2650	2670	2660	2660	2620	2310	1590
21	1830	1970	2060	2460	2640	2650	2660	2660	2660	2610	2320	1620
22	1830	1980	1950	2470	2640	2650	2660	2660	2660	2600	2310	1630
23	1840	1980	1900	2470	2640	2650	2660	2660	2660	2600	2280	1630
24	1840	1980	1870	2480	2640	2650	2660	2660	2660	2600	2250	1630
25	1840	1980	1870	2500	2640	2650	2660	2670	2660	2620	2210	1630
26	1850	1980	1900	2510	2640	2650	2660	2670	2660	2630	2180	1630
27	1850	1980	1900	2510	2640	2650	2660	2670	2650	2620	2150	1620
28	1860	1990	1940	2520	2640	2650	2690	2680	2650	2610	2120	1610
29	1870	1990	1980	2520	---	2650	2690	2680	2650	2610	2080	1610
30	1870	1990	2020	2530	---	2640	2680	2680	2650	2600	2050	1600
31	1880	---	2120	2530	---	2650	---	2680	---	2590	2020	---
MAX	1940	1990	2120	2530	2640	2670	2690	2690	2680	2650	2580	1990
MIN	1810	1890	1870	2200	2530	2640	2640	2660	2650	2590	2020	1580
(†)	85.60	87.40	89.37	95.13	96.77	96.83	97.37	97.27	96.94	95.99	87.80	80.69
(††)	-70	+110	+130	+410	+110	+10	+30	0	-30	-60	-570	-420

CAL YR 1984 MAX 2660 MIN 1230 (††) -350  
WTR YR 1985 MAX 2690 MIN 1580 (††) +420

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

## 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 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1910, January 1913 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1953, published as Santa Fe Creek near Santa Fe.

REVISED RECORDS.--WSP 1512: 1933, 1936-37(M), 1942, drainage area. WSP 1732: 1923, 1925. WDR NM-75-1: 1927.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 7,718 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1312 for history of changes prior to Oct. 1, 1947.

REMARKS.--Estimated daily discharges: Dec. 9 to Jan. 7 and Apr. 30 to May 10. 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.--72 years, 8.06 ft<sup>3</sup>/s, 5,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft<sup>3</sup>/s, Aug. 14, 1921, gage height, 5.17 ft, site and datum then in use, from rating curve extended above 150 ft<sup>3</sup>/s; minimum, 0.05 ft<sup>3</sup>/s, Apr. 7, 8, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 1,000 ft<sup>3</sup>/s occurred Aug. 19, 1872, and Sept. 29 or 30, 1904. Without regulation the flood of Sept. 23, 1929, might have exceeded 1,500 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 174 ft<sup>3</sup>/s, April 29, gage height, 3.46 ft; minimum, 1.8 ft<sup>3</sup>/s many days.

DISCHARGE, IN 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	10	3.5	1.8	2.1	1.9	9.5	14	94	52	14	12	16
2	10	3.5	1.8	2.1	1.9	10	13	94	51	12	12	16
3	10	3.5	1.8	2.1	1.9	12	15	95	49	12	12	16
4	11	3.5	1.8	2.1	1.9	11	19	95	46	11	12	16
5	11	3.5	1.8	2.1	1.9	10	28	96	44	9.9	12	16
6	11	3.5	1.8	2.1	1.9	9.9	31	96	38	9.0	12	16
7	10	3.3	1.8	2.1	1.9	9.5	33	92	41	8.9	12	16
8	10	2.9	1.8	2.1	1.9	8.6	37	90	48	8.7	12	16
9	10	2.4	1.8	2.1	1.9	8.0	39	89	55	7.9	12	16
10	10	2.4	1.8	2.1	1.9	9.3	43	87	55	7.4	12	16
11	6.8	2.4	1.8	2.1	1.9	32	44	71	54	7.3	12	16
12	4.0	2.4	1.8	2.1	1.9	68	43	62	49	6.6	12	16
13	3.9	2.4	1.8	2.1	1.9	49	40	55	45	6.3	12	12
14	3.8	2.4	1.8	2.1	1.9	41	42	45	44	6.1	12	9.2
15	3.8	2.4	1.9	2.1	1.9	34	47	39	41	7.0	12	9.4
16	3.8	2.4	1.9	2.1	1.9	29	39	35	40	6.5	11	9.2
17	3.7	2.4	1.9	2.1	1.9	24	53	33	37	5.6	11	9.1
18	3.5	2.4	1.9	2.1	1.9	21	59	34	32	8.5	11	9.1
19	3.5	2.5	1.9	2.1	1.9	21	53	34	29	10	11	9.2
20	3.5	2.3	1.9	2.1	2.4	19	38	33	28	9.9	7.1	9.2
21	3.5	1.8	2.0	2.0	7.3	18	30	32	27	9.9	2.6	9.5
22	3.5	1.8	2.0	1.9	9.5	18	27	33	27	9.9	9.2	9.3
23	3.5	1.8	2.0	1.9	9.3	17	22	32	26	9.4	17	9.3
24	3.5	1.8	2.0	1.9	8.7	16	19	31	24	5.2	17	9.3
25	3.5	1.8	2.0	1.9	8.4	17	17	32	27	2.3	17	9.3
26	3.5	1.8	2.0	1.9	8.2	19	18	36	23	7.5	17	9.3
27	3.5	1.8	2.0	1.9	8.0	21	19	42	20	12	17	9.3
28	3.5	1.8	2.0	1.9	8.5	20	59	49	18	12	16	9.3
29	3.5	1.8	2.0	1.9	---	20	99	53	16	12	17	9.3
30	3.5	1.8	2.0	1.9	---	18	94	56	15	12	16	9.3
31	3.5	---	2.0	1.9	---	16	---	56	---	12	16	---
TOTAL	181.8	74.0	58.6	63.0	106.4	635.8	1134	1821	1101	278.8	392.9	361.6
MEAN	5.86	2.47	1.89	2.03	3.80	20.5	37.8	58.7	36.7	8.99	12.7	12.1
MAX	11	3.5	2.0	2.1	9.5	68	99	96	55	14	17	16
MIN	3.5	1.8	1.8	1.9	1.9	8.0	13	31	15	2.3	2.6	9.1
AC-FT	361	147	116	125	211	1260	2250	3610	2180	553	779	717
CAL YR 1984	TOTAL	2652.3		MEAN	7.25	MAX	56	MIN	1.8	AC-FT	5260	
WTR YR 1985	TOTAL	6208.9		MEAN	17.0	MAX	99	MIN	1.8	AC-FT	12320	

## 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 mi<sup>2</sup>.

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

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

REMARKS.--No estimated daily contents. 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, 728 acre-ft, Apr. 28, gage height, 168.42 ft; minimum, 328 acre-ft, Feb. 19, 20, gage height, 152.54 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)  
(Based on survey by Public Service Co. of New Mexico in 1943)

145	202	160	491
150	279	165	625
155	375	170	776

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	390	527	542	535	402	451	699	719	710	692	544	527
2	398	533	531	538	397	470	698	720	710	690	544	536
3	405	539	525	540	392	490	700	718	709	689	552	550
4	420	544	521	542	387	511	703	718	709	690	557	559
5	428	547	519	543	382	529	707	718	707	686	557	567
6	435	547	517	543	376	544	708	719	706	678	553	572
7	443	548	514	543	372	556	709	718	704	671	548	575
8	451	548	512	544	368	566	710	716	705	666	543	582
9	463	547	508	544	364	576	709	717	707	661	544	587
10	477	547	505	543	359	595	712	717	706	650	547	590
11	482	548	503	533	355	669	713	716	705	640	552	598
12	481	549	500	513	351	722	715	714	703	628	554	608
13	479	553	498	502	347	715	714	711	702	616	551	609
14	477	555	497	501	343	711	713	709	702	604	545	601
15	477	558	494	498	339	708	714	706	701	592	538	597
16	474	564	491	491	335	706	713	705	700	580	534	594
17	473	566	489	486	333	704	714	704	698	568	527	595
18	471	567	487	480	330	703	715	704	694	561	523	597
19	470	567	485	475	328	703	712	705	700	558	518	599
20	472	567	483	469	328	703	710	704	704	555	503	603
21	473	568	480	463	337	703	708	705	701	555	478	609
22	474	568	478	458	353	702	706	706	702	557	465	611
23	474	569	475	452	368	702	703	705	702	555	471	612
24	476	571	471	447	382	702	703	705	703	545	474	613
25	480	574	467	441	395	703	702	706	702	532	480	612
26	488	577	461	435	408	703	703	707	700	528	487	610
27	498	576	454	430	420	704	705	709	698	534	494	608
28	505	570	477	425	435	703	728	710	695	538	501	607
29	513	562	505	419	---	703	725	711	693	542	508	605
30	519	551	520	414	---	701	721	711	693	543	515	603
31	523	---	529	408	---	700	---	711	---	544	521	---
MAX	523	577	542	544	435	722	728	720	710	692	557	613
MIN	390	527	454	408	328	451	698	704	693	528	465	527
(†)	161.20	162.25	161.42	156.44	157.57	167.48	168.16	167.84	167.25	161.99	161.11	164.19
(††)	+141	+28	-22	-121	+27	+265	+21	-10	-18	-149	-23	+82

CAL YR 1984 MAX 712 MIN 352 (††) +170  
WTR YR 1985 MAX 728 MIN 328 (††) +221

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

## 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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 5,505 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 20 to Feb. 5, Mar. 12 to Apr. 28, May 2-14, June 5-20, June 26 to July 18, and Aug. 30 to Sept. 30. 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. See tabulation below for the results of discharge measurements made during year at point adjacent to gage of an unnamed ditch on right bank which diverts water 0.4 mi upstream and bypasses gage; ditch flow not included in record.

AVERAGE DISCHARGE.--15 years, 9.56 ft<sup>3</sup>/s, 6,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft<sup>3</sup>/s, July 26, 1971, gage height, 9.58 ft, from rating curve extended above 160 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 28	1845	342	2.67	June 25	0345	*1,280	*4.24
May 2	0215	550	3.12				
Minimum daily, 2.5 ft <sup>3</sup> /s, Aug. 23, 24.							

## DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND, OF DITCH, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Nov. 20	0.19	Mar. 6	0	June 20	1.0	Aug. 21	2.8
Jan. 3	0	Apr. 1	0	July 18	2.4	Sept. 24	0
Feb. 5	0.08	May 15	1.6				

DISCHARGE, IN 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	6.4	9.3	9.5	9.5	9.9	11	27	117	49	12	4.7	3.0
2	6.2	10	9.2	12	12	9.5	19	170	50	11	5.5	3.1
3	13	10	9.2	15	11	9.5	20	114	46	11	5.9	3.1
4	14	10	9.2	20	12	9.7	20	102	49	10	6.3	3.0
5	9.1	10	9.5	11	12	10	21	91	55	9.6	6.0	3.0
6	8.7	9.5	8.9	10	13	10	24	86	47	8.3	6.0	3.0
7	8.2	9.2	8.9	10	11	11	27	76	41	8.7	5.5	3.1
8	7.5	10	9.2	11	11	11	29	69	42	8.4	4.3	3.1
9	6.7	10	9.2	11	11	11	32	65	47	8.2	4.5	3.2
10	7.3	10	9.2	11	11	11	34	61	51	7.7	4.6	3.3
11	8.1	10	8.9	10	11	11	35	57	38	7.3	5.6	3.8
12	7.6	10	8.9	11	11	59	37	54	33	7.0	4.8	4.4
13	11	9.3	8.9	12	11	84	39	50	29	6.7	4.7	3.8
14	8.2	9.7	10	11	11	42	41	49	26	6.3	3.9	3.2
15	40	9.8	9.9	11	11	19	42	45	24	5.8	4.0	3.8
16	18	9.8	10	9.2	10	20	42	45	27	5.6	4.2	10
17	11	11	12	9.5	10	19	43	42	30	5.4	4.3	5.0
18	11	11	10	9.9	10	17	43	42	28	4.0	4.4	3.5
19	11	11	9.5	9.2	11	17	45	40	26	3.0	4.5	4.0
20	12	12	9.9	9.2	11	19	45	45	44	3.9	3.9	45
21	12	9.9	10	9.9	11	17	43	39	23	3.7	3.3	19
22	13	9.9	9.9	12	12	16	42	42	18	3.4	2.9	12
23	12	9.5	10	9.5	12	15	41	41	14	7.3	2.5	7.6
24	12	11	9.9	9.2	12	15	38	39	13	4.3	2.5	6.8
25	12	10	8.9	9.9	12	15	32	38	125	5.3	3.7	6.6
26	12	9.9	8.3	9.5	11	15	29	37	20	5.3	3.8	6.4
27	11	9.9	9.5	9.5	11	16	34	40	16	5.2	3.1	6.4
28	10	9.5	33	9.5	11	17	109	44	15	4.9	3.2	6.4
29	9.3	9.2	14	10	---	19	205	45	14	5.4	3.3	6.2
30	8.0	9.2	10	9.5	---	23	154	46	13	3.5	3.3	6.1
31	10	---	10	9.9	---	24	---	49	---	3.4	2.9	---
TOTAL	346.3	299.6	323.5	330.9	312.9	602.7	1392	1880	1053	202.6	132.1	200.9
MEAN	11.2	9.99	10.4	10.7	11.2	19.4	46.4	60.6	35.1	6.54	4.26	6.70
MAX	40	12	33	20	13	84	205	170	125	12	6.3	45
MIN	6.2	9.2	8.3	9.2	9.9	9.5	19	37	13	3.0	2.5	3.0
AC-FT	687	594	642	656	621	1200	2760	3730	2090	402	262	398

CAL YR 1984	TOTAL	3059.1	MEAN	8.36	MAX	75	MIN	1.3	AC-FT	6070
WTR YR 1985	TOTAL	7076.5	MEAN	19.4	MAX	205	MIN	2.5	AC-FT	14040



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

## WATER-QUALITY RECORDS

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (000095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (MG/L AS CAC03) (00900)
NOV 20...	1045	8.8	--	710	7.9	8.6	8.5	7.0	10.0	28	150
JAN 03...	1500	9.7	525	--	7.6	--	2.5	.0	12.2	--	--
MAR 06...	1430	8.3	--	601	8.2	7.4	14.5	9.0	10.5	--	150
MAY 15...	1330	50	252	279	7.5	8.2	28.5	18.0	7.6	--	82
JUL 18...	1130	4.2	634	615	--	8.0	33.0	26.0	8.6	80	110
SEP 24...	1045	6.9	591	--	8.1	--	27.0	12.5	8.6	--	--

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (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)	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)
NOV 20...	0	49	7.3	80	3	7.7	49	33	.80	24	380
JAN 03...	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	0	48	7.9	64	2	6.6	48	32	.90	23	350
MAY 15...	6	26	4.2	19	1	2.6	29	10	.40	16	150
JUL 18...	0	36	5.2	77	3	9.3	32	34	.80	21	320
SEP 24...	--	--	--	--	--	--	--	--	--	--	--

DATE	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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTH- DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 20...	2.5	2.6	9.40	2.6	15	4.50	4.00	8.2	32	.76	82
JAN 03...	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	--	--	--	--	--	--	--	--	73	1.6	97
MAY 15...	--	--	--	--	--	--	--	--	1020	138	55
JUL 18...	4.5	4.4	4.50	3.1	12	--	4.10	25	107	1.2	--
SEP 24...	--	--	--	--	--	--	--	--	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 20...	1045	140	33
MAR 06...	1430	140	18
MAY 15...	1330	40	190
JUL 18...	1130	150	23

## RIO GRANDE BASIN

## 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup>, 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, 1982, 505,700 acre-ft between elevations 5,247.0 ft and 5,450.0 ft, crest of service spillway. Dead storage 732 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, 282,716 acre-ft, June 28, 1985, elevation, 5,413.47 ft; no storage prior to Nov. 12, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 282,716 acre-ft, June 28, elevation, 5,413.47 ft; minimum, 46,740 acre-ft, Nov. 10, elevation, 5,327.08 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Corps of Engineers in 1981)

5,325	44,346	5,385	170,704
5,345	72,203	5,395	205,437
5,355	90,664	5,405	245,062
5,365	113,640	5,415	289,888
5,375	140,203		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47370	47180	47290	47470	49610	47250	67430	82650	207700	280000	180700	179000
2	47300	47290	47180	47430	48400	47630	63720	84430	210700	276700	180700	178800
3	47400	47350	46980	47260	47690	47550	59720	86300	212200	272400	180700	178700
4	47550	47300	46940	47420	47530	48730	56620	88540	212900	267700	180700	178900
5	47380	47360	47190	47530	47370	50760	53950	91470	213500	262200	180700	179100
6	47220	47310	47310	47430	47300	52860	51940	95710	213200	256300	180200	179100
7	47200	47060	47500	47240	47310	53790	50880	100200	212400	250200	180300	179000
8	47230	46930	47550	47260	47420	53110	50230	106200	211800	244100	180400	178900
9	47220	46850	47400	47290	47460	52730	50210	114400	212400	238100	180500	178700
10	47190	46740	47280	47290	47340	52430	50940	122500	215300	232700	181100	178600
11	47170	47730	47290	47310	47170	52000	52700	130500	219600	226900	181600	178700
12	47200	49330	47440	47350	47260	52230	54400	138400	225300	220900	180500	178900
13	47430	50830	47480	47350	47430	52540	56040	145500	231800	216000	180100	178900
14	47470	52350	47500	47320	47620	52190	58230	152600	239000	210100	180100	179100
15	47400	53200	47420	47420	47510	52190	60860	157700	245700	206000	180300	179200
16	47350	52860	47070	47410	47500	52710	63220	161800	251600	202200	180100	179000
17	47590	52410	46970	47470	47680	52560	65180	165500	256900	198500	180100	178400
18	47320	51830	47050	47430	47650	51160	68060	169100	261800	195000	180100	178700
19	47290	51030	47120	47610	47350	49880	71380	171500	266200	191400	180000	178800
20	47310	50140	47340	48320	47290	48190	73800	175800	270100	187500	180000	179200
21	47410	49410	47400	49010	47650	47530	75410	179500	272700	183600	179900	178800
22	47300	48790	47200	49630	47550	47510	76900	182600	274700	181200	179800	177000
23	47260	48240	47000	50180	47420	47590	77290	185600	276300	180800	179700	177000
24	47340	47550	47220	50310	47440	47560	76670	188500	278100	180800	179700	177800
25	47240	47180	47620	49120	47260	47650	75050	190900	280100	180800	179800	178200
26	47170	47220	47620	49160	47250	48470	73730	192700	281400	180900	179900	178400
27	47350	47200	47320	50430	47440	52010	73040	195000	282300	181100	179800	178500
28	47410	47320	47440	51870	47190	57050	74210	197300	282700	181100	179700	178600
29	47400	47250	47470	52740	---	61500	78350	199800	282600	181000	179600	178500
30	47260	47250	47360	52360	---	64490	80880	201800	281900	181000	179200	178500
31	47220	---	47300	51010	---	67610	---	204500	---	180700	179100	---
MAX	47590	53200	47620	52740	49610	67610	80880	204500	282700	280000	181600	179200
MIN	47170	46740	46940	47240	47170	47250	50210	82650	207700	180700	179100	177000
(†)	5327.48	5327.51	5327.55	5330.55	5327.46	5342.17	5349.95	5394.75	5413.29	5388.00	5387.52	5387.34
(††)	-184	0	+50	+3705	-3813	+20422	+13267	+123635	-77364	-101177	-1623	-607
CAL YR 1984	MAX	76670	MIN	45510	(††)	+830						
WTR YR 1985	MAX	282700	MIN	46740	(††)	+131073						

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

(††) CHANGE IN CONTENTS, IN ACRE-FEET

08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM -- Continued

## WATER-QUALITY RECORDS

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

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

REMARKS.--Samples for chemical analyses are collected annually at surface and/or bottom levels of selected sites, located as follows: Site A, 500 ft upstream from Outlet Tower (Riser); Site B, 0.4 mi east of Outlet Towers (Riser); Site C, approximately 2.5 mi upstream from Outlet Tower (Riser) and 0.3 mi north of boat ramp on east side of lake; Site D, approximately 5.0 mi upstream from Outlet Tower (Riser) at mouth of Bland Canyon.

08313408 - COCHITI LAKE AT SITE D (LAT 35°40'41" LONG 106°18'53")

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
JUN							
05...	1448	65.0	70.0	--	--	--	16.5
05...	1449	60.0	70.0	--	--	--	16.5
05...	1450	55.0	70.0	--	--	--	16.5
05...	1451	50.0	70.0	--	--	--	16.5
05...	1452	45.0	70.0	--	--	--	16.5
05...	1453	40.0	70.0	--	--	--	16.5
05...	1454	35.0	70.0	--	--	--	17.0
05...	1455	30.0	70.0	--	--	--	17.0
05...	1456	25.0	70.0	--	--	--	17.0
05...	1457	20.0	70.0	--	--	--	17.5
05...	1458	15.0	70.0	--	--	--	18.0
05...	1459	10.0	70.0	--	--	--	18.0
05...	1500	5.00	70.0	195	7.8	20.5	18.5
05...	1501	1.00	70.0	--	--	--	19.0

08313412 - COCHITI LAKE AT SITE C (LAT 35°38'57" LONG 106°18'39")

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
JUN							
05...	1412	95.0	134	--	--	--	15.5
05...	1413	90.0	134	--	--	--	16.0
05...	1414	85.0	134	--	--	--	16.0
05...	1415	80.0	134	--	--	--	16.0
05...	1416	75.0	134	--	--	--	16.0
05...	1417	70.0	134	--	--	--	16.5
05...	1418	65.0	134	--	--	--	16.5
05...	1419	60.0	134	--	--	--	16.5
05...	1420	55.0	134	--	--	--	17.0
05...	1421	50.0	134	--	--	--	17.0
05...	1422	45.0	134	--	--	--	17.0
05...	1423	40.0	134	--	--	--	17.5
05...	1424	35.0	134	--	--	--	17.5
05...	1425	30.0	134	--	--	--	17.5
05...	1426	25.0	134	--	--	--	18.0
05...	1427	20.0	134	--	--	--	18.0
05...	1428	15.0	134	--	--	--	18.0
05...	1429	10.0	134	--	--	--	18.0
05...	1430	5.00	134	198	8.0	22.5	18.5
05...	1431	1.00	134	--	--	--	19.0

## RIO GRANDE BASIN

08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM -- Continued

## WATER-QUALITY RECORDS

08317298 - COCHITI LAKE AT SITE B (LAT 35°37'06" LONG 106°18'39")

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
JUN							
05...	1312	95.0	103	--	--	--	15.0
05...	1313	90.0	103	--	--	--	15.5
05...	1314	85.0	103	--	--	--	16.0
05...	1315	80.0	103	--	--	--	16.0
05...	1316	75.0	103	--	--	--	16.0
05...	1317	70.0	103	--	--	--	16.0
05...	1318	65.0	103	--	--	--	16.5
05...	1319	60.0	103	--	--	--	16.5
05...	1320	55.0	103	--	--	--	16.5
05...	1321	50.0	103	--	--	--	16.5
05...	1322	45.0	103	--	--	--	16.5
05...	1323	40.0	103	--	--	--	16.5
05...	1324	35.0	103	--	--	--	18.0
05...	1325	30.0	103	--	--	--	18.0
05...	1326	25.0	103	--	--	--	18.0
05...	1327	20.0	103	--	--	--	18.0
05...	1328	15.0	103	--	--	--	18.0
05...	1329	10.0	103	--	--	--	18.0
05...	1330	5.00	103	200	7.8	21.5	18.5
05...	1331	1.00	103	--	--	--	19.0

08317300 - COCHITI LAKE AT SITE A (LAT 35°38'11" LONG 106°19'05")

CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (MG/L AS CAC03) (00900)
JUN											
05...	1130	143	148	230	244	7.8	8.0	16.5	18.5	28	94
05...	1131	95.0	148	--	--	--	--	--	15.5	--	--
05...	1132	90.0	148	--	--	--	--	--	15.5	--	--
05...	1133	85.0	148	--	--	--	--	--	16.0	--	--
05...	1134	80.0	148	--	--	--	--	--	16.0	--	--
05...	1135	75.0	148	--	--	--	--	--	16.0	--	--
05...	1136	70.0	148	--	--	--	--	--	16.5	--	--
05...	1137	65.0	148	--	--	--	--	--	16.5	--	--
05...	1138	60.0	148	--	--	--	--	--	16.5	--	--
05...	1139	55.0	148	--	--	--	--	--	16.5	--	--
05...	1140	50.0	148	--	--	--	--	--	16.5	--	--
05...	1141	45.0	148	--	--	--	--	--	16.5	--	--
05...	1142	40.0	148	--	--	--	--	--	17.5	--	--
05...	1143	35.0	148	--	--	--	--	--	18.0	--	--
05...	1144	30.0	148	--	--	--	--	--	18.0	--	--
05...	1145	25.0	148	--	--	--	--	--	18.0	--	--
05...	1146	20.0	148	--	--	--	--	--	18.0	--	--
05...	1147	15.0	148	--	--	--	--	--	18.0	--	--
05...	1148	10.0	148	--	--	--	--	--	18.0	--	--
05...	1149	5.00	148	--	--	--	--	--	18.5	--	--
05...	1150	1.00	148	--	--	--	--	--	19.0	--	--

WATER-QUALITY RECORDS

CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[illegible][illegible]

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

		ARSENIC		BORON		CADMIUM		CHROMIUM		COPPER	
		DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-
		SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED
		(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
DATE	TIME	AS AS)	AS AS)	AS B)	AS CD)	AS CD)	AS CD)	AS CR)	AS CR)	AS CR)	AS CU)
		(01002)	(01000)	(01020)	(01027)	(01025)	(01034)	(01030)	(01030)	(01042)	(01042)
JUN 05...	1130	1	<1	20	<1	<1	<10	<10	<10	<1	
		COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DIS-SOLVED (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)		
		(01040)	(01046)	(01051)	(01049)	(01147)	(01145)	(01092)	(01090)		
JUN 05...		3	54	4	9	<1	<1	<10	18		

## RIO GRANDE BASIN

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")

## CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	
JUN 05...	1130	2.0	40	1100	11	<1	130	
		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 AS HG) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS U) (01093)
JUN 05...	<10	19	12000	40	840	.20	70	

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 AS U) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
JUN 05...	1130	<3.3	<1.4	2.9	<1.8	2.5	<1.7	.07	1.5

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
JUN 05...	1130	<.1	<.010	<.1	<.010	<.010	<.010	<.01	<.010	<.010
		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)
JUN 05...	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01	<.01	<.01
		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)
JUN 05...	<.01	<.1	<.01	<.01	<.01	<.01	<.01	<.1	<.10	<.01

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUN 05...	1130	143	148	0	K2

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.

WATER-DISCHARGE RECORDS

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 ft<sup>3</sup>/s, July 26, 1971, gage height, 7.90 ft, site and datum then in use, from rating curve extended above 2,600 ft<sup>3</sup>/s; minimum, 0.51 ft<sup>3</sup>/s, Aug. 3-5, 1977, Aug. 27-28, 1978, release of regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 15, 1941, reached a discharge of 23,400 ft<sup>3</sup>/s at a nearby site upstream from mouth of Santa Fe River. The flood of May 23, 1920, probably exceeded 23,400 ft<sup>3</sup>/s, and is likely the highest since 1905.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,460 ft<sup>3</sup>/s, May 7, gage height, 6.20 ft; minimum, 13 ft<sup>3</sup>/s, Oct. 17.

CORRECTION.--Figures of monthly diversions by Cochiti Eastside Main Canal and Sili Main Canal published in the report for 1984, are in total cfs-days. Figures of monthly diversions of these canals, in acre-feet, for 1984 water year, are given in the table below.

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT
(†)	7390	2320	0	0	0	4410	7060	8060	7940	7710	6080	7640
(††)	3810	1180	0	0	0	3690	4230	4410	4480	4550	4020	4010

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN VALUES													
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	268	566	756	949	1250	1330	2700	7660	4900	4090	638	806		
2	229	577	829	1050	1060	1260	3800	7860	4910	4350	818	810		
3	193	662	879	968	974	1410	3940	7870	5250	4820	938	810		
4	307	686	783	814	890	770	4810	7900	5720	4800	936	810		
5	523	672	669	943	816	208	5420	7980	6440	4780	1170	810		
6	578	993	719	1030	747	208	5350	8130	6990	4750	1430	810		
7	522	1140	802	1080	722	846	5310	8290	7000	4730	1120	810		
8	506	1090	974	1050	727	1650	5590	7750	6980	4700	754	806		
9	509	1100	1080	1150	847	1510	5970	6930	6330	4370	654	800		
10	433	1100	1070	1170	952	1510	6000	6760	5250	4160	670	800		
11	347	581	1070	1130	873	1730	6060	6880	4280	4120	1050	800		
12	324	294	1130	1100	740	2420	6110	6990	3820	4110	1270	802		
13	342	297	1240	1120	694	3560	6170	7100	3850	4090	855	596		
14	379	300	1260	1120	735	4160	6210	7290	3870	4070	418	415		
15	468	709	1260	1110	963	3740	6280	7550	3910	3780	303	415		
16	514	1320	1260	1110	930	3370	6770	7000	3930	3320	474	645		
17	456	1320	1160	1130	799	3680	7160	5920	3670	3200	415	567		
18	571	1310	1030	1160	1060	4200	7240	4870	3450	3100	333	371		
19	546	1370	980	935	1170	4400	7340	4410	3460	3170	291	575		
20	545	1430	1010	560	1060	4370	7410	4260	3670	3260	291	813		
21	595	1350	1080	562	1260	3830	7460	3970	3960	3250	562	1200		
22	646	1290	1030	566	1790	3390	7510	3980	3970	2470	754	1420		
23	646	1290	903	563	1980	3330	7520	4000	3990	959	754	943		
24	646	1280	734	829	1880	3300	7750	4010	4010	648	791	682		
25	646	1100	628	1370	1920	3270	7990	4030	4030	599	810	607		
26	645	929	853	840	1640	2140	7680	4040	4040	606	810	436		
27	646	920	979	154	1430	659	7350	4050	4050	605	810	408		
28	704	875	948	154	1420	319	6870	4060	4060	598	810	408		
29	770	795	1150	357	---	262	6580	4270	4070	670	810	402		
30	689	763	1110	977	---	223	7260	4740	4080	718	810	378		
31	571	---	1030	1400	---	650	---	4880	---	679	805	---		
TOTAL	15764	28109	30406	28451	31329	67705	189610	185430	137940	93572	23354	20955		
MEAN	509	937	981	918	1119	2184	6320	5982	4598	3018	753	699		
MAX	770	1430	1260	1400	1980	4400	7990	8290	7000	4820	1430	1420		
MIN	193	294	628	154	694	208	2700	3970	3450	598	291	371		
AC-FT	31270	55750	60310	56430	62140	134300	376100	367800	273600	185600	46320	41560		
(†)	7710	1210	0	0	0	464	6330	6360	7900	8060	7740	7060		
(††)	3950	0	0	0	0	2460	3990	4390	4500	4600	4530	4240		
CAL YR 1984	TOTAL	642374	MEAN	1755	MAX	8000	MIN	67	AC-FT	1274000	(†)	57780	(††)	33340
WTR YR 1985	TOTAL	852625	MEAN	2336	MAX	8290	MIN	154	AC-FT	1691000	(†)	52830	(††)	32650
(†) DIVERSION, IN ACRE-FEET, BY COCHITI EASTSIDE MAIN CANAL AT HEAD														
(††) DIVERSION, IN ACRE-FEET, BY SILI MAIN CANAL AT HEAD														

08317400 RIO GRANDE BELOW COCHITI DAM, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1984.

WATER TEMPERATURES: July 1971 to September 1982.

SUSPENDED-SEDIMENT DISCHARGES: July 1974 to September 1984.

INSTRUMENTATION.--Continuous automatic pumping sediment sampler.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 698 microsiemens July 19, 1978; minimum daily, 130 microsiemens July 30, 1978.

WATER TEMPERATURES: Maximum daily, 35.5°C Aug. 4, 1977; minimum daily, 0.0°C on several days during winter periods.

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.

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (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)
JAN						
03...	1300	1100	3.0	11	33	--
FEB						
06...	1245	767	2.5	6	12	--
MAR						
11...	1500	1920	5.0	61	316	--
29...	1230	219	--	53	31	98
APR						
03...	1200	3640	8.5	26	256	--
07...	1230	5300	--	40	572	96
22...	1230	7210	--	58	1130	--
MAY						
07...	1230	8280	--	64	1430	--
13...	1500	7080	14.0	50	956	95
16...	1200	7050	--	39	742	--
JUN						
04...	1200	5740	--	10	155	--
13...	1200	3850	--	15	156	--
18...	1030	3420	16.0	12	111	--
29...	1200	4100	--	16	177	--
JUL						
16...	1330	3460	19.0	6	56	--
17...	1210	3110	20.0	36	302	--
26...	1200	610	--	22	36	--
31...	1200	709	--	21	40	--
AUG						
02...	1200	940	--	14	36	--



## 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 mi<sup>2</sup>.

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

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

REMARKS.--Reservoir is formed by an earthfill dam, completed Oct. 11, 1970. Capacity, 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. p 08317950

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

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
24	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
27	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	.0	.0	.0	.0	---	.0	.0	.0	.0	.0	.0	.0
30	.0	.0	.0	.0	---	.0	.0	.0	.0	.0	.0	.0
31	.0	---	.0	.0	---	.0	---	.0	---	.0	.0	---
MAX	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
MIN	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CAL YR 1984		MAX	49	MIN	.0							
WTR YR 1985		MAX	.0	MIN	.0							

## 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 mi<sup>2</sup>.

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: Oct. 1, 2, Oct. 6 to Nov. 13, Nov. 22, 23, Mar. 21-31, May 24 to June 5, June 21-26, July 20-24, 27, 28, July 31 to Aug. 14, Aug. 28-31, and Sept. 23-30. Records 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.--15 years, 6.33 ft<sup>3</sup>/s, 4,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft<sup>3</sup>/s July 27, 1971, gage height, 7.00 ft; maximum gage height, 7.33 ft July 20, 1971; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 871 ft<sup>3</sup>/s, July 29, gage height, 5.41 ft; no flow many days.

DISCHARGE, IN 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	.00	.00	.52	16	.33	3.0	8.5	82	.57	.00	15	.00
2	.00	.00	.45	1.5	.31	4.2	8.4	107	.57	.00	10	.00
3	14	.00	.59	1.3	.30	5.8	8.5	70	.57	.17	6.9	.00
4	32	.00	.72	1.1	.28	4.5	8.8	64	.57	.33	5.0	.00
5	3.3	.00	.78	1.0	.70	4.0	8.7	60	.52	.12	1.2	.00
6	1.0	.00	.66	.95	.54	3.6	8.8	57	.57	.00	.30	.00
7	.50	.00	.66	.89	.39	2.3	8.3	49	.00	.00	.08	.00
8	.00	.00	1.8	.80	.50	2.2	8.0	42	.00	.00	.00	.00
9	.00	.00	2.1	.71	.62	2.1	8.8	39	.00	.00	.00	.00
10	.00	.00	1.3	.62	.80	2.1	8.5	36	.00	.00	.00	.00
11	.00	.00	1.8	.52	.62	2.7	7.9	30	.00	.00	.00	.00
12	.00	.10	1.8	.48	.85	19	7.6	29	.02	.00	.00	.00
13	.00	.15	5.6	1.0	1.0	19	7.7	29	.00	.00	.00	.00
14	.00	.58	3.1	.97	.85	19	7.6	31	.00	.00	.00	.00
15	.00	.52	3.8	1.1	.74	22	7.6	28	.00	1.8	.00	.00
16	.00	.60	.96	.92	.68	19	7.7	25	.00	9.8	.00	17
17	.00	2.4	.90	.77	.61	16	7.7	23	.00	2.1	.00	1.1
18	.00	2.3	1.1	.64	.55	17	8.5	22	.00	8.9	.00	2.6
19	.00	1.4	.90	.68	1.1	23	9.5	22	.10	7.7	.00	7.4
20	.00	1.1	1.6	.56	1.4	20	8.6	21	134	3.0	.00	64
21	.00	.94	2.1	.74	1.0	15	8.9	32	15	1.0	.00	59
22	.00	.60	.70	.90	3.5	11	12	49	10	1.0	.00	1.9
23	.00	1.1	.65	.69	3.6	10	9.6	29	8.0	1.5	.00	.00
24	.00	2.1	.65	.61	4.0	9.5	7.5	3.0	3.0	1.2	.00	.00
25	.00	1.7	.90	.56	2.9	9.2	6.2	1.1	29	87	4.2	.00
26	.00	.78	2.7	.61	4.8	9.0	7.5	.66	12	41	.30	.00
27	.00	.37	3.2	.60	4.6	8.8	14	.64	9.3	10	.00	.00
28	.00	.49	28	.66	4.6	8.6	67	.61	.00	5.0	.00	.00
29	.00	1.1	57	.62	---	8.6	137	.60	.00	171	.00	.00
30	.00	.86	32	.67	---	8.5	80	.58	.00	63	.00	.00
31	.00	---	23	.77	---	8.5	---	.58	---	26	.00	---
TOTAL	50.80	19.19	182.04	39.94	42.17	317.2	515.4	983.77	223.79	441.62	42.98	153.00
MEAN	1.64	.64	5.87	1.29	1.51	10.2	17.2	31.7	7.46	14.2	1.39	5.10
MAX	32	2.4	57	16	4.8	23	137	107	134	171	15	64
MIN	.00	.00	.45	.48	.28	2.1	6.2	.58	.00	.00	.00	.00
AC-FT	101	38	361	79	84	629	1020	1950	444	876	85	303
CAL YR 1984	TOTAL	1396.57		MEAN	3.82	MAX	187	MIN	.00	AC-FT	2770	
WTR YR 1985	TOTAL	3011.90		MEAN	8.25	MAX	171	MIN	.00	AC-FT	5970	

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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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.--Estimated daily discharges: July 24-28. 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 ft<sup>3</sup>/s, 995,500 acre-ft/yr, prior to closure of Cochiti Dam.  
12 years (water years 1974-85), 1,484 ft<sup>3</sup>/s, 1,075,000 acre-ft/yr, since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,300 ft<sup>3</sup>/s, June 26, 1937, gage height, 11.13 ft site and datum then in use, from rating curve extended above 15,000 ft<sup>3</sup>/s; minimum, 32 ft<sup>3</sup>/s, July 7, 1934.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,290 ft<sup>3</sup>/s, at 1145 hours May 8, gage height, 7.14 ft; minimum daily, 234 ft<sup>3</sup>/s Jan. 28.

DISCHARGE, IN 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	399	773	847	999	1240	1260	1990	7670	5200	4250	743	967
2	422	726	871	1040	1070	1170	3730	7920	5210	4390	883	979
3	345	801	941	1070	1030	1230	3780	7800	5430	4930	1090	970
4	438	851	896	862	933	1020	4290	7820	5930	4920	1110	972
5	659	828	758	970	900	250	5090	7840	6380	4920	1250	976
6	801	946	774	1030	819	238	5210	7920	7050	4890	1620	983
7	740	1160	852	1080	783	437	5220	8100	7050	4880	1400	983
8	715	1140	965	1060	782	1510	5320	7880	7080	4860	932	989
9	716	1140	1080	1100	840	1460	5730	7040	6710	4640	743	986
10	668	1140	1080	1160	976	1500	5810	6850	5710	4370	784	982
11	537	884	1090	1120	945	1650	5850	6970	4810	4350	1060	989
12	494	427	1100	1090	813	2280	5910	7050	4180	4340	1420	992
13	499	408	1200	1090	742	3280	5940	7170	4200	4370	1160	868
14	531	398	1220	1110	750	3770	6000	7270	4240	4410	669	529
15	776	524	1220	1090	898	3830	6060	7550	4260	4290	277	524
16	790	1230	1220	1090	988	3430	6320	7220	4280	3750	586	701
17	636	1270	1180	1090	850	3550	6820	6300	4110	3630	482	830
18	780	1280	1070	1130	912	3970	6910	5360	3820	3460	452	562
19	711	1300	1020	1060	1160	4230	7080	4770	3820	3470	363	597
20	769	1360	1030	609	1020	4250	7180	4690	4090	3620	355	1160
21	772	1330	1080	595	1110	4000	7280	4380	4290	3610	518	1340
22	835	1280	1070	590	1380	3510	7370	4360	4270	3110	907	1590
23	841	1280	987	589	1610	3420	7370	4370	4290	1100	932	1300
24	849	1280	868	672	1540	3380	7460	4370	4300	630	954	879
25	848	1200	725	1250	1600	3340	7780	4380	4330	730	993	847
26	848	1010	827	1100	1490	2750	7630	4380	4320	760	1000	598
27	850	1000	1030	271	1310	1140	7300	4380	4280	700	1010	527
28	875	974	980	234	1310	492	7180	4400	4280	680	982	521
29	928	904	1160	283	---	487	6970	4540	4280	700	975	522
30	927	853	1160	785	---	481	7200	5010	4280	1020	972	512
31	808	---	1090	1280	---	570	---	5210	---	825	961	---
TOTAL	21807	29697	31391	28499	29801	67885	183780	190970	146480	100605	27583	26175
MEAN	703	990	1013	919	1064	2190	6126	6160	4883	3245	890	873
MAX	928	1360	1220	1280	1610	4250	7780	8100	7080	4930	1620	1590
MIN	345	398	725	234	742	238	1990	4360	3820	630	277	512
AC-FT	43250	58900	62260	56530	59110	134600	364500	378800	290500	199600	54710	51920
(+)	4180	0	0	0	0	0	2670	3140	3740	2540	3760	3730
CAL YR 1984	TOTAL	680183		MEAN	1858	MAX	7910	MIN	191	AC-FT	1349000	
WTR YR 1985	TOTAL	884673		MEAN	2424	MAX	8100	MIN	234	AC-FT	1755000	

(+) MONTHLY DIVERSION, IN ACRE-FEET, OF COCHITI EASTSIDE CANAL; RECORDS OF THIS FLOW PROVIDED 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.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (000095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV 19...	1445	1340	335	350	8.1	8.6	7.5	9.5	10.8	10
JAN 22...	1015	565	330	--	7.8	--	2.5	1.5	12.8	21
MAR 15...	1130	4240	325	310	7.8	7.9	4.0	6.5	10.9	51
MAY 13...	1300	6890	210	228	7.6	8.2	15.0	15.0	9.0	10
JUL 15...	1230	4310	225	235	7.8	8.0	28.0	21.0	8.0	29
SEP 16...	1015	558	340	--	7.6	--	17.0	18.0	7.6	17

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)
------	---	---	---	---	---	--	--	---	--

NOV 19...	130	16	42	7.2	21	.8	2.8	120	12
JAN 22...	--	--	--	--	--	--	--	--	--
MAR 15...	120	27	39	6.7	18	.7	2.6	120	.000
MAY 13...	89	27	28	4.7	11	.5	2.8	76	.000
JUL 15...	93	28	29	4.9	14	.7	3.0	79	.000
SEP 16...	--	--	--	--	--	--	--	--	--

DATE	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L CAC03) (99430)	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 DIS- TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
------	--	--	--	--	---	--	--	---	--

NOV 19...	120	110	50	6.3	.40	18	230	<.10	<.10
JAN 22...	--	--	--	--	--	--	--	.10	.11
MAR 15...	100	100	52	5.5	.30	20	200	.20	.21
MAY 13...	--	62	34	3.4	.20	17	140	<.10	<.10
JUL 15...	--	65	34	3.8	.20	17	150	<.10	.10
SEP 16...	--	--	--	--	--	--	--	.10	.11

DATE	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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	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...	.020	.28	--	.070	.030	2.4	189	684	28
JAN 22...	.030	.27	.40	.060	.030	1.8	11	17	53
MAR 15...	.080	.82	1.1	.250	.050	5.2	753	8620	36
MAY 13...	.080	.62	--	.130	.040	5.7	229	4260	37
JUL 15...	.060	.34	--	.080	.060	4.6	82	954	16
SEP 16...	.090	.51	.70	.100	.050	4.9	86	130	100

08319000 RIO GRANDE AT SAN FELIPE, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)
NOV 19...	1445	2	1	40	<1	<1	10	<10	12	2
MAR 15...	1130	--	--	30	--	--	--	--	--	--
MAY 13...	1300	--	--	20	--	--	--	--	--	--
JUL 15...	1230	1	2	20	<1	<1	<10	<10	7	4

DATE	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)
NOV 19...	7	3	2	<.1	<.1	<1	<1	<10	<3
MAR 15...	20	--	--	--	--	--	--	--	--
MAY 13...	76	--	--	--	--	--	--	--	--
JUL 15...	53	1	1	.2	.3	<1	<1	80	22

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01029)
NOV 19...	1445	5.0	6.5	90	1	<1	4

	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 AS HG) (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)
NOV 19...	<10	2	1300	<10	28	<.10	4

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 (PGI/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 AS U) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 19...	1445	9.9	1.6	5.7	1.5	4.9	1.3	.07	3.4

## RIO GRANDE BASIN

08319000 RIO GRANDE AT SAN FELIPE, NM -- Continued

## WATER-QUALITY RECORDS

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
MAR 15...	1130	--	--	--	--	--	--	--	--	--
SEP 16...	1015	<.1	<.010	<.1	<.010	<.010	<.010	<.01	<.010	<.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)
MAR 15...	--	--	--	--	--	--	--	--	--
SEP 16...	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01	<.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)
MAR 15...	--	--	--	.01	<.01	<.01	--	--	--
SEP 16...	<.01	<1	<.01	--	--	--	<.1	<.10	<.01

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 19...	1445	K340	100
JAN 22...	1015	K11	21
MAR 15...	1130	21	100
MAY 13...	1300	K18	94
JUL 15...	1230	48	94
SEP 16...	1015	K850	K1200

## 08319945 REDONDO CREEK NEAR JEMEZ SPRINGS, NM

LOCATION.--Lat 35°52'34", long 106°37'50", in SW¼ sec.16, T.19 N., R.3 E, Sandoval County, Hydrologic Unit 13020202, on left bank 0.1 mi upstream from Sulphur Creek, 0.7 mi northeast of intersection of State Highways 7 and 126, and 8.0 mi northeast of Jemez Springs.

DRAINAGE AREA.--12.1 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1981 to September 1985 (no winter records in water year 1985). Station discontinued September 30, 1985.

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

REMARKS.--Estimated daily discharges: Nov. 10-12, 15, 16, 20-24 and 26-30. Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20 ft<sup>3</sup>/s, Apr. 4, 1985, gage height, 2.30 ft; minimum daily, 0.18 ft<sup>3</sup>/s, Jan. 4, 1982, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20 ft<sup>3</sup>/s, at 2000 hours Apr. 4, gage height, 2.30 ft; minimum daily, 0.49 ft<sup>3</sup>/s, Oct. 1, 2.

DISCHARGE, IN 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	.49	.88				---	4.1	14	6.9	3.2	1.8	.78
2	.49	.87				---	5.8	14	6.8	3.1	1.8	.90
3	1.7	.85				---	8.5	13	6.6	3.0	2.5	.98
4	1.7	.76				---	12	13	7.6	2.8	2.4	.85
5	1.2	.96				---	15	13	6.8	2.7	1.7	.78
6	.87	.84				---	15	13	7.0	2.6	1.6	.75
7	.60	.90				---	16	13	6.2	2.6	1.5	.72
8	.57	.87				---	16	12	6.2	2.7	1.5	.70
9	.72	.66				---	17	12	6.1	2.7	1.6	.69
10	.68	.64				---	19	12	5.9	2.5	1.6	.71
11	.67	.64				---	18	11	5.8	2.4	2.2	1.2
12	.80	.64				---	17	11	5.7	2.4	1.6	.84
13	1.3	.64				---	16	11	5.7	2.4	1.4	.76
14	.86	.69				---	4.2	14	9.5	5.7	2.4	.74
15	.93	.70				---	3.4	14	8.6	5.5	3.2	1.1
16	.98	.66				---	3.1	15	7.7	5.4	2.8	1.2
17	1.2	.64				---	3.0	14	7.5	5.4	2.3	.89
18	1.7	.63				---	3.5	14	8.5	6.2	4.6	1.6
19	1.1	.61				---	3.4	14	7.4	5.6	2.5	1.9
20	1.1	.60				---	2.9	12	7.3	4.9	2.3	6.5
21	1.0	.60				---	2.9	11	7.4	4.5	2.3	2.3
22	1.1	.66				---	2.7	12	7.5	4.3	2.4	1.1
23	.99	.64				---	2.9	9.5	9.9	4.3	2.8	.94
24	1.1	.64				---	3.7	8.0	8.8	4.5	2.2	.92
25	1.1	.64				---	5.0	7.6	7.5	5.8	2.1	.89
26	1.2	.62				---	5.7	9.6	7.2	4.1	2.1	.87
27	1.2	.62				---	4.8	11	7.3	3.8	2.5	.88
28	1.1	.60				---	5.2	13	6.8	3.6	2.2	.98
29	.98	.64				---	4.5	14	6.4	3.4	2.7	1.1
30	.92	.60				---	4.6	13	6.5	3.2	2.8	.95
31	.92	---				---	4.3	---	7.1	---	2.0	---
TOTAL	31.27	20.94				---	385.1	300.9	163.5	81.3	43.27	35.52
MEAN	1.01	.70				---	12.8	9.71	5.45	2.62	1.40	1.18
MAX	1.7	.96				---	19	14	7.6	4.6	2.5	6.5
MIN	.49	.60				---	4.1	6.4	3.2	2.0	.72	.69
AC-FT	62	42				---	764	597	324	161	86	70

## RIO GRANDE BASIN

08319950 SULPHUR CREEK NR JEMEZ SPRINGS, NM

LOCATION.--Lat 35°52'14", long 106°38'17", in NE¼ sec.20, T.19 N., R.3 E., Sandoval County, Hydrologic Unit 13020202, on left bank 300 ft downstream from culvert under State Highway 4, 0.2 mi north at intersection of State Highways 4 and 126, 0.4 mi upstream from San Antonio Creek, and 7.5 mi northeast of Jemez Springs, NM.

DRAINAGE AREA.--38.0 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1981 to September 1985 (no winter records in water year 1985). Station discontinued September 30, 1985.

GAGE.--Water-stage recorder. Elevation of gage is 7,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 11-15, 17-19, 21-30, and Sept. 22-30. Records good except for Mar. 12 to Apr. 9 and Apr. 24 to May 14, which are fair and for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 156 ft<sup>3</sup>/s, Apr. 28, 1985, gage height, 3.46 ft, from rating curve extended above 60 ft<sup>3</sup>/s; minimum daily, 0.04 ft<sup>3</sup>/s, July 27, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 156 ft<sup>3</sup>/s, at 1645 hours Apr. 28, gage height, 3.46 ft, from rating curve extended above 60 ft<sup>3</sup>/s; minimum daily, 0.75 ft<sup>3</sup>/s, Oct. 2.

DISCHARGE, IN 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	.76	1.7				---	17	64	9.3	4.3	2.7	1.2
2	.75	1.6				---	20	69	8.6	4.2	2.6	1.2
3	2.2	1.5				---	27	61	8.4	4.1	3.3	1.2
4	2.7	1.4				---	42	63	9.7	3.8	3.5	1.2
5	2.0	1.3				---	54	56	10	3.6	2.6	1.2
6	1.4	1.3				---	66	47	10	3.5	2.3	1.1
7	1.1	1.2				---	75	39	8.6	3.4	2.2	1.1
8	.91	1.2				---	80	32	8.0	3.6	2.2	1.1
9	1.0	1.2				---	75	29	7.9	3.7	2.4	1.1
10	.97	.86				---	71	26	7.3	3.5	2.2	1.1
11	1.0	.85				---	65	23	7.0	3.3	2.8	1.3
12	1.3	.85				23	63	21	7.0	3.2	2.2	1.2
13	1.9	.85				21	57	18	7.0	3.2	2.0	1.2
14	1.3	.85				23	52	17	7.1	3.5	1.9	1.2
15	1.4	.85				21	50	16	6.9	4.0	1.9	1.2
16	1.5	.89				19	48	15	6.6	3.8	1.8	1.3
17	1.8	.88				18	45	14	6.5	3.2	1.7	1.2
18	2.8	.86				18	45	17	7.4	5.3	1.7	1.6
19	1.8	.84				18	49	16	8.0	3.8	1.7	2.5
20	1.6	.86				16	35	15	6.2	3.3	1.6	8.9
21	1.6	.85				16	29	17	5.6	3.7	1.7	4.8
22	1.7	.85				15	34	16	5.4	3.7	1.6	2.0
23	1.6	.85				15	25	21	5.4	4.2	1.5	1.7
24	1.8	.85				17	20	17	5.6	3.6	1.4	1.5
25	2.0	.85				21	17	14	7.6	3.3	1.3	1.4
26	1.9	.85				24	24	12	5.5	3.2	1.2	1.4
27	2.0	.85				22	35	11	5.0	3.7	1.5	1.4
28	1.8	.85				22	82	10	4.7	3.4	1.9	1.4
29	1.7	.85				19	102	9.4	4.5	3.8	1.7	1.6
30	1.7	.85				19	71	9.3	4.4	4.0	1.4	1.4
31	1.7	---				19	---	9.6	---	3.2	1.3	---
TOTAL	49.69	30.34				---	1475	804.3	211.2	114.1	61.8	51.7
MEAN	1.60	1.01				---	49.2	25.9	7.04	3.68	1.99	1.72
MAX	2.8	1.7				---	102	69	10	5.3	3.5	8.9
MIN	.75	.84				---	17	9.3	4.4	3.2	1.2	1.1
AC-FT	99	60				---	2930	1600	419	226	123	103



## 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 mi<sup>2</sup>.

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: Oct. 1-17, Nov. 19, Dec. 14-16, 22, 23, 31, Jan. 1-5, 14-20, and Jan. 30 to Mar. 2. Records good except for May, which are fair and estimated daily discharges, which are poor. No diversion upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years (water years 1950, 1959-76, 1982-85), 32.0 ft<sup>3</sup>/s, 23,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 2,500 ft<sup>3</sup>/s, Apr. 21, 1958, gage height, 7.35 ft, from rating curve extended above 1,100 ft<sup>3</sup>/s on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.91 ft<sup>3</sup>/s, Jan. 24, 1969, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 29	0130	163	2.32	Apr. 28	2145	*1,290	*4.64
Apr. 9	2400	1,270	4.63	Aug. 10	2045	113	1.98

Minimum daily discharge, 8.0 ft<sup>3</sup>/s, Feb. 2.

DISCHARGE, IN 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	15	36	18	25	10	23	83	422	72	25	22	17
2	14	34	18	20	8.0	24	88	547	65	26	21	18
3	25	31	17	24	10	25	143	396	60	26	24	20
4	35	30	19	28	11	21	260	361	57	24	28	19
5	36	28	19	32	14	21	435	357	70	23	25	19
6	30	26	16	32	14	24	620	327	78	22	21	17
7	25	25	17	29	10	24	705	297	63	22	19	17
8	22	24	19	24	10	23	713	266	52	22	19	17
9	20	24	20	25	20	25	825	246	61	22	21	17
10	17	18	18	24	20	28	774	280	53	23	25	17
11	15	21	21	23	10	45	578	231	46	22	31	20
12	15	22	20	22	10	91	507	206	42	22	27	21
13	20	21	17	21	9.0	81	392	216	42	20	21	18
14	25	21	17	21	10	95	355	191	40	22	19	17
15	30	20	15	21	10	105	318	163	40	24	18	21
16	24	19	14	20	11	87	278	139	38	29	18	27
17	20	22	13	20	12	85	242	131	37	25	17	24
18	35	22	20	20	13	84	237	159	40	26	17	23
19	32	19	19	19	14	94	250	176	54	25	17	30
20	26	18	19	19	15	85	219	141	43	23	17	49
21	27	18	17	19	16	90	171	148	34	22	21	71
22	27	22	16	19	17	85	213	153	31	25	19	39
23	26	21	15	19	17	77	215	150	31	25	17	27
24	26	24	17	18	14	85	155	171	35	24	17	24
25	29	25	17	18	15	100	119	152	43	22	18	22
26	29	14	17	18	17	129	149	116	40	22	19	21
27	30	15	18	18	18	128	337	96	30	24	18	21
28	30	18	28	19	20	124	776	84	28	23	20	23
29	31	23	44	17	---	138	812	76	27	24	21	24
30	31	18	38	14	---	101	654	71	26	26	18	23
31	31	---	31	12	---	92	---	69	---	25	18	---
TOTAL	798	679	614	660	375.0	2239	11623	6538	1378	735	633	723
MEAN	25.7	22.6	19.8	21.3	13.4	72.2	387	211	45.9	23.7	20.4	24.1
MAX	36	36	44	32	20	138	825	547	78	29	31	71
MIN	14	14	13	12	8.0	21	83	69	26	20	17	17
AC-FT	1580	1350	1220	1310	744	4440	23050	12970	2730	1460	1260	1430
CAL YR 1984	TOTAL	15394		MEAN	42.1	MAX	273	MIN	13	AC-FT	30530	
WTR YR 1985	TOTAL	26995.0		MEAN	74.0	MAX	825	MIN	8.0	AC-FT	53540	

## 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 mi<sup>2</sup>.

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. 20 to Dec. 12, Dec. 16-26, 31, Jan. 1 to Feb. 15, Mar. 12-20, and Mar. 30 to Apr. 22. Records good except for May, which are fair and 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.--27 years (water years 1939-42, 1950, 1959-76, 1982-1985), 47.2 ft<sup>3</sup>/s, 34,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,190 ft<sup>3</sup>/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 ft<sup>3</sup>/s; minimum, 2.8 ft<sup>3</sup>/s, Dec. 9, 1967.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 22	1715	422	5.31	July 15	1930	1,090	a 7.20
May 6	0100	*1,140	6.94	Aug. 10	1945	462	5.81

a From floodmarks

Minimum daily discharge, 11.0 ft<sup>3</sup>/s, Oct. 1, 2.

DISCHARGE, IN 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	11	26	14	20	13	25	178	638	175	28	26	14
2	11	26	14	18	11	25	185	746	147	28	25	16
3	15	26	13	16	12	25	219	796	133	32	27	17
4	29	26	15	16	14	24	256	829	125	28	34	17
5	29	23	20	14	16	15	237	786	138	26	27	15
6	26	24	18	12	16	13	218	811	126	24	24	14
7	20	24	16	16	15	13	269	744	110	23	21	14
8	17	24	18	20	12	13	347	726	104	24	20	13
9	15	23	19	18	14	13	345	741	99	25	20	14
10	14	21	21	16	16	14	506	734	85	24	37	13
11	13	20	22	15	18	15	512	692	75	26	24	15
12	14	23	23	13	13	20	472	570	69	23	22	17
13	19	23	23	13	15	25	442	435	64	21	20	18
14	23	23	22	12	19	35	456	360	59	22	19	16
15	21	22	22	12	23	45	480	342	54	41	18	20
16	20	21	20	13	28	55	503	356	50	37	18	20
17	19	24	18	13	30	70	490	358	47	31	17	19
18	22	25	17	13	33	90	507	375	47	26	17	20
19	21	24	18	14	34	120	534	376	60	33	16	31
20	22	21	20	15	38	150	461	343	50	27	16	35
21	22	19	22	15	40	141	423	337	43	26	19	50
22	24	19	18	16	40	143	389	299	39	30	19	30
23	23	20	13	17	40	132	341	281	37	26	17	23
24	22	22	14	17	37	141	336	291	40	25	16	21
25	23	25	16	17	35	173	335	264	42	24	15	19
26	23	20	19	17	29	210	333	267	41	24	16	18
27	25	12	23	18	24	206	325	260	34	23	15	18
28	26	14	29	17	25	190	546	241	33	25	15	18
29	25	16	34	19	---	188	754	224	31	25	17	19
30	26	15	30	19	---	154	726	203	29	31	16	20
31	26	---	24	15	---	165	---	187	---	36	14	---
TOTAL	646	651	615	486	660	2648	12125	14612	2186	844	627	594
MEAN	20.8	21.7	19.8	15.7	23.6	85.4	404	471	72.9	27.2	20.2	19.8
MAX	29	26	34	20	40	210	754	829	175	41	37	50
MIN	11	12	13	12	11	13	178	187	29	21	14	13
AC-FT	1280	1290	1220	964	1310	5250	24050	28980	4340	1670	1240	1180
CAL YR 1984	TOTAL	20456.1		MEAN	55.9	MAX	565	MIN	9.0	AC-FT	40570	
WTR YR 1985	TOTAL	36694		MEAN	101	MAX	829	MIN	11	AC-FT	72780	

## 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 mi<sup>2</sup>.

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.--Estimated daily discharges: Nov. 20-24, 27-30, Dec. 1-7, 31, Jan. 1-4, 12, 15, 16, 18, 19, Feb. 1-9, 11-16, and Mar. 10-13. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 300 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years (water years 1937-40, 1950, 1954-85), 74.9 ft<sup>3</sup>/s, 54,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft<sup>3</sup>/s, Apr. 21, 1958, from rating curve extended above 2,200 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; maximum gage height, 10.10 ft, July 15, 1985, present datum; minimum, 1.2 ft<sup>3</sup>/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 ft<sup>3</sup>/s), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 10	0300	1,990	7.86	Aug. 10	2130	1,880	7.77
Apr. 29	0100	2,020	7.90	Sept. 15	1830	2,220	8.11
July 15	2030	*4,540	a *10.10				

a From floodmarks

Minimum discharge, 10 ft<sup>3</sup>/s, Dec. 22.

DISCHARGE, IN 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	29	65	28	35	19	72	261	978	259	58	50	25
2	28	65	28	30	15	75	273	1170	227	53	50	65
3	43	61	25	35	19	81	362	1060	207	59	52	37
4	63	59	25	40	22	70	516	1040	193	57	72	34
5	65	55	25	42	28	60	672	1050	218	55	59	30
6	56	52	25	40	28	74	838	1000	215	51	46	27
7	45	51	25	41	20	72	974	899	187	49	40	24
8	40	49	34	41	20	70	1060	833	166	47	35	22
9	36	47	36	39	32	78	1170	810	167	51	39	19
10	34	41	34	36	35	110	1280	838	149	51	204	19
11	33	39	36	33	20	170	1090	776	129	52	87	36
12	34	45	37	32	21	250	979	654	117	52	59	30
13	45	44	38	31	23	400	834	567	110	45	45	31
14	51	42	34	31	24	355	811	485	98	44	41	29
15	58	39	32	31	25	325	798	447	90	295	41	178
16	48	36	29	31	28	296	781	443	82	92	37	55
17	42	42	22	31	37	273	732	436	81	65	32	47
18	57	43	34	31	41	254	744	485	82	56	32	53
19	61	41	33	31	41	277	784	513	108	60	33	77
20	54	35	35	32	54	246	680	447	96	52	34	156
21	55	30	32	32	61	246	594	439	80	46	37	138
22	60	33	18	32	65	249	608	421	70	54	40	84
23	56	36	26	34	64	228	581	403	66	56	34	57
24	53	38	28	33	50	246	522	489	85	54	34	47
25	57	47	31	33	54	287	473	439	90	45	30	42
26	56	33	32	34	57	346	481	396	87	62	34	40
27	59	20	31	34	59	356	618	366	71	57	30	39
28	61	25	48	35	68	335	1090	328	64	52	34	38
29	60	30	64	34	---	363	1480	294	60	57	39	39
30	61	30	56	30	---	301	1270	274	61	61	30	39
31	61	---	45	23	---	278	---	266	---	65	26	---
TOTAL	1561	1273	1026	1047	1030	6843	23356	19046	3715	1953	1456	1557
MEAN	50.4	42.4	33.1	33.8	36.8	221	779	614	124	63.0	47.0	51.9
MAX	65	65	64	42	68	400	1480	1170	259	295	204	178
MIN	28	20	18	23	15	60	261	266	60	44	26	19
AC-FT	3100	2520	2040	2080	2040	13570	46330	37780	7370	3870	2890	3090
CAL YR 1984	TOTAL	32101		MEAN	87.7	MAX	532	MIN	18	AC-FT	63670	
WTR YR 1985	TOTAL	63863		MEAN	175	MAX	1480	MIN	15	AC-FT	126700	

08324000 JEMEZ RIVER NEAR JEMEZ, NM -- Continued

## WATER-QUALITY RECORDS

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
NOV 16...	1000	37	490	495	8.2	8.4	8.0	2.5	13.0	130	0
JAN 15...	1230	36	510	--	7.8	--	5.0	.0	11.8	--	--
MAR 06...	1100	74	390	363	7.9	8.2	8.0	2.0	11.5	110	0
APR 22...	1430	516	175	193	8.1	8.3	11.5	8.5	9.0	72	0
JUL 22...	1010	52	410	442	8.1	8.4	27.0	19.5	7.6	130	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)	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)
NOV 16...	45	4.8	48	2	7.4	13	54	.80	39	300
JAN 15...	--	--	--	--	--	--	--	--	--	--
MAR 06...	36	4.2	31	1	4.5	16	28	.60	32	230
APR 22...	24	3.0	8.7	.5	2.4	14	6.9	.20	21	120
JUL 22...	45	5.3	36	1	6.4	12	41	.60	30	260

DATE	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- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 16...	<.10	<.10	.060	.24	.050	.060	1.8	32	3.2	75
JAN 15...	--	--	--	--	--	--	--	--	--	--
MAR 06...	--	--	--	--	--	--	--	--	--	--
APR 22...	--	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	35	4.9	79

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)
NOV 16...	1000	38	34	460	<1	<1	<10	20	5	3
MAR 06...	1100	--	--	240	--	--	--	--	--	--
APR 22...	1430	--	--	110	--	--	--	--	--	--
JUL 22...	1010	--	--	340	--	--	--	--	--	--

WATER-QUALITY RECORDS

[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 mi<sup>2</sup>.

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

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

REMARKS.--Reservoir is formed by earthfill dam, completed 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 ft/s by storage for one day before releasing to Rio Grande, and for possible detention during flood stage on Rio Grande.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 71,220 acre-ft, June 8, 1958, elevation, 5,213.36 ft; no storage most of time prior to March 1979.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,862 acre-ft, June 9, elevation, 5,197.05 ft; minimum contents, 2,418 acre-ft, Oct. 1, elevation, 5,161.44 ft.

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

Oct. 1 to Dec. 31  
(Based on survey by C of E in 1975)

5,155	811
5,160	1,980
5,165	3,700
5,170	6,180

Jan. 1 to Sept. 30  
(Based on survey by C of E in 1985)

5,165	2,370	5,185	15,400
5,170	4,200	5,190	20,840
5,175	6,980	5,195	27,060
5,180	10,730	5,200	34,100

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2418	2805	3082	4135	6423	8413	9495	17184	29694	29569	28560	27286
2	2443	2833	3152	4195	6429	8509	9121	18122	29722	29541	28587	27219
3	3002	2836	3241	4236	6435	8598	8816	18906	29708	29527	28629	27192
4	3275	2839	3317	4320	6441	8688	8808	19579	29666	29513	28670	27205
5	3140	2836	3401	4446	6447	8808	9191	20149	29722	29485	28698	27179
6	3122	2802	3467	4567	6466	8907	9821	20749	29820	29430	28670	27125
7	3108	2784	3534	4650	6491	8975	10433	21182	29848	29360	28601	27059
8	3093	2788	3605	4709	6604	9029	11266	21489	29848	29332	28546	26992
9	3067	2764	3678	4829	6755	9045	12370	21679	29862	29263	28739	26939
10	3013	2743	3751	4957	6903	9060	13237	21857	29820	29221	29069	26899
11	2902	2723	3850	5014	6975	9214	13571	21905	29708	29180	29402	26859
12	2857	2706	3969	5045	7053	10112	13648	21953	29652	29166	29263	26846
13	2867	2736	4112	5077	7139	10492	13609	21905	29750	29152	28711	26953
14	2874	2809	4237	5124	7205	10120	13581	21560	29778	29097	28327	27112
15	3174	2854	4341	5274	7252	9813	13456	21324	29750	29430	28259	27272
16	3374	2864	4451	5367	7313	9789	13227	21359	29736	29848	28191	27433
17	3013	2895	4503	5433	7374	9765	12973	22048	29652	29806	28110	27125
18	2850	2931	4565	5505	7434	9574	12702	22829	29624	29444	28015	27112
19	2878	2938	4666	5572	7510	9229	12637	23638	29624	29235	27947	27380
20	2949	2846	4807	5629	7592	8968	12804	24258	29610	29235	27892	27554
21	3027	2850	4886	5726	7675	8816	12973	25002	29555	29235	27851	28069
22	3079	2871	4931	5801	7773	8665	13208	25643	29485	29235	27811	28560
23	2892	2871	4977	5871	7871	8524	13048	26215	29402	29125	27770	28001
24	2713	2917	5043	5935	7971	8391	12813	26740	29457	28973	27730	26992
25	2802	2966	5131	6023	8049	8361	12297	27272	29541	28918	27676	26873
26	2888	2906	5235	6125	8100	8539	12026	27824	29582	28862	27622	26846
27	2942	2833	5357	6227	8201	8770	11972	28382	29596	28780	27581	26793
28	2984	2867	5518	6281	8317	9022	13284	28821	29596	28698	27541	26727
29	2984	2945	5702	6318	---	9268	15250	29083	29596	28601	27487	26661
30	2888	3017	5888	6373	---	9440	16407	29471	29582	28574	27420	26621
31	2805	---	6009	6410	---	9582	---	29666	---	28574	27353	---
MAX	3374	3017	6009	6410	8317	10492	16407	29666	29862	29848	29402	28560
MIN	2418	2706	3082	4135	6423	8361	8808	17184	29402	28574	27353	26621
(†)	5162.61	5163.21	5196.70	5174.11	5176.94	5178.60	5185.98	5196.91	5196.85	5196.12	5195.22	5194.67
(††)	+422	+212	+2992	*+2341	+1907	+1265	+6825	+13259	-84	-1008	-1221	-732
CAL YR 1984	MAX	6009	MIN	2229	(††)	+3491						
WTR YR 1985	MAX	29862	MIN	2418	(††)	*+25146						

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

\* COMPUTED ON BASIS OF REVISED CAPACITY TABLE PUT INTO USE JAN. 1, 1985.

## 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 mi<sup>2</sup>.

## 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.--Estimated daily discharges: Sept. 26-30. Water-discharge records good except for those below 5.0 cfs, which are fair and estimated daily discharges, which are poor. Subsequent to October 1953, flow at this station can be completely regulated by Jemez Canyon Reservoir (station 08328500). However, reservoir is designed essentially for desilting and flood control rather than storage. Diversions for irrigation of about 3,000 acres upstream from station.

AVERAGE DISCHARGE.--43 years (water years 1937, 1944-85), 59.9 ft<sup>3</sup>/s, 43,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft<sup>3</sup>/s, Aug. 29, 1943, gage height, 5.62 ft, site and datum then in use, from rating curve extended above 3,000 ft<sup>3</sup>/s; no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in 1900 was probably less than 16,000 ft<sup>3</sup>/s, but highest observed outside period of record.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,180 ft<sup>3</sup>/s, Apr. 11; no flow at times.

DISCHARGE, IN 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	.15	40	.45	.30	.56	.19	421	689	160	1.1	32	.00
2	.15	31	.31	.15	.45	.20	543	697	160	2.6	32	.00
3	.02	40	.30	.15	.45	.28	525	707	159	2.8	32	.00
4	99	41	.23	.15	.45	.15	521	716	158	2.7	33	.39
5	127	46	.15	.15	.45	.15	579	718	137	2.5	33	.83
6	30	55	.15	.15	.45	.21	642	723	121	2.5	34	.90
7	30	45	.15	.15	.45	30	640	726	119	2.5	34	.90
8	30	33	.15	.18	.45	59	643	732	117	2.2	33	.90
9	29	36	.15	.30	.45	60	643	732	116	2.2	32	.90
10	53	31	.15	.30	.45	60	921	732	116	2.1	31	.90
11	67	31	.15	.30	.45	84	1180	720	115	2.1	30	1.1
12	36	31	.15	.19	.45	182	1170	713	86	1.9	165	1.1
13	21	16	.29	.30	.45	504	1160	695	34	1.8	276	1.1
14	21	3.5	.30	.20	.45	695	1130	740	34	2.0	184	1.1
15	20	10	.29	.15	.35	566	1130	614	34	5.5	24	1.1
16	139	27	.15	.15	.30	359	1120	413	34	2.1	24	50
17	214	25	.15	.15	.30	362	1100	31	35	93	24	227
18	97	25	.15	.22	.30	447	1080	2.3	36	222	24	193
19	27	35	.15	.30	.18	525	921	2.0	36	120	9.5	126
20	23	68	.15	.58	.21	450	618	28	37	1.4	.00	195
21	23	28	.15	.29	.15	366	623	38	37	1.2	.00	120
22	62	20	.15	.30	.15	366	616	37	37	1.3	.00	117
23	155	36	.15	.30	.15	359	758	36	36	51	.00	443
24	106	20	.15	.30	.30	364	871	35	27	101	.00	650
25	23	20	.15	.30	.30	308	709	35	12	42	.00	90
26	23	57	.15	.30	.20	266	706	35	1.6	34	.00	30
27	23	45	.15	.30	.15	267	700	35	1.4	51	.00	30
28	23	7.5	.15	.30	.20	268	460	35	1.2	50	.01	30
29	45	.70	.15	.30	---	268	344	36	1.1	50	.00	28
30	90	.57	.29	.30	---	269	684	35	.98	38	.00	28
31	88	---	.30	.30	---	271	---	77	---	31	.00	---
TOTAL	1724.32	904.27	6.06	7.81	9.65	7756.18	23158	11564.3	1999.28	925.5	1086.51	2368.22
MEAN	55.6	30.1	.20	.25	.34	250	772	373	66.6	29.9	35.0	78.9
MAX	214	68	.45	.58	.56	695	1180	740	160	222	276	650
MIN	.02	.57	.15	.15	.15	.15	344	2.0	.98	1.1	.00	.00
AC-FT	3420	1790	12	15	19	15380	45930	22940	3970	1840	2160	4700
CAL YR 1984	TOTAL	27566.72		MEAN	75.3	MAX	473	MIN	.00	AC-FT	54680	
WTR YR 1985	TOTAL	51510.10		MEAN	141	MAX	1180	MIN	.00	AC-FT	102200	

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

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)
DEC 04...	1300	.15	1700	1680	8.6	7.9	1.5	2.0	14.8	340	47
MAR 06...	1400	.13	2180	2020	7.9	8.0	16.0	9.0	9.6	400	61
MAY 02...	1400	729	500	508	7.8	7.9	19.0	12.0	9.8	110	24
JUL 22...	1210	1.3	690	687	7.9	8.0	38.0	22.5	7.3	150	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)	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 SI02) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
DEC 04...	110	16	230	6	11	290	210	.90	29	1100
MAR 06...	120	25	280	6	12	360	250	.80	30	1300
MAY 02...	36	4.3	57	2	4.0	96	35	.30	20	300
JUL 22...	48	7.5	71	3	5.2	83	61	.50	24	400

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC 04...	1300	960	8
MAR 06...	1400	1200	20
MAY 02...	1400	190	43
JUL 22...	1210	200	36



## 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 Barelbas 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.--No estimated daily discharges. Records good. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 686 ft<sup>3</sup>/s, July 31, 1982, gage height, 3.20 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 346 ft<sup>3</sup>/s, at 0630 hours Apr. 28, gage height, 2.18 ft; no flow most of time.

DISCHARGE, IN 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	.00	.00	.00			---	.00	5.1	.00	.00	2.2	.00
2	3.1	.00	.00			---	.00	1.0	.00	.72	3.3	1.9
3	24	.00	.00			---	.00	.00	.00	.00	1.2	5.9
4	.45	.00	---			---	.00	.00	.00	.00	1.0	.00
5	.00	.00	---			---	.00	.00	.00	.00	.00	.00
6	.00	.00	---			---	.00	.00	.00	.00	2.6	.00
7	.00	.00	---			---	.00	.00	.00	.00	.00	.00
8	.00	.00	---			---	.00	.00	.00	.00	.00	.00
9	.00	.00	---			---	.00	.00	.00	.00	.00	.00
10	.00	.00	---			---	.00	.00	.00	.00	1.6	.00
11	.00	.00	---			.00	.00	.00	.00	.00	1.9	.00
12	1.7	.00	---			13	.00	2.2	.00	.00	.00	.00
13	2.1	.00	---			.00	.00	1.2	.00	.00	.00	.00
14	.00	.70	---			.00	.00	.00	.00	.00	.00	.00
15	56	.00	---			.00	.00	.00	.00	.00	.00	7.3
16	.00	.00	---			.00	.00	.00	.00	.00	.00	7.9
17	.00	2.9	---			.00	.00	.80	.00	.00	.00	.00
18	.00	1.6	---			.00	2.6	.80	.00	.00	.00	10
19	.70	.00	---			.00	.00	.00	.00	1.2	.00	7.6
20	1.8	.00	---			.00	.00	.00	1.2	1.9	1.6	12
21	1.0	.00	---			.00	.00	8.7	1.6	.00	3.3	.00
22	.70	.00	---			.00	4.7	.00	.00	.00	.00	.00
23	.00	.00	---			.00	.00	.00	.00	1.4	.00	.00
24	1.2	1.6	---			.00	.00	.00	7.7	.00	.00	.00
25	.00	.00	---			.00	.00	.00	5.5	2.9	.00	.00
26	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
27	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
28	.00	.00	---			.00	41	.00	.00	2.6	.00	.26
29	.00	.00	---			.00	.00	.00	.00	3.7	.00	.00
30	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
31	.00	---	---			.00	---	.00	---	.00	.00	---
TOTAL	92.75	6.80	---			---	48.30	19.80	16.00	14.42	18.70	52.86
MEAN	2.99	.23	---			---	1.61	.64	.53	.47	.60	1.76
MAX	56	2.9	---			---	41	8.7	7.7	3.7	3.3	12
MIN	.00	.00	---			---	.00	.00	.00	.00	.00	.00
AC-FT	184	13	---			---	96	39	32	29	37	105

## 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: Aug. 10-27. Records good except for estimated daily discharges, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,230 ft<sup>3</sup>/s, July 31, 1982, gage height, 11.20 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,670 ft<sup>3</sup>/s, at 0630 hours Apr. 28, gage height, 5.56 ft; no flow most of time.

DISCHARGE, IN 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	.00	.00	.00			---	.00	48	.00	.00	25	.00
2	7.1	.00	.00			---	.00	9.5	.00	13	31	3.2
3	108	.00	.00			---	.00	.00	.00	.00	1.1	25
4	2.9	.00	---			---	.00	10	12	.00	2.1	1.6
5	.00	.00	---			---	.00	.00	.00	.00	.00	.00
6	.00	.00	---			---	.00	.00	.00	.00	3.3	.00
7	.00	.00	---			---	.00	.00	.00	.00	7.0	.00
8	.00	.00	---			---	.00	.00	.00	.00	.00	.00
9	.00	.00	---			---	.00	.00	.00	.00	.00	.00
10	.00	.00	---			---	.00	.00	.00	.00	60	.00
11	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
12	10	.00	---		139	.00	.00	.20	.00	.00	.00	.00
13	11	.00	---			.00	.00	36	.00	.00	.00	.00
14	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
15	227	.00	---			.00	.00	.00	.00	.94	.00	41
16	1.8	.00	---			.00	.00	.00	.00	1.4	.00	80
17	.00	42	---			.00	.00	1.2	.00	.00	.00	3.6
18	.00	16	---			.00	29	17	.00	1.3	.00	61
19	3.3	.00	---		13	.00	.00	.00	.00	18	.00	56
20	19	.00	---			.00	.00	3.3	13	5.6	40	98
21	15	.00	---			.00	.60	79	2.9	.00	.00	2.7
22	7.7	.00	---			.00	42	.00	.00	4.5	.00	.00
23	.00	.00	---			.00	.00	.00	.00	9.5	.00	.00
24	21	11	---			.00	.00	.00	50	.00	.00	.00
25	1.3	2.3	---			.00	.00	.00	19	58	.00	.00
26	5.4	.00	---			.00	7.9	.00	.00	.00	.00	.00
27	1.2	.00	---			.00	.00	.00	.00	.00	.00	.00
28	.00	.00	---			.00	243	.00	.00	4.0	7.1	1.2
29	.00	.00	---			4.1	3.6	.00	.00	26	.50	.00
30	.00	.00	---			.00	.00	.00	.00	3.4	.00	.00
31	.00	---	---			.00	---	.00	---	26	.00	---
TOTAL	441.70	71.30	---			---	326.10	204.20	96.90	171.64	177.10	373.30
MEAN	14.2	2.38	---			---	10.9	6.59	3.23	5.54	5.71	12.4
MAX	227	42	---			---	243	79	50	58	60	98
MIN	.00	.00	---			---	.00	.00	.00	.00	.00	.00
AC-FT	876	141	---			---	647	405	192	340	351	740

## 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.

## WATER-DISCHARGE RECORDS

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.--No estimated daily discharges. Water-discharge records good except those below 25 ft<sup>3</sup>/s, which are fair. 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 ft<sup>3</sup>/s, Aug. 14, 1980, gage height, 10.4 ft, from rating curve extended above 2,900 ft<sup>3</sup>/s; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 3	1530	1,820	3.25	Aug. 10	1800	1,650	3.05
Oct. 15	1730	*2,960	*4.46	Sept. 16	1930	2,500	4.00
Apr. 28	0645	2,580	4.08				

No flow most of time.

DISCHARGE, IN 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	.00	.00	.00			---	.00	47	.00	.00	12	.00
2	9.7	.00	.00			---	.00	36	.00	30	88	14
3	260	.00	.00			---	.00	.00	.00	9.6	20	48
4	25	.00	---			---	.00	15	11	.00	12	11
5	.00	.00	---			---	.00	.00	6.0	.00	.00	.00
6	.00	.00	---			---	.00	.00	.00	.00	7.5	.00
7	.00	.00	---			---	.00	.00	.00	.00	31	.00
8	.00	.00	---			---	.00	.00	.00	.00	.00	.00
9	.00	.00	---			---	.00	.00	.00	.00	.00	.00
10	.00	.00	---			---	.00	.00	.00	.00	83	.00
11	.00	.00	---			---	.00	.00	.00	.00	23	.00
12	42	.00	---			---	.00	.00	.00	.00	.00	.00
13	30	.00	---			---	.00	56	.00	.00	.00	.00
14	.00	.00	---			---	.00	.00	.00	.00	.00	.00
15	564	.00	---			---	.00	.00	.00	.00	.00	72
16	19	.00	---			---	.00	.00	.00	5.0	.00	174
17	.00	99	---			---	.00	.00	.00	.00	.00	32
18	.00	63	---			---	42	49	.00	.00	.00	90
19	3.9	.00	---			---	30	3.9	.00	28	.00	80
20	47	.00	---			---	.00	11	6.0	12	6.4	187
21	60	.00	---			---	4.4	92	24	.00	42	14
22	29	.00	---			.00	104	22	.00	18	.00	.00
23	.00	.00	---			.00	4.2	.00	.00	18	.00	.00
24	37	51	---			.00	.00	.00	53	7.9	.00	.00
25	21	25	---			.00	.00	.00	99	99	.00	.00
26	3.5	.00	---			.00	22	.00	.00	.00	.00	.00
27	32	.00	---			.00	4.2	.00	.00	.00	.00	.00
28	.00	.00	---			.00	413	.00	.00	9.7	11	2.9
29	.00	.00	---			17	24	.00	.00	54	2.8	1.3
30	.00	.00	---			.00	.00	.00	.00	7.0	.00	.00
31	.00	---	---			.00	---	.00	---	46	.00	---
TOTAL	1183.10	238.00	---			---	647.80	331.90	199.00	344.20	338.70	726.20
MEAN	38.2	7.93	---			---	21.6	10.7	6.63	11.1	10.9	24.2
MAX	564	99	---			---	413	92	99	99	88	187
MIN	.00	.00	---			---	.00	.00	.00	.00	.00	.00
AC-FT	2350	472	---			---	1280	658	395	683	672	1440

## 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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. 18, 1947, to Apr. 12, 1959, at site 550 ft to the left of present site; Apr. 13, 1959, to June 29, 1960, at site 150 ft to right of present site. Supplemental water-stage recorders at sites 75 ft and 150 ft to right of present site used at various times since 1964.

REMARKS.--No estimated daily discharges. Water-discharge 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 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 ft<sup>3</sup>/s, 773,800 acre-ft/yr, prior to closure of Cochiti Dam.  
12 years (water years 1974-85), 1,352 ft<sup>3</sup>/s, 979,500 acre-ft/yr, since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft<sup>3</sup>/s, Apr. 24, 1942, from rating curve extended above 13,900 ft<sup>3</sup>/s; maximum gage height, 7.82 ft, Aug. 10, 1967; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,370 ft<sup>3</sup>/s, at 0530 hours Apr. 24, gage height, 7.21 ft; minimum daily, 179 ft<sup>3</sup>/s, Oct. 2.

DISCHARGE, IN 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	182	794	861	1180	1090	1480	677	7740	4870	3320	518	431
2	179	737	847	1140	1010	1350	3230	8460	4950	3310	487	447
3	290	757	892	1240	960	1320	3880	8530	5160	3790	618	474
4	309	813	931	1190	911	1450	4200	8210	5600	4000	692	477
5	312	853	865	1120	838	1020	5140	8280	5820	4020	701	476
6	372	843	758	1200	773	679	5110	7880	6520	4050	861	494
7	393	1040	787	1260	723	534	5250	7600	6870	4060	1100	508
8	379	1110	845	1290	692	880	5430	7560	6830	4080	835	504
9	366	1090	977	1250	699	1520	5910	7290	6720	4100	587	514
10	370	1090	1060	1280	770	1560	6010	6770	6050	3650	493	511
11	360	1060	1110	1270	841	1610	6160	6610	5230	3620	553	506
12	305	729	1130	1230	825	2170	6310	6620	4280	3620	771	523
13	298	502	1380	1170	740	2850	6450	6810	3970	3660	1110	507
14	279	448	1280	1160	672	3330	6590	7090	3920	3730	803	432
15	585	420	1310	1150	674	3630	6620	7230	3820	3730	504	338
16	801	672	1260	1130	844	3320	6880	7460	3750	3440	304	356
17	665	1210	1250	1100	835	3660	7220	6630	3750	3170	320	548
18	589	1260	1200	1090	745	3990	7230	6090	3310	3170	279	677
19	490	1230	1130	1090	926	4240	7180	5080	3210	3090	256	568
20	507	1290	1110	882	1010	4200	7860	4860	3340	2980	225	707
21	567	1360	1140	575	959	4260	8170	4350	3590	2940	218	1220
22	607	1280	1170	544	1120	3610	7930	3980	3510	2880	231	1240
23	655	1250	1150	519	1590	3460	8180	3870	3590	1840	333	1340
24	745	1310	1080	497	1570	3410	8650	3910	3600	998	406	1370
25	713	1290	969	701	1630	3350	8360	3780	3780	667	432	986
26	669	1150	887	1120	1730	3170	8060	3690	3650	568	455	690
27	682	1070	1050	834	1550	1940	7480	3630	3580	528	442	516
28	679	1030	1220	339	1420	1080	7030	3650	3580	475	453	438
29	728	971	1170	252	---	761	6380	3760	3450	472	436	420
30	812	894	1310	301	---	585	6700	4140	3310	582	432	395
31	798	---	1250	811	---	491	---	4580	---	578	444	---
TOTAL	15686	29553	33379	29915	28147	70910	190277	186140	133610	85118	16299	18613
MEAN	506	985	1077	965	1005	2287	6343	6005	4454	2746	526	620
MAX	812	1360	1380	1290	1730	4260	8650	8530	6870	4100	1110	1370
MIN	179	420	758	252	672	491	677	3630	3210	472	218	338
AC-FT	31110	58620	66210	59340	55830	140600	377400	369200	265000	168800	32330	36920
(†)	10530	1170	954	851	897	4860	14110	14820	15560	15400	13810	11850
CAL YR 1984	TOTAL	610762		MEAN	1669	MAX	8500	MIN	31	AC-FT 1211000	(†)	111500
WTR YR 1985	TOTAL	837647		MEAN	2295	MAX	8650	MIN	179	AC-FT 1661000	(†)	104800

(†) 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 current year.

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.--Additional sediment total-discharge determinations were made monthly when needed.

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, 673 microsiemens Aug. 16; minimum daily, 192 microsiemens May 15.

WATER TEMPERATURES: Maximum daily, 23.0°C July 30; minimum daily, 2.0°C Dec. 17, Feb. 2, 3.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,460 mg/L April 28; minimum daily mean, 10 mg/L June 5.

SEDIMENT LOADS: Maximum daily, 46,700 tons Apr. 28; minimum daily, 15 tons Aug. 20.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (000955)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (900955)	PH (STAND- ARD UNITS) (004000)	PH LAB (STAND- ARD UNITS) (004003)	TEMPER- ATURE, AIR (DEG C) (000200)	TEMPER- ATURE (DEG C) (000100)	OXYGEN, DIS- SOLVED (MG/L) (003000)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (003400)	HARD- NESS (MG/L CACO3) (009000)
NOV 13...	1530	509	475	479	8.1	8.6	18.5	14.0	8.4	10	170
JAN 21...	1130	573	350	--	7.9	--	1.0	4.5	10.8	--	--
MAR 18...	1100	4200	400	398	7.9	8.0	14.5	8.5	9.8	--	140
MAY 15...	1500	7170	192	247	7.8	8.0	27.5	15.0	9.4	--	90
JUL 16...	1245	3550	240	246	7.9	8.0	25.0	22.0	7.0	30	96

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (009002)	CALCIUM DIS- SOLVED (MG/L AS CA) (009155)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (009255)	SODIUM, DIS- SOLVED (MG/L AS NA) (009300)	SODIUM AD- SORP- TION RATIO (009310)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (009355)	SULFATE DIS- SOLVED (MG/L AS SO4) (009455)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (009400)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (009500)	SILICA, DIS- SOLVED (MG/L AS SIO2) (009555)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (703010)
NOV 13...	27	52	8.6	34	1	3.8	84	15	.40	21	300
JAN 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 18...	16	43	7.0	32	1	3.3	65	16	.30	20	260
MAY 15...	19	28	4.8	13	.6	2.5	38	5.4	.20	17	150
JUL 16...	25	30	5.0	14	.6	2.9	36	4.5	.20	17	150

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (006300)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (006310)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (006100)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (006050)	NITRO- GEN, TOTAL (MG/L AS N) (006000)	PHOS- PHORUS, TOTAL (MG/L AS P) (006655)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (006670)	CARBON, ORGANIC TOTAL (MG/L AS C) (006800)
NOV 13...	<.10	<.10	.020	.18	--	.060	.030	2.2
JAN 21...	--	--	--	--	--	--	--	--
MAR 18...	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--
JUL 16...	.10	.10	.070	.43	.60	.090	.050	4.2

## RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC	ARSENIC	BORON,	CADMIUM	CADMIUM	CHRO-	CHRO-	COPPER,	COPPER,
		TOTAL (UG/L AS AS) (01002)	DIS- SOLVED (UG/L AS AS) (01000)	DIS- SOLVED (UG/L AS B) (01020)	TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	DIS- SOLVED (UG/L AS CD) (01025)	TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	MIUM, DIS- SOLVED (UG/L AS CR) (01030)	TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	DIS- SOLVED (UG/L AS CU) (01040)
NOV 13...	1530	3	3	90	<1	<1	10	<10	9	2
MAR 18...	1100	--	--	90	--	--	--	--	--	--
MAY 15...	1500	--	--	30	--	--	--	--	--	--
JUL 16...	1245	--	--	20	--	--	--	--	--	--

DATE	TIME	IRON,	LEAD,	LEAD,	MERCURY	MERCURY	SELE-	SELE-	ZINC,	ZINC,
		DIS- SOLVED (UG/L AS FE) (01046)	TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	DIS- SOLVED (UG/L AS PB) (01049)	TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	DIS- SOLVED (UG/L AS HG) (71890)	NIUM, DIS- SOLVED (UG/L AS SE) (01147)	NIUM, DIS- SOLVED (UG/L AS SE) (01145)	TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	DIS- SOLVED (UG/L AS ZN) (01090)
NOV 13...	1530	3	4	<1	<.1	<.1	<1	<1	30	14
MAR 18...	1100	10	--	--	--	--	--	--	--	--
MAY 15...	1500	76	--	--	--	--	--	--	--	--
JUL 16...	1245	63	--	--	--	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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 (PCI/L RADON METHOD (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 13...	1530	13	1.9	6.1	1.9	5.3	1.6	.08	3.6

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	PCB,	ALDRIN,	CHLOR-	DDD,	DDE,	DDT,	DI-	DI-	ENDO-
		TOTAL (UG/L (39516)	TOTAL (UG/L (39330)	DANE, TOTAL (UG/L (39350)	TOTAL (UG/L (39360)	TOTAL (UG/L (39365)	TOTAL (UG/L (39370)	AZINON, TOTAL (UG/L (39570)	ELDRIN, TOTAL (UG/L (39380)	SULFAN, TOTAL (UG/L (39388)
MAR 18...	1100	--	--	--	--	--	--	--	--	--
JUL 16...	1245	<.1	<.010	<.1	<.010	<.010	<.010	<.01	<.010	<.010

DATE	TIME	ENDRIN,	ETHION,	HEPTA-	HEPTA-	LINDANE	MALA-	METH-	METHYL	METHYL
		TOTAL (UG/L (39390)	TOTAL (UG/L (39398)	CHLOR, TOTAL (UG/L (39410)	CHLOR EPOXIDE TOTAL (UG/L (39420)	TOTAL (UG/L (39340)	THION, TOTAL (UG/L (39530)	CHLOR, TOTAL (UG/L (39480)	PARA- THION, TOTAL (UG/L (39600)	TRI- THION, TOTAL (UG/L (39790)

MAR 18...	1100	--	--	--	--	--	--	--	--	--
JUL 16...	1245	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01	<.01

DATE	TIME	PARA-	TOX-	TOTAL	2,4-D,	2,4,5-T	SILVEX,	PER-	NAPH-	MIREX,
		THION, TOTAL (UG/L (39540)	APHENE, TOTAL (UG/L (39400)	TRI- THION TOTAL (UG/L (39786)	TOTAL (UG/L (39730)	TOTAL (UG/L (39740)	TOTAL (UG/L (39760)	THANE TOTAL (UG/L (39034)	THA- LENES, POLY- CHLOR. TOTAL (UG/L (39250)	TOTAL (UG/L (39755)

MAR 18...	1100	--	--	--	.01	<.01	<.01	--	--	--
JUL 16...	1245	<.01	<1	<.01	--	--	--	<.1	<.10	<.01

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

## WATER-QUALITY RECORDS

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SEDI- MENT, DISCH, SUSP. + BED MA- TERIAL (T/DAY) (80156)	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)
OCT										
01...	1000	180	18.0	51	25	27	--	--	--	--
NOV										
13...	1530	509	14.0	103	142	232	--	--	--	--
DEC										
03...	1100	878	5.0	134	318	628	--	--	--	--
JAN										
21...	1130	573	4.5	131	203	373	--	--	--	--
FEB										
11...	1215	834	5.0	89	200	540	--	--	--	--
MAR										
04...	1130	1490	4.0	2130	8570	22900	--	--	--	14
18...	1100	4200	8.5	1140	12900	17000	9	11	15	43
APR										
01...	0930	455	2.5	122	150	--	--	--	--	--
MAY										
01...	1100	7830	6.5	1330	28100	--	8	10	15	28
15...	1500	7170	15.0	434	8400	12400	--	--	--	42
JUN										
17...	1045	3620	20.5	84	821	2360	--	--	--	--
JUL										
01...	1030	3280	11.0	1000	8860	13600	--	--	--	--
16...	1245	3550	22.0	452	4330	--	--	--	--	--
30...	1335	470	23.0	259	329	--	--	--	--	--
AUG										
12...	1100	882	20.0	689	1640	1830	--	--	--	--
SEP										
10...	1100	523	18.0	65	92	--	--	--	--	--
22...	1100	1250	13.0	2500	8440	--	--	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM (70336)
OCT										
01...	--	--	--	--	93	95	97	100	--	--
NOV										
13...	--	--	--	--	36	39	62	97	100	--
DEC										
03...	--	--	--	--	44	53	81	97	100	--
JAN										
21...	--	--	--	--	36	44	82	100	--	--
FEB										
11...	--	--	--	--	47	60	95	100	--	--
MAR										
04...	41	95	100	--	--	--	--	--	--	--
18...	59	85	100	--	--	--	--	--	--	--
APR										
01...	--	--	--	--	87	94	96	99	100	--
MAY										
01...	45	83	99	100	--	--	--	--	--	--
15...	75	100	--	--	--	--	--	--	--	--
JUN										
17...	--	--	--	--	58	87	99	100	--	--
JUL										
01...	--	--	--	--	7	11	44	90	99	100
16...	--	--	--	--	10	--	--	--	--	--
30...	--	--	--	--	95	--	--	--	--	--
AUG										
12...	--	--	--	--	92	95	97	100	--	--
SEP										
10...	--	--	--	--	88	93	96	99	100	--
22...	--	--	--	--	100	--	--	--	--	--

08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

## WATER-QUALITY RECORDS

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	BED MAT. FALL DIAM. % FINER THAN (80158)	BED MAT. FALL DIAM. % FINER THAN (80159)	BED MAT. FALL DIAM. % FINER THAN (80160)	BED MAT. FALL DIAM. % FINER THAN (80161)	BED MAT. SIEVE DIAM. % FINER THAN (80168)	BED MAT. SIEVE DIAM. % FINER THAN (80169)	BED MAT. SIEVE DIAM. % FINER THAN (80170)	BED MAT. SIEVE DIAM. % FINER THAN (80171)	BED MAT. SIEVE DIAM. % FINER THAN (80172)	BED MAT. SIEVE DIAM. % FINER THAN (80173)
OCT										
01...	0	0	20	74	93	99	100	--	--	--
NOV										
13...	0	0	18	66	86	94	98	100	--	--
DEC										
03...	3	7	53	92	98	99	99	100	--	--
JAN										
21...	0	0	12	68	85	94	97	99	100	--
FEB										
11...	0	0	13	59	85	96	98	99	100	--
MAR										
04...	11	11	22	70	88	95	97	98	100	--
18...	0	2	29	80	93	97	98	100	--	--
APR										
01...	0	0	5	56	77	88	92	96	100	--
MAY										
01...	0	0	3	18	39	70	89	96	100	--
15...	15	57	96	100	--	--	--	--	--	--
JUN										
17...	0	0	9	89	98	98	98	99	100	--
JUL										
01...	0	0	46	83	89	92	94	96	100	--
16...	0	0	34	81	92	96	97	98	100	--
30...	--	--	--	--	--	--	--	--	--	--
AUG										
12...	0	0	14	77	94	98	99	100	--	--
SEP										
10...	6	8	22	55	63	70	74	81	92	100
22...	--	--	--	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	446	491	432	396	279	352	581	290	234	213	---	416
2	449	461	425	390	295	350	468	278	242	203	---	421
3	449	462	308	393	348	354	376	291	235	212	---	416
4	429	465	330	389	355	364	363	267	231	212	---	416
5	529	470	366	403	363	361	350	260	224	212	318	415
6	546	468	376	388	361	392	342	257	220	218	320	417
7	479	474	381	392	368	412	342	252	211	220	311	415
8	474	467	348	380	367	414	334	246	212	216	335	414
9	475	462	337	381	369	398	327	246	209	220	351	419
10	482	460	367	375	362	394	320	239	211	222	324	409
11	486	459	360	377	363	398	319	236	213	223	321	352
12	493	460	374	381	364	396	305	232	212	222	343	367
13	494	490	299	388	380	402	289	235	217	223	347	374
14	488	492	313	391	372	431	283	230	213	227	556	373
15	483	477	351	390	373	431	279	229	211	225	567	380
16	---	471	405	388	363	407	268	227	207	225	673	341
17	---	413	392	389	364	410	267	231	208	234	512	340
18	532	432	396	387	365	401	260	232	210	240	484	438
19	535	435	403	387	372	406	256	235	208	---	478	442
20	492	439	400	385	357	396	255	240	208	---	479	419
21	485	456	386	410	366	389	243	245	253	---	437	437
22	484	---	395	410	361	397	242	245	214	---	436	452
23	490	---	400	412	---	389	245	251	210	---	414	433
24	490	---	404	409	347	392	251	252	209	---	409	463
25	478	---	418	411	351	396	250	252	210	---	403	450
26	465	424	416	262	338	385	252	251	214	---	403	443
27	464	454	416	270	345	400	257	251	213	---	405	430
28	463	429	391	263	348	432	275	249	211	---	403	430
29	466	428	403	288	---	528	277	246	211	---	402	433
30	462	419	400	298	---	534	277	239	211	303	404	429
31	483	---	396	268	---	566	---	239	---	---	410	---
MEAN	482	456	380	369	355	409	305	248	216	225	416	413
WTR YR 1985	MEAN	358	MAX	673	MIN	203						



08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.0	9.0	9.0	4.0	3.0	6.0	7.0	12.0	11.0	12.0	---	14.0
2	9.0	7.0	7.0	3.0	2.0	8.0	7.0	12.0	10.0	12.0	---	14.0
3	9.0	7.0	7.0	4.0	2.0	7.0	8.0	10.0	10.0	13.0	---	11.0
4	10.0	8.0	8.0	5.0	3.0	6.0	9.0	11.0	13.0	14.0	---	12.0
5	9.0	9.0	7.0	5.0	3.0	6.0	9.0	12.0	13.0	14.0	13.0	12.0
6	9.0	9.0	6.0	6.0	4.0	7.0	10.0	9.0	15.0	16.0	14.0	15.0
7	8.0	9.0	6.0	6.0	5.0	8.0	11.0	9.0	11.0	15.0	14.0	13.0
8	8.0	7.0	5.0	5.0	4.0	8.0	11.0	10.0	11.0	12.0	12.0	13.0
9	9.0	8.0	5.0	6.0	5.0	9.0	12.0	10.0	14.0	13.0	15.0	11.0
10	8.0	8.0	5.0	8.0	6.0	8.0	9.0	11.0	13.0	13.0	15.0	10.0
11	9.0	10.0	5.0	6.0	5.0	9.0	10.0	11.0	10.0	15.0	13.0	12.0
12	8.0	9.0	6.0	5.0	7.0	8.0	12.0	9.0	10.0	15.0	14.0	14.0
13	8.0	8.0	4.0	5.0	5.0	7.0	10.0	10.0	15.0	13.0	12.0	12.0
14	9.0	7.0	4.0	6.0	6.0	9.0	10.0	9.0	12.0	14.0	13.0	12.0
15	8.0	7.0	3.0	6.0	7.0	9.0	11.0	9.0	13.0	15.0	14.0	11.0
16	---	8.0	3.0	4.0	7.0	11.0	10.0	10.0	15.0	13.0	14.0	13.0
17	---	7.0	2.0	5.0	5.0	10.0	9.0	10.0	15.0	13.0	15.0	13.0
18	9.0	8.0	3.0	5.0	6.0	8.0	11.0	12.0	14.0	14.0	12.0	12.0
19	9.0	8.0	4.0	6.0	8.0	9.0	12.0	12.0	14.0	---	13.0	11.0
20	9.0	7.0	4.0	5.0	7.0	9.0	11.0	11.0	14.0	---	14.0	12.0
21	8.0	7.0	4.0	7.0	6.0	8.0	9.0	10.0	11.0	---	15.0	12.0
22	8.0	---	5.0	7.0	5.0	9.0	10.0	11.0	12.0	---	16.0	13.0
23	8.0	---	5.0	6.0	---	9.0	9.0	10.0	15.0	---	16.0	11.0
24	9.0	---	4.0	6.0	5.0	10.0	10.0	13.0	15.0	---	12.0	12.0
25	7.0	---	3.0	5.0	6.0	9.0	10.0	11.0	16.0	---	13.0	13.0
26	9.0	9.0	4.0	4.0	7.0	10.0	11.0	11.0	16.0	---	14.0	13.0
27	8.0	8.0	3.0	5.0	7.0	9.0	10.0	12.0	15.0	---	14.0	14.0
28	10.0	8.0	5.0	5.0	8.0	11.0	9.0	13.0	14.0	---	13.0	14.0
29	8.0	7.0	4.0	7.0	---	8.0	10.0	12.0	14.0	---	12.0	11.0
30	8.0	9.0	3.0	4.0	---	9.0	11.0	14.0	12.0	23.0	12.0	10.0
31	8.0	---	4.0	3.0	---	7.0	---	11.0	---	---	13.0	---
MEAN	8.5	8.0	4.5	5.5	5.5	8.5	10.0	11.0	13.0	14.0	13.5	12.5
WTR YR 1985		MEAN	9.5	MAX	23.0	MIN	2.0					

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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	36	18	106	227	42	98	215	685	240	706	83	332
2	33	16	83	165	48	110	79	243	100	273	60	219
3	102	123	85	174	97	234	102	341	63	163	69	246
4	76	76	58	127	59	148	77	247	55	135	665	2600
5	279	235	105	242	54	126	54	163	29	66	68	187
6	333	334	107	244	48	98	75	243	31	65	30	55
7	154	163	215	604	84	178	70	238	28	55	26	37
8	76	78	241	722	78	178	60	209	32	60	42	100
9	75	74	222	653	98	259	59	199	33	62	146	599
10	78	78	171	503	104	298	49	169	52	108	87	366
11	79	77	171	489	105	315	235	806	60	136	91	396
12	51	42	102	201	88	268	102	339	37	82	1310	7680
13	59	47	67	91	323	1200	63	199	42	84	1580	12200
14	64	48	34	41	125	432	47	147	40	73	1960	17600
15	139	376	30	34	109	386	64	199	31	56	1290	12600
16	277	574	28	51	103	350	42	128	53	121	716	6420
17	213	382	65	212	81	273	42	125	53	119	625	6180
18	196	312	101	344	78	253	44	129	36	72	776	8360
19	148	196	170	565	112	342	71	209	79	198	577	6610
20	107	146	163	568	62	186	56	133	95	259	502	5690
21	129	197	195	716	65	200	74	115	58	150	345	3970
22	103	169	184	636	60	190	36	53	91	275	366	3570
23	171	302	141	476	58	180	28	39	216	927	248	2320
24	130	261	124	439	53	155	29	39	233	988	250	2300
25	95	183	118	411	37	97	59	112	194	854	183	1660
26	246	444	103	320	35	84	139	420	190	887	176	1510
27	111	204	76	220	80	227	138	311	166	695	147	770
28	100	183	62	172	108	356	95	87	106	406	96	280
29	100	197	60	157	73	231	93	63	---	---	93	191
30	138	303	46	111	557	1970	275	223	---	---	65	103
31	161	347	---	---	256	864	1050	2300	---	---	82	109
TOTAL	---	6185	---	9915	---	10286	---	8913	---	8075	---	105260



## 08330600 TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'04", long 106°39'18", in SW¼SW¼ sec.17, T.9 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on right bank 875 ft downstream from highway bridge on Broadway Boulevard SE, 1,760 ft upstream from South Diversion Channel, 0.5 mi downstream from highway bridge on Interstate Highway 25, and 3 mi south of Albuquerque.

DRAINAGE AREA.--133 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1951 to September 1968, (annual maximum only), August 1974 to current year (no winter records).

GAGE.--Water-stage recorder and concrete lined channel. Elevation of gage is 4,960 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,530 ft<sup>3</sup>/s, June 24, 1967, (gage height not determined); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 430 ft<sup>3</sup>/s, at 1900 hours Oct. 15, gage height, 1.80 ft; no flow most of time.

DISCHARGE, IN 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	.00	.00	.00			---	.00	1.9	.00	.00	.00	.00
2	1.7	.00	.00			---	.00	5.2	.00	.00	.00	.00
3	17	.00	---			---	.00	.00	.00	.00	.00	9.3
4	.00	.00	---			---	.00	.00	.00	.00	.00	.00
5	.00	.00	---			---	.00	.00	.00	.00	.00	.00
6	.00	.00	---			---	.00	.00	.00	.00	.00	.00
7	.00	.00	---			---	.00	.00	.00	.00	.00	.00
8	.00	.00	---			---	.00	.00	.00	.00	.00	.00
9	.00	.00	---			---	.00	.00	.00	.00	.00	.00
10	.00	.00	---			---	.00	.00	.00	.00	.00	.00
11	.00	.00	---			---	.00	.00	.00	.00	.00	.00
12	4.0	.00	---			37	.00	.00	.00	.00	.00	.00
13	1.0	.00	---			13	.00	.00	.00	.00	.00	.00
14	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
15	68	.00	---			.00	.00	.00	.00	.00	.00	.52
16	4.0	.00	---			.00	.00	.00	.00	.00	.00	.43
17	.00	2.0	---			.00	.00	.00	.00	.00	.00	.00
18	.00	32	---			.00	.00	.85	.00	.00	.00	.42
19	.00	18	---			1.8	.00	.00	.00	.00	.00	3.7
20	.00	6.0	---			.00	.00	.00	.00	.00	2.3	3.6
21	.00	.00	---			.00	.00	2.4	.00	.00	6.0	11
22	.00	.00	---			.00	4.0	1.0	.00	.00	.00	.00
23	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
24	.00	1.0	---			.00	.00	.00	3.2	.00	.00	.00
25	.00	.00	---			.00	.00	.00	.00	12	.00	.00
26	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
27	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
28	.00	13	---			.00	42	.00	.00	.00	.00	.10
29	.00	8.0	---			.00	.00	.00	.00	4.0	.00	.00
30	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
31	.00	---	---			.00	---	.00	---	6.4	.00	---
TOTAL	95.70	80.00	---			---	46.00	11.35	3.20	22.40	8.30	29.07
MEAN	3.09	2.67	---			---	1.53	.37	.11	.72	.27	.97
MAX	68	32	---			---	42	5.2	3.2	12	6.0	11
MIN	.00	.00	---			---	.00	.00	.00	.00	.00	.00
AC-FT	190	159	---			---	91	23	6.3	44	16	58

## 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 current year (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 ft<sup>3</sup>/s, Aug. 19, 1976, gage height, (not determined); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 460 ft<sup>3</sup>/s, at 1900 hours Oct. 15, gage height, 1.90 ft; no flow most of time.

DISCHARGE, IN 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	.00	.00	.00			---	.00	3.6	.00	.00	.00	.00
2	1.7	.00	.00			---	.00	5.2	.00	.00	.00	.00
3	24	.00	---			---	.00	.00	.00	.00	.00	9.3
4	.00	.00	---			---	.00	.00	.00	.00	.00	2.7
5	.00	.00	---			---	.00	.00	.00	.00	.00	.00
6	.00	.00	---			---	.00	.00	.00	.00	.00	.00
7	.00	.00	---			---	.00	.00	.00	3.3	.00	.00
8	.00	.00	---			---	.00	.00	.00	.00	.00	.00
9	.00	.00	---			---	.00	.00	.00	.00	.00	.00
10	.00	4.7	---			---	.00	.00	.00	.00	.00	.00
11	.00	.00	---			---	.00	.00	.00	.00	.00	.00
12	4.0	.00	---			37	.00	.00	.00	.00	.00	.00
13	4.8	.00	---			41	.00	.00	.00	.00	.00	.00
14	5.0	.00	---			.00	.00	.00	.00	.00	.00	.00
15	68	.00	---			7.8	.00	.00	.00	.00	.00	.52
16	4.0	.00	---			9.4	.00	.00	.00	.00	.00	.43
17	.00	9.8	---			.00	.00	.00	.00	.00	.00	.00
18	.00	33	---			.00	.00	1.0	.00	.00	.00	.42
19	.00	18	---			8.8	.00	.00	.00	.00	.00	3.7
20	.00	6.0	---			9.2	.00	.00	.00	.00	2.3	3.6
21	.00	.00	---			.00	.00	2.6	.00	.00	17	11
22	.00	.00	---			.00	4.3	1.0	.00	.00	.00	.00
23	.00	3.2	---			.00	.00	.00	.00	.00	.00	.00
24	.00	3.9	---			.00	.00	.00	3.2	.00	.00	.00
25	3.2	6.6	---			.00	.00	.00	.00	.00	.00	.00
26	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
27	2.0	.00	---			.00	.00	.00	.00	.00	.00	.00
28	.00	21	---			.00	42	.00	.00	.00	.00	.10
29	.00	16	---			.00	.00	.00	.00	4.0	.00	.00
30	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
31	.00	---	---			.00	---	.00	---	6.4	.00	---
TOTAL	116.70	122.20	---			---	46.30	13.40	3.20	13.70	19.30	31.77
MEAN	3.76	4.07	---			---	1.54	.43	.11	.44	.62	1.06
MAX	68	33	---			---	42	5.2	3.2	6.4	17	11
MIN	.00	.00	---			---	.00	.00	.00	.00	.00	.00
AC-FT	231	242	---			---	92	27	6.3	27	38	63

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 mi<sup>2</sup> (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.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (000095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (900095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV										
16...	1030	470	500	505	7.8	8.4	9.5	9.5	8.0	12
JAN										
22...	1400	534	415	--	7.8	--	7.0	7.0	9.6	27
MAR										
22...	0930	3460	360	391	8.0	8.0	12.0	9.5	9.1	47
MAY										
16...	1015	7500	225	250	7.8	8.0	21.0	15.0	7.8	20
JUL										
16...	1000	3440	250	255	7.8	8.0	22.5	22.0	6.3	31
SEP										
18...	0945	680	480	--	7.7	--	17.5	20.0	5.3	45

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L 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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)
NOV									
16...	160	19	50	8.2	40	1	4.9	170	.000
JAN									
22...	--	--	--	--	--	--	--	--	--
MAR									
22...	140	38	43	7.0	29	1	3.2	120	.000
MAY									
16...	93	25	29	4.9	14	.7	2.6	82	.000
JUL									
16...	96	23	30	5.0	16	.7	3.1	89	.000
SEP									
18...	--	--	--	--	--	--	--	--	--

DATE	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
NOV									
16...	140	140	80	21	.50	25	320	.40	.36
JAN									
22...	--	--	--	--	--	--	--	.30	.27
MAR									
22...	100	100	70	14	.30	19	240	.30	.29
MAY									
16...	--	67	40	5.0	.20	17	150	<.10	<.10
JUL									
16...	--	73	39	5.0	.20	18	160	.20	.23
SEP									
18...	--	--	--	--	--	--	--	.50	.51

08331000 RIO GRANDE AT ISLETA, NM --- Continued

## WATER-QUALITY RECORDS

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, DIS- SOLVED (MG/L AS C) (80154)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 16...	1.80	.50	2.7	1.00	.830	4.5	562	713	8
JAN 22...	.880	.42	1.6	.630	.530	2.9	156	225	26
MAR 22...	.200	.50	1.0	.410	.120	12	729	6810	42
MAY 16...	.150	.55	--	.320	.060	6.6	980	19800	15
JUL 16...	.110	.39	.70	.200	.120	4.7	532	4940	10
SEP 18...	.910	.99	2.4	1.80	.820	14	693	1270	100

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)
NOV 16...	1030	4	4	100	<1	<1	20	<10	18	4
MAR 22...	0930	--	--	70	--	--	--	--	--	--
MAY 16...	1015	--	--	30	--	--	--	--	--	--
JUL 16...	1000	2	2	20	<1	<1	<10	<10	12	4

DATE	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)
NOV 16...	7	10	3	<.1	<.1	<1	<1	10	10
MAR 22...	14	--	--	--	--	--	--	--	--
MAY 16...	35	--	--	--	--	--	--	--	--
JUL 16...	49	4	2	.1	.2	<1	<1	<10	15

## CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TERIAL (UG/G) (01029)
NOV 16...	1030	8.0	6.0	45	1	<1	4
DATE		COBALT, RECOV. FM BOT- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TERIAL (UG/G AS HG) (01053)	MERCURY RECOV. FM BOT- TERIAL (UG/G AS ZN) (71921)
NOV 16...		<10	<1	550	<10	28	<.10

08331000 RIO GRANDE AT ISLETA, NM -- Continued

## WATER-QUALITY RECORDS

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 16...	1030	<8.3	2.1	8.3	1.7	7.2	1.5	.11	3.1

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
MAR 22...	0930	--	--	--	--	--	--	--	--	--
SEP 18...	0945	<.1	<.010	<.1	<.010	<.010	<.010	.04	<.010	<.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 THION, TOTAL (UG/L) (39600)	METHYL THION, TOTAL (UG/L) (39790)
MAR 22...	--	--	--	--	--	--	--	--	--
SEP 18...	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01	<.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)
MAR 22...	--	--	--	.02	<.01	<.01	--	--	--
SEP 18...	<.01	<1	<.01	--	--	--	<.1	<.10	<.01

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 16...	1030	K0	180
JAN 22...	1400	K7	K14
MAR 22...	0930	34	150
MAY 16...	1015	K30	120
JUL 16...	1000	60	130
SEP 18...	0945	1700	K2900

## 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.--No estimated daily discharges. Records good. 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 ft<sup>3</sup>/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 ft<sup>3</sup>/s, Apr. 22, 1958; no flow many days most years.

DISCHARGE, IN 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	3.0	6.5	6.3	7.6	5.7	7.3	7.3	9.0	9.4	4.6	4.8	1.4
2	3.0	6.7	6.4	7.5	6.8	5.7	6.6	9.1	6.8	4.5	5.3	1.5
3	4.2	6.8	6.2	7.1	7.0	5.8	6.6	9.9	6.1	6.6	5.7	1.6
4	4.2	6.5	6.7	7.1	7.3	5.4	6.8	11	8.0	7.4	5.6	2.4
5	4.0	6.6	6.4	6.5	7.2	5.4	6.5	9.4	7.3	5.9	5.4	1.9
6	4.0	7.0	6.3	6.5	7.1	5.4	6.7	8.4	7.1	5.2	5.1	1.5
7	4.0	6.7	6.0	6.5	7.1	5.2	8.1	8.0	7.2	5.3	5.0	1.4
8	4.5	6.3	6.1	6.9	7.1	4.8	7.9	17	7.0	5.4	7.0	1.4
9	4.5	6.5	6.5	7.1	7.1	4.6	7.6	12	6.5	7.2	6.6	1.4
10	4.5	6.4	6.6	6.5	7.0	4.7	7.7	9.6	6.6	7.2	5.5	1.5
11	5.6	6.7	7.1	6.5	6.8	4.5	9.0	9.0	6.8	6.5	5.3	1.8
12	4.9	6.7	7.1	6.8	7.3	4.8	12	8.8	6.2	5.9	4.3	1.8
13	5.1	6.8	7.7	7.3	7.1	4.9	11	9.0	5.9	5.9	3.9	1.8
14	5.0	6.8	8.2	6.6	7.1	8.9	11	9.0	5.0	5.8	3.8	1.8
15	4.9	6.5	8.0	6.8	7.0	6.8	10	8.8	5.8	5.5	3.7	1.8
16	4.8	6.5	7.8	7.1	7.1	6.6	11	8.9	6.2	5.5	3.0	2.0
17	5.0	6.7	7.8	7.1	6.8	6.5	10	9.0	5.1	6.5	2.7	2.2
18	5.1	6.8	7.8	7.1	7.2	10	11	9.9	4.9	5.6	2.4	3.0
19	5.0	7.1	7.8	6.9	7.1	30	13	9.1	5.2	4.9	2.3	5.1
20	5.2	7.1	7.8	7.1	7.9	20	13	9.0	5.0	5.5	2.2	5.6
21	5.3	7.1	7.8	7.1	8.5	8.6	11	8.8	5.1	5.3	2.1	3.9
22	5.3	7.1	7.8	6.6	8.5	7.9	11	8.0	4.9	7.5	2.1	3.9
23	5.3	7.4	7.9	6.4	8.5	9.0	11	7.1	5.9	7.6	1.9	3.8
24	5.9	8.0	7.8	6.2	8.8	17	11	6.4	6.1	5.8	1.7	4.2
25	6.0	7.6	7.8	5.9	9.2	28	10	6.4	5.6	4.9	1.7	4.1
26	6.1	7.8	7.8	6.1	9.0	30	10	6.2	5.5	4.5	1.8	4.1
27	6.2	7.3	7.9	6.9	9.2	24	9.5	5.7	5.5	4.2	1.8	5.1
28	6.2	7.1	8.4	7.0	9.2	12	13	5.8	5.3	4.7	2.3	14
29	6.3	7.1	8.4	6.8	---	17	13	6.2	5.5	5.7	2.0	4.2
30	6.5	6.6	7.7	6.0	---	9.3	9.6	7.2	5.1	6.8	1.7	3.8
31	6.3	---	7.8	5.7	---	8.2	---	6.4	---	4.9	1.5	---
TOTAL	155.9	206.8	227.7	209.3	211.7	328.3	291.9	268.1	182.6	178.8	110.2	94.0
MEAN	5.03	6.89	7.35	6.75	7.56	10.6	9.73	8.65	6.09	5.77	3.55	3.13
MAX	6.5	8.0	8.4	7.6	9.2	30	13	17	9.4	7.6	7.0	14
MIN	3.0	6.3	6.0	5.7	5.7	4.5	6.5	5.7	4.9	4.2	1.5	1.4
AC-FT	309	410	452	415	420	651	579	532	362	355	219	186
CAL YR 1984	TOTAL	2515.4		MEAN	6.87	MAX	21	MIN	1.6	AC-FT	4990	
WTR YR 1985	TOTAL	2465.3		MEAN	6.75	MAX	30	MIN	1.4	AC-FT	4890	



## RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM

LOCATION.--Lat 34°25'01", long 106°48'00", Socorro County, Hydrologic Unit 13020203, in Belen or Sevilleta Grant, on downstream side of bridge on U.S. Highway 60, 5 mi downstream from heading of conveyance channel, 2 mi east of Bernardo, and at mile 1,487.2.

DRAINAGE AREA.--19,230 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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. 20-27, Oct. 31 to Nov. 12, Nov. 21 to Dec. 9, Dec. 29 to Jan. 5, Jan. 7-21, 27, 28, Feb. 17 to Mar. 6, Mar. 10-12, Apr. 11-20, 22, Apr. 25 to May 5, May 25-31, June 16-19, June 28 to July 5, July 7-10, and Aug. 26 to Sept. 30. Water-discharge records poor. Since November 1973 flow completely regulated by Cochiti Dam (station 08317300) 100 mi upstream. Floodway is 1 of 4 channels (stations 08331990, 08332030, and 08332050) carrying flow in valley cross section. For combined monthly flow in acre-ft of floodway, conveyance channel, Bernardo interior drain and Lower San Juan Riverside drain see tabulation below. Diversions for irrigation of about 740,000 acres upstream from station.

AVERAGE DISCHARGE.--19 years (water years 1937-38, 1942-58), 1,125 ft<sup>3</sup>/s, 815,100 acre-ft/yr. Includes flow of floodway, conveyance channel, and Bernardo interior drain.  
15 years (water years 1959-73), 898 ft<sup>3</sup>/s, 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.  
12 years (water years 1974-85), 1,319 ft<sup>3</sup>/s, 955,600 acre-ft/yr, includes flow of floodway, conveyance channel, Bernardo interior drain, and lower San Juan Riverside drain since, closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD (1936-39 AND SINCE 1941).--Maximum discharge, 21,000 ft<sup>3</sup>/s, Apr. 25, 1942, gage height, 6.90 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 8,950 ft<sup>3</sup>/s, May 4; minimum daily, 1.6 ft<sup>3</sup>/s, Aug. 25.

DISCHARGE, IN 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	243	920	960	1150	546	1320	256	6900	3620	3150	734	2.0
2	182	890	920	1100	1080	1370	223	7700	3700	3150	672	2.0
3	207	860	870	900	960	1320	2590	8270	3600	3150	705	770
4	288	800	860	900	874	1230	2860	8950	3990	3560	728	550
5	440	830	1000	1000	811	1130	3720	8740	4580	3770	803	400
6	305	870	960	986	689	1030	4370	7520	4640	3590	767	300
7	439	860	860	860	629	483	4050	7530	5730	3580	734	500
8	534	870	820	900	634	348	4970	8070	5200	3580	966	350
9	570	1000	880	950	641	302	5530	8140	5290	3580	1000	100
10	518	1100	908	1050	644	1280	5210	7170	4550	3480	518	250
11	519	1150	1100	1100	833	1170	4950	6540	3060	3130	380	150
12	460	1150	1130	1150	859	1240	4730	5980	2850	3120	340	100
13	448	1100	1270	1150	760	1710	4760	7400	2680	3060	282	250
14	382	574	1680	1100	686	2920	4730	6430	3020	3250	539	200
15	370	463	1500	1060	644	3000	5110	6440	3140	3170	564	150
16	650	404	1400	1100	727	2730	5140	6180	2900	2940	259	120
17	1220	436	1240	1100	820	2040	5140	5230	2800	2370	122	50
18	832	1550	1310	1060	620	1950	5760	3470	2700	2710	70	300
19	764	1590	1190	1000	520	3490	6800	3240	2550	2790	57	100
20	700	1500	1120	1000	510	4310	6750	3080	2520	2660	30	1000
21	570	1500	1120	1000	610	3890	6780	3590	2960	2710	21	1500
22	740	1500	1180	778	1060	3710	6700	3420	3430	2630	15	2000
23	690	1500	1230	725	1160	3020	6910	3200	3150	2790	21	2000
24	770	1500	1090	714	1300	3190	6900	3350	3160	1530	6.6	1500
25	830	1450	1010	692	1400	3160	6750	3050	3310	716	1.6	1000
26	800	1400	886	800	1350	2890	7050	3000	3290	475	2.0	900
27	740	1300	732	1300	1270	2430	6800	3000	3210	409	2.0	800
28	902	1100	918	1000	1270	1200	6750	3000	3150	337	2.0	600
29	807	1050	1100	441	---	633	6500	3000	3150	430	2.0	500
30	707	1000	900	279	---	390	6000	3100	3050	557	2.0	400
31	720	---	1000	226	---	314	---	3200	---	598	2.0	---
TOTAL	18347	32217	33144	28571	23907	59200	154789	167890	104980	76972	10347.2	16844.0
MEAN	592	1074	1069	922	854	1910	5160	5416	3499	2483	334	561
MAX	1220	1590	1680	1300	1400	4310	7050	8950	5730	3770	1000	2000
MIN	182	404	732	226	510	302	223	3000	2520	337	1.6	2.0
AC-FT	36390	63900	65740	56670	47420	117400	307000	333000	208200	152700	20520	33410
(†)	49180	69460	71360	62300	52310	130600	322700	349300	222300	167400	31100	47480
CAL YR 1984	TOTAL 575218.00	MEAN 1572	MAX 7550	MIN .00	AC-FT 1141000	(†) MEAN 1741	AC-FT 1264000					
WTR YR 1985	TOTAL 727208.2	MEAN 1992	MAX 8950	MIN 1.6	AC-FT 1442000	(†) MEAN 2176	AC-FT 1575000					

(†) COMBINED FLOW, IN ACRE-FT, AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY, CONVEYANCE CHANNEL, BERNARDO INTERIOR DRAIN AND LOWER SAN JUAN RIVERSIDE DRAIN.

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGES: October 1964 to current year.

**SEDIMENT LOADS:** Maximum daily, 356,000 tons Aug. 11, 1967; minimum daily, 0 ton on many days each year.

SEDIMENT LOADS: Maximum daily, 19,500 tons May 5; minimum daily, 0.11 ton Aug. 25.

[illegible]

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

## WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 20...	.70	.69	.020	1.2	1.9	.670	.330	6.9
JAN 23...	--	--	--	--	--	--	--	--
MAR 20...	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--
JUL 19...	.30	.32	.050	.45	.80	.250	.150	4.6
SEP 16...	--	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)
NOV 20...	0930	4	3	80	<1	<1	<10	<10	33	1
MAR 20...	1130	--	--	100	--	--	--	--	--	--
MAY 15...	1100	--	--	40	--	--	--	--	--	--
JUL 19...	1045	--	--	30	--	--	--	--	--	--

DATE	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)
NOV 20...	8	13	1	.1	<.1	<1	<1	70	12
MAR 20...	7	--	--	--	--	--	--	--	--
MAY 15...	35	--	--	--	--	--	--	--	--
JUL 19...	21	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
MAR 20...	1130	--	--	--	--	--	--	--	--	--
JUL 19...	1045	<.1	<.010	<.1	<.010	<.010	<.010	.01	<.010	<.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)
MAR 20...	--	--	--	--	--	--	--	--	--
JUL 19...	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01	<.01

## RIO GRANDE BASIN

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

## WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
MAR 20...	--	--	--	<.01	<.01	<.01	--	--	--
JUL 19...	<.01	<1	<.01	--	--	--	<.1	<.10	<.01

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SEDI- MENT, DISCH, SUSP. + BED MA- TERIAL (T/DAY) (80156)	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)
OCT									
01...	1000	250	16.0	6240	4210	10500	81	88	98
17...	1800	894	12.0	3330	8040	--	66	76	92
NOV									
20...	1415	1520	12.0	1000	4100	5950	15	19	30
DEC									
11...	1100	1070	8.5	390	1130	1650	--	--	--
31...	1700	1590	4.0	937	4020	--	48	64	82
JAN									
23...	1100	707	5.5	320	611	1130	--	--	--
MAR									
08...	1145	349	11.0	--	--	--	--	--	--
20...	1130	4530	10.0	1840	22500	37800	11	13	20
APR									
22...	1115	7370	14.5	366	7280	10900	--	--	--
MAY									
07...	1400	7810	18.0	326	6870	11200	--	--	--
15...	1100	7010	15.0	969	18300	--	--	--	--
JUL									
09...	1230	4100	24.5	786	8700	12200	--	--	--
19...	1045	2820	25.0	584	4450	--	--	--	--
30...	1030	530	21.0	3830	5480	6080	26	30	48
AUG									
11...	1530	312	26.0	1520	1280	--	39	62	96
SEP									
16...	1015	124	21.0	55	18	--	--	--	--
		SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)
DATE									

OCT 01...	--	--	--	--	100	--	--	--	--
17...	--	--	--	--	99	99	100	--	--
NOV 20...	47	57	94	100	--	--	--	--	--
DEC 11...	--	--	--	--	72	80	98	100	--
31...	--	--	--	--	93	97	100	--	--
JAN 23...	28	39	99	100	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--
20...	42	60	99	100	--	--	--	--	--
APR 22...	--	--	--	--	91	99	99	100	--
MAY 07...	--	--	--	--	84	93	99	100	--
15...	28	55	99	100	--	--	--	--	--
JUL 09...	--	--	--	--	37	69	87	94	97
19...	22	49	99	100	--	--	--	--	--
30...	90	97	100	--	--	--	--	--	--
AUG 11...	--	--	--	--	100	--	--	--	--
SEP 16...	--	--	--	--	100	--	--	--	--

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

## WATER-QUALITY RECORDS

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM (70336)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80163)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)
OCT									
01...	--	0	0	86	100	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
NOV									
20...	--	1	3	73	99	100	--	--	--
DEC									
11...	--	0	1	46	93	99	100	--	--
31...	--	--	--	--	--	--	--	--	--
JAN									
23...	--	1	6	51	92	--	--	99	100
MAR									
08...	--	20	66	99	100	--	--	--	--
20...	--	1	5	83	98	100	--	--	--
APR									
22...	--	11	38	91	100	--	--	--	--
MAY									
07...	--	8	37	94	100	--	--	--	--
15...	--	0	1	38	94	--	--	99	100
JUL									
09...	99	8	68	100	--	--	--	--	--
19...	--	1	4	59	95	100	--	--	--
30...	--	15	62	99	100	--	--	--	--
AUG									
11...	--	--	--	--	--	--	--	--	--
SEP									
16...	--	0	2	60	96	--	--	100	--

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	629	588	518	462	551	407	560	315	279	269	480	---
2	674	588	526	476	448	413	569	322	284	268	490	---
3	626	588	527	475	452	403	422	308	274	269	468	---
4	647	572	508	475	450	418	391	295	263	268	463	591
5	556	567	444	469	457	412	385	294	259	266	439	605
6	601	553	472	495	458	425	372	284	252	262	443	611
7	700	547	492	447	468	494	367	276	245	268	458	589
8	673	537	504	468	480	529	364	286	242	268	426	641
9	572	537	499	463	489	543	369	275	240	245	425	645
10	592	528	487	462	492	455	356	271	242	257	473	624
11	571	533	461	461	489	442	348	263	249	273	630	642
12	573	524	453	456	457	437	339	259	248	271	520	632
13	580	598	436	465	460	423	327	260	279	269	520	640
14	613	607	424	471	473	436	319	264	269	270	448	646
15	605	621	425	469	489	476	313	254	267	270	560	635
16	575	503	423	463	508	470	302	253	268	273	603	646
17	548	605	442	473	497	442	324	264	266	281	630	652
18	545	523	448	470	441	418	309	263	268	287	650	644
19	702	495	467	468	468	420	320	273	267	294	630	588
20	721	493	473	463	475	425	301	281	270	299	---	586
21	587	494	481	461	442	432	289	281	282	305	---	596
22	550	494	475	507	444	417	283	286	292	330	---	525
23	550	493	476	534	449	422	283	294	277	340	---	574
24	531	479	472	526	413	424	275	293	268	330	---	520
25	575	488	465	515	410	431	283	289	266	390	---	517
26	622	482	495	524	405	427	278	285	271	468	---	696
27	573	487	498	455	391	423	282	285	274	488	---	652
28	543	504	500	445	400	449	291	288	270	520	---	598
29	536	556	478	578	---	483	308	287	272	530	---	597
30	537	523	475	582	---	497	316	279	273	520	---	594
31	530	---	461	557	---	538	---	281	---	483	---	---
MEAN	595	537	474	485	459	446	342	281	266	327	513	611
WTR YR 1985	MEAN	441	MAX	721	MIN	240						

08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	14.0	4.0	2.0	.0	5.0	7.0	20.0	22.0	28.0	28.0	---
2	20.0	13.0	5.0	1.0	2.0	5.0	9.0	19.5	22.0	27.0	26.0	---
3	16.0	17.0	4.0	.0	2.0	1.0	9.0	20.0	21.0	27.0	21.0	---
4	15.0	11.0	1.0	1.0	.0	6.0	6.5	19.0	19.0	28.0	30.0	27.0
5	17.0	9.0	4.0	2.0	1.0	2.5	7.0	16.0	21.0	29.0	31.0	29.0
6	16.0	12.0	3.0	2.0	.0	4.0	5.0	21.5	24.0	30.0	32.0	28.0
7	19.0	11.0	5.0	2.0	2.0	3.0	8.0	21.0	27.0	25.0	30.0	24.0
8	18.0	11.0	6.0	2.0	4.0	4.0	7.0	21.0	25.0	29.0	28.0	27.0
9	19.0	9.0	6.0	2.0	3.5	5.5	7.5	20.5	26.0	27.0	30.0	28.0
10	19.0	9.0	7.0	3.0	4.0	6.0	6.5	18.5	24.0	29.0	26.0	27.0
11	17.0	9.0	5.0	3.0	2.5	4.0	8.5	19.5	26.0	30.0	26.0	24.0
12	15.0	15.0	6.0	.0	3.0	3.5	8.5	19.0	25.0	30.0	30.0	27.0
13	19.0	12.0	4.0	.0	5.0	4.5	8.5	18.5	25.0	26.0	31.0	27.0
14	14.0	11.0	4.0	2.0	5.5	3.0	8.0	19.5	26.0	30.0	29.0	27.0
15	9.0	10.0	2.0	.0	8.0	5.0	7.5	21.0	26.0	27.0	30.0	26.0
16	10.0	9.0	.5	1.0	4.0	5.0	7.0	19.0	26.0	29.0	30.0	23.0
17	12.0	14.0	1.0	2.0	6.0	5.5	7.5	20.0	27.0	30.0	29.0	22.0
18	14.0	9.0	4.0	3.0	6.0	4.0	8.0	19.0	26.0	28.0	28.0	21.0
19	12.0	9.0	1.0	3.0	7.0	3.5	16.0	20.0	25.0	27.0	29.0	22.0
20	7.0	9.0	2.0	4.0	4.0	6.0	17.0	20.0	25.0	25.0	---	20.0
21	9.0	7.0	3.0	3.0	4.5	4.5	13.5	17.5	26.0	28.0	---	14.0
22	9.0	8.0	4.0	.0	2.5	4.5	14.5	21.5	27.0	27.0	---	19.0
23	7.0	7.0	1.0	1.0	2.0	6.0	16.5	23.5	28.0	27.0	---	20.0
24	6.0	7.0	1.0	1.0	3.0	7.5	17.5	22.0	26.0	29.0	---	21.0
25	8.0	6.0	.0	3.0	4.0	7.0	17.0	23.0	26.0	30.0	---	22.0
26	9.0	3.0	4.5	1.0	6.0	7.0	13.0	24.0	23.0	30.0	---	30.0
27	10.0	3.0	4.0	3.0	5.0	6.0	11.0	25.0	25.0	30.0	---	20.0
28	14.0	5.0	6.0	2.0	6.0	7.0	13.5	24.0	26.0	27.0	---	28.0
29	8.0	5.0	5.0	1.0	---	3.5	16.0	23.0	27.0	22.0	---	22.0
30	9.0	5.0	4.0	.0	---	3.0	19.5	19.0	27.0	25.0	---	19.0
31	19.0	---	4.0	.0	---	4.0	---	20.0	---	27.0	---	---
MEAN	13.5	9.5	3.5	1.5	3.5	4.5	10.5	20.5	25.0	28.0	28.5	24.0
WTR YR 1985	MEAN	14.0	MAX	32.0	MIN	.0						

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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	930	610	415	1030	201	521	573	1780	179	264	296	1050
2	108	53	407	978	183	455	235	698	265	773	386	1430
3	672	376	352	817	180	423	198	481	171	443	260	927
4	1120	871	309	667	186	432	183	445	156	368	322	1070
5	959	1140	334	748	182	491	206	556	122	267	272	830
6	2700	2220	370	869	187	485	162	431	110	205	193	537
7	2770	3280	339	787	175	406	181	420	105	178	170	222
8	1450	2090	435	1020	165	365	188	457	89	152	213	200
9	650	1000	729	1970	176	418	211	541	83	144	233	190
10	453	634	553	1640	233	571	189	536	88	153	322	1110
11	385	540	474	1470	307	912	194	576	107	241	273	862
12	314	390	439	1360	259	790	194	602	135	313	270	904
13	277	335	307	912	268	919	249	773	118	242	617	2850
14	232	239	219	339	237	1080	296	879	98	182	2080	16400
15	194	194	186	233	229	927	190	544	81	141	1520	12300
16	714	1250	319	348	238	900	166	493	108	212	961	7080
17	3740	12300	177	208	292	978	148	440	146	323	762	4200
18	3280	7370	567	2370	257	909	179	512	136	228	674	3550
19	1870	3860	562	2410	226	726	202	545	736	1030	691	6510
20	1200	2270	666	2700	217	656	159	429	495	682	1090	12700
21	665	1020	539	2180	193	584	160	432	351	578	786	8260
22	471	941	417	1690	182	580	122	256	226	647	649	6500
23	448	835	395	1600	190	631	175	343	301	943	616	5020
24	459	954	363	1480	182	536	106	204	690	2420	367	3160
25	552	1240	382	1500	157	428	93	174	624	2360	309	2640
26	614	1330	359	1360	139	333	89	192	611	2230	327	2550
27	435	869	277	972	140	277	142	498	538	1840	310	2030
28	442	1080	247	734	168	416	174	470	353	1210	259	839
29	342	745	304	862	178	529	93	111	---	---	220	376
30	299	571	319	861	182	442	70	53	---	---	168	177
31	354	688	---	---	710	1920	72	44	---	---	116	98
TOTAL	---	51295	---	36115	---	20040	---	14915	---	18769	---	106572

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	105	73	917	17100	104	1020	107	910	460	912	44	.24
2	144	87	552	11500	114	1140	93	791	1330	2410	44	.24
3	394	2760	534	11900	98	953	87	740	687	1310	45	94
4	410	3170	497	12000	107	1150	129	1240	385	757	47	70
5	448	4500	825	19500	120	1480	117	1190	387	839	31	33
6	500	5900	305	6190	192	2410	106	1030	291	603	41	33
7	375	4100	304	6180	229	3540	99	957	230	456	30	40
8	371	4980	284	6190	145	2040	99	957	338	882	41	39
9	367	5480	247	5430	166	2370	301	2910	331	894	67	18
10	374	5260	258	4990	130	1600	144	1350	173	242	68	46
11	413	5520	232	4100	111	917	85	718	830	852	72	29
12	380	4850	207	3340	94	723	81	682	279	256	74	20
13	495	6360	230	4600	97	702	76	628	126	96	81	55
14	557	7110	214	3720	82	669	87	763	206	300	70	38
15	430	5930	188	3270	91	771	91	779	207	315	67	27
16	404	5610	192	3200	86	673	90	714	110	77	113	37
17	412	5720	197	2780	68	514	84	538	65	21	102	14
18	335	5210	165	1550	71	518	144	1050	45	8.5	81	66
19	300	5510	151	1320	63	434	328	2470	37	5.7	214	58
20	252	4590	155	1290	98	667	142	1020	26	2.1	1250	3380
21	283	5180	151	1460	99	791	113	827	36	2.0	1220	4940
22	288	5210	149	1380	935	8660	124	881	34	1.4	650	3510
23	322	6010	160	1380	291	2470	82	618	49	2.8	3060	16500
24	293	5460	139	1260	159	1360	71	293	32	.57	2400	9720
25	268	4880	157	1290	129	1150	71	137	26	.11	677	1830
26	290	5520	133	1080	170	1510	55	71	42	.23	366	889
27	301	5530	106	859	269	2330	51	56	41	.22	236	510
28	313	5700	105	850	173	1470	54	49	40	.22	170	275
29	389	6830	100	810	128	1090	402	467	40	.22	140	189
30	1190	19300	101	845	101	832	2050	3080	42	.23	114	123
31	---	---	102	881	---	---	260	420	42	.23	---	---
TOTAL	---	162340	---	142245	---	45954	---	28336	---	11246.53	---	42583.48
TOTAL LOAD FOR YEAR: 680411.01 TONS.												

## 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.--No estimated daily discharges. 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 ft<sup>3</sup>/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 1984 TO SEPTEMBER 1985  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	53	26	28	26	64	118	125	105	102	83	121
2	86	34	26	28	26	63	117	125	114	101	89	128
3	91	32	26	27	26	63	117	124	108	95	83	111
4	80	30	26	27	26	61	108	120	101	99	75	117
5	68	30	26	27	26	61	115	120	86	91	79	124
6	65	29	25	27	26	60	113	116	90	85	93	127
7	75	29	25	27	26	56	118	115	95	96	97	137
8	72	28	25	28	26	54	124	98	89	110	109	133
9	72	28	25	27	26	54	111	118	90	109	101	136
10	74	28	26	26	26	57	110	120	82	92	88	130
11	84	28	27	26	26	65	111	112	82	92	97	124
12	98	28	27	28	26	88	115	107	76	99	101	129
13	97	27	27	28	26	94	112	119	83	89	94	145
14	92	26	29	28	26	96	114	114	82	87	94	131
15	93	26	29	28	26	102	116	113	87	85	99	129
16	76	26	28	28	26	113	108	110	96	90	87	118
17	69	26	28	28	26	118	112	108	87	101	78	114
18	61	26	27	28	26	106	118	116	91	100	77	118
19	59	27	26	28	26	129	112	117	88	97	72	139
20	66	27	26	28	26	135	110	115	91	96	68	110
21	63	27	26	28	26	141	120	114	95	107	65	86
22	87	26	27	27	26	151	121	115	114	93	64	84
23	106	27	28	25	27	125	127	115	106	97	68	89
24	104	27	28	25	27	119	125	105	111	100	60	102
25	111	28	28	25	28	117	118	106	108	100	69	95
26	83	27	27	26	35	118	110	107	93	91	71	94
27	64	27	26	27	62	115	120	102	105	108	61	111
28	63	27	27	27	65	108	125	94	106	113	75	119
29	57	26	28	26	---	120	119	89	107	112	71	116
30	64	26	28	26	---	122	115	101	104	85	86	120
31	73	---	28	25	---	128	---	104	---	82	108	---
TOTAL	2439	856	831	837	816	3003	3479	3464	2872	3004	2562	3537
MEAN	78.7	28.5	26.8	27.0	29.1	96.9	116	112	95.7	96.9	82.6	118
MAX	111	53	29	28	65	151	127	125	114	113	109	145
MIN	57	26	25	25	26	54	108	89	76	82	60	84
AC-FT	4840	1700	1650	1660	1620	5960	6900	6870	5700	5960	5080	7020
CAL YR 1984 TOTAL		19899		MEAN	54.4	MAX	134	MIN	24	AC-FT	39470	
WTR YR 1985 TOTAL		27700		MEAN	75.9	MAX	151	MIN	25	AC-FT	54940	



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

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,950 ft above National Geodetic Vertical Datum of 1929. Prior to July 14, 1966 at datum 1.01 ft higher.

REMARKS.--Estimated daily discharges: Oct. 16-31, Nov. 11 to Dec. 12, Jan. 2-15, Jan. 31 to Feb. 9, Apr. 21 to May 10, and July 3-18, 21-27. 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.--34 years, 13.6 ft<sup>3</sup>/s, 9,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,940 ft<sup>3</sup>/s July 29, 1967, gage height, 13.53 ft, from rating curve extended above 1,300 ft<sup>3</sup>/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 ft<sup>3</sup>/s based on records for stations upstream and downstream.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 21	1300	1,070	5.20	Aug. 3	2030	1,380	6.10
Mar. 13	0300	1,040	5.28	Sept. 15	2000	*2,590	*8.08

No flow at times.

DISCHARGE, IN 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	.14	1.4	2.5	2.8	1.5	76	30	28	64	1.8	36	.00
2	1.7	1.4	2.0	1.5	1.2	43	28	29	56	.50	6.7	2.6
3	8.8	1.1	1.5	1.7	.80	36	25	70	56	.00	108	.17
4	17	.99	1.3	2.0	.60	23	28	60	55	.00	248	.15
5	8.8	.92	3.0	2.3	.70	14	31	35	50	.00	7.0	.10
6	6.1	.62	2.5	2.5	1.5	14	27	30	51	.00	3.4	.00
7	3.6	.46	2.0	3.1	1.8	8.2	24	25	47	.00	.15	.00
8	2.4	.42	3.0	3.7	3.0	7.9	31	27	42	.00	.15	.00
9	1.2	.38	5.0	4.5	6.5	8.5	42	20	44	.00	1.2	.00
10	.42	.38	6.0	3.0	11	12	41	15	36	.00	.61	.00
11	.15	.50	5.8	1.9	4.5	25	47	20	34	.00	139	.00
12	3.4	.70	5.7	1.2	7.0	179	60	30	32	.00	12	.00
13	2.9	.80	5.6	1.6	21	420	62	50	28	.00	1.2	.00
14	3.3	.90	3.3	2.2	19	69	62	119	28	.00	.65	.00
15	16	1.0	2.2	3.0	23	40	59	100	33	.00	.30	311
16	1.8	.70	2.5	4.0	43	42	52	90	42	.00	.11	238
17	2.6	.80	2.7	5.5	83	45	50	89	53	.00	.05	5.4
18	2.6	1.0	3.0	11	148	42	51	89	67	.00	.00	19
19	1.8	.80	3.3	10	166	47	82	103	66	3.1	.00	43
20	2.0	.70	4.0	8.1	197	64	60	121	59	1.3	.00	93
21	2.3	.80	4.0	4.1	409	82	60	91	63	.00	.00	60
22	2.3	.70	4.3	5.1	132	57	22	98	48	.00	.00	1.8
23	2.0	.60	5.4	7.0	82	50	76	76	39	.00	.00	.57
24	2.0	.55	7.3	6.2	48	47	80	74	35	.00	.00	.20
25	1.9	.80	6.5	9.1	42	46	85	76	30	.00	.00	.10
26	1.8	.60	6.5	6.6	67	45	64	85	19	.00	.00	.00
27	.50	.80	7.3	8.9	64	50	71	89	18	.00	.00	.00
28	.70	1.0	111	7.3	94	48	26	82	20	1.4	.00	.07
29	.70	1.3	18	5.1	---	44	114	81	21	5.8	.00	.00
30	.70	1.7	4.2	5.5	---	42	32	71	11	16	.00	.00
31	.70	---	2.9	3.5	---	31	---	64	---	11	.00	---
TOTAL	102.31	24.82	244.3	144.0	1678.10	1757.6	1522	2037	1247	40.90	564.52	775.16
MEAN	3.30	.83	7.88	4.65	59.9	56.7	50.7	65.7	41.6	1.32	18.2	25.8
MAX	17	1.7	111	11	409	420	114	121	67	16	248	311
MIN	.14	.38	1.3	1.2	.60	7.9	22	15	11	.00	.00	.00
AC-FT	203	49	485	286	3330	3490	3020	4040	2470	81	1120	1540
CAL YR 1984	TOTAL	6019.10		MEAN	16.4	MAX	162	MIN	.00	AC-FT	11940	
WTR YR 1985	TOTAL	10137.71		MEAN	27.8	MAX	420	MIN	.00	AC-FT	20110	

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.

REMARKS.-- Under the heading SAMPLE SOURCE numerical values are used to indicate sampling method; 26 indicates automatic pump sample and 29 indicates dip or grab sample.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 190,000 mg/L Aug. 2, 1983; 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, 127,000 mg/L Mar. 1; minimum daily mean, no flow on many days.

SEDIMENT LOADS: Maximum daily, 90,400 tons Mar. 13; minimum daily, 0 ton on many days.

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
OCT								
02...	1055	6.4	1880	15.5	29200	505	63	78
30...	1053	7.0	1820	8.5	5230	99	76	89
DEC								
13...	1040	20	189	2.0	30800	1660	36	43
MAR								
01...	1215	28	1140	6.0	127000	9600	36	39
21...	1110	75	1340	11.0	68700	13900	35	39
MAY								
11...	2240	.94	--	--	57700	146	32	37
19...	1040	7.8	828	--	40700	857	36	41
JUN								
01...	1200	2.7	1130	--	38400	280	36	41
12...	1800	.60	941	--	23800	39	38	44

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	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)	SAMPLE SOURCE (72005)
OCT								
02...	95	99	100	--	--	--	--	26
30...	96	99	100	--	--	--	--	--
DEC								
13...	65	--	--	93	99	100	--	--
MAR								
01...	50	--	--	76	92	99	100	--
21...	49	--	--	78	95	100	--	--
MAY								
10...	--	--	--	--	--	--	--	29
11...	46	--	--	66	87	98	100	26
19...	53	--	--	78	93	99	100	26
JUN								
01...	52	--	--	76	93	99	100	26
12...	54	--	--	75	94	100	--	26

WATER-QUALITY RECORDS

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)						
OCTOBER			NOVEMBER			DECEMBER			JANUARY			FEBRUARY			MARCH		
1	19600	7.4	5040	19	28700	194	32100	243	21100	85	84700	17400					
2	32200	148	18300	69	28300	153	34800	141	21600	70	82700	9600					
3	72900	1730	24200	72	26700	108	39400	181	21100	46	71500	6950					
4	110000	5050	25500	68	25000	88	40900	221	21200	34	70500	4380					
5	59200	1410	24900	62	28900	234	41400	257	21200	40	75500	2850					
6	42900	707	25000	42	31800	215	26400	178	24000	97	73800	2790					
7	42000	408	24700	31	31900	172	22500	188	25300	123	67400	1490					
8	37100	240	24700	28	31000	251	25100	251	26400	214	62700	1340					
9	31400	102	25400	26	33800	456	26300	320	25600	449	60800	1400					
10	26400	30	25400	26	37200	603	25400	206	23700	704	60300	1950					
11	21700	8.8	25500	34	37900	594	24600	126	25100	305	65100	4390					
12	34600	318	24200	46	33300	512	23700	77	28500	539	60100	29000					
13	41000	321	23700	51	31600	478	23500	102	28700	1630	79700	90400					
14	39100	348	24000	58	28000	249	23400	139	26700	1370	63000	11700					
15	62200	3800	21000	57	28900	172	23400	190	24700	1530	51700	5580					
16	44700	217	28100	53	33300	225	23900	258	28100	3260	65700	7450					
17	35500	249	29100	63	34000	248	23500	349	28700	6430	73500	8930					
18	34200	240	28100	76	41900	339	24600	731	44800	17900	74000	8390					
19	32000	156	28100	61	41800	372	25800	697	60000	26900	53500	6790					
20	30500	165	27000	51	41700	450	26100	571	75200	40000	63300	10900					
21	28000	174	30000	65	41100	444	21700	240	65500	72300	55300	12200					
22	26000	161	28600	54	39400	457	22100	304	65700	23400	54100	8330					
23	22000	119	30500	49	40700	593	24500	463	54300	12000	53400	7210					
24	18000	97	28500	42	44200	871	24800	415	65400	8480	53800	6830					
25	14000	72	28200	61	42200	741	26900	661	72200	8190	51500	6400					
26	12000	58	27300	44	42800	751	23200	413	75800	13700	52300	6350					
27	10000	13	26900	58	40100	790	25600	615	78400	13500	51000	6880					
28	8000	15	27000	73	55700	27200	26500	522	89700	22800	57000	7390					
29	6000	11	28800	101	43800	2130	26900	370	---	---	42500	5050					
30	5230	9.9	27000	124	40200	456	24700	367	---	---	37700	4280					
31	5000	9.5	---	---	36000	282	22700	215	---	---	47500	3980					
TOTAL	---	16394.6	---	1664	---	40828	---	10011	---	276096	---	308580					

DAY	MEAN		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)	CONCEN- TRATION (MG/L)	LOADS (T/DAY)
		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	51300	4160	21000	1590	34400	5940	3010	15	67500	6560	0	.00		
2	50700	3830	39700	3110	34400	5200	1650	2.2	57800	1050	25100	176		
3	49800	3360	50700	9580	37300	5640	0	.00	68700	20000	14900	6.8		
4	52300	3950	51800	8390	39300	5840	0	.00	75800	50800	2100	.85		
5	58200	4870	50100	4730	37000	4990	0	.00	19600	370	1500	.41		
6	55700	4060	52500	4250	34800	4790	0	.00	8110	74	0	.00		
7	53900	3490	56100	3790	35200	4470	0	.00	5860	2.4	0	.00		
8	57400	4800	56600	4130	34100	3870	0	.00	5330	2.2	0	.00		
9	59700	6770	57100	3080	33200	3940	0	.00	3480	11	0	.00		
10	60800	6730	57400	2320	28600	2780	0	.00	4300	7.1	0	.00		
11	57500	7300	59300	3200	26000	2390	0	.00	47900	18000	0	.00		
12	60000	9720	56600	4580	27400	2370	0	.00	32900	1070	0	.00		
13	55400	9270	53200	7180	18700	1410	0	.00	17800	58	0	.00		
14	54100	9060	43200	13900	11200	847	0	.00	10200	18	0	.00		
15	52000	8280	38500	10400	7730	689	0	.00	4430	3.6	29000	24400		
16	54200	7610	41600	10100	6150	697	0	.00	1600	.48	46000	29600		
17	53600	7240	38500	9250	5920	847	0	.00	938	.13	22500	328		
18	51200	7050	41700	10000	4390	794	0	.00	0	.00	32200	1650		
19	50600	11200	43900	12200	6810	1210	18600	156	0	.00	67500	7840		
20	52200	8460	40600	13300	12200	1940	23400	82	0	.00	71800	18000		
21	49000	7940	36000	8850	6620	1130	0	.00	0	.00	65000	10500		
22	43400	2580	35200	9310	4840	627	0	.00	0	.00	31700	154		
23	52000	10700	30600	6280	9800	1030	0	.00	0	.00	14300	22		
24	51300	11100	29700	5930	9820	928	0	.00	0	.00	10200	5.5		
25	49700	11400	29600	6070	9810	795	0	.00	0	.00	10400	2.8		
26	42800	7400	32100	7370	10700	549	0	.00	0	.00	0	.00		
27	38100	7300	34200	8220	11100	539	0	.00	0	.00	0	.00		
28	29200	2050	34200	7570	12300	664	33200	125	0	.00	9020	1.7		
29	28900	8900	32100	7020	12100	686	48500	760	0	.00	0	.00		
30	35600	3080	31200	5980	9990	297	67200	2900	0	.00	0	.00		
31	---	---	31800	5500	---	---	55100	1640	0					

## 08340500 ARROYO CHICO NEAR GUADALUPE, NM

LOCATION.--Lat 35°35'33", long 107°11'19", in NE¼ sec.30, T.16 N., R.3 W., Sandoval County, Hydrologic Unit 13020205, on left bank 0.2 mi upstream from mouth, 4.1 mi northwest of Guadalupe, and 5.5 mi southwest of Gabezon.

DRAINAGE AREA.--1,390 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1282: 1944-50.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,920 ft above National Geodetic Vertical Datum of 1929. Prior to June 21, 1968 at site 500 ft upstream at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges; Dec. 11, 15-21, Jan. 3-12, 21, Feb. 2-7, and June 26 to July 1. Water-discharge records fair except for estimated daily discharges, which are poor. Diversions for irrigation of about 100 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--42 years, 21.1 ft<sup>3</sup>/s, 15,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft<sup>3</sup>/s, Sept. 12, 1972, gage height, 17.5 ft from floodmarks, from rating curve extended above 2,900 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 11.6 ft and 14.8 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 2,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 15	1730	*2,780	*7.28	No other peak greater than base discharge			
No flow at times.							

DISCHARGE, IN 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	9.2	6.0	11	3.0	1.9	16	13	64	2.7	.05	90	.00
2	6.8	6.7	9.6	1.7	1.4	38	13	46	2.0	.00	80	3.1
3	365	5.8	8.7	2.0	1.0	41	13	31	1.3	.00	151	.14
4	509	6.0	5.2	2.4	.68	48	6.1	23	52	.00	84	5.7
5	98	6.2	17	2.8	1.1	21	4.1	15	124	.00	20	13
6	23	6.6	10	3.2	2.0	14	7.9	8.7	12	.00	7.2	5.5
7	12	6.9	4.0	3.7	3.6	11	9.5	4.7	4.4	.00	1.1	2.5
8	11	6.4	14	4.2	8.3	8.6	9.8	2.9	2.7	.00	1.4	.82
9	9.2	4.5	13	5.0	24	9.9	9.5	4.1	1.9	.00	1.3	.42
10	11	3.9	12	3.5	34	14	8.0	2.3	.97	.00	.65	.23
11	28	7.4	12	2.5	5.0	52	7.7	.94	.64	.00	58	.44
12	86	8.0	11	1.7	19	197	7.2	2.1	.60	.00	94	.45
13	62	7.9	16	1.2	18	204	7.8	2.7	.29	.00	6.5	.28
14	21	8.2	2.4	2.8	16	91	7.0	6.5	.25	.00	1.7	.15
15	86	8.2	2.6	6.0	14	55	6.5	7.8	.23	.00	1.4	458
16	119	4.9	2.8	11	56	37	5.9	7.9	.22	1.4	.55	252
17	50	5.8	3.1	10	226	30	7.3	8.9	.12	5.0	.46	71
18	35	8.1	3.5	10	319	27	10	7.1	.08	2.8	.29	32
19	15	6.4	3.8	22	229	48	10	7.8	.00	1.5	.23	180
20	14	7.3	4.1	26	175	118	7.5	7.8	.00	1.0	60	349
21	12	6.1	4.5	12	183	66	7.5	25	.00	.50	96	275
22	12	5.5	4.8	23	63	26	14	17	.00	10	8.8	32
23	26	4.5	6.5	35	46	16	9.8	10	.00	3.6	2.2	8.9
24	19	8.1	5.0	21	23	15	8.3	7.8	.00	2.4	.72	2.5
25	12	8.5	5.0	30	18	11	6.7	8.3	.00	2.0	.33	1.0
26	8.2	2.7	16	16	11	7.8	6.3	7.3	.00	1.7	.14	1.1
27	6.8	1.7	37	25	9.8	7.5	7.8	6.9	.34	4.0	.08	1.3
28	4.7	3.0	136	27	7.5	7.1	222	5.1	.40	3.0	.05	25
29	5.7	6.6	48	19	---	9.4	214	4.4	.30	14	.04	6.1
30	5.4	15	24	20	---	9.9	125	4.0	.20	80	.05	2.7
31	6.8	---	14	5.1	---	10	---	3.4	---	94	.03	---
TOTAL	1688.8	192.9	466.6	357.8	1516.28	1266.2	792.2	360.44	207.64	226.95	768.22	1730.33
MEAN	54.5	6.43	15.1	11.5	54.2	40.8	26.4	11.6	6.92	7.32	24.8	57.7
MAX	509	15	136	35	319	204	222	64	124	94	151	458
MIN	4.7	1.7	2.4	1.2	.68	7.1	4.1	.94	.00	.00	.03	.00
AC-FT	3350	383	926	710	3010	2510	1570	715	412	450	1520	3430
CAL YR 1984	TOTAL	8159.33		MEAN	22.3	MAX	1090	MIN	.01	AC-FT	16180	
WTR YR 1985	TOTAL	9574.36		MEAN	26.2	MAX	509	MIN	.00	AC-FT	18990	

08340500 ARROYO CHICO NEAR GUADALUPE, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-56, 1978 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGES: July 1948 to June 1956, October 1978 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since July 1979.

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate sampling method; 26 indicates automatic pump sample and 29 indicates dip or grab sample.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 201,000 mg/L Sept. 18, 1981; minimum daily mean, no flow on many days of most years.

SEDIMENT LOADS: Maximum daily, 1,220,000 tons July 17, 1953; minimum daily, 0 ton on many days of most years.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 153,000 mg/L Aug. 21; minimum daily mean, no flow many days in June, July, and Sept.

SEDIMENT LOADS: Maximum daily, 128,000 tons Oct. 4; minimum daily, 0 ton many days in June, July, and Sept.

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
OCT								
03...	0920	8.8	1220	--	6510	155	43	50
30...	0952	.70	1810	2.5	1890	3.6	63	74
DEC								
13...	1320	5.6	1610	5.5	4650	70	--	--
MAR								
01...	1445	176	1560	6.0	9570	4550	44	49
21...	1245	161	--	10.5	26800	11600	52	64
MAY								
01...	1255	28	1160	19.0	18800	1420	56	69
01...	1315	28	1160	19.0	19800	1500	65	79
23...	0900	76	1860	13.0	2810	577	48	55
JUN								
04...	1500	55	1920	--	23900	3550	48	57
JUL								
19...	0949	.51	1800	21.5	21700	30	93	94

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	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)	SAMPLE SOURCE (72005)
OCT							
03...	69	--	--	91	98	100	26
30...	82	--	--	90	96	100	--
DEC							
13...	--	88	--	--	--	--	--
MAR							
01...	64	--	--	91	99	100	--
21...	76	--	--	94	99	100	29
MAY							
01...	79	--	--	93	99	100	29
01...	86	--	--	95	99	100	26
23...	63	--	--	72	91	100	29
JUN							
04...	80	99	100	--	--	--	26
JUL							
19...	99	100	--	--	--	--	29

08340500 ARROYO CHICO NEAR GUADALUPE, NM -- Continued

## WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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	7190	179	1390	23	4910	146	3590	29	3260	17	9720	420
2	2780	51	1300	24	4790	124	3240	15	2910	11	20300	2080
3	51100	101000	1220	19	4610	108	2780	15	2480	6.7	22500	2490
4	93000	128000	1170	19	4510	63	2390	15	2070	3.8	22500	2920
5	48800	12900	1150	19	4630	213	2170	16	1650	4.9	21000	1190
6	23900	1480	1170	21	4510	122	1920	17	1400	7.6	20000	756
7	15800	512	1140	21	4400	48	1640	16	1300	13	18000	535
8	12900	383	1070	18	4560	172	1460	17	1220	27	16000	372
9	11000	273	988	12	4540	159	2630	36	2410	156	14800	396
10	9870	293	948	10	4360	141	3290	31	4220	387	13500	510
11	20200	1530	2290	46	4370	142	3170	21	3820	52	21500	3020
12	64300	14900	2540	55	4400	131	2460	11	3900	200	30800	16400
13	58600	9810	1950	42	4600	199	2180	7.1	4000	194	29700	16400
14	29000	1640	1690	37	4460	29	1920	15	4080	176	27600	6780
15	33300	7730	1600	35	4220	30	1560	25	4180	158	27000	4010
16	66300	21300	1590	21	4110	31	1640	49	8740	1320	26200	2620
17	39900	5390	1560	24	3870	32	1520	41	20500	12500	25200	2040
18	24900	2350	1660	36	3790	36	1660	45	25700	22100	24100	1760
19	16900	684	1630	28	3590	37	2260	134	25200	15600	23600	3060
20	13200	499	2060	41	3740	41	3470	244	22400	10600	28100	8950
21	11200	363	2050	34	3930	48	3590	116	20000	9880	26800	4780
22	11000	356	2000	30	3690	48	3800	236	16300	2770	24700	1730
23	10400	730	1890	23	3470	61	3980	376	14700	1830	23300	1010
24	10100	518	1910	42	3320	45	3870	219	13900	863	22000	891
25	7560	245	1730	40	3090	42	3940	319	13300	646	20700	615
26	5130	114	1500	11	3430	148	3880	168	12900	383	19300	406
27	3850	71	1350	6.2	4450	445	3900	263	11700	310	17100	346
28	3150	40	1170	9.5	6190	2270	3950	288	10400	211	13600	261
29	2410	37	2470	44	5110	662	3950	203	---	---	11200	284
30	1690	25	5130	208	4260	276	3900	211	---	---	9270	248
31	1610	30	---	---	3860	146	3670	51	---	---	7710	208
TOTAL	---	313433	---	998.7	---	6195	---	3249.1	---	80427.0	---	87488

[illegible]

## 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 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1927 to December 1950 (monthend contents only, published in WSP 1732), April 1958 to current year (month end 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.--Reservoir is formed by concrete arch dam. Storage began in 1927. Capacity, 38,500 acre-ft survey of 1945 at elevation 7,402.6 ft crest of uncontrolled siphon spillway which is vented to avoid drawdown below crest, and 44,200 acre-ft at elevation 7,405.6 ft crest of ungated spillway over dam. Capacity table used through 1944 showed a capacity of 50,300 acre-ft at crest of ungated spillway over dam, and that used from 1945-50, 43,500 acre-ft. Tables used prior to 1958 are not available and no adjustments are made for changes in tables. Dead storage, 3.4 acre-ft at elevation 7,345.4 ft sill of lower outlet tube. Lake not usually drawn below conservation pool level elevation, 7,365.36 ft, below which ownership is by State Game and Fish Department. Above this level, water is owned and used by Bluewater-Toltec Irrigation Co. Figures given herein represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents determined, 47,100 acre-ft Apr. 30, 1941. Contents may have been greater on Apr. 28, 1941 when peak discharge of 800 ft<sup>3</sup>/s occurred at station 8 mi downstream; no storage at times prior to 1947.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 42,050 acre-ft, May 3, 4, elevation, 7,404.5 ft; minimum, 19,370 acre-ft, Nov. 30, elevation, 7,389.1 ft.

## MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 .....	7,389.4	19,730	-----
Oct. 31 .....	7,389.4	19,730	0
Nov. 30 .....	7,389.1	19,370	- 360
Dec. 31 .....	7,389.3	19,610	+ 240
CAL YR 1984 .....			- 9,790
Jan. 31 .....	7,389.5	19,850	+ 240
Feb. 28 .....	7,391.3	22,040	+ 2,190
Mar. 31 .....	7,402.9	39,060	+17,020
Apr. 30 .....	7,404.2	41,480	+ 2,420
May 31 .....	7,402.6	38,510	- 2,970
June 30 .....	7,401.0	35,680	- 2,830
July 31 .....	7,399.5	33,240	- 2,440
Aug. 31 .....	7,398.4	31,580	- 1,660
Sept. 30 .....	7,396.8	29,260	- 2,320
WTR YR 1985 .....			+ 9,530

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

PERIOD OF RECORD.--October 1912 to February 1914, June 1914, October 1914 to February 1915, May 1915 to June 1921, September 1921 to June 1923, October 1923 to May 1926, September to December 1926, May 1949 to September 1966, June 1968 to current year. Monthly discharge only for some periods published in WSP 1312. Prior to October 1967, published as "Bluewater Creek at Grants".

REVISED RECORDS.--WSP 1512: 1913-14. WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,468.34 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). See WSP 1732 or 1923 for history of changes prior to Jan. 1, 1926.

REMARKS.--No estimated daily discharges. Records good. 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.--44 years (water years 1913, 1915-20, 1922, 1924-25, 1950-66, 1968-85), 3.18 ft<sup>3</sup>/s, 2,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1950-66 AND SINCE 1968).--Maximum discharge recorded, 1,760 ft<sup>3</sup>/s, Aug. 28, 1952, gage height, 5.35 ft, from rating curve extended above 300 ft<sup>3</sup>/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.--Peaks discharges greater than base discharge of 200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 17	1130	*158	*3.26				

No flow most of time.

DISCHARGE, IN 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	.00	.00	.00	.00	.00	.00	4.9	46	.06	.00	.00	.00
2	.01	.00	.00	.00	.00	.00	11	54	.10	.00	.69	.00
3	1.2	.00	.00	.00	.00	.00	15	66	.03	.00	.17	.00
4	.22	.00	.00	.00	.00	.00	10	67	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	16	65	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	25	62	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	30	56	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	35	43	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	33	34	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	25	27	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	23	21	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	24	15	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	23	13	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	21	8.4	.00	.00	.00	.00
15	1.6	.00	.00	.00	.00	.00	16	5.5	.00	.00	.00	.00
16	1.1	.00	.00	.00	.00	.00	13	3.9	.00	.00	.00	.00
17	.41	.00	.00	.00	.00	100	12	2.4	.00	.00	.00	.00
18	.22	.00	.00	.00	.00	70	9.6	1.4	.00	1.7	.00	.00
19	.03	.00	.00	.00	.00	18	9.4	.38	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	3.3	7.1	.23	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.88	5.0	.14	.00	.03	.00	.00
22	.00	.00	.00	.00	.00	.30	5.9	.04	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.10	8.6	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.03	9.6	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	10	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	13	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	13	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	20	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	25	.00	.00	1.6	.00	.00
30	.00	.00	.00	.00	---	.94	38	.00	.00	.30	.00	.00
31	.00	---	.00	.00	---	1.8	---	.00	---	.00	.00	---
TOTAL	4.79	.00	.00	.00	.00	195.35	511.1	591.39	.19	3.63	.86	.00
MEAN	.15	.00	.00	.00	.00	6.30	17.0	19.1	.01	.12	.03	.00
MAX	1.6	.00	.00	.00	.00	100	38	67	.10	1.7	.69	.00
MIN	.00	.00	.00	.00	.00	.00	4.9	.00	.00	.00	.00	.00
AC-FT	9.5	.00	.00	.00	.00	387	1010	1170	.4	7.2	1.7	.00
CAL YR 1984	TOTAL	35.66		MEAN	.10	MAX	23	MIN	.00	AC-FT	71	
WTR YR 1985	TOTAL	1307.31		MEAN	3.58	MAX	100	MIN	.00	AC-FT	2590	



## 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 mi<sup>2</sup>.

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: July 28 to Aug. 14, and Sept. 16, 19-21. Records good except those for August and September, which are fair.

AVERAGE DISCHARGE.--24 years, 0.133 ft<sup>3</sup>/s, 96 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft<sup>3</sup>/s, Aug. 26, 1963, gage height, 5.10 ft, from rating curve extended above 220 ft<sup>3</sup>/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.--Peaks discharges greater than base discharge of 175 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 27	1600	*180	*1.64	No other peak greater than base discharge.			
No flow most of time.							

DISCHARGE, IN 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	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	1.6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.51
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	.89	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09
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	1.0
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	14	.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
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	2.58	.00	.00	.00	.00	.00	.00	.00	.00	14.00	.00	1.60
MEAN	.08	.00	.00	.00	.00	.00	.00	.00	.00	.45	.00	.05
MAX	1.6	.00	.00	.00	.00	.00	.00	.00	.00	14	.00	1.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	5.1	.00	.00	.00	.00	.00	.00	.00	.00	28	.00	3.2
CAL YR 1984 TOTAL	4.45		MEAN		.01	MAX	1.6	MIN	.00	AC-FT	8.8	
WTR YR 1985 TOTAL	18.18		MEAN		.05	MAX	14	MIN	.00	AC-FT	36	

LOCATION.--Lat 35°04'27", long 107°45'01", in SE¼SE¼ sec.23, T.10 N., R.9 W., Cibola County, Hydrologic Unit 13020207, on right bank at west boundary of Acoma Pueblo Grant, 8.5 mi southeast of Grants, and at mile 57.4.

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: Oct. 1, 2. Records fair except those for July thur September, which are poor. Flow slightly regulated by Bluewater Lake (station 08341400), 34 mi upstream. Diversions and ground-water withdrawal for irrigation of about 5,100 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--49 years, 6.81 ft<sup>3</sup>/s, 4,930 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.-Maximum discharge, 1,400 ft<sup>3</sup>/s, Sept. 20, 1963, gage height, 4.87 ft, from rating curve extended above 450 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 3.19 ft and 4.87 ft; minimum, 1.9 ft<sup>3</sup>/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.--Peaks discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 18	1600	*180	*4.26	May 4	1100	109	3.96

Minimum daily discharge, 3.8 ft<sup>3</sup>/s, Sept. 14, 15, 26, 27.

DISCHARGE, IN 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	6.0	5.2	6.0	6.8	4.5	5.2	6.7	55	5.4	5.1	6.4	4.1
2	6.5	5.3	5.9	5.9	4.2	5.3	8.9	75	5.4	5.1	6.9	4.2
3	7.4	5.4	5.8	5.6	4.4	5.1	14	84	5.1	5.1	5.0	4.3
4	15	5.4	6.1	5.9	4.5	4.6	18	105	5.1	5.3	5.9	4.4
5	13	5.5	6.2	6.0	4.5	4.5	15	105	5.1	5.3	7.1	5.4
6	8.4	5.6	6.2	6.1	4.4	4.6	21	100	5.2	5.3	6.1	4.6
7	7.0	5.6	6.0	6.3	4.6	4.6	30	93	5.1	5.3	6.6	4.4
8	6.4	5.8	6.3	6.7	4.9	4.7	37	83	5.3	5.3	6.6	4.3
9	6.7	6.0	6.7	7.1	5.7	4.8	46	60	5.8	5.3	5.8	4.1
10	6.7	5.9	6.7	7.9	5.5	4.8	42	47	5.3	5.3	5.3	4.0
11	6.7	6.1	7.0	6.6	4.7	4.8	32	36	5.3	5.3	5.6	3.9
12	6.8	6.0	7.0	5.3	4.9	5.5	30	30	5.3	5.3	5.6	4.2
13	6.8	5.9	7.3	5.5	4.9	5.5	30	23	5.3	5.3	5.3	4.3
14	6.9	5.7	7.8	5.6	4.8	4.9	30	21	5.4	5.3	6.1	3.8
15	7.0	5.7	8.2	5.6	4.7	4.6	28	17	5.4	5.4	6.4	3.8
16	6.5	5.7	7.2	5.6	4.8	4.8	24	14	5.4	5.8	6.7	3.9
17	6.5	5.8	6.5	5.4	4.8	5.1	20	13	5.4	5.6	6.7	4.6
18	6.5	5.8	6.5	5.5	4.7	110	18	12	5.4	5.3	6.9	4.3
19	5.4	5.9	7.0	5.7	4.7	62	16	10	5.3	5.0	6.7	5.7
20	4.9	6.0	7.3	5.7	4.9	28	14	8.8	5.4	5.2	6.0	5.9
21	4.8	5.8	7.1	5.6	4.8	12	13	8.7	5.3	5.2	5.3	6.5
22	4.8	5.6	6.3	6.1	5.9	8.0	13	8.1	5.3	5.0	4.7	6.5
23	5.0	5.3	6.0	6.1	8.0	5.9	13	7.2	5.1	4.7	4.7	4.5
24	4.9	6.1	6.3	5.9	6.1	5.5	14	6.8	5.0	4.7	4.4	4.0
25	4.9	7.8	6.9	5.7	5.2	5.3	16	6.6	5.1	4.7	4.4	3.9
26	4.8	6.3	6.7	5.7	5.0	5.3	17	6.5	4.8	4.4	4.4	3.8
27	4.9	5.6	7.4	6.0	5.0	5.2	22	6.0	5.0	5.0	4.5	3.8
28	4.9	5.8	8.1	6.3	5.1	5.2	29	5.9	5.1	5.5	4.4	3.9
29	4.9	6.4	7.9	6.0	---	5.3	41	5.8	5.2	6.5	4.2	4.0
30	4.9	6.0	7.3	5.6	---	5.7	38	5.6	5.2	5.4	4.1	4.0
31	5.1	---	7.1	5.0	---	5.9	---	5.5	---	5.3	4.1	---
TOTAL	201.0	175.0	210.8	184.8	140.2	352.7	696.6	1064.5	157.5	162.3	172.9	133.1
MEAN	6.48	5.83	6.80	5.96	5.01	11.4	23.2	34.3	5.25	5.24	5.58	4.44
MAX	15	7.8	8.2	7.9	8.0	110	46	105	5.8	6.5	7.1	6.5
MIN	4.8	5.2	5.8	5.0	4.2	4.5	6.7	5.5	4.8	4.4	4.1	3.8
AC-FT	399	347	418	367	278	700	1380	2110	312	322	343	264
CAL YR 1984	TOTAL	1986.3		MEAN	5.43	MAX	15	MIN	3.1	AC-FT	3940	
WTR YR 1985	TOTAL	3651.4		MEAN	10.0	MAX	110	MIN	3.8	AC-FT	7240	

## 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 mi<sup>2</sup>.

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: Oct. 1-31, Jan.31 to Feb. 9, June 4-11, and Aug. 11-14. Records fair except for estimated daily discharges, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--9 years, 1.70 ft<sup>3</sup>/s, 1,230 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,520 ft<sup>3</sup>/s, Aug. 16, 1982, gage height, 11.8 ft, from floodmarks, from rating curve extended above 20 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 8.60 ft and contracted-opening measurement at gage height 10.19 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 3	1330	*270	*5.54	Mar. 12	1830	136	4.58
Oct. 15	1715	156	4.96	July 30	0330	120	4.54

No flow at times.

DISCHARGE, IN 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	.10	1.4	2.0	2.9	3.8	13	3.0	2.4	.60	.00	7.4	.00
2	.10	1.4	2.0	4.9	3.6	12	2.7	5.0	.60	.19	13	.05
3	35	1.5	1.9	4.6	3.5	12	2.4	2.3	.58	.31	12	.16
4	5.0	1.5	2.1	4.4	3.4	4.7	2.1	1.7	.60	.00	10	.24
5	3.5	1.6	2.2	6.1	3.0	2.7	2.6	1.6	.60	.00	9.4	.25
6	2.0	1.7	3.0	5.8	2.8	2.2	2.4	1.3	.62	.00	8.6	.10
7	1.5	1.9	2.9	2.4	3.0	2.7	1.9	1.2	.62	.00	8.0	.12
8	1.5	1.9	2.1	2.6	3.2	2.2	1.8	1.2	.64	.04	7.2	.10
9	1.4	1.9	2.1	2.6	4.0	2.2	1.5	1.1	.62	.11	5.2	.17
10	1.4	1.9	2.0	3.1	2.9	5.5	1.8	1.1	.60	.01	4.4	.16
11	1.2	2.1	2.1	3.9	2.3	13	1.9	1.0	.64	.15	2.0	.77
12	1.2	2.3	2.2	2.9	2.2	65	1.8	1.2	.65	.06	1.7	.31
13	1.1	2.3	3.0	3.1	1.8	21	2.2	.97	.41	.01	1.4	.00
14	1.0	2.4	3.0	3.1	1.8	8.9	1.6	.66	.27	.75	1.0	.00
15	21	2.5	3.1	3.0	2.6	6.8	1.4	.58	.17	2.9	.50	.74
16	6.0	2.7	4.2	2.2	2.6	4.9	1.2	.52	.14	3.2	.28	.38
17	3.5	2.8	6.3	2.6	2.6	5.2	1.1	.59	.08	.56	.12	.01
18	2.5	1.1	8.6	4.6	2.6	4.3	1.1	.69	.15	.59	.01	2.0
19	1.2	1.0	8.7	3.5	2.6	3.9	1.1	.90	.14	.24	.00	2.1
20	1.1	1.0	7.8	3.1	2.7	3.9	1.1	.71	.22	.03	.00	4.8
21	1.3	1.2	5.7	2.7	2.8	3.7	.98	.80	.22	.00	.05	.70
22	1.3	1.3	5.2	3.5	3.0	3.4	1.2	.86	.14	.03	.00	.33
23	1.1	1.3	5.0	3.0	3.0	2.9	1.1	1.5	.08	.58	.01	.03
24	1.1	2.4	5.0	3.0	3.7	2.9	.93	1.3	.04	.50	.01	.00
25	1.0	1.9	5.1	3.0	3.4	2.9	.76	1.2	.12	.04	.03	.00
26	1.2	1.9	5.1	3.0	2.8	4.2	.70	1.1	.05	.00	.01	.00
27	1.1	2.4	3.8	3.2	2.8	4.4	.79	.81	.06	.00	.02	.00
28	1.1	2.2	3.9	3.2	5.1	3.7	2.6	.70	.17	.13	.01	.00
29	1.3	1.9	2.6	2.9	---	4.2	1.9	.61	.10	.23	.00	.00
30	1.3	1.7	2.1	3.6	---	4.1	6.8	.60	.03	9.0	.00	.00
31	1.3	---	2.7	4.0	---	3.6	---	.60	---	1.7	.00	---
TOTAL	104.40	55.1	117.5	106.5	83.6	236.1	54.46	36.80	9.96	21.36	92.35	13.52
MEAN	3.37	1.84	3.79	3.44	2.99	7.62	1.82	1.19	.33	.69	2.98	.45
MAX	35	2.8	8.7	6.1	5.1	65	6.8	5.0	.65	9.0	13	4.8
MIN	.10	1.0	1.9	2.2	1.8	2.2	.70	.52	.03	.00	.00	.00
AC-FT	207	109	233	211	166	468	108	73	20	42	183	27
CAL YR 1984	TOTAL	730.96		MEAN	2.00	MAX	39	MIN	.00	AC-FT	1450	
WTR YR 1985	TOTAL	931.65		MEAN	2.55	MAX	65	MIN	.00	AC-FT	1850	

## 08351500 RIO SAN JOSE AT CORREO, NM

LOCATION.--Lat 34°58'03", long 107°10'10", in NE¼ sec.32, T.9 N., R.3 W., Cibola County, Hydrologic Unit 13020207, on left bank 0.3 mi downstream from State Highway 6, 1.2 mi northeast of Correo, and 13 mi upstream from mouth.

DRAINAGE AREA.--3,660 mi<sup>2</sup>, approximately, of which about 1,130 mi<sup>2</sup> does not contribute directly to surface runoff.

PERIOD OF RECORD.--April 1943 to current year. Prior to October 1955, published as "San Jose River at Correo".

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,474.88 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1958 to Sept. 30, 1975, water-stage recorder at site 1 mi upstream at datum 17.55 ft higher.

REMARKS.--Estimated daily discharges: Oct. 1, 6-21, Dec. 15, 17-28, 30, Jan. 3-17, Feb. 1-10, Mar. 16-18, 21-28, Apr. 9-29, May 26 to June 12, July 21-29, Aug. 7-11, 14, and Sept. 28-30. Records fair 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.

AVERAGE DISCHARGE.--42 years, 11.1 ft<sup>3</sup>/s, 8,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,150 ft<sup>3</sup>/s, Aug. 11, 1955; maximum gage height, 20.7 ft, Aug. 22, 1958, backwater from dam (present datum); no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood which probably occurred Aug. 21, 1935, reached a stage of 15.4 ft, from floodmarks, (discharge, about 11,000 ft<sup>3</sup>/s), but was probably exceeded by the flood of Sept. 23, 1929 (discharge not determined), based on study of records for Rio Puerco at Rio Puerco.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 4	0145	*644	*4.27				

No flow for many days.

DISCHARGE, IN 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	5.2	6.8	14	12	7.0	32	7.8	50	.00	.00	71	.00
2	4.2	6.3	11	7.1	6.8	49	6.8	38	.00	.00	81	.00
3	54	6.0	12	7.4	6.0	57	6.3	47	.00	.00	74	.00
4	192	5.5	11	7.8	5.9	34	6.2	59	.00	.00	104	.00
5	80	5.0	7.7	8.2	5.7	20	8.0	68	.00	.00	90	.00
6	52	4.8	11	9.0	6.0	17	13	71	.00	.00	25	.00
7	31	5.1	6.7	10	6.4	16	12	69	.00	.00	18	.00
8	16	4.9	10	12	7.0	16	15	69	.00	.00	17	.00
9	9.0	4.7	7.2	11	19	15	24	66	.00	.00	16	.00
10	6.2	4.5	6.9	10	15	15	31	62	.00	.00	15	.00
11	9.2	4.4	6.9	8.8	12	28	45	53	.00	.00	14	.00
12	20	4.6	7.3	8.2	12	60	41	44	.00	.00	144	.00
13	42	5.0	8.5	8.4	12	165	26	36	.00	.00	50	.00
14	28	5.2	11	8.6	10	54	24	30	.00	.00	30	.00
15	18	5.1	8.0	8.8	9.0	29	24	23	.00	.00	6.3	.00
16	42	5.0	5.4	9.0	8.7	19	24	18	.00	.00	3.1	.00
17	28	5.3	6.2	9.2	8.5	16	22	13	.00	.00	1.4	.00
18	18	4.7	9.9	9.8	8.4	15	18	11	.00	22	.49	.33
19	13	5.1	12	11	8.2	16	14	9.7	.00	29	.02	49
20	19	5.0	10	9.7	8.3	49	13	6.7	.00	12	.00	81
21	18	4.9	8.8	9.7	8.9	35	11	8.0	.00	2.5	.22	122
22	16	4.9	7.8	8.8	8.6	24	10	4.7	.00	.34	.05	183
23	15	5.2	7.2	9.7	8.8	19	9.0	2.5	.00	.00	.23	59
24	15	6.4	9.8	11	9.4	12	8.6	1.9	.00	.00	.00	23
25	15	7.1	10	10	9.4	10	8.5	1.6	.00	.00	.00	11
26	13	7.8	9.2	10	9.9	8.4	9.0	.20	.00	.00	9.4	4.7
27	13	7.5	8.8	11	9.0	7.6	11	.00	.00	.00	1.3	1.0
28	10	9.6	8.6	10	8.5	6.0	15	.00	.00	.00	.10	.50
29	8.5	10	18	9.5	---	6.2	25	.00	.00	.00	.05	.35
30	7.7	12	16	9.4	---	7.5	35	.00	.00	.21	.02	.15
31	7.3	---	15	8.0	---	9.1	---	.00	---	16	.00	---
TOTAL	825.3	178.4	301.9	293.1	254.4	866.8	523.2	862.30	.00	82.05	771.68	535.03
MEAN	26.6	5.95	9.74	9.45	9.09	28.0	17.4	27.8	.00	2.65	24.9	17.8
MAX	192	12	18	12	19	165	45	71	.00	29	144	183
MIN	4.2	4.4	5.4	7.1	5.7	6.0	6.2	.00	.00	.00	.00	.00
AC-FT	1640	354	599	581	505	1720	1040	1710	.00	163	1530	1060
CAL YR 1984	TOTAL	2556.76		MEAN	6.99	MAX	192	MIN	.00	AC-FT	5070	
WTR YR 1985	TOTAL	5494.16		MEAN	15.1	MAX	192	MIN	.00	AC-FT	10900	

## Q8353000 RIO PUERCO NEAR BERNARDO, NM

LOCATION.--Lat 34°24'33", long 106°51'09", in SE¼ sec.8, T.2 N., R.1 E., Socorro County, Hydrologic Unit 13020204, on bridge on former U.S. Highway 85 and 0.2 mi upstream from Interstate Highway 25, 1.2 mi southwest of Bernardo, 3 mi upstream from mouth, and 18 mi south of Belen.

DRAINAGE AREA.--7,350 mi<sup>2</sup>, approximately, of which at least 1,130 mi<sup>2</sup> does not contribute directly to surface runoff.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1939 to current year. Fragmentary gage height record and footnotes concerning no flow for the period September 1910 to August 1914, published in WSP 358 and 388, are in error and should not be used.

REVISED RECORDS.--WSP 1512: 1941-42, 1944-45, 1946(P), 1947-49. WSP 1632: 1957. WSP 1732: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 4,722.34 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 24, 1969, at datum 3.10 ft higher.

REMARKS.--Estimated daily discharges: Oct. 5-9, 20-23, Jan. 1-8, Feb. 1-15, 20-28, Mar. 7-12, 15-19, Mar. 26 to Apr. 8, May 3-6, 9-14, June 10-30, July 1 to Aug. 2, Aug. 6-8, 14-31, and Sept. 1-10, 18-30. 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).

AVERAGE DISCHARGE.--45 years (water years 1941-85), 45.2 ft<sup>3</sup>/s, 32,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft<sup>3</sup>/s, Sept. 23, 1941, from rating curve extended above 7,800 ft<sup>3</sup>/s; maximum gage height, 16.9 ft, present datum, Aug. 12, 1955; no flow for extended periods.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since about 1880 occurred Sept. 23, 1929, from information by local residents (discharge, about 35,000 ft<sup>3</sup>/s, estimated on basis of peak at Rio Puerco). Another flood occurred Aug. 12, 1929 (discharge, 30,600 ft<sup>3</sup>/s, by slope-area method, from reports of State Engineer).

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 14	1430	*1,400	*9.94				

No flow most of time.

DISCHARGE, IN 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	7.8	4.0	.00	60	9.0	30	.00	535	19	.00	.00	.00
2	7.3	2.4	.00	25	5.0	60	.00	468	14	.00	.00	.00
3	46	1.6	.00	30	3.0	90	.00	300	10	.00	10	.00
4	115	.97	.00	15	1.9	83	.00	250	7.8	.00	266	.00
5	90	.23	.00	9.0	.00	68	.00	150	5.9	.00	452	.00
6	60	.00	.00	8.0	.00	50	.00	300	18	.00	100	.00
7	35	.00	.00	10	.00	30	.00	210	35	.00	35	.00
8	25	.00	.00	8.0	.00	20	15	222	20	.00	10	.00
9	18	.00	.00	6.3	.00	18	25	150	16	.00	3.0	.00
10	12	.00	.00	8.0	.00	22	41	120	6.0	.00	.00	.00
11	8.5	.00	3.6	13	.00	35	60	100	2.0	.00	.00	.00
12	9.1	.00	56	12	.00	50	82	70	.00	.00	.00	.00
13	3.8	.00	175	12	.00	114	94	50	.00	.00	260	.00
14	2.4	.00	65	11	.00	947	98	70	.00	.00	100	.00
15	42	.00	6.1	6.8	.00	400	100	109	.00	.00	10	.00
16	274	.00	10	4.7	4.8	250	97	80	.00	.00	.00	9.6
17	552	.00	15	9.8	5.5	130	95	58	.00	.00	.00	432
18	263	.00	12	12	234	70	96	52	.00	.00	.00	40
19	92	.00	11	8.3	777	50	95	54	.00	.00	.00	90
20	60	.00	7.6	7.6	500	60	99	59	.00	.00	.00	300
21	45	.00	1.2	6.7	250	70	126	62	.00	.00	.00	150
22	30	.00	.48	6.4	150	152	124	63	.00	.00	.00	80
23	11	.00	.00	7.2	90	122	110	72	.00	.00	.00	40
24	13	.00	.00	8.7	60	97	106	66	.00	.00	.00	30
25	27	.00	.00	11	6.0	85	103	48	.00	.00	.00	20
26	23	.00	1.0	12	7.0	30	89	42	.00	.00	.00	15
27	14	.00	3.4	15	6.0	3.0	83	36	.00	.00	.00	9.0
28	11	.00	5.7	15	5.0	.00	85	32	.00	.00	.00	8.0
29	10	.00	14	13	---	.00	141	27	.00	2.0	.00	5.0
30	8.2	.00	291	14	---	.00	726	25	.00	6.0	.00	3.0
31	5.8	---	145	12	---	.00	---	26	---	2.0	.00	---
TOTAL	1920.9	9.20	823.08	397.5	2114.20	3136.00	2690.00	3906	153.70	10.00	1246.00	1231.60
MEAN	62.0	.31	26.6	12.8	75.5	101	89.7	126	5.12	.32	40.2	41.1
MAX	552	4.0	291	60	777	947	726	535	35	6.0	452	432
MIN	2.4	.00	.00	4.7	.00	.00	.00	25	.00	.00	.00	.00
AC-FT	3810	18	1630	788	4190	6220	5340	7750	305	20	2470	2440
CAL YR 1984	TOTAL	11419.32		MEAN	31.2	MAX	806	MIN	.00	AC-FT	22650	
WTR YR 1985	TOTAL	17638.18		MEAN	48.3	MAX	947	MIN	.00	AC-FT	34990	

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, 3,330 microsiemens May 25; minimum daily, 708 microsiemens July 30.

WATER TEMPERATURES: Maximum daily, 31.0°C Aug. 6; minimum daily, 0.0°C Mar. 3.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 129,000 mg/L June 7; minimum daily mean, no flow on many days.

SEDIMENT LOADS: Maximum daily, 266,000 tons Mar. 14; minimum daily, 0 ton on many days.

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .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 .062 MM (70331)
OCT												
05...	1830	90	16.0	84100	20400	47	53	72	97	100	--	--
07...	1530	35	16.0	57500	5430	68	73	87	96	100	--	--
FEB												
19...	1730	1050	6.0	119000	337000	38	44	58	95	100	--	--
MAR												
04...	1630	80	6.0	59200	12800	64	72	89	97	100	--	--
27...	1700	3.0	5.0	54000	437	73	91	97	--	--	--	100
APR												
08...	1400	15	19.0	59200	2400	75	88	98	100	--	--	--
21...	1030	120	12.5	76400	24800	53	61	73	93	100	--	--
27...	0900	83	10.0	58100	13000	61	76	93	97	99	100	--
MAY												
24...	1400	60	21.0	83000	13400	55	68	81	96	100	--	--
JUL												
30...	1450	5.0	27.0	20100	271	63	84	98	--	--	--	100
AUG												
05...	1215	611	23.0	164000	271000	40	44	66	92	99	100	--
SEP												
21...	0900	850	13.0	63800	146000	46	58	75	98	100	--	--

08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued

## WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---		---	---	---	---	2160	1670	1790	---	---	---
2	---		---	---	---	2260	---	1520	---	---	---	---
3	1280		---	---	---	1970	---	1720	---	---	1980	---
4	3120		---	---	---	1870	---	1790	1850	---	---	---
5	1430		---	---	---	1860	---	1850	---	---	2500	---
6	1370		---	---	---	---	---	1810	---	---	2150	---
7	1340		---	---	---	1910	---	1800	2090	---	1770	---
8	1360		---	---	---	1990	2620	1750	2290	---	1740	---
9	---		---	---	---	2150	---	1730	2200	---	---	---
10	---		---	---	---	2230	---	1800	2270	---	---	---
11	---		2820	---	---	---	2150	1720	---	---	---	---
12	---		---	---	---	---	2040	1720	---	---	---	---
13	---		---	---	---	2690	1930	1720	---	---	2670	---
14	---		---	1800	---	1800	1710	1710	---	---	2730	---
15	---		---	---	---	1640	1820	1700	---	---	---	---
16	1640		---	---	2910	1580	1810	1710	---	---	---	---
17	---		---	---	2980	1720	---	1750	---	---	---	2490
18	1090		---	---	2930	1880	---	1760	---	---	---	2270
19	---		---	---	1960	1860	---	1850	---	---	---	2000
20	1230		---	---	1530	1900	1700	1860	---	---	---	1600
21	---		---	---	1450	2080	1800	1770	---	---	---	1750
22	---		---	---	1470	1840	1820	1830	---	---	---	1710
23	---		---	---	1550	1740	1880	1840	---	---	---	1440
24	---		---	---	1560	1730	1730	1700	---	---	---	1450
25	---		---	---	1740	1930	1750	3330	---	---	---	1560
26	---		---	---	1710	1980	1780	1990	---	---	---	1590
27	---		---	---	1900	2090	1840	1880	---	---	---	---
28	---		---	---	2020	---	1770	1890	---	---	---	---
29	---		---	---	---	---	1880	1940	---	---	---	---
30	---		---	---	---	---	1750	1930	---	708	---	---
31	---		---	---	---	---	---	1910	---	---	---	---
MEAN	1540		2820	1800	1980	1940	1890	1840	2080	708	2220	1790
WTR YR 1985		MEAN	1890	MAX	3330	MIN		708				

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---		---	---	---	---	7.5	19.0	21.0	---	---	---
2	---		---	---	---	4.0	---	18.5	---	---	---	---
3	15.0		---	---	---	.0	---	19.0	---	---	20.0	---
4	14.0		---	---	---	6.0	---	18.0	18.0	---	---	---
5	16.0		---	---	---	1.5	---	15.0	---	---	30.0	---
6	15.0		---	---	---	---	---	20.5	---	---	31.0	---
7	16.0		---	---	---	2.0	---	20.0	26.0	---	29.0	---
8	17.0		---	---	---	3.0	19.0	20.0	24.0	---	27.0	---
9	---		---	---	---	4.5	---	19.5	25.0	---	---	---
10	---		---	---	---	6.0	---	17.5	23.0	---	---	---
11	---		9.0	---	---	---	7.5	18.5	---	---	---	---
12	---		---	---	---	---	7.5	18.0	---	---	---	---
13	---		---	---	---	3.5	7.5	18.0	---	---	30.0	---
14	---		---	7.0	---	2.0	7.0	18.5	---	---	28.0	---
15	---		---	---	---	4.0	6.5	---	---	---	---	---
16	9.0		---	---	3.5	4.0	6.0	18.0	---	---	---	---
17	---		---	---	5.0	4.5	---	19.0	---	---	---	21.0
18	13.0		---	---	5.0	3.0	---	18.0	---	---	---	20.0
19	---		---	---	6.0	2.5	---	19.0	---	---	---	21.0
20	6.0		---	---	3.0	5.0	16.0	19.0	---	---	---	19.0
21	---		---	---	3.5	3.5	12.5	20.5	---	---	---	13.0
22	---		---	---	1.5	3.5	13.5	16.5	---	---	---	18.0
23	---		---	---	1.0	5.0	15.0	22.5	---	---	---	19.0
24	---		---	---	2.0	6.5	16.5	21.0	---	---	---	20.0
25	---		---	---	3.0	7.0	16.0	24.0	---	---	---	21.0
26	---		---	---	5.0	6.0	12.0	23.0	---	---	---	29.0
27	---		---	---	4.0	5.0	10.0	24.0	---	---	---	---
28	---		---	---	5.0	---	12.5	23.0	---	---	---	---
29	---		---	---	---	---	15.0	22.0	---	---	---	---
30	---		---	---	---	---	18.5	18.0	---	27.0	---	---
31	---		---	---	---	---	---	19.0	---	---	---	---
MEAN	13.5		9.0	7.0	3.5	4.0	12.0	19.5	23.0	27.0	28.0	20.0
WTR YR 1985		MEAN	13.5	MAX	31.0	MIN		.0				

## RIO GRANDE BASIN

08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued

## WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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	9970	210	17200	186	0	.00	13400	2170	5720	139	40200	3260
2	12100	238	16700	108	0	.00	13000	877	4690	63	47400	7680
3	27600	4740	14700	64	0	.00	12600	1020	3790	31	59300	14400
4	47200	17300	13000	34	0	.00	12100	490	3460	18	59200	13300
5	89500	21700	12000	7.5	0	.00	11800	287	0	.0	54500	10000
6	75700	12300	0	.00	0	.00	11500	248	0	.0	47700	6440
7	60200	5690	0	.00	0	.00	11300	305	0	.0	40600	3290
8	47300	3190	0	.00	0	.00	11500	248	0	.0	37100	2000
9	34000	1650	0	.00	0	.00	10700	182	0	.0	34200	1660
10	23800	771	0	.00	0	.00	9560	206	0	.0	35400	2100
11	17900	411	0	.00	2080	29	10200	358	0	.0	35400	3350
12	22200	545	0	.00	13400	2030	9030	293	0	.0	32800	4430
13	24500	251	0	.00	20500	9690	7680	249	0	.0	31300	9630
14	17700	115	0	.00	14700	2580	7000	208	0	.0	104000	266000
15	34200	3880	0	.00	8180	135	6670	122	0	.0	95800	103000
16	41500	35400	0	.00	8000	216	6320	80	3550	46	63300	42700
17	54300	80900	0	.00	8500	344	6740	178	10100	150	48600	17100
18	39500	28000	0	.00	8120	263	6610	214	33100	49500	40200	7600
19	28900	7180	0	.00	7850	233	5900	132	90200	191000	37400	5050
20	24200	3920	0	.00	7100	146	5780	119	94000	127000	37000	5990
21	21200	2580	0	.00	7030	23	5900	107	76100	51400	39200	7410
22	18500	1500	0	.00	6000	7.8	6880	119	81300	32900	50800	20800
23	16800	499	0	.00	0	.00	6310	123	90200	21900	47100	15500
24	16700	586	0	.00	0	.00	6180	145	69500	11300	45600	11900
25	25600	1870	0	.00	0	.00	6120	182	56000	907	44500	10200
26	24800	1540	0	.00	2660	13	5620	182	52200	987	44000	3560
27	23500	888	0	.00	6770	62	5640	228	44300	718	50400	408
28	23300	692	0	.00	8680	134	5020	203	40000	540	0	.0
29	20700	559	0	.00	8770	332	5310	186	---	---	0	.0
30	19000	421	0	.00	21200	16700	6610	250	---	---	0	.0
31	18400	288	---	---	15900	6220	6510	211	---	---	0	.0
TOTAL	---	239814	---	399.50	---	39157.80	---	9922	---	488599.0	---	598758.0

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)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	0	.0	103000	149000	78000	4000	0	.00	0	.0	0	.0
2	0	.0	83000	105000	79000	2990	0	.00	0	.0	0	.0
3	0	.0	77500	62800	79000	2130	0	.00	61300	1660	0	.0
4	0	.0	80000	54000	79000	1660	0	.00	101000	72500	0	.0
5	0	.0	74200	30100	77000	1230	0	.00	128000	156000	0	.0
6	0	.0	76500	62000	82000	3990	0	.00	78000	21100	0	.0
7	0	.0	83000	47100	129000	12200	0	.00	45000	4250	0	.0
8	49200	1990	88800	53200	93000	5020	0	.00	39000	1050	0	.0
9	42200	2850	81000	32800	84000	3630	0	.00	40200	326	0	.0
10	41900	4640	77000	24900	91500	1480	0	.00	0	.0	0	.0
11	48700	7890	76100	20500	93500	505	0	.00	0	.0	0	.0
12	54200	12000	75000	14200	0	.00	0	.00	0	.0	0	.0
13	61300	15600	83600	11300	0	.00	0	.00	93300	65500	0	.0
14	62200	16500	79900	15100	0	.00	0	.00	100000	27000	0	.0
15	63000	17000	77000	22700	0	.00	0	.00	85000	2300	0	.0
16	72600	19000	65300	14100	0	.00	0	.00	0	.0	7050	721
17	72900	18700	58000	9080	0	.00	0	.00	0	.0	62600	92600
18	74200	19200	58300	8190	0	.00	0	.00	0	.0	78800	8510
19	74300	19100	62000	9040	0	.00	0	.00	0	.0	73500	17900
20	74300	19900	60000	9560	0	.00	0	.00	0	.0	60000	48600
21	76500	26000	59000	9880	0	.00	0	.00	0	.0	56000	22700
22	75200	25200	64000	10900	0	.00	0	.00	0	.0	51800	11200
23	76800	22800	73000	14200	0	.00	0	.00	0	.0	58300	6300
24	79500	22800	23000	4100	0	.00	0	.00	0	.0	45500	3690
25	71200	19800	62900	8150	0	.00	0	.00	0	.0	37000	2000
26	65200	15700	19000	2150	0	.00	0	.00	0	.0	36800	1490
27	58000	13000	69000	6710	0	.00	0	.00	0	.0	38100	926
28	56100	12900	74000	6390	0	.00	0	.00	0	.0	36500	788
29	74000	28200	73000	5320	0	.00	14200	77	0	.0	35000	472
30	114000	223000	74000	4990	0	.00	23200	376	0	.0	31500	255
31	---	---	20600	1450	---	---	24300	131	0	.0	---	---
TOTAL	---	583770.0	---	828910	---	38835.00	---	584.00	---	351686.0	---	218152.0
TOTAL LOAD FOR YEAR: 3398587.30 TONS.												



## 08353130 ALAMO CREEK NEAR ALAMO, NM

LOCATION.--Lat 34°24'08", long 107°28'41", in SW¼NW¼ sec.16, T.2 N., R.6 W., Socorro County, Hydrologic Unit 13020209, on Alamo Band Navajo Indian Reservation, on left bank 0.5 mi downstream from Alamo Spring, 2.0 mi upstream from Rio Salado, 2.8 mi east of Alamo and 28 mi north of Magdalena.

DRAINAGE AREA.--22.4 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1983 to September 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 6,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 752 ft<sup>3</sup>/s, Sept. 14, 1983, gage height, 4.28 ft, from rating curve extended above 1.0 ft<sup>3</sup>/s on basis of step-backwater analysis and slope-area measurement of peak flow; no flow at times.

EXTREMES.--Maximum discharge during the period June to September 1983, 752 ft<sup>3</sup>/s, at 1700 hours Sept. 14, gage height, 4.28 ft, from rating curve extended as explained above; no flow at times.

Water year 1984: Maximum discharge, 520 ft<sup>3</sup>/s, at 1830 hours Aug. 5, gage height, 3.76 ft, from rating curve extended as explained above; no flow at times

Water Year 1985: Maximum discharge, 589 ft<sup>3</sup>/s, at 0730 hours Sept. 20, gage height, 3.90 ft, from rating curve extended as explained above; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	.00	.01	.08
2									---	.00	6.6	.08
3									---	.00	.02	.08
4									---	.00	.02	.08
5									---	.00	.02	.08
6									---	.00	.02	.08
7									---	.10	.02	.08
8									---	.00	.02	23
9									---	.00	.02	.10
10									---	.00	.02	.10
11									---	.05	.02	.10
12									---	.05	.02	.10
13									---	.05	.02	.10
14									---	.05	.02	32
15									---	.05	.02	1.5
16									---	.05	.02	.10
17									---	.05	.02	.10
18									---	.05	.02	.10
19									---	.05	.02	.10
20									---	.05	.02	.10
21									---	.05	.02	.10
22									---	.05	.02	.10
23									---	.05	1.9	.10
24									.16	6.9	.10	19
25									.20	.05	.10	.15
26									.10	.01	.08	.08
27									.05	.01	15	.08
28									.02	.01	.20	.08
29									.00	.01	11	.08
30									.00	.20	15	.08
31									---	.20	.08	---
TOTAL									---	8.14	50.47	77.91
MEAN									---	.26	1.63	2.60
MAX									---	6.9	15	32
MIN									---	.00	.01	.08
AC-FT									---	16	100	155

08353130 ALAMO CREEK NEAR ALAMO, NM -- Continued

## DISCHARGE, IN 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	37	.10	.14	.18	.15	.07	.04	.02	.00	1.1	.03	.02
2	10	.10	.14	.18	.15	.07	.04	.02	.00	.10	.80	.02
3	.08	.10	.14	.18	.14	.07	.04	.02	.00	.03	.03	.02
4	.08	.11	.14	.18	.14	.06	.04	.01	.00	.03	1.8	.01
5	.08	.11	.14	.19	.14	.06	.04	.01	.00	.03	46	.01
6	.08	.11	.15	.19	.13	.06	.04	.01	.00	.03	.50	.01
7	.08	.11	.15	.19	.13	.06	.03	.01	.00	.03	12	.01
8	.08	.11	.15	.19	.12	.05	.03	.01	.00	.03	14	.01
9	.08	.11	.15	.19	.12	.05	.03	.01	.00	.03	.04	.01
10	.08	.11	.15	.19	.12	.05	.03	.01	.00	.03	.04	.01
11	.08	.11	.15	.19	.11	.05	.03	.01	.00	.03	.04	.02
12	.08	.11	.15	.20	.11	.05	.03	.01	.01	.03	.04	.02
13	.09	.12	.15	.20	.11	.05	.03	.01	1.3	.03	.04	.02
14	.09	.12	.16	.20	.11	.05	.03	.01	3.5	.03	.04	.02
15	.09	.12	.16	.20	.11	.05	.03	.01	.02	.03	.04	.03
16	.09	.12	.16	.20	.11	.05	.03	.01	.02	.03	.04	.03
17	.09	.12	.16	.20	.10	.05	.03	.01	.02	.03	.04	.03
18	.09	.12	.16	.20	.10	.05	.03	.00	.02	.03	.04	.03
19	.09	.12	.16	.20	.10	.05	.03	.00	.02	.03	.04	.04
20	.09	.12	.16	.20	.10	.05	.03	.00	.02	.03	.04	.04
21	.10	.13	.16	.20	.09	.05	.02	1.3	.02	.03	.04	.04
22	.10	.13	.17	.19	.09	.05	.02	.00	.02	.03	4.1	.04
23	.10	.13	.17	.19	.09	.05	.02	.00	.02	.03	15	.05
24	.10	.13	.17	.18	.09	.05	.02	.00	.02	.03	.03	.05
25	.10	.13	.17	.18	.08	.04	.02	.00	.02	.03	.03	.05
26	.10	.13	.17	.18	.08	.04	.02	.00	.02	.03	.03	.05
27	.10	.13	.17	.17	.08	.04	.02	.00	.02	.03	.03	.06
28	.10	.13	.18	.17	.08	.04	.02	.00	.02	.03	.03	.06
29	.10	.14	.18	.16	.07	.04	.02	.00	.02	.03	.03	.06
30	.10	.14	.18	.16	---	.04	.02	.00	.02	.03	.03	.06
31	.10	---	.18	.16	---	.04	---	.00	---	.03	.03	---
TOTAL	49.62	3.57	4.92	5.79	3.15	1.58	.86	1.50	5.13	2.07	95.02	.93
MEAN	1.60	.12	.16	.19	.11	.05	.03	.05	.17	.07	3.07	.03
MAX	37	.14	.18	.20	.15	.07	.04	1.3	3.5	1.1	46	.06
MIN	.08	.10	.14	.16	.07	.04	.02	.00	.00	.03	.03	.01
AC-FT	98	7.1	9.8	11	6.2	3.1	1.7	3.0	10	4.1	188	1.8
WTR YR 1984	TOTAL	174.14		MEAN	.48	MAX	46	MIN	.00	AC-FT	345	

## DISCHARGE, IN 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	.07	.08	.08	.09	.10	.07	.04	.03	.01	.00	.04	.04
2	.07	.08	.08	.09	.10	.07	.04	.03	.01	.00	.04	.04
3	5.2	.08	.08	.09	.10	.06	.04	.03	.01	.00	.04	.04
4	.07	.08	.08	.10	.10	.06	.04	.03	.01	.00	.04	.03
5	.08	.08	.08	.10	.09	.06	.04	.03	.01	.00	.05	.03
6	.08	.08	.08	.10	.09	.06	.04	.03	.01	.00	.05	.03
7	.08	.08	.08	.10	.09	.06	.04	.03	.01	.00	.05	.03
8	.08	.08	.08	.10	.09	.06	.04	.03	.01	.00	.05	.03
9	.09	.08	.09	.10	.09	.06	.04	.03	.01	.00	.05	.03
10	.09	.08	.09	.10	.09	.06	.04	.03	.01	.00	.06	.03
11	.09	.08	.09	.10	.09	.05	.03	.03	.01	.00	.06	.03
12	.09	.08	.09	.10	.09	.05	.03	.03	.01	.00	.06	.03
13	.09	.08	.09	.10	.09	.05	.03	.02	.01	.00	.06	.03
14	.09	.08	.09	.10	.08	.05	.03	.02	.01	.01	.06	.03
15	.09	.08	.09	.10	.08	.05	.03	.02	.01	.00	.06	.03
16	.09	.08	.09	.10	.08	.05	.03	.02	.01	.00	.06	.03
17	.09	.08	.09	.10	.08	.05	.03	.02	.01	.00	.06	.03
18	.09	.08	.09	.10	.08	.05	.03	.02	8.6	.00	.06	1.2
19	.09	.08	.09	.10	.08	.04	.03	.02	.01	.00	.06	.03
20	.09	.08	.09	.10	.08	.04	.03	.02	.01	.00	.05	15
21	.09	.08	.09	.10	.08	.04	.03	.02	.01	.00	.05	.04
22	.09	.08	.09	.10	.08	.04	.03	.02	.01	.01	.05	.04
23	.09	.08	.09	.10	.07	.04	.03	.02	.01	.00	.05	.04
24	.09	.08	.09	.10	.07	.04	.03	.02	.01	.00	.05	.04
25	.09	.08	.09	.10	.07	.04	.03	.01	.00	.00	.04	.04
26	.09	.08	.09	.10	.07	.04	.03	.01	.00	.00	.04	.04
27	.09	.08	.09	.10	.07	.04	.03	.01	.00	.01	.04	.04
28	.09	.08	.09	.10	.07	.04	.03	.01	.00	2.6	.04	.94
29	.08	.08	.09	.10	---	.04	8.0	.01	.00	.04	.04	.05
30	.08	.08	.09	.10	---	.04	1.0	.01	.00	.10	.04	.05
31	.08	---	.09	.10	---	.04	---	.01	---	.04	.04	---
TOTAL	7.77	2.40	2.71	3.07	2.35	1.54	9.94	.67	8.83	2.81	1.54	18.09
MEAN	.25	.08	.09	.10	.08	.05	.33	.02	.29	.09	.05	.60
MAX	5.2	.08	.09	.10	.10	.07	8.0	.03	8.6	2.6	.06	15
MIN	.07	.08	.08	.09	.07	.04	.03	.01	.00	.00	.04	.03
AC-FT	15	4.8	5.4	6.1	4.7	3.1	20	1.3	18	5.6	3.1	36
CAL YR 1984	TOTAL	128.91		MEAN	.35	MAX	46	MIN	.00	AC-FT	256	
WTR YR 1985	TOTAL	61.72		MEAN	.17	MAX	15	MIN	.00	AC-FT	122	

## 08353150 RIO SALADO NEAR ALAMO, NM

LOCATION.--Lat 34°25'41", long 107°25'41", in NE¼SE¼ sec.2, T.2 N., R.6 W., Socorro County, Hydrologic Unit 13020209, on Alamo Band Navajo Indian Reservation, on left bank 0.7 mi west of Reservation Boundary, 2.2 mi downstream from Alamo Creek, 5.0 mi east of Alamo and 30 mi north of Magdalena.

DRAINAGE AREA.--540 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1983 to September 1985 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 5,930 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft<sup>3</sup>/s, August 23, 1984, gage height, 4.75 ft, from rating curve extended above 30 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 3.20 ft, from floodmarks; no flow at times.

EXTREMES.--Maximum discharge during the period June to September 1983, 852 ft<sup>3</sup>/s, at 0230 hours July 31, gage height, 3.76 ft, from rating curve extended as explained above; no flow at times.

Water year 1984: Maximum discharge, 1,400 ft<sup>3</sup>/s, at 0100 hours Aug. 23, gage height, 4.75 ft, from rating curve extended as explained above; no flow at times.

Water Year 1985: Maximum discharge, 1,280 ft<sup>3</sup>/s, at 1000 hours Sept. 20, gage height, 4.38 ft, from rating curve extended as explained above; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	.00	.00	.00
2									---	.00	25	.00
3									---	.00	108	.00
4									---	.00	42	.00
5									---	.00	.00	.00
6									---	.00	.00	.00
7									---	.00	.00	.00
8									---	.00	.00	.00
9									---	.00	.00	20
10									---	.00	.02	.50
11									---	.00	.00	.00
12									---	.00	.00	.00
13									---	.00	16	.00
14									---	.00	.00	50
15									---	.00	.00	1.0
16									---	.00	.00	.00
17									---	.00	.00	.00
18									---	.00	.00	.00
19									---	.00	.00	.00
20									---	.00	.00	.00
21									---	.00	.00	.00
22									---	.00	.00	.00
23									.00	7.4	24	.00
24									.73	14	23	.00
25									.00	.00	1.8	.00
26									.00	29	.00	1.0
27									.00	21	28	76
28									.00	.00	3.0	105
29									.00	.00	111	3.0
30									.00	.00	25	1.0
31									---	49	5.0	---
TOTAL									---	120.40	411.82	257.50
MEAN									---	3.88	13.3	8.58
MAX									---	49	111	105
MIN									---	.00	.00	.00
AC-FT									---	239	817	511

08353150 RIO SALADO NEAR ALAMO, NM -- Continued

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

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.30	.15	.15	.10	.10	.00	.00	.00	15	.00	.00
2	.30	.30	.15	.15	.10	.10	.00	.00	.00	.00	.00	.00
3	.30	.30	.15	.15	.10	.10	.00	.00	.00	.00	1.0	.00
4	.30	5.4	.15	.15	.10	.10	.00	.00	.00	.00	5.0	.00
5	.30	150	.15	.15	.10	2.0	.00	.00	.00	.00	70	.00
6	.30	5.0	.15	.15	.10	.10	.00	.00	.00	3.0	7.0	.00
7	.30	1.0	.15	.15	.10	.10	.00	.00	.00	.50	20	.00
8	.30	.20	.15	.15	.10	.10	.00	.00	.00	.00	10	.00
9	.30	.20	.15	.15	.10	.10	.00	.00	.00	.00	.30	.00
10	.30	.20	.15	.15	.10	.10	.00	.00	.00	40	.20	.00
11	.30	.20	.15	.15	.10	.10	.00	.00	.00	1.0	.10	.00
12	.30	.20	.15	.15	.10	.10	.00	.00	.00	.00	.30	.00
13	.30	.20	.15	.15	.10	.05	.00	.00	.00	.00	50	.00
14	.30	.20	.15	.15	.10	.05	.00	.00	43	.00	2.0	.00
15	.30	.20	.15	.15	.10	.05	.00	.00	.00	.00	1.0	.10
16	.30	.20	.15	.15	.10	.05	.00	.00	.00	.00	.00	.00
17	.30	.20	.15	.15	.10	.05	.00	.00	.00	.00	.00	30
18	.30	.20	.15	.15	.10	.05	.00	.00	.00	.00	.00	5.0
19	.30	.20	.15	.15	.10	.05	.00	.00	.00	.00	.00	1.0
20	.30	.20	.15	.15	.10	.05	.00	.00	.00	.00	.00	.20
21	.30	.20	.15	.15	.10	.00	.00	.00	.00	.00	.00	.20
22	.30	.20	.15	.15	.10	.00	.00	.00	.00	.00	50	.20
23	.30	.20	.15	.15	.10	.00	.00	.00	.00	.00	100	1.0
24	.30	.20	.15	.15	.10	.00	.00	.00	.00	.00	10	.50
25	.30	.20	.15	.15	.10	.00	.00	.00	.00	.00	5.0	.50
26	.30	.20	.15	.15	.10	.00	.00	.00	.00	.00	3.0	5.0
27	.30	.20	.15	.15	.10	.00	.00	.00	.00	.00	1.0	1.0
28	.30	.20	1.0	.15	.10	.00	.00	.00	.00	.00	.60	.20
29	.30	.20	.15	.15	.00	.00	.00	.00	.00	.00	.20	.10
30	.30	.20	.15	.15	---	.00	.00	.00	.00	.00	.10	.10
31	.30	---	.15	.15	---	.00	---	.00	---	.00	.05	---
TOTAL	9.30	166.90	5.50	4.65	2.80	3.50	.00	.00	43.00	59.50	336.85	45.10
MEAN	.30	5.56	.18	.15	.10	.11	.00	.00	1.43	1.92	10.9	1.50
MAX	.30	150	1.0	.15	.10	2.0	.00	.00	43	40	100	30
MIN	.30	.20	.15	.15	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	18	331	11	9.2	5.6	6.9	.00	.00	85	118	668	89
WTR YR 1984	TOTAL	677.10	MEAN	1.85	MAX	150	MIN	.00	AC-FT	1340		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.09	.15	.30	.40	.15	.00	.00	.00	.00	2.0	.00
2	.00	.09	.15	.30	.40	.15	.00	.00	.00	.00	1.0	.00
3	10	.08	.15	.30	.40	.15	.00	.00	.00	.00	40	.00
4	.30	.08	.15	.30	.35	.15	.00	.00	.00	.00	5.0	.00
5	.25	.07	.15	.30	.35	.15	.00	.00	.00	.00	.50	.00
6	.20	.07	.15	.30	.35	.15	.00	.00	.00	.00	.10	.00
7	.20	.06	.15	.30	.35	.15	.00	.00	.00	.00	.10	.00
8	.20	.06	.15	.30	.35	.10	.00	.00	.00	.00	.10	.00
9	.20	.05	.15	.35	.35	.10	.00	.00	.00	.00	.10	.00
10	.20	.05	.20	.35	.35	.10	.00	.00	.00	.00	.10	.00
11	.20	.04	.20	.35	.30	.10	.00	.00	.00	.00	.10	5.0
12	.20	.04	.20	.35	.30	.10	.00	.00	.00	.00	.10	.10
13	.19	.03	.20	.35	.30	.10	.00	.00	.00	.00	.10	.05
14	.19	.03	.20	.35	.30	.05	.00	.00	.00	.00	.10	.00
15	.18	.03	.20	.35	.30	.05	.00	.00	.00	.00	.10	.00
16	.18	.03	.20	.35	.30	.05	.00	.00	.00	.00	.09	.00
17	.17	.05	.20	.35	.25	.05	.00	.00	.00	.00	.08	.00
18	.17	.05	.20	.35	.25	.05	.00	.00	38	.00	.08	.00
19	.16	.05	.20	.40	.25	.05	.00	.00	1.0	.00	.07	10
20	.16	.05	.25	.40	.25	.00	.00	.00	.00	.00	.06	100
21	.15	.05	.25	.40	.25	.00	.00	.00	.00	.00	.06	30
22	.15	.05	.25	.40	.25	.00	.00	.00	.00	.00	.05	5.0
23	.14	.05	.25	.40	.20	.00	.00	.00	.00	.00	.04	1.0
24	.14	.10	.25	.40	.20	.00	.00	.00	.00	.00	.04	.50
25	.13	.10	.25	.40	.20	.00	.00	.00	.00	.00	.03	.10
26	.13	.10	.25	.40	.20	.00	.00	.00	.00	.00	.02	.10
27	.12	.10	.25	.40	.20	.00	.00	.00	.00	.00	.02	.10
28	.12	.10	.25	.40	.20	.00	15	.00	.00	1.0	.01	.10
29	.11	.10	.25	.40	---	.00	30	.00	.00	10	.01	.10
30	.10	.15	.30	.40	---	.00	3.6	.00	.00	6.0	.01	.10
31	.10	---	.30	.40	---	.00	---	.00	---	4.5	.01	---
TOTAL	14.74	2.00	6.45	11.10	8.15	1.95	48.60	.00	39.00	21.50	50.18	152.25
MEAN	.48	.07	.21	.36	.29	.06	1.62	.00	1.30	.69	1.62	5.07
MAX	10	.15	.30	.40	.40	.15	30	.00	38	10	40	100
MIN	.00	.03	.15	.30	.20	.00	.00	.00	.00	.00	.01	.00
AC-FT	29	4.0	13	22	16	3.9	96	.00	77	43	100	302
CAL YR 1984	TOTAL	518.59	MEAN	1.42	MAX	100	MIN	.00	AC-FT	1030		
WTR YR 1985	TOTAL	355.92	MEAN	.98	MAX	100	MIN	.00	AC-FT	706		

## 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 fair. 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, 274 ft<sup>3</sup>/s, June 22, 1980; no flow at times.

DISCHARGE, IN 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	137	76	32	91	34	104	148	92	175	181	97	116
2	113	42	31	71	38	111	171	103	185	196	89	113
3	98	48	30	50	39	100	188	122	189	213	49	127
4	90	51	34	48	62	95	169	130	170	257	40	43
5	70	41	36	65	59	74	179	133	149	238	83	34
6	54	32	33	38	44	74	179	128	158	231	97	117
7	72	25	33	38	40	66	165	141	147	240	92	122
8	77	.00	33	38	38	61	166	157	166	217	100	115
9	78	.00	33	39	38	58	145	158	182	202	106	112
10	59	.00	43	40	36	59	150	155	165	196	87	111
11	62	.00	64	45	35	64	161	156	150	190	72	98
12	92	.00	78	57	33	82	157	148	178	197	79	104
13	100	.00	99	57	34	95	162	134	206	221	91	104
14	94	.00	126	58	34	104	163	134	209	226	89	102
15	94	.00	76	59	33	110	162	129	217	231	93	110
16	90	.00	60	60	33	106	152	131	208	191	90	86
17	86	.00	74	54	32	92	165	123	191	186	112	40
18	78	.00	78	50	33	90	175	122	201	190	125	38
19	78	46	69	49	37	140	174	122	179	209	145	43
20	73	101	54	45	35	145	184	120	200	214	155	20
21	74	131	50	42	44	111	190	132	193	196	127	.56
22	90	125	47	41	36	134	191	138	172	209	85	.00
23	105	112	59	40	36	162	167	138	188	150	114	61
24	104	113	57	40	38	150	186	127	183	132	146	105
25	94	113	42	40	37	159	181	128	178	127	126	103
26	94	113	41	39	37	175	164	126	169	136	137	100
27	84	99	41	67	39	166	145	123	161	174	143	101
28	82	46	41	79	55	163	153	127	165	116	120	78
29	81	37	67	63	---	153	162	149	161	123	144	52
30	77	33	76	42	---	170	122	171	178	116	134	82
31	88	---	86	37	---	162	---	202	---	107	110	---
TOTAL	2668	1384.00	1723	1582	1089	3535	4976	4199	5373	5812	3277	2437.56
MEAN	86.1	46.1	55.6	51.0	38.9	114	166	135	179	187	106	81.3
MAX	137	131	126	91	62	175	191	202	217	257	155	127
MIN	54	.00	30	37	32	58	122	92	147	107	40	.00
AC-FT	5290	2750	3420	3140	2160	7010	9870	8330	10660	11530	6500	4830
CAL YR 1984	TOTAL	43341.80		MEAN	118	MAX	266	MIN	.00	'C-FT	85970	
WTR YR 1985	TOTAL	38055.56		MEAN	104	MAX	257	MIN	.00	AC-FT	75480	

08354500 SOCORRO MAIN CANAL NORTH AT SAN ACACIA, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1985.

REMARKS.--Samples collected in flume at diversion dam, 0.5 mi upstream from discharge station.

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (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)
SEP						
20...	1201	2.0	19.0	1150	6.2	71
20...	1202	2.0	19.0	1020	5.5	78
20...	1245	1.6	18.0	1220	5.3	71
20...	1246	1.6	18.0	954	4.1	78

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.

## WATER-DISCHARGE RECORDS

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.--Estimated daily discharges: Nov. 6-8, and Mar. 17. Water-discharge records good except for estimated daily discharges, which are poor. Conveyance channel, constructed in 1958, is 1 of 3 channels (stations 08354500, 08354900) carrying flow in valley cross section. Original design and plan was for conveyance channel to carry all flows up to about 2,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s, May 12, 13, 1966; no flow at times.

DISCHARGE, IN 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	379	1010	1090	1370	569	1400	.09	.24	.11	.01	.37	.09
2	317	1010	1030	1250	1260	1400	.31	.24	.06	.14	.37	.10
3	466	942	1020	1150	1260	1370	.34	.25	.06	.01	.37	.09
4	947	885	1070	1140	1140	1240	.30	.27	.08	.01	.35	.10
5	1260	943	1160	1210	1090	1260	.31	.25	.11	.01	.37	.09
6	892	1000	1100	999	970	1220	.31	.23	.10	.01	.38	.08
7	624	975	984	1030	938	639	.27	.25	.10	.01	.35	.06
8	629	1040	936	1130	858	475	.27	.27	.09	.02	.26	.04
9	623	1240	974	1230	825	398	.26	.26	.10	.05	.20	.04
10	553	1300	1040	1230	805	995	.28	.20	.11	.06	.21	.04
11	573	1330	1220	1240	808	1250	.28	.20	.09	.06	.21	.04
12	514	1320	1250	1330	912	1260	.26	.20	.11	.09	.18	.01
13	500	1190	1300	1310	945	1490	.27	.20	.12	.17	.17	.01
14	437	819	1500	1270	860	1480	.28	.22	.10	.19	.17	.01
15	461	720	1460	1250	778	1360	.27	.22	.07	.26	.17	.01
16	679	678	1420	1290	750	320	.25	.24	.08	.29	.16	.05
17	1500	670	1490	1240	780	2.0	.25	.20	.05	.27	.15	.05
18	1190	1220	1490	1220	1020	.30	.24	.17	.04	.23	.18	.05
19	933	1550	1430	1210	1330	.59	.21	.14	.03	.24	.21	.10
20	809	1580	1300	1230	1240	.74	.22	.14	.02	.27	.19	.04
21	727	1600	1240	1210	1470	.23	.24	.11	.01	.20	.13	.02
22	794	1570	1240	886	1320	.22	.24	.09	.01	.19	.07	.01
23	810	1540	1290	777	1360	.17	.23	.08	.01	.19	.08	.01
24	868	1550	1280	745	1420	.09	.24	.08	.01	.02	.12	.01
25	926	1560	1170	747	1270	.08	.24	.08	.01	.01	.13	.01
26	940	1550	1060	734	1300	.06	.25	.10	.01	.05	.13	.01
27	853	1470	918	1220	1270	.05	.26	.07	.01	.18	.11	.03
28	918	1260	918	1310	1280	.19	.29	.09	.01	.05	.10	.02
29	888	1230	1260	835	---	.23	.27	.09	.01	.01	.12	.01
30	825	1160	1300	650	---	.28	.23	.13	.01	.01	.11	.03
31	865	---	1360	500	---	.22	---	.16	---	.11	.10	---
TOTAL	23700	35912	37300	33943	29828	17562.45	7.76	5.47	1.73	3.42	6.22	1.26
MEAN	765	1197	1203	1095	1065	567	.26	.18	.06	.11	.20	.04
MAX	1500	1600	1500	1370	1470	1490	.34	.27	.12	.29	.38	.10
MIN	317	670	918	500	569	.05	.09	.07	.01	.01	.07	.01
AC-FT	47010	71230	73980	67330	59160	34840	15	11	3.4	6.8	12	2.5
CAL YR 1984	TOTAL 312650.15			MEAN	854	MAX	1790	MIN	.73	AC-FT 620100		
WTR YR 1985	TOTAL 178271.31			MEAN	488	MAX	1600	MIN	.01	AC-FT 353600		

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued

## WATER-QUALITY RECORDS

LOCATION.--Samples collected about 100 ft downstream from discharge station.

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to current year.

WATER TEMPERATURES: May 1959 to current year.

SUSPENDED-SEDIMENT DISCHARGES: January 1959 to current year.

REMARKS.--When there is insufficient flow to sample 08354800 Rio Grande Conveyance Channel at San Acacia or 08354900 Rio Grande Floodway at San Acacia, samples are taken from 08354500 Socorro Main Canal North at San Acacia.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,840 microsiemens Oct. 8, 1964; minimum daily, 136 microsiemens June 19, 1967.

WATER TEMPERATURES: Maximum daily, 36.0°C July 13, 1970, Aug. 13, 1978; minimum daily, 0.0°C on several days during winter periods of most years.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 141,000 mg/L Aug. 10, 1959; minimum daily mean, no flow on many days during most years.

SEDIMENT LOADS: Maximum daily, 528,000 tons Aug. 28, 1972; minimum daily, 0 ton on many days during most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 884 microsiemens Mar. 29; minimum daily, 446 microsiemens Feb. 27.

WATER TEMPERATURES: Maximum daily, 27.0°C on several days during June and July; minimum daily, 1.0°C Feb. 1-3.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 26,900 mg/L Oct. 17; minimum daily mean, 17 mg/L June 25.

SEDIMENT LOADS: Maximum daily, 109,000 tons Oct. 17; minimum daily, 0 ton many days in March, June, July, and Sept.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS AS CAC03 (MG/L) (00900)
NOV 14...	1030	813	550	582	8.1	8.4	16.0	9.0	9.8	22	180
JAN 24...	1045	772	550	--	8.1	--	6.0	5.5	10.5	27	--

DATE	TIME	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CAC03) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 14...	30	56	9.9	53	2	4.3	160	12	150	100	25	
JAN 24...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	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 SIO2) (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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 14...	.50	24	380	.60	.59	.020	.98	1.6	.720	.280	6.6	
JAN 24...	--	--	--	.80	.73	.090	.41	1.3	.640	.410	3.4	

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)
NOV 14...	1030	5	4	110	<1	<1	<10	<10	30	1



08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	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)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
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NOV  
14... 3 14 5 .1 <.1 <1 <1 70 12

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS U) (01029)
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NOV  
14... 1030 6.0 4.0 85 <1 <1 6

DATE	TIME	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 AS AS) (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)
------	------	---	---	---	---	---	---	---

NOV  
14... <10 <1 510 <10 38 <.10 3

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. (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)
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NOV  
14... 1030 12 17 6.1 21 5.3 18 .14 2.9

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCOCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 14...	1030	K660	2700
JAN 24...	1045	K110	510

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	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 0.062 MM (70342)	SED. SUSP. FALL DIAM. % FINER 0.125 MM (70343)	SED. SUSP. FALL DIAM. % FINER 0.250 MM (70344)	SED. SUSP. FALL DIAM. % FINER 0.062 MM (70331)
OCT 02...	1630	317	25.0	14400	12300	46	53	71	93	99	100	--
19...	1630	935	15.0	9230	23300	51	57	66	88	97	100	--
NOV 06...	1630	1000	14.0	872	2350	49	59	90	--	--	--	100
JAN 01...	1630	1390	6.0	2140	8030	35	45	60	82	94	100	--
FEB 19...	1630	1330	6.0	20000	71800	54	56	77	96	99	100	--
MAR 14...	1630	1470	10.0	19900	79000	42	50	71	94	99	100	--

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued

## WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	780	610	583	594	503	466	642	---	556	588		
2	773	653	581	544	511	490	472	---	551	586		
3	774	702	538	592	515	494	488	---	659	---		
4	568	701	554	598	511	514	487	680	660	---		
5	629	707	564	607	516	521	489	692	665	---		
6	634	703	---	599	512	525	492	695	663	---		
7	736	670	---	606	518	549	490	697	664	---		
8	739	729	---	594	509	617	529	695	659	---		
9	743	575	572	605	516	486	532	696	724	---		
10	739	590	575	589	510	475	533	533	757	---		
11	716	600	570	613	515	473	534	557	766	---		
12	738	598	529	604	508	474	532	556	766	---		
13	745	601	522	605	524	496	533	564	770	---		
14	713	639	543	584	517	709	---	563	767	---		
15	715	650	521	586	525	591	---	564	745	---		
16	657	706	516	584	519	583	---	725	727	---		
17	672	712	513	614	529	582	---	750	749	---		
18	656	579	621	621	522	578	---	751	738	---		
19	742	572	632	615	759	663	---	757	736	---		
20	712	579	630	513	774	664	---	756	741	---		
21	720	541	638	537	639	666	---	759	605	---		
22	531	542	632	537	691	665	---	591	592	---		
23	594	543	637	541	532	669	---	565	591	---		
24	688	543	632	537	514	789	---	556	588	---		
25	696	540	634	539	456	804	---	562	590	---		
26	693	546	628	532	448	803	---	559	587	---		
27	607	549	632	534	446	875	---	554	589	---		
28	608	586	700	534	463	876	---	555	586	---		
29	610	579	712	537	---	884	---	558	588	---		
30	610	597	710	536	---	644	---	554	586	---		
31	602	---	719	538	---	872	---	557	---	---		
MEAN	682	615	601	573	536	629	519	629	666	587		
WTR YR 1985		MEAN	612	MAX	884	MIN	446					

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	16.0	11.0	6.0	1.0	8.0	13.0	---	23.0	27.0		
2	25.0	14.0	11.0	5.0	1.0	8.0	13.0	---	23.0	27.0		
3	25.0	14.0	11.0	4.0	1.0	8.0	13.0	---	23.0	---		
4	25.0	14.0	10.0	3.0	2.0	10.0	15.0	19.0	23.0	---		
5	25.0	14.0	10.0	3.0	2.0	10.0	15.0	19.0	23.0	---		
6	25.0	14.0	---	3.0	2.0	10.0	16.0	19.0	23.0	---		
7	25.0	13.0	---	3.0	2.0	10.0	16.0	19.0	23.0	---		
8	24.0	13.0	---	4.0	2.0	10.0	16.0	19.0	23.0	---		
9	23.0	12.0	7.0	3.0	3.0	10.0	16.0	19.0	23.0	---		
10	23.0	12.0	7.0	3.0	3.0	10.0	16.0	19.0	23.0	---		
11	23.0	12.0	7.0	3.0	3.0	10.0	16.0	19.0	23.0	---		
12	23.0	11.0	6.0	3.0	4.0	10.0	16.0	19.0	23.0	---		
13	23.0	12.0	6.0	3.0	4.0	10.0	16.0	19.0	23.0	---		
14	20.0	11.0	5.0	3.0	4.0	10.0	---	19.0	23.0	---		
15	19.0	10.0	4.0	3.0	4.0	10.0	---	19.0	24.0	---		
16	19.0	10.0	3.0	3.0	4.0	10.0	---	21.0	24.0	---		
17	17.0	10.0	3.0	3.0	4.0	11.0	---	21.0	24.0	---		
18	15.0	10.0	3.0	3.0	4.0	12.0	---	21.0	24.0	---		
19	15.0	10.0	3.0	3.0	6.0	12.0	---	21.0	24.0	---		
20	14.0	10.0	3.0	3.0	6.0	12.0	---	21.0	24.0	---		
21	14.0	10.0	3.0	3.0	6.0	12.0	---	21.0	26.0	---		
22	14.0	10.0	3.0	3.0	7.0	12.0	---	21.0	26.0	---		
23	14.0	10.0	4.0	2.0	7.0	12.0	---	21.0	26.0	---		
24	14.0	10.0	5.0	2.0	7.0	12.0	---	21.0	26.0	---		
25	14.0	10.0	5.0	2.0	7.0	11.0	---	21.0	26.0	---		
26	14.0	11.0	5.0	2.0	7.0	11.0	---	21.0	26.0	---		
27	15.0	11.0	6.0	2.0	7.0	11.0	---	21.0	27.0	---		
28	16.0	11.0	7.0	2.0	7.0	11.0	---	21.0	27.0	---		
29	16.0	11.0	7.0	2.0	---	10.0	---	21.0	27.0	---		
30	16.0	11.0	7.0	2.0	---	13.0	---	21.0	27.0	---		
31	16.0	---	7.0	2.0	---	13.0	---	21.0	---	---		
MEAN	19.0	11.5	6.0	3.0	4.0	10.5	15.0	20.0	24.5	27.0		
WTR YR 1985		MEAN	12.5	MAX	27.0	MIN	1.0					

WATER-QUALITY RECORDS

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)						
OCTOBER			NOVEMBER			DECEMBER			JANUARY			FEBRUARY			MARCH		
1	15200	15600	2490	6790	847	2490	2080	7690	1560	2400	3370	12700					
2	14700	12600	1460	3980	795	2210	850	2870	3220	11100	3370	12700					
3	14700	18500	1180	3000	854	2350	792	2460	897	3050	3370	12500					
4	12100	35900	992	2370	845	2440	800	2460	538	1660	3370	11300					
5	18200	61900	912	2320	890	2790	822	2690	535	1570	4490	15300					
6	10700	25800	893	2410	609	1810	834	2250	528	1380	3370	11100					
7	8690	14600	1500	3950	550	1460	811	2260	505	1280	3370	5810					
8	10100	17200	953	2680	524	1320	771	2350	493	1140	2640	3390					
9	9350	15700	1490	4990	826	2170	786	2610	460	1020	2010	2160					
10	9730	14500	1750	6140	1060	2980	770	2560	470	1020	20000	63600					
11	9280	14400	1700	6100	1260	4150	757	2530	470	1030	11000	37100					
12	9160	12700	1740	6200	1120	3780	779	2800	495	1220	2320	7890					
13	9180	12400	1950	6040	1160	4070	819	2900	587	1500	4880	19600					
14	8980	10600	2790	6170	960	3890	1770	6070	688	1600	16200	64700					
15	9480	11800	1320	2570	773	3050	1380	4660	705	1480	18100	66500					
16	10400	19100	1320	2420	731	2800	1140	3970	781	1580	2540	2190					
17	26900	109000	782	1410	720	2900	1130	3780	623	1310	650	3.5					
18	22800	73300	1910	6780	603	2430	1250	4120	1700	5530	591	.5					
19	11200	28200	1950	8160	639	2470	1410	4610	18700	67200	159	.3					
20	14400	31500	1870	7980	600	2110	1600	5310	19500	65300	85	.2					
21	11900	23400	1750	7560	600	2010	1380	4510	15200	60300	168	.1					
22	3710	7950	1420	6020	610	2040	1250	2990	13800	49200	324	.2					
23	3120	6820	1180	4910	632	2200	1250	2620	8640	31700	242	.1					
24	3850	9020	1010	4230	740	2560	1560	3140	6500	24900	61	.0					
25	4360	10900	820	3450	767	2420	1410	2840	3650	12500	43	.0					
26	4340	11000	642	2690	795	2280	1310	2600	3440	12100	46	.0					
27	3600	8290	604	2400	1260	3120	1800	5930	3570	12200	56	.0					
28	2250	5580	1110	3780	6470	16000	1330	4700	3370	11600	42	.0					
29	2110	5060	976	3240	6110	20800	1340	3020	---	---	53	.0					
30	2330	5190	872	2730	5550	19500	1540	2700	---	---	107	.1					
31	2530	5910	---	---	3240	11900	1340	1810	---	---	217	.1					
TOTAL	---	654420	---	133470	---	138500	---	107810	---	387870	---	348545.1					

[illegible]

RIO GRANDE BASIN  
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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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. Aug. 19, 1965 to Aug. 15, 1967 at same site at datum 1.89 ft higher. 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. Floodway is bypassed by Socorro main canal north and since Oct. 1958, by conveyance channel.

REMARKS.--No estimated daily discharges. 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 ft<sup>3</sup>/s) and Socorro main canal north (about 200 ft<sup>3</sup>/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 ft<sup>3</sup>/s, 863,000 acre-ft/yr, prior to construction of conveyance channel; does not include Socorro main canal north.  
15 years (water years 1959-73), 911 ft<sup>3</sup>/s, 660,000 acre-ft/yr, combined flow of floodway, conveyance channel and Socorro main canal north, prior to closure of Cochiti Dam.  
12 years (water years 1974-85), 1,336 ft<sup>3</sup>/s, 967,900 acre-ft/yr, combined flow of floodway, conveyance channel, and Socorro main canal north, since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft<sup>3</sup>/s, Aug. 5, 1936, gage height, 10.75 ft, site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 9,420 ft<sup>3</sup>/s, May 4; no flow Dec. 19-27.

DISCHARGE, IN 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	9.8	4.6	6.4	2.4	4.5	171	796	7440	4290	3200	784	3.0
2	14	3.9	6.4	3.7	5.5	177	552	8440	4370	3150	841	3.0
3	42	3.6	5.6	2.8	5.2	183	2480	8680	4370	3050	818	8.0
4	105	3.7	4.4	2.8	4.3	188	3320	9420	4660	3500	1240	951
5	19	5.2	3.5	2.9	16	199	4070	9210	5290	3890	1280	788
6	1.3	6.0	3.1	2.8	6.0	96	5390	7940	5360	3600	932	500
7	1.0	3.3	2.6	3.0	2.0	.92	4750	7430	5910	3470	801	629
8	2.8	3.3	2.5	4.9	2.0	.87	5200	7980	5450	3560	916	544
9	2.8	3.8	2.4	5.0	2.1	.75	4760	7840	5620	3560	1160	296
10	3.7	3.7	2.2	4.4	2.1	1.2	5560	6570	5390	3480	714	535
11	4.5	3.4	2.8	18	2.0	1.8	5630	6650	4480	3060	446	593
12	3.4	3.2	2.4	20	2.3	2.5	5470	7080	3950	2900	509	336
13	4.4	3.0	2.2	.91	1.9	354	5380	7320	3310	2930	639	408
14	7.6	2.2	68	1.9	1.9	2540	5500	6770	3250	2960	1090	422
15	5.2	1.5	111	1.6	1.8	2860	6030	7230	3320	3030	1330	334
16	10	1.6	111	1.3	1.9	3630	5920	7260	3300	2940	812	303
17	152	1.2	43	1.3	1.8	3420	5940	6580	3260	2740	444	535
18	56	27	1.3	1.4	3.2	3660	7380	5570	3020	2430	194	913
19	11	52	.00	1.9	53	4470	7550	4960	2740	2520	172	854
20	11	19	.00	1.5	1.9	5000	7640	4710	2520	2520	55	2110
21	9.4	12	.00	1.5	32	4580	7600	4840	2700	2490	8.0	2390
22	11	64	.00	1.3	131	4520	7850	4640	3290	2470	339	3020
23	11	36	.00	1.3	102	3380	7490	4270	3180	2540	9.0	2930
24	12	2.8	.00	1.4	294	3510	7560	3990	3150	1970	8.0	2660
25	11	2.2	.00	1.4	329	3670	7680	3750	3240	1050	5.0	2380
26	16	1.9	.00	1.9	295	3520	7700	3670	3480	572	5.0	2300
27	8.4	6.7	.00	3.1	291	3130	7440	3710	3420	395	5.0	1840
28	6.3	2.1	.90	3.3	216	2040	7330	3480	3280	432	5.0	1320
29	6.7	3.4	26	4.1	---	1420	6780	3510	3070	565	5.0	988
30	6.7	6.6	68	2.0	---	1390	6080	3650	3100	1070	5.0	758
31	5.3	---	1.9	4.1	---	1000	---	4060	---	1830	5.0	---
TOTAL	570.3	292.9	477.60	109.91	1811.4	59116.04	172828	188650	115770	77874	15576.0	31651.0
MEAN	18.4	9.76	15.4	3.55	64.7	1907	5761	6085	3859	2512	502	1055
MAX	152	64	111	20	329	5000	7850	9420	5910	3890	1330	3020
MIN	1.0	1.2	.00	.91	1.8	.75	552	3480	2520	395	5.0	3.0
AC-FT	1130	581	947	218	3590	117300	342800	374200	229600	154500	30890	62780
(+)	53440	74560	78350	70690	64890	159200	352700	382500	240300	166000	37400	67610
CAL YR 1984	TOTAL 263243.40	MEAN 719	MAX 6080	MIN .00	AC-FT 522100	(+) MEAN 1692	AC-FT 1228000					
WTR YR 1985	TOTAL 664727.15	MEAN 1821	MAX 9420	MIN .00	AC-FT 1318000	(+) MEAN 2414	AC-FT 1747000					

(+) COMBINED FLOW, IN ACRE-FT, AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY, CONVEYANCE CHANNEL, AND SOCORRO MAIN CANAL NORTH.

## 08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937-56, 1959 to current year.

## 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.--Additional sediment total-discharge determinations were made monthly when needed. When there is insufficient flow to sample 08354800 Rio Grande Conveyance Channel at San Acacia or 08354900 Rio Grande Floodway at San Acacia, samples are taken from 08354500 Socorro Main Canal North at San Acacia.

## 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, 1964-85): 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, 1,510 microsiemens Aug. 18; minimum daily, 262 microsiemens July 3.  
 WATER TEMPERATURES: Maximum daily, 29.0°C on several days during Aug.; minimum daily, 1.0°C Feb. 1-3.  
 SEDIMENT CONCENTRATIONS: Maximum daily mean, 140,000 mg/L Aug. 17; minimum daily mean, 0 mg/L several days in Dec.  
 SEDIMENT LOADS: Maximum daily, 499,000 tons Aug. 15; minimum daily, 0 ton several days in Dec.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
MAR 21...	1130	4200	390	432	8.0	7.9	16.5	9.5	9.3	31	150	7
MAY 14...	1200	7120	300	327	7.8	8.1	18.5	15.5	8.5	60	100	0
JUL 18...	1045	2600	320	323	8.1	7.9	30.5	25.0	7.1	38	120	17
SEP 19...	1030	545	900	--	8.0	--	19.5	19.0	7.5	220	--	--

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 IT-FLD (MG/L HCO3) (99440)	CAR- BONATE IT-FLD (MG/L CO3) (99445)	ALKA- LINITY FIELD (MG/L CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L CACO3) (99430)	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 21...	46	7.7	40	1	3.4	170	.000	140	140	84	18	.40
MAY 14...	32	6.0	22	1	2.6	140	.000	--	110	54	8.9	.30
JUL 18...	36	6.1	24	1	3.6	120	.000	--	100	46	9.3	.30
SEP 19...	--	--	--	--	--	--	--	--	--	--	--	--

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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
MAR 21...	21	300	.40	.45	.060	1.5	2.0	1.20	.100	14
MAY 14...	17	210	.20	.19	.080	1.8	2.1	.960	.050	14
JUL 18...	20	200	.40	.37	.050	.55	1.0	.420	.150	7.2
SEP 19...	--	--	1.2	1.1	.090	3.9	5.2	4.70	.140	96

## RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC		BORON,		CADMIUM		CHRO-		CHRO-		COPPER,	
		DIS-		DIS-		TOTAL		MIUM,		MIUM,		TOTAL	
		SOLVED		SOLVED		RECOV-		TOTAL		SOLVED		RECOV-	
		ERABLE	ERABLE	ERABLE	ERABLE	ERABLE	ERABLE	ERABLE	ERABLE	ERABLE	ERABLE	ERABLE	ERABLE
		(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
		AS AS)	AS AS)	AS B)	AS CD)	AS CD)	AS CD)	AS CR)	AS CR)	AS CR)	AS CR)	AS CU)	AS CU)
		(01002)	(01000)	(01020)	(01027)	(01025)	(01034)	(01030)	(01042)	(01040)	(01040)	(01040)	(01040)
MAR													
21...	1130	--	--	90	--	--	--	--	--	--	--	--	--
MAY													
14...	1200	--	--	50	--	--	--	--	--	--	--	--	--
JUL													
18...	1045	4	3	30	<1	<1	20	<10		19		6	

DATE	TIME	IRON,		LEAD,		MERCURY		SELE-		ZINC,	
		DIS- SOLVED (UG/L AS FE) (01046)	RECOV- ERABLE (UG/L AS PB) (01051)	DIS- SOLVED (UG/L AS PB) (01049)	RECOV- ERABLE (UG/L AS HG) (71900)	DIS- SOLVED (UG/L AS HG) (71890)	RECOV- ERABLE (UG/L AS SE) (01147)	RECOV- ERABLE (UG/L AS SE) (01145)	RECOV- ERABLE (UG/L AS SE) (01145)	DIS- SOLVED (UG/L AS ZN) (01092)	DIS- SOLVED (UG/L AS ZN) (01090)
MAR 21...		3	--	--	--	--	--	--	--	--	--
MAY 14...		53	--	--	--	--	--	--	--	--	--
JUL 18...		11	10	1	.1	.1	<1	<1	60	10	

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	PCB,	ALDRIN,	CHLOR-	DDD,	DDE,	DDT,	DI-	DI-	ENDO-
		TOTAL	TOTAL	DANE,	TOTAL	TOTAL	TOTAL	AZINON,	ELDRIN	SULFAN,
		(UG/L)	(UG/L)	TOTAL	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
		(39516)	(39330)	(39350)	(39360)	(39365)	(39370)	(39570)	(39380)	(39388)
MAR										
21...	1130	--	--	--	--	--	--	--	--	--
SEP										
19...	1030	<.1	<.010	<.1	<.010	<.010	<.010	.02	<.010	<.010

DATE	TIME	ENDRIN,		ETHION,		HEPTA-		HEPTA-		MALA-		METH-		METHYL		METHYL	
		TOTAL (UG/L (39390)	TOTAL (UG/L (39398)	TOTAL (UG/L (39398)	TOTAL (UG/L (39398)	TOTAL (UG/L (39410)	TOTAL (UG/L (39410)	TOTAL (UG/L (39420)	TOTAL (UG/L (39420)	TOTAL (UG/L (39340)	TOTAL (UG/L (39530)	TOTAL (UG/L (39480)	TOTAL (UG/L (39480)	TOTAL (UG/L (39600)	TOTAL (UG/L (39600)	TOTAL (UG/L (39790)	TOTAL (UG/L (39790)
MAR 21...		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 19...		<.010	<.01	<.010	<.010	<.010	<.010	<.010	<.010	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

DATE	TIME	PARA-		TOX-		TOTAL		HEPTA-		MALA-		METH-		METHYL		METHYL	
		THION, TOTAL (UG/L (39540)	THION, TOTAL (UG/L (39540)	APHENE, TOTAL (UG/L (39400)	APHENE, TOTAL (UG/L (39400)	TRI- THION (UG/L (39786)	TRI- THION (UG/L (39786)	2,4-D, TOTAL (UG/L (39730)	2,4-D, TOTAL (UG/L (39730)	2,4,5-T TOTAL (UG/L (39740)	2,4,5-T TOTAL (UG/L (39740)	SILVEX, TOTAL (UG/L (39760)	SILVEX, TOTAL (UG/L (39760)	PER- THANE TOTAL (UG/L (39034)	PER- THANE TOTAL (UG/L (39034)	CHLOR. TOTAL (UG/L (39250)	CHLOR. TOTAL (UG/L (39250)
MAR 21...		--	--	--	--	--	--	.02	<.01	<.01	<.01	--	--	--	--	--	--
SEP 19...		<.01	<.01	<.01	<.01	<.01	<.01	--	--	--	--	<.1	<.1	<.10	<.10	<.01	<.01

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

## WATER-QUALITY RECORDS

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)
MAR 21...	1130	92	170
MAY 14...	1200	K56	290
JUL 18...	1045	K180	320
SEP 19...	1030	4600	5500

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SEDI- MENT, DISCH, SUSP. + BED MA- TERIAL (T/DAY) (80156)	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)	
OCT 13...	1600	4.4	23.0	5680	67	--	70	82	95	
NOV 05...	1600	5.2	14.0	1610	23	--	16	20	26	
DEC 31...	1600	1.9	7.0	3480	18	--	65	83	91	
FEB 19...	1600	5.2	6.0	20000	281	--	47	60	78	
MAR 21...	1130	4200	9.5	5140	58300	68500	12	14	19	
APR 03...	1200	3740	13.5	1340	13500	16300	34	39	58	
APR 19...	1000	7430	13.0	1150	23100	--	50	60	83	
MAY 14...	1200	7120	15.5	4310	82900	94200	22	26	37	
JUL 02...	1230	3150	24.0	298	2530	3790	--	--	--	
JUL 18...	1045	2600	25.0	1130	7930	12400	--	--	--	
AUG 03...	1600	818	28.0	11400	25200	--	61	75	93	
AUG 08...	1600	910	29.0	134000	329000	--	41	52	82	
SEP 19...	1030	545	19.0	16600	24400	33100	57	67	84	
DATE		SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)
OCT 13...	--	--	--	--	--	98	99	100	--	--
NOV 05...	63	88	100	--	--	--	--	--	--	--
DEC 31...	--	--	--	--	--	96	99	100	--	--
FEB 19...	96	99	100	--	--	--	--	--	--	--
MAR 21...	38	62	91	100	--	--	--	--	0	3
APR 03...	--	--	--	--	--	90	99	100	26	70
APR 19...	--	--	--	--	--	100	--	--	1	8
MAY 14...	56	74	96	100	--	--	--	--	0	2
JUL 02...	--	--	--	--	--	82	97	100	13	37
JUL 18...	40	61	97	100	--	--	--	--	0	3
AUG 03...	--	--	--	--	--	100	--	--	--	--
AUG 08...	100	--	--	--	--	--	--	--	--	--
SEP 19...	93	98	100	--	--	--	--	--	1	4

## RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM-- Continued

## WATER-QUALITY RECORDS

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. FALL DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. FALL DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. FALL DIAM. % FINER THAN 16.0 MM (80172)
OCT 13...	--	--	--	--	--	--	--	--
NOV 05...	--	--	--	--	--	--	--	--
DEC 31...	--	--	--	--	--	--	--	--
FEB 19...	--	--	--	--	--	--	--	--
MAR 21...	66	98	100	--	--	--	--	--
APR 03...	97	97	--	100	--	--	--	--
19...	64	97	100	--	--	--	--	--
MAY 14...	47	82	--	90	93	96	98	100
JUL 02...	95	100	--	--	--	--	--	--
18...	82	99	100	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
SEP 19...	67	94	--	98	99	99	100	--

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	702	668	604	857	861	530	604	---	323	294	463	---
2	894	681	602	787	926	607	396	---	319	292	600	---
3	908	672	533	688	952	799	393	---	294	262	616	---
4	802	670	567	671	956	844	393	339	289	329	536	1310
5	869	684	586	670	936	857	390	342	289	336	518	805
6	872	760	---	710	941	772	392	342	287	337	518	736
7	709	686	---	731	1050	721	391	341	289	336	514	---
8	696	683	---	782	1050	637	355	339	290	338	1480	---
9	696	650	750	795	1060	797	354	340	314	335	1370	---
10	761	710	947	789	1070	807	350	320	294	370	1440	---
11	773	730	782	790	1080	813	356	304	295	345	1460	---
12	771	744	767	785	1070	676	349	299	290	338	1450	---
13	776	752	716	784	988	516	347	303	292	339	1460	---
14	771	766	686	791	897	738	---	300	290	336	1260	---
15	778	778	639	802	885	515	---	301	295	338	1460	---
16	737	777	642	795	836	490	---	337	292	340	1450	---
17	736	780	642	799	802	488	---	343	293	338	1480	---
18	733	597	787	795	793	485	---	345	290	342	1510	---
19	743	730	938	805	740	489	349	347	299	344	1460	762
20	734	582	791	708	914	486	---	346	295	344	766	824
21	743	664	766	781	775	489	---	349	300	446	738	846
22	590	536	767	768	805	489	---	325	300	461	710	846
23	629	883	756	768	522	490	---	320	298	464	---	849
24	785	905	762	772	502	451	---	318	300	465	---	848
25	798	915	753	788	446	448	---	320	299	463	---	654
26	804	1020	761	724	436	445	---	316	298	463	---	641
27	669	673	753	773	437	491	---	318	297	463	---	641
28	677	640	767	782	432	491	---	320	296	463	---	639
29	676	594	759	764	---	494	---	321	295	463	---	640
30	673	582	815	748	---	492	---	319	297	464	---	639
31	672	---	815	780	---	590	---	320	---	464	---	---
MEAN	748	717	730	767	827	595	387	326	297	378	1060	779
WTR YR 1985	MEAN	629		MAX	1510		MIN	262				



08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	16.0	11.0	6.0	1.0	8.0	13.0	---	23.0	27.0	28.0	---
2	25.0	14.0	11.0	5.0	1.0	8.0	13.0	---	23.0	27.0	28.0	---
3	25.0	14.0	11.0	4.0	1.0	8.0	13.0	---	23.0	28.0	28.0	---
4	25.0	14.0	10.0	3.0	2.0	10.0	15.0	19.0	23.0	28.0	28.0	27.0
5	25.0	14.0	10.0	3.0	2.0	10.0	15.0	19.0	23.0	28.0	28.0	27.0
6	25.0	14.0	---	3.0	2.0	10.0	16.0	19.0	23.0	28.0	28.0	27.0
7	25.0	13.0	---	3.0	2.0	10.0	16.0	19.0	23.0	28.0	28.0	---
8	24.0	13.0	---	4.0	2.0	10.0	16.0	19.0	23.0	28.0	29.0	---
9	23.0	12.0	7.0	3.0	3.0	10.0	16.0	19.0	23.0	28.0	29.0	---
10	23.0	12.0	7.0	3.0	3.0	10.0	16.0	19.0	23.0	28.0	29.0	---
11	23.0	12.0	7.0	3.0	3.0	10.0	16.0	19.0	23.0	28.0	29.0	---
12	23.0	11.0	6.0	3.0	4.0	10.0	16.0	19.0	23.0	28.0	29.0	---
13	23.0	12.0	6.0	3.0	4.0	10.0	16.0	19.0	23.0	28.0	29.0	---
14	20.0	11.0	5.0	3.0	4.0	10.0	---	19.0	23.0	28.0	29.0	---
15	19.0	10.0	4.0	3.0	4.0	10.0	---	19.0	24.0	28.0	29.0	---
16	19.0	10.0	3.0	3.0	4.0	10.0	---	21.0	24.0	28.0	29.0	---
17	17.0	10.0	3.0	3.0	4.0	11.0	---	21.0	24.0	28.0	29.0	---
18	15.0	10.0	3.0	3.0	4.0	12.0	---	21.0	24.0	28.0	29.0	---
19	15.0	10.0	3.0	3.0	6.0	12.0	13.0	21.0	24.0	28.0	29.0	24.0
20	14.0	10.0	3.0	3.0	6.0	12.0	---	21.0	24.0	28.0	27.0	24.0
21	14.0	10.0	3.0	3.0	6.0	12.0	---	21.0	26.0	28.0	27.0	24.0
22	14.0	10.0	3.0	3.0	7.0	12.0	---	21.0	26.0	28.0	27.0	24.0
23	14.0	10.0	4.0	2.0	7.0	12.0	---	21.0	26.0	28.0	---	24.0
24	14.0	10.0	5.0	2.0	7.0	12.0	---	21.0	26.0	28.0	---	24.0
25	14.0	10.0	5.0	2.0	7.0	11.0	---	21.0	26.0	28.0	---	24.0
26	14.0	11.0	5.0	2.0	7.0	11.0	---	21.0	26.0	28.0	---	24.0
27	15.0	11.0	6.0	2.0	7.0	11.0	---	21.0	27.0	28.0	---	24.0
28	16.0	11.0	7.0	2.0	7.0	11.0	---	21.0	27.0	28.0	---	24.0
29	16.0	11.0	7.0	2.0	---	10.0	---	21.0	27.0	28.0	---	24.0
30	16.0	11.0	7.0	2.0	---	13.0	---	21.0	27.0	28.0	---	24.0
31	16.0	---	7.0	2.0	---	13.0	---	21.0	---	28.0	---	---
MEAN	19.0	11.5	6.0	3.0	4.0	10.5	15.0	20.0	24.5	28.0	28.5	24.5
WTR YR 1985	MEAN	15.5	MAX	29.0	MIN	1.0						

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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	3390	90	207	2.6	434	7.5	818	5.3	73	.89	1170	540
2	3140	119	1320	14	507	8.8	819	8.2	52	.77	801	383
3	1270	144	1800	17	517	7.8	846	6.4	54	.76	110	54
4	591	168	1740	17	236	2.8	825	6.2	49	.57	122	62
5	713	37	1650	23	154	1.5	885	6.9	57	2.5	127	68
6	757	2.7	1660	27	172	1.4	850	6.4	54	.87	458	119
7	2330	6.3	1570	14	241	1.7	871	7.1	44	.24	468	1.2
8	4600	35	1650	15	313	2.1	764	10	34	.18	1120	2.6
9	4270	32	1000	10	356	2.3	589	8.0	36	.20	317	.6
10	5350	53	238	2.4	598	3.6	243	2.9	63	.36	134	.4
11	5690	69	224	2.1	404	3.1	398	19	69	.37	134	.7
12	5710	52	232	2.0	143	.93	589	32	35	.22	1520	10
13	5680	67	271	2.2	303	1.8	304	.75	524	2.7	3460	3310
14	5650	116	163	.97	339	62	237	1.2	1570	8.1	13100	89800
15	5770	81	187	.76	730	219	237	1.0	1300	6.3	3650	28200
16	6360	172	132	.57	902	270	197	.69	1330	6.8	3080	30200
17	4490	1840	144	.47	337	39	220	.77	2170	11	3130	28900
18	3530	534	646	47	236	.83	687	2.6	2030	18	3070	30300
19	9870	293	1210	170	0	.00	751	3.9	6130	877	3510	42400
20	8840	263	1080	55	0	.00	458	1.9	839	4.3	4350	58700
21	11200	284	446	14	0	.00	405	1.6	683	59	3450	42700
22	679	20	819	142	0	.00	435	1.5	1130	400	3300	40300
23	558	17	139	14	0	.00	422	1.5	4380	1210	3280	29900
24	599	19	98	.74	0	.00	414	1.6	5990	4750	1900	18000
25	679	20	108	.64	0	.00	418	1.6	3870	3440	1420	14100
26	595	26	84	.43	0	.00	450	2.3	2830	2250	1500	14300
27	504	11	272	4.9	0	.00	444	3.7	2790	2190	1550	13100
28	431	7.3	326	1.8	121	.29	440	3.9	2180	1270	1690	9310
29	295	5.3	613	5.6	1260	88	475	5.3	---	---	1740	6670
30	281	5.1	491	8.7	2120	389	510	2.8	---	---	1660	6230
31	244	3.5	---	---	3170	16	425	4.7	---	---	1190	3210
TOTAL	---	4592.2	---	615.88	---	1129.45	---	161.71	---	16511.13	---	510871.5

## RIO GRANDE BASIN

08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued

## WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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	955	2050	1290	25900	1220	14100	268	2320	1880	3980	637	5.2
2	1470	2190	1210	27600	1120	13200	285	2420	8450	19200	641	5.2
3	1490	9980	1410	32400	390	4600	547	4500	12300	27200	2600	56
4	1590	14300	4570	116000	259	3260	600	5670	6450	21600	31300	80400
5	1590	17500	3340	83100	308	4400	654	6870	3950	13700	4570	9720
6	1580	23000	3120	66900	318	4600	625	6070	3230	8130	6720	9070
7	1570	20100	3060	61400	303	4830	588	5510	3420	7400	7990	13600
8	2260	31700	2700	58200	248	3650	635	6100	99200	245000	7750	11400
9	2550	32800	2700	57200	325	4930	689	6620	138000	432000	6170	4930
10	2620	39300	2400	42600	369	5370	655	6150	135000	260000	6740	9740
11	2790	42400	2100	37700	326	3940	865	7150	136000	164000	6540	10500
12	2660	39300	1850	35400	328	3500	861	6740	136000	187000	6160	5590
13	2540	36900	2180	43100	303	2710	854	6760	136000	235000	6270	6910
14	2580	38300	3090	56500	314	2760	765	6110	138000	406000	7070	8060
15	2390	38900	2170	42400	362	3240	652	5330	139000	499000	7190	6480
16	2020	32300	1880	36900	367	3270	641	5090	139000	305000	10800	8840
17	1650	26500	1910	33900	333	2930	570	4220	140000	168000	17300	25000
18	1360	27100	1720	25900	351	2860	758	4970	138000	72300	25600	63100
19	1140	23200	1790	24000	634	4690	591	4020	58800	27300	18800	49900
20	1050	21700	1850	23500	794	5400	529	3600	1580	235	23900	143000
21	1020	20900	1780	23300	332	2420	1460	9820	1030	22	19200	124000
22	1030	21800	1260	15800	270	2400	1710	11400	1260	1150	17300	141000
23	996	20100	1130	13000	289	2480	1840	12600	1360	33	16100	127000
24	1060	21600	1190	12800	284	2420	1810	9630	1200	26	9350	67200
25	1100	22800	1160	11700	260	2270	1770	5020	1070	14	333	2140
26	1030	21400	1190	11800	258	2420	1760	2720	953	13	318	1970
27	999	20100	1240	12400	274	2530	1740	1860	898	12	305	1520
28	1200	23700	1200	11300	273	2420	1820	2120	812	11	271	966
29	1520	27800	1170	11100	281	2330	1920	2930	759	10	245	654
30	1350	22200	1190	11700	271	2270	1770	5110	720	10	241	493
31	---	---	1170	12800	---	---	1750	8650	666	9	---	---
TOTAL	---	741920	---	1078300	---	122200	---	178080	---	3103355	---	933249.4
TOTAL LOAD FOR YEAR: 6690986.27 TONS.												

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.--Estimated daily discharges: Nov. 19-27, Dec. 12-25, Dec. 30 to Jan. 5, Jan. 9-21, and Aug. 21 to Sept. 4. Water-discharge records good except for estimated daily discharges, which are poor. Original design and plan was for conveyance channel to carry all flows up to about 2,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s, May 14, 1966; no flow at times.

DISCHARGE, IN 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	496	1030	1120	1400	578	1470	284	514	278	256	280	100
2	447	1090	1070	1350	922	1470	275	541	333	223	270	95
3	423	980	1050	1200	1150	1460	330	526	303	223	296	89
4	924	915	1070	1150	1060	1430	327	513	267	218	279	175
5	831	929	1140	1200	1080	1380	347	492	285	240	262	150
6	1090	991	1130	1150	1020	1410	358	444	294	267	238	133
7	645	999	1060	1110	984	1070	417	390	281	258	232	131
8	630	985	990	1150	950	875	379	441	264	295	219	136
9	613	1110	996	1200	915	778	343	497	264	267	208	120
10	591	1200	1050	1200	909	858	359	534	291	292	225	94
11	562	1200	1180	1300	933	1250	360	515	278	273	220	121
12	538	1190	1250	1450	982	1190	415	496	278	280	273	145
13	526	1170	1300	1400	1060	1260	397	531	272	271	251	137
14	526	873	1400	1380	1030	1340	392	493	260	267	246	117
15	485	743	1610	1350	972	1230	431	428	241	294	250	154
16	507	716	1550	1400	947	1070	400	464	253	269	207	222
17	1090	684	1530	1350	960	492	378	477	263	263	224	196
18	1160	844	1530	1300	1060	439	387	482	253	241	212	182
19	949	1000	1450	1310	1270	401	442	482	284	250	222	229
20	769	1450	1350	1350	1350	460	421	513	294	316	185	204
21	736	1600	1300	1300	1400	438	463	483	278	297	158	157
22	734	1650	1250	1100	1380	384	497	470	271	303	200	131
23	782	1600	1280	904	1380	368	476	473	291	223	100	138
24	896	1550	1300	846	1440	349	464	322	314	225	120	162
25	994	1600	1220	817	1350	347	456	323	274	255	100	173
26	1050	1580	1100	792	1340	312	513	319	267	284	118	169
27	957	1500	1070	923	1400	335	541	309	240	270	105	269
28	898	1230	1020	1230	1320	314	539	264	250	265	100	360
29	928	1200	1080	922	---	285	527	283	255	276	112	304
30	895	1160	1300	674	---	277	525	274	280	258	90	261
31	853	---	1400	609	---	284	---	231	---	298	85	---
TOTAL	23525	34769	38146	35817	31142	25026	12443	13524	8256	8217	6087	5054
MEAN	759	1159	1231	1155	1112	807	415	436	275	265	196	168
MAX	1160	1650	1610	1450	1440	1470	541	541	333	316	296	360
MIN	423	684	990	609	578	277	275	231	240	218	85	89
AC-FT	46660	68960	75660	71040	61770	49640	24680	26820	16380	16300	12070	10020
CAL YR 1984	TOTAL	343990		MEAN	940	MAX	1780	MIN	105	AC-FT	682300	
WTR YR 1985	TOTAL	242006		MEAN	663	MAX	1650	MIN	85	AC-FT	480000	

## 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.

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, 1,060 microsiemens Oct. 5, 7; minimum daily, 316 microsiemens June 27, July 14.

WATER TEMPERATURES: Maximum daily, 37.0°C July 17, 24, Sept. 2; minimum daily, 4.0°C several days in Jan. and Feb.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 50,800 mg/L Oct. 5; minimum daily mean, 93 mg/L May 23.

SEDIMENT LOADS: Maximum daily, 135,000 tons Oct. 6; minimum daily, 44 tons Sept. 22.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
NOV 15...	1030	720	610	673	8.1	8.7	17.0	9.5	250	9.4	200	20
JAN 25...	1045	807	625	--	8.1	--	9.5	6.0	--	10.3	--	--
SEP 17...	1145	230	750	797	8.0	8.3	24.0	21.0	100	8.2	220	46

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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CAC03) (99430)	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 15...	62	11	65	2	4.8	190	15	180	180	120	36	.50	
JAN 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 17...	67	12	83	3	5.2	210	.000	--	170	150	54	.50	

DATE	TIME	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CYANIDE TOTAL (MG/L AS CN) (00720)
------	------	--	---	--	--	--	---	---	--

NOV 15...	25	424	450	.62	.050	1.10	.360	.01
JAN 25...	--	--	--	--	--	--	--	--
SEP 17...	24	504	500	.22	.070	.360	.110	<.01

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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) (01033)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 15...	1030	20	5	79	2.0	<1	6	<3	1	13	4
SEP 17...	1145	<10	7	67	<.5	<1	<1	<3	7	3	1

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	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 15...	67	<1	<.1	10	<10	2	<1	<1	590	<6	12
SEP 17...	74	3	<.1	5	<10	1	<1	<1	690	<6	19

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01029)
NOV 15...	1030	5.0	3.0	65	1	<1	6
DATE	TIME	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 AS HG) (01053)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
NOV 15...	<10	<1	410	<10	33	<.10	3

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L 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 15...	1030	<31	<31	<16	31	<14	26	.10	2.9

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	PCB,	ALDRIN,	CHLOR-	DDD,	DDE,	DDT,	DI-	
		TOTAL	TOTAL	DANE,	TOTAL	TOTAL	TOTAL	AZINON,	
		(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	TOTAL	
		(39516)	(39330)	(39350)	(39360)	(39365)	(39370)	(39570)	
SEP 17...	1145	<.1	<.010	<.1	<.010	<.010	<.010	<.01	
DATE		DI-	ENDO-	ETHION,	HEPTA-	HEPTA-	LINDANE	MALA-	METH-
		ELDRIN	SULFAN,		CHLOR,	CHLOR		THION,	OXY-
		TOTAL	TOTAL		TOTAL	EPOXIDE		TOTAL	CHLOR,
		(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	TOTAL
		(39380)	(39388)	(39390)	(39410)	(39420)	(39340)	(39530)	(39480)
SEP 17...	<.010	<.010	<.010	<.01	<.010	<.010	<.010	<.01	<.01

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued

## WATER-QUALITY RECORDS

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
SEP 17...	<.01	<.01	<.01	<1	<.01	<.1	<.10	<.01

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCOCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 15...	1030	700	2300
JAN 25...	1045	990	650
SEP 17...	1145	1600	1500

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY) (80155)	SEDI- MENT, DISCH, SUSP. + BED MA- TERIAL (T/DAY) (80156)	SED. SUSP. FALL DIAM. THAN .002 MM (70337)	SED. SUSP. FALL DIAM. THAN .004 MM (70338)	SED. SUSP. FALL DIAM. THAN .016 MM (70340)	SED. SUSP. FALL DIAM. THAN .062 MM (70342)	SED. SUSP. FALL DIAM. THAN .125 MM (70343)
OCT 07...	1425	645	25.0	38800	67600	--	57	65	79	97	100
22...	1040	734	18.0	2740	5430	--	27	30	41	76	96
NOV 15...	1030	720	9.5	2420	4700	6530	10	13	19	38	79
DEC 05...	1820	1140	10.0	3380	10400	--	55	60	81	--	--
JAN 25...	1045	807	6.0	1250	2720	4100	8	9	12	35	71
FEB 21...	1240	1400	10.0	14100	53300	--	43	47	65	95	99
MAR 07...	1440	1070	12.0	1350	3900	--	38	43	63	--	--
SEP 17...	1145	230	21.0	431	268	441	--	--	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)
OCT 07...	--	--	--	--	--	--	--	--	--	--	--
22...	100	--	--	--	--	--	--	--	--	--	--
NOV 15...	99	100	--	--	--	2	14	79	100	--	--
DEC 05...	--	--	94	99	100	--	--	--	--	--	--
JAN 25...	97	100	--	--	--	1	7	74	100	--	--
FEB 21...	100	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	96	100	--	--	--	--	--	--	--
SEP 17...	--	--	54	68	98	100	1	2	79	99	100

## 08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued

## WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	791	682	640	643	550	653	752	733	673	694	801	748
2	1020	539	633	646	616	649	762	614	766	731	804	834
3	1040	562	636	643	634	648	768	800	779	745	803	765
4	1050	567	633	646	675	648	768	---	776	744	802	751
5	1060	568	637	---	646	652	773	810	784	747	807	750
6	1050	568	635	555	643	622	765	810	785	747	808	885
7	1060	569	---	594	678	681	783	813	760	739	811	906
8	1050	568	---	598	649	686	766	745	767	715	772	904
9	710	567	---	601	683	698	775	739	792	719	793	1010
10	782	566	---	600	649	712	767	735	735	713	774	1000
11	800	570	---	603	685	703	774	739	795	716	773	1010
12	801	567	---	600	649	706	768	589	800	714	771	1010
13	805	571	---	602	646	703	776	726	395	351	776	1030
14	804	568	---	598	651	698	771	780	701	316	774	992
15	743	604	---	601	680	732	775	786	722	551	770	972
16	738	617	---	553	679	734	383	783	739	335	766	963
17	785	621	---	550	685	736	709	787	751	674	720	962
18	743	622	636	545	688	737	738	787	814	688	825	958
19	739	622	638	548	684	737	747	787	754	635	843	968
20	796	620	634	544	648	678	750	786	751	713	841	952
21	692	621	638	---	649	766	753	791	754	508	847	954
22	678	612	636	542	639	780	740	787	726	698	843	948
23	679	615	---	595	642	782	759	825	725	732	762	956
24	677	615	637	594	642	731	803	821	720	736	775	953
25	731	619	642	598	652	653	811	827	344	742	750	783
26	682	617	635	592	650	642	809	822	548	769	743	871
27	703	---	640	595	652	593	815	826	316	746	841	889
28	701	620	639	588	651	723	812	824	---	768	756	891
29	794	---	642	595	---	759	816	826	---	778	756	903
30	690	---	641	591	---	548	809	822	---	779	743	903
31	715	---	645	596	---	---	---	826	---	---	765	---
MEAN	810	595	638	592	653	693	760	778	703	675	788	914
WTR YR 1985		MEAN	721	MAX	1060	MIN	316					

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	18.0	10.0	8.0	4.0	12.0	18.0	25.0	29.0	35.0	36.0	32.0
2	25.0	17.0	11.0	8.0	8.0	11.0	19.0	25.0	30.0	35.0	34.0	37.0
3	25.0	18.0	8.0	7.0	9.5	13.0	21.0	24.0	31.0	34.0	32.0	32.0
4	24.0	18.0	10.0	7.0	10.0	10.0	20.0	---	33.0	36.0	30.0	34.0
5	25.0	19.0	10.0	---	9.0	11.0	20.0	25.0	30.0	35.0	34.0	34.0
6	26.0	15.0	10.0	7.0	11.0	13.0	20.0	25.0	32.0	34.0	34.0	32.0
7	25.0	18.0	---	7.0	12.5	12.0	18.0	23.0	30.0	32.0	36.0	34.0
8	24.0	17.0	---	6.5	10.0	13.5	19.0	25.0	31.0	33.0	34.0	34.0
9	20.0	15.0	---	5.0	12.5	15.0	19.0	27.0	31.0	35.0	34.0	32.0
10	19.0	13.0	---	4.5	12.0	14.0	18.0	25.0	30.0	35.0	34.0	34.0
11	20.0	13.0	---	5.0	12.5	15.0	19.0	25.0	33.0	32.0	33.0	36.0
12	19.0	11.0	---	5.0	10.0	14.0	21.0	26.0	31.0	34.0	34.0	32.0
13	18.0	10.0	---	4.0	11.0	15.0	18.0	25.0	32.0	35.0	36.0	30.0
14	22.0	10.0	---	5.0	12.0	14.0	17.0	27.0	30.0	33.0	33.0	33.0
15	19.0	10.0	---	5.0	12.0	12.5	17.0	27.0	30.0	30.0	36.0	34.0
16	19.0	11.0	---	5.0	14.0	12.0	16.0	26.0	32.0	33.0	34.0	34.0
17	18.0	12.0	---	6.0	11.0	12.0	14.0	27.0	33.0	37.0	35.0	34.0
18	22.0	13.0	10.0	5.0	12.0	13.0	16.0	25.0	29.0	34.0	32.0	35.0
19	19.0	13.0	9.0	5.0	11.5	12.5	19.0	26.0	30.0	34.0	36.0	34.0
20	22.0	11.0	9.0	4.0	12.0	12.0	19.0	24.0	32.0	34.0	34.0	35.0
21	19.0	10.0	8.0	---	10.0	14.0	20.0	24.0	30.0	34.0	36.0	33.0
22	18.0	10.0	9.0	5.0	8.0	18.0	22.0	25.0	30.0	36.0	36.0	34.0
23	19.0	10.0	---	4.5	10.0	17.0	21.0	25.0	34.0	35.0	32.0	33.0
24	19.0	12.0	8.0	5.0	10.0	17.5	22.0	25.0	30.0	37.0	34.0	32.0
25	10.0	12.0	7.0	5.0	11.0	16.5	20.0	27.0	29.0	34.0	34.0	35.0
26	18.0	11.0	8.0	4.0	10.0	16.0	20.0	29.0	29.0	34.0	32.0	34.0
27	17.0	---	8.0	4.0	11.5	16.0	21.0	28.0	32.0	35.0	36.0	33.0
28	18.0	14.0	8.0	4.0	11.0	15.5	20.0	26.0	---	35.0	36.0	33.0
29	18.0	---	10.0	4.0	---	14.0	20.0	26.0	---	30.0	36.0	32.0
30	18.0	---	8.0	5.0	---	15.0	22.0	27.0	---	35.0	35.0	31.0
31	21.0	---	7.0	4.5	---	---	---	28.0	---	---	34.0	---
MEAN	20.5	13.5	9.0	5.5	10.5	14.0	19.0	25.5	31.0	34.0	34.5	33.5
WTR YR 1985		MEAN	21.5	MAX	37.0	MIN	4.0					

## 08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued

## WATER-QUALITY RECORDS

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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	5020	6720	2870	7980	3690	11200	608	2300	634	989	5400	21400
2	18900	22800	1430	4210	3630	10500	646	2350	468	1240	3880	15400
3	6430	7340	1400	3700	4100	11600	672	2180	1190	3690	4250	16800
4	43400	114000	1370	3380	3790	10900	556	1730	508	1450	5040	19500
5	50800	119000	1230	3090	3420	10500	455	1470	381	1110	2610	9720
6	44600	135000	1330	3560	3410	10400	451	1400	475	1310	1570	5980
7	39300	68400	1630	4400	3350	9590	550	1650	515	1370	1350	3900
8	33300	56600	1300	3460	3150	8420	533	1650	410	1050	1380	3260
9	4350	7200	987	2960	3100	8340	508	1650	378	934	1450	3050
10	3680	5870	916	2970	3760	10700	521	1690	542	1330	1210	2840
11	3730	5660	1280	4150	3870	12300	529	1860	626	1580	2160	7290
12	4430	6440	1010	3250	3840	13000	486	1900	504	1340	1410	4530
13	4470	6350	589	1860	3790	13300	553	2090	837	2400	1440	4900
14	3730	5300	927	2190	3760	14200	501	1870	771	2140	1470	5320
15	2980	3900	1690	3390	3710	16100	516	1880	395	1040	764	2540
16	2530	3460	552	1070	3700	15500	546	2060	328	839	565	1630
17	7170	21200	719	1330	3750	15500	680	2480	375	972	515	684
18	3910	12200	861	1960	3730	15400	649	2280	325	930	591	701
19	3000	7690	574	1550	3740	14600	616	2180	667	2300	592	641
20	3840	7970	707	2770	3680	13400	438	1600	10600	38000	313	389
21	2790	5540	605	2610	3670	12900	453	1590	12400	46600	192	227
22	3200	6340	584	2600	3830	12900	524	1560	2700	10100	256	265
23	3650	7710	562	2430	3640	12600	550	1340	11100	41400	270	268
24	2250	5440	573	2400	3760	13200	643	1470	12200	47400	272	256
25	3190	8560	573	2480	3910	12900	911	2010	6070	22100	430	403
26	3520	9980	584	2490	3950	11700	947	2030	4570	16500	318	268
27	2910	7520	699	2830	3960	11400	407	1030	5050	19100	224	203
28	2610	6330	658	2190	4410	12100	711	2360	4730	16900	254	215
29	2200	5510	3700	12000	4440	12900	547	1360	---	---	360	277
30	2300	5560	3960	12400	2000	7020	681	1240	---	---	253	189
31	2680	6170	---	---	761	2880	771	1270	---	---	593	455
TOTAL	---	697760	---	107660	---	367950	---	55530	---	286114	---	133501

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	815	625	221	307	489	367	263	182	309	234	483	130
2	525	390	663	968	306	275	275	166	285	208	269	69
3	485	432	289	410	336	275	264	159	266	213	476	114
4	479	423	266	368	426	307	240	141	265	200	300	142
5	500	468	465	618	647	498	272	176	282	199	399	162
6	432	418	558	669	450	357	214	154	262	168	435	156
7	493	555	450	474	172	130	244	170	258	162	430	152
8	495	507	220	262	449	320	192	153	201	119	416	153
9	496	459	131	176	458	326	197	142	212	119	284	92
10	318	308	137	198	281	221	191	151	213	129	295	75
11	293	285	139	193	314	236	172	127	190	113	320	105
12	284	318	122	163	431	324	188	142	195	144	328	128
13	204	219	113	162	180	132	370	271	161	109	238	88
14	283	300	159	212	251	176	393	283	210	139	215	68
15	314	365	194	224	238	155	367	291	160	108	202	84
16	792	855	146	183	242	165	383	278	163	91	280	168
17	411	419	163	210	219	156	388	276	155	94	295	156
18	378	395	174	226	212	145	296	193	216	124	263	129
19	407	486	137	178	208	159	213	144	179	107	212	131
20	291	331	122	169	225	179	214	183	201	100	189	104
21	376	470	126	164	244	183	202	162	189	81	149	63
22	239	321	130	165	219	160	187	153	354	191	124	44
23	182	234	93	119	256	201	229	138	396	107	136	51
24	220	276	171	149	254	215	174	106	375	121	161	70
25	189	233	173	151	869	643	195	134	368	99	667	312
26	161	223	149	128	536	386	222	170	483	154	641	292
27	165	241	208	174	417	270	203	148	382	108	671	487
28	159	231	146	104	375	253	259	185	484	131	648	630
29	236	336	155	118	330	227	256	191	467	141	646	530
30	263	373	157	116	291	220	288	201	483	117	666	469
31	---	---	163	102	---	---	350	282	602	138	---	---
TOTAL	---	11496	---	7860	---	7661	---	5652	---	4268	---	5354
TOTAL LOAD FOR YEAR: 1690806 TONS.												



## 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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: Feb. 24 to Mar. 18, Apr. 21 to May 12, May 20, 21, and Aug. 3-15. Water-discharge records 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 ft<sup>3</sup>/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.--21 years (water years 1965-85), 618 ft<sup>3</sup>/s, 447,700 acre-ft/yr.

Total flow of river.--90 years (water years 1895-1985), 1,248 ft<sup>3</sup>/s, 904,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, since January 1895 about 50,000 ft<sup>3</sup>/s Oct. 11, 1904; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 8,110 ft<sup>3</sup>/s, May 5; no flow for many days.

DISCHARGE, IN 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	.00	.00	.00	.00	.00	.00	305	6490	3480	2790	507	.00
2	.00	.00	.00	.00	.00	.00	235	6960	3700	2680	524	.00
3	.00	.00	.00	.00	.00	.00	625	7470	3730	2580	465	.00
4	.00	.00	.00	.00	.00	.00	2450	7990	3710	2640	875	.00
5	.00	.00	.00	.00	.00	.00	2430	8110	4430	3350	1040	95
6	.00	.00	.00	.00	.00	.00	3440	7560	5190	3240	705	82
7	.00	.00	.00	.00	.00	.00	3880	6910	5130	3040	620	66
8	.00	.00	.00	.00	.00	.00	3990	7060	5170	3090	740	22
9	.00	.00	.00	.00	.00	.00	4280	6700	5280	3090	980	18
10	.00	.00	.00	.00	.00	.00	4660	5970	5360	2950	530	6.4
11	.00	.00	.00	.00	.00	.00	5000	6080	4740	2690	230	1.2
12	.00	.00	.00	.00	.00	.00	4920	6300	3430	2400	255	.00
13	.00	.00	.00	.00	.00	20	5040	6330	3200	2380	440	10
14	.00	.00	.00	.00	.00	100	4920	6550	2720	2380	870	3.0
15	.00	.00	.00	.00	.00	500	5320	6530	2820	2400	1110	1.0
16	.00	.00	.00	.00	.00	2000	5300	6420	2790	2470	484	6.8
17	.00	.00	.00	.00	.00	2500	5340	6310	2900	2400	148	101
18	.00	.00	.00	.00	.00	3000	5170	5800	2660	2070	39	520
19	.00	.00	.00	.00	.00	3120	5320	4770	2640	1860	19	555
20	.00	.00	.00	.00	.00	3870	6280	3750	2210	1940	6.8	879
21	.00	.00	.00	.00	.00	3570	6840	3660	2160	1940	2.0	1400
22	.00	.00	.00	.00	.00	3620	6900	3570	2520	1860	.00	1210
23	.00	.00	.00	.00	289	3240	6720	3520	2670	1840	8.0	1640
24	.00	.00	.00	.00	60	3080	6540	3430	2520	1880	.00	989
25	.00	.00	.00	.00	25	2910	6440	3280	2600	1030	.00	838
26	.00	.00	.00	.00	5.0	2870	6590	3060	2820	599	.00	701
27	.00	.00	.00	.00	.00	2550	6460	2720	2840	260	.00	531
28	.00	.00	.00	.00	.00	2030	6160	2740	2900	157	.00	340
29	.00	.00	.00	.00	---	1090	5970	2690	2710	254	.00	296
30	.00	.00	.00	.00	---	596	5380	2690	2680	575	.00	239
31	.00	---	.00	.00	---	410	---	2980	---	729	.00	---
TOTAL	.00	.00	.00	.00	379.00	41076.00	142905	164400	101710	63564	10597.80	10550.40
MEAN	.00	.00	.00	.00	13.5	1325	4764	5303	3390	2050	342	352
MAX	.00	.00	.00	.00	289	3870	6900	8110	5360	3350	1110	1640
MIN	.00	.00	.00	.00	.00	.00	235	2690	2160	157	.00	.00
AC-FT	.00	.00	.00	.00	752	81470	283500	326100	201700	126100	21020	20930
(†)	46660	68960	75660	71040	62520	131100	308200	352900	218100	142400	33090	30920

CAL YR 1984 TOTAL 223563.13 MEAN 611 MAX 5330 MIN .00 AC-FT 443400 (†) MEAN 1551 AC-FT 1126000  
WTR YR 1985 TOTAL 535182.20 MEAN 1466 MAX 8110 MIN .00 AC-FT 1062000 (†) MEAN 2129 AC-FT 1542000

(†) COMBINED FLOW, IN ACRE-FT, AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY AND CONVEYANCE CHANNEL.

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1905-07, 1946 to current year.

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. Additional sediment total-discharge determinations were made monthly when needed.

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, 1.190 microsiemens Sept. 19; minimum daily, 285 microsiemens May 17.

WATER TEMPERATURES: Maximum daily, 37.0°C July 22, 27, Aug. 7; minimum daily, 9.0°C Feb. 24.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 31,100 mg/L Sept. 18; minimum daily mean, no flow on many days throughout the year.

SEDIMENT LOADS: Maximum daily, 113,000 tons Sept. 21; minimum daily, 0 ton on many days throughout the year.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
MAR 19...	1130	3190	480	481	7.9	8.0	12.0	10.0	2400	9.0	150	11
MAY 17...	1030	6300	285	308	7.9	8.1	24.0	17.0	390	8.0	110	0
JUL 17...	1030	2600	300	--	8.0	--	28.0	23.5	--	6.9	--	--

[illegible][illegible]

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
MAR 19...	1130	140	3	48	<.5	1	<1	<3	5	98	<1
MAY 17...	1030	20	2	41	2.7	<1	<1	<3	7	33	2

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	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)
MAR 19...	77	11	1.6	<1	<10	2	<1	1	440	<6	<3
MAY 17...	18	<1	.2	<1	<10	3	<1	3	300	<6	14

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
MAY 17...	1030	<6.2	110	4.0	78	3.3	67	.09	2.5

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
MAY 17...	1030	<.01	<.01	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
MAR 19...	1130	68	430
MAY 17...	1030	K160	K330
JUL 17...	1030	190	280

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

## WATER-QUALITY RECORDS

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	TEMPER- ATURE (DEG C) (000010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SEDI- MENT, DISCH, SUSP. + BED MA- TERIAL (T/DAY) (80156)	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)
FEB										
23...	1625	289	10.0	24600	19200	--	81	93	99	--
MAR										
16...	1640	E2000	13.5	11500	--	--	27	31	47	80
19...	1130	3190	10.0	9490	81700	95600	24	28	36	69
APR										
02...	1130	224	12.5	1920	1160	1460	71	84	91	--
16...	1315	5590	19.0	2490	37600	48400	50	62	76	--
MAY										
17...	1030	6300	17.0	4590	78100	84700	19	22	29	54
JUN										
20...	1030	2250	20.0	3110	18900	23300	53	62	80	94
JUL										
03...	0945	2650	20.0	574	4110	6050	31	37	52	--
17...	1030	2600	23.5	1810	12700	15900	9	10	14	35
29...	1400	210	35.0	11000	6240	--	57	69	87	98
AUG										
02...	1000	745	22.0	9430	19000	23900	52	66	92	--
SEP										
19...	1740	570	34.0	27900	42900	--	61	73	92	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)
FEB									
23...	--	--	100	--	--	--	--	--	--
MAR									
16...	97	100	--	--	--	--	--	--	--
19...	89	100	--	--	--	2	11	88	100
APR									
02...	--	--	96	98	100	47	97	99	100
16...	--	--	99	100	--	49	79	97	100
MAY									
17...	88	100	--	--	--	3	25	90	100
JUN									
20...	100	--	--	--	--	58	97	100	--
JUL									
03...	--	--	94	99	100	51	94	98	100
17...	82	100	--	--	--	3	36	95	100
29...	100	--	--	--	--	--	--	--	--
AUG									
02...	--	--	100	--	--	83	99	100	--
SEP									
19...	--	--	100	--	--	--	--	--	--

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

## WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	---	446	391	322	317	642	---
2					---	---	403	392	301	298	629	---
3					---	---	402	380	300	294	640	---
4					---	---	403	---	301	292	635	---
5					---	---	397	348	302	295	642	---
6					---	---	586	356	299	293	641	---
7					---	---	403	368	298	295	641	---
8					---	---	385	327	298	292	---	---
9					---	---	383	326	298	361	---	---
10					---	---	379	324	293	661	---	---
11					---	---	382	356	291	658	---	---
12					---	---	383	385	290	704	---	---
13					---	577	359	343	366	364	---	---
14					---	544	351	336	297	344	---	---
15					---	530	353	337	291	341	---	901
16					---	530	355	337	328	340	---	1140
17					---	529	353	334	335	335	---	1170
18					---	526	349	334	336	334	---	1180
19					---	518	353	336	333	445	---	1190
20					---	524	349	336	330	488	---	1180
21					---	527	354	337	332	485	---	1180
22					---	525	384	335	299	484	---	719
23					794	534	385	340	297	707	---	692
24					847	479	383	337	293	729	---	684
25					863	478	386	373	293	509	---	691
26					863	469	383	337	295	492	---	752
27					---	470	385	344	320	615	---	771
28					---	482	389	337	---	636	---	772
29					---	483	409	341	---	657	---	783
30					---	700	383	343	---	649	---	777
31					---	---	---	347	---	---	---	---
MEAN					842	524	387	347	309	457	639	911
WTR YR 1985	MEAN	469		MAX	1190		MIN	290				

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	---	19.0	25.0	29.0	36.0	35.0	---
2					---	---	19.0	27.0	30.0	34.0	34.0	---
3					---	---	20.0	24.0	32.0	32.0	34.0	---
4					---	---	19.0	---	30.0	36.0	36.0	---
5					---	---	19.0	24.0	32.0	34.0	36.0	---
6					---	---	18.5	26.0	30.0	34.0	36.0	---
7					---	---	19.0	27.0	28.0	30.0	37.0	---
8					---	---	20.0	26.0	29.0	32.0	---	---
9					---	---	19.0	28.0	29.0	35.0	---	---
10					---	---	19.0	26.0	30.0	34.0	---	---
11					---	---	18.0	26.0	32.0	34.0	---	---
12					---	---	19.0	28.0	30.0	32.0	---	---
13					---	14.0	18.0	27.0	29.0	36.0	---	---
14					---	12.0	18.0	26.0	27.0	32.0	---	---
15					---	13.0	17.0	29.0	29.0	30.0	---	34.0
16					---	13.5	17.0	27.0	29.0	34.0	---	34.0
17					---	13.0	16.0	26.0	32.0	36.0	---	35.0
18					---	14.0	18.0	27.0	30.0	35.0	---	33.0
19					---	13.0	19.5	29.0	31.0	34.0	---	34.0
20					---	14.0	19.0	27.0	29.0	34.0	---	36.0
21					---	15.0	19.0	27.0	29.0	36.0	---	33.0
22					---	14.5	25.0	26.0	28.0	37.0	---	34.0
23					10.0	14.0	23.0	28.0	29.0	36.0	---	33.0
24					9.0	17.0	24.0	26.0	31.0	36.0	---	34.0
25					12.0	15.0	23.0	25.0	30.0	35.0	---	35.0
26					11.0	16.0	22.0	24.0	28.0	35.0	---	32.0
27					---	14.0	20.0	27.0	30.0	37.0	---	34.0
28					---	13.0	22.0	27.0	---	32.0	---	33.0
29					---	14.0	21.0	26.0	---	35.0	---	33.0
30					---	14.0	23.0	29.0	---	35.0	---	32.0
31					---	---	---	29.0	---	---	---	---
MEAN					10.5	14.0	20.0	26.5	29.5	34.5	35.5	33.5
WTR YR 1985	MEAN	26.5		MAX	37.0		MIN	9.0				

## RIO GRANDE BASIN

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued

## WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
2	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
3	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
4	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
5	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
6	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
7	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
8	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
9	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
10	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
11	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
12	0	.00	0	.00	0	.00	0	.00	0	.00	0	.0
13	0	.00	0	.00	0	.00	0	.00	0	.00	4890	264
14	0	.00	0	.00	0	.00	0	.00	0	.00	6620	1790
15	0	.00	0	.00	0	.00	0	.00	0	.00	13700	18500
16	0	.00	0	.00	0	.00	0	.00	0	.00	11700	63200
17	0	.00	0	.00	0	.00	0	.00	0	.00	10700	72200
18	0	.00	0	.00	0	.00	0	.00	0	.00	7860	63700
19	0	.00	0	.00	0	.00	0	.00	0	.00	5020	42300
20	0	.00	0	.00	0	.00	0	.00	0	.00	1540	16100
21	0	.00	0	.00	0	.00	0	.00	0	.00	1550	14900
22	0	.00	0	.00	0	.00	0	.00	0	.00	2100	20500
23	0	.00	0	.00	0	.00	0	.00	26400	29200	5120	44800
24	0	.00	0	.00	0	.00	0	.00	25800	4180	4090	34000
25	0	.00	0	.00	0	.00	0	.00	26800	1810	3910	30700
26	0	.00	0	.00	0	.00	0	.00	24200	327	4330	33600
27	0	.00	0	.00	0	.00	0	.00	0	.00	4050	27900
28	0	.00	0	.00	0	.00	0	.00	0	.00	5730	31400
29	0	.00	0	.00	0	.00	0	.00	---	---	5130	15100
30	0	.00	0	.00	0	.00	0	.00	---	---	1870	3010
31	0	.00	---	---	0	.00	0	.00	---	---	1960	2170
TOTAL	---	0.00	---	0.00	---	0.00	---	0.00	---	35517.00	---	536134.0

DAY	MEAN		MEAN		MEAN		MEAN		MEAN		MEAN		MEAN	
	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)
		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	2210	1820	1590	27900	625	5870	560	4220	3650	5000	0	0	0	.0
2	2100	1330	1750	32900	592	5910	690	4990	6170	8730	0	0	0	.0
3	1910	4430	2320	46800	728	7330	594	4140	4100	5150	0	0	0	.0
4	2280	15100	1790	38600	742	7430	591	4210	3770	8910	0	0	0	.0
5	2050	13500	1490	32600	1060	12700	875	7910	3530	9910	6420	1650		
6	2140	19900	2260	46100	1350	18900	1160	10100	2350	4470	5020	1110		
7	2390	25000	1360	25400	590	8170	625	5130	3420	5730	4150	740		
8	2480	26700	1940	37000	859	12000	575	4800	3400	6790	3130	186		
9	2250	26000	2120	38400	1320	18800	217	1810	3200	8470	1850	90		
10	2280	28700	2560	41300	565	8180	184	1470	3200	4580	1620	28		
11	2000	27000	2230	36600	434	5550	329	2390	3200	1990	1640	5.3		
12	1740	23100	2220	37800	372	3450	225	1460	3100	2130	0	0		.0
13	1370	18600	2520	43100	972	8400	403	2590	3100	3680	11000	243		
14	1400	18600	1450	25600	538	3950	569	3660	3100	7280	14100	114		
15	2000	28700	1410	24900	1410	10700	1130	7320	3200	9590	13600	37		
16	1990	28500	1550	26900	3450	26000	1520	10100	3100	4050	23100	424		
17	1270	18300	1510	25700	6450	50500	1170	7580	2750	1100	26600	7250		
18	1260	17600	1590	24900	3980	28600	725	4050	2270	239	31100	59200		
19	1490	21400	1420	18300	3250	23200	200	1000	1900	97	30600	45900		
20	1830	31000	1520	15400	2730	16300	172	901	2540	47	24700	58600		
21	1150	21200	1870	18500	3110	18100	140	733	3600	19	29400	113000		
22	1470	27400	1600	15400	1180	8030	135	678	0	.00	8660	28300		
23	2000	36300	2590	24600	738	5320	144	715	1860	81	4280	19000		
24	2630	46400	2160	20000	856	5820	223	1130	0	.00	8870	23700		
25	2530	44000	2110	18700	728	5110	177	492	0	.00	17900	40500		
26	2760	49100	2030	16800	1070	8150	508	822	0	.00	22000	41600		
27	2280	39800	2030	14900	1470	11300	7730	5430	0	.00	27500	39400		
28	1740	28900	2160	16000	1350	10600	10000	4240	0	.00	18500	17000		
29	1700	27400	2390	17400	1120	8200	10700	7340	0	.00	20400	16300		</

## 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 mi<sup>2</sup>, approximately including 2,940 mi<sup>2</sup> 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 daily contents, 2,013,800 acre-feet, June 17, gage height, 4,404.35 ft; minimum daily contents, 1,468,300 acre-ft, Oct. 1, gage height, 4,387.52 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 (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1468300	1494300	1550200	1614500	1615100	1607700	1661900	1849600	1966700	2012000	1983000	1886800
2	1468900	1496000	1551700	1612400	1613900	1605000	1658400	1856100	1967700	2010900	1984800	1881600
3	1470300	1498100	1553200	1612400	1613300	1609300	1655000	1865000	1969900	2010900	1985500	1875000
4	1471200	1500100	1555900	1612400	1613000	1609900	1656600	1874000	1971600	2011300	1984800	1870500
5	1472300	1502100	1557400	1613000	1612000	1609900	1659100	1881900	1975200	2011300	1985900	1864700
6	1474900	1503900	1558600	1614800	1612000	1609300	1662900	1890600	1980900	2013100	1988000	1860600
7	1475800	1505900	1560700	1615100	1610800	1609000	1666000	1900300	1986900	2011600	1986200	1855100
8	1476400	1507400	1561600	1614500	1609900	1608400	1670800	1909400	1991200	2010900	1986200	1849900
9	1477200	1509700	1563100	1615700	1608700	1606800	1674600	1916000	1996200	2010200	1983000	1848600
10	1479000	1510600	1564600	1616100	1607700	1607400	1679300	1922300	2001600	2009800	1979500	1843400
11	1478700	1511800	1566700	1617600	1606200	1607700	1684700	1926800	2007300	2009800	1975600	1840400
12	1479200	1513800	1568500	1617000	1605300	1607700	1691100	1932500	2008400	2008100	1972700	1838000
13	1479500	1515600	1571500	1619100	1604400	1606500	1697500	1937400	2009800	2007000	1969900	1833900
14	1480100	1517700	1575400	1619500	1603400	1606500	1702300	1942300	2011300	2005500	1966700	1830900
15	1480400	1518500	1576900	1620100	1602200	1612700	1712000	1949000	2012000	2004500	1962100	1830500
16	1479800	1519700	1579100	1621000	1601600	1618500	1722300	1955000	2012400	2004500	1956400	1829500
17	1480700	1520300	1581800	1621000	1602800	1624700	1731100	1960300	2013800	2004500	1954300	1829500
18	1483600	1521800	1584200	1620400	1603400	1628700	1738600	1964900	2012000	2004100	1949300	1829500
19	1483000	1523200	1587000	1620400	1602500	1632800	1748400	1969900	2009500	2004100	1945100	1831500
20	1479800	1525300	1589400	1621900	1601300	1637500	1754700	1971300	2009800	2003400	1940200	1832600
21	1478400	1527700	1591800	1622200	1602800	1642400	1761300	1972700	2009800	2002000	1935600	1834300
22	1479000	1530600	1593000	1621600	1602800	1648100	1768900	1972700	2009800	2000200	1932100	1837300
23	1481000	1534500	1594600	1621000	1603100	1651500	1776800	1971300	2010600	2000900	1927900	1839700
24	1481800	1535900	1597300	1621300	1605000	1657800	1784100	1972700	2009800	1998700	1924000	1841700
25	1483300	1537700	1599200	1620700	1606200	1659700	1792100	1972000	2009100	1998700	1919500	1845200
26	1484700	1540100	1601300	1620100	1606500	1663200	1800500	1971300	2010600	1993700	1915600	1845200
27	1486200	1542200	1603100	1621300	1606800	1663800	1809600	1970900	2009100	1989800	1911800	1848200
28	1487900	1544500	1604700	1621900	1607100	1664400	1817700	1970200	2009100	1987700	1905500	1847500
29	1489600	1546600	1606500	1620700	---	1665100	1827500	1967400	2009800	1984500	1901700	1847900
30	1491100	1548400	1608700	1618800	---	1664400	1838000	1968500	2010900	1983400	1896500	1846900
31	1492300	---	1610500	1619500	---	1665400	---	1965600	---	1983400	1892000	---
MAX	1492300	1548400	1610500	1622200	1615100	1665400	1838000	1972700	2013800	2013100	1988000	1886800
MIN	1468300	1494300	1550200	1612400	1601300	1605000	1655000	1849600	1966700	1983400	1892000	1829500
(†)	4388.35	4390.26	4392.31	4392.60	4392.20	4394.07	4399.33	4403.00	4404.27	4403.50	4400.90	4399.59
(††)	+24600	+56100	+62100	+9000	-12400	+58300	+172600	+127600	+45300	-27500	-91400	-45100
CAL YR 1984	MAX	1610500	MIN	1291400	(††)	+287800						
WTR YR 1985	MAX	2013800	MIN	1468300	(††)	+379200						

(†) 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

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.--Estimated daily discharges: Feb. 24, 25, May 27-30, July 25 to Aug. 6 and Sept. 17-30. Water-discharge records good except for estimated daily discharges, which are fair. Flow regulated by Elephant Butte Reservoir (station 08360500). Diversion for irrigation of about 800,000 acres upstream from station.

AVERAGE DISCHARGE.--70 years, 970 ft<sup>3</sup>/s, 702,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8,220 ft<sup>3</sup>/s, May 22, 1942; no flow at times prior to 1929, Mar. 2-4, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,130 ft<sup>3</sup>/s, May 26, 27; minimum daily, 2.8 ft<sup>3</sup>/s, Sept. 30.

DISCHARGE, IN 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	19	12	12	15	1290	1340	1850	2270	2410	2150	700	2110
2	17	13	12	830	1280	1320	1920	2460	2400	2150	736	2120
3	17	13	13	851	1280	46	1930	2510	2210	1790	738	2120
4	13	13	16	839	1290	920	1940	2510	2040	2160	734	2120
5	12	13	20	649	1240	1350	1950	2520	2060	2490	736	2130
6	13	14	17	24	1290	1350	1950	2660	2080	2620	99	2120
7	12	15	17	823	1290	1360	1960	2810	2050	2610	47	2130
8	12	14	17	814	1290	1370	1970	2900	2070	2690	723	2140
9	11	13	17	831	1300	1340	1970	2980	2090	2780	2170	2140
10	10	14	17	828	1310	48	1980	3010	2120	2770	2140	2150
11	9.7	14	18	811	1310	940	1990	3020	2080	2770	2110	1760
12	9.5	14	19	637	1310	1370	2000	3040	2160	2770	2100	1470
13	11	15	19	23	1310	1370	2010	3050	2170	2750	2090	1650
14	11	15	18	811	1310	1370	2020	3060	2180	2730	2060	1200
15	11	15	18	821	1310	1380	1100	3070	2180	2090	2050	1210
16	10	15	17	857	1290	1350	85	3080	2180	2090	2030	149
17	12	15	17	1230	42	50	632	3090	2180	2080	2020	10
18	10	15	16	1230	894	933	638	3110	2180	2090	2020	5.0
19	887	15	16	1210	1300	1370	604	3110	2170	2090	2030	5.0
20	1280	15	17	34	1300	1370	1870	3100	2170	2080	2030	5.0
21	1270	15	15	845	722	1380	1940	3110	2160	2090	2030	5.0
22	854	15	14	1250	1050	1380	1940	3110	2160	2090	2040	5.0
23	15	15	14	1240	1280	1360	1940	3120	2160	2090	2050	5.0
24	12	14	14	574	51	61	1950	3120	2160	2090	2060	5.0
25	12	15	14	783	652	1350	1960	3120	2150	2010	2050	5.0
26	12	13	14	1230	1320	1390	1960	3130	2150	1850	2060	3.0
27	13	12	15	41	1340	1400	1950	3130	2150	1850	2080	3.0
28	12	12	15	869	1340	1390	1960	3110	2150	1840	2130	3.0
29	12	12	15	1280	---	1390	1820	3110	2150	1700	2090	3.0
30	12	12	15	1290	---	1360	2100	3100	2150	1820	2110	2.8
31	12	---	15	1290	---	63	---	2760	---	1360	2110	---
TOTAL	4623.2	417	493	24860	31991	34471	51889	91280	64720	68540	52173	28783.8
MEAN	149	13.9	15.9	802	1143	1112	1730	2945	2157	2211	1683	959
MAX	1280	15	20	1290	1340	1400	2100	3130	2410	2780	2170	2150
MIN	9.5	12	12	15	42	46	85	2270	2040	1360	47	2.8
AC-FT	9170	827	978	49310	63450	68370	102900	181100	128400	135900	103500	57090
CAL YR 1984	TOTAL	331312.2		MEAN	905	MAX	2210	MIN	9.5	AC-FT	657200	
WTR YR 1985	TOTAL	454241.0		MEAN	1244	MAX	3130	MIN	2.8	AC-FT	901000	



## 08362000 CABALLO RESERVOIR NEAR ARREY, NM

LOCATION.--Lat 32°53'47", long 107°17'30", in SE&SW¼ 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> 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 daily contents, 347,000 acre-ft, Mar. 4, 1942, gage height, 4,182.06 ft; minimum daily contents, 118 acre-ft, Oct. 14, 1938, gage height, 4,108.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 244,300 acre-ft, Sept. 15, gage height, 4,173.79 ft; minimum daily contents, 9,700 acre-ft, Oct. 2, gage height, 4,128.70 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 (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10500	23300	26600	41100	91100	141400	127300	148300	223400	227900	235500	235300
2	9700	23400	26700	41600	93000	141600	128100	150000	224300	226600	235000	235400
3	10200	23500	26700	43300	95600	141600	129100	152300	225300	226100	233800	235700
4	10500	23600	26900	44900	98100	140500	130000	154500	225900	225400	232500	236600
5	10700	23700	27100	46600	100500	141200	131200	156500	226500	225400	231300	237400
6	10900	23900	27200	47200	102900	141300	132800	158600	227300	225600	228600	238500
7	11000	23900	27300	48100	104900	141700	133800	161100	228200	225700	224200	239200
8	11200	24000	27400	49800	107200	142100	135600	163400	229000	226800	220800	239900
9	11400	24200	27500	51400	109500	142000	136700	165600	229600	228000	220700	240900
10	11600	24300	27700	53000	112300	140900	137500	168400	230100	229000	222000	241700
11	11900	24300	27700	54600	114300	138000	138100	170800	230300	229500	223000	242300
12	12200	24400	27900	56300	116600	138400	139100	174000	230000	230200	223500	242200
13	12400	24500	28100	56700	118800	138500	140100	176700	230000	231100	225000	242600
14	12600	24700	28400	57600	121300	138900	141100	179000	230100	232700	226600	243200
15	12800	24800	28500	59200	122900	139800	141100	181900	230300	231700	228000	244300
16	12800	24800	28700	60900	125900	140700	138700	185200	230500	231300	228200	243500
17	12900	25000	28800	63300	126600	139300	135900	187900	230600	231000	228300	242400
18	13100	25100	28900	65700	127400	138300	133500	190700	230600	230400	228200	240700
19	12000	25200	29100	68100	128700	138600	131700	193500	229300	230400	228400	239900
20	16100	25300	29700	68900	131600	138600	132000	196400	229000	230100	229500	239100
21	19500	25400	30600	69700	132900	138700	133000	199300	229000	229700	230600	237900
22	21000	25500	31200	72100	134000	138800	134100	201400	228600	229300	232000	237000
23	21900	25700	31500	74500	136200	138100	134700	203500	228500	229700	232700	235800
24	22100	25900	31800	76100	136000	136200	136000	206000	227800	230400	233500	234600
25	22300	26000	31900	77200	136500	134700	136500	208700	227800	231100	234200	233200
26	22400	26200	32100	79800	138400	133900	137900	211200	227800	230600	234300	231300
27	22600	26200	32300	80500	139800	132700	139800	213900	227200	230900	234800	229700
28	22800	26300	32600	81500	140600	130900	141600	216300	227100	231700	234800	227700
29	22900	26400	38600	83800	---	130600	143500	218300	227500	233500	234900	226400
30	23000	26700	39600	86300	---	130200	145200	220400	227700	235100	235200	224600
31	23200	---	40400	89100	---	128200	---	222200	---	235600	235200	---
MAX	23200	26700	40400	89100	140600	142100	145200	222200	230600	235600	235500	244300
MIN	9700	23300	26600	41100	91100	128200	127300	148300	223400	225400	220700	224600
(†)	4135.86	4137.33	4142.19	4153.31	4161.32	4159.57	4161.95	4171.44	4172.03	4172.88	4172.84	4171.70
(††)	+11300	+3500	+13700	+48700	+51500	-12400	+17000	+77000	+5500	+7900	-400	-10600

CAL YR 1984 MAX 124800 MIN 9700 (††) -5380

WTR YR 1985 MAX 244300 MIN 9700 (††) +212700

(†) 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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--January 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,140.9 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1938, at datum 7.0 ft higher, Oct. 7-12, 1938, at datum 6.0 ft higher, and Oct. 13, 1938, to Dec. 31, 1945, at datum 5.0 ft higher than present datum.

REMARKS.--Flow regulated by Caballo Reservoir (station 08362000) capacity, 344,000 acre-ft, 1958 survey and Elephant Butte Reservoir (station 08360500) capacity, 2,109,000 acre-ft, 1974 survey. Diversions for irrigation of about 800,000 acres upstream from station. Figures of daily discharge do not include Bonita ditch which diverts from Caballo Dam and bypasses station for irrigation below. See monthly table below for record of ditch.

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

AVERAGE DISCHARGE.--47 years, 852 ft<sup>3</sup>/s, 617,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,650 ft<sup>3</sup>/s, May 20, 1942; minimum daily, 0.1 ft<sup>3</sup>/s, Oct. 31 to Nov. 14, 1954, Nov. 7 to Dec. 31, 1955, Feb. 15-29, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,290 ft<sup>3</sup>/s, July 11; minimum daily, 1.0 ft<sup>3</sup>/s at times.

DISCHARGE, IN 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	1160	2.0	2.0	2.0	2.0	810	1510	1240	1600	1890	1200	1890
2	591	1.0	1.0	1.0	2.0	778	1460	1150	1610	2000	1420	1890
3	10	1.0	1.0	1.0	2.0	700	1440	1290	1560	2100	1430	1780
4	3.0	1.0	1.0	1.0	2.0	700	1440	1400	1530	2100	1390	1570
5	3.0	1.0	1.0	1.0	2.0	944	1310	1400	1490	2180	1390	1510
6	3.0	1.0	1.0	1.0	1.0	1120	1180	1430	1520	2260	1710	1510
7	2.0	1.0	1.0	1.0	1.0	1120	1190	1560	1550	2260	2010	1510
8	2.0	1.0	1.0	1.0	1.0	1080	1200	1670	1570	1930	1990	1510
9	2.0	1.0	1.0	2.0	1.0	1330	1350	1670	1580	2010	1810	1510
10	2.0	1.0	1.0	2.0	1.0	1340	1530	1600	1590	2210	1750	1480
11	2.0	1.0	1.0	2.0	1.0	1340	1560	1500	1810	2290	1680	1460
12	2.0	1.0	2.0	2.0	1.0	1190	1380	1510	2010	2220	1510	1460
13	2.0	1.0	2.0	2.0	1.0	1080	1320	1500	2030	2140	1290	1200
14	2.0	1.0	2.0	2.0	1.0	1080	1390	1540	1970	2140	1150	932
15	2.0	1.0	2.0	2.0	1.0	942	1380	1580	1930	2150	1160	928
16	2.0	2.0	2.0	2.0	2.0	1020	1530	1460	1920	2210	1550	872
17	2.0	2.0	2.0	2.0	2.0	1040	1740	1560	1920	2210	1870	634
18	2.0	2.0	2.0	2.0	2.0	1140	1790	1580	2110	2210	1850	831
19	2.0	2.0	2.0	2.0	2.0	1190	1520	1580	2290	2200	1670	787
20	2.0	2.0	2.0	2.0	184	1240	1300	1570	2230	2200	1530	333
21	2.0	2.0	2.0	2.0	200	1250	1300	1660	2170	2190	1450	745
22	2.0	2.0	2.0	2.0	232	1360	1300	1740	2150	2110	1450	756
23	2.0	2.0	2.0	2.0	232	1460	1360	1750	2140	1860	1520	756
24	2.0	2.0	2.0	2.0	232	1470	1430	1630	2100	1680	1560	783
25	2.0	2.0	2.0	2.0	232	1540	1480	1570	2080	1710	1580	809
26	2.0	2.0	2.0	2.0	104	1650	1350	1570	2080	1640	1580	816
27	2.0	2.0	2.0	2.0	602	1770	861	1560	2100	1580	1740	841
28	2.0	2.0	2.0	2.0	810	1820	861	1720	2040	1380	1860	822
29	2.0	2.0	2.0	2.0	---	1660	861	1850	1980	1270	1870	828
30	2.0	2.0	2.0	2.0	---	1520	1050	1850	1950	1290	1890	785
31	2.0	---	2.0	2.0	---	1500	---	1680	---	1230	1900	---
TOTAL	1820.0	46.0	52.0	55.0	2856.0	38184	40373	48370	56610	60850	49760	33538
MEAN	58.7	1.53	1.68	1.77	102	1232	1346	1560	1887	1963	1605	1118
MAX	1160	2.0	2.0	2.0	810	1820	1790	1850	2290	2290	2010	1890
MIN	2.0	1.0	1.0	1.0	1.0	700	861	1150	1490	1230	1150	333
AC-FT	3610	91	103	109	5660	75740	80080	95940	112300	120700	98700	66520
(†)	0	0	0	0	0	140	96	99	26	103	68	24
CAL YR 1984 TOTAL	329245.0				900		2510		1.0		AC-FT 653100	
WTR YR 1985 TOTAL	332514.0				911		2290		1.0		AC-FT 659500	

(†) DIVERSION, IN ACRE-FT, BY BONITA DITCH. BONITA DITCH DIVERTS DIRECTLY FROM CABALLO DAM AND THIS DIVERSION IS NOT INCLUDED IN THE RIVER RECORDS.

## RIO GRANDE BASIN

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 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--Water years 1930 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1978 to 1981.

WATER TEMPERATURES: January 1978 to 1981.

REMARKS.--Records of discharge are given in International Boundary and Water Commission Water Bulletins.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CAC03) (00900)
OCT											
15...	0915	327	1490	1540	7.9	8.6	--	10.5	--	--	330
NOV											
12...	0900	132	1930	2080	8.3	8.2	9.5	10.0	20	9.6	470
19...	0850	131	2020	2100	7.9	8.3	--	3.5	--	--	470
DEC											
20...	0830	178	2090	2150	8.0	8.1	--	3.0	--	--	520
JAN											
03...	1000	118	1860	2020	8.3	8.1	-1.0	4.0	60	11.4	390
16...	0840	143	2120	1990	8.1	8.2	--	0.0	--	--	440
FEB											
28...	1125	96	2240	2200	8.1	8.2	--	8.5	--	--	450
MAR											
07...	1000	554	1120	1210	8.2	8.1	17.0	12.0	18	8.7	260
21...	0845	600	969	--	7.5	--	--	4.0	--	--	240
APR											
17...	1545	596	1110	1090	7.9	8.1	--	23.5	--	--	260
MAY											
05...	1400	545	1220	1270	8.4	8.3	30.5	24.0	65	--	300
15...	0740	729	946	960	7.9	7.9	--	16.0	--	--	240
JUN											
17...	0835	915	966	975	7.9	8.0	--	21.5	--	--	240
JUL											
10...	1000	930	1010	1040	8.2	8.1	29.0	24.0	65	7.1	260
16...	0830	1320	915	924	8.0	8.0	--	20.5	--	--	230
AUG											
20...	0815	1500	852	844	7.7	8.0	--	20.5	--	--	220
SEP											
06...	1400	934	1100	1140	8.2	8.2	29.0	23.5	80	7.6	260
18...	0730	963	1080	1110	7.7	7.9	--	19.0	--	--	270

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (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- LILITY FIELD (MG/L AS CAC03) (00410)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT										
15...	110	96	21	190	5	8.6	220	330	160	--
NOV										
12...	310	140	29	280	6	10	--	470	240	.80
19...	190	140	30	270	6	12	280	470	250	--
DEC										
20...	250	150	36	290	6	11	270	470	250	--
JAN										
03...	130	110	29	290	7	7.2	--	450	240	.70
16...	190	130	29	290	6	9.3	250	450	250	--
FEB										
28...	200	130	31	310	7	11	249	500	260	--
MAR										
07...	16	78	17	140	4	6.0	--	220	130	.60
21...	75	71	15	110	3	6.0	164	170	88	--
APR										
17...	82	79	16	120	3	7.1	182	210	110	--
MAY										
05...	110	88	18	160	4	8.9	--	250	130	.60
15...	73	73	15	100	3	6.6	171	190	81	--

## RIO GRANDE BASIN

08364000 RIO GRANDE AT EL PASO, TX -- Continued

## WATER-QUALITY RECORDS

CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	HARD- NESS, NONCAR- BONATE (MG/L 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 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)
JUN 17...	71	72	15	110	3	6.8	171	190	80	--
JUL 10...	84	76	16	130	4	6.9	--	200	88	.60
JUL 16...	63	71	14	100	3	8.1	172	180	77	--
AUG 20...	62	65	13	90	3	6.1	154	160	70	--
SEP 06...	85	74	18	130	4	6.8	--	220	120	1.7
SEP 18...	91	81	17	130	4	7.1	182	220	100	--

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, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00671)	SEDI- MENT, 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 15...	22	--	960	--	--	--	--	--	--	--
NOV 12...	25	1390	1300	.46	.080	.160	.100	38	14	76
NOV 19...	27	--	1400	--	--	--	--	--	--	--
DEC 20...	27	--	1400	--	--	--	--	--	--	--
JAN 03...	29	1340	1300	.65	.310	.350	.230	99	32	94
JAN 16...	26	--	1300	--	--	--	--	--	--	--
FEB 28...	20	--	1400	--	--	--	--	--	--	--
MAR 07...	18	750	760	.42	.060	.530	.110	536	802	80
MAR 21...	15	--	570	--	--	--	--	--	--	--
APR 17...	15	--	670	--	--	--	--	--	--	--
MAY 05...	15	797	780	.14	.060	.240	.060	148	218	96
MAY 15...	13	--	580	--	--	--	--	--	--	--
JUN 17...	14	--	590	--	--	--	--	--	--	--
JUL 10...	14	646	640	.34	.120	.330	.060	202	507	96
JUL 16...	12	--	570	--	--	--	--	--	--	--
AUG 20...	13	--	510	--	--	--	--	--	--	--
SEP 06...	15	712	690	.29	.080	.100	.040	167	421	97
SEP 18...	16	--	680	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 12...	0900	30	3	97	.0	<1	<1	<3	2	11	<1
MAY 05...	1400	20	3	79	2.7	<1	<1	<3	2	9	<1
JUL 10...	1000	<10	4	75	<.5	<1	<1	<3	2	<3	<1
SEP 06...	1400	40	4	74	.5	<1	1	<3	3	18	<3

## RIO GRANDE BASIN

08364000 RIO GRANDE AT EL PASO, TX -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 12...	190	23	.2	10	2	<1	<1	1700	<6	10
MAY 05...	130	11	<.1	<10	3	<1	<1	1000	<6	13
JUL 10...	85	6	<.1	10	1	<1	<1	890	<6	<3
SEP 06...	96	15	<.1	10	3	<1	<1	980	<6	17

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 12...	0900	1100	750
JAN 03...	1000	680	39000
MAR 07...	1000	390	1000
MAY 05...	1400	530	380
JUL 10...	1000	400	380
SEP 06...	1400	2300	800

## RIO GRANDE BASIN

08370500 RIO GRANDE BELOW OLD FORT QUITMAN, TX  
(National stream-quality accounting network)

## WATER-QUALITY RECORDS

LOCATION.--Lat 31°05'05", long 105°36'25", Hudspeth County, Hydrologic Unit 13040201, at gaging station on the rectified channel of the Rio Grande, 1.5 mi downstream from Old Fort Quitman, and 81.7 mi downstream from the American Dam at El Paso.

DRAINAGE AREA.--31,990 mi<sup>2</sup>, approximately, United States and Mexico; from International Boundary and Water Commission Bulletin No. 46 (excluding 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO).

PERIOD OF RECORD.--Water years 1930 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to 1981.

WATER TEMPERATURES: October 1974 to 1981.

REMARKS.--Records of discharge are given in International Boundary and Water Commission Water Bulletins.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV										
09...	1000	266	3480	3460	7.9	8.6	18.0	14.0	70	7.2
JAN										
04...	1000	159	3600	3800	8.0	8.0	2.5	4.0	29	10.6
MAR										
08...	1000	150	3920	3920	8.2	7.9	18.5	13.0	39	8.8
MAY										
11...	0900	94	4800	4870	8.2	7.8	16.0	18.0	120	7.6
JUL										
12...	0900	283	4200	4590	8.2	7.9	29.0	23.5	80	6.4
SEP										
07...	1000	194	3400	3560	8.2	8.0	24.0	23.0	100	7.6

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (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)	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										
09...	660	420	190	45	530	9	12	620	620	<.10
JAN										
04...	610	330	170	45	560	10	9.5	620	670	.70
MAR										
08...	680	440	180	57	620	11	11	660	840	.70
MAY										
11...	820	560	230	58	660	10	12	770	760	.80
JUL										
12...	780	580	210	61	570	9	18	680	920	.70
SEP										
07...	620	390	170	47	500	9	9.9	620	710	.70

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, DIS- SOLVED TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- SOLVED CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- SOLVED CHARGE, SUS- PENDED (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV										
09...	5.0	2260	2200	1.4	2.40	1.40	1.00	411	295	45
JAN										
04...	28	2340	2300	1.2	2.90	1.30	.880	128	55	23
MAR										
08...	21	2640	2500	1.1	.360	.710	.420	121	49	68
MAY										
11...	26	3050	2700	1.3	.250	1.00	.330	253	64	90
JUL										
12...	23	2790	2600	.41	.140	.290	.090	148	113	94
SEP										
07...	21	2240	2200	1.1	.110	.400	.310	552	289	71

08370500 RIO GRANDE BELOW OLD FORT QUITMAN, TX -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 09...	1000	30	7	<100	<10	<1	<1	<1	3	30	<1
MAY 11...	0900	10	6	400	<10	1	<1	<1	2	30	3
JUL 12...	0900	10	6	300	<10	1	<1	2	1	30	<1
SEP 07...	1000	20	7	100	10	2	1	1	3	50	2

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 09...	220	30	.4	11	4	<1	<1	3000	15	20
MAY 11...	260	50	.1	8	6	<1	1	3500	21	20
JUL 12...	270	170	1.2	16	6	1	<1	3300	22	50
SEP 07...	200	10	<.1	10	6	<1	<1	2600	16	30

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 09...	1000	420	4700
JAN 04...	1000	100	--
MAR 08...	1000	60	190
MAY 11...	0900	140	170
JUL 12...	0900	120	220
SEP 07...	1000	1100	550

## RIO GRANDE BASIN

08377900 RIO MORA NEAR TERRERO, NM  
(Hydrologic bench-mark station)

LOCATION.--Lat 35°46'38", long 105°39'27", in E½ 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 mi<sup>2</sup>.

## 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: Dec. 28 to Jan. 4 and Feb. 2 to Mar. 7. 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.--22 years, 31.1 ft<sup>3</sup>/s, 22,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft<sup>3</sup>/s, June 8, 1979, gage height, 4.15 ft; minimum determined, 0.90 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 18	1945	144	2.24	June 4	2030	371	3.00
May 10	2030	*375	*3.01	June 25	0345	110	2.05

Minimum discharge, 6.2 ft<sup>3</sup>/s, Nov. 16.

DISCHARGE, IN 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	11	16	25	12	7.6	9.3	27	132	310	45	36	13
2	11	16	28	11	7.7	10	28	143	296	43	36	13
3	13	16	25	11	7.7	11	36	168	272	40	34	13
4	16	15	22	11	7.8	11	46	217	266	37	36	18
5	16	15	17	10	7.8	11	55	255	305	35	32	14
6	15	14	14	11	7.8	11	61	290	306	33	30	13
7	14	14	14	11	8.0	11	70	295	308	32	28	12
8	12	13	14	11	8.4	9.8	78	311	311	30	27	12
9	14	12	13	10	8.4	10	85	340	294	29	28	11
10	12	11	11	9.6	8.5	13	91	358	277	32	28	11
11	12	10	11	9.0	8.4	20	98	342	251	31	29	14
12	12	14	11	9.0	8.2	21	103	302	228	28	26	24
13	12	14	11	9.0	8.2	22	106	253	217	28	23	14
14	13	14	9.9	8.7	8.4	25	111	213	192	31	22	13
15	12	13	9.8	8.7	8.6	24	127	201	166	32	21	13
16	13	12	11	8.6	9.0	20	130	201	148	33	20	18
17	15	11	11	8.4	9.1	21	122	200	136	31	19	15
18	15	10	10	8.2	9.0	21	138	201	124	32	19	18
19	14	11	9.8	8.1	9.2	22	128	207	108	34	18	25
20	14	12	9.8	7.9	9.1	21	107	202	100	36	19	24
21	14	17	9.1	7.8	8.4	23	94	198	93	35	26	37
22	13	12	9.8	8.1	7.8	23	86	194	84	32	19	31
23	13	16	10	7.9	7.4	23	78	189	78	36	19	26
24	14	14	11	7.8	7.6	24	75	191	74	34	17	24
25	14	10	12	7.6	8.0	33	75	199	87	38	18	22
26	14	8.1	11	7.6	8.0	39	75	228	71	44	19	22
27	15	10	11	7.6	8.2	35	75	271	64	38	18	21
28	15	21	13	7.5	8.2	32	110	301	59	38	17	20
29	15	26	14	7.4	---	31	124	326	53	39	15	21
30	15	25	13	7.4	---	28	114	329	48	36	15	20
31	15	---	12	7.6	---	30	---	318	---	36	15	---
TOTAL	423	422.1	413.2	277.5	230.5	645.1	2653	7575	5326	1078	729	552
MEAN	13.6	14.1	13.3	8.95	8.23	20.8	88.4	244	178	34.8	23.5	18.4
MAX	16	26	28	12	9.2	39	138	358	311	45	36	37
MIN	11	8.1	9.1	7.4	7.4	9.3	27	132	48	28	15	11
AC-FT	839	837	820	550	457	1280	5260	15030	10560	2140	1450	1090
CAL YR 1984	TOTAL	11722.3	MEAN	32.0	MAX	281	MIN	5.2	AC-FT	23250		
WTR YR 1985	TOTAL	20324.4	MEAN	55.7	MAX	358	MIN	7.4	AC-FT	40310		



08377900 RIO MORA NEAR TERRERO, NM -- Continued

## WATER-QUALITY RECORDS

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

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
NOV 23...	1045	16	80	105	8.4	8.2	11.0	.5	12	9.8	50	7
FEB 27...	1500	8.2	118	124	7.3	7.8	8.0	1.0	1.3	12.8	59	6
MAY 28...	1630	276	48	64	8.4	8.0	27.0	9.0	4.6	8.5	29	6
SEP 16...	1215	19	110	104	7.5	8.7	20.0	10.0	1.0	9.0	47	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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 23...	17	1.8	1.3	.0	.60	52	.000	--	43	8.6	.60
FEB 27...	20	2.2	2.9	.2	.50	65	.000	53	53	9.5	1.2
MAY 28...	10	.99	.80	.0	.50	--	--	--	--	8.5	.60
SEP 16...	16	1.6	1.2	.0	3.8	54	.000	44	44	7.9	.60

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, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDED (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 23...	.20	5.9	65	62	.10	.020	.010	.010	1	.04	59
FEB 27...	.20	6.7	85	75	.10	.050	.010	.010	2	.04	67
MAY 28...	.10	5.6	45	41	.10	.110	.010	.010	16	12	63
SEP 16...	.10	6.0	58	64	.10	.050	.010	.010	26	1.3	59

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 23...	1045	10	1	28	.0	1	1	3	1	10	1
MAY 28...	1630	70	1	22	.9	1	1	3	3	41	11

## RIO GRANDE BASIN

08377900 RIO MORA NEAR TERRERO, NM -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 23...	<4	<1	<.1	<10	1	<1	<1	38	<6	5
MAY 28...	<4	1	.1	<10	4	<1	1	21	<6	9

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
NOV 23...	1045	<2.2	<.4	<1.4	<.5	<1.2	<.5	.05	.28

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 23...	1045	K1	140
FEB 27...	1500	0	0
MAY 28...	1630	0	0
SEP 16...	1215	0	75

## 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 mi<sup>2</sup>.

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.--No estimated daily discharges. Records good except those for winter period, 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.--66 years, 99.3 ft<sup>3</sup>/s, 71,950 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 4,500 ft<sup>3</sup>/s, Sept. 21 or 22, 1929, gage height, 6.2 ft, from floodmark, from rating curve extended above 1,600 ft<sup>3</sup>/s; minimum, 2.0 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 10	2200	*1,100	*3.89	June 25	0515	487	3.15
June 4	2115	930	3.75				

Minimum discharge, 16 ft<sup>3</sup>/s, Nov. 21.

DISCHARGE, IN 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	39	60	35	32	30	45	82	427	799	180	100	43
2	39	56	35	33	30	46	87	478	762	174	106	43
3	46	57	33	32	30	46	112	532	704	166	94	46
4	59	53	35	29	30	43	139	651	678	154	106	56
5	63	51	30	27	30	44	157	794	741	147	95	47
6	54	50	25	28	30	43	170	864	685	141	85	41
7	49	48	25	30	35	39	193	853	705	135	81	39
8	47	47	30	31	35	37	216	880	763	130	78	38
9	44	45	30	31	35	39	231	959	811	126	84	37
10	42	32	30	29	35	55	251	1020	777	134	81	37
11	41	30	33	30	33	114	275	976	735	131	92	48
12	44	44	32	31	35	136	303	836	673	117	83	75
13	52	43	35	30	38	112	298	707	628	118	74	47
14	53	42	38	29	38	100	315	596	588	120	69	41
15	51	40	40	31	40	94	354	546	551	120	67	42
16	47	37	30	31	38	83	385	535	516	132	64	61
17	56	44	30	30	38	75	368	516	482	120	60	48
18	58	34	35	29	40	81	425	525	456	116	61	58
19	50	34	35	29	40	93	447	541	411	118	59	85
20	51	35	35	29	36	87	376	531	392	126	58	77
21	51	28	30	29	35	90	336	531	353	116	82	127
22	49	40	28	29	35	93	298	516	331	107	61	92
23	50	40	30	32	34	89	259	506	310	114	59	74
24	51	40	30	34	38	93	242	526	290	106	56	66
25	51	34	30	34	38	108	240	563	349	115	55	63
26	53	30	32	30	38	122	240	630	275	123	60	60
27	57	25	35	35	39	114	242	726	245	106	59	57
28	54	30	38	35	42	105	347	785	223	104	55	55
29	53	45	38	30	---	102	402	811	206	105	49	61
30	56	42	35	29	---	90	378	823	192	98	47	55
31	58	---	35	33	---	90	---	804	---	94	46	---
TOTAL	1568	1236	1012	951	995	2508	8168	20988	15631	3893	2226	1719
MEAN	50.6	41.2	32.6	30.7	35.5	80.9	272	677	521	126	71.8	57.3
MAX	63	60	40	35	42	136	447	1020	811	180	106	127
MIN	39	25	25	27	30	37	82	427	192	94	46	37
AC-FT	3110	2450	2010	1890	1970	4970	16200	41630	31000	7720	4420	3410
CAL YR 1984 TOTAL		40067		MEAN	109	MAX	885	MIN	12	AC-FT	79470	
WTR YR 1985 TOTAL		60895		MEAN	167	MAX	1020	MIN	25	AC-FT	120800	

## 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 mi<sup>2</sup>, 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.--Estimated daily discharges: Aug. 10 to Sept. 30. 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 about 8 mi upstream from gage and bypasses this station on left bank; ditch flow not included in record measurements made at point opposite regular gage. A portion of this flow may be returned to the river about 5.0 mi downstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--72 years (1910-15, 1915-24, 1926-85), 129 ft<sup>3</sup>/s, 93,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,300 ft<sup>3</sup>/s, June 1, 1937, gage height, 20.34 ft, from floodmarks, at site and datum then in use, by slope-area measurement; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since 1879 occurred Sept. 29, 1904, discharge about 73,000 ft<sup>3</sup>/s, from information by a local resident.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 15	2030	*2,890	7.41				

Minimum discharge, 8.7 ft<sup>3</sup>/s, Aug. 18.

DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND, OF DITCH, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985			
Date	Discharge	Date	Discharge
Oct. 18	43	Jan. 9	0
Nov. 15	0	Feb. 12	0
		Apr. 10	0
		May 16	0
		June 27	48
		Aug. 8	34

DISCHARGE, IN 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	16	85	49	121	16	63	293	789	753	162	81	23
2	16	89	44	91	23	68	285	865	727	149	99	22
3	16	88	45	59	23	73	293	931	689	155	98	24
4	102	83	42	50	32	77	324	942	654	142	77	32
5	50	80	50	66	35	76	366	1040	911	128	120	30
6	44	77	43	90	43	75	416	1140	762	115	77	26
7	41	72	47	77	49	79	437	1140	699	117	54	26
8	35	70	40	93	48	76	462	1110	700	100	44	27
9	29	67	51	85	52	74	487	1110	732	81	41	28
10	24	64	49	72	52	72	493	1130	839	68	84	29
11	21	63	49	56	50	76	515	1150	740	64	50	34
12	46	52	46	30	40	226	549	1090	685	67	56	43
13	25	62	50	40	41	355	589	970	650	54	46	37
14	21	58	53	59	50	316	613	839	608	58	33	33
15	25	55	50	66	48	306	620	741	556	264	29	32
16	33	56	52	64	46	304	642	694	502	198	27	200
17	35	52	37	62	46	279	672	635	464	134	26	150
18	35	56	47	54	47	258	677	655	446	137	11	68
19	34	60	55	59	54	298	708	636	422	122	13	58
20	27	51	56	57	58	423	718	639	417	130	12	90
21	23	49	54	42	59	416	648	661	363	116	84	265
22	30	50	51	30	64	406	584	655	408	120	45	150
23	37	41	35	28	62	387	524	654	431	114	12	115
24	41	57	28	27	61	342	467	626	309	123	11	90
25	52	60	48	25	57	339	421	595	343	86	12	76
26	74	57	52	24	56	373	396	590	374	84	13	60
27	71	49	60	23	60	412	393	647	271	116	13	54
28	82	26	60	22	61	405	596	701	240	87	11	54
29	97	33	113	22	---	370	1030	737	227	83	15	60
30	88	47	120	21	---	361	847	751	187	93	15	61
31	85	---	122	20	---	326	---	763	---	88	36	---
TOTAL	1355	1809	1698	1635	1333	7711	16065	25626	16109	3555	1345	1997
MEAN	43.7	60.3	54.8	52.7	47.6	249	536	827	537	115	43.4	66.6
MAX	102	89	122	121	64	423	1030	1150	911	264	120	265
MIN	16	26	28	20	16	63	285	590	187	54	11	22
AC-FT	2690	3590	3370	3240	2640	15290	31860	50830	31950	7050	2670	3960
CAL YR 1984	TOTAL	40158.61		MEAN	110	MAX	786	MIN	.67	AC-FT	79650	
WTR YR 1985	TOTAL	80238		MEAN	220	MAX	1150	MIN	11	AC-FT	159200	

## 08380500 GALLINAS CREEK NEAR MONTEZUMA, NM

LOCATION.--Lat 35°39'07", long 105°19'06", San Miguel County, Hydrologic Unit 13060001, in Las Vegas Grant, on left bank 2.4 mi west of Montezuma, 6.9 mi northwest of Las Vegas, and at mile 74.4.

DRAINAGE AREA.--84 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--March to September 1915, June 1916 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1964, published as Gallinas River near Montezuma.

REVISED RECORDS.--WSP 898: Drainage area. WSP 1562: 1951(P), 1952(M), 1955(P), 1957. WSP 1632: 1931-32, 1933(M), 1934, 1935(M), 1938, 1939-40(M), 1941-42, 1945, 1949-50(M).

GAGE.--Water-stage recorder. Elevation of gage is 6,875 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 21, 1934, at different datum.

REMARKS.--Estimated daily discharges: June 24 to Sept. 30. 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.--69 years, 19.3 ft<sup>3</sup>/s, 13,980 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,120 ft<sup>3</sup>/s, Aug. 2, 1966, gage height, 9.7 ft, from floodmarks, from rating curve extended above 500 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 5.25 ft, 8.25 ft, and 9.7 ft; minimum, 0.20 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 23	1800	*247	*2.75	No other peak greater than base discharge			
Minimum daily discharge, 4.1 ft <sup>3</sup> /s, Oct. 2, may have been less during ice period.							

DISCHARGE, IN 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	4.7	26	8.8	25	5.4	9.5	60	169	82	25	26	9.8
2	4.1	23	11	10	5.4	9.7	89	203	77	24	25	11
3	5.1	20	10	9.0	5.3	11	104	194	72	23	25	12
4	10	17	9.0	22	5.3	8.9	111	201	67	22	24	11
5	8.0	16	10	23	5.3	9.4	116	210	87	22	24	10
6	6.8	15	14	19	5.7	10	109	206	74	21	22	9.6
7	7.2	14	15	16	6.0	9.7	107	187	66	21	20	9.0
8	6.8	13	15	14	6.3	9.3	107	177	65	21	19	8.5
9	5.9	11	11	11	6.5	8.8	106	176	72	21	18	8.6
10	5.5	10	5.3	9.0	7.0	12	122	175	108	20	17	9.5
11	5.0	10	5.3	8.4	7.5	30	124	172	77	20	16	12
12	4.7	9.6	5.1	8.1	7.2	42	127	147	67	19	15	10
13	5.0	9.6	5.4	7.8	38	40	127	125	60	19	14	9.1
14	4.9	8.8	4.5	7.4	42	34	118	102	55	20	12	8.5
15	5.7	7.9	5.4	7.1	40	31	115	89	48	20	12	8.0
16	6.6	8.3	7.5	6.9	40	27	116	84	43	20	12	7.4
17	7.9	8.7	7.6	6.8	41	25	116	84	40	21	11	6.6
18	12	7.9	8.8	6.7	38	31	123	84	41	20	11	7.0
19	11	7.5	10	6.6	20	39	131	83	40	19	12	9.9
20	9.5	6.4	7.1	6.5	8.1	40	109	84	37	20	15	11
21	9.9	7.4	7.3	6.4	7.9	51	93	84	30	20	13	29
22	10	7.5	8.8	6.4	7.8	68	81	88	31	21	12	22
23	11	7.9	15	6.2	7.7	68	71	119	42	20	12	19
24	12	7.2	15	6.1	7.2	88	62	104	35	29	12	15
25	13	5.7	12	6.0	8.3	117	61	86	33	26	12	13
26	21	10	12	5.9	8.1	128	60	83	32	25	11	11
27	35	11	6.3	5.8	8.1	104	63	88	31	25	11	11
28	34	9.0	58	5.6	8.9	89	133	90	29	25	11	11
29	28	7.9	78	5.5	---	80	175	91	28	26	10	11
30	26	7.1	45	5.5	---	63	154	88	26	33	10	10
31	26	---	33	5.4	---	56	---	84	---	28	9.8	---
TOTAL	362.3	330.4	466.2	295.1	404.0	1349.3	3190	3957	1595	696	473.8	340.5
MEAN	11.7	11.0	15.0	9.52	14.4	43.5	106	128	53.2	22.5	15.3	11.3
MAX	35	26	78	25	42	128	175	210	108	33	26	29
MIN	4.1	5.7	4.5	5.4	5.3	8.8	60	83	26	19	9.8	6.6
AC-FT	719	655	925	585	801	2680	6330	7850	3160	1380	940	675
CAL YR 1984	TOTAL	4699.2		MEAN	12.8	MAX	127	MIN	2.4	AC-FT	9320	
WTR YR 1985	TOTAL	13459.6		MEAN	36.9	MAX	210	MIN	4.1	AC-FT	26700	

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

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,944 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. 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.--34 years, 15.6 ft<sup>3</sup>/s, 11,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft<sup>3</sup>/s, July 11, 1982, gage height, 19.67 ft, from rating curve extended above 1,900 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 10	0515	*792	*5.89				

No flow several days.

DISCHARGE, IN 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	1.2	6.6	3.9	8.9	2.3	1.7	12	31	16	2.8	20	1.3
2	.92	6.1	3.7	7.4	1.7	1.6	12	21	12	2.8	17	.75
3	.83	5.4	3.5	5.8	1.9	1.4	11	15	9.5	4.3	18	1.2
4	10	5.0	3.5	4.4	2.2	1.2	9.4	11	12	5.0	6.3	.97
5	9.3	4.8	4.3	4.9	2.4	1.2	8.3	9.6	59	3.1	4.5	1.0
6	6.8	4.6	3.9	5.3	2.2	1.5	7.7	8.3	119	2.2	9.0	1.3
7	96	4.3	3.6	5.3	3.1	1.6	6.8	7.1	43	.92	8.4	2.1
8	14	3.9	3.7	5.3	2.5	1.6	6.6	7.1	24	.28	4.8	3.7
9	6.5	3.5	3.6	5.7	2.1	1.6	6.7	6.9	15	.02	27	2.7
10	4.2	3.2	4.4	3.7	2.8	1.7	6.8	6.2	16	.00	142	1.3
11	3.1	3.2	4.1	4.8	2.3	1.6	6.4	5.6	10	.00	32	.70
12	1.6	3.3	3.9	4.2	2.0	2.3	5.8	5.5	9.6	.00	25	.34
13	1.7	3.5	4.0	3.6	2.4	3.6	5.3	5.5	11	.00	12	.39
14	1.3	3.3	5.8	4.2	1.8	11	5.0	4.9	9.6	.00	5.8	1.5
15	1.9	3.3	7.1	4.4	1.8	19	4.7	3.7	9.4	.00	68	1.4
16	4.9	3.2	4.8	4.7	1.7	19	4.3	3.6	9.8	14	16	199
17	5.8	3.4	5.3	5.6	1.6	19	3.9	3.9	9.6	6.9	4.9	59
18	5.1	3.7	5.3	5.2	1.5	27	3.8	4.7	8.8	1.2	2.7	26
19	7.9	3.5	7.1	4.6	1.5	23	3.4	8.2	13	.14	1.7	14
20	8.3	3.5	6.9	4.6	1.6	44	3.0	8.5	15	.00	.85	11
21	11	3.4	7.4	4.3	1.6	196	2.7	19	8.7	.00	4.3	18
22	8.1	3.6	8.0	2.8	2.0	94	2.7	20	18	.00	3.1	71
23	8.0	3.7	11	3.7	2.2	77	2.6	23	14	.00	2.6	34
24	11	5.6	7.7	3.4	2.2	39	2.3	24	8.8	5.0	70	19
25	17	6.6	6.8	4.3	2.1	27	2.1	35	52	2.8	22	14
26	18	6.2	6.5	4.2	2.0	21	1.9	29	34	.96	7.2	11
27	19	5.8	6.5	3.8	2.1	17	2.0	19	12	.48	4.2	8.9
28	15	5.1	6.5	3.6	1.9	13	6.2	14	11	.86	8.3	7.8
29	12	5.4	7.0	3.4	---	12	95	13	6.1	2.3	5.2	12
30	8.8	3.9	12	3.1	---	12	65	12	3.6	1.7	3.4	11
31	7.7	---	12	3.1	---	12	---	14	---	.94	2.3	---
TOTAL	326.95	130.6	183.8	142.3	57.5	704.6	315.4	399.3	599.5	58.70	558.55	536.35
MEAN	10.5	4.35	5.93	4.59	2.05	22.7	10.5	12.9	20.0	1.89	18.0	17.9
MAX	.96	6.6	12	8.9	3.1	196	95	35	119	14	142	199
MIN	.83	3.2	3.5	2.8	1.5	1.2	1.9	3.6	3.6	.00	.85	.34
AC-FT	649	259	365	282	114	1400	626	792	1190	116	1110	1060
CAL YR 1984	TOTAL	3451.50		MEAN	9.43	MAX	299	MIN	.00	AC-FT	6850	
WTR YR 1985	TOTAL	4013.55		MEAN	11.0	MAX	199	MIN	.00	AC-FT	7960	

## 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 mi<sup>2</sup>, 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, (U.S. Army Corps of Engineers plans).

REMARKS.--Estimated daily discharges: Oct. 1-16 and Jan. 24 to Feb. 11. 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.--9 years, 79.2 ft<sup>3</sup>/s, 57,380 acre ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft<sup>3</sup>/s, June 20, 1982, gage height, 10.36 ft, from rating curve extended above 1,200 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 5	1715	*1,480	*7.82				

Minimum discharge, 1.5 ft<sup>3</sup>/s, part or all of each day Feb. 16 and Feb. 21 to Mar. 4.

DISCHARGE, IN 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	9.0	28	5.1	112	5.8	1.5	186	715	631	56	47	35
2	9.2	27	5.1	76	5.9	1.5	172	734	616	37	84	29
3	9.6	31	4.5	17	5.6	1.5	170	907	561	35	78	26
4	10	29	5.1	21	5.2	1.6	217	912	557	68	76	23
5	69	26	4.8	17	4.7	1.9	237	977	703	50	57	22
6	30	24	5.4	30	4.2	7.8	294	1090	665	26	93	23
7	88	22	5.1	41	3.5	13	294	1040	552	12	55	22
8	38	15	4.8	33	3.0	13	328	1010	531	8.6	28	24
9	24	13	4.5	37	2.5	14	347	1020	548	8.1	26	25
10	17	11	4.5	25	2.2	13	311	1050	766	8.1	100	27
11	13	11	4.5	11	2.0	6.1	319	965	718	11	115	26
12	13	9.4	4.2	7.9	1.7	15	347	1060	576	14	67	28
13	14	3.4	2.9	8.0	1.8	322	402	919	547	14	38	29
14	14	5.1	3.0	7.0	1.8	214	401	766	498	15	31	29
15	16	4.3	3.0	6.5	1.8	210	397	668	432	15	42	29
16	17	4.3	2.8	14	1.8	225	435	569	363	195	60	380
17	17	6.8	2.8	18	1.8	197	534	533	326	104	28	191
18	15	5.3	3.0	14	1.7	180	504	528	345	112	26	47
19	17	5.4	3.6	11	1.7	213	510	502	351	80	27	44
20	26	9.0	3.6	4.7	1.7	434	492	499	289	69	26	51
21	31	6.6	2.6	4.6	1.6	584	376	530	261	58	34	347
22	26	5.3	2.9	4.9	1.6	458	313	524	193	47	68	243
23	31	4.9	3.1	5.0	1.6	414	287	569	390	53	26	179
24	39	5.8	3.5	5.6	1.6	307	269	528	197	49	24	120
25	42	5.6	3.6	6.6	1.5	286	281	519	252	49	27	82
26	45	7.8	3.6	6.5	1.5	317	249	490	402	21	23	58
27	35	7.6	3.5	5.4	1.5	360	223	538	163	25	23	42
28	26	4.2	3.6	5.0	1.5	350	510	607	129	46	21	32
29	33	5.1	4.8	4.8	---	292	940	619	104	25	23	28
30	40	5.1	182	4.5	---	271	832	610	89	32	25	42
31	33	---	163	5.6	---	229	---	626	---	31	66	---
TOTAL	846.8	348.0	458.5	569.6	72.8	5952.9	11177	22624	12755	1373.8	1464	2283
MEAN	27.3	11.6	14.8	18.4	2.60	192	373	730	425	44.3	47.2	76.1
MAX	88	31	182	112	5.9	584	940	1090	766	195	115	380
MIN	9.0	3.4	2.6	4.5	1.5	1.5	170	490	89	8.1	21	22
AC-FT	1680	690	909	1130	144	11810	22170	44870	25300	2720	2900	4530
CAL YR 1984	TOTAL	23398.29	MEAN	63.9	MAX	708	MIN	.00	AC-FT	46410		
WTR YR 1985	TOTAL	59925.40	MEAN	164	MAX	1090	MIN	1.5	AC-FT	118900		

## 08382650 PEGOS 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 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--February 1976 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder. Elevation of gage is 4,760 ft above National Geodetic Vertical Datum of 1929, (levels by U.S. Army Corps of Engineers).

REMARKS.--Estimated daily discharges: May 5-14. 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.--9 years, 183 ft<sup>3</sup>/s, 71,580 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft<sup>3</sup>/s, June 21, 1982, gage height, 14.50 ft, from manometer gage, 15.33 ft, from floodmarks, from rating curve extended above 1,500 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 2.9 ft<sup>3</sup>/s, Aug. 21, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft<sup>3</sup>/s and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 5	1845	*2,990	*9.35				

Minimum discharge, 18 ft<sup>3</sup>/s, Feb. 13.

DISCHARGE, IN 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	25	61	23	168	26	24	163	849	768	83	48	42
2	26	58	23	115	27	25	149	890	691	63	67	43
3	28	61	23	49	26	25	144	1100	621	57	69	38
4	27	58	24	42	25	25	161	1050	583	60	63	30
5	103	60	23	39	23	26	189	1080	1110	58	50	29
6	54	65	23	53	22	30	254	1190	1100	48	78	30
7	129	58	22	70	21	34	266	1180	710	37	56	29
8	76	56	22	64	21	33	274	1150	643	35	38	30
9	41	45	22	74	21	38	297	1150	662	33	35	31
10	28	40	22	48	21	37	297	1160	868	32	71	31
11	25	37	22	30	23	32	310	1100	699	32	77	30
12	25	36	22	23	25	35	346	1150	615	32	52	31
13	26	31	23	22	20	256	440	980	523	33	36	31
14	26	25	24	21	31	273	470	800	422	32	31	31
15	28	26	23	20	20	267	464	678	346	32	31	31
16	36	25	22	26	20	267	504	532	293	146	46	554
17	45	27	22	38	20	219	580	474	266	103	31	208
18	45	26	22	37	20	203	464	480	250	70	31	82
19	54	24	22	29	21	230	490	453	233	75	31	70
20	54	25	23	22	22	496	559	436	217	60	31	65
21	59	25	21	21	22	724	387	491	211	75	28	337
22	54	24	21	20	22	523	306	500	173	56	76	183
23	65	24	21	22	23	406	256	574	338	56	48	147
24	72	29	21	27	23	291	220	512	177	54	39	101
25	80	25	21	32	23	255	184	431	296	57	43	77
26	83	27	21	25	24	285	165	368	491	43	29	64
27	81	27	21	24	23	330	176	416	162	37	28	51
28	61	24	21	23	24	308	344	541	130	58	28	44
29	72	23	21	22	---	265	1230	641	110	47	29	40
30	80	23	203	21	---	248	1200	701	113	47	29	48
31	71	---	234	25	---	207	---	766	---	38	73	---
TOTAL	1679	1095	1078	1252	639	6417	11289	23823	13821	1689	1422	2558
MEAN	54.2	36.5	34.8	40.4	22.8	207	376	768	461	54.5	45.9	85.3
MAX	129	65	234	168	31	724	1230	1190	1110	146	78	554
MIN	25	23	21	20	20	24	144	368	110	32	28	29
AC-FT	3330	2170	2140	2480	1270	12730	22390	47250	27410	3350	2820	5070
CAL YR 1984 TOTAL	33244			90.8	MAX 1870	MIN 12	AC-FT 65940					
WTR YR 1985 TOTAL	66762			183	MAX 1230	MIN 20	AC-FT 132400					



WATER-QUALITY RECORDS

CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV 14...	1030	24	780	800	8.4	8.0	15.0	12.0	9.4	<10
JAN 10...	1045	42	520	--	8.0	--	1.5	3.0	11.2	--
MAR 21...	1130	461	440	420	7.3	7.9	18.0	9.0	9.9	--
MAY 15...	1400	644	255	234	7.9	8.1	26.0	16.0	8.5	--
JUL 11...	0850	32	800	760	8.0	8.2	25.0	18.0	8.5	11
SEP 18...	0915	81	--	--	7.3	--	20.0	16.5	7.8	--

[illegible][illegible]

08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM -- Continued

## WATER-QUALITY RECORDS

CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	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)
NOV 14...	.030	.27	.50	.010	.010	.20	8	.52	19
JAN 10...	--	--	--	--	--	--	52	6.0	90
MAR 21...	--	--	--	--	--	--	2190	2730	81
MAY 15...	--	--	--	--	--	--	904	1570	50
JUL 11...	.090	--	--	<.010	.010	.50	13	1.1	40
SEP 18...	--	--	--	--	--	--	1730	380	98

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)
NOV 14...	1030	<1	<1	40	<1	<1	10	<10	5	1
MAR 21...	1130	--	--	20	--	--	--	--	--	--
MAY 15...	1400	--	--	<10	--	--	--	--	--	--
JUL 11...	0850	--	--	30	--	--	--	--	--	--

DATE	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)
NOV 14...	9	1	1	<.1	<.1	1	1	20	18
MAR 21...	110	--	--	--	--	--	--	--	--
MAY 15...	40	--	--	--	--	--	--	--	--
JUL 11...	<3	--	--	--	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 14...	1030	<12	<.4	<6.3	<.4	<5.4	<.4	.21	1.9

## 08382730 LOS ESTEROS CREEK ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°05'42", long 104°39'49", Guadalupe County, Hydrologic Unit 13060001 in Preston-Beck Grant, on left bank, 3.7 mi upstream from mouth, 4.9 mi north-northeast of Santa Rosa Dam, and 10.4 mi north-northeast of Santa Rosa. Mouth at Pecos River mile 763.0.

DRAINAGE AREA.--65.6 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1973 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,767 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 6 and Jan. 10 to Feb. 10. Records good except for estimated daily discharges, which are poor. No known diversions or groundwater withdrawals for irrigation upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--12 years, 1.26 ft<sup>3</sup>/s, 913 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft<sup>3</sup>/s, July 24, 1976, gage height, 9.3 ft, from rating curve extended above 70 ft<sup>3</sup>/s on basis of velocity-area studies and slope-area measurements at gage heights 6.5 ft and 9.3 ft; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood of unknown date reached a discharge of about 6,800 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 28	1700	135	3.32	Aug. 15	1200	*216	*3.71
No flow most of time.							

DISCHARGE, IN 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	.00	.00	.00	.00	.00	.00	.00	.22	.00	.00	.00	.00
2	.00	.00	.00	.10	.00	.00	.00	.06	.00	.00	.00	.00
3	.00	.00	.00	.10	.00	.00	.00	.02	.00	.00	.00	.00
4	.00	.00	.00	.05	.00	.00	.00	.01	.00	.00	.00	.00
5	.00	.00	.00	.01	.00	.00	.00	.00	.81	.00	9.4	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.24	.00	.68	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.09	.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	.01	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.38	.00	.00	.00	.00	.00	.00	.00	.00	.00	36	.00
16	5.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.8	.00
17	.63	.00	.00	.00	.00	.00	.00	.00	.00	.00	.32	.00
18	.11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11	.00
19	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.01	.00
20	.00	.00	.00	.00	.03	.06	.00	.00	.00	.00	.01	.00
21	.00	.00	.00	.00	.04	.34	.00	.00	.00	.00	.01	.00
22	.00	.00	.00	.00	.02	.15	.00	.00	.00	.00	.93	.00
23	.00	.00	.00	.00	.01	.06	.00	.00	.00	.00	.35	.00
24	.02	1.5	.00	.00	.01	.02	.00	.00	.00	.00	.12	.00
25	.01	1.4	.00	.00	.01	.01	.00	.00	.00	.00	.05	.00
26	.00	.11	.00	.00	.00	.01	.00	.00	.00	.00	.01	.00
27	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.02	.00	.00	---	.00	32 14	.00	.00	.00	.08	.00
30	.00	---	.00	.00	---	.00	.96	.00	.00	.00	.12	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.06	---
TOTAL	6.95	3.15	.00	.26	.16	.69	46.96	.31	1.09	.00	51.15	.00
MEAN	.22	.11	.000	.008	.006	.022	1.57	.010	.036	.000	1.65	.000
MAX	5.8	1.5	.00	.10	.04	.34	32	.22	.81	.00	36	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	14	6.2	.00	.5	.3	1.4	93	.6	2.2	.00	101	.00

CAL YR 1984 TOTAL 477.98 MEAN 1.31 MAX 148 MIN .00 AC-FT 948  
WTR YR 1985 TOTAL 110.72 MEAN .30 MAX 36 MIN .00 AC-FT 220

## 08382760 LOS ESTEROS CREEK TRIBUTARY ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°05'35", long 104°40'20", Preston-Beck Grant, Guadalupe County, Hydrologic Unit 13060001, 0.5 mi west-southwest of Los Esteros Creek gage, 0.8 mi upstream from confluence with Los Esteros Creek, 4.6 mi north-northeast of Santa Rosa Dam, and 10.2 mi north-northeast of Santa Rosa.

DRAINAGE AREA.--13.7 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1973 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,758 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No known diversions or groundwater withdrawals for irrigation upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--12 years, 0.31 ft<sup>3</sup>/s, 225 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft<sup>3</sup>/s, Aug. 29, 1977, gage height, 7.80 ft, from rating curve extended above 0.5 ft<sup>3</sup>/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 discharge greater than base discharge of 80 ft<sup>3</sup>/s and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 15	0215	*9.4	*1.19				

No flow most of time.

DISCHARGE, IN 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	.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	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.40	.00
16	.13	.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	.01	.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	.30	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.01	.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	.18	.01	.00	.00	.00	.00	.31	.00	.00	.00	.40	.00
MEAN	.006	.000	.000	.000	.000	.000	.010	.000	.000	.000	.013	.000
MAX	.13	.01	.00	.00	.00	.00	.30	.00	.00	.00	.40	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.4	.02	.00	.00	.00	.00	.6	.00	.00	.00	.8	.00
CAL YR 1984	TOTAL 2.98	MEAN .008	MAX 1.3	MIN .00	AC-FT 5.9							
WTR YR 1985	TOTAL 0.90	MEAN .002	MAX .40	MIN .00	AC-FT 1.8							

## 08382810 SANTA ROSA LAKE NEAR SANTA ROSA, NM

LOCATION.--Lat 35°01'47", long 104°41'30", Guadalupe County, Hydrologic Unit 13060001, in Jose Perea Grant, near outlet gates of Santa Rosa Dam on Pecos River, approximately 7.0 mi north of Santa Rosa, and at mile 757.2.

DRAINAGE AREA.--2,430 mi<sup>2</sup>, approximately.

PERIOD OF RECORDS.--April 1980 to current year.

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

REMARKS.--All record prior to May 13, 1983 is questionable. Lake is formed by earth and rockfill dam on Pecos River. Storage began on Apr. 22, 1980. Capacity 447,100 acre-ft 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, 108,000 acre-ft, July 1, 1985, elevation, 4,746.59 ft; no storage for many days July-Sept., 1980 and June-Aug. 1981.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 108,000 acre-ft, July 1, elevation, 4,746.59 ft; minimum, 1,670 acre-ft, Oct. 1, elevation, 4706.28 ft.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16700	19490	21120	23150	24800	25480	37980	64050	105300	108000	103900	91350
2	16810	19580	21150	23380	24820	25480	38280	65420	106400	106900	104000	91350
3	16900	19670	21170	23470	24840	25480	38810	67340	107200	106400	104100	91350
4	16960	19760	21220	23520	24860	25500	39040	68950	106600	105600	104200	91350
5	17030	19860	21260	23570	24880	25460	39350	70600	106700	104700	104300	91420
6	17130	19920	21320	23620	24880	25460	39970	72830	106500	103900	104400	91380
7	17230	20020	21360	23760	24890	25560	40600	74690	106300	103200	104500	91310
8	17330	20080	21390	23930	24900	25600	41380	76550	106100	102600	104800	91280
9	17440	20130	21440	24010	24920	25600	42180	78410	105900	102300	104800	91180
10	17630	20140	21480	24050	24930	25600	42980	80370	105900	102400	104700	91070
11	17650	20150	21510	24070	25000	25640	43820	82160	106600	102100	104700	91040
12	17600	20180	21540	24090	25050	25800	44700	83980	107400	102000	104700	91110
13	17610	20280	21560	24090	25060	26130	45640	85890	107500	102100	104700	91140
14	17620	20320	21610	24120	25080	26610	46580	87400	107600	102100	104700	91180
15	17700	20350	21680	24150	25080	27080	47500	88950	107400	102200	103800	91180
16	17820	20390	21790	24190	25090	27650	48500	89900	107200	102300	102200	91870
17	17930	20430	21850	24240	25090	28230	49580	90380	107100	102600	100400	92770
18	17980	20490	21920	24290	25090	28560	50670	91210	106900	102600	98690	92910
19	18050	20510	21940	24330	25120	29320	51640	92040	106100	102600	96990	93470
20	18130	20610	21980	24370	25180	30480	52720	93090	105600	102700	95340	93720
21	18210	20650	22010	24390	25250	31280	53820	93890	105800	102700	93890	93960
22	18360	20660	22060	24410	25300	31700	55060	95020	106200	103000	92180	94100
23	18480	20690	22110	24420	25330	32360	55640	96090	106600	103000	91380	94600
24	18550	20750	22140	24450	25360	33020	56340	97200	106900	103200	91350	94780
25	18740	20800	22480	24490	25360	33820	56860	98000	107000	103300	91280	94780
26	18840	20870	22220	24520	25370	34550	57480	98800	105200	103500	91280	94920
27	18940	20930	22260	24560	25370	35010	58290	99600	103600	103500	91380	94950
28	19070	21030	22370	24590	25440	35610	59110	100700	104700	103500	91310	94920
29	19120	21150	22490	24670	---	36330	60720	101900	106200	103600	91280	94880
30	19340	21090	22610	24760	---	36840	62700	103000	107700	103800	91310	94810
31	19420	---	22860	24790	---	37360	---	104100	---	103900	91350	---
MAX	19420	21150	22860	24790	25440	37360	62700	104100	107700	108000	104800	94950
MIN	16700	19490	21120	23150	24800	25460	37980	64050	103600	102000	91280	91040
(+)	+2750	+1670	+1770	+1930	+650	+11920	+25340	+41400	+3600	-3800	-12550	+3460
CAL YR 1984	MAX	28920	MIN	2620	(+)	+11580						
WTR YR 1985	MAX	108000	MIN	16700	(+)	+78140						

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

08382810 SANTA ROSA LAKE NEAR SANTA ROSA, NM -- Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4706.28	4709.01	4710.48	4712.18	4713.47	4713.98	4721.76	4733.18	4745.87	4746.59	4745.51	4742.03
2	4706.39	4709.10	4710.50	4712.36	4713.49	4713.98	4721.92	4733.68	4746.17	4746.31	4745.53	4742.03
3	4706.49	4709.18	4710.52	4712.43	4713.50	4713.98	4722.20	4734.37	4746.38	4746.16	4745.56	4742.03
4	4706.55	4709.26	4710.56	4712.47	4713.52	4714.00	4722.32	4734.94	4746.23	4745.96	4745.59	4742.03
5	4706.62	4709.35	4710.60	4712.51	4713.53	4713.97	4722.48	4735.51	4746.26	4745.73	4745.61	4742.05
6	4706.72	4709.41	4710.65	4712.55	4713.53	4713.97	4722.80	4736.27	4746.20	4745.52	4745.64	4742.04
7	4706.82	4709.50	4710.68	4712.66	4713.54	4714.04	4723.12	4736.89	4746.13	4745.31	4745.67	4742.02
8	4706.92	4709.55	4710.71	4712.80	4713.55	4714.07	4723.51	4737.50	4746.09	4745.17	4745.74	4742.01
9	4707.04	4709.60	4710.75	4712.86	4713.56	4714.07	4723.91	4738.10	4746.04	4745.08	4745.75	4741.98
10	4707.23	4709.61	4710.79	4712.89	4713.57	4714.07	4724.30	4738.72	4746.03	4745.11	4745.72	4741.95
11	4707.25	4709.62	4710.81	4712.91	4713.62	4714.10	4724.71	4739.28	4746.22	4745.03	4745.71	4741.94
12	4707.20	4709.64	4710.84	4712.92	4713.66	4714.22	4725.13	4739.84	4746.43	4745.01	4745.71	4741.96
13	4707.21	4709.73	4710.86	4712.92	4713.67	4714.46	4725.57	4740.42	4746.45	4745.02	4745.73	4741.97
14	4707.22	4709.77	4710.90	4712.95	4713.68	4714.81	4726.01	4740.87	4746.49	4745.04	4745.71	4741.98
15	4707.30	4709.80	4710.96	4712.97	4713.68	4715.14	4726.43	4741.33	4746.44	4745.06	4745.48	4741.98
16	4707.42	4709.83	4711.05	4713.00	4713.69	4715.54	4726.88	4741.61	4746.38	4745.08	4745.05	4742.18
17	4707.52	4709.87	4711.10	4713.04	4713.69	4715.94	4727.36	4741.75	4746.36	4745.16	4744.58	4742.44
18	4707.57	4709.92	4711.16	4713.08	4713.69	4716.16	4727.84	4741.99	4746.30	4745.17	4744.10	4742.48
19	4707.64	4709.94	4711.18	4713.11	4713.71	4716.67	4728.26	4742.23	4746.09	4745.16	4743.63	4742.64
20	4707.72	4710.03	4711.21	4713.14	4713.76	4717.42	4728.72	4742.53	4745.97	4745.18	4743.17	4742.71
21	4707.80	4710.06	4711.24	4713.16	4713.81	4717.92	4729.18	4742.76	4746.01	4745.20	4742.76	4742.78
22	4707.94	4710.07	4711.28	4713.17	4713.85	4718.18	4729.69	4743.08	4746.12	4745.26	4742.27	4742.82
23	4708.06	4710.10	4711.32	4713.18	4713.87	4718.58	4729.93	4743.38	4746.22	4745.28	4742.04	4742.96
24	4708.13	4710.15	4711.35	4713.20	4713.89	4718.98	4730.21	4743.69	4746.29	4745.31	4742.03	4743.01
25	4708.31	4710.20	4711.38	4713.23	4713.89	4719.45	4730.42	4743.91	4746.32	4745.36	4742.01	4743.01
26	4708.40	4710.26	4711.41	4713.26	4713.90	4719.87	4730.67	4744.13	4745.86	4745.40	4742.01	4743.05
27	4708.50	4710.31	4711.45	4713.29	4713.90	4720.13	4730.99	4744.35	4745.44	4745.40	4742.04	4743.06
28	4708.62	4710.40	4711.54	4713.31	4713.95	4720.47	4731.31	4744.66	4745.73	4745.40	4742.02	4743.05
29	4708.67	4710.50	4711.64	4713.37	---	4720.87	4731.93	4744.96	4746.11	4745.44	4742.01	4743.04
30	4708.87	4710.45	4711.74	4713.44	---	4721.15	4732.68	4745.27	4746.51	4745.47	4742.02	4743.02
31	4708.95	---	4711.94	4713.46	---	4721.43	---	4745.57	---	4745.50	4742.03	---
MEAN	4707.53	4709.81	4711.05	4712.96	4713.68	4716.50	4726.74	4740.54	4746.17	4745.38	4744.14	4742.41
MAX	4708.95	4710.50	4711.94	4713.46	4713.95	4721.43	4732.68	4745.57	4746.51	4746.59	4745.75	4743.06
MIN	4706.28	4709.01	4710.48	4712.18	4713.47	4713.97	4721.76	4733.18	4745.44	4745.01	4742.01	4741.94
CAL YR 1984	MEAN	4704.40	MAX	4716.40	MIN	4672.81						
WTR YR 1985	MEAN	4726.46	MAX	4746.59	MIN	4706.28						

## RIO GRANDE BASIN

08382830 PECOS RIVER BELOW SANTA ROSA DAM, NM

LOCATION.--Lat 35°01'27", long 104°41'20", Guadalupe County, Hydrologic Unit 13060001, in Jose Perea Grant, on right bank, 0.2 mi downstream from Santa Rosa Dam, 5.7 mi north of Santa Rosa, and at mile 757.0.

DRAINAGE AREA.--2,430 mi<sup>2</sup>, 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. 5, 6 and Jan. 2, 3, 11, 12, 30, 31. Records good except for estimated daily discharges, which are poor. Flow completely regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions and groundwater withdrawals for irrigation of about 12,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--5 years, 81.2 ft<sup>3</sup>/s, 58,830 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft<sup>3</sup>/s, June 26, 1980, gage height, about 5.77 ft, present datum; no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 887 ft<sup>3</sup>/s, Aug. 22; no flow at times.

DISCHARGE, IN 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	.25	.53	.01	.01	2.4	5.5	.44	1.2	2.6	206	1.1	.38
2	.14	.55	.02	.01	2.3	4.2	.51	1.2	2.7	448	1.1	.41
3	.28	.53	.01	.01	1.9	3.8	.56	1.2	297	400	1.1	.45
4	.14	.53	.01	.01	1.4	5.9	.63	1.1	771	399	1.1	.53
5	.21	.53	.01	.02	3.3	7.1	.58	1.2	776	399	1.1	.49
6	.20	.58	.02	.04	5.0	5.9	.59	1.2	810	398	1.2	.52
7	.20	.62	.03	.02	5.6	5.6	.60	1.2	770	398	1.6	.59
8	.26	.57	.04	.04	6.2	5.3	.59	1.4	689	398	.30	.59
9	.21	.46	.01	.03	6.4	4.6	.66	1.5	689	247	.23	.59
10	.26	.03	.01	1.2	6.6	4.5	.66	1.5	557	20	.21	.70
11	.23	.01	.03	1.2	6.8	4.2	.66	1.3	336	14	.21	.74
12	.22	.00	.04	1.3	7.6	6.4	.72	1.5	244	3.7	.26	.76
13	.31	.00	.02	1.4	6.3	7.0	.84	1.4	378	.74	.20	.81
14	.26	.01	.14	1.3	4.3	6.6	.89	1.4	473	.74	130	.81
15	.41	.02	.05	1.4	6.5	5.9	.97	1.5	528	.74	492	.81
16	.48	.04	3.5	1.4	8.4	5.6	.97	231	529	.74	755	.80
17	.12	.04	.00	1.7	8.7	5.5	1.0	313	527	.74	797	.28
18	.28	.05	.01	1.6	9.0	5.6	.87	.57	539	.71	797	.13
19	.21	.04	.06	1.8	6.5	7.8	.99	.47	545	.66	792	.81
20	.21	.02	.62	1.7	3.9	6.9	.97	1.6	475	.74	728	.32
21	.21	.01	.21	1.8	3.9	.76	1.0	3.0	232	.74	629	.33
22	.21	.01	.14	2.0	3.6	.52	.96	2.8	97	.74	887	.31
23	.21	.01	.04	2.1	3.4	.43	1.0	2.8	97	.74	489	.31
24	.21	.42	.04	2.1	3.0	.46	1.1	2.9	97	.74	1.1	.28
25	.34	.13	.02	2.1	6.8	.43	1.1	3.1	152	.74	1.1	.26
26	.44	.01	.01	2.0	8.0	.50	1.1	3.2	312	.78	.79	.26
27	.46	.01	.03	1.6	7.6	.50	1.0	3.4	151	.93	.41	.18
28	.46	.01	.00	5.3	7.5	.48	1.4	3.5	19	1.0	.41	.17
29	.52	.03	.02	5.0	---	.49	1.1	3.0	19	1.1	.38	.14
30	.54	.01	.04	2.8	---	.42	1.1	2.6	19	1.1	.36	.13
31	.53	---	.01	2.8	---	.41	---	2.6	---	1.1	.36	---
TOTAL	9.01	5.81	5.20	45.79	152.9	119.30	25.56	599.34	11133.3	3346.22	6510.62	13.89
MEAN	.29	.19	.17	1.48	5.46	3.85	.85	19.3	371	108	.210	.46
MAX	.54	.62	3.5	5.3	9.0	7.8	1.4	313	810	448	887	.81
MIN	.12	.00	.00	.01	1.4	.41	.44	.47	2.6	.66	.20	.13
AC-FT	18	12	10	91	303	237	51	1190	22080	6640	12910	28
CAL YR 1984	TOTAL	25067.23	MEAN 68.5	MAX 1160	MIN .00	AC-FT 49720						
WTR YR 1985	TOTAL	21966.94	MEAN 60.2	MAX 887	MIN .00	AC-FT 43570						

## 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 U.S. Highway I-40, 0.6 mi upstream from bridge on U.S. Highway I-40 (Business) in Santa Rosa, 1.9 mi upstream from El Rito Creek, and at mile 748.4.

DRAINAGE AREA.--2,650 mi<sup>2</sup>, 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. Records good. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions for irrigation of about 12,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--63 years (1906, 1913-14, 1928-79), 135 ft<sup>3</sup>/s, 97,810 acre-ft/yr, prior to completion of Santa Rosa Dam.  
6 years (1980-1985), 83.1 ft<sup>3</sup>/s, 60,210 acre-ft/yr, since completion of Santa Rosa Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft<sup>3</sup>/s, June 2, 1937, gage height, 25.7 ft, site and datum then in use, from rating curve extended above 32,000 ft<sup>3</sup>/s; minimum, 0.28 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s, by comparison with 1904 flood.  
Since completion of Santa Rosa Dam in 1980, maximum discharge, 7,050 ft<sup>3</sup>/s, Aug. 11, 1981, gage height, 6.56 ft; minimum daily, 2.0 ft<sup>3</sup>/s, July 23-25, 31, and Aug. 1, 12, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,030 ft<sup>3</sup>/s, June 6, gage height, 2.56 ft; minimum daily discharge, 2.0 ft<sup>3</sup>/s, July 23-25, 31, and Aug. 1, 12.

DISCHARGE, IN 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	4.2	5.8	5.8	8.7	8.3	7.3	5.1	7.3	35	127	2.0	7.3
2	3.8	5.8	5.8	6.0	8.2	6.1	5.1	7.3	35	410	3.0	7.3
3	5.1	5.8	5.8	5.9	7.5	4.9	5.8	7.0	234	369	2.9	7.3
4	6.2	5.8	5.8	7.1	7.3	4.3	5.6	6.5	871	365	2.7	7.3
5	4.7	5.8	5.8	7.0	5.8	6.4	5.5	6.5	891	362	2.4	7.6
6	4.7	5.8	5.8	7.3	9.1	8.7	5.8	6.5	888	362	2.4	7.3
7	4.2	7.5	5.8	7.1	12	7.9	5.8	6.5	876	361	4.3	7.3
8	4.2	6.3	5.8	6.7	13	7.3	5.8	6.5	731	356	5.1	7.3
9	4.2	6.7	5.8	7.3	13	7.3	6.2	6.5	724	283	2.8	7.6
10	4.2	6.5	5.8	7.3	13	6.5	7.3	6.3	580	30	2.4	8.1
11	5.0	6.5	5.8	11	13	5.8	7.1	5.8	373	26	2.3	8.1
12	5.3	6.5	5.8	14	13	5.8	6.5	5.8	214	23	2.0	8.1
13	5.3	6.5	5.9	14	11	13	6.7	5.8	350	8.4	2.1	8.1
14	4.7	6.2	6.5	13	5.1	13	7.3	6.3	442	4.2	59	7.9
15	9.5	5.8	6.5	12	3.7	13	7.3	7.3	508	3.3	431	7.5
16	9.7	5.4	7.2	12	5.7	13	7.0	129	510	2.9	653	14
17	7.0	5.1	9.1	12	6.8	12	6.5	393	510	2.7	748	9.6
18	6.5	5.1	9.3	12	7.3	10	6.2	34	519	2.4	724	8.9
19	6.5	5.1	8.5	12	8.7	13	6.8	27	534	2.3	724	11
20	6.4	5.1	8.3	12	5.8	22	6.5	24	484	2.8	661	9.7
21	7.0	5.1	9.1	11	4.3	14	6.5	42	270	2.8	572	6.7
22	5.9	5.1	8.9	9.3	3.9	8.0	6.5	42	98	2.3	911	5.1
23	5.8	5.1	7.4	8.9	3.9	6.5	6.5	43	96	2.0	645	5.1
24	5.8	13	7.3	8.9	3.9	6.2	6.5	42	93	2.0	30	5.1
25	5.8	8.9	7.3	8.9	3.1	5.8	6.5	42	121	2.0	20	5.1
26	5.8	7.0	7.3	11	6.1	5.2	6.5	46	258	2.7	16	5.1
27	5.8	6.2	7.3	10	7.3	4.5	6.5	46	218	2.9	13	5.1
28	5.8	5.5	7.8	8.7	7.3	4.5	14	45	29	2.4	8.9	5.1
29	5.8	5.8	7.6	19	---	4.7	15	41	27	2.4	8.1	5.1
30	5.8	5.8	7.4	13	---	5.1	7.9	36	25	2.2	8.1	5.1
31	5.8	---	8.0	9.3	---	5.1	---	35	---	2.0	7.9	---
TOTAL	176.5	186.6	216.3	312.4	217.1	256.9	208.3	1164.9	11544	3128.7	6276.4	219.9
MEAN	5.69	6.22	6.98	10.1	7.75	8.29	6.94	37.6	385	101	202	7.33
MAX	9.7	13	9.3	19	13	22	15	393	891	410	911	14
MIN	3.8	5.1	5.8	5.9	3.1	4.3	5.1	5.8	25	2.0	2.0	5.1
AC-FT	350	370	429	620	431	510	413	2310	22900	6210	12450	436
CAL YR 1984	TOTAL	27129.5	MEAN	74.1	MAX	1080	MIN	2.4	AC-FT	53810		
WTR YR 1985	TOTAL	23908.0	MEAN	65.5	MAX	911	MIN	2.0	AC-FT	47420		



08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued

## WATER-QUALITY RECORDS

LOCATION.--Samples collected 0.6 mi downstream from discharge station.

PERIOD OF RECORD.--Water years 1905-07, 1959 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1985 (discontinued).

WATER TEMPERATURES: October 1958 to September 1985 (discontinued).

SUSPENDED-SEDIMENT DISCHARGES: October 1958 to September 1985 (discontinued).

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,170 microsiemens Oct. 21, 1982; minimum daily, 173 microsiemens May 22, 1973.

WATER TEMPERATURES: Maximum daily, 38.0°C May 11, 1970; minimum daily, 0.0°C on several days during most winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 31,400 mg/L Aug. 18, 1961; minimum daily mean, 0 mg/L several days 1982-85.

SEDIMENT LOADS: Maximum daily, 344,000 tons July 30, 1971; minimum daily, 0 ton several days 1982-85.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,040 microsiemens Sept. 29; minimum daily, 346 microsiemens June 10.

WATER TEMPERATURES: Maximum daily, 28.0°C June 23, July 16; minimum daily, 0.0°C Jan. 31, Feb. 1.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 419 mg/L May 17; minimum daily mean, 0 mg/L Oct. 12, 14, Sept. 13, 17.

SEDIMENT LOADS: Maximum daily, 879 tons June 4; minimum daily, 0 ton Oct. 12, 14, Sept. 13, 17.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 15...	1600	5.8	2800	2610	8.2	7.8	12.5	14.0	9.2	1600	1500	530
JAN 08...	1400	6.5	2600	--	8.1	--	11.0	12.0	10.3	--	--	--
MAR 18...	1600	9.8	1580	1750	7.9	7.9	23.5	21.5	9.2	1000	930	340
MAY 14...	1530	5.8	2700	2500	8.0	7.9	23.0	26.0	7.3	1600	1500	530
JUL 10...	1705	28	975	893	7.9	8.1	25.0	28.0	7.0	480	370	160
SEP 19...	1045	8.1	2190	--	7.9	--	--	21.0	8.9	--	--	--

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)	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)
NOV 15...	68	50	.6	2.1	1600	60	.60	15	2400
JAN 08...	--	--	--	--	--	--	--	--	--
MAR 18...	45	38	.5	2.4	920	36	.50	7.8	1500
MAY 14...	67	51	.6	1.7	1500	61	.60	14	2300
JUL 10...	19	16	.3	1.8	340	14	.30	9.0	620
SEP 19...	--	--	--	--	--	--	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 15...	1600	100	40
MAR 18...	1600	70	14
MAY 14...	1530	90	20
JUL 10...	1705	40	5

08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued

## WATER-QUALITY RECORDS

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM (70335)
OCT										
17...	1420	6.5	18.0	39	.68	39	80	100	--	--
NOV										
15...	1600	5.8	14.0	20	.31	57	81	98	100	--
JAN										
08...	1400	6.5	12.0	17	.30	50	74	93	100	--
MAR										
18...	1600	9.8	21.5	31	.82	83	96	100	--	--
MAY										
17...	0815	439	14.0	284	337	93	97	99	99	100
JUN										
04...	1605	1000	15.5	614	1660	82	97	100	--	--
JUL										
10...	1705	28	28.0	15	1.1	64	78	89	100	--
SEP										
19...	1045	8.1	21.0	23	.50	84	91	96	100	--
19...	1830	91	20.0	1220	300	99	100	--	--	--

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2750	2820	2770	2670	2060	1920	2440	2280	1010	1140	2410	2750
2	2760	2810	2720	2660	2220	1920	2460	2330	1010	488	2380	2880
3	2810	2840	2740	2710	2190	2290	2480	2380	997	409	2310	2920
4	2740	2840	2720	2710	2190	2330	2470	2370	503	409	2360	2910
5	2840	2930	2770	2740	2320	2270	2490	2380	427	406	2440	2900
6	2810	2810	2740	2770	2380	1970	2480	2390	444	402	2440	2890
7	2830	2830	2750	2450	1980	1950	2490	2310	409	403	2490	2910
8	2840	2820	2780	2640	1810	2070	2480	2330	432	404	2370	2950
9	2870	2850	2800	2670	1810	2090	2510	2150	386	403	2240	3020
10	2810	2840	2780	2690	1780	2150	2460	2320	346	904	2320	3000
11	2870	2840	2810	2820	1800	2210	2440	2400	367	1060	2370	2990
12	2880	2810	2800	2770	1790	2260	2420	2430	442	1100	2500	2950
13	2870	2810	2800	2770	1810	2050	2460	2420	438	1480	2330	2560
14	2850	2790	2690	2220	1870	1800	2450	2450	375	1510	2580	2780
15	2870	2820	2680	2240	2210	1840	2410	2420	362	2190	632	2850
16	2650	2630	2730	2180	2200	1660	2410	2410	356	2350	391	2670
17	2550	2730	2730	2160	1920	1820	2420	677	359	2440	361	2600
18	2590	2730	2740	2180	1920	1900	2390	1080	368	2530	403	2620
19	2460	2790	2750	2180	1900	1970	2400	1330	362	2590	418	2660
20	2580	2780	2670	2220	1990	1500	2420	1340	370	2600	411	2450
21	2550	2830	2750	2230	2260	1550	2440	1010	380	2630	414	2540
22	2610	2810	2760	2210	2420	1900	2460	978	546	1890	413	2640
23	2660	2500	2750	2250	2470	2130	2450	981	532	2380	416	2870
24	2600	2420	2740	2220	2130	2290	2460	962	534	2510	1180	2880
25	2670	2540	2760	2240	2260	2390	2470	960	536	2480	1190	2970
26	2650	2520	2770	2280	2280	2380	2470	945	437	2460	1830	2950
27	2730	2620	2800	2350	2300	2450	2450	941	388	2390	1900	2990
28	2700	2710	2620	2280	1940	2520	1900	935	940	2430	2280	2990
29	2770	2750	2770	2080	---	2500	1730	939	1050	2410	2410	3040
30	2760	2730	2520	1810	---	2470	2050	1000	1040	2420	2630	3010
31	2810	---	2650	1970	---	2490	---	1010	---	2450	2690	---
MEAN	2730	2750	2740	2400	2080	2100	2400	1710	538	1670	1730	2840
WTR YR 1985	MEAN	2140	MAX	3040	MIN	346						

08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	11.0	4.0	5.0	.0	9.0	8.0	23.0	17.5	19.0	20.0	20.0
2	15.0	10.0	6.0	1.0	1.0	8.0	10.0	16.5	21.0	18.0	20.0	20.0
3	16.0	10.0	3.0	1.0	2.0	8.0	11.0	14.5	19.0	18.0	22.0	18.0
4	13.0	13.0	4.0	5.0	2.5	13.0	12.5	16.0	16.0	19.5	22.0	27.0
5	13.0	9.0	2.0	3.5	1.0	5.5	13.0	18.0	15.0	19.0	19.0	18.0
6	12.0	9.0	1.0	5.0	1.5	8.0	12.0	15.5	15.5	19.0	20.0	17.0
7	15.0	10.0	5.0	4.5	2.5	10.0	10.0	16.5	17.0	21.0	20.0	20.0
8	13.0	10.0	8.0	5.0	3.5	9.0	14.0	17.0	17.5	19.0	19.0	20.0
9	14.0	9.0	9.0	5.0	4.5	10.0	10.0	18.0	17.5	19.0	20.0	16.0
10	14.0	5.0	6.5	7.0	6.0	16.0	12.0	18.0	18.5	21.0	19.0	16.0
11	14.0	10.0	9.0	4.0	3.0	13.0	14.0	12.5	16.5	18.0	20.0	16.0
12	14.0	9.0	8.0	5.0	4.5	10.0	15.0	12.5	16.0	19.0	19.0	16.0
13	13.0	9.0	5.5	10.0	6.0	8.0	13.0	12.5	17.0	18.0	19.0	15.0
14	15.0	10.0	2.0	9.0	4.5	7.0	15.0	12.0	16.5	22.0	19.0	22.0
15	11.0	8.0	4.0	4.0	5.0	9.5	15.0	13.0	22.0	18.0	18.0	18.0
16	7.0	7.0	4.5	4.5	6.0	8.0	15.5	14.0	18.0	28.0	18.0	17.0
17	8.0	9.0	3.0	4.0	8.0	10.0	14.5	15.0	18.5	19.0	19.0	16.0
18	10.0	10.0	5.0	5.0	8.0	8.5	16.5	13.5	17.0	19.0	19.0	16.0
19	8.0	6.0	5.0	5.0	7.0	10.0	13.0	17.0	18.0	19.0	18.0	17.0
20	9.0	8.0	7.0	2.0	10.0	8.0	12.0	15.0	17.0	22.0	19.0	17.0
21	9.5	8.0	4.0	1.5	9.0	7.0	16.0	15.5	22.0	20.0	19.0	17.0
22	9.0	7.0	3.0	1.0	10.0	10.0	10.0	15.0	18.5	19.0	19.0	17.0
23	8.0	7.0	9.0	3.0	8.0	6.0	14.0	14.0	28.0	18.0	19.0	15.0
24	7.5	8.5	5.0	5.0	7.0	13.0	15.0	17.0	20.5	20.0	21.0	13.0
25	8.0	8.5	6.0	5.5	7.0	9.0	13.0	19.0	20.0	19.0	21.0	13.0
26	7.0	5.0	6.0	9.0	9.0	13.0	16.0	27.0	18.5	19.0	18.0	13.0
27	9.0	4.0	7.0	7.0	6.0	9.0	13.0	20.0	18.0	20.0	22.0	13.0
28	17.0	4.0	9.0	5.0	7.0	11.0	9.0	18.0	19.0	21.0	18.0	11.0
29	11.0	3.5	8.5	4.0	---	10.0	11.0	17.5	16.5	19.0	18.0	12.0
30	10.5	6.0	9.0	5.0	---	5.5	12.5	18.0	18.0	27.0	18.0	9.0
31	12.0	---	7.5	.0	---	6.0	---	18.5	---	19.0	19.0	---
MEAN	11.5	8.0	5.5	4.5	5.5	9.5	13.0	16.5	18.5	20.0	19.5	16.5
WTR YR 1985	MEAN	12.5	MAX	28.0	MIN	.0						

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8	.09	3	.05	10	.16	9	.21	21	.47	10	.20
2	4	.04	12	.19	11	.17	8	.13	22	.49	7	.12
3	8	.11	9	.14	5	.08	11	.18	15	.30	8	.11
4	5	.08	8	.13	18	.28	6	.12	11	.22	6	.07
5	1	.01	4	.06	10	.16	18	.34	36	.56	76	1.3
6	6	.08	5	.08	20	.31	6	.12	71	1.7	19	.45
7	4	.05	3	.06	12	.19	8	.15	64	2.1	10	.21
8	2	.02	5	.09	7	.11	13	.24	93	3.3	9	.18
9	3	.03	6	.11	7	.11	8	.16	36	1.3	9	.18
10	1	.01	14	.25	22	.34	5	.10	47	1.6	6	.11
11	1	.01	4	.07	6	.09	4	.12	57	2.0	4	.06
12	0	.00	6	.11	4	.06	6	.23	28	.98	7	.11
13	1	.01	7	.12	3	.05	9	.34	38	1.1	7	.25
14	0	.00	10	.17	25	.44	9	.32	48	.66	6	.21
15	1	.03	12	.19	11	.19	8	.26	7	.07	19	.67
16	6	.16	9	.13	9	.17	6	.19	15	.23	14	.49
17	25	.47	7	.10	9	.22	5	.16	56	1.0	9	.29
18	5	.09	6	.08	13	.33	7	.23	50	.99	26	.70
19	7	.12	8	.11	7	.16	7	.23	55	1.3	14	.49
20	13	.22	20	.28	17	.38	21	.68	26	.41	38	2.3
21	8	.15	5	.07	19	.47	17	.50	4	.05	31	1.2
22	6	.10	10	.14	5	.12	7	.18	47	.49	18	.39
23	7	.11	8	.11	5	.10	13	.31	47	.49	21	.37
24	16	.25	12	.42	39	.77	8	.19	63	.66	41	.69
25	6	.09	5	.12	5	.10	5	.12	14	.12	46	.72
26	7	.11	5	.09	14	.28	5	.15	12	.20	51	.72
27	5	.08	8	.13	4	.08	5	.14	38	.75	54	.66
28	3	.05	4	.06	21	.44	29	.68	8	.16	49	.60
29	1	.02	6	.09	5	.10	15	.77	---	---	14	.18
30	5	.08	3	.05	5	.10	8	.28	---	---	21	.29
31	3	.05	---	---	3	.06	40	1.0	---	---	7	.10
TOTAL	---	2.72	---	3.80	---	6.62	---	8.83	---	23.70	---	14.42

## RIO GRANDE BASIN

08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued

## WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	
APRIL MAY JUNE JULY AUGUST SEPTEMBER												
1	8	.11	7	.14	9	.85	27	9.3	8	.04	2	.04
2	15	.21	4	.08	18	1.7	45	50	12	.10	2	.04
3	16	.25	3	.06	84	101	34	34	7	.05	3	.06
4	48	.73	5	.09	340	879	45	44	17	.12	2	.04
5	17	.25	5	.09	148	356	50	49	8	.05	7	.14
6	23	.36	4	.07	99	237	42	41	6	.04	1	.02
7	14	.22	3	.05	75	177	57	56	9	.10	11	.22
8	13	.20	5	.09	69	136	82	79	18	.25	14	.28
9	6	.10	30	.53	96	188	48	37	20	.15	1	.02
10	13	.26	15	.26	63	99	23	1.9	4	.03	3	.07
11	34	.65	7	.11	43	43	39	2.7	4	.02	2	.04
12	8	.14	9	.14	127	73	44	2.7	6	.03	4	.09
13	4	.07	10	.16	155	146	59	1.3	10	.06	0	.00
14	11	.22	12	.20	72	86	71	.81	24	.10	2	.04
15	5	.10	12	.24	58	80	11	.10	77	103	5	.10
16	34	.64	158	142	41	56	5	.04	65	115	9	.34
17	8	.14	419	502	26	36	6	.04	49	99	0	.00
18	17	.28	26	2.4	54	76	8	.05	40	78	2	.05
19	34	.62	11	.80	36	52	9	.06	45	88	150	8.4
20	6	.11	12	.78	30	39	9	.07	35	62	26	.68
21	7	.12	27	3.1	28	20	7	.05	43	66	7	.13
22	14	.25	20	2.3	26	6.9	10	.06	42	103	7	.10
23	5	.09	13	1.5	20	5.2	14	.08	43	75	6	.08
24	40	.70	14	1.6	22	5.5	6	.03	24	1.9	7	.10
25	11	.19	8	.91	17	5.6	13	.07	23	1.2	4	.06
26	9	.16	23	2.9	28	20	25	.18	30	1.3	5	.07
27	9	.16	7	.87	37	22	3	.02	26	.91	5	.07
28	234	8.8	7	.85	27	2.1	6	.04	5	.12	6	.08
29	67	2.7	7	.77	27	2.0	20	.13	6	.13	3	.04
30	36	.77	7	.68	26	1.8	4	.02	4	.09	3	.04
31	---	---	8	.76	---	---	27	.15	3	.06	---	---
TOTAL	---	19.60	---	666.53	---	2953.65	---	409.90	---	805.75	---	11.44
TOTAL LOAD FOR YEAR:		4926.96	TONS.									

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 mi<sup>2</sup>, approximately (contributing area).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to current year.

REVISED RECORDS.--WSP 1512: 1939.

GAGE.--Water-stage recorder 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: Oct. 17, 18, Dec. 5, 6, Jan. 2, 3, 12, 13, 21, 22, July 31, and Aug. 1, 24-27. Records good. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions for irrigation of about 12,500 acres, 1959 determination, upstream from station. Discharge represents inflow to Lake Sumner.

AVERAGE DISCHARGE.--41 years (1939-79), 209 ft<sup>3</sup>/s, 151,400 acre-ft/yr, prior to completion of Santa Rosa Dam. 6 years (1980-85), 166 ft<sup>3</sup>/s, 120,300 acre-ft/yr, since completion of Santa Rosa Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,600 ft<sup>3</sup>/s, Sept. 1, 1942, gage height, 17.00 ft, from rating curve extended above 7,400 ft<sup>3</sup>/s on basis of flow "at Santa Rosa"; minimum, 11 ft<sup>3</sup>/s, Jan. 31, 1951. Since completion of Santa Rosa Dam in 1980, maximum discharge, 10,900 ft<sup>3</sup>/s, June 10, 1982, gage height, 7.44 ft; minimum, 41 ft<sup>3</sup>/s, Aug. 13, 14, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1886 occurred June 2, 1937, when peak at Santa Rosa was 55,200 ft<sup>3</sup>/s and peak inflow to Lake Sumner was about 75,000 ft<sup>3</sup>/s. Flood of July 24, 1895, was reported as "highest in 10 years." Other major floods occurred on June 9, 1903, Sept. 30, 1904, and May 1, 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,290 ft<sup>3</sup>/s, Aug. 15, gage height, 5.00 ft; minimum, 41 ft<sup>3</sup>/s, Aug. 13, 14.

DISCHARGE, IN 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	77	76	84	85	115	90	84	83	73	69	61	59
2	74	77	85	91	151	90	84	81	75	291	59	61
3	78	77	84	94	147	86	83	79	73	488	64	63
4	83	75	88	93	128	85	82	78	571	465	59	66
5	73	76	88	93	94	86	81	71	905	458	105	63
6	72	77	87	87	101	90	82	69	778	451	62	63
7	73	76	87	87	94	89	82	70	890	450	62	65
8	71	76	87	87	95	87	84	68	731	453	63	65
9	71	74	84	87	96	88	84	67	716	454	58	64
10	71	75	83	87	96	91	87	66	704	256	68	65
11	71	81	83	86	96	89	82	64	544	92	58	68
12	73	81	82	98	96	90	80	65	298	78	54	64
13	72	81	83	98	96	93	81	62	337	70	46	65
14	73	81	96	94	95	94	88	63	442	57	51	63
15	79	76	95	95	93	92	83	63	553	55	638	68
16	221	80	90	96	91	95	80	65	564	60	638	192
17	111	85	87	94	95	93	78	483	566	55	790	77
18	84	88	88	93	96	91	76	355	600	51	809	71
19	77	82	89	89	95	92	77	120	596	48	817	105
20	77	82	103	86	95	127	74	122	572	50	830	126
21	84	81	101	91	91	105	72	169	474	64	735	98
22	83	81	89	96	91	91	73	195	235	56	834	85
23	88	82	88	93	89	85	72	111	182	54	939	78
24	98	207	87	90	91	83	72	105	146	85	321	76
25	91	140	87	89	89	83	71	100	149	76	143	73
26	82	104	87	88	88	82	69	92	200	65	109	73
27	82	91	87	90	89	81	72	84	403	65	91	70
28	78	86	89	90	91	80	149	84	157	60	85	71
29	79	85	92	91	---	83	117	82	82	96	81	80
30	78	85	87	99	---	89	93	80	75	82	78	75
31	77	---	87	92	---	85	---	73	---	71	65	---
TOTAL	2601	2618	2734	2829	2784	2785	2492	3369	12691	5225	8873	2312
MEAN	83.9	87.3	88.2	91.3	99.4	89.8	83.1	109	423	169	286	77.1
MAX	221	207	103	99	151	127	149	483	905	488	939	192
MIN	71	74	82	85	88	80	69	62	73	48	46	59
AC-FT	5160	5190	5420	5610	5520	5520	4940	6680	25170	10360	17600	4590
CAL YR 1984	TOTAL	62667	MEAN 171	MAX 2390	MIN 58	AC-FT 124300						
WTR YR 1985	TOTAL	51313	MEAN 141	MAX 939	MIN 46	AC-FT 101800						

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937-66, 1972 to current year.

CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV 16...	1130	80	3080	2920	8.1	8.1	8.5	8.0	10.4	30
JAN 08...	0915	86	2860	--	8.2	--	6.5	4.0	11.4	<10
MAR 19...	0930	89	2520	2790	8.2	7.8	12.0	10.0	9.4	54
MAY 14...	1130	65	3500	3000	8.1	7.8	22.5	20.0	8.1	22
JUL 10...	0900	298	900	900	8.1	8.3	28.0	22.0	8.2	12
SEP 17...	1545	76	2680	--	7.9	--	31.0	27.0	7.0	13

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (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 IT-FLD AS HCO3) (99440)	CAR- BONATE IT-FLD AS CO3) (99445)
NOV 16...	1800	1700	610	72	100	1	2.2	150	.000
JAN 08...	--	--	--	--	--	--	--	--	--
MAR 19...	1700	1500	550	70	100	1	2.3	130	6.0
MAY 14...	1800	1700	600	75	98	1	2.3	120	7.0
JUL 10...	450	350	150	18	24	.5	1.6	110	6.0
SEP 17...	--	--	--	--	--	--	--	--	--

DATE	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L CAC03) (99430)	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 DIS- TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
NOV 16...	130	130	1700	150	.60	15	2700	<.10	<.10
JAN 08...	--	--	--	--	--	--	--	<.10	.10
MAR 19...	--	120	1500	140	.70	14	2500	<.10	<.10
MAY 14...	110	110	1700	150	.70	14	2700	<.10	<.10
JUL 10...	100	100	310	24	.30	9.5	600	.10	.11
SEP 17...	--	--	--	--	--	--	--	<.10	<.10

DATE	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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHATE (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, PENDE- D (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 16...	.200	.20	--	.010	.010	1.1	23	5.0	90
JAN 08...	.280	--	--	.020	<.010	.60	19	4.4	88
MAR 19...	.210	.00	--	.010	<.010	.50	13	3.1	91
MAY 14...	.030	.47	--	.010	<.010	2.5	41	7.2	96
JUL 10...	.110	.09	.30	.060	.020	3.7	237	191	30
SEP 17...	.320	.28	--	.080	<.010	2.1	2450	503	5

08383500 PEGOS RIVER NEAR PUERTO DE LUNA, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC		BORON,	CADMIUM	CADMIUM	CHRO-	CHRO-	COPPER,	COPPER,
		TOTAL	DIS-	DIS-	TOTAL	DIS-	M-IUM,	M-IUM,	TOTAL	DIS-
		(UG/L	SOLVED	SOLVED	RECOV-	SOLVED	ERABLE	ERABLE	RECOV-	SOLVED
		(01002)	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
		AS AS)	AS AS)	AS B)	AS CD)	AS CD)	AS CR)	AS CR)	AS CU)	AS CU)
		(01000)	(01000)	(01020)	(01027)	(01025)	(01034)	(01030)	(01042)	(01040)
NOV 16...	1130	<1	<1	120	<1	<1	10	<10	7	1
MAR 19...	0930	--	--	110	--	--	--	--	--	--
MAY 14...	1130	--	--	110	--	--	--	--	--	--
JUL 10...	0900	3	2	30	<1	<1	<10	<10	4	1

DATE	IRON,	LEAD,		MERCURY			SELE-	ZINC,	
	DIS-	TOTAL	LEAD,	TOTAL	MERCURY		NIUM,	TOTAL	ZINC,
	SOLVED	RECOV-	DIS-	RECOV-	DIS-	SELE-	NIUM,	RECOV-	DIS-
	(UG/L	ERABLE	SOLVED	ERABLE	SOLVED	TOTAL	SOLVED	ERABLE	SOLVED
	(AS FE)	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
	(01046)	AS PB)	AS PB)	AS HG)	AS HG)	AS SE)	AS SE)	AS ZN)	AS ZN)
NOV									
16...	50	4	1	<.1	<.1	<1	<1	20	20
MAR									
19...	50	--	--	--	--	--	--	--	--
MAY									
14...	30	--	--	--	--	--	--	--	--
JUL									
10...	3	<1	2	<.1	<.1	<1	<1	30	13

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	NITRO-		NITRO-		PHOS-		ARSENIC		CADMIUM		CHRO-	
		GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	GEN, NH4 IN BOT. MAT. (MG/KG AS N) (00611)	GEN, NH4 IN BOT. MAT. (MG/KG AS P) (00668)	TOTAL IN BOT. MAT. (MG/KG AS P) (01003)	TOTAL IN BOT. MAT. (MG/KG AS P) (01003)	TOTAL IN BOT. MAT. (MG/KG AS P) (01003)	TOTAL IN BOT. MAT. (MG/KG AS P) (01003)	TOTAL IN BOT. MAT. (MG/KG AS P) (01003)	TOTAL IN BOT. MAT. (MG/KG AS P) (01003)	TOTAL IN BOT. MAT. (MG/KG AS P) (01003)	TOTAL IN BOT. MAT. (MG/KG AS P) (01003)	TOTAL IN BOT. MAT. (MG/KG AS P) (01003)
NOV 16...	1130	18	5.0	35	1	<1	4						
		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 AS HG) (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)					
NOV 16...	<10	2	810	10	250	<.10	4						

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	GROSS		GROSS		GROSS		GROSS		RADIUM		URANIUM	
		ALPHA, DIS- SOLVED (UG/L U-NAT) (80030)	ALPHA, DIS- SOLVED (UG/L U-NAT) (80040)	BETA, DIS- SOLVED (PCI/L CS-137) (03515)	BETA, DIS- SOLVED (PCI/L CS-137) (03516)	BETA, DIS- SOLVED (PCI/L YT-90) (80050)	BETA, DIS- SOLVED (PCI/L YT-90) (80060)	BETA, DIS- SOLVED (PCI/L YT-90) (80060)	BETA, DIS- SOLVED (PCI/L YT-90) (80060)	226, DIS- SOLVED (PCI/L METHOD (UG/L AS U) (22703)	226, DIS- SOLVED (PCI/L METHOD (UG/L AS U) (22703)	226, DIS- SOLVED (PCI/L METHOD (UG/L AS U) (22703)	226, DIS- SOLVED (PCI/L METHOD (UG/L AS U) (22703)
NOV 16...	1130	<56	.7	<31	1.0	<27	.8	.06	2.5				

## RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM -- Continued

## WATER-QUALITY RECORDS

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
MAR 19...	0930	--	--	--	--	--	--	--	--	--
SEP 17...	1545	<.1	<.010	<.1	<.010	<.010	<.010	<.01	<.010	<.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)
MAR 19...	--	--	--	--	--	--	--	--	--
SEP 17...	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01	<.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)
MAR 19...	--	--	--	<.01	<.01	<.01	--	--	--
SEP 17...	<.01	<.1	<.01	--	--	--	<.1	<.10	<.01

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JAN 08...	0915	0	13
MAR 19...	0930	16	0
MAY 14...	1130	2	4
JUL 10...	0900	26	100
SEP 17...	1545	290	5200



## 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 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--December 1938 to September 1965 (monthend elevations and contents), October 1965 to current year. Monthend elevations September 1937 to November 1938 published in reports of Pecos River Commission. Elevations and contents May 27, 1937 to June 10, 1937 in WSP 842. Prior to October 1974, published as "Alamogordo Reservoir".

REVISED RECORDS.--WSP 1732: 1939-54 (contents). WSP 1923: 1939-53(M).

GAGE.--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.--Reservoir is formed by earthfill dam, completed and storage began in August 1937. Capacity, 101,600 acre-ft 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.--Elevation record and capacity table (dated November 1973) 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, 46,200 acre-ft, June 6, elevation, 4,259.10 ft; minimum, 8,680 acre-ft, Sept. 14-21, elevation, 4,235.70 ft.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21040	22120	27260	32830	37960	42330	42830	41830	43340	27630	31570	10020
2	21040	22280	27450	32830	38200	42590	42830	41830	43340	27820	31370	9930
3	20890	22440	27630	33040	38200	42830	42830	41830	43340	28010	31370	9680
4	21040	22600	27630	33260	38200	42830	42830	41580	43340	28780	31370	9680
5	21040	22600	27820	33410	38430	42830	42830	41580	44370	29560	31370	9600
6	21040	22920	28200	33690	38670	43090	42580	41580	46200	29950	31160	9600
7	21040	23080	28390	33690	38910	43090	42580	41580	45940	30760	30960	9600
8	21040	23240	28580	33900	38910	43340	42580	41580	45940	31370	30960	9520
9	20890	23240	28580	33900	39140	43340	42850	41580	45150	31990	30960	9280
10	20890	23410	28780	34120	39380	43600	42850	41830	44890	32200	29580	9210
11	20890	23570	28970	33340	39620	43850	42850	41830	44110	32830	26890	9130
12	20890	23740	28970	34560	39620	43850	42850	41080	43340	32830	25100	8900
13	20890	23740	29160	34560	39860	43600	42850	41080	42080	32830	23410	8820
14	20890	23900	29360	34780	40110	43600	42330	40840	40840	32830	21040	8680
15	20890	24240	29750	35000	40110	43600	42330	40590	39620	32830	19590	8680
16	20890	24240	29950	35220	40350	43600	42080	40590	38670	32830	18890	8680
17	21040	24410	30150	35440	40590	43340	42080	40350	37960	32620	18490	8680
18	21040	24580	30350	35670	40590	43340	42080	41580	36800	32200	18080	8680
19	21040	24760	30350	35670	40840	43340	42080	41830	36120	32000	17950	8680
20	21040	24530	30760	35890	40840	43340	42080	41830	35440	31780	17820	8680
21	21040	25100	30960	36120	41330	43600	42080	41830	34560	31780	17700	8680
22	21190	25280	31160	36120	41330	43600	41830	42830	33470	31780	17320	9520
23	21190	25450	31370	36350	41580	43340	41830	43090	31780	31780	17320	9520
24	21350	25810	31370	36570	41580	43340	41580	43090	30350	31580	17320	9520
25	21500	26160	31570	36570	41830	43340	41580	43340	28580	31570	15630	9680
26	21810	26520	31780	36800	41830	43340	41580	43600	26890	31570	13940	9680
27	21810	26710	31990	37030	42080	43340	41580	43850	27080	31570	11910	9770
28	21960	26890	31990	37260	42330	43090	41580	44110	27820	31570	9850	9770
29	22120	26890	32200	37490	---	43090	41830	44110	27820	31570	10270	9770
30	22120	27260	32410	37730	---	43090	41830	43850	27820	31570	10270	9680
31	22120	---	32830	37960	---	43090	---	43600	---	31570	10100	---
MAX	22120	27260	32830	37960	42330	43850	42850	44110	46200	32830	31570	10020
MIN	20890	22120	27260	32830	37960	42330	41580	40350	26890	27630	9850	8680
(†)	+1080	+5140	+5570	+5130	+4370	+760	-1260	+1770	-15780	+3750	-21470	-420
CAL YR 1984	MAX	32830	MIN	9210	(†)	+13800						
WTR YR 1985	MAX	46200	MIN	8680	(†)	-11360						

(†) CHANGE IN CONTENTS, IN ACRE-FEET.

## 08384000 LAKE SUMNER NEAR FORT SUMNER, NM -- Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4247.00	4247.70	4250.70	4253.50	4255.80	4257.60	4257.80	4257.40	4258.00	4250.90	4252.90	4237.40
2	4247.00	4247.80	4250.80	4253.50	4255.90	4257.70	4257.80	4257.40	4258.00	4251.00	4252.80	4237.30
3	4246.90	4247.90	4250.90	4253.60	4255.90	4257.80	4257.80	4257.40	4258.00	4251.10	4252.80	4237.00
4	4247.00	4248.00	4250.90	4253.70	4255.90	4257.80	4257.80	4257.30	4258.00	4251.50	4252.80	4237.00
5	4247.00	4248.00	4251.00	4253.80	4256.00	4257.80	4257.80	4257.30	4258.40	4251.90	4252.80	4236.90
6	4247.00	4248.20	4251.20	4253.90	4256.10	4257.90	4257.70	4257.30	4259.10	4252.10	4252.70	4236.90
7	4247.00	4248.30	4251.30	4253.90	4256.20	4257.90	4257.70	4257.30	4259.00	4252.50	4252.60	4236.90
8	4247.00	4248.40	4251.40	4254.00	4256.20	4258.00	4257.70	4257.30	4259.00	4252.80	4252.60	4236.80
9	4246.90	4248.40	4251.40	4254.00	4256.30	4258.00	4257.70	4257.30	4258.70	4253.10	4252.60	4236.50
10	4246.90	4248.50	4251.50	4254.10	4256.40	4258.10	4257.70	4257.20	4258.60	4253.20	4251.40	4236.40
11	4246.90	4248.60	4251.60	4254.20	4256.50	4258.20	4257.70	4257.20	4258.30	4253.50	4250.50	4236.30
12	4246.90	4248.70	4251.60	4254.30	4256.50	4258.20	4257.70	4257.10	4258.00	4253.50	4249.50	4236.00
13	4246.90	4248.70	4251.70	4254.30	4256.60	4258.10	4257.70	4257.10	4257.50	4253.50	4248.50	4235.80
14	4246.90	4248.80	4251.80	4254.40	4256.70	4258.10	4257.60	4257.00	4257.00	4253.50	4247.00	4235.70
15	4246.90	4249.00	4252.00	4254.50	4256.70	4258.10	4257.60	4256.90	4256.50	4253.50	4246.00	4235.70
16	4246.90	4249.00	4252.10	4254.60	4256.80	4258.10	4257.50	4256.90	4256.10	4253.50	4245.50	4235.70
17	4247.00	4249.10	4252.20	4254.70	4256.90	4258.00	4257.50	4256.80	4255.80	4253.40	4245.20	4235.70
18	4247.00	4249.20	4252.30	4254.80	4256.90	4258.00	4257.50	4257.30	4255.30	4253.20	4245.00	4235.70
19	4247.00	4249.30	4252.30	4254.80	4257.00	4258.00	4257.50	4257.40	4255.00	4253.10	4244.90	4235.70
20	4247.00	4249.40	4252.50	4254.90	4257.00	4258.00	4257.50	4257.40	4254.70	4253.00	4244.80	4235.70
21	4247.00	4249.50	4252.60	4255.00	4257.20	4258.10	4257.50	4257.40	4254.30	4253.00	4244.70	4235.70
22	4247.10	4249.60	4252.70	4255.00	4257.20	4258.10	4257.40	4257.80	4253.80	4253.00	4244.40	4236.80
23	4247.10	4249.70	4252.80	4255.10	4257.30	4258.00	4257.40	4257.90	4253.00	4253.00	4244.40	4236.80
24	4247.20	4249.90	4252.80	4255.20	4257.30	4258.00	4257.30	4257.90	4252.30	4252.90	4244.40	4236.80
25	4247.30	4250.10	4252.90	4255.20	4257.40	4258.00	4257.30	4258.00	4251.40	4252.90	4243.00	4237.00
26	4247.50	4250.30	4253.00	4255.30	4257.40	4258.00	4257.30	4258.10	4250.50	4252.90	4241.50	4237.00
27	4247.50	4250.40	4253.10	4255.40	4257.50	4258.00	4257.30	4258.20	4250.60	4252.90	4239.50	4237.10
28	4247.60	4250.50	4253.10	4255.50	4257.60	4257.90	4257.30	4258.30	4251.00	4252.90	4237.20	4237.10
29	4247.70	4250.50	4253.20	4255.60	---	4257.90	4257.40	4258.30	4251.00	4252.90	4237.70	4237.10
30	4247.70	4250.70	4253.30	4255.70	---	4257.90	4257.40	4258.20	4251.00	4252.90	4237.70	4237.00
31	4247.70	---	4253.50	4255.80	---	4257.90	---	4258.10	---	4252.90	4237.50	---
MEAN	4247.11	4249.07	4252.07	4254.59	4256.69	4257.97	4257.56	4257.50	4255.60	4252.77	4246.61	4236.52
MAX	4247.70	4250.70	4253.50	4255.80	4257.60	4258.20	4257.80	4258.30	4259.10	4253.50	4252.90	4237.40
MIN	4246.90	4247.70	4250.70	4253.50	4255.80	4257.60	4257.30	4256.80	4250.50	4250.90	4237.20	4235.70
CAL YR 1984	MEAN	4246.13	MAX	4253.50	MIN	4236.40						
WTR YR 1985	MEAN	4251.99	MAX	4259.10	MIN	4235.70						

08384500 PECOS RIVER BELOW SUMNER DAM, NM  
(National stream-quality accounting network station)

LOCATION.--Lat 34°36'15", long 104°23'14", in lot 1, sec.2, T.4 N., R.24 E., DeBaca County, Hydrologic Unit 13060003, on left bank 1,200 ft downstream from Sumner Dam, 2.9 mi upstream from Salado Creek, 4.6 mi northeast of Guadalupe, 12.2 mi northwest of Fort Sumner, and at mile 701.7.

## WATER-DISCHARGE RECORDS

DRAINAGE AREA.--4,390 mi<sup>2</sup>, 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. Records good. Flow completely regulated by Santa Rosa Lake (station 08382810) beginning April 1980 and Lake Sumner (station 08484000) 0.3 mi upstream beginning August 1937. Diversion for irrigation of about 12,500 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--23 years (1913-25, 1927-36), 236 ft<sup>3</sup>/s, 171,000 acre-ft/yr, prior to completion of Sumner Dam. 49 years (1937-85), 200 ft<sup>3</sup>/s, 144,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft<sup>3</sup>/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 ft<sup>3</sup>/s at site 1.5 mi upstream, from peak inflow to Lake Sumner.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 976 ft<sup>3</sup>/s, June 19; minimum daily, 0.13 ft<sup>3</sup>/s, Feb. 1, 3.

DISCHARGE, IN 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	89	.63	.28	.58	.13	1.3	70	100	101	103	93	102
2	100	.63	.28	.45	.14	1.3	70	100	101	103	95	102
3	100	.44	.28	.45	.13	1.1	78	100	102	103	95	103
4	100	.45	.38	.45	.34	1.1	98	99	102	103	95	104
5	81	.45	.28	.45	.50	1.1	98	98	102	103	99	103
6	71	.45	.28	.46	.52	1.1	98	98	715	103	101	104
7	71	.46	.33	.48	.55	1.1	98	98	968	103	101	105
8	71	.47	.59	.46	.64	1.1	98	99	970	103	101	105
9	71	.47	.45	.48	.70	1.1	98	99	970	103	652	105
10	70	.45	.45	.45	.79	1.1	98	100	968	103	913	105
11	70	.45	.45	.45	.65	73	98	99	968	103	913	105
12	70	.48	.45	.45	.64	99	98	99	970	103	912	105
13	70	.51	.46	.45	.65	99	98	99	975	103	912	105
14	70	.73	.44	.45	.85	99	98	99	973	103	909	105
15	70	.85	.36	.45	.57	99	82	99	973	103	906	105
16	70	.85	.29	.29	.51	99	69	99	973	103	902	102
17	71	.97	.30	.29	.62	99	69	100	971	103	889	101
18	70	.46	.28	.34	.64	99	69	99	971	103	888	94
19	70	.45	.35	.32	.65	99	69	99	976	104	893	90
20	70	.45	.50	.32	1.0	99	69	99	975	103	893	89
21	70	.45	.38	.32	.84	99	91	99	966	103	891	38
22	70	.45	.44	.38	.83	99	99	44	965	98	889	.42
23	70	.51	.44	.47	.75	99	99	.60	962	95	892	.44
24	30	1.0	.43	.45	.81	99	99	.58	963	95	896	.42
25	.28	.60	.45	.47	.79	99	101	.64	956	95	896	27
26	.37	.55	.55	.70	.80	99	103	.64	376	95	892	74
27	.32	.32	.64	.61	.94	99	101	.60	103	95	803	71
28	41	.34	.64	.44	1.2	89	100	68	103	94	214	71
29	69	.37	.70	.29	---	69	100	101	103	94	103	70
30	69	.28	.73	.33	---	68	100	101	103	95	102	70
31	67	---	.64	.21	---	69	---	101	---	94	102	---
TOTAL	2011.97	15.97	13.52	13.19	18.18	1963.4	2716	2499.06	20424	3114	18042	2461.28
MEAN	64.9	.53	.44	.43	.65	63.3	90.5	80.6	681	100	582	82.0
MAX	100	1.0	.73	.70	1.2	99	103	101	976	104	913	105
MIN	.28	.28	.28	.21	.13	1.1	69	.58	101	94	93	.42
AC-FT	3990	32	27	26	36	3890	5390	4960	40510	6180	35790	4880
CAL YR 1984	TOTAL	52478.96	MEAN 143	MAX 1050	MIN .28	AC-FT 104100						
WTR YR 1985	TOTAL	53292.57	MEAN 146	MAX 976	MIN .13	AC-FT 105700						

08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937-66, 1972 to current year.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
NOV 13...	1300	.45	2200	2110	8.1	8.0	25.0	11.0	2.0	10.0	1100	1100
JAN 11...	0930	.45	2120	2340	8.0	7.9	-6.0	1.0	2.4	11.1	1400	1300
MAY 13...	1300	99	3100	2690	8.3	7.7	26.5	18.0	8.6	8.3	1700	1600
SEP 17...	1145	101	1790	1820	7.9	8.1	31.0	21.0	55	8.2	940	830

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 IT-FLD (MG/L HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	ALKA- LITY, CARBON- ATE IT-FLD (MG/L AS CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 13...	370	53	70	.9	3.1	100	6.0	93	93	1100	100
JAN 11...	440	67	--	--	2.7	--	--	--	--	1200	110
MAY 13...	560	66	82	.9	3.1	110	11	1	110	1500	130
SEP 17...	310	40	54	.8	2.5	140	.000	120	120	870	78

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, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00671)
NOV 13...	.50	9.2	1800	1800	<.10	.160	.010	<.010
JAN 11...	.50	12	2020	--	.10	.200	.010	<.010
MAY 13...	.60	11	2450	2400	<.10	.230	.020	<.010
SEP 17...	.10	12	1580	1400	<.10	.210	--	<.010

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 13...	1300	20	<1	<100	<10	<1	<1	<1	1	50	<1
JAN 11...	0930	<10	<1	<100	<10	<1	<.00	<1	1	20	3
MAY 13...	1300	20	<1	300	<10	<1	<1	2	2	30	7
SEP 17...	1145	110	1	120	<.5	<1	<1	<3	2	55	1

08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 13...	20	80	<.1	3	2	1	<1	5600	2	20
JAN 11...	30	50	<.1	<1	<1	2	<1	5300	2	10
MAY 13...	30	60	<.1	2	2	<1	<1	6300	4	20
SEP 17...	29	100	.2	<10	1	<1	<1	3800	<6	32

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, O.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 13...	1300	97	52
MAY 13...	1300	2	2
SEP 17...	1145	9	76

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. DIS- SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT							
03...	1100	101	1720	16.0	55	15	--
04...	1100	100	1850	17.0	50	14	--
05...	0930	73	1720	16.0	48	9.5	--
06...	0800	71	1680	15.0	32	6.1	--
07...	0800	71	1710	15.0	49	9.4	--
08...	0800	71	1710	15.0	38	7.3	--
09...	1200	71	1970	17.0	47	9.0	--
10...	1130	70	1990	17.0	69	13	--
11...	0800	70	2040	16.0	74	14	--
12...	0930	70	1910	17.0	57	11	--
13...	0800	71	1780	15.0	45	8.6	--
14...	0800	70	1750	15.0	28	5.3	--
19...	0800	70	1750	13.0	39	7.4	--
20...	0800	71	1840	13.0	40	7.7	--
21...	0800	70	1850	12.0	53	10	--
22...	1230	70	1980	12.0	57	11	--
23...	1410	70	2040	12.0	33	6.2	--
24...	0930	70	2000	11.0	57	11	--
28...	1100	68	2040	12.0	36	6.6	--
29...	0800	69	2050	10.0	46	8.6	--
30...	0730	69	1990	10.0	30	5.6	--
31...	0800	69	2070	11.0	46	8.6	--
NOV							
13...	1300	.45	2200	11.0	7	.00	65
JAN							
11...	0930	.45	2120	1.0	7	.00	83
MAR							
12...	1130	99	2550	9.0	12	3.2	--
13...	0900	99	2550	8.0	14	3.7	--
14...	1345	99	2540	10.0	13	3.5	--
15...	0930	99	2530	8.0	13	3.5	--
16...	0815	99	2560	8.0	14	3.7	--
17...	0845	99	2550	8.0	5	1.3	--
18...	0900	99	2570	9.0	21	5.6	--
19...	0830	99	2620	8.0	8	2.1	--
20...	1300	99	2560	9.0	9	2.4	--
21...	0830	99	2570	8.0	7	1.9	--
22...	0900	99	2600	8.0	7	1.9	--
23...	0800	99	2570	8.0	9	2.4	--
24...	0900	99	2580	9.0	10	2.7	--

## RIO GRANDE BASIN

08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued

## WATER-QUALITY RECORDS

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
MAR						
25...	0800	99	2610	9.0	7	1.9
26...	0730	99	2580	10.0	9	2.4
27...	0830	99	2600	10.0	8	2.1
28...	0745	99	2630	10.0	5	1.3
29...	0730	70	2610	10.0	29	5.5
30...	0800	68	2620	10.0	6	1.1
31...	0800	68	2630	10.0	12	2.2
APR						
01...	0730	70	2640	10.0	9	1.7
02...	0730	70	2640	10.0	14	2.6
03...	0715	70	2660	10.0	12	2.3
04...	0730	98	2670	10.0	11	2.9
05...	0730	98	2320	11.0	14	3.7
06...	0745	98	2440	11.0	19	5.0
07...	0700	98	2480	12.0	19	5.0
08...	0800	98	2480	13.0	17	4.5
09...	0730	98	2480	12.0	16	4.2
10...	0720	98	2490	12.0	12	3.2
11...	0700	98	2480	12.0	21	5.6
12...	0720	98	2490	12.0	17	4.5
13...	0730	99	2500	12.0	17	4.5
14...	0700	99	2490	12.0	14	3.7
15...	0800	98	2490	12.0	14	3.7
16...	0700	70	2500	12.0	19	3.6
18...	0930	69	2500	14.0	8	1.5
19...	0820	69	2510	13.0	11	2.0
20...	0815	70	2510	14.0	12	2.3
21...	0715	70	2520	13.0	12	2.3
22...	0730	99	2530	14.0	12	3.2
23...	0730	100	2540	14.0	14	3.8
24...	0745	100	2540	14.0	17	4.6
25...	0800	100	2570	14.0	19	5.1
26...	0800	102	2560	15.0	8	2.2
27...	0900	104	2550	14.0	12	3.4
28...	0920	101	2550	14.0	15	4.1
29...	1300	101	2560	15.0	12	3.3
MAY						
01...	0730	101	2570	14.0	13	3.5
02...	0730	100	2560	14.0	13	3.5
03...	0800	101	2570	15.0	7	1.9
MAY						
04...	0800	100	2580	16.0	7	1.9
05...	0800	99	2570	16.0	3	.80
06...	0800	96	2570	15.0	5	1.3
07...	0930	100	2480	16.0	24	6.5
08...	0715	98	2470	15.0	25	6.6
09...	0730	99	2460	16.0	29	7.8
10...	0730	100	2470	15.0	25	6.8
11...	0800	99	2470	16.0	27	7.2
12...	0815	98	2460	16.0	46	12
13...	0800	99	2480	16.0	44	12
13...	1300	99	3100	18.0	21	5.6
14...	0715	100	2500	17.0	29	7.8
15...	0800	99	2500	17.0	57	15
16...	0730	98	2530	17.0	41	11
17...	0800	99	2510	17.0	43	11
18...	0800	99	2510	17.0	45	12
19...	0900	99	2550	17.0	22	5.9
20...	0745	99	2540	17.0	34	9.1
21...	0730	99	2510	17.0	31	8.3
22...	0830	99	2500	18.0	46	12
28...	1500	100	2500	18.0	42	11
29...	0800	102	2500	17.0	36	9.9
30...	0900	101	2490	18.0	31	8.5
31...	0730	101	2500	18.0	32	8.7

08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued

## WATER-QUALITY RECORDS

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (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)
JUN							
01...	0800	101	2210	18.0	33	9.0	--
02...	0800	101	2420	18.0	38	10	--
03...	0730	101	2440	18.0	41	11	--
04...	0800	102	2450	19.0	38	10	--
06...	1300	970	2460	20.0	175	458	--
07...	1000	970	2460	20.0	8	21	--
08...	0700	970	2460	20.0	6	16	--
09...	0800	970	2450	20.0	5	13	--
10...	0800	970	2450	20.0	44	115	--
11...	0730	970	2380	20.0	9	24	--
12...	0730	990	2370	20.0	9	24	--
13...	0730	970	2370	20.0	14	37	--
14...	0730	990	2250	21.0	12	32	--
15...	0745	970	2220	21.0	13	34	--
16...	0745	990	2180	21.0	11	29	--
17...	0800	970	2140	22.0	92	241	--
18...	0730	990	2020	22.0	23	61	--
19...	1100	990	2020	22.0	20	53	--
20...	1300	970	1920	23.0	18	47	--
21...	0720	970	1760	23.0	15	39	--
22...	0800	950	1700	23.0	19	49	--
23...	0745	970	1630	23.0	11	29	--
24...	1015	970	1660	23.0	50	131	--
25...	0730	950	1770	23.0	52	133	--
26...	0730	970	1740	23.0	179	469	--
27...	0800	104	1680	22.0	106	30	99
28...	0730	103	1620	22.0	81	23	--
29...	0645	103	1800	21.0	68	19	--
30...	0830	103	1670	22.0	57	16	--
JUL							
01...	0730	103	1630	22.0	80	22	--
02...	0820	103	1630	22.0	77	21	--
03...	0745	103	1640	22.0	69	19	--
04...	0720	103	1610	22.0	67	19	--
05...	0730	103	1670	21.0	71	20	--
06...	0800	104	1710	22.0	73	20	--
07...	0820	103	1680	22.0	73	20	--
08...	0730	103	1690	22.0	58	16	--
09...	0730	103	1670	22.0	59	16	--
10...	0730	104	1660	22.0	70	20	--
11...	0720	103	1650	22.0	53	15	--
12...	0800	103	1650	22.0	51	14	--
13...	0900	104	1640	22.0	68	19	--
14...	0830	104	1630	22.0	50	14	--
15...	0800	102	1610	22.0	53	15	--
16...	0800	103	1590	24.0	62	17	--
17...	0800	103	1580	22.0	59	16	--
18...	1300	102	1580	23.0	85	23	--
19...	0800	103	1570	23.0	73	20	--
20...	0830	104	1540	23.0	56	16	--
21...	0800	103	1540	23.0	78	22	--
22...	0800	102	1530	23.0	71	20	--
23...	0730	96	1530	23.0	52	13	--
24...	0800	95	1480	23.0	59	15	--
25...	1100	95	1480	24.0	59	15	--

08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued

## WATER-QUALITY RECORDS

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	TEMPER- ATURE (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)
JUL							
26...	0730	95	1450	23.0	77	20	--
27...	0815	94	1450	23.0	30	7.6	98
28...	0730	95	1490	23.0	60	15	--
29...	0800	94	1500	23.0	63	16	--
30...	0800	94	1510	23.0	55	14	--
31...	0700	94	1510	23.0	42	11	--
AUG							
01...	0730	94	1510	23.0	65	16	--
02...	1130	95	1550	25.0	72	18	--
03...	0915	95	1580	24.0	60	15	--
04...	0800	95	1570	24.0	51	13	--
05...	0745	96	1560	23.0	52	13	--
06...	0800	101	1550	23.0	68	19	--
07...	0800	101	1770	24.0	75	20	--
08...	0800	101	1680	24.0	47	13	--
09...	0800	575	1650	24.0	34	53	--
10...	0820	916	1590	24.0	30	74	--
12...	0800	916	1630	24.0	109	270	--
13...	1030	902	1620	25.0	64	156	--
14...	0730	916	1710	24.0	60	148	--
15...	0745	902	1680	24.0	36	88	--
16...	0830	902	1680	23.0	51	124	--
17...	0715	888	1700	23.0	33	79	--
18...	0800	888	1690	23.0	27	65	--
19...	0730	902	1630	24.0	44	107	--
20...	0630	888	1600	23.0	29	70	--
21...	0730	888	1150	23.0	40	96	--
22...	0730	888	1300	23.0	29	70	--
23...	0730	888	1170	23.0	37	89	--
25...	0800	874	1020	24.0	43	101	--
26...	0730	888	1080	24.0	40	96	--
26...	0745	888	1010	24.0	46	110	--
27...	0900	888	940	25.0	46	110	--
28...	0730	404	1020	25.0	39	43	99
29...	0745	104	1100	24.0	88	25	--
SEP							
05...	0745	104	1410	23.0	96	27	--
06...	0730	103	1460	23.0	96	27	--
07...	0730	104	1710	23.0	102	29	--
08...	0730	104	1750	22.0	89	25	--
09...	0730	104	1800	22.0	122	34	--
10...	0800	104	1750	22.0	98	28	--
11...	0800	104	1760	22.0	83	23	--
12...	0730	104	1720	22.0	71	20	--
13...	0730	104	1920	22.0	103	29	--
14...	0730	104	1830	22.0	78	22	--
15...	0815	104	1750	22.0	68	19	--
16...	0730	104	1760	22.0	64	18	--
17...	0720	100	1930	21.0	78	21	--
17...	1145	101	1790	21.0	72	20	100
18...	0730	100	1890	22.0	61	16	--
19...	0800	91	1920	22.0	89	22	--
20...	1030	88	1940	22.0	114	27	--
21...	0800	86	1880	22.0	64	15	--
26...	0800	80	2310	17.0	51	11	--
27...	1100	71	2290	18.0	39	7.5	--
28...	0700	71	2310	18.0	29	5.6	--
29...	0800	70	2260	17.0	28	5.3	--
30...	0800	70	2280	16.0	28	5.3	--



## 08385000 FORT SUMNER MAIN CANAL NEAR FORT SUMNER, NM

LOCATION.--Lat 34°30'30", long 104°16'40", in SE½SW¼SW¼ 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.--34 years (1940-42, 1955-85), 52.8 ft<sup>3</sup>/s, 35,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 174 ft<sup>3</sup>/s, July 22, 1941; no flow many days each year.

DISCHARGE, IN 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	66	59	.00	.00	.00	.00	79	95	91	95	102	93
2	79	5.1	.00	.00	.00	.00	83	97	90	95	98	92
3	76	.00	.00	.00	.00	.00	71	78	90	94	92	92
4	81	.00	.00	.00	.00	.00	88	84	91	95	91	91
5	83	.00	.00	.00	.00	.00	95	82	89	95	92	90
6	79	.00	.00	.00	.00	.00	94	81	90	95	95	89
7	72	.00	.00	.00	.00	.00	95	81	96	95	94	88
8	71	.00	.00	.00	.00	.00	95	86	96	94	94	88
9	64	.00	.00	.00	.00	.00	96	89	96	94	103	87
10	65	.00	.00	.00	.00	.00	96	94	87	96	117	86
11	69	.00	.00	.00	.00	.00	96	92	95	95	117	84
12	68	.00	.00	.00	.00	41	97	92	95	95	117	86
13	67	.00	.00	.00	.00	95	98	93	94	94	117	82
14	67	.00	.00	.00	.00	93	97	96	94	93	116	85
15	63	.00	.00	.00	.00	92	96	95	95	92	113	85
16	69	.00	.00	.00	.00	91	71	96	94	96	102	84
17	67	.00	.00	.00	.00	90	72	102	95	94	102	85
18	61	.00	.00	.00	.00	90	72	80	95	94	98	85
19	61	.00	.00	.00	.00	91	73	76	95	93	97	84
20	57	.00	.00	.00	.00	91	71	82	94	91	95	41
21	58	.00	.00	.00	.00	82	73	104	94	92	91	.25
22	61	.00	.00	.00	.00	90	93	85	94	94	90	.15
23	77	.00	.00	.00	.00	90	93	36	94	94	89	.02
24	76	.00	.00	.00	.00	90	93	13	94	87	88	.00
25	21	.00	.00	.00	.00	91	92	8.7	95	82	87	.00
26	.00	.00	.00	.00	.00	93	92	6.4	101	87	86	16
27	.00	.00	.00	.00	.00	93	93	5.0	97	95	85	50
28	.00	.00	.00	.00	.00	93	95	5.2	95	91	96	56
29	33	.00	.00	.00	---	75	93	83	95	92	98	56
30	72	.00	.00	.00	---	71	85	89	95	95	96	55
31	76	---	.00	.00	---	85	---	91	---	106	94	---
TOTAL	1859.00	64.10	.00	.00	.00	1727.00	2637	2297.3	2816	2900	3052	1930.42
MEAN	60.0	2.14	.000	.000	.000	55.7	87.9	74.1	93.9	93.5	98.5	64.3
MAX	83	59	.00	.00	.00	95	98	104	101	106	117	93
MIN	.00	.00	.00	.00	.00	.00	71	5.0	87	82	85	.00
AC-FT	3690	127	.00	.00	.00	3430	5230	4560	5590	5750	6050	3830
CAL YR 1984	TOTAL	18771.16	MEAN	51.3	MAX	106	MIN	.00	AC-FT	37230		
WTR YR 1985	TOTAL	19282.82	MEAN	52.8	MAX	117	MIN	.00	AC-FT	38250		

## RIO GRANDE BASIN

08386000 PECOS RIVER NEAR ACME, NM  
(Surveillance network station)

LOCATION.--Lat 33°32'10", long 104°22'34", in SW¼NW¼ sec.14, T.9 S., R.25 E., Chaves County, Hydrologic Unit 13060007, on right bank 3.0 mi downstream from U.S. Highway 70, 3.7 mi downstream from Salt Creek, 4.7 mi southwest of Acme, 14 mi northeast of Roswell, and at mile 585.3.

DRAINAGE AREA.--11,380 mi<sup>2</sup>, 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 3,507 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 1, 1938, at site on highway bridge 3 mi upstream at various datums. Since Oct. 25, 1963, supplemental water-stage recorder at site opposite base gage at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980 and by Lake Sumner (station 08384000) since August 1937. Diversions for irrigation of about 20,000 acres, 1959 determination upstream from station.

AVERAGE DISCHARGE.--48 years (1938-85), 179 ft<sup>3</sup>/s, 129,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft<sup>3</sup>/s, Sept. 23, 1941, gage height, 13.71 ft, from rating curve extended above 27,000 ft<sup>3</sup>/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 28, 1937, reached a discharge of 53,000 ft<sup>3</sup>/s, gage height, 14.82 ft, from floodmarks, site and datum then in use, by slope-area method, 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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 17	2345	*2,140	*6.19				

No flow part of each day June 3, 4.

DISCHARGE, IN 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	22	32	32	23	20	8.9	20	28	5.1	137	42	135
2	19	33	28	19	20	8.1	25	25	2.2	109	28	103
3	22	40	25	18	19	7.3	25	22	.58	88	23	90
4	71	53	25	20	16	6.4	32	18	1.2	74	32	130
5	40	49	27	19	12	5.9	37	16	3.2	59	31	80
6	39	34	25	19	15	5.8	30	14	5.0	47	28	69
7	50	29	24	21	18	5.5	22	13	8.9	39	29	52
8	56	25	23	20	20	5.5	20	12	4.3	32	32	42
9	56	22	22	18	23	5.7	18	11	521	26	34	37
10	53	19	21	17	19	7.0	18	10	657	22	39	35
11	52	18	21	17	17	8.0	20	8.7	1000	19	35	32
12	49	17	21	15	15	7.4	22	6.0	1080	15	495	32
13	40	15	21	13	14	6.8	23	3.3	843	13	672	39
14	42	15	27	16	13	6.4	22	2.2	767	12	746	52
15	49	14	30	17	12	6.4	19	1.0	778	13	992	115
16	40	14	30	20	12	7.5	17	.99	762	29	1110	72
17	30	16	28	17	11	35	17	1.3	934	32	649	92
18	34	20	33	24	11	53	17	3.7	1450	13	721	134
19	37	19	45	24	11	41	15	5.6	825	7.1	786	280
20	40	20	43	20	11	45	14	28	796	5.5	726	1190
21	40	22	39	16	11	41	12	65	819	8.3	721	539
22	36	21	35	14	9.8	36	10	48	768	12	664	298
23	45	20	34	15	9.7	31	9.7	83	760	9.4	611	220
24	66	43	32	15	10	27	9.6	237	798	4.5	619	161
25	90	49	29	15	10	25	9.1	137	834	3.3	789	118
26	96	57	27	17	9.6	21	9.4	102	843	140	682	89
27	93	72	27	20	9.5	20	9.0	65	826	139	734	73
28	74	56	27	20	9.6	19	21	33	496	92	739	61
29	52	44	29	20	---	17	30	21	231	98	761	62
30	40	37	27	19	---	16	28	14	185	94	421	89
31	34	---	25	16	---	16	---	8.8	---	59	216	---
TOTAL	1507	925	882	564	388.2	551.6	580.8	1043.59	17003.48	1451.1	14207	4521
MEAN	48.6	30.8	28.5	18.2	13.9	17.8	19.4	33.7	567	46.8	458	151
MAX	96	72	45	24	23	53	37	237	1450	140	1110	1190
MIN	19	14	21	13	9.5	5.5	9.0	.99	.58	3.3	23	32
AC-FT	2990	1830	1750	1120	770	1090	1150	2070	33730	2880	28180	8970
CAL YR 1984	TOTAL	42789.97	MEAN	117	MAX	1760	MIN	.27	AC-FT	84870		
WTR YR 1985	TOTAL	43624.77	MEAN	120	MAX	1450	MIN	.58	AC-FT	86530		

08386000 PECOS RIVER NEAR ACME, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937 to current year.

CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV 09...	1430	21	3800	3420	8.0	7.9	21.0	16.0	8.4	17
JAN 14...	1300	16	4600	--	7.6	--	5.0	3.5	11.7	13
MAR 22...	1030	37	--	3710	7.8	8.2	19.0	13.0	9.3	17
MAY 17...	1100	1.2	10800	8470	--	7.6	25.5	20.0	8.0	46
JUL 12...	1230	15	3550	3610	8.5	7.9	34.0	30.0	6.6	20
SEP 19...	1645	420	1600	--	7.3	--	--	24.0	6.7	110
DATE		HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L 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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)
NOV 09...	1500		1400	440	93	270	3	3.9	120	.000
JAN 14...	--	--	--	--	--	--	--	--	160	.000
MAR 22...	1500		1400	470	90	--	--	3.5	140	.000
MAY 17...	2600		2500	710	210	1100	10	8.0	--	--
JUL 12...	1700		1700	530	100	230	3	5.1	65	16
SEP 19...	--	--	--	--	--	--	--	--	--	--
DATE		ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L CACO3) (99430)	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)
NOV 09...	95	95	1400	430	.50	11	2700	.10	.13	
JAN 14...	--	130	--	--	--	--	--	.20	1.1	
MAR 22...	--	--	1400	430	.50	9.0	--	<.10	<.10	
MAY 17...	--	--	2700	1900	.70	13	6700	<.10	<.10	
JUL 12...	79	79	1600	330	.60	15	2900	.10	.18	
SEP 19...	--	--	--	--	--	--	--	.30	.29	
DATE		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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	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 09...	.160	.24	.50	.040	<.010	2.0	68	3.9	97	
JAN 14...	.220	.08	.50	.020	.040	4.8	30	1.3	78	
MAR 22...	.250	.05	--	.040	<.010	2.0	72	7.2	77	
MAY 17...	.430	.47	--	.020	.030	4.7	67	.22	50	
JUL 12...	.340	.26	.70	.030	<.010	1.8	46	1.9	77	
SEP 19...	.070	--	--	--	<.010	44	5310	6020	93	

## RIO GRANDE BASIN

08386000 PECOS RIVER NEAR ACME, NM -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)
NOV 09...	1430	1	1	240	1	1	80	<10	22	3
MAR 22...	1030	--	--	240	--	--	--	--	--	--
MAY 17...	1100	--	--	550	--	--	--	--	--	--
JUL 12...	1230	2	1	250	<1	2	10	<10	4	1

DATE	TIME	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)
NOV 09...		80	3	9	.2	.1	<1	<1	30	20
MAR 22...		30	--	--	--	--	--	--	--	--
MAY 17...		50	--	--	--	--	--	--	--	--
JUL 12...		50	<1	<1	<.1	<.1	<1	<1	30	40

## CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS U) (01029)
NOV 09...	1430	5.0	3.0	35	<1	<1	5

DATE	TIME	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 AS HG) (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)
NOV 09...		<10	<1	820	20	70	<.01	3

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 AS U) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 09...	1430	<63	3.2	<37	4.5	<32	3.8	.06	7.5

08386000 PECOS RIVER NEAR ACME, NM -- Continued

## WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
MAR 22...	1030	--	--	--	--	--	--	--	--	--
SEP 19...	1645	<.1	<.010	<.1	<.010	<.010	<.010	<.01	<.010	<.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)
MAR 22...	--	--	--	--	--	--	--	--	--
SEP 19...	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01	<.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)
MAR 22...	--	--	--	.01	<.01	<.01	--	--	--
SEP 19...	<.01	<.1	<.01	--	--	--	<.1	<.10	<.01

## 08387000 RIO RUIDOSO AT HOLLYWOOD, NM

LOCATION.--Lat 33°19'43", long 105°36'34", in SW¼SE¼NE¼ sec.30, T.11 S., R.14 E., Lincoln County, Hydrologic Unit 13060008, on right upstream bridge abutment on road leading to Ruidoso Downs Race Track, 0.2 mi north of U.S. Highway 70, 1.1 mi east of the Hollywood Post Office, 1.8 mi downstream from Galvilan Canyon, 2.8 mi downstream from Carrizzo Creek, and at mile 23.4. Due to construction work, a temporary gage was installed Mar. 28, 1985, 0.95 mi upstream at different datum and used for the remainder of the water year.

DRAINAGE AREA.--120 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--March 1953 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,365.42 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1961, at datum 0.30 ft higher. Oct. 14, 1961 to Mar. 8, 1962 at datum 0.60 ft higher. Mar. 9, 1962 to June 18, 1965, at datum 1.0 ft higher.

REMARKS.--Estimated daily discharges: Oct. 18-21, Dec. 10-17, Feb. 11-18, Mar. 14-26, and Sept. 3-13. Records fair except for estimated daily discharges, which are poor. Village of Ruidoso diverts from right bank 7.0 mi upstream for municipal use and return a portion on 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 ft<sup>3</sup>/s, 10,800 acre-ft/yr, for period when sewage disposal plant effluent was discharged upstream from gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft<sup>3</sup>/s, Aug. 11, 1984, gage height, 9.68 ft, from rating curve extended above 510 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 10.05 ft, present datum, June 17, 1965; minimum discharge, 0.30 ft<sup>3</sup>/s, Jan. 1, 1962, May 8-9, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Sept. 29, 1941, is probably the highest since at least 1904 (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 1,200 ft<sup>3</sup>/s:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 20	unknown	*1,400	a 5.60	May 9	0415	127	2.78
Mar. 12	2030	243	3.02	Aug. 1	1500	229	2.80
Apr. 16	0730	119	2.80				

a From floodmarks

Minimum discharge, 4.2 ft<sup>3</sup>/s, July 13.

DISCHARGE, IN 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	11	58	16	186	18	98	57	62	31	13	54	12
2	11	56	16	182	15	97	74	71	29	12	41	12
3	15	52	13	134	16	97	66	68	25	11	75	12
4	20	45	11	115	71	68	44	73	21	11	30	12
5	13	41	13	115	71	41	53	83	46	9.1	25	12
6	11	39	11	115	69	40	61	88	25	8.6	17	12
7	12	41	11	113	87	38	69	108	22	8.3	13	11
8	12	38	13	96	88	40	78	122	23	7.7	12	11
9	12	36	14	98	90	50	84	104	29	7.3	11	11
10	11	35	12	82	85	90	105	81	31	6.4	11	11
11	21	33	14	63	80	175	103	71	30	6.5	11	11
12	15	25	14	61	70	202	102	59	30	6.4	10	11
13	12	18	20	60	16	201	105	51	29	5.2	9.5	11
14	12	17	30	58	20	150	104	44	25	5.0	11	11
15	22	16	50	58	25	150	112	39	26	7.3	9.8	12
16	27	16	50	55	30	145	108	37	23	9.6	16	13
17	17	17	50	51	38	135	93	38	22	14	11	12
18	15	16	50	39	42	130	97	41	22	7.3	18	13
19	15	14	167	18	45	125	103	42	24	6.4	13	16
20	15	13	1130	15	51	117	84	43	27	6.6	14	23
21	15	14	469	13	57	90	73	43	21	10	10	17
22	20	17	266	12	58	65	70	43	20	7.8	11	17
23	22	18	197	11	69	83	51	41	22	29	11	16
24	24	23	152	11	64	60	43	41	26	26	27	16
25	21	19	170	11	78	58	43	47	27	15	33	15
26	27	18	184	23	95	54	46	50	18	15	18	14
27	35	16	140	29	95	52	47	49	15	20	14	13
28	36	18	175	22	97	52	58	43	14	15	13	14
29	41	17	186	21	---	53	62	37	14	13	13	14
30	46	16	186	22	---	49	59	33	14	13	12	15
31	53	---	186	19	---	43	---	32	---	14	12	---
TOTAL	639	802	4016	1908	1640	2828	2254	1784	731	346.5	586.3	400
MEAN	20.6	26.7	130	61.5	58.6	91.2	75.1	57.5	24.4	11.2	18.9	13.3
MAX	53	58	1130	186	97	202	112	122	46	29	75	23
MIN	11	13	11	11	15	38	43	32	14	5.0	9.5	11
AC-FT	1270	1590	7970	3780	3250	5610	4470	3540	1450	687	1160	793

CAL YR 1984	TOTAL	14537.5	MEAN	39.7	MAX	1130	MIN	7.6	AC-FT	28840
WTR YR 1985	TOTAL	17934.8	MEAN	49.1	MAX	1130	MIN	5.0	AC-FT	35570

## 08390500 RIO HONDO AT DIAMOND A RANCH, NEAR ROSWELL, NM

LOCATION.--33°20'57", long 104°51'05", in NE¼NE¼ sec.20, T.11 S, R.21 E., Chaves County, Hydrologic Unit 13060008, on right bank 15 ft downstream from county road bridge at Diamond A Ranch, 1.3 mi south of U.S. Highway 70-380, 13 mi upstream from Two Rivers Reservoir, 21 mi upstream from mouth of Rocky Arroyo, 18 mi west of Roswell, and at mile 44.7.

DRAINAGE AREA.--947 mi<sup>2</sup>, 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.--No estimated daily discharges. Records fair. Diversions and groundwater withdrawals upstream from station for irrigation upstream and downstream from station of about 6,500 acres, 1959 determination. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--46 years (1939-85) 22.3 ft<sup>3</sup>/s, 16,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,800 ft<sup>3</sup>/s, June 18, 1965, gage height, 26.40 ft, from rating curve extended above 3,100 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 21	0500	*1,340	*17.02	No other peak greater than base discharge.			
No flow many days.							

DISCHARGE, IN 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	.00	29	17	343	95	94	69	123	22	.00	.00	.00
2	.00	36	22	291	91	89	66	116	20	.00	.00	.00
3	.00	36	20	258	110	94	78	121	15	.00	35	.00
4	.00	37	21	239	115	98	68	123	14	.00	75	.00
5	.00	38	21	228	113	69	53	116	19	.00	29	.00
6	.00	25	21	216	118	47	70	122	61	.00	19	.00
7	.00	22	21	205	116	33	84	133	50	.00	7.8	.00
8	.00	21	21	199	122	29	112	154	34	.00	4.3	.00
9	.00	16	18	194	126	24	112	158	26	.00	.06	.00
10	.00	12	20	189	128	26	109	145	23	.00	.20	.00
11	.00	8.8	21	169	125	69	141	120	30	.00	.07	.00
12	.00	6.8	40	160	104	157	149	107	22	.00	.21	.00
13	.02	5.5	79	155	88	203	154	96	16	.00	.16	.00
14	.00	2.7	109	146	83	225	166	74	13	.00	.00	.00
15	.00	1.5	98	139	73	207	167	47	10	.00	.00	.00
16	.00	.34	83	147	58	194	166	38	4.3	.00	.00	13
17	.00	.32	66	146	61	174	171	34	1.1	.00	.00	6.7
18	2.0	.63	48	134	57	148	173	45	.20	.00	.00	.24
19	.00	.61	39	123	63	136	170	50	.76	.00	.00	27
20	.00	1.0	122	113	70	162	178	56	.19	.00	.00	8.3
21	.00	1.1	985	116	78	150	165	53	.00	.00	.00	11
22	.00	1.2	534	104	85	114	133	52	.00	.00	.00	9.9
23	.00	3.5	382	99	96	95	131	51	.00	.00	.00	4.3
24	.00	33	302	98	116	92	97	45	.00	.00	.00	.68
25	.69	33	255	95	103	91	66	44	.18	.00	.00	.53
26	2.3	25	228	102	106	84	56	50	.77	.00	.00	.49
27	5.8	19	215	123	97	81	75	48	.03	.00	.00	.37
28	8.9	16	220	130	97	76	95	46	.00	.00	.00	.08
29	10	14	649	114	---	76	116	44	.29	.00	.00	1.2
30	18	15	568	100	---	78	121	28	.00	.00	.00	1.6
31	28	---	422	96	---	81	---	22	---	.00	.00	---
TOTAL	75.71	461.00	5667	4971	2694	3296	3511	2461	382.82	.00	170.80	85.39
MEAN	2.44	15.4	183	160	96.2	106	117	79.4	12.8	.000	5.51	2.85
MAX	28	38	985	343	128	225	178	158	61	.00	75	27
MIN	.00	.32	17	95	57	24	53	22	.00	.00	.00	.00
AC-FT	150	914	11240	9860	5340	6540	6960	4880	759	.00	339	169

CAL YR 1984	TOTAL	15265.71	MEAN	41.7	MAX	985	MIN	.00	AC-FT	30280
WTR YR 1985	TOTAL	23775.72	MEAN	65.1	MAX	985	MIN	.00	AC-FT	47160

## 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 mi<sup>2</sup>; Rio Hondo, 963 mi<sup>2</sup>; Rocky Arroyo, 64 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1963 to current year (prior to October 1965 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 between elevations 3,957.0 ft, sill of outlet gate, and 3,980.0. Capacity of Rocky Arroyo Reservoir, 13,410 acre-ft 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 here are present total contents at 2400 hours.

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

EXTREMES FOR PERIOD OF RECORD.--Rio Hondo Reservoir: maximum contents at 0800 hours, 1,260 acre-ft, July 29, 1965, elevation, 3,985.7 ft; no storage most of time.  
Rocky Arroyo Reservoir: maximum contents at 0800 hours, 6,090 acre-ft, June 18, 1965, elevation, 3,970.7 ft; no storage most of time.

EXTREMES FOR CURRENT YEAR.--Maximum contents at 2400 hours of Rio Hondo Res., 592 acre-ft, Dec. 22, elevation, 3,984.51 ft; Rocky Arroyo Res. at 2400 hours, 10 acre-ft, Dec. 30, elevation, 3,946.79 ft; no contents both reservoirs most of time.

CONTENTS, IN ACRE-FEET, AND ELEVATION, IN FEET, WATER YEAR, OCTOBER 1984 TO SEPTEMBER 1985.

NO CONTENTS AT 2400 HOURS DURING YEAR EXCEPT:

## RIO HONDO RESERVOIR

DATE	ELEVATION	CONTENTS	DATE	ELEVATION	CONTENTS
Dec. 20	3,966.03	1	Jan. 28	3,976.52	58
21	3,971.55	6	29	3,976.70	62
22	3,984.51	592	30	3,976.67	61
23	3,983.99	525	31	3,976.69	62
24	3,981.34	247	Feb. 01	3,977.21	73
25	3,976.26	53	02	3,977.59	84
26	3,975.82	45	03	3,977.97	94
27	3,975.78	45	04	3,978.37	109
28	3,974.96	33	05	3,979.22	143
29	3,980.44	209	06	3,979.48	156
30	3,981.89	317	07	3,979.47	155
31	3,981.55	287	08	3,977.60	84
Jan. 01	3,980.71	226	09	3,977.65	86
02	3,976.64	61	10	3,977.78	89
03	3,981.00	244	11	3,978.20	102
04	3,979.32	148	12	3,978.47	112
05	3,976.80	64	13	3,978.22	103
06	3,974.29	25	14	3,977.19	73
07	3,975.75	44	15	3,977.78	89
08	3,975.30	38	16	3,977.31	76
09	3,974.75	30	17	3,976.83	65
10	3,974.60	29	18	3,976.36	55
11	3,974.46	27	19	3,976.53	59
12	3,974.48	27	20	3,965.83	1
13	3,974.00	22	Mar. 13	3,968.00	1.2
14	3,977.95	94	14	3,978.00	95
15	3,974.08	23	15	3,972.84	9
16	3,974.20	24	16	3,966.52	1
17	3,974.17	24	25	3,978.00	95
18	3,975.23	36	26	3,979.80	171
19	3,975.25	37	27	3,978.80	125
20	3,975.20	36	28	3,978.30	96
21	3,975.23	36	29	3,973.83	20
22	3,975.19	36	May 08	3,957.00	.2
23	3,978.20	102	09	3,957.00	3
24	3,976.07	49	10	3,957.00	22
25	3,977.36	78	11	3,957.00	4
26	3,976.93	67	12	3,957.00	1
27	3,976.23	53			



08390600 TWO RIVERS RESERVOIR NEAR ROSWELL, NM -- Continued

CONTENTS, IN ACRE-FEET, AND ELEVATION, IN FEET, WATER YEAR, OCTOBER 1984 TO SEPTEMBER 1985

NO CONTENTS AT 2400 HOURS DURING YEAR EXCEPT:

## ROCKY ARROYO RESERVOIR

DATE	ELEVATION	CONTENTS	DATE	ELEVATION	CONTENTS
Dec. 19	3,945.19	1	Dec. 28	3,945.19	1
20	3,945.19	1	29	3,946.45	8
21	3,945.72	3	30	3,946.79	10
22	3,946.52	8	31	3,946.35	7
23	3,946.59	9	Jan. 01	3,945.71	3
24	3,945.94	4	02	3,945.62	2
25	3,945.31	2	03	3,945.90	3
26	3,945.20	1	04	3,945.60	2
27	3,945.20	1	05	3,945.20	1

## 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 mi<sup>2</sup>, 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.--No estimated daily discharges. Records good. Diversions and ground-water withdrawals for irrigation of about 6,500 acres, 1959 determination, upstream from station. This record represents the outflow from Two Rivers Reservoir through Diamond A Dam. Flow from reservoir can also be discharged into Rocky Arroyo through Rocky Dam (see REMARKS for station 08390600). Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--22 years, 11.0 ft<sup>3</sup>/s, 7,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 659 ft<sup>3</sup>/s, July 29, 1965, gage height, 4.91 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 520 ft<sup>3</sup>/s, Mar. 14, gage height, 3.53 ft; no flow many days.

DISCHARGE, IN 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	.00	14	13	367	74	104	58	96	11	.00	.00	.00
2	.00	20	15	329	72	108	50	94	13	.00	.00	.00
3	.14	21	17	237	72	107	54	90	7.9	.00	.16	.00
4	.03	20	16	202	70	101	49	90	7.0	.00	4.5	.00
5	.00	19	18	193	67	93	39	90	5.8	.00	6.5	.00
6	.00	15	18	185	86	79	48	90	28	.00	6.3	.00
7	.00	14	17	173	95	60	61	93	39	.00	2.6	.00
8	.00	13	16	162	97	50	76	103	19	.00	1.9	.00
9	.00	11	16	147	93	44	81	118	14	.00	.72	.00
10	.00	10	15	129	91	37	79	118	10	.00	.00	.00
11	.00	8.9	16	129	94	64	103	112	13	.00	.00	.00
12	.00	6.4	25	118	137	99	116	107	14	.00	.00	.00
13	.00	5.8	46	112	90	264	111	89	6.9	.00	.00	.00
14	.00	4.1	71	109	69	288	127	62	4.4	.00	.00	.00
15	.00	1.2	78	107	62	229	140	38	3.2	.00	.00	.00
16	.00	.38	74	104	50	200	139	27	4.2	.00	.00	.00
17	.00	.01	70	100	43	166	144	24	.77	.00	.00	5.5
18	.00	.00	69	93	43	133	127	32	.10	.00	.00	.47
19	.00	1.2	71	87	46	117	122	34	.00	.00	.00	23
20	.00	2.0	86	73	52	124	126	38	.00	.00	.00	14
21	.00	2.1	275	67	51	126	124	35	.00	.00	.06	16
22	.00	2.2	347	64	64	103	115	34	.00	.00	.00	15
23	.00	2.2	340	57	73	68	107	33	.00	.00	.00	9.9
24	.00	14	320	82	107	62	89	34	.00	.00	.00	1.2
25	.00	18	195	74	110	30	55	31	.00	.19	.00	.69
26	.00	17	159	72	113	12	45	37	.00	.11	.00	.36
27	.00	17	139	79	115	11	48	31	.00	.00	.00	.27
28	7.4	15	130	86	105	148	63	29	.00	.00	.03	.26
29	8.6	13	230	83	---	77	78	29	.00	.01	.00	.23
30	8.7	12	379	81	---	54	87	19	.00	.00	.00	1.0
31	13	---	375	81	---	58	---	13	---	.00	.00	---
TOTAL	37.87	299.49	3656	3982	2241	3216	2661	1870	201.27	.31	22.77	87.88
MEAN	1.22	9.98	118	128	80.0	104	88.7	60.3	6.71	.010	.73	2.93
MAX	13	21	379	367	137	288	144	118	39	.19	6.5	23
MIN	.00	.00	13	57	43	11	39	13	.00	.00	.00	.00
AC-FT	75	594	7250	7900	4450	6380	5280	3710	399	.6	45	174

CAL YR 1984 TOTAL 8880.30 MEAN 24.3 MAX 379 MIN .00 AC-FT 17610  
WTR YR 1985 TOTAL 18275.59 MEAN 50.1 MAX 379 MIN .00 AC-FT 36250

## 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 Sunset Ave. bridge 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 mi<sup>2</sup>, 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.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 3,615 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 1, 2, 24, Mar. 26, 28, June 3, 4, 6, 13, July 25, 26, Aug. 4, 7, and Sept. 19, 24. Records fair except for estimated daily discharges, which are poor. Flow regulated by Two Rivers Reservoirs (station 08390600). Diversions and ground-water withdrawals for irrigation upstream from station. Several observations of water temperatures were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 373 ft<sup>3</sup>/s, Dec. 23, 1984, gage height, 6.73 ft, from rating curve extended above 354 ft<sup>3</sup>/s; maximum gage height, 7.5 ft, May 3, 1981, from floodmarks; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 373 ft<sup>3</sup>/s, Dec. 23, gage height, 6.73 ft, from rating curve extended above 354 ft<sup>3</sup>/s; no flow many days.

DISCHARGE, IN 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	.00	2.4	6.7	291	64	83	57	87	6.1	.00	.00	.00
2	.00	6.1	7.7	278	54	88	44	87	6.0	.00	.00	.00
3	.00	14	12	217	55	89	34	87	3.4	.00	.00	.00
4	.00	14	9.0	177	57	84	26	87	.23	.00	17	.00
5	.00	15	12	166	57	76	22	88	.00	.00	15	.00
6	.00	9.8	12	161	68	65	21	86	1.6	.00	5.0	.00
7	.00	8.4	13	155	77	55	26	85	31	.00	1.2	.00
8	.00	7.3	12	148	78	39	43	87	13	.00	.00	.00
9	.00	6.0	12	138	77	34	59	98	17	.00	.00	.00
10	.00	5.1	11	116	74	31	61	101	5.8	.00	.00	.00
11	.00	4.8	10	114	76	45	76	96	2.8	.00	.00	.00
12	.00	3.7	17	107	101	72	84	93	4.5	.00	.00	.00
13	.00	1.6	41	101	90	158	82	83	.82	.00	.00	.00
14	.00	.92	57	98	70	181	92	60	.00	.00	.00	.00
15	.00	.00	55	96	66	170	103	32	.00	.00	.00	.00
16	.00	.00	58	92	53	157	102	21	.00	.00	.00	.00
17	.00	.00	81	89	44	138	106	19	.00	.00	.00	.00
18	.00	.00	83	86	43	113	97	24	.00	.00	.00	.00
19	.00	.00	83	79	46	97	90	28	.00	.00	.00	7.7
20	.00	.00	84	70	55	104	96	32	.00	.00	.00	8.5
21	.00	.00	221	64	59	107	101	26	.00	.00	.00	9.9
22	.00	.00	356	61	65	93	98	21	.00	.00	.00	11
23	.00	.00	363	58	72	72	92	19	.00	.00	.00	6.3
24	.00	3.5	339	62	98	66	84	19	.00	.00	.00	1.8
25	.00	16	261	65	97	42	57	15	.00	.41	.00	.00
26	.00	14	197	63	89	.12	42	19	.00	.25	.00	.00
27	.00	14	175	67	88	.00	35	15	.00	.00	.00	.00
28	.00	11	160	75	82	64	64	15	.00	.00	.00	.00
29	.00	8.6	194	74	---	87	74	14	.00	.00	.00	.00
30	.00	6.6	287	71	---	52	81	15	.00	.00	.00	.00
31	.00	---	304	71	---	56	---	8.9	---	.00	.00	---
TOTAL	.00	172.82	3533.4	3510	1955	2518.12	2049	1567.9	92.25	.66	38.20	45.20
MEAN	.000	5.76	114	113	69.8	81.2	68.3	50.6	3.08	.021	1.23	1.51
MAX	.00	16	363	291	101	181	106	101	31	.41	17	11
MIN	.00	.00	6.7	58	43	.00	21	8.9	.00	.00	.00	.00
AC-FT	.00	343	7010	6960	3880	4990	4060	3110	183	1.3	76	90
CAL YR 1984	TOTAL	7858.93	MEAN	21.5	MAX	363	MIN	.00	AC-FT	15590		
WTR YR 1985	TOTAL	15482.55	MEAN	42.4	MAX	363	MIN	.00	AC-FT	30710		

## 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 mi<sup>2</sup>, 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.--Estimated daily discharges: July 1, 2 and Aug. 30 to Sept. 4. Records good except for estimated daily discharges, which are poor. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980, by Lake Sumner (station 08384000) since August 1937 and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigations of about 80,000 acres upstream from station. Several observations of water temperatures were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined, 3,700 ft<sup>3</sup>/s, Sept. 11, 1969; no flow at times in 1971, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge greater than 1,200 ft<sup>3</sup>/s, June 11-13, 18, 19, Aug. 16, 17, and Sept. 20, 21; minimum, 12 ft<sup>3</sup>/s, June 4.

DISCHARGE, IN 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	44	79	91	307	129	91	55	120	27	170	70	326
2	46	74	84	306	122	90	56	99	20	120	54	217
3	40	73	80	301	107	93	57	93	15	100	37	143
4	80	87	81	275	112	105	57	76	11	82	30	112
5	109	92	83	218	115	119	50	72	9.0	70	29	124
6	82	98	83	205	116	86	52	70	13	61	37	97
7	70	85	82	203	126	62	54	66	14	55	27	84
8	74	75	82	211	143	55	47	64	5.5	48	22	73
9	79	68	81	194	150	43	46	62	23	41	24	60
10	79	63	77	180	153	39	57	81	525	37	25	54
11	78	58	76	167	146	40	54	87	a	33	28	50
12	76	55	75	169	148	41	59	70	a	29	69	48
13	72	54	76	161	180	43	63	66	a	22	451	45
14	70	51	103	153	157	114	66	60	833	19	552	42
15	64	49	138	149	132	157	92	45	758	18	645	55
16	70	48	153	150	117	162	115	29	752	22	a	114
17	68	50	145	146	104	147	112	22	772	28	a	77
18	60	56	138	145	94	139	112	24	a	33	835	81
19	54	60	138	139	86	164	115	26	a	25	795	137
20	61	59	151	136	71	162	110	33	800	16	810	a
21	75	58	163	124	79	176	112	27	798	17	779	a
22	80	60	262	116	75	161	119	63	793	16	884	384
23	85	62	316	111	66	135	116	63	815	16	758	194
24	115	98	325	109	67	108	108	106	783	17	731	170
25	156	164	310	112	90	92	64	218	793	19	802	150
26	145	136	253	114	96	74	42	151	806	149	870	121
27	146	119	228	117	91	57	32	125	821	160	757	104
28	139	126	206	126	95	50	103	101	687	149	767	98
29	118	120	201	132	---	93	139	59	284	95	762	95
30	100	102	259	129	---	103	119	41	210	89	636	94
31	87	---	301	128	---	62	---	33	---	92	462	---
TOTAL	2622	2379	4841	5233	3167	3063	2383	2252	---	1848	---	---
MEAN	84.6	79.3	156	169	113	98.8	79.4	72.6	---	59.6	---	---
MAX	156	164	325	307	180	176	139	218	---	170	---	---
MIN	40	48	75	109	66	39	32	22	---	16	---	---
AC-FT	5200	4720	9600	10380	6280	6080	4730	4470	---	3670	---	---

a Discharge greater than 1,200 ft<sup>3</sup>/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 1306007, on left bank 400 ft upstream from county bridge, 2.5 mi east of Lake Arthur, 7 mi upstream from Cottonwood Creek, 11 mi northeast of Artesia, and at mile 522.0.

DRAINAGE AREA.--14,760 mi<sup>2</sup>, 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: Jan. 9-26, 30, 31, Feb. 5-22, Feb. 26 to Mar. 12, Mar. 16-26, Mar. 31 to Apr. 1, Apr. 7-10, June 17, Aug. 5-7, 20, 21, and Sept. 16-19. Records good except for estimated daily discharges, which are poor. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980, by Lake Sumner (station 08384000) since August 1937, and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigation of about 124,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--47 years, 159 ft<sup>3</sup>/s, 163,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft<sup>3</sup>/s, Sept. 24, 1941, gage height, 21.90 ft, from rating curve extended above 16,100 ft<sup>3</sup>/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 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,360 ft<sup>3</sup>/s, June 19, gage height, 5.91 ft; minimum, 8.1 ft<sup>3</sup>/s, July 11.

DISCHARGE, IN 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	60	101	113	343	124	120	45	80	17	161	65	262
2	38	96	106	335	122	115	20	86	15	113	60	197
3	38	93	101	315	118	110	19	83	15	83	56	141
4	39	93	96	270	116	100	19	79	13	77	53	108
5	102	97	95	228	110	105	19	73	9.3	67	48	107
6	121	102	94	237	120	105	19	68	9.9	41	42	110
7	108	104	94	235	125	90	22	64	12	37	36	98
8	97	93	94	233	128	82	26	57	16	35	34	90
9	93	85	94	215	130	75	36	52	18	25	27	86
10	92	78	94	200	138	70	35	48	223	23	33	81
11	94	74	92	180	140	60	34	48	475	14	40	75
12	93	69	90	170	140	54	33	52	910	14	170	70
13	91	66	89	160	135	47	35	51	940	15	557	66
14	86	65	90	158	148	44	36	48	686	13	622	62
15	81	62	97	155	155	43	39	45	586	18	847	58
16	77	61	127	155	135	100	54	40	565	23	1020	130
17	73	61	140	150	119	120	57	31	650	18	723	115
18	73	61	135	150	110	115	48	26	809	15	662	100
19	72	68	131	145	105	110	52	28	1240	16	694	86
20	68	70	135	140	100	115	53	30	839	17	690	285
21	67	70	147	135	90	130	53	30	717	16	700	822
22	68	69	211	130	84	135	56	28	666	17	670	404
23	71	72	310	125	97	130	61	31	622	18	684	263
24	85	86	342	122	95	112	62	39	599	18	628	212
25	130	121	335	118	94	90	61	48	594	24	596	187
26	142	142	272	116	105	84	46	114	588	245	646	163
27	138	125	246	133	125	54	33	82	579	181	646	141
28	139	118	237	130	123	26	31	66	570	133	603	113
29	132	125	216	128	---	21	47	43	372	112	561	93
30	120	121	245	130	---	48	67	26	205	109	519	86
31	110	---	317	135	---	73	---	26	---	91	384	---
TOTAL	2798	2648	4985	5576	3331	2683	1218	1622	13560.2	1789	13116	4813
MEAN	90.3	88.3	161	180	119	86.5	40.6	52.3	452	57.7	423	160
MAX	142	142	342	343	155	135	67	114	1240	245	1020	822
MIN	38	61	89	116	84	21	19	26	9.3	13	27	58
AC-FT	5550	5250	9890	11060	6610	5320	2420	3220	26900	3550	26020	9550
CAL YR 1984	TOTAL	54685.2	MEAN	149	MAX	2640	MIN	4.8	AC-FT	108500		
WTR YR 1985	TOTAL	58139.2	MEAN	159	MAX	1240	MIN	9.3	AC-FT	115300		

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 mi<sup>2</sup>, approximately (contributing area).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1905 to June 1909, August 1909 to current year. Monthly discharge only for some periods, published in WSP 1312 and 1712. Records for 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: Oct. 2, Dec. 6-15, 21-28, Dec. 31 to Jan. 6, Mar. 11, May 18-22, May 30 to June 10, June 25-28, June 30 to July 2, July 6-16, July 30 to Aug. 5, Aug. 12, 13, and Sept. 1-3. Records good except for estimated daily discharges, which are poor. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980, by Lake Sumner (station 08384000) since August 1937, and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigation of about 154,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--49 years, (1937-85), 240 ft<sup>3</sup>/s, 173,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge probably occurred May 30, 1937, when a discharge of 51,500 ft<sup>3</sup>/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 ft<sup>3</sup>/s. The second highest flood occurred July 25, 1905, discharge below Rio Penasco, 50,300 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 19	1900	*1,480	*8.59				
Minimum discharge, 9.3 ft <sup>3</sup> /s, July 18.							

## DISCHARGE, IN 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	69	100	121	352	139	123	60	117	21	142	103	240
2	53	95	113	350	134	118	45	119	19	131	88	171
3	49	91	107	323	128	112	38	104	17	100	68	146
4	53	89	100	300	123	104	34	96	16	81	57	142
5	63	94	98	250	124	108	32	88	20	64	53	122
6	122	103	92	240	129	111	28	82	18	58	50	129
7	102	114	90	240	127	99	29	77	19	46	57	110
8	85	109	90	240	132	87	35	68	20	40	47	95
9	79	98	92	230	145	78	37	56	21	38	37	94
10	87	91	92	211	152	79	25	49	80	30	34	88
11	92	86	92	197	150	68	33	55	438	26	36	77
12	96	83	92	183	148	60	34	72	776	18	42	72
13	94	80	90	182	146	51	33	59	1070	19	175	68
14	93	77	94	180	163	50	35	47	938	18	520	68
15	86	75	105	176	157	60	37	47	772	22	570	62
16	79	73	136	169	135	114	39	42	682	27	711	69
17	74	71	166	168	120	123	62	36	632	14	949	149
18	78	72	160	165	112	115	64	30	769	12	772	101
19	75	71	159	163	104	105	61	30	1330	15	730	102
20	67	77	167	156	102	118	69	36	991	20	723	279
21	68	79	170	154	92	130	62	34	810	16	685	956
22	76	79	250	147	90	139	72	30	779	15	736	646
23	92	79	360	138	105	132	79	34	800	25	786	326
24	116	97	410	132	100	109	77	58	785	16	710	194
25	117	101	410	127	99	96	76	50	812	21	738	174
26	151	166	400	123	116	77	60	138	800	235	826	153
27	148	147	350	137	128	62	39	115	780	334	784	130
28	146	130	250	130	127	44	109	82	760	229	760	111
29	143	133	227	131	---	38	91	70	561	174	741	103
30	129	135	223	137	---	29	147	40	241	112	711	99
31	114	---	286	137	---	94	---	28	---	102	473	---
TOTAL	2896	2895	5592	5968	3527	2833	1642	1989	15777	2200	13772	5276
MEAN	93.4	96.5	180	193	126	91.4	54.7	64.2	526	71.0	444	176
MAX	151	166	410	352	163	139	147	138	1330	334	949	956
MIN	49	71	90	123	90	29	25	28	16	12	34	62
AC-FT	5740	5740	11090	11840	7000	5620	3260	3950	31290	4360	27320	10460
CAL YR 1984	TOTAL	55835.0	MEAN	153	MAX	2060	MIN	6.5	AC-FT	110700		
WTR YR 1985	TOTAL	64367.0	MEAN	176	MAX	1330	MIN	12	AC-FT	127700		

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.

REMARKS.--Continuous water-temperature and specific-conductance recorder July 1981 to November 1983.

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 and 1984.

SEDIMENT LOADS: Maximum daily, 183,000 tons Sept. 26, 1955; minimum daily, 0 ton on many days during 1953-54, 1957, 1964, 1982, and 1984.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 17,200 microsiemens June 7; minimum daily, 1,380 microsiemens Aug. 31.

WATER TEMPERATURES: Maximum daily, 35.0°C Aug. 6; minimum daily, 0.0°C Feb. 2.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7,700 mg/L Sept. 22; minimum daily mean, 5 mg/L Dec. 4.

SEDIMENT LOADS: Maximum daily, 13,600 tons June 14; minimum daily, 0.77 ton July 22.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV										
01...	1200	99	6600	6520	8.2	8.2	21.0	16.0	10.8	65
DEC										
28...	1400	246	3320	3510	8.2	7.9	18.5	8.5	10.1	52
MAR										
11...	1000	62	8000	7670	8.4	7.2	28.5	15.5	11.7	93
MAY										
01...	1145	111	4450	4250	8.5	7.5	22.0	21.0	9.2	74
JUL										
02...	1115	132	3500	3020	8.1	7.6	32.0	25.0	8.3	24
AUG										
28...	1115	785	1450	1540	7.8	7.9	31.5	25.5	6.6	46
DATE		HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L 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 IT-FLD AS HCO3) (99440)	CAR- BONATE IT-FLD AS CO3) (99445)
NOV										
01...	1900	1800	490	170	780	8	6.5	160	11	
DEC										
28...	1300	1000	320	110	370	5	4.1	230	12	
MAR										
11...	2100	1900	480	210	1000	10	8.4	120	12	
MAY										
01...	940	850	230	90	550	8	5.8	110	6.0	
JUL										
02...	1300	1100	370	80	230	3	4.2	140	7.0	
AUG										
28...	710	600	230	33	72	1	2.9	--	--	
DATE		ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CACO3) (99430)	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 DIS- TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- TOTAL (MG/L AS N) (00631)
NOV										
01...	150	--	1600	1400	.80	12	4600	.90	.80	
DEC										
28...	--	210	780	640	.50	13	2400	.70	.75	
MAR										
11...	--	--	1600	2000	.70	11	5400	<.10	<.10	
MAY										
01...	100	100	840	650	.60	7.7	2400	.50	.49	
JUL										
02...	130	130	1200	380	.60	11	2400	<.10	<.10	
AUG										
28...	110	--	590	99	.60	11	1100	.20	.22	



08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

## WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 01...	.240	.96	2.1	.150	<.010	7.9
DEC 28...	.460	1.5	2.7	.610	.080	11
MAR 11...	.230	1.3	--	.210	.020	4.9
MAY 01...	.340	1.1	1.9	.160	.010	5.0
JUL 02...	.230	.67	--	.200	.030	8.0
AUG 28...	.080	.42	.70	.020	<.010	10

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)
NOV 01...	1200	<1	<1	370	<1	<1	20	40	11	2
DEC 28...	1400	--	--	140	--	--	--	--	--	--
MAR 11...	1000	--	--	430	--	--	--	--	--	--
MAY 01...	1145	--	--	230	--	--	--	--	--	--
JUL 02...	1115	2	<1	150	1	<1	20	<10	9	1
AUG 28...	1115	--	--	110	--	--	--	--	--	--

DATE	TIME	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)
NOV 01...	50	<1	5	.1	<.1	--	2	20	30	
DEC 28...	20	--	--	--	--	--	--	--	--	--
MAR 11...	60	--	--	--	--	--	--	--	--	--
MAY 01...	30	--	--	--	--	--	--	--	--	--
JUL 02...	30	7	1	<.1	.1	1	1	60	70	
AUG 28...	17	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM TOTAL FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G (01029)
NOV 01...	1200	<5.0	28	200	2	<1	5

## RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

## WATER-QUALITY RECORDS

## CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	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 AS HG) (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)
NOV 01...	<10	3	1300	<10	120	.60	6

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 01...	1200	<120	4.2	<67	4.6	<58	4.0	.07	6.6

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
MAR 11...	1000	--	--	--	--	--	--	--	--	--
AUG 28...	1115	<.1	<.010	<.1	<.010	<.010	<.010	<.01	<.010	<.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)
MAR 11...	--	--	--	--	--	--	--	--	--
AUG 28...	<.010	<.01	<.010	<.010	<.010	<.01	<.01	<.01	<.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)
MAR 11...	--	--	--	.03	<.01	<.01	--	--	--
AUG 28...	<.01	<1	<.01	--	--	--	<.1	<.10	<.01

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

## WATER-QUALITY RECORDS

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 01...	1200	48	350
DEC 28...	1400	5800	2600
MAR 11...	1000	240	300
MAY 01...	1145	260	38
JUL 02...	1115	110	620
AUG 28...	1115	430	1400

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	TEMPERATURE (DEG C) (00010)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)
OCT 02...	1400	53	17.0	68	9.7	--	--	--
NOV 01...	1200	99	16.0	110	29	--	--	--
DEC 24...	1125	360	7.0	1530	1490	45	63	79
28...	1400	246	8.5	851	565	33	39	58
28...	1707	243	10.0	667	438	--	--	--
MAR 11...	1000	65	15.5	102	18	--	--	--
JUN 13...	1145	1130	21.0	4090	12500	37	47	71
14...	1603	902	25.0	5380	13100	40	54	77
16...	1846	636	26.5	2770	4760	35	50	76
22...	0840	782	23.0	7430	15700	53	67	87
28...	1826	760	25.0	1680	3450	30	37	57
JUL 02...	1115	132	25.0	583	208	44	50	63
AUG 14...	1440	561	26.5	3250	4920	41	49	75
26...	1758	865	26.5	2940	6870	17	25	38
28...	1115	785	25.5	3190	6760	31	39	57
SEP 22...	1030	636	22.0	9050	15500	39	53	79
DATE		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. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)
OCT 02...	--	--	--	--	72	85	98	100
NOV 01...	--	--	--	--	83	93	99	100
DEC 24...	--	--	--	--	96	100	--	--
28...	--	--	--	--	71	84	99	100
28...	--	--	--	--	92	99	100	--
MAR 11...	--	--	--	--	82	89	98	100
JUN 13...	93	100	--	--	--	--	--	--
14...	94	100	--	--	--	--	--	--
16...	--	--	--	--	98	100	--	--
22...	--	--	--	--	98	100	--	--
28...	--	--	--	--	92	99	100	--
JUL 02...	--	--	--	--	75	89	99	100
AUG 14...	--	--	--	--	95	100	--	--
26...	79	100	--	--	--	--	--	--
28...	82	96	100	--	--	--	--	--
SEP 22...	96	100	--	--	--	--	--	--

## RIO GRANDE BASIN

08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued

## WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9680	5970	6760	4060	5600	5600	5760	4980	7630	3750	5910	1540
2	9200	6660	6980	3080	5580	5950	7290	7230	9180	2930	5770	1760
3	9290	7610	7280	2690	5670	6250	9510	6530	11400	3310	6150	2010
4	8240	8370	7780	2670	5270	6210	9640	5890	13100	3340	6810	2250
5	8010	7430	7780	2770	5390	6440	10400	5970	13400	3690	7710	2530
6	8830	7330	7700	2720	6330	6330	10500	6120	12800	4110	8830	3100
7	7250	6930	7910	4070	6320	6160	10400	6670	17200	5020	9100	3410
8	6580	7060	8030	4030	6440	5700	11400	6800	12700	5730	9630	3670
9	7120	7010	8140	4110	5910	6040	10100	7090	11800	6310	9630	4130
10	7000	7620	8270	4120	5740	7110	9830	7340	11500	6850	11100	4480
11	6320	7930	8200	4060	5190	7820	12000	7650	4440	7240	11100	5050
12	6500	8160	8200	4360	5260	7860	11200	6170	3520	8730	11100	5790
13	6240	8630	8210	4480	5330	8710	9510	5950	2940	7810	10400	6350
14	6460	8830	8130	4520	5240	9770	9780	6850	3150	8190	3050	6300
15	6490	9050	8040	4720	5150	10600	9510	7070	3180	10200	2280	6360
16	6750	9250	7490	4880	4750	11200	8980	6970	3090	9320	2200	7090
17	7130	9700	6850	5150	4970	4480	9440	7090	3040	10100	2130	5270
18	7140	9550	6400	5390	5440	4440	8420	8010	3020	11000	2180	4480
19	7290	9410	6360	5480	6110	4920	7100	10700	2880	13000	1800	4810
20	7400	9530	6270	5530	6330	5110	6230	9360	2550	12600	2000	4680
21	6660	9270	6360	5550	6800	4930	6160	10500	2710	12500	2040	3570
22	6760	9500	6270	5780	7140	5440	6200	11300	2610	10900	2000	1930
23	6310	9530	6730	5840	7510	5400	6040	12200	2700	11600	1900	1740
24	5550	9290	3150	5970	7930	6030	5720	10400	2660	11500	1920	2210
25	6280	9250	2650	6130	7290	6320	5590	7430	2660	10800	3480	2560
26	7020	8010	2640	6090	6880	7870	5150	5880	2290	10800	1660	2910
27	6470	8150	2710	6120	6410	8220	5500	4970	2200	2300	1590	3540
28	6550	7860	2770	6400	5600	8520	7030	5020	2150	2020	1450	3890
29	6030	7400	3410	6200	---	9110	6610	4700	2210	4060	1450	4380
30	6090	6990	3640	6290	---	10200	8550	4960	2430	4350	1420	5050
31	5960	---	4020	6240	---	12000	---	7120	---	5260	1380	---
MEAN	7050	8240	6290	4820	5990	7120	8320	7260	5900	7400	4810	3890
WTR YR 1985	MEAN	6430		MAX	17200		MIN	1380				

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	17.5	6.5	10.0	2.0	14.0	20.0	25.0	25.0	25.5	30.0	25.0
2	17.0	19.0	7.0	9.0	.0	12.0	22.5	21.0	20.0	25.0	28.0	25.0
3	22.0	11.0	10.0	4.5	2.0	16.5	23.5	25.0	25.0	25.0	28.0	24.5
4	17.0	17.0	7.0	5.0	5.0	13.0	17.0	23.0	26.5	27.0	25.0	24.0
5	23.0	13.0	5.0	5.5	6.0	14.0	20.5	25.5	21.0	24.0	27.5	27.0
6	22.0	15.0	8.0	7.0	10.0	10.5	15.0	27.0	28.0	23.5	35.0	26.0
7	18.0	12.0	3.0	6.0	7.0	12.0	21.0	25.5	31.5	26.0	26.0	27.0
8	17.0	14.0	9.0	8.0	6.0	13.0	18.0	24.0	32.0	25.0	27.5	27.0
9	18.0	16.0	8.0	9.0	9.0	14.0	21.0	28.5	32.0	25.0	31.5	25.0
10	22.0	14.0	10.0	9.0	11.0	16.5	20.5	23.5	27.5	24.0	23.0	27.5
11	22.0	10.5	12.0	10.5	12.0	15.0	23.5	22.0	26.0	26.0	24.0	24.0
12	20.0	11.0	11.0	10.0	10.0	17.0	21.0	22.0	22.0	29.0	30.0	26.0
13	19.5	14.0	12.5	7.0	8.5	17.0	21.5	22.5	21.0	27.0	29.0	26.0
14	16.0	14.5	7.0	3.0	11.5	15.0	19.0	23.0	25.0	29.5	26.5	23.0
15	19.0	12.0	6.0	4.0	10.0	10.0	23.0	20.5	24.0	33.0	27.0	22.0
16	18.5	16.0	4.0	5.0	10.0	12.5	18.0	22.5	26.5	25.0	27.0	26.0
17	18.5	9.0	7.0	7.0	14.0	13.5	26.0	18.0	26.0	25.0	26.0	22.5
18	15.0	9.0	7.5	8.0	9.0	17.0	25.5	20.5	25.0	33.5	25.0	27.0
19	18.0	10.5	10.0	7.0	13.5	15.0	20.0	24.0	24.5	33.0	26.0	22.5
20	15.0	12.0	12.0	9.0	11.5	12.0	25.0	25.5	24.5	33.5	26.5	25.0
21	11.0	8.5	11.5	3.0	13.5	14.5	18.0	26.0	25.0	28.5	25.0	22.0
22	11.0	10.0	7.0	3.0	18.0	15.0	24.0	21.0	23.0	24.0	25.0	20.0
23	11.0	8.0	7.5	5.0	15.0	15.0	19.0	22.0	26.5	23.0	28.0	19.0
24	12.0	8.0	7.0	5.0	12.0	18.0	21.0	23.0	25.0	29.0	26.0	19.0
25	10.5	10.0	6.5	6.0	10.0	20.0	23.0	25.5	25.5	28.0	27.0	22.0
26	12.0	10.0	8.0	9.0	12.5	15.0	23.0	27.5	25.0	24.0	26.5	21.0
27	15.0	8.0	7.0	7.5	11.5	14.0	20.0	22.0	25.0	24.0	27.0	23.5
28	12.0	10.5	10.0	9.0	10.5	17.0	20.0	27.0	25.0	26.0	26.0	19.0
29	13.0	10.0	9.0	10.5	---	14.5	16.5	25.0	23.0	30.0	26.0	17.0
30	16.0	7.0	11.0	8.0	---	12.0	23.5	21.0	22.0	31.0	24.5	16.0
31	18.0	---	9.0	6.0	---	12.0	---	24.5	---	28.0	25.5	---
MEAN	16.5	12.0	8.5	7.0	9.5	14.5	21.0	23.5	25.5	27.0	27.0	23.5
WTR YR 1985	MEAN	18.0		MAX	35.0		MIN	.0				

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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	39	6.3	125	39	53	3.0	600	230	103	29	1110	719
2	38	4.6	112	36	87	4.5	488	173	46	11	710	328
3	33	3.4	78	22	41	1.9	207	56	33	6.1	472	186
4	26	2.4	109	28	120	5.2	189	41	30	4.6	277	106
5	17	1.5	101	24	69	3.7	114	20	28	4.0	269	89
6	19	1.4	88	19	139	6.8	66	10	29	3.9	200	70
7	19	1.5	90	19	86	4.4	50	6.2	31	4.8	131	39
8	33	3.1	111	20	73	3.9	43	4.6	39	4.9	81	21
9	34	3.4	151	23	68	3.9	51	5.2	40	4.0	190	48
10	26	1.8	76	10	475	103	31	2.5	18	1.7	179	43
11	37	3.3	78	12	3670	4340	39	2.7	19	1.8	87	18
12	36	3.3	84	16	4210	8820	47	2.3	36	4.1	61	12
13	31	2.8	51	8.1	4350	12500	36	1.8	362	273	54	9.9
14	24	2.3	50	6.3	5380	13600	39	1.9	2820	3960	41	7.5
15	30	3.0	49	6.2	2870	5980	34	2.0	2430	3740	46	7.7
16	28	2.9	62	7.0	2650	4880	43	3.1	2740	5260	52	9.7
17	31	5.2	53	5.2	2990	5100	34	1.3	4680	12000	212	85
18	40	6.9	33	2.7	2460	5110	49	1.6	4330	9030	152	41
19	41	6.8	65	5.3	1960	7040	32	1.3	3990	7860	409	113
20	38	7.1	92	8.9	3160	8460	29	1.6	2920	5700	500	377
21	41	6.9	87	8.0	3390	7410	27	1.2	2480	4590	783	2020
22	45	8.7	63	5.1	5710	12000	19	.77	2430	4830	7700	13400
23	88	19	127	12	2650	5720	32	2.2	2910	6180	6430	5660
24	76	16	160	25	2490	5280	36	1.6	3370	6460	2670	1400
25	97	20	329	44	2280	5000	21	1.2	2660	5300	3000	1410
26	127	21	297	111	1830	3950	849	797	2750	6130	1990	822
27	143	15	262	81	1710	3600	1030	929	3060	6480	781	274
28	115	31	213	47	1680	3450	504	312	2680	5500	862	258
29	85	21	296	56	1490	2260	281	132	1800	3600	447	124
30	94	37	176	19	937	610	326	99	2520	4840	253	68
31	---	---	86	6.5	---	---	241	66	2190	2800	---	---
TOTAL	---	268.6	---	732.3	---	125250.3	---	2910.07	---	104612.9	---	27765.8
TOTAL LOAD FOR YEAR: 275394.27 TONS.												

## 08398500 RIO PENASCO AT DAYTON, NM

LOCATION.--Lat 32°44'36", long 104°24'49", in NE&SE&SE& sec.18, T.18 S., R.26 E., Eddy County, Hydrologic Unit 13060010, on left bank 1.2 mi upstream from U.S. Highway 285, 1.9 mi northwest of old Dayton railway station, 5.6 mi upstream from mouth, and 7.0 mi south of Artesia. Mouth at Pecos River mile 496.4.

DRAINAGE AREA.--1,060 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--April 1951 to 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: Oct. 27 to Nov. 1, Mar. 21-25, Mar. 28 to Apr. 28, July 1-30, and Sept. 4-29. 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.--34 years, 5.34 ft<sup>3</sup>/s, 3,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft<sup>3</sup>/s, Aug. 23, 1966, gage height, 16.4 ft, from floodmarks, present site and datum, from rating curve extended above 6,000 ft<sup>3</sup>/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 Dunkin" (station 08397600), about 60 mi upstream, was 70,000 ft<sup>3</sup>/s, determined in 1956 from rating curve extended above a slope-area measurement of 36,300 ft<sup>3</sup>/s for peak of Oct. 6 or 7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 19	unknown	*11	*1.18				
No flow most of time.							

DISCHARGE, IN 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	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.01	.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	1.1
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03
22	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
23	.22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.93	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.96	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.71	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.40	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.07	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.01	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.01	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.01	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	3.37	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.19
MEAN	.11	.003	.000	.000	.000	.000	.000	.000	.000	.000	.000	.040
MAX	.96	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	6.7	.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.4

CAL YR 1984 TOTAL 6076.63 MEAN 16.6 MAX 5230 MIN .00 AC-FT 12050  
WTR YR 1985 TOTAL 4.65 MEAN .013 MAX 1.1 MIN .00 AC-FT 9

## 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. 23 to Nov. 1, Nov. 20 to Dec. 5, Dec. 8-10, Jan. 1, 2, 9-31, July 4 to Aug. 6, and Aug. 19-27. Records good except for estimated daily discharges, which are poor. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980, by Lake Sumner (station 08384000) since August 1937, and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigation of about 170,000 acres, 1959 determination, upstream from station. Above about 1,500 ft<sup>3</sup>/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.--35 years, 150 ft<sup>3</sup>/s, 108,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,920 ft<sup>3</sup>/s, July 12, 1960; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,090 ft<sup>3</sup>/s, June 19; minimum daily, 6.2 ft<sup>3</sup>/s, June 6.

DISCHARGE, IN 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	54	95	113	310	121	121	69	117	22	167	105	259
2	59	91	104	335	117	113	47	117	13	120	80	180
3	45	86	96	382	111	111	35	107	9.5	155	62	146
4	56	82	90	296	106	97	31	92	8.7	110	54	136
5	49	82	87	259	105	102	31	87	9.7	70	50	121
6	108	93	87	240	114	105	25	79	6.2	62	45	119
7	107	101	85	232	111	99	26	74	13	49	43	111
8	84	100	86	231	114	83	27	68	16	41	43	97
9	73	88	86	230	129	76	37	57	17	38	29	95
10	81	80	87	200	138	75	25	51	16	31	23	89
11	86	75	86	185	140	65	27	44	330	27	23	82
12	90	73	84	175	140	60	31	62	647	19	28	75
13	85	68	83	170	138	51	30	62	982	17	52	67
14	85	66	86	165	147	47	32	46	723	17	387	68
15	79	64	92	160	162	47	32	41	544	20	487	63
16	74	61	117	155	135	94	35	42	571	24	642	62
17	69	59	142	155	121	119	49	31	644	15	970	107
18	71	59	149	153	110	115	59	25	707	12	761	98
19	69	58	144	150	102	107	54	24	1090	14	710	93
20	65	64	143	145	100	111	62	31	916	18	710	152
21	62	68	149	140	92	128	57	30	605	16	660	775
22	68	70	175	135	85	137	59	23	634	14	700	664
23	82	70	324	130	97	134	70	21	676	22	700	322
24	110	87	380	125	98	116	74	47	686	15	700	194
25	110	91	396	120	95	98	69	47	774	21	720	155
26	140	150	366	120	105	82	64	104	726	220	810	134
27	136	140	270	135	122	64	40	119	724	310	800	118
28	132	120	252	127	125	47	103	87	726	250	746	104
29	130	123	242	130	---	37	66	72	539	190	739	97
30	122	125	232	135	---	27	130	47	228	120	705	91
31	110	---	287	135	---	64	---	27	---	105	495	---
TOTAL	2691	2589	5120	5760	3280	2732	1496	1881	13603.1	2309	13079	4874
MEAN	86.8	86.3	165	186	117	88.1	49.9	60.7	453	74.5	422	162
MAX	140	150	396	382	162	137	130	119	1090	310	970	775
MIN	45	58	83	120	85	27	25	21	6.2	12	23	62
AC-FT	5340	5140	10160	11420	6510	5420	2970	3730	26980	4580	25940	9670
CAL YR 1984	TOTAL	53716.42	MEAN	147	MAX	1500	MIN	.00	AC-FT	106500		
WTR YR 1985	TOTAL	59414.10	MEAN	163	MAX	1090	MIN	6.2	AC-FT	117800		

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

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WRD 1968: 1967.

GAGE.--Water-stage recorder. Elevation of gage is 3,299.14 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1951 to June 19, 1962, at site 1.8 mi upstream at datum 30.61 ft higher. June 19, 1962 to Oct. 12, 1966 at site 410 ft upstream at datum 6.08 ft higher.

REMARKS.--No estimated daily discharges. Records good. No surface diversions upstream from station.

AVERAGE DISCHARGE.--34 years, 3.69 ft<sup>3</sup>/s, 2,670 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,300 ft<sup>3</sup>/s, Aug. 23, 1966, gage height, 19.9 ft, from floodmarks, present datum, from rating curve extended above 5,000 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
No flow during year.							

DISCHARGE, IN 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	.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	.00	.00	.00	.00	.00
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1984 TOTAL 5783.33 MEAN 15.8 MAX 4770 MIN .00 AC-FT 11470  
WTR YR 1985 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT 0



## 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 mi<sup>2</sup>, 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 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.--Gage-height record and capacity table (based on August 1964 survey) 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, 34,180 acre-ft, Jan. 16-20, Jan. 27, 28, gage height, 26.20 ft; minimum, 2,750 acre-ft, Aug. 13, 14, gage height, 17.20 ft.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20530	19690	23440	31440	33900	33620	32250	18280	9760	24380	9760	19480
2	20530	19900	23440	31710	33900	33620	30900	18280	9240	23900	9370	19080
3	20110	19900	23670	32520	33900	33620	30380	18480	8460	23440	8980	18680
4	20110	20110	23670	32790	33620	33620	29600	18680	8080	22980	8200	18480
5	20110	20110	23900	33060	33620	33620	28820	18680	8080	22520	7600	18480
6	20110	20320	24140	33340	33620	33620	27800	18680	8080	21840	7000	18280
7	20110	20320	24140	33620	33620	33620	27050	18280	7480	21180	6310	18280
8	20110	20320	24380	33620	33620	33340	26060	17880	6540	20320	5520	18080
9	20110	20740	24380	33620	33620	33340	25340	17120	6200	19280	4750	17690
10	19900	20740	24620	33900	33620	33340	24620	16380	5740	18480	3910	17500
11	19900	20740	24620	33900	33620	33340	24380	15480	5520	17690	3310	17310
12	19480	20740	24860	33900	33620	33340	23900	14620	5850	16930	2930	17120
13	19080	20960	24860	33900	33620	33340	23670	14110	6880	16020	2750	16930
14	18680	20960	25100	33900	33620	33340	23210	13460	6880	15480	2750	16740
15	18680	20960	25340	33900	33620	33340	22750	12820	9900	14790	3710	16740
16	18480	21180	25340	34180	33900	33060	22060	12360	11020	14450	4220	16740
17	18280	21180	25580	34180	33900	33060	21180	12060	12210	13940	5190	16740
18	17880	21180	25820	34180	33900	33060	20320	12060	12980	13620	6310	16740
19	17500	21400	25820	34180	33900	33060	19480	12060	13780	13140	7360	17120
20	17310	21400	26060	34180	33620	33060	19280	12060	14960	12510	8330	17500
21	17120	21400	26300	33900	33620	33060	19080	11760	16200	12060	9240	18280
22	17120	21620	26550	33900	33620	33060	18680	11460	17500	11460	10320	20320
23	17120	21620	26800	33900	33620	33060	18480	11020	18280	11020	11460	21180
24	17690	22060	27550	33900	33620	33060	18280	10600	19480	10460	12820	21840
25	17880	22290	28050	33900	33620	33060	17880	10600	20530	10040	13780	22290
26	18080	22290	28560	33900	33620	33060	17500	10740	21620	9500	15130	22290
27	18280	22520	29340	34180	33620	33060	17120	10880	22750	9630	16200	22290
28	18680	22750	29340	34180	33620	32520	17500	11020	23440	9900	16930	22520
29	18880	22980	30120	33900	---	32790	17880	10880	24380	9900	18080	22980
30	19080	23210	30640	33900	---	33060	18080	10880	24620	9900	18880	22980
31	19480	---	30900	33900	---	32790	---	10320	---	9900	19480	---
MAX	20530	23210	30900	34180	33900	33620	32250	18680	24620	24380	19480	22980
MIN	17120	19690	23440	31440	33620	32520	17120	10320	5520	9500	2750	16740
(+)	-1050	+3730	+7690	+3000	-280	-830	-14710	-7760	+14300	-14720	+9580	+3500
CAL YR 1984	MAX	36480	MIN	156	(+)	+6760						
WTR YR 1985	MAX	34180	MIN	2750	(+)	+2450						

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

08400500 LAKE MCMILLAN NEAR LAKEWOOD, NM -- Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.45	23.25	24.10	25.70	26.15	26.10	25.85	22.90	20.30	24.30	20.30	23.20
2	23.45	23.30	24.10	25.75	26.15	26.10	25.60	22.90	20.10	24.20	20.15	23.10
3	23.35	23.30	24.15	25.90	26.15	26.10	25.50	22.95	19.80	24.10	20.00	23.00
4	23.35	23.35	24.15	25.95	26.10	26.10	25.35	23.00	19.65	24.00	19.70	22.95
5	23.35	23.35	24.20	26.00	26.10	26.10	25.20	23.00	19.65	23.90	19.45	22.95
6	23.35	23.40	24.25	26.05	26.10	26.10	25.00	23.00	19.65	23.75	19.20	22.90
7	23.35	23.40	24.25	26.10	26.10	26.10	24.85	22.90	19.40	23.60	18.90	22.90
8	23.35	23.40	24.30	26.10	26.10	26.05	24.65	22.80	19.00	23.40	18.55	22.85
9	23.35	23.50	24.30	26.10	26.10	26.05	24.50	22.60	18.85	23.15	18.20	22.75
10	23.30	23.50	24.35	26.15	26.10	26.05	24.35	22.40	18.65	22.95	17.80	22.70
11	23.30	23.50	24.35	26.15	26.10	26.05	24.30	22.15	18.55	22.75	17.50	22.65
12	23.20	23.50	24.40	26.15	26.10	26.05	24.20	21.90	18.70	22.55	17.30	22.60
13	23.10	23.55	24.40	26.15	26.10	26.05	24.15	21.75	19.15	22.30	17.20	22.55
14	23.00	23.55	24.45	26.15	26.10	26.05	24.05	21.55	19.15	22.15	17.20	22.50
15	23.00	23.55	24.50	26.15	26.10	26.05	23.95	21.35	20.35	21.95	17.70	22.50
16	22.95	23.60	24.50	26.20	26.15	26.00	23.80	21.20	20.75	21.85	17.95	22.50
17	22.90	23.60	24.55	26.20	26.15	26.00	23.60	21.10	21.15	21.70	18.40	22.50
18	22.80	23.60	24.60	26.20	26.15	26.00	23.40	21.10	21.40	21.60	18.90	22.50
19	22.70	23.65	24.60	26.20	26.15	26.00	23.20	21.10	21.65	21.45	19.35	22.60
20	22.65	23.65	24.65	26.20	26.10	26.00	23.15	21.10	22.00	21.25	19.75	22.70
21	22.60	23.65	24.70	26.15	26.10	26.00	23.10	21.00	22.35	21.10	20.10	22.90
22	22.60	23.70	24.75	26.15	26.10	26.00	23.00	20.90	22.70	20.90	20.50	23.40
23	22.60	23.70	24.80	26.15	26.10	26.00	22.95	20.75	22.90	20.75	20.90	23.60
24	22.75	23.80	24.95	26.15	26.10	26.00	22.90	20.60	23.20	20.55	21.35	23.75
25	22.80	23.85	25.05	26.15	26.10	26.00	22.80	20.60	23.45	20.40	21.65	23.85
26	22.85	23.85	25.15	26.15	26.10	26.00	22.70	20.65	23.70	20.20	22.05	23.85
27	22.90	23.90	25.30	26.20	26.10	26.00	22.60	20.70	23.95	20.25	22.35	23.85
28	23.00	23.95	25.30	26.20	26.10	25.90	22.70	20.75	24.10	20.35	22.55	23.90
29	23.05	24.00	25.44	26.15	---	25.95	22.80	20.70	24.30	20.35	22.85	24.00
30	23.10	24.05	25.55	26.15	---	26.00	22.85	20.70	24.35	20.35	23.05	24.00
31	23.20	---	25.60	26.15	---	25.95	---	20.50	---	20.35	23.20	---
MEAN	23.05	23.60	24.64	26.11	26.11	26.03	23.90	21.63	21.10	22.01	19.81	23.07
MAX	23.45	24.05	25.60	26.20	26.15	26.10	25.85	23.00	24.35	24.30	23.20	24.00
MIN	22.60	23.25	24.10	25.70	26.10	25.90	22.60	20.50	18.55	20.20	17.20	22.50
CAL YR 1984	MEAN 22.91		MAX 26.60	MIN 15.00								
WTR YR 1985	MEAN 23.40		MAX 26.20	MIN 17.20								

## 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 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1908, January 1909 to December 1911, August 1939 to December 1940, December 1946 to current year (January 1906, and January 1910 to December 1911, gage heights and discharge measurements only). Published as "near Lakewood" 1906-11, and as "below McMillan Dam, near Lakewood" 1939-40.

REVISED RECORDS.--WSP 1512: 1909.

GAGE.--Water-stage recorder and rock control. Elevation of gage is 3,238.21 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). See WSP 1732 for history of changes prior to Mar. 12, 1957. Supplemental water-stage recorders on McMillan Dam spillways No. 1 and 2, Apr. 6, 1960, to Sept. 30, 1970.

REMARKS.--Estimated daily discharges: Apr. 26-29. Records good except for estimated daily discharges, which is poor. Flow completely regulated by Lake McMillan (station 08400500). Flow also regulated by several other reservoirs. Discharge figures do not include flow, if any, over Lake McMillan spillways No. 1 and 2 which enters the Pecos River downstream from this gage. Diversions and ground-water withdrawals for irrigation of about 171,000 acres, 1959 determination, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--40 years (1907, 1940, 1948-85), 95.8 ft<sup>3</sup>/s, 69,410 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft<sup>3</sup>/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 ft<sup>3</sup>/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, 371 ft<sup>3</sup>/s, April 3; no flow many days.

DISCHARGE, IN 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	1.1	.39	.00	.00	.00	.00	345	.51	247	307	198	303
2	98	.34	.00	.00	.00	.00	369	.32	274	252	228	302
3	108	.36	.00	.00	.00	.00	371	.30	230	230	276	278
4	66	.35	.00	.00	.00	.00	368	.14	.26	230	315	136
5	67	.29	.00	.00	.00	.00	368	64	.08	229	311	82
6	67	.13	.00	.00	.00	.00	364	125	200	229	310	82
7	67	.09	.00	.00	.00	.00	363	213	305	250	318	99
8	67	.08	.00	.00	.00	.00	336	291	217	338	336	156
9	67	.05	.00	.00	.00	.00	300	289	191	302	331	133
10	67	.03	.00	.00	.00	.00	215	289	167	285	312	109
11	128	.00	.00	.00	.00	.00	118	287	136	284	168	85
12	180	.00	.00	.00	.00	.00	118	287	129	282	95	66
13	178	.00	.00	.00	.00	.00	187	261	103	257	94	87
14	131	.00	.00	.00	.00	.00	225	246	47	170	93	71
15	81	.00	.00	.00	.00	.00	225	246	.17	169	97	4.2
16	77	.00	.00	.00	.00	.00	285	198	24	136	144	2.9
17	135	.00	.00	.00	.00	.00	312	52	161	120	170	2.6
18	135	.00	.00	.00	.00	.00	287	.50	242	120	173	2.6
19	113	.00	.00	.00	.00	.00	208	.44	269	220	150	2.5
20	101	.00	.00	.00	.00	.00	164	64	220	195	139	2.8
21	100	.00	.00	.00	.00	.00	120	112	198	194	93	1.9
22	73	.00	.00	.00	.00	.00	119	170	199	193	69	1.6
23	.38	.00	.00	.00	.00	.00	119	170	150	190	71	1.3
24	.35	.00	.00	.00	.00	.00	117	98	123	190	71	1.2
25	.27	.00	.00	.00	.00	.00	134	.28	124	191	71	1.1
26	.28	.00	.00	.00	.00	.00	200	.17	125	138	124	1.1
27	.32	.00	.00	.00	.00	.00	200	.15	125	111	146	1.1
28	.31	.00	.00	.00	.00	.00	106	67	126	112	176	1.1
29	.34	.00	.00	.00	---	.00	1.0	101	174	112	232	.95
30	.44	.00	.00	.00	---	65	.78	126	226	111	286	.78
31	.51	---	.00	.00	---	221	---	204	---	130	302	---
TOTAL	2110.30	2.11	.00	.00	.00	286.00	6644.78	3962.81	4732.51	6277	5899	2018.73
MEAN	68.1	.070	.000	.000	.000	9.23	221	128	158	202	190	67.3
MAX	180	.39	.00	.00	.00	221	371	291	305	338	336	303
MIN	.27	.00	.00	.00	.00	.00	.78	.14	.08	111	69	.78
AC-FT	4190	4.2	.00	.00	.00	567	13180	7860	9390	12450	11700	4000
CAL YR 1984	TOTAL	30139.92	MEAN	82.3	MAX	833	MIN	.00	AC-FT	59780		
WTR YR 1985	TOTAL	31933.24	MEAN	87.5	MAX	371	MIN	.00	AC-FT	63340		

## 08401100 PECOS RIVER ABOVE SEVEN RIVERS, NEAR LAKEWOOD, NM

LOCATION.--Lat 32°34'42", long 104°22'42", in NE¼NE¼NE¼ sec.16, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank, 0.5 mi upstream from mouth of Seven Rivers, 2.6 mi downstream from Lake McMillan, and 3.6 mi south of Lakewood, and at mile 481.4.

DRAINAGE AREA.--17,000 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--May 1974 to current year (operated as a low-flow station only).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,213.52 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.--Estimated daily discharges: Oct. 1 and Apr. 29, 30. Records good except for estimated daily discharges, which are poor. Flow regulated by Lake McMillan (station 08400500) and by several other reservoirs. Discharge figures do not include flow, if any, over Lake McMillan Spillway No. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined, 2,080 ft<sup>3</sup>/s, Oct. 26, 1974; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 363 ft<sup>3</sup>/s, April 2; no flow many days.

DISCHARGE, IN 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	.21	.00	.00	.00	.00	.00	330	.00	254	326	206	306
2	87	.00	.00	.00	.00	.00	363	.00	285	267	239	305
3	116	.00	.00	.00	.00	.00	362	.00	255	239	290	282
4	65	.00	.00	.00	.00	.00	361	.00	1.7	239	336	143
5	65	.00	.00	.00	.00	.00	360	50	.00	236	331	79
6	65	.00	.00	.00	.00	.00	358	122	186	236	329	79
7	65	.00	.00	.00	.00	.00	358	216	328	255	330	93
8	65	.00	.00	.00	.00	.00	329	306	224	360	353	154
9	65	.00	.00	.00	.00	.00	296	304	199	320	348	132
10	65	.00	.00	.00	.00	.00	210	303	174	296	326	111
11	124	.00	.00	.00	.00	.00	107	302	139	294	185	83
12	191	.00	.00	.00	.00	.00	107	301	133	292	97	71
13	189	.00	.00	.00	.00	.00	170	272	104	270	96	75
14	142	.00	.00	.00	.00	.00	218	256	58	175	95	78
15	93	.00	.00	.00	.00	.00	218	255	.14	175	99	3.8
16	68	.00	.00	.00	.00	.00	277	212	11	142	143	1.5
17	143	.00	.00	.00	.00	.00	315	63	160	121	173	1.4
18	142	.00	.00	.00	.00	.00	295	.22	247	121	176	1.7
19	120	.00	.00	.00	.00	.00	205	.00	279	227	154	2.9
20	105	.00	.00	.00	.00	.00	166	53	232	204	142	20
21	104	.00	.00	.00	.00	.00	115	109	205	203	98	1.5
22	85	.00	.00	.00	.00	.00	114	175	206	201	69	1.2
23	1.3	.00	.00	.00	.00	.00	114	175	158	198	70	.90
24	1.0	.00	.00	.00	.00	.00	112	114	125	196	70	.60
25	.64	.00	.00	.00	.00	.00	125	.97	125	198	69	.60
26	.37	.00	.00	.00	.00	.00	199	.00	125	144	118	.60
27	.13	.00	.00	.00	.00	.00	199	.00	126	112	145	.60
28	.00	.00	.00	.00	.00	.00	143	54	127	112	174	.60
29	.00	.00	.00	.00	---	.00	.92	102	176	114	230	.40
30	.00	.00	.00	.00	---	37	.00	125	231	113	285	.30
31	.00	---	.00	.00	---	193	---	205	---	130	305	---
TOTAL	2167.65	.00	.00	.00	.00	230.00	6526.92	4075.19	4873.84	6516	6081	2029.60
MEAN	69.9	.000	.000	.000	.000	7.42	218	131	162	210	196	67.7
MAX	191	.00	.00	.00	.00	193	363	306	328	360	353	306
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	112	69	.30
AC-FT	4300	.00	.00	.00	.00	456	12950	8080	9670	12920	12060	4030

WTR YR 1985 TOTAL 32500.20 MEAN 89.0 MAX 363 MIN .00 AC-FT 64460

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

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

GAGE.--Water-stage recorder. Elevation of gage is 3,276 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 8, 1965, at site 400 ft upstream at datum 0.52 ft higher.

REMARKS.--No estimated daily discharges. Records good. No surface diversions upstream from station, ground-water withdrawals for 240 acres, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--22 years, 4.29 ft<sup>3</sup>/s, 3,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft<sup>3</sup>/s, May 30, 1965, gage height, 20.0 ft, from floodmarks, present site and datum, from rating curve extended above 5,700 ft<sup>3</sup>/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 ft<sup>3</sup>/s, gage height, 22.8 ft, from old debris on left bank, former site and datum, from rating curve extended above 5,700 ft<sup>3</sup>/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 of 450 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 20	1830	*18.0	*5.85				

No flow most of time.

DISCHARGE, IN 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	.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	1.6
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04
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	.02	.00	.00	.00	.00	.00
29	.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	.02	.00	.00	.00	.00	1.64
MEAN	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.055
MAX	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	1.6
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	3.3
CAL YR 1984	TOTAL	4847.82	MEAN	13.2	MAX	2560	MIN	.00	AC-FT	9620		
WTR YR 1985	TOTAL	1.66	MEAN	.005	MAX	1.6	MIN	.00	AC-FT	3.3		

## 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 Damsite, 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 mi<sup>2</sup>, 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: Nov. 12 to Dec. 6 and Dec. 27 to Jan. 1. Records good except for estimated daily discharges, which are poor. Flow regulated by Lake McMillan (station 08400500), and by several other reservoirs. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,160 ft<sup>3</sup>/s, Sept. 15, 1949, July 24, 1950, from rating curve extended above 780 ft<sup>3</sup>/s; maximum gage height, 5.38 ft, Sept. 15, 1949, site and datum then in use; minimum discharge, 7.0 ft<sup>3</sup>/s, July 20, 1977, Aug. 12, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, greater than 500 ft<sup>3</sup>/s, at times; minimum, 36 ft<sup>3</sup>/s, May 28.

DISCHARGE, IN 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	60	46	37	44	120	85	408	48	263	341	222	332
2	129	45	37	42	110	89	a	47	298	305	258	333
3	174	44	37	43	110	82	a	47	285	267	289	320
4	113	44	37	44	103	81	a	47	55	268	346	213
5	113	44	37	53	106	84	a	83	40	268	343	120
6	117	44	37	66	110	82	a	157	161	267	341	120
7	120	43	37	80	112	81	a	250	350	271	341	123
8	123	42	37	91	103	82	453	363	252	375	370	193
9	126	43	38	91	91	87	378	350	230	355	365	173
10	129	43	39	112	117	79	266	337	207	324	349	162
11	184	43	39	127	120	74	153	336	170	322	245	124
12	258	42	40	132	113	75	152	336	168	319	129	121
13	253	43	40	129	128	72	205	305	135	314	126	103
14	210	42	40	133	113	65	260	280	109	214	124	140
15	163	41	38	129	115	62	262	278	39	210	126	50
16	113	41	38	143	125	63	325	249	38	186	159	45
17	207	40	37	130	118	67	389	112	164	160	199	44
18	208	39	38	140	119	62	372	45	254	159	202	45
19	188	39	38	132	106	63	246	43	296	238	187	50
20	170	39	37	140	102	92	216	79	266	237	170	58
21	171	39	37	125	103	69	158	134	230	233	138	53
22	162	39	38	125	96	86	157	199	232	239	97	43
23	55	39	38	125	100	70	156	198	200	229	98	42
24	52	42	39	125	96	71	155	155	158	226	99	42
25	49	40	39	125	86	68	160	43	160	227	100	42
26	48	38	39	119	92	64	240	38	161	191	136	42
27	47	39	39	126	86	59	240	37	161	148	176	42
28	47	38	41	119	85	53	242	75	162	148	198	43
29	47	38	44	110	---	53	52	128	195	147	246	43
30	47	37	45	115	---	82	48	146	244	145	301	43
31	48	---	46	138	---	220	---	214	---	149	330	---
TOTAL	3931	1236	1203	3353	2985	2422	---	5159	5683	7482	6810	3304
MEAN	127	41.2	38.8	108	107	78.1	---	166	189	241	220	110
MAX	258	46	46	143	128	220	---	363	350	375	370	333
MIN	47	37	37	42	85	53	---	37	38	145	97	42
AC-FT	7800	2450	2390	6650	5920	4800	---	10230	11270	14840	13510	6550

a Discharge greater than 500 ft<sup>3</sup>/s.

08401500 PECOS RIVER BELOW MAJOR JOHNSON SPRINGS NEAR CARLSBAD, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960, 1962, 1978-79, 1981 to current year.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
NOV 02...	1500	45	4880	4890	7.9	8.3	13.0	16.0	12.2	1800	1700
JAN 02...	1430	42	4920	--	8.0	--	3.0	13.0	10.8	--	--
MAR 11...	1330	72	4800	4800	7.8	7.7	28.0	18.0	9.3	1800	1700
MAY 01...	0905	48	4590	4850	7.6	7.6	18.0	17.0	6.5	1800	1700
JUL 03...	1215	268	3700	3660	7.8	7.6	30.0	24.0	6.6	1400	1400
SEP 30...	1215	42	4500	--	8.0	--	10.0	14.5	7.7	--	--

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)	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)
NOV 02...	510	130	450	5	5.1	1600	810	1.1	17	3600
JAN 02...	--	--	--	--	--	--	--	--	--	--
MAR 11...	480	150	530	6	5.2	1500	870	.90	15	3600
MAY 01...	510	120	400	4	5.2	1300	690	.90	17	3100
JUL 03...	420	95	300	4	5.6	1400	470	.70	12	2800
SEP 30...	--	--	--	--	--	--	--	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 02...	1500	290	90
MAR 11...	1330	270	40
MAY 01...	0905	280	40
JUL 03...	1215	190	40

## 08401900 ROCKY ARROYO AT HIGHWAY BRIDGE, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'23", long 104°22'28", in SE¼SE¼ sec.3, T.21 S., R.25 E., Eddy County, Hydrologic Unit 13060011, at downstream end of bridge pier nearest left bank on U.S. Highway 285, 2.1 mi upstream from mouth and 10 mi northwest of Carlsbad. Mouth at Pecos River mile 475.2.

DRAINAGE AREA.--285 mi, approximately.

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

GAGE.--Water-stage recorder. Elevation of gage is 3,250 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of 220 acres, upstream from station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--22 years, 7.49 ft<sup>3</sup>/s, 5,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft<sup>3</sup>/s, Aug. 23, 1966, gage height, 15.35 ft, from rating curve extended above 8,500 ft<sup>3</sup>/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 ft<sup>3</sup>/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 of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 28	0900	*198	*6.63				

No flow most of time.

DISCHARGE, IN 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	.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	72	.00	.00	.00	.00	.00
29	.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	72.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	2.40	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	72	.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	143	.00	.00	.00	.00	.00

CAL YR 1984	TOTAL	3118.44	MEAN	8.52	MAX	2680	MIN	.00	AC-FT	6190
WTR YR 1985	TOTAL	72.00	MEAN	.20	MAX	72	MIN	.00	AC-FT	143



## 08402000 PECOS RIVER AT DAMSITE 3, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'40", long 104°19'58", in lot 14, sec.6, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank at damsite 3 of Carlsbad project of Bureau of Reclamation, about 1 mi upstream from flow line of Lake Avalon, 1.3 mi downstream from Rocky Arroyo, 8.0 mi northwest of Carlsbad, and at mile 473.8.

DRAINAGE AREA.--17,980 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--August 1939 to December 1940, August 1944 to current year.

REVISED RECORDS.--WSP 1512: 1946-47(M), 1948(P), 1949, 1950(P). WSP 1712: Drainage area.

GAGE.--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, Dec. 6, 7, 23, Jan. 1-3, 9-22, and Jan. 28 to Feb. 3. Records good except for estimated daily discharges, which are fair. Flow regulated by Lake McMillan (station 08400500) since 1893 and by several other reservoirs. Diversions and ground-water withdrawals for irrigation of about 173,000 acres, 1959 determination, upstream from station. Discharge represents inflow to Lake Avalon. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--42 years (1940, 1945-85), 155 ft<sup>3</sup>/s, 112,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,000 ft<sup>3</sup>/s, Aug. 23, 1966, gage height, 21.32 ft, present datum, from floodmark, from rating curve extended above 25,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 19.53 ft; minimum, 4.3 ft<sup>3</sup>/s, Aug. 5, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 40,000 ft<sup>3</sup>/s occurred in Aug. 1893, Oct. 2, 1904, July 25, 1905, Apr. 17, 1915, Aug. 7, 1916, and May 30, 1937, based primarily on records for station "at Carlsbad." Peak of May 22, 1941, was estimated at 60,000 ft<sup>3</sup>/s. Floods of 1893 and 1904 originated upstream from McMillan Dam and contributed to the two failures of Avalon Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,190 ft<sup>3</sup>/s, April 28, gage height, 4.22 ft; minimum, 32 ft<sup>3</sup>/s, Dec. 21.

DISCHARGE, IN 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	55	43	36	41	118	80	371	46	305	363	216	343
2	98	43	36	39	102	81	424	46	339	347	260	344
3	188	43	35	39	102	81	436	46	328	306	288	336
4	120	43	35	41	100	73	437	45	102	312	361	243
5	112	43	35	45	99	78	437	56	43	299	362	118
6	113	43	35	55	96	78	437	151	140	302	362	118
7	113	41	35	69	105	77	437	225	394	296	354	118
8	113	39	34	78	99	77	420	341	296	364	386	177
9	115	41	34	82	90	81	389	347	259	402	387	169
10	115	40	34	95	99	78	311	344	238	365	374	161
11	147	39	35	107	118	71	185	346	186	362	282	121
12	244	39	35	126	104	71	172	349	180	358	126	118
13	247	39	36	120	117	67	200	336	152	354	122	92
14	218	39	38	122	111	65	284	329	134	249	120	147
15	165	41	36	124	107	62	290	316	48	226	119	54
16	96	41	35	133	117	61	326	313	36	198	145	39
17	195	41	36	129	114	62	390	154	138	188	195	39
18	196	39	36	129	112	60	406	61	270	186	201	49
19	183	39	36	129	106	59	304	51	340	254	190	61
20	158	39	37	131	98	75	251	59	306	269	165	43
21	154	39	35	118	97	83	174	142	243	253	143	61
22	155	39	36	115	95	87	191	212	247	259	93	39
23	65	39	37	120	85	79	204	228	225	250	93	37
24	50	43	37	120	98	77	202	204	177	241	93	37
25	48	36	37	121	82	77	201	75	170	244	93	37
26	48	36	37	116	83	73	276	43	159	228	119	37
27	44	37	37	119	84	64	289	51	157	160	173	37
28	43	36	39	115	78	57	420	62	163	157	190	37
29	43	36	41	107	---	56	89	152	194	157	241	37
30	43	36	43	107	---	63	48	147	252	157	302	37
31	43	---	44	118	---	200	---	222	---	149	335	---
TOTAL	3727	1192	1132	3110	2816	2353	9001	5499	6221	8255	6890	3286
MEAN	120	39.7	36.5	100	101	75.9	300	177	207	266	222	110
MAX	247	43	44	133	118	200	437	349	394	402	387	344
MIN	43	36	34	39	78	56	48	43	36	149	93	37
AC-FT	7390	2360	2250	6170	5590	4670	17850	10910	12340	16370	13670	6520
CAL YR 1984	TOTAL	58551	MEAN 160	MAX 5370	MIN 23	AC-FT 116100						
WTR YR 1985	TOTAL	53482	MEAN 147	MAX 437	MIN 34	AC-FT 106100						

## 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.--Estimated daily discharges: Jan. 12-17, 24, and Feb. 21. Records good except for estimated daily discharges, which are fair. 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.--46 years, 104 ft<sup>3</sup>/s, 75,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 526 ft<sup>3</sup>/s, Sept. 15, 16, 1946; no flow many days each year.

DISCHARGE, IN 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	157	.00	.00	.00	.00	101	355	154	145	240	317	180
2	150	.00	.00	.00	.00	99	345	176	161	224	288	262
3	133	.00	.00	.00	.00	91	322	177	255	239	269	291
4	101	.00	.00	.00	.00	111	308	163	319	250	258	263
5	82	.00	.00	.00	.00	139	287	126	292	271	287	264
6	109	.00	.00	.00	.00	169	245	209	194	273	273	207
7	94	.00	.00	.00	.00	201	221	272	160	251	251	177
8	144	.00	.00	.00	.00	143	266	311	157	337	290	114
9	141	.00	.00	.00	.00	70	277	318	155	340	260	101
10	160	.00	.00	.00	.00	.60	262	300	185	313	210	90
11	159	.00	.00	.00	.00	.60	264	278	126	336	179	126
12	183	.00	.00	.00	.00	.61	276	247	99	361	247	145
13	157	.00	.00	.00	.00	.50	256	249	101	296	266	166
14	88	.00	.00	.00	.00	.40	245	303	112	179	225	113
15	86	.00	.00	.00	.00	.48	293	287	116	166	174	3.2
16	135	.00	.00	.00	.00	.40	320	249	130	174	156	27
17	150	.00	.00	.00	.00	.40	312	171	219	233	124	41
18	177	.00	.00	.00	.00	.46	249	109	234	276	80	42
19	163	.00	.00	.00	.00	.47	219	95	205	239	111	9.9
20	183	.00	.00	.00	.00	.28	210	95	196	173	121	1.0
21	167	.00	.00	.00	16	.32	203	117	204	157	131	.10
22	139	.00	.00	.00	62	.40	177	128	181	206	144	.00
23	33	.00	.00	.00	62	.40	171	126	185	224	129	.00
24	11	.00	.00	.00	61	.40	189	111	158	217	124	.00
25	.00	.00	.00	.00	69	74	163	69	150	218	104	.00
26	.00	.00	.00	.00	106	167	161	46	165	164	161	.00
27	.00	.00	.00	.00	129	284	132	84	205	120	178	.00
28	.00	.00	.00	.00	123	341	113	111	209	85	178	7.7
29	.00	.00	.00	.00	---	346	91	144	202	134	233	42
30	.00	.00	.00	.00	---	340	106	143	210	195	228	82
31	.00	---	.00	.00	---	362	---	140	---	250	210	---
TOTAL	3102.00	.00	.00	.00	628.00	3044.72	7038	5508	5430	7141	6206	2754.90
MEAN	100	.000	.000	.000	22.4	98.2	235	178	181	230	200	91.8
MAX	183	.00	.00	.00	129	362	355	318	319	361	317	291
MIN	.00	.00	.00	.00	.00	.28	91	46	99	85	80	.00
AC-FT	6150	.00	.00	.00	1250	6040	13960	10930	10770	14160	12310	5460
CAL YR 1984	TOTAL	36370.97	MEAN	99.4	MAX 378	MIN .00	AC-FT 72140					
WTR YR 1985	TOTAL	40852.62	MEAN	112	MAX 362	MIN .00	AC-FT 81030					

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.

PERIOD OF RECORD.--January 1939 to September 1965 (month end gage heights and contents). October 1965 to current year. Monthend gage heights January 1919 to December 1938 in files of Pecos River Commission.

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 (based on 1979 reservoir, new capacity table put into use January 1, 1982), 4,330 acre-ft 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.--Gage-height record and capacity table based on August 1964 survey provided by Carlsbad Irrigation District. Capacity table based on 1979 resurvey provided by U.S. Bureau of Reclamation.

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, 4,520 acre-ft, Jan. 15-17, Jan. 22 to Feb. 5, Feb. 9-14, Feb. 19-22, gage height, 20.60 ft; minimum, 573 acre-ft, June 7, gage height, 15.20 ft.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1030	1610	2830	3580	4520	3800	760	2630	1210	975	864	1210
2	975	1680	2870	3580	4520	3710	760	2560	1470	1090	710	1470
3	760	1710	2910	3580	4520	3620	811	2100	1610	1210	616	1540
4	864	1750	2790	3620	4520	3540	919	1750	1540	1280	710	1610
5	919	1820	2950	3660	4520	3360	1030	1540	1030	1280	864	1410
6	919	1890	3070	3660	4470	3200	1210	1340	616	1150	975	1410
7	919	1890	3070	3710	4470	3120	1540	1210	573	1150	1030	919
8	946	1960	3120	3710	4470	2630	1680	1090	919	1090	1150	919
9	1030	2000	3120	3800	4520	2480	1960	1090	1090	1210	1280	975
10	760	2030	3120	3930	4520	2560	2030	1030	1150	1210	1540	1150
11	662	2030	3120	3930	4520	2630	1960	1120	1210	1210	1610	1240
12	662	2070	3120	3970	4520	2830	1750	1280	1280	1150	1750	1210
13	760	2070	3160	4380	4520	2910	1470	1340	1340	1030	1470	1150
14	864	2100	3200	4470	4520	3030	1410	1410	1410	1150	1280	975
15	1030	2100	3240	4520	4470	3120	1340	1340	1280	1180	975	1150
16	1090	2250	3280	4520	4470	3240	1210	1340	1150	1280	864	1210
17	1120	2290	3320	4520	4470	3320	1210	1410	919	1210	975	1150
18	1060	2330	3320	4470	4470	3450	1280	1340	811	975	1150	1150
19	1000	2360	3360	4470	4520	3580	1410	1210	864	662	1210	1280
20	975	2400	3360	4470	4520	3620	1470	1090	975	811	1340	1470
21	919	2440	3410	4470	4520	3710	1410	1090	1090	975	1410	1610
22	864	2480	3450	4520	4520	3800	1370	1030	1150	1030	1340	1640
23	975	2520	3450	4520	4330	3880	1280	1090	1210	1090	1210	1680
24	1030	2600	3490	4520	4330	3970	1210	1340	1150	1090	1090	1750
25	1150	2710	3490	4520	4290	4060	1150	1340	1210	1120	1090	1750
26	1210	2710	3490	4520	4240	3880	1150	1410	1210	1090	1030	1820
27	1280	2710	3540	4520	4060	3540	1280	1340	1150	1150	919	1850
28	1340	2710	3540	4520	3970	3030	1610	1210	1060	1210	891	1890
29	1410	2750	3540	4520	---	2330	2950	1030	891	1280	864	1850
30	1470	2790	3580	4520	---	1610	2870	1030	864	1210	864	1820
31	1570	---	3580	4520	---	1090	---	1030	---	1090	864	---
MAX	1570	2790	3580	4520	4520	4060	2950	2630	1610	1280	1750	1890
MIN	662	1610	2790	3580	3970	1090	760	1030	573	662	616	919
(†)	+420	+1220	+790	+940	-550	+2880	+1780	-1840	-166	+226	-226	+956
CAL YR 1984	MAX											

(†) CHANGE IN CONTENTS, IN ACRE-FEET.

## RIO GRANDE BASIN

08403800 LAKE AVALON NEAR CARLSBAD, NM -- Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.10	17.00	18.65	19.55	20.60	19.80	15.60	18.40	16.40	16.00	15.80	16.40
2	16.00	17.10	18.70	19.55	20.60	19.70	15.60	18.30	16.80	16.20	15.50	16.80
3	15.60	17.15	18.75	19.55	20.60	19.60	15.70	17.70	17.00	16.40	15.30	16.90
4	15.80	17.20	18.60	19.60	20.60	19.50	15.90	17.20	16.90	16.50	15.50	17.00
5	15.90	17.30	18.80	19.65	20.60	19.30	16.10	16.90	16.10	16.50	15.80	16.70
6	15.90	17.40	18.95	19.65	20.55	19.10	16.40	16.60	15.30	16.30	16.00	16.70
7	15.90	17.40	18.95	19.70	20.55	19.00	16.90	16.40	15.20	16.30	16.10	15.90
8	15.95	17.50	19.00	19.70	20.55	18.40	17.10	16.20	15.90	16.20	16.30	15.90
9	16.10	17.55	19.00	19.80	20.60	18.20	17.50	16.20	16.20	16.40	16.50	16.00
10	15.60	17.60	19.00	19.95	20.60	18.30	17.60	16.10	16.30	16.40	16.90	16.30
11	15.40	17.60	19.00	19.95	20.60	18.40	17.50	16.25	16.40	16.40	17.00	16.45
12	15.40	17.65	19.00	20.00	20.60	18.65	17.20	16.50	16.50	16.30	17.20	16.40
13	15.60	17.65	19.05	20.45	20.60	18.75	16.80	16.60	16.60	16.10	16.80	16.30
14	15.80	17.70	19.10	20.55	20.60	18.90	16.70	16.70	16.70	16.30	16.50	16.00
15	16.10	17.70	19.15	20.60	20.55	19.00	16.60	16.60	16.50	16.35	16.00	16.30
16	16.20	17.90	19.20	20.60	20.55	19.15	16.40	16.60	16.30	16.50	15.80	16.40
17	16.25	17.95	19.25	20.60	20.55	19.25	16.40	16.70	15.90	16.40	16.00	16.30
18	16.15	18.00	19.25	20.55	20.55	19.40	16.50	16.60	15.70	16.00	16.30	16.30
19	16.05	18.05	19.30	20.55	20.60	19.55	16.70	16.40	15.80	15.40	16.40	16.50
20	16.00	18.10	19.30	20.55	20.60	19.60	16.80	16.20	16.00	15.70	16.60	16.80
21	15.90	18.15	19.35	20.55	20.60	19.70	16.70	16.20	16.20	16.00	16.70	17.00
22	15.80	18.20	19.40	20.60	20.60	19.80	16.65	16.10	16.30	16.10	16.60	17.05
23	16.00	18.25	19.40	20.60	20.40	19.90	16.50	16.20	16.40	16.20	16.40	17.10
24	16.10	18.35	19.45	20.60	20.40	20.00	16.40	16.60	16.30	16.20	16.20	17.20
25	16.30	18.50	19.45	20.60	20.35	20.10	16.30	16.60	16.40	16.25	16.20	17.20
26	16.40	18.50	19.45	20.60	20.30	19.90	16.30	16.70	16.40	16.20	16.10	17.30
27	16.50	18.50	19.50	20.60	20.10	19.50	16.50	16.60	16.30	16.30	15.90	17.35
28	16.60	18.50	19.50	20.60	20.00	18.90	17.00	16.40	16.15	16.40	15.85	17.40
29	16.70	18.55	19.50	20.60	---	18.00	18.80	16.10	15.85	16.50	15.80	17.35
30	16.80	18.60	19.55	20.60	---	17.00	18.70	16.10	15.80	16.40	15.80	17.30
31	16.95	---	19.55	20.60	---	16.20	---	16.10	---	16.20	15.80	---
MEAN	16.06	17.85	19.16	20.25	20.51	19.05	16.73	16.61	16.22	16.24	16.18	16.69
MAX	16.95	18.60	19.55	20.60	20.60	20.10	18.80	18.40	17.00	16.50	17.20	17.40
MIN	15.40	17.00	18.60	19.55	20.00	16.20	15.60	16.10	15.20	15.40	15.30	15.90
CAL YR 1984	MEAN 17.43		MAX 21.00	MIN 15.30								
WTR YR 1985	MEAN 17.61		MAX 20.60	MIN 15.20								

## 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 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1907, (published as "at Avalon"), June 1951 to current year.

GAGE.--Water-stage recorder. 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 good. Flow completely regulated by Lake Avalon (station 08403800) since 1891. Flow also regulated by several other reservoirs. Diversions and ground-water withdrawals upstream from station for irrigation of about 198,000 acres, 1959 determination. Station bypassed by Carlsbad Main Canal (station 08403500).

AVERAGE DISCHARGE.--34 years, 29.7 ft<sup>3</sup>/s, 21,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,500 ft<sup>3</sup>/s, Aug. 23, 1966, gage height, 26.4 ft, from floodmarks, from rating curve extended above 33,000 ft<sup>3</sup>/s on basis of computation of peak flow over Tansill Dam 5.8 mi 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 ft<sup>3</sup>/s and is probably the greatest flood since 1842. A major flood occurred Aug. 3, 1893, and was described as "greatest in 50 years"; it damaged McMillan Dam, then under construction, and washed out the original Avalon Dam. Another major flood occurred Aug. 7, 1916, discharge 70,000 ft<sup>3</sup>/s at site 6.5 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 104 ft<sup>3</sup>/s, Jan. 19, gage height, 4.58 ft; no flow most of time.

DISCHARGE, IN 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	.00	.00	.00	.00	75	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	69	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	64	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	65	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	57	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	55	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	55	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	55	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	62	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	50	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	58	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	62	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	67	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	25	71	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	52	65	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	58	67	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	69	67	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	67	67	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	82	65	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	67	62	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	65	48	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	65	23	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	67	5.4	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	69	1.4	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	69	.18	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	69	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	71	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	71	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	69	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	64	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	62	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	1161.00	1335.98	.00	.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	37.5	47.7	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	82	75	.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	2300	2650	.00	.00	.00	.00	.00	.00	.00
CAL YR 1984	TOTAL	17326.00	MEAN	47.3	MAX	8950	MIN	.00	AC-FT	34370		
WTR YR 1985	TOTAL	2496.98	MEAN	6.84	MAX	82	MIN	.00	AC-FT	4950		

08405000 PECOS RIVER AT CARLSBAD, NM

## WATER-QUALITY RECORDS

LOCATION.--Lat 32°24'42", long 104°13'17", in SE¼NE¼ sec. 7, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, immediately downstream from Lower Tansil Dam, which is approximately 0.2 mi upstream from Dark Canyon, and 0.5 mi downstream from the Greene Street Bridge on U.S. Highway 62-180 in Carlsbad.

DRAINAGE AREA.--18,100 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--Water years 1905-07, 1937-46, 1951 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1905 to April 1907, May 1937 to September 1946, July 1951 to current year.  
WATER TEMPERATURES: July 1951 to current year.

REMARKS.--Prior to impoundment above Lower Tansil Dam in January 1970 samples were collected at gage on Greene Street Bridge. Additional samples were collected at 08405200 Pecos River below Dark Canyon for comparison with those collected at this station. Mean daily discharges are estimated from discharge station below Dark Canyon.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 6,800 microsiemens Aug. 3, 1974; minimum daily, 401 microsiemens Sept. 23, 1974.  
WATER TEMPERATURES: Maximum daily, 38.0°C May 28, 1969; minimum daily, 0.0°C Dec. 18, 1965.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,550 microsiemens Feb. 22; minimum daily, 3,000 microsiemens Jan. 3.  
WATER TEMPERATURES: Maximum daily, 31.0°C Aug. 4, 6; minimum daily, 6.0°C several days in Jan. and Feb.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
OCT 03...	1300	25	3580	3750	8.0	7.8	21.0	19.0	8.7	1400	1200
NOV 05...	1030	25	3380	3360	8.1	8.0	21.0	15.0	9.7	1200	1100
DEC 10...	1330	22	3280	3290	7.8	8.0	12.0	10.0	11.0	1300	1100
JAN 03...	1400	23	3000	3180	8.1	7.7	10.5	7.0	11.6	1300	1100
FEB 04...	1330	99	4000	4360	8.1	8.0	13.0	7.0	11.0	1700	1500
MAR 08...	1445	60	4100	4130	8.1	7.8	29.0	16.0	9.3	1600	1400
APR 03...	0920	23	3420	3640	8.1	7.8	23.0	16.0	9.6	1400	1200
MAY 02...	1045	22	3420	3820	8.3	7.8	25.0	22.0	9.6	1300	1200
JUL 01...	1500	18	3250	3510	9.1	7.7	36.0	28.0	8.9	1200	1000
AUG 07...	0900	8.9	4150	3940	7.9	7.6	27.0	29.0	--	1500	1300
SEP 04...	1140	16	3600	3850	8.0	7.8	28.0	27.0	8.2	1300	1200
30...	1545	15	3400	3810	9.2	7.8	13.0	18.0	8.7	1400	1300

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)	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)
OCT 03...	350	130	340	4	4.6	1100	570	.80	17	2600
NOV 05...	310	110	290	4	4.2	850	510	.70	16	2200
DEC 10...	320	110	290	4	3.9	970	510	.60	16	2300
JAN 03...	320	110	280	4	3.8	920	460	.70	17	2200
FEB 04...	450	130	430	5	4.8	1300	780	.70	12	3200
MAR 08...	390	140	430	5	4.8	1200	730	.80	17	3000
APR 03...	360	110	340	4	4.3	1100	560	.70	13	2600
MAY 02...	350	110	360	4	5.0	1100	600	.70	12	2600
JUL 01...	300	100	330	4	4.9	1000	550	.70	15	2400
AUG 07...	370	130	360	4	5.5	1200	610	.70	20	2800
SEP 04...	340	120	360	4	5.3	1200	640	.70	18	2800
30...	360	130	360	4	4.6	1200	590	.70	16	2800

08405000 PECOS RIVER AT CARLSBAD, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT			
03...	1300	240	40
NOV			
05...	1030	220	30
DEC			
10...	1330	210	60
JAN			
03...	1400	200	80
FEB			
04...	1330	240	40
MAR			
08...	1445	270	40
APR			
03...	0920	230	40
MAY			
02...	1045	240	30
JUL			
01...	1500	210	30
AUG			
07...	0900	260	50
SEP			
04...	1140	280	80
30...	1545	240	50

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. ° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3690	3420	3420	3140	4510	4310		3910	3400	3440	3840	4170
2	3690	3380	3450	3140	4460	4240		3740	3500	3500	3860	4150
3	3740	3380	3450	3150	4410	4070		3730	3530	3510	3850	4130
4	3750	3380	3460	3150	4390	4090		3740	3520	3460	3870	3670
5	3730	3350	3440	3160	4400	4100		3720	3520	3450	3880	3980
6	3760	3350	3440	3150	4390	4290		3720	3560	3450	3880	4010
7	3620	3380	3410	3130	4400	4260		3710	3560	3450	3870	4020
8	3570	3410	3390	3130	4390	4220		3710	3590	3480	3880	4140
9	3510	3440	3380	3220	4340	4060		3730	3600	3490	3890	4160
10	3530	3480	3390	3190	4400	4000		3720	3280	3540	3850	4150
11	3490	3530	3360	3190	4410	3960		3730	3500	3540	3890	4190
12	3490	3530	3330	3210	4400	3930		3720	3470	3510	3850	4160
13	3510	3520	3270	3190	4400	3940		3750	3530	3570	3900	4100
14	3480	3590	3230	3190	4380	3940		3760	3560	3600	3920	4040
15	3490	3590	3130	3190	4400	3990		3750	3590	3600	3940	3980
16	3510	3590	3100	3120	4380	4000		3750	3630	3630	3940	3950
17	3520	3630	3100	3130	4470	4050		3470	3640	3630	3970	3890
18	3520	3600	3210	3110	4470	4060		3530	3670	3660	4000	3880
19	3620	3570	3260	3410	4480	4060		3530	3670	3700	4020	3760
20	3670	3570	3290	3970	4460	4020		3540	3680	3720	4030	3670
21	3720	3560	3320	4120	4490	3980		3550	3680	3720	3990	3630
22	3660	3590	3290	4230	4550	3980		3530	3680	3720	3890	3630
23	3620	3620	3300	4250	4500	3920		3530	3680	3730	3960	3630
24	3200	3180	3270	4310	4460	3890		3480	3670	3770	4000	3630
25	3180	3350	3250	4310	4450	3860		3470	3280	3740	4010	3670
26	3350	3420	3300	4270	4450	3820		3110	3170	3770	4020	3660
27	3470	3390	3230	4260	4270	3790		3100	3140	3770	4040	3660
28	3410	3360	3210	4300	4200	3780		3140	3140	3760	4110	3680
29	3410	3360	3160	4330	---	3770		3260	3280	3800	4110	3680
30	3420	3360	3170	4330	---	3710		3320	3320	3830	4140	3740
31	3400	---	3200	4330	---	3690		3390	---	3870	4180	---
MEAN	3540	3460	3300	3590	4420	3990		3580	3500	3630	3950	3890
WTR YR 1985	MEAN	3710		MAX	4550		MIN	3100				

## RIO GRANDE BASIN

08405000 PECOS RIVER AT CARLSBAD, NM -- Continued

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG. ° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	16.0	9.0	9.0	7.0	13.0	15.0	20.0	23.0	25.0	29.0	29.0
2	19.0	15.0	10.0	7.0	6.0	14.0	17.0	21.0	25.0	25.0	30.0	28.0
3	19.0	15.0	9.0	7.0	7.0	15.0	18.0	21.0	24.0	25.0	30.0	28.0
4	19.0	16.0	8.0	8.0	7.0	13.0	16.0	22.0	25.0	26.0	31.0	28.0
5	19.0	14.0	8.0	10.0	8.0	12.0	18.0	25.0	25.0	26.0	30.0	28.0
6	19.0	15.0	8.0	10.0	8.0	13.0	18.0	23.0	29.0	27.0	31.0	26.0
7	21.0	16.0	8.0	9.0	6.0	15.0	19.0	23.0	25.0	29.0	30.0	26.0
8	20.0	15.0	8.0	9.0	7.0	16.0	17.0	24.0	28.0	28.0	30.0	28.0
9	20.0	15.0	10.0	10.0	9.0	16.0	16.0	25.0	28.0	29.0	29.0	27.0
10	20.0	14.0	10.0	9.0	10.0	18.0	16.0	25.0	25.0	26.0	26.0	26.0
11	20.0	15.0	9.0	9.0	9.0	17.0	19.0	21.0	26.0	29.0	27.0	28.0
12	20.0	15.0	10.0	6.0	9.0	16.0	19.0	24.0	25.0	30.0	28.0	27.0
13	20.0	14.0	10.0	6.0	10.0	14.0	20.0	21.0	25.0	29.0	29.0	26.0
14	21.0	15.0	9.0	6.0	10.0	15.0	20.0	24.0	24.0	29.0	29.0	25.0
15	20.0	15.0	8.0	6.0	10.0	13.0	20.0	20.0	28.0	28.0	28.0	27.0
16	19.0	13.0	9.0	8.0	11.0	15.0	20.0	22.0	28.0	28.0	27.0	24.0
17	19.0	14.0	8.0	8.0	11.0	13.0	21.0	21.0	28.0	29.0	28.0	26.0
18	18.0	14.0	9.0	9.0	11.0	15.0	22.0	21.0	26.0	30.0	29.0	25.0
19	18.0	11.0	9.0	9.0	12.0	15.0	20.0	23.0	26.0	28.0	29.0	24.0
20	16.0	11.0	10.0	9.0	11.0	13.0	21.0	21.0	26.0	28.0	27.0	24.0
21	17.0	10.0	10.0	8.0	14.0	14.0	20.0	25.0	25.0	30.0	27.0	25.0
22	17.0	10.0	9.0	7.0	15.0	14.0	19.0	24.0	26.0	28.0	28.0	25.0
23	16.0	10.0	10.0	8.0	15.0	14.0	19.0	22.0	25.0	28.0	28.0	22.0
24	13.0	10.0	9.0	8.0	15.0	16.0	20.0	24.0	25.0	26.0	30.0	24.0
25	13.0	11.0	9.0	9.0	13.0	15.0	20.0	24.0	25.0	25.0	29.0	24.0
26	13.0	10.0	8.0	9.0	14.0	15.0	20.0	26.0	25.0	25.0	27.0	21.0
27	12.0	9.0	8.0	10.0	14.0	17.0	20.0	24.0	29.0	28.0	30.0	20.0
28	16.0	9.0	10.0	8.0	11.0	17.0	20.0	25.0	26.0	29.0	29.0	20.0
29	15.0	11.0	10.0	10.0	---	17.0	19.0	25.0	28.0	29.0	27.0	19.0
30	15.0	11.0	10.0	11.0	---	15.0	22.0	22.0	25.0	30.0	29.0	20.0
31	16.0	---	10.0	6.0	---	16.0	---	24.0	---	29.0	27.0	---
MEAN	17.5	13.0	9.0	8.5	10.5	15.0	19.0	23.0	26.0	28.0	28.5	25.0
WTR YR 1985	MEAN	18.5	MAX	31.0	MIN	6.0						



## 08405150 DARK CANYON DRAW AT CARLSBAD, NM

LOCATION.--Lat 32°24'24", long 104°13'34", in NE¼NW¼SE¼ sec.7, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on downstream side of U.S. Highway 62-285 (Canal Street) bridge in Carlsbad, and 0.6 mi upstream from mouth. Mouth at Pecos River mile 459.2.

DRAINAGE AREA.--450 mi<sup>2</sup>, 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 excellent. A Soil Conservation Service flood control project on Hackberry Draw, an upstream tributary, has some effect on flood peaks and flow duration. Ground-water withdrawals upstream from station for irrigation of approximately 2,100 acres, 1973 determination and for municipal supply for Carlsbad.

AVERAGE DISCHARGE.--12 years, 7.27 ft<sup>3</sup>/s, 5,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft<sup>3</sup>/s, Sept. 26, 1980, gage height, 12.10 ft, from rating curve extended above 7,100 ft<sup>3</sup>/s; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a discharge of 66,000 ft<sup>3</sup>/s as determined by slope-area measurement at site 1.2 mi upstream. Another flood of approximately the same magnitude occurred Sept. 20, 1941.

Other major peaks occurred July 17, 1906, July 24, 1908, July 24, 1911, Apr. 18, 1915, Aug. 8, 1916, Sept. 15, 1919, Aug. 4, 1925, and May 23, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
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No flow during year.

DISCHARGE, IN 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	.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
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	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

GAL YR 1984	TOTAL	5031.50	MEAN	13.7	MAX	2670	MIN	.00	AC-FT	9980
WTR YR 1985	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00

## 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 mi<sup>2</sup>, 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.--Estimated daily discharges: Feb. 17-19 and Aug. 19-29. Records good except for estimated daily discharges, which are poor. Flow regulated by Lake Avalon (station 08403800) since 1891 and by several other reservoirs and up to Nov. 1982 at low stages by power plant. Power Plant discontinued operation Nov. 1982. Gage is bypassed on left bank by Carlsbad Main Canal East which irrigates several hundred acres adjacent to and downstream from gage site and on right bank by Carlsbad Main Canal South, which with supplemental ground-water withdrawals irrigates about 23,000 acres downstream. Diversions and ground-water withdrawals upstream from station for irrigation of about 198,000 acres, 1959 determination.

AVERAGE DISCHARGE.--15 years, 45.7 ft<sup>3</sup>/s, 33,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft<sup>3</sup>/s, Sept. 26, 1980, gage height, 14.60 ft, from floodmarks, from rating curve extended above 12,000 ft<sup>3</sup>/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a stage of about 22 ft, discharge not determined. (For dates of other historical floods see station 08404000.)

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft<sup>3</sup>/s, June 24, gage height, 3.44 ft; minimum, 3.9 ft<sup>3</sup>/s, part of each day Mar. 17, 18.

DISCHARGE, IN 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	26	26	23	26	94	51	24	23	18	17	19	11
2	26	25	23	23	92	48	24	22	17	23	19	11
3	26	27	22	23	88	46	23	22	17	52	14	15
4	26	26	23	23	90	39	24	22	19	37	11	24
5	25	25	23	23	88	37	21	22	17	23	11	14
6	25	25	22	24	85	34	22	20	15	19	10	14
7	25	25	22	23	82	35	21	19	15	20	9.0	14
8	25	28	22	25	85	49	21	20	16	13	9.9	17
9	25	28	23	25	88	42	22	19	21	15	13	16
10	25	23	23	23	79	32	23	20	22	18	14	15
11	25	26	25	23	83	36	25	19	22	19	10	16
12	28	26	22	23	90	36	28	19	31	18	11	21
13	26	25	23	25	92	36	27	20	30	22	11	22
14	26	26	22	24	105	22	28	18	30	21	12	34
15	26	25	28	53	109	4.7	28	19	26	16	9.9	19
16	25	25	23	73	108	5.0	29	69	21	14	14	17
17	23	26	23	80	111	4.3	29	25	22	19	14	18
18	26	23	23	82	115	23	27	20	17	16	11	21
19	23	23	23	88	118	29	23	24	18	10	10	38
20	28	23	23	85	122	27	22	24	19	12	9.8	20
21	31	23	23	82	115	24	23	18	22	12	9.8	20
22	51	23	22	84	106	27	22	19	29	13	9.8	18
23	35	25	22	87	87	27	20	18	37	13	9.5	16
24	39	42	22	88	66	26	20	19	128	13	11	17
25	26	28	21	90	61	26	23	50	38	13	17	17
26	26	26	21	89	55	24	24	21	18	14	17	16
27	27	23	22	91	53	24	29	19	16	15	15	18
28	26	25	26	92	52	24	42	19	15	14	14	18
29	27	25	25	90	---	24	21	20	16	14	13	18
30	27	23	23	85	---	23	23	20	15	13	12	15
31	28	---	25	84	---	24	---	18	---	15	11	---
TOTAL	853	769	713	1756	2519	909.0	738	707	747	553	381.7	550
MEAN	27.5	25.6	23.0	56.6	90.0	29.3	24.6	22.8	24.9	17.8	12.3	18.3
MAX	51	42	28	92	122	51	42	69	128	52	19	38
MIN	23	23	21	23	52	4.3	20	18	15	10	9.0	11
AC-FT	1690	1530	1410	3480	5000	1800	1460	1400	1480	1100	757	1090

CAL YR 1984 TOTAL 27032.21 MEAN 73.9 MAX 7410 MIN 4.2 AC-FT 53620  
WTR YR 1985 TOTAL 11195.70 MEAN 30.7 MAX 128 MIN 4.3 AC-FT 22210

08405200 PECOS RIVER BELOW DARK CANYON DRAW, AT CARLSBAD, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

REMARKS.--Samples collected at this station for comparison with those collected at 08405000 Pecos River at Carlsbad, NM.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
NOV											
05...	0930	25	3400	--	7.9	--	12.0	14.0	9.3	--	--
DEC											
10...	1200	22	3280	--	7.8	--	12.0	10.0	11.0	--	--
JAN											
03...	1245	25	3100	--	8.1	--	9.0	7.0	11.8	--	--
FEB											
04...	1230	89	4100	--	--	--	12.0	8.0	11.4	--	--
MAR											
08...	1330	64	4080	--	8.1	--	30.5	21.0	10.3	--	--
APR											
03...	0830	25	3550	--	8.0	--	22.0	15.0	9.2	--	--
MAY											
02...	1000	22	3500	--	8.1	--	19.0	20.0	7.8	--	--
31...	0930	19	3250	3520	7.7	7.7	23.0	23.0	7.2	1300	1100
JUL											
01...	1430	18	3400	--	8.0	--	38.0	25.0	10.1	--	--
AUG											
07...	0830	8.9	4140	--	7.8	--	25.0	27.0	--	--	--
SEP											
04...	1000	17	3550	--	7.7	--	27.5	25.5	5.7	--	--
30...	1520	15	3500	--	9.0	--	13.0	18.0	8.9	--	--

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)	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)
NOV										
05...	--	--	--	--	--	--	--	--	--	--
DEC										
10...	--	--	--	--	--	--	--	--	--	--
JAN										
03...	--	--	--	--	--	--	--	--	--	--
FEB										
04...	--	--	--	--	--	--	--	--	--	--
MAR										
08...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	--	--	--	--	--	--	--	--	--	--
31...	320	110	320	4	5.1	990	590	.70	12	2400
JUL										
01...	--	--	--	--	--	--	--	--	--	--
AUG										
07...	--	--	--	--	--	--	--	--	--	--
SEP										
04...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
MAY			
31...	0930	220	20

## 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 mi<sup>2</sup>.

PERIOD OF RECORD.--March to December 1940, December 1946 to current year.

REVISED RECORDS.--WSP 1632: 1948, 1949-50(P).

GAGE.--Water-stage recorder 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.--38 years (1948-85), 12.9 ft<sup>3</sup>/s, 9,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,600 ft<sup>3</sup>/s, Aug. 23, 1966, gage height, 21.7 ft, from floodmarks, from rating curve extended above 5,900 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 12.60 ft and 21.7 ft; minimum, 0.51 ft<sup>3</sup>/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 ft<sup>3</sup>/s, from rating curve extended above 1,400 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 8.41 ft and 12.60 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft<sup>3</sup>/s and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 19	0015	*6,490	*8.93	No other peak greater than base discharge.			

Minimum discharge, 1.8 ft<sup>3</sup>/s, part of each day Aug. 30, Sept. 1.

DISCHARGE, IN 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	7.0	10	13	7.1	14	7.5	10	7.6	4.9	8.5	7.7	3.1
2	7.0	10	13	7.1	14	7.4	11	7.7	9.1	7.6	5.4	
3	7.2	11	12	6.8	14	7.3	11	11	8.0	9.9	7.6	6.3
4	9.3	11	12	6.7	14	6.6	11	11	8.3	9.3	7.6	7.7
5	8.4	11	13	6.7	14	6.8	11	11	10	8.7	7.8	7.4
6	7.7	11	13	6.7	14	7.0	11	11	10	8.3	7.8	7.0
7	7.7	11	13	6.7	14	7.1	12	11	9.3	8.2	7.6	6.9
8	7.7	11	13	6.7	14	7.2	12	11	8.9	8.1	7.4	15
9	7.6	11	13	6.6	14	7.5	12	11	8.7	8.1	7.4	9.9
10	7.8	11	13	6.4	13	7.8	12	11	9.8	8.1	7.8	7.8
11	7.8	11	14	6.4	14	11	12	9.8	9.3	8.1	7.8	7.8
12	7.7	11	14	6.6	13	11	12	9.8	9.0	8.0	8.2	7.6
13	7.5	11	14	7.3	13	8.3	12	10	9.2	7.9	8.2	7.4
14	7.7	11	14	12	14	7.6	13	11	9.4	7.9	8.5	33
15	7.5	11	16	13	14	7.6	13	11	9.5	8.0	8.6	63
16	7.2	11	16	13	14	7.8	13	12	9.3	7.9	7.7	13
17	8.5	12	14	13	14	7.7	13	16	9.1	7.9	7.5	7.0
18	10	12	14	13	14	7.4	12	17	9.1	7.8	7.5	187
19	9.9	12	14	14	14	7.5	12	14	9.3	7.6	7.8	477
20	9.9	12	14	14	16	7.8	12	13	9.3	8.0	8.5	29
21	9.6	12	14	14	16	7.4	12	12	9.2	8.2	11	88
22	12	12	14	14	13	7.4	11	10	28	11	9.1	50
23	14	12	14	14	8.9	7.1	11	6.5	34	12	7.9	15
24	14	15	14	14	8.2	7.1	11	4.5	18	9.0	7.7	9.6
25	12	15	13	14	8.0	7.1	10	3.7	12	8.7	5.8	8.3
26	11	13	8.3	14	7.7	7.3	7.0	3.5	10	10	3.5	7.6
27	11	12	7.5	13	7.5	7.1	4.8	3.1	9.2	9.8	2.6	7.1
28	11	12	7.6	13	7.8	6.8	4.3	2.9	8.9	8.9	2.2	7.3
29	11	13	7.7	13	---	7.0	3.8	2.5	8.6	8.5	2.0	7.3
30	11	13	7.5	13	---	6.7	3.6	2.3	8.4	8.1	1.9	6.9
31	11	---	7.1	13	---	7.4	---	2.4	---	7.8	1.8	---
TOTAL	288.7	351	386.7	328.8	356.1	234.3	316.5	283.6	324.4	267.4	212.1	1115.4
MEAN	9.31	11.7	12.5	10.6	12.7	7.56	10.6	9.15	10.8	8.63	6.84	37.2
MAX	14	15	16	14	16	11	13	17	34	12	11	477
MIN	7.0	10	7.1	6.4	7.5	6.6	3.6	2.3	4.9	7.6	1.8	3.1
AC-FT	573	696	767	652	706	465	628	563	643	530	421	2210

CAL YR 1984 TOTAL 4334.9 MEAN 11.8 MAX 327 MIN 1.1 AC-FT 8600  
WTR YR 1985 TOTAL 4465.0 MEAN 12.2 MAX 477 MIN 1.8 AC-FT 8860

## 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 mi<sup>2</sup>, approximately (contributing area).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1920 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1632: 1925, 1932-37.

GAGE.--Water-stage recorder. 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.--Estimated daily discharges: Nov. 28 and Sept. 3-6. Records good except for estimated daily discharges, which are poor. Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals upstream from station for irrigation of about 202,000 acres, 1959 determination. Harroun canal bypasses gage on left bank and irrigates approximately 1,000 acres adjacent to and downstream from gage. This bypass is not gaged.

AVERAGE DISCHARGE.--16 years (1921-36), 274 ft<sup>3</sup>/s, 198,500 acre-ft/yr, prior to completion of Lake Sumner.  
49 years (1938-85), 166 ft<sup>3</sup>/s, 120,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft<sup>3</sup>/s, Aug. 23, 1966, gage height, 42.1 ft, from floodmarks, from rating curve extended above 36,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 3.7 ft<sup>3</sup>/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 ft<sup>3</sup>/s at Capitan, 27 mi upstream. Flood in September 1919 reached a stage of 29.4 ft, present datum, discharge, 40,400 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,550 ft<sup>3</sup>/s, Sept. 19, gage height, 13.20 ft; minimum, 13 ft<sup>3</sup>/s, Sept. 2.

DISCHARGE, IN 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	86	71	71	63	129	109	34	35	41	28	30	15
2	104	71	71	64	135	89	55	34	33	26	35	14
3	74	70	70	63	138	79	54	39	33	26	40	36
4	73	70	70	63	134	77	52	45	32	25	42	31
5	77	70	70	62	131	67	75	53	34	24	32	29
6	67	70	71	63	131	62	57	45	42	23	29	42
7	89	71	71	61	128	60	37	44	48	22	45	54
8	86	71	65	62	126	55	34	38	33	23	37	41
9	79	70	60	62	128	50	32	37	30	22	30	69
10	78	69	59	62	131	77	40	39	29	24	27	62
11	68	68	59	61	126	64	59	35	55	32	24	56
12	70	69	59	60	123	51	51	29	52	28	23	44
13	69	70	60	62	132	49	56	34	36	26	24	54
14	79	71	64	64	129	50	52	32	34	26	22	64
15	87	72	80	68	132	50	45	28	32	31	38	160
16	76	67	84	71	142	48	43	31	28	28	48	109
17	75	61	83	108	148	37	48	75	28	25	41	67
18	65	61	77	124	147	34	47	108	27	23	34	54
19	72	62	76	131	149	33	38	61	39	22	30	1420
20	107	59	76	131	159	37	37	58	43	21	27	249
21	85	59	75	133	158	52	44	53	34	21	35	153
22	99	59	72	131	148	52	34	53	30	24	34	161
23	142	59	71	132	143	48	30	62	54	30	31	115
24	128	74	70	134	131	50	28	57	45	29	46	89
25	118	93	70	135	128	50	31	57	54	28	47	80
26	96	90	69	135	122	47	37	65	78	36	39	73
27	77	73	65	136	113	38	41	95	58	59	30	69
28	73	69	66	137	111	34	40	52	39	47	26	59
29	71	69	69	138	---	35	37	48	32	44	23	62
30	68	71	70	136	---	38	49	44	29	35	20	60
31	67	---	68	132	---	36	---	47	---	32	17	---
TOTAL	2605	2079	2161	2984	3752	1658	1317	1533	1182	890	1006	3591
MEAN	84.0	69.3	69.7	96.3	134	53.5	43.9	49.5	39.4	28.7	32.5	120
MAX	142	93	84	138	159	109	75	108	78	59	48	1420
MIN	65	59	59	60	111	33	28	28	27	21	17	14
AC-FT	5170	4120	4290	5920	7440	3290	2610	3040	2340	1770	2000	7120
CAL YR 1984	TOTAL	40106	MEAN	110	MAX	11200	MIN	12	AC-FT	79550		
WTR YR 1985	TOTAL	24758	MEAN	67.8	MAX	1420	MIN	14	AC-FT	49110		

08406500 PECOS RIVER NEAR MALAGA, NM -- Continued

## WATER-QUALITY RECORDS

LOCATION.--Samples collected 2.5 mi upstream from discharge station.

PERIOD OF RECORD.--Water years 1937 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1937 to current year.

WATER TEMPERATURES: February 1959 to current year.

REMARKS.--No appreciable inflow between discharge station and sampling point except during periods of heavy local rains.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 28,100 microsiemens June 7, 1966; minimum daily, 402 microsiemens Aug. 12, 1984.

WATER TEMPERATURES: Maximum daily, 34.0°C June 25, 1964; minimum daily, 2.0°C Dec. 25, 26, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 8,600 microsiemens Sept. 5; minimum daily, 2,510 microsiemens Sept. 22.

WATER TEMPERATURES: Maximum daily, 32.5°C Aug. 4; minimum daily, 4.0°C Feb. 5.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CAC03) (00900)
OCT										
04...	1030	75	5100	5190	8.0	7.9	29.5	18.5	8.6	1600
30...	1030	69	6000	5980	8.2	8.3	19.0	15.5	10.3	1900
DEC										
11...	1100	59	6100	6170	8.3	7.9	14.5	11.0	14.2	2000
31...	1000	69	5800	5850	8.4	7.9	9.5	9.5	13.9	1700
FEB										
05...	1030	130	5000	4980	8.2	8.0	7.0	4.0	11.6	1800
MAR										
13...	0900	49	5800	6190	8.3	7.2	17.0	16.0	13.2	2000
APR										
02...	0945	64	7600	7130	8.6	7.3	22.5	17.0	12.8	2200
30...	0930	53	6700	7170	8.5	7.3	23.0	20.0	8.9	2100
MAY										
30...	1030	45	5680	6650	8.2	7.3	31.0	25.0	8.6	2000
JUN										
27...	1100	57	--	7220	7.8	7.2	26.5	26.0	8.8	2200
AUG										
06...	1200	29	6000	6420	8.1	7.4	--	30.5	--	2000
SEP										
05...	0945	34	8600	8670	8.0	7.5	28.0	26.0	8.1	2500

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (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)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT									
04...	1500	410	140	560	6	11	1300	1100	.70
30...	1800	460	180	630	7	8.2	1500	1200	.80
DEC									
11...	1900	500	190	760	8	11	1600	1300	.80
31...	1500	430	150	700	8	9.1	1600	1200	.70
FEB									
05...	1700	480	150	510	5	6.5	1400	950	.70
MAR									
13...	1900	490	190	800	8	11	1600	1300	.80
APR									
02...	2100	550	200	890	9	15	1900	1600	.80
30...	2000	530	200	830	8	15	1400	1700	.80
MAY									
30...	1900	490	190	720	7	11	1400	1200	.80
JUN									
27...	2100	550	210	840	8	15	1800	1600	.80
AUG									
06...	1900	530	160	740	7	14	1900	1400	.80
SEP									
05...	2400	630	220	1200	11	25	2200	2300	1.0

08406500 PECOS RIVER NEAR MALAGA, NM -- Continued

## WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT									
04...	15	3600	--	.96	--	--	--	--	<.010
30...	13	4100	1.5	1.4	.180	.52	2.2	<.010	<.010
DEC									
11...	11	4400	1.8	1.8	.210	1.6	3.6	.160	<.010
31...	13	4200	2.0	2.1	.230	1.3	3.5	.190	.060
FEB									
05...	12	3600	1.5	1.5	.210	.79	2.5	.130	.150
MAR									
13...	4.7	4500	.30	.28	.210	1.6	2.1	.150	<.010
APR									
02...	5.7	5200	.90	.94	.290	.11	1.3	.140	<.010
30...	6.9	4700	.50	.42	.310	1.2	2.0	.110	<.010
MAY									
30...	12	4100	.20	.25	.210	1.4	1.8	.020	.020
JUN									
27...	7.1	5100	.50	.50	.330	1.3	2.1	.100	.020
AUG									
06...	16	4800	.60	.58	.200	1.9	2.7	.060	.020
SEP									
05...	18	6700	2.6	1.2	.280	1.6	4.5	.040	.010

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT						
04...	1030	310	30	20	4	<10
30...	1030	400	100	--	--	--
DEC						
11...	1100	390	80	--	--	--
31...	1000	360	60	--	--	--
FEB						
05...	1030	240	40	--	--	--
MAR						
13...	0900	380	50	--	--	--
APR						
02...	0945	470	50	--	--	--
30...	0930	440	40	--	--	--
MAY						
30...	1030	410	50	--	--	--
JUN						
27...	1100	410	100	--	--	--
AUG						
06...	1200	410	190	--	--	--
SEP						
05...	0945	560	260	--	--	--

08406500 PECOS RIVER NEAR MALAGA, NM -- Continued

## WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5310	5950	5750	5740	4550	5360	7220	6990	6410	7570	7470	8410
2	4870	5790	5700	5720	4670	5570	7140	7080	6650	7680	7350	8500
3	5010	5780	5700	5720	4770	5610	6650	7110	6860	7640	7030	8320
4	5280	5790	5680	5700	4810	5740	6740	6930	6860	7360	5790	8360
5	5480	5770	5710	5740	4920	5720	5550	6170	6900	7580	6360	8110
6	5610	5750	5690	5730	4990	6000	6310	6050	6940	7830	7180	8000
7	5480	5740	5660	5740	4990	5780	6870	6220	6390	7860	6350	6990
8	5370	5730	5650	5790	4990	5870	7250	6420	6870	7830	6190	6620
9	5390	5820	5970	5830	4860	6120	7420	6610	7050	7790	7160	5200
10	5380	5770	6160	5900	4910	6100	7440	6360	7140	7850	7460	5850
11	5700	5760	6260	5750	4890	6030	6750	6430	7000	7780	7600	6080
12	5700	5750	6320	5800	4960	6180	7030	6940	6430	7640	8070	6600
13	5740	5730	6410	5740	4980	6310	7060	7220	6740	7660	7370	6740
14	5600	5740	6410	5740	5040	6370	6720	6940	7040	7940	7110	6310
15	5470	5740	6340	5680	5120	6420	6790	7060	7080	7820	6430	4460
16	5510	5720	5760	5690	5080	6450	6810	7500	7210	7840	5810	5620
17	5590	5710	5630	5580	4970	6610	6750	6900	7340	7920	6850	6040
18	5740	5770	5590	5480	4930	6870	6730	6690	7400	7910	6860	6350
19	5980	5760	5540	5380	4960	7060	6820	6750	7500	7950	6650	3430
20	5050	5800	5580	5240	4930	7090	6920	6110	6830	8080	7270	2630
21	5410	5840	5520	5110	4930	6880	6910	5960	6920	7900	7290	2750
22	5490	5880	5540	4960	5030	6670	6980	6180	7330	8110	7740	2510
23	4820	5830	5580	4900	4960	6770	7160	6340	7270	8180	7870	3280
24	5400	5830	5580	4840	4930	6760	7320	6130	6740	8220	7500	3820
25	5430	5780	5580	4660	4900	6610	7440	6130	5800	8460	6770	4230
26	5440	5680	5590	4500	4810	6550	7520	6370	7260	8360	6410	4580
27	5670	5670	5690	4410	5110	6610	7210	6360	6740	6830	7290	4840
28	5760	5740	5780	4440	5200	6850	6840	6440	6920	---	---	5140
29	5810	5720	5790	4430	---	6980	7050	6550	7140	6930	6770	5370
30	5840	5750	5820	4490	---	7090	6980	6550	7350	7210	7200	5530
31	5960	---	5780	4600	---	7130	---	6550	---	7430	6440	---
MEAN	5490	5770	5800	5320	4940	6390	6950	6580	6940	7770	6990	5690
WTR YR 1985	MEAN	6220	MAX	8500	MIN	2510						

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	18.0	9.0	10.0	6.0	12.5	15.0	25.5	23.0	24.0	27.0	26.0
2	17.5	17.0	10.0	7.0	5.0	13.0	15.0	23.5	26.0	25.0	28.5	25.0
3	19.0	15.0	9.5	7.0	5.5	15.0	16.0	21.0	27.0	25.0	28.0	30.0
4	19.0	15.5	8.5	8.0	6.0	12.0	18.0	23.5	27.0	26.0	32.5	29.0
5	19.0	15.0	8.0	8.0	7.0	12.0	17.0	24.0	25.5	27.5	27.0	25.5
6	20.0	15.0	7.0	8.5	6.5	13.0	17.0	23.0	22.0	25.0	27.5	24.0
7	19.5	15.0	7.0	8.5	7.0	17.0	19.0	26.0	24.0	29.0	30.0	24.0
8	22.0	15.0	9.0	10.0	7.0	15.0	17.5	28.5	25.5	28.0	31.0	25.0
9	19.5	16.0	10.0	10.5	8.0	16.5	16.0	25.0	26.5	29.0	28.0	25.0
10	21.0	14.0	10.0	8.5	9.0	17.0	16.5	24.0	27.0	27.0	26.0	28.0
11	21.0	13.5	10.0	9.0	9.0	17.5	19.0	21.0	27.0	26.0	25.5	25.5
12	20.5	13.0	11.0	7.0	8.5	16.0	22.0	21.0	25.0	30.0	25.5	25.5
13	20.0	13.5	12.0	6.0	9.0	17.0	20.0	21.0	23.0	27.0	26.0	25.0
14	18.5	14.0	10.0	7.0	9.0	15.0	20.0	24.0	28.0	27.5	29.0	25.0
15	19.0	13.5	8.0	7.0	9.0	14.0	19.5	24.5	27.0	28.0	26.0	23.5
16	19.5	13.0	8.0	8.0	9.5	13.0	25.0	22.0	26.5	27.0	25.5	23.5
17	19.0	13.0	9.0	6.5	11.0	14.0	21.0	21.0	30.0	29.5	28.0	24.0
18	17.5	12.5	9.0	7.0	11.0	14.0	21.5	21.0	27.5	27.0	26.5	25.0
19	16.0	12.0	10.0	8.0	11.5	16.0	20.5	21.5	26.0	27.0	28.5	23.5
20	16.5	12.0	11.0	7.0	12.5	13.0	19.0	25.0	24.5	26.5	27.5	24.0
21	16.5	11.0	11.5	6.0	13.5	12.0	20.0	21.0	27.0	25.0	27.0	22.0
22	16.0	10.0	10.0	4.5	14.5	14.5	20.0	22.5	26.0	28.0	30.0	---
23	14.0	10.0	9.5	6.5	14.0	14.0	20.0	22.0	25.5	26.0	29.0	23.0
24	13.0	10.5	10.0	6.0	13.0	15.0	21.0	23.0	27.0	26.0	26.5	22.0
25	13.0	9.0	9.0	7.5	12.0	18.0	20.0	24.0	26.5	27.0	26.0	22.0
26	13.5	11.5	9.0	8.5	12.5	17.0	20.0	24.0	25.5	26.0	25.0	22.0
27	13.5	10.0	9.0	9.0	12.0	16.0	19.0	24.0	25.0	26.5	26.0	22.0
28	15.0	9.0	10.0	8.5	12.0	16.5	21.0	26.0	26.5	---	---	21.5
29	15.0	10.0	12.0	8.5	---	16.5	19.0	24.0	24.0	26.0	28.0	20.5
30	18.0	9.0	10.0	9.5	---	14.0	20.0	25.0	23.5	29.0	28.0	17.5
31	18.0	---	10.0	7.5	---	14.5	---	22.0	---	31.5	26.0	---
MEAN	17.5	13.0	9.5	8.0	9.5	15.0	19.0	23.5	26.0	27.0	27.5	24.0
WTR YR 1985	MEAN	18.5	MAX	32.5	MIN	4.5						



## 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 mi<sup>2</sup>, 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. July 1938 to Sept. 1941 at datum 1.19 ft higher.

REMARKS.--Estimated daily discharges: Sept. 3-5. Records good except those above 300 ft<sup>3</sup>/s, which are fair and estimated daily discharges, which are poor. Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals upstream from station for irrigation of about 202,000 acres, 1959 determination.

AVERAGE DISCHARGE.--37 years (1939-41, 1952-85), 128 ft<sup>3</sup>/s, 92,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined, 65,000 ft<sup>3</sup>/s, Aug. 23, 1966, maximum gage height, 31.6 ft, Aug. 23, 1966, from floodmarks; minimum discharge, 0.54 ft<sup>3</sup>/s, May 30, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,960 ft<sup>3</sup>/s, Sept. 19, gage height, 9.04 ft, from rating curve extended above 170 ft<sup>3</sup>/s on basis of runoff comparisons with nearby stations; minimum, 15 ft<sup>3</sup>/s, Sept. 1.

DISCHARGE, IN 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	91	73	72	63	126	101	38	39	46	25	27	17
2	109	73	72	62	127	85	38	33	39	23	25	16
3	98	72	71	62	135	76	48	31	33	24	26	15
4	80	71	69	61	133	67	50	36	32	22	30	32
5	78	71	70	59	130	70	58	40	33	24	30	23
6	83	70	72	59	131	56	67	43	36	25	27	22
7	80	71	72	59	127	59	54	40	46	23	26	33
8	103	70	70	59	122	50	43	40	47	22	30	46
9	87	70	62	60	123	47	38	37	37	22	28	57
10	89	69	59	59	126	53	37	33	32	22	25	61
11	77	68	59	59	124	61	44	32	31	23	22	59
12	71	67	59	58	116	46	51	29	47	23	21	51
13	71	68	59	58	122	46	52	26	47	23	20	46
14	72	70	60	60	125	44	57	27	39	22	20	59
15	83	70	73	63	120	50	54	28	34	24	23	110
16	85	71	81	66	133	52	48	26	31	29	31	150
17	74	64	81	86	147	46	46	30	29	24	35	89
18	67	62	76	117	147	31	48	76	26	23	31	64
19	62	62	73	129	146	33	50	89	26	22	27	1410
20	97	63	73	130	160	33	45	66	32	22	25	384
21	97	61	72	133	163	40	43	65	36	21	25	200
22	94	61	71	130	151	41	44	60	31	21	25	173
23	149	63	70	130	145	41	39	62	30	23	24	128
24	154	75	68	133	133	45	33	61	42	22	25	88
25	132	88	68	135	120	45	33	56	46	21	32	74
26	115	98	68	133	118	49	33	57	51	22	34	68
27	89	81	64	133	105	45	37	75	61	27	27	66
28	79	71	63	134	100	41	46	75	50	39	23	65
29	77	68	66	135	---	39	43	55	37	40	23	63
30	75	71	67	135	---	37	39	49	28	37	22	62
31	70	---	68	132	---	38	---	45	---	31	19	---
TOTAL	2788	2112	2128	2892	3655	1567	1356	1461	1135	771	808	3731
MEAN	89.9	70.4	68.6	93.3	131	50.5	45.2	47.1	37.8	24.9	26.1	124
MAX	154	98	81	135	163	101	67	89	61	40	35	1410
MIN	62	61	59	58	100	31	33	26	26	21	19	15
AC-FT	5530	4190	4220	5740	7250	3110	2690	2900	2250	1530	1600	7400
CAL YR 1984	TOTAL	41529	MEAN	113	MAX	9980	MIN	10	AC-FT	82370		
WTR YR 1985	TOTAL	24404	MEAN	66.9	MAX	1410	MIN	15	AC-FT	48410		

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued

## WATER-QUALITY RECORDS

LOCATION.--Samples collected 0.2 mi downstream from discharge station.

PERIOD OF RECORD.--Water years 1938-41, 1952 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1938 to September 1941, October 1951 to current year.

WATER TEMPERATURES: October 1952 to current year.

REMARKS.--No appreciable inflow between discharge station and sampling point except during periods of heavy local rains.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 66,000 microsiemens Aug. 1, 2, 1966; minimum daily, 433 microsiemens Sept. 21, 1941.

WATER TEMPERATURES: Maximum daily, 35.0°C July 6, 1968; minimum daily, 1.0°C Dec. 25, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 17,300 microsiemens July 25; minimum daily, 2,310 microsiemens Sept. 19.

WATER TEMPERATURES: Maximum daily, 33.0°C Aug. 4; minimum daily, 4.5°C Feb. 2.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	
OCT												
04...	1330	83	7200	7360	8.2	7.9	29.0	20.0	--	10.4	1700	
30...	1300	76	8100	8210	8.3	8.4	24.0	17.0	--	13.2	2000	
DEC												
11...	1300	59	8700	8550	8.4	8.1	12.0	9.5	2	--	2000	
31...	1215	68	8400	8480	8.4	7.3	18.0	10.0	--	--	1800	
FEB												
05...	1315	129	6200	6510	8.1	8.1	13.5	6.0	--	12.2	1900	
MAR												
13...	1100	46	9800	9480	8.9	7.1	18.5	16.0	--	17.9	2000	
APR												
02...	1200	36	12000	11000	9.1	7.2	30.0	18.0	--	16.2	2200	
30...	1220	40	11500	11800	8.7	8.7	27.0	22.0	--	12.1	2000	
MAY												
30...	1400	48	10000	9680	8.1	7.2	34.0	26.0	--	10.2	2100	
JUN												
27...	1400	63	10300	11500	--	7.1	30.0	26.0	--	--	2200	
AUG												
06...	1030	28	14000	13900	8.0	7.0	--	29.0	--	--	2500	
SEP												
05...	1150	20	16000	16300	8.1	7.0	33.0	26.5	--	11.0	2700	
DATE		HARD- NESS, NONCAR- BONATE (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)	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)
OCT												
04...	1500	400	160	980	11	28	1300	1800	.70	15	4800	
30...	1800	460	200	1100	11	27	1500	1900	.80	13	5300	
DEC												
11...	1900	480	200	1300	13	33	1700	2200	.70	7.6	6000	
31...	1600	420	180	1200	13	30	1600	2000	.70	5.6	5500	
FEB												
05...	1700	480	170	850	9	19	1500	1400	.70	12	4500	
MAR												
13...	1900	480	200	1600	16	42	1800	2500	.70	<1.0	--	
APR												
02...	2200	520	220	1800	17	52	2000	3000	.70	2.2	7600	
30...	2000	450	220	1900	19	50	2000	3200	.80	6.0	7900	
MAY												
30...	2000	510	210	1200	12	36	1800	2500	.70	4.7	6300	
JUN												
27...	2100	540	200	1800	17	51	1900	2900	.80	10	7500	
AUG												
06...	2400	590	250	2400	22	71	1900	3600	.80	17	8900	
SEP												
05...	2600	630	270	2800	24	90	2300	5100	.80	16	11000	

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT			
04...	1330	420	50
30...	1300	490	100
DEC			
11...	1300	510	90
31...	1215	490	50
FEB			
05...	1315	360	60
MAR			
13...	1100	550	90
APR			
02...	1200	650	50
30...	1220	680	40
MAY			
30...	1400	520	40
JUN			
27...	1400	600	290
AUG			
06...	1030	780	150
SEP			
05...	1150	930	350

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7810	8990	8490	8830	6010	7180	11300	11700	9630	10400	12800	13500
2	7530	8880	8470	8790	6240	7240	11400	12000	10200	11400	12800	14300
3	7410	8870	8370	8920	6430	7530	11400	11700	10100	12400	13400	15100
4	7350	9010	8410	8820	6420	8110	12600	11500	10500	13500	14400	15200
5	7450	8970	8470	8920	6510	8210	12100	12000	11000	14700	14100	15700
6	7770	8880	8490	8980	6590	8150	11900	12000	11900	15000	14000	16200
7	7710	8990	8360	9060	6540	8790	10600	12300	11500	15100	14000	14700
8	8280	8800	8380	9040	6580	8630	10100	11800	11200	15000	14500	13800
9	8010	8940	8380	9170	6690	9010	9680	11600	11000	15300	14000	13300
10	7750	8970	8630	9560	6750	9440	9810	11600	10900	15400	13500	13300
11	7930	8630	8690	9040	6670	9460	10600	11300	10900	15800	13500	10900
12	8040	8820	8940	8940	6610	9230	12300	12200	11900	15900	14600	10300
13	8260	8840	9190	8900	6740	9940	12700	12100	12500	16200	15100	9390
14	8630	8940	9530	9160	6710	9550	11600	11700	11100	16800	15200	9340
15	8820	8870	9240	8850	6660	9330	11300	12300	10700	16800	15500	10200
16	8560	8670	9310	9180	6850	9310	10600	12500	10700	17000	15500	9920
17	8100	8650	9010	9020	6840	9280	10800	12000	11400	16500	15200	7250
18	8400	8920	8510	9240	6660	9260	10800	12500	11700	16400	13100	7500
19	8440	9130	8360	8720	6490	9660	11100	13300	12500	15600	12700	2310
20	8740	8940	8350	8330	6540	10700	11400	10200	13200	15800	12400	3670
21	8590	8840	8370	7750	6430	11000	11200	10100	13800	16600	12800	3710
22	7740	8940	8330	7630	6430	11200	11000	10200	13000	16800	13500	4350
23	7580	8960	8250	7410	6510	10700	11600	10000	12400	16700	13300	4570
24	7150	8980	8310	7230	6480	11500	11500	9860	13000	16800	13500	4800
25	6670	8980	8360	7090	6520	10600	11300	9640	12300	17300	13500	5860
26	7170	8850	8270	6920	6700	10600	11300	10100	11900	16900	13300	6790
27	7310	8640	8200	6690	6610	10800	11400	10100	11000	16500	13400	7480
28	7730	8300	8510	6530	6630	10900	12100	10300	10300	---	---	7850
29	7910	8520	8450	6510	---	10900	12600	9640	9680	15200	13500	7920
30	8220	8800	8730	6530	---	11100	12000	9530	9760	14100	13800	8750
31	8370	---	8380	6480	---	12000	---	9910	---	13600	13600	---
MEAN	7920	8850	8570	8270	6570	9660	11300	11200	11400	15400	13800	9600
WTR YR 1985	MEAN	10200		MAX	17300		MIN	2310				

## RIO GRANDE BASIN

08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	18.5	9.0	10.0	5.5	13.0	15.0	25.0	24.0	24.0	27.5	26.0
2	18.0	17.0	9.0	7.0	4.5	13.0	15.0	23.0	26.0	25.0	28.0	25.0
3	19.0	15.5	9.0	6.5	5.5	15.0	21.0	21.0	25.0	25.5	28.0	29.0
4	19.0	15.0	8.0	7.0	6.0	12.5	18.0	23.5	26.0	26.5	33.0	29.0
5	19.0	15.0	7.0	7.0	7.0	12.0	17.5	25.0	24.5	27.0	29.5	26.5
6	20.5	15.0	6.5	8.0	6.5	12.5	18.0	24.0	23.0	29.0	28.0	25.5
7	20.0	15.0	6.5	8.0	7.5	17.0	18.0	27.0	24.0	28.0	30.5	25.0
8	22.5	15.0	8.5	9.0	7.0	15.0	17.5	29.0	26.5	28.0	32.5	26.0
9	20.0	15.0	10.0	10.5	8.5	16.5	16.0	25.0	27.0	28.0	29.0	26.0
10	22.0	13.5	10.0	9.0	9.5	17.5	16.0	25.0	27.5	27.0	27.0	26.0
11	21.0	13.0	10.0	8.5	10.0	18.0	18.0	22.0	27.5	27.0	27.0	26.0
12	21.0	12.5	10.5	7.0	8.5	16.5	22.0	21.5	26.0	29.0	26.0	26.0
13	20.0	13.0	11.5	5.0	10.0	17.0	20.0	21.0	24.0	28.0	27.0	25.0
14	18.0	14.0	10.5	5.5	10.5	15.5	21.0	23.0	27.0	28.0	25.0	25.0
15	19.0	13.5	7.0	6.0	9.5	14.0	21.0	22.5	27.0	28.0	26.5	24.0
16	20.0	13.0	7.0	7.0	10.0	13.0	24.0	22.0	27.0	27.5	26.0	23.5
17	19.0	12.5	9.0	6.0	12.0	13.5	22.0	22.0	29.0	29.0	28.5	24.0
18	18.0	12.0	9.0	7.0	11.5	14.0	22.0	22.0	28.0	27.0	27.0	25.0
19	16.0	11.0	10.0	8.0	12.0	15.5	21.0	22.0	27.0	27.5	29.0	22.5
20	16.0	11.0	11.0	7.5	13.0	13.5	20.0	22.5	25.5	26.5	28.0	25.0
21	16.5	11.0	11.5	5.0	14.0	12.0	21.0	22.5	27.0	26.0	28.0	23.5
22	16.0	9.0	10.0	6.5	15.0	14.0	20.0	23.0	26.0	27.5	31.0	---
23	14.0	9.0	9.5	6.0	15.0	14.5	19.0	23.0	26.0	26.5	29.0	24.0
24	13.0	10.0	10.0	6.5	13.5	15.0	20.0	23.5	28.0	26.0	27.0	22.0
25	12.0	10.0	9.0	7.0	13.0	18.0	19.0	25.0	25.0	28.0	27.0	22.0
26	13.0	11.0	8.0	8.5	13.0	17.0	20.0	25.0	25.5	27.0	27.0	21.0
27	13.0	10.0	8.0	9.0	12.0	17.0	20.0	25.0	25.0	27.5	27.0	21.0
28	15.0	8.0	9.0	8.5	12.0	17.5	21.0	27.0	26.5	---	---	21.5
29	15.0	9.0	12.0	8.5	---	16.5	19.0	25.0	25.0	27.0	26.0	21.0
30	18.0	9.0	10.0	10.0	---	14.0	20.0	26.0	24.0	28.0	26.5	18.0
31	18.0	---	10.0	9.0	---	14.5	---	24.0	---	30.0	27.0	---
MEAN	18.0	12.5	9.0	7.5	10.0	15.0	19.5	24.0	26.0	27.5	28.0	24.5
WTR YR 1985	MEAN	18.5		MAX	33.0		MIN	4.5				

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 mi<sup>2</sup>, 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.--Estimated daily discharges: Oct. 22-28 and Apr. 12-25. Records good except for estimated daily discharges, which are poor. Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals upstream from station for irrigation of about 202,000 acres, 1959 determination.

AVERAGE DISCHARGE.--48 years (1938-85), 161 ft<sup>3</sup>/s, 116,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 111,000 ft<sup>3</sup>/s, Aug. 23, 1966, gage height, 33.32 ft, from rating curve extended above 32,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 0.19 ft<sup>3</sup>/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, 1,700 ft<sup>3</sup>/s, Sept. 19, gage height, 7.67 ft<sup>3</sup>/s; minimum, 20 ft<sup>3</sup>/s, part of each day Sept. 2, 3.

DISCHARGE, IN 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	90	73	73	66	135	108	40	40	51	27	27	25
2	95	73	73	63	131	101	37	36	48	27	27	22
3	106	74	72	63	139	85	42	32	40	26	26	24
4	83	72	72	62	141	77	50	32	46	25	26	30
5	77	72	71	62	137	77	49	37	51	24	27	24
6	80	73	71	62	135	67	63	41	37	24	27	23
7	74	72	72	62	134	64	62	42	43	24	27	29
8	97	72	72	62	130	61	48	40	49	23	27	46
9	89	72	66	62	128	56	41	38	45	23	27	83
10	85	70	61	61	128	53	39	34	37	23	27	70
11	82	69	60	62	128	74	37	32	32	23	27	71
12	71	69	60	61	124	55	45	30	36	22	26	70
13	70	69	59	60	123	54	52	27	50	22	24	62
14	69	71	60	61	131	52	54	25	44	22	22	68
15	77	71	68	63	126	55	56	26	38	22	22	95
16	84	72	79	67	132	59	52	41	34	22	22	169
17	75	70	82	72	145	58	48	36	32	25	34	127
18	72	64	81	109	151	46	47	45	28	24	34	88
19	64	63	75	125	149	36	48	94	26	24	30	762
20	75	63	74	128	156	38	50	74	27	34	29	771
21	105	63	73	132	164	38	45	66	33	27	29	554
22	100	62	72	133	159	51	42	64	35	23	27	275
23	110	63	71	132	150	40	38	62	29	22	26	180
24	150	77	69	134	144	48	33	64	33	21	26	119
25	150	83	68	136	130	49	32	60	43	22	29	90
26	140	98	68	136	126	50	34	60	48	23	37	79
27	105	89	68	137	117	50	39	62	54	23	35	74
28	88	76	66	138	110	46	70	83	56	27	28	84
29	80	71	68	139	---	43	46	67	45	38	26	82
30	78	71	68	140	---	39	39	55	33	36	26	71
31	75	---	69	138	---	38	---	53	---	32	26	---
TOTAL	2796	2157	2161	2928	3803	1768	1378	1498	1203	780	853	4267
MEAN	90.2	71.9	69.7	94.5	136	57.0	45.9	48.3	40.1	25.2	27.5	142
MAX	150	98	82	140	164	108	70	94	56	38	37	771
MIN	64	62	59	60	110	36	32	25	26	21	22	22
AC-FT	5550	4280	4290	5810	7540	3510	2730	2970	2390	1550	1690	8460
CAL YR 1984	TOTAL	40344	MEAN	110	MAX	7550	MIN	14	AC-FT	80020		
WTR YR 1985	TOTAL	25592	MEAN	70.1	MAX	771	MIN	21	AC-FT	50760		

08407500 PECOS RIVER AT RED BLUFF, NM --- Continued

## WATER-QUALITY RECORDS

LOCATION.--Samples collected 2 mi downstream from discharge station.

PERIOD OF RECORD.--Water years 1937 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1937 to 1982.

WATER TEMPERATURES: October 1952 to 1982.

REMARKS.--No appreciable inflow between discharge station and sampling point except during periods of heavy local rains.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
OCT 29...	1300	79	8800	8750	8.2	7.9	22.0	14.5	7.9	10.4	2100	2000
DEC 27...	1215	68	9200	9290	8.4	7.4	9.5	7.5	9.0	14.8	1800	1700
MAR 12...	0915	53	10300	10100	8.8	6.9	16.0	16.0	4.3	11.0	2100	2100
APR 25...	0845	34	13800	12800	8.4	7.0	31.0	21.0	5.2	9.5	2400	2300
JUN 25...	1015	43	14600	14700	8.1	6.9	31.0	26.0	14	9.3	--	--
AUG 29...	0930	26	14000	14400	8.4	7.2	28.5	26.0	3.7	9.4	2500	2400

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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LITY FIELD (MG/L AS CAC03) (00410)	ALKA- LITY, CARBON- ATE IT-FLD (MG/L AS CAC03) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 29...	500	200	1200	12	28	130	12	130	130	1700	2200
DEC 27...	430	180	1500	16	35	130	25	--	150	1600	2400
MAR 12...	490	220	1800	17	42	65	8.0	--	--	1800	2700
APR 25...	530	250	1900	18	53	96	4.0	85	70	1900	3600
JUN 25...	--	--	--	--	--	70	8.0	70	70	2600	5500
AUG 29...	610	240	2500	22	76	71	12	78	78	2300	4400

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 CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 29...	.70	13	6050	5900	.80	.180	.040	<.010	25	5.3	97
DEC 27...	.70	6.1	6460	6300	1.2	.210	.070	<.010	21	3.9	63
MAR 12...	.70	<1.0	7060	--	<.10	.220	.140	<.010	67	9.6	66
APR 25...	.80	9.7	8780	8300	<.10	.220	.100	<.010	41	3.8	96
JUN 25...	.80	5.8	9970	--	<.10	.350	.120	<.010	65	7.5	96
AUG 29...	.90	11	9980	10000	<.10	.210	.040	.010	115	8.1	77

08407500 PECOS RIVER AT RED BLUFF, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
OCT 29...	1300	30	1	<100	<10	<1	<1	<1	1	100	4
APR 25...	0845	50	1	400	<10	<1	<1	<1	3	100	<1
JUN 25...	1015	--	--	--	--	--	--	--	--	--	--
AUG 29...	0930	310	3	100	<10	1	<1	1	2	370	4

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 29...	70	20	--	2	2	2	<1	7400	35	50
APR 25...	100	50	.1	2	1	<1	3	7200	61	30
JUN 25...	--	--	.8	--	--	--	--	--	22	--
AUG 29...	100	80	.3	4	3	2	<1	7600	69	40

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML) (31673)
DEC 27...	1215	7	180
MAR 12...	0915	7	8
APR 25...	0845	10	4
JUN 25...	1015	63	8
AUG 29...	0930	56	44

## 08408500 DELAWARE RIVER NEAR RED BLUFF, NM

LOCATION.--Lat 32°01'23", long 104°03'15", in NE¼SW¼SE¼ sec.23, T.26 S., R.28 E., Eddy County, Hydrologic Unit 13070002, near center of channel on downstream side of pier of bridge on U.S. Highway 285, 2.1 mi north of the New Mexico-Texas state line, 3.6 mi southwest of Red Bluff, 3.7 mi upstream from mouth and 14 mi south of Malaga. Mouth at Pecos River mile 405.6.

DRAINAGE AREA.--689 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1912 to September 1913, May 1914 to June 1915, October 1937 to current year. Published as "near Malaga" 1912-13, and as "near Angeles, Tex." 1914-15.

GAGE.--Water-stage recorder. Elevation of gage is 2,900.66 ft above National Geodetic Vertical Datum of 1929 (U.S. Boundary Commission post). Prior to May 1914, at site 3.0 mi upstream at different datum. May 1914 to June 1915 at site 2.5 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. One small upstream diversion. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--48 years (1938-85), 12.9 ft<sup>3</sup>/s, 9,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,400 ft<sup>3</sup>/s, Oct. 2, 1955, gage height, 27.0 ft, from floodmarks, from rating curve extended above 6,500 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 12.84 ft, 17.55 ft, and 27.0 ft; no flow many days most years.  
Maximum discharge since at least 1911 is that of Oct. 2, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 21	0245	*1,810	*7.27	No other peak greater than base discharge.			
No flow July 16-23.							

DISCHARGE, IN 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	2.7	3.2	3.3	3.2	3.3	3.0	2.7	2.1	1.4	1.2	.79	.04
2	2.6	3.1	3.2	3.2	3.2	3.0	2.7	2.0	1.4	1.1	.64	.01
3	2.6	3.1	3.2	3.1	3.0	2.9	2.7	2.0	1.3	.99	.57	.54
4	2.7	3.1	3.3	3.1	3.1	2.8	2.7	2.0	20	.95	.52	8.0
5	2.4	3.0	3.3	3.2	3.1	2.8	2.7	1.9	124	.91	.49	3.3
6	2.2	3.0	3.3	3.2	3.0	2.8	2.6	1.8	7.6	.81	.63	1.4
7	2.2	3.0	3.2	3.2	3.0	2.9	2.6	1.8	2.8	.70	.57	1.0
8	2.2	2.9	3.3	3.3	2.9	3.0	2.6	1.8	1.9	.62	.46	.89
9	2.2	2.8	3.3	3.2	2.9	3.0	2.7	1.8	1.6	.54	.36	.78
10	2.2	2.8	3.3	3.1	2.9	3.0	2.7	1.8	1.4	.43	.27	.75
11	2.3	2.9	3.3	3.1	2.8	3.0	2.7	1.6	1.4	.34	.32	1.6
12	2.3	3.0	3.3	3.1	2.9	3.0	2.7	1.5	1.4	.27	.64	3.0
13	2.2	3.1	3.3	3.3	3.0	2.8	2.9	1.4	1.4	.22	2.5	1.6
14	2.4	3.1	3.1	3.3	3.0	2.8	2.8	1.5	1.4	.14	1.4	1.6
15	2.3	3.1	3.6	3.4	3.0	2.9	2.8	1.5	1.3	.06	1.2	1.8
16	2.2	3.1	3.7	3.3	3.0	3.0	2.7	1.7	1.1	.00	1.3	15
17	2.1	3.3	3.5	3.3	3.1	3.0	2.6	59	.97	.00	1.4	24
18	2.1	3.3	3.3	3.3	3.0	2.9	2.4	41	14	.00	.88	4.9
19	2.1	3.3	3.3	3.3	3.1	2.8	2.3	5.3	2.9	.00	.74	3.3
20	2.1	3.2	3.3	3.2	3.5	2.8	2.2	4.1	1.5	.00	.87	7.3
21	2.5	3.2	3.3	3.1	3.4	2.8	2.1	2.9	1.3	.00	.93	560
22	6.9	3.3	3.2	3.1	3.2	2.7	2.1	2.3	1.1	.00	.77	45
23	6.0	3.3	3.1	3.2	3.0	2.7	2.1	2.1	1.0	.00	.64	12
24	5.8	4.5	3.1	3.3	3.1	2.8	2.1	2.1	.97	.36	.54	6.8
25	5.1	4.4	3.1	3.3	3.1	2.8	2.1	2.2	1.0	.33	.48	5.2
26	4.5	3.6	3.1	3.3	3.0	2.8	2.1	2.1	8.2	101	.40	4.5
27	4.1	3.3	3.1	3.3	3.0	2.8	2.4	1.9	3.7	28	.30	4.1
28	3.6	3.4	3.3	3.3	3.0	2.7	2.4	1.5	2.0	3.4	.22	8.9
29	3.3	3.4	3.4	3.3	---	2.7	2.1	1.4	1.5	1.7	.12	23
30	3.3	3.3	3.3	3.2	---	2.7	2.1	1.3	1.2	1.3	.07	4.2
31	3.3	---	3.3	3.2	---	2.7	---	1.3	---	.93	.03	---
TOTAL	94.5	97.1	101.7	100.0	85.6	88.4	74.4	158.7	212.74	146.30	21.05	754.51
MEAN	3.05	3.24	3.28	3.23	3.06	2.85	2.48	5.12	7.09	4.72	.68	25.2
MAX	6.9	4.5	3.7	3.4	3.5	3.0	2.9	59	124	101	2.5	560
MIN	2.1	2.8	3.1	3.1	2.8	2.7	2.1	1.3	.97	.00	.03	.01
AC-FT	187	193	202	198	170	175	148	315	422	290	42	1500

CAL YR 1984 TOTAL 4021.09 MEAN 11.0 MAX 960 MIN .00 AC-FT 7980  
WTR YR 1985 TOTAL 1935.00 MEAN 5.30 MAX 560 MIN .00 AC-FT 3840



## 08410000 RED BLUFF RESERVOIR NEAR ORLA, TX

LOCATION.--Lat 31°54'04", long 103°54'35", Reeves County, Hydrologic Unit 13070001, at right end of Red Bluff Dam on the Pecos River, 2.8 mi upstream from Salt Creek, and 5.2 mi north of Orla.

DRAINAGE AREA.--20,720 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--February 1937 to current year. Monthly contents only for some periods, published in WSP 1312.

GAGE.--Nonrecording gage. Datum of gage is 0.43 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--The 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 is a cut through natural ground located to the right of right end of dam is 790 ft wide. 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, survey of 1925. 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 spillway .....	2,845.0	340,000
Top of gates (top of conservation pool) .....	2,842.0	310,000
Crest of spillway .....	2,827.0	166,500
Lowest gated outlet (invert) .....	2,764.0	3,000

COOPERATION.--Gage-height records and capacity curve were provided 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, 102,000 acre-ft, Mar. 13-25, gage height, 2,816.6 ft; minimum observed, 56,850 acre-ft, Sept. 16-18, gage height, 2,806.1 ft.

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

2,798.0	34,400	2,810.0	71,500
2,804.0	50,000	2,815.0	94,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89500	91500	91000	91000	96000	101500	97500	89500	86750	77300	70300	65900
2	89500	92000	91000	91500	96000	101500	96500	89500	86300	76400	69900	65900
3	89500	92000	91000	91500	96500	101500	96000	89500	86300	75950	69900	65100
4	89500	92000	91000	91500	96500	101500	95500	89500	86750	75100	69900	64300
5	89500	92000	91000	91500	97000	101500	95000	89500	86750	74300	69900	63500
6	89500	92000	91000	91500	97000	101500	94000	89500	86750	73500	69900	62800
7	90000	92000	91000	92000	97000	101500	93500	89500	86300	72700	69500	62100
8	90000	92500	91000	92000	97000	101500	92500	89000	86300	72300	69500	61400
9	90000	92500	91000	92000	97500	101500	92000	89000	86300	72300	69500	60700
10	90000	92500	91000	92000	97500	101500	91500	88550	85850	72300	69500	60000
11	90000	92000	91000	92500	98000	101500	91000	88550	85400	72300	69500	59650
12	90000	92000	91000	92500	98000	101500	90000	88100	85400	72300	69100	59300
13	90000	92000	91000	92500	98000	102000	89500	88100	85400	71900	69100	58600
14	90000	92000	91000	93000	98500	102000	89500	87650	84950	71900	69100	57900
15	90000	92000	91000	93000	98500	102000	89500	87650	84950	71900	69100	57200
16	90000	92000	91000	93000	99000	102000	89500	87200	84950	71900	68700	56850
17	90000	91500	91000	93000	99000	102000	89500	87200	84500	71500	68700	56850
18	90000	91500	91000	93000	99000	102000	89500	87200	84500	71500	68700	56850
19	90000	91500	91000	93500	99500	102000	89500	87200	84500	71100	68300	57200
20	90000	91500	91000	93500	100000	102000	89500	87200	84500	70300	68300	58950
21	90000	91500	91000	93500	100000	102000	89500	87200	84500	70300	68300	60700
22	90000	91500	91000	93500	100500	102000	89500	87200	83600	69900	68300	62450
23	90000	91500	91000	94000	100500	102000	89500	87650	82700	69900	67900	62800
24	90500	91000	91000	94000	100500	102000	89500	87650	82250	69900	67900	63150
25	90500	91000	91000	94000	101000	102000	89500	87650	81350	69900	67900	62800
26	91000	91000	91000	94500	101000	101500	89500	87650	80900	69500	67500	62800
27	91000	91000	91000	95000	101000	100500	89500	87650	80000	69900	67500	62800
28	91500	91000	91000	95000	101000	100000	89500	87650	79550	69900	67100	62800
29	91500	91000	91000	95000	---	99500	89500	87650	78650	69900	66700	62450
30	91500	91000	91000	95500	---	98500	89500	87650	78200	69900	66300	62450
31	91500	---	91000	96000	---	98000	---	87200	---	69900	66300	---
MAX	91500	92500	91000	96000	101000	102000	97500	89500	86750	77300	70300	65900
MIN	89500	91000	91000	91000	96000	98000	89500	87200	78200	69500	66300	56850
(+)	+2000	-500	0	+5000	+3000	-3000	-8500	-2300	-9000	-8300	-3600	-3850

CAL YR 1984 MAX 92500 MIN 41750  
WTR YR 1985 MAX 102000 MIN 56850

(+) 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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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: Dec. 28 to Feb. 14, and Aug. 7-15, 21-28. Water-discharge records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--7 years, 20.5 ft<sup>3</sup>/s, 14,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,360 ft<sup>3</sup>/s, Dec. 28, 1984, gage height, 8.05 ft, from floodmarks, from rating curve extended above 450 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 6.70 ft and 8.05 ft; minimum, 0.22 ft<sup>3</sup>/s, Aug. 22, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 20	1415	390	4.61	Mar. 14	0130	209	4.90
Dec. 28	Unknown	a *6,360	b *8.05	Aug. 19	1700	347	5.27

a From slope-area measurement of peak flow

b From floodmarks

Minimum discharge, 2.1 ft<sup>3</sup>/s Aug. 15.

DISCHARGE, IN 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	14	9.3	8.2	180	62	53	44	44	22	9.1	22	4.6
2	13	9.3	8.2	130	53	55	41	67	21	9.6	42	4.8
3	17	9.3	8.0	100	45	60	39	96	23	9.7	56	5.0
4	14	8.8	9.6	83	37	57	39	94	22	9.4	23	5.7
5	12	8.9	8.4	70	32	52	41	81	21	9.5	20	6.0
6	12	8.5	8.2	62	32	48	44	70	20	9.1	25	6.4
7	12	8.0	7.8	55	32	43	49	60	19	7.6	18	6.7
8	12	7.9	7.8	48	35	40	54	51	18	7.0	12	7.3
9	12	9.2	7.7	44	37	42	63	46	17	7.4	10	6.7
10	11	8.3	7.7	41	40	61	63	40	17	8.2	8.7	7.0
11	12	5.8	8.0	37	43	128	60	36	16	7.6	8.2	7.8
12	12	8.1	7.8	35	47	166	58	35	16	7.4	7.4	7.8
13	12	8.1	8.6	33	50	187	56	31	17	7.2	6.2	7.8
14	12	8.2	9.0	32	54	191	56	30	16	7.7	3.8	7.2
15	12	8.2	8.8	31	59	161	56	28	15	10	2.3	7.5
16	12	8.2	8.6	30	65	119	56	27	15	9.0	3.0	7.9
17	11	9.7	9.2	29	74	99	55	26	15	8.1	3.5	7.8
18	11	10	12	28	82	90	54	26	13	7.8	12	8.6
19	11	9.9	19	27	87	87	51	25	14	8.2	40	8.8
20	11	9.7	259	27	92	81	46	25	13	8.2	19	8.5
21	11	9.0	251	26	93	81	42	25	14	8.6	11	8.4
22	11	8.6	160	26	88	78	41	24	12	8.2	9.6	8.4
23	11	8.7	124	26	78	72	36	24	11	7.8	8.3	8.2
24	11	8.9	112	28	66	69	34	25	11	7.9	7.2	8.0
25	11	8.4	103	50	58	63	32	23	12	7.6	6.5	7.9
26	10	6.5	99	100	52	61	34	22	11	7.0	6.0	7.5
27	9.9	5.9	159	200	48	60	36	21	10	7.4	5.7	7.5
28	9.7	7.5	2500	150	49	58	48	22	9.7	39	5.3	8.0
29	9.6	7.5	1000	110	---	60	41	22	10	9.8	5.1	8.0
30	9.5	7.9	550	90	---	54	41	20	9.2	6.8	4.7	7.6
31	9.5	---	280	74	---	48	---	22	---	11	5.3	---
TOTAL	358.2	252.3	5769.6	2002	1590	2524	1410	1188	459.9	288.9	416.8	219.4
MEAN	11.6	8.41	186	64.6	56.8	81.4	47.0	38.3	15.3	9.32	13.4	7.31
MAX	17	10	2500	200	93	191	63	96	23	39	56	8.8
MIN	9.5	5.8	7.7	26	32	40	32	20	9.2	6.8	2.3	4.6
AC-FT	710	500	11440	3970	3150	5010	2800	2360	912	573	827	435
CAL YR 1984	TOTAL	9258.8		MEAN	25.3	MAX	2500	MIN	1.6	AC-FT	18360	
WTR YR 1985	TOTAL	16479.1		MEAN	45.1	MAX	2500	MIN	2.3	AC-FT	32690	

## 08477110 MIMBRES RIVER AT MIMBRES, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
NOV 08...	1000	7.1	240	259	8.3	8.4	20.0	9.0	1.4	10.6	110	0
JAN 10...	0900	41	288	259	7.9	8.0	.0	6.0	8.5	11.8	110	0
MAR 14...	1000	192	124	139	8.6	7.8	6.0	6.5	85	9.6	56	5
MAY 21...	1500	25	170	213	7.8	8.2	24.0	20.0	1.6	7.3	91	0
JUL 09...	1530	6.7	220	266	8.4	8.4	30.0	26.0	1.1	6.5	110	0
SEP 29...	0930	8.7	240	280	8.6	8.0	12.0	11.0	1.5	8.4	130	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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L AS CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
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NOV 08...	33	6.6	10	.4	2.9	150	14	120	--	14	2.9
JAN 10...	34	6.6	8.8	.4	2.8	140	.000	110	--	24	3.4
MAR 14...	16	3.9	5.9	.4	1.7	46	8.0	52	52	24	2.0
MAY 21...	27	5.6	8.5	.4	2.4	110	.000	91	91	22	2.5
JUL 09...	33	7.2	11	.5	3.4	110	14	120	120	15	2.8
SEP 29...	39	7.4	11	.4	3.1	99	22	120	120	17	3.0

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, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
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NOV 08...	.30	49	175	220	.18	.030	.070	.070	5	.10	63
JAN 10...	.20	42	185	190	.91	<.010	.160	.130	45	5.0	45
MAR 14...	.20	38	98	130	.11	.030	.450	.110	639	331	55
MAY 21...	.20	46	157	170	.16	.100	.100	.150	8	.54	89
JUL 09...	.20	53	192	210	.18	.030	.090	<.010	9	.16	76
SEP 29...	.20	51	201	230	.13	.060	.090	.070	9	.21	33

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 08...	1000	20	<1	35	.0	<1	<1	<3	<1	7	<1
MAY 21...	1500	50	<1	36	<.5	<1	<1	<3	2	31	2
JUL 09...	1530	<10	1	39	<.5	<1	<1	<3	5	<3	1
SEP 29...	0930	<10	1	42	<.5	<1	--	<3	1	3	<1

## MIMBRES RIVER BASIN

08477110 MIMBRES RIVER AT MIMBRES, NM -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 08...	5	4	<.1	<10	<1	<1	<1	150	8	10
MAY 21...	<4	1	--	<10	5	<1	1	130	7	18
JUL 09...	<4	3	.2	<10	3	<1	<1	160	10	15
SEP 29...	<4	3	.1	<10	49	<1	<1	170	9	27

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 08...	1000	20	46
JAN 10...	0900	58	K16
MAY 21...	1500	6	28
JUL 09...	1530	28	180
SEP 29...	0930	320	150

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 13050003, on right bank 50 ft downstream from old U.S. Highway 70 bridge, 2.6 mi west of Bent, and 8.5 mi northeast of Tularosa, and at mile 19.4.

DRAINAGE AREA.--120 mi<sup>2</sup>, 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. Elevation of gage is 5,450 ft above National Geodetic Vertical Datum of 1929, from topographic map. Since Jan. 20, 1983, supplemental water-stage recorder at site 200 ft upstream and at datum 3.70 ft higher.

REMARKS.--No estimated daily discharges. Water-discharge records fair except for doubtful record, Jan. 17-28, which is poor. Diversions for irrigation of about 1,000 acres, 1959 determination, upstream from station.

AVERAGE DISCHARGE.--37 years (1949-85), 10.6 ft<sup>3</sup>/s, 7,680 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,280 ft<sup>3</sup>/s, June 18, 1965, gage height, 5.02 ft, from rating curve extended above 160 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow May 14, 1955, result of unusual regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood probably occurred Sept. 3, 1938, when a peak of 9,640 ft<sup>3</sup>/s was computed for station approximately 6 mi downstream near Tularosa. Another flood may have occurred July 2, 1914.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 125 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 26	2330	*131	*2.74	No other peak greater than base discharge.			
Minimum discharge, 9.5 ft <sup>3</sup> /s, Oct. 5.							

DISCHARGE, IN 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	14	18	16	19	20	19	23	20	19	17	21	21
2	14	18	16	19	20	19	24	21	17	17	22	21
3	15	18	15	19	20	19	23	21	18	19	24	21
4	13	18	16	19	20	21	23	21	16	18	21	21
5	13	18	16	19	20	21	22	19	20	18	23	20
6	14	17	16	19	20	21	22	20	20	18	23	20
7	14	17	16	18	20	21	21	18	20	19	23	20
8	14	17	15	20	20	20	21	21	20	19	23	19
9	14	17	15	19	21	20	22	22	20	19	23	20
10	14	17	15	19	21	19	22	21	20	19	23	20
11	15	16	18	19	20	19	22	21	20	20	21	20
12	16	16	18	19	21	19	22	21	18	20	23	21
13	16	16	19	19	20	19	23	21	16	19	23	20
14	16	16	19	19	20	19	23	21	17	16	23	21
15	16	16	19	19	20	19	22	20	17	18	23	22
16	16	17	18	20	20	20	21	20	15	18	23	22
17	15	19	18	20	20	20	21	19	16	19	23	22
18	15	17	20	20	20	20	22	20	16	19	23	22
19	15	17	21	20	19	21	22	18	19	19	23	22
20	16	17	25	20	19	17	21	19	19	20	24	23
21	16	17	20	20	19	16	20	17	19	18	24	22
22	16	17	19	20	19	20	22	20	19	17	23	22
23	16	18	18	20	19	20	22	20	18	17	23	22
24	18	20	18	20	20	17	22	21	19	17	25	22
25	19	16	17	20	19	18	22	21	18	17	22	22
26	20	16	17	22	19	17	22	21	18	18	22	22
27	18	16	19	22	19	14	23	20	18	18	23	22
28	18	15	20	21	19	14	25	20	19	16	24	22
29	18	15	19	21	---	21	23	19	19	18	24	22
30	18	15	19	20	---	23	21	18	16	20	22	22
31	18	---	19	21	---	24	---	18	---	22	21	---
TOTAL	490	507	556	612	554	597	664	619	546	569	708	638
MEAN	15.8	16.9	17.9	19.7	19.8	19.3	22.1	20.0	18.2	18.4	22.8	21.3
MAX	20	20	25	22	21	24	25	22	20	22	25	23
MIN	13	15	15	18	19	14	20	17	15	16	21	19
AC-FT	972	1010	1100	1210	1100	1180	1320	1230	1080	1130	1400	1270
CAL YR 1984	TOTAL	5465.5		MEAN	14.9	MAX	46	MIN	9.1	AC-FT	10840	
WTR YR 1985	TOTAL	7060		MEAN	19.3	MAX	25	MIN	13	AC-FT	14000	

08481500 TULAROSA CREEK NEAR BENT, NM -- Continued

## WATER-QUALITY RECORDS

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

CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
NOV 07...	1400	17	1290	1220	8.4	7.8	21.0	13.0	10	9.0	690	440
JAN 15...	1430	20	1200	1210	7.9	7.9	5.0	8.0	28	10.7	690	440
MAR 25...	1130	18	1450	1220	8.0	7.7	20.5	14.0	8.9	8.5	760	540
MAY 29...	1530	19	--	1220	8.4	7.9	28.5	18.0	7.2	7.6	650	470
JUL 31...	1315	22	1300	1280	8.3	8.1	28.5	18.0	29	7.7	670	480
SEP 27...	1300	22	1120	1220	8.2	7.9	24.5	15.0	4.3	8.2	610	440

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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L AS CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 07...	190	51	40	.7	1.4	270	16	250	250	450	53
JAN 15...	190	52	41	.7	1.2	300	.000	--	250	440	55
MAR 25...	210	56	46	.8	1.1	260	.000	--	210	450	58
MAY 29...	170	54	42	.7	1.2	190	13	--	180	430	54
JUL 31...	180	54	41	.7	1.4	210	16	--	200	440	56
SEP 27...	160	50	39	.7	1.3	170	16	--	170	410	53

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 CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00671)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 07...	.40	14	925	970	.40	.130	.060	.020	47	2.2	66
JAN 15...	.40	13	973	940	.85	.090	.030	.010	58	3.1	70
MAR 25...	.40	13	954	960	.71	.060	.020	<.010	53	2.6	58
MAY 29...	.40	14	888	890	.62	.070	.060	.010	34	1.7	58
JUL 31...	.40	14	964	930	.66	.170	.200	.070	107	6.4	66
SEP 27...	.40	14	924	850	.58	.080	.040	.020	34	2.0	47

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ALUM- INIUM, 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)
NOV 07...	1400	50	<1	32	.0	<1	<1	<3	1	67	1
MAY 29...	1530	10	<1	33	<.5	1	<1	<3	4	4	5
JUL 31...	1315	<10	<1	34	<.5	<1	1	<3	2	<3	1
SEP 27...	1300	20	<1	30	<.5	2	<1	<3	4	6	4

08481500 TULAROSA CREEK NEAR BENT, NM -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 07...	20	25	<.1	<10	2	1	<1	2100	<6	19
MAY 29...	26	11	--	<10	4	1	<1	2100	<6	16
JUL 31...	20	18	.3	<10	8	<1	<1	2100	<6	15
SEP 27...	17	15	.3	<10	2	<1	<1	2000	<6	33

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 07...	1400	> 600	530
JAN 15...	1430	9	49
MAR 25...	1130	4	40
MAY 29...	1530	58	140
JUL 31...	1315	93	580
SEP 27...	1300	70	130

## 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 mi<sup>2</sup>

PERIOD OF RECORD.--October 1982 to current year. Records for November 1931 to September 1932 published in WSP 733, are unreliable and should not be used.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water stage recorder. Elevation of gage is 4,870 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except for doubtful record, Aug. 25-28, which is poor. Diversions upstream from station for municipal supply of Alamogordo. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,840 ft<sup>3</sup>/s, Aug. 23, 1984, gage height, 10.2 ft, from floodmarks, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 250 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 1	1645	433	4.29	Aug. 11	0045	*489	*4.50
Aug. 10	0515	384	4.10	Aug. 24	1745	348	3.95

Minimum discharge, 0.14 ft<sup>3</sup>/s, Oct. 8.

DISCHARGE, IN 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	4.0	4.0	.48	13	12	11	11	9.8	4.6	.81	58	4.4
2	3.7	2.8	.41	13	15	10	9.3	7.7	4.3	.84	16	3.5
3	19	1.3	.46	13	11	10	5.9	3.7	3.7	.90	16	16
4	7.3	1.1	1.3	13	12	9.7	5.5	3.0	2.7	.89	13	36
5	2.8	1.8	1.3	12	10	8.5	5.5	2.6	1.7	.84	13	28
6	2.8	4.0	.83	12	8.8	7.0	5.5	2.4	1.5	.83	11	23
7	2.8	2.2	.64	12	8.9	8.2	5.5	5.5	1.4	.82	8.6	18
8	2.2	.68	.57	12	9.4	11	5.5	7.6	1.3	.79	8.3	18
9	.28	.61	.53	12	9.9	11	5.5	7.5	1.2	.80	7.7	18
10	.36	2.5	.40	12	10	9.3	5.2	7.7	1.3	.83	29	22
11	2.8	3.7	7.1	12	11	9.1	5.2	8.4	1.2	3.4	28	27
12	4.0	2.8	8.2	12	9.5	11	5.0	8.7	1.3	5.1	11	26
13	3.2	.51	9.0	12	8.2	8.8	4.9	8.2	1.3	5.2	9.6	21
14	3.2	.49	9.4	11	8.2	5.2	5.2	7.4	1.2	5.5	10	21
15	7.2	2.5	9.0	8.3	8.2	7.7	4.6	4.8	1.2	5.7	6.8	22
16	13	3.7	8.6	8.4	8.1	12	4.7	3.0	1.1	5.5	3.9	29
17	7.4	5.4	8.8	8.7	8.0	7.3	4.2	3.2	1.1	6.0	5.2	12
18	.77	4.4	9.4	9.0	8.0	6.3	3.7	6.1	.99	7.3	10	14
19	.77	4.0	19	9.1	8.0	14	3.9	8.8	1.2	7.5	10	13
20	.96	2.7	27	9.4	8.2	14	3.5	6.9	1.1	8.1	8.6	21
21	1.1	.54	17	8.3	8.4	10	2.8	7.5	1.1	8.2	7.8	16
22	1.1	.38	15	7.9	8.8	6.3	3.0	7.9	1.1	8.5	5.4	15
23	6.1	.78	15	7.8	9.2	5.6	3.0	8.6	1.2	6.9	4.1	9.2
24	12	8.8	14	8.5	9.4	9.5	4.3	8.4	1.0	4.8	17	8.5
25	11	4.3	13	7.8	9.6	12	5.2	8.2	1.1	4.9	9.7	12
26	16	4.4	13	9.7	9.6	11	5.9	7.6	.98	5.7	9.5	12
27	4.9	4.3	13	12	9.8	7.4	6.2	7.3	.94	6.0	8.2	12
28	4.6	4.5	17	11	10	5.5	11	5.2	.93	4.8	8.3	14
29	4.6	4.5	15	12	---	5.9	12	3.5	.92	5.7	7.3	10
30	4.3	3.1	14	12	---	8.4	11	4.2	.86	8.3	4.6	10
31	4.3	---	14	12	---	11	---	4.9	---	6.9	4.9	---
TOTAL	158.54	86.79	282.42	332.9	267.2	283.7	173.7	196.3	45.52	138.35	370.5	511.6
MEAN	5.11	2.89	9.11	10.7	9.54	9.15	5.79	6.33	1.52	4.46	12.0	17.1
MAX	19	8.8	27	13	15	14	12	9.8	4.6	8.5	58	36
MIN	.28	.38	.40	7.8	8.0	5.2	2.8	2.4	.86	.79	3.9	3.5
AC-FT	314	172	560	660	530	563	345	389	90	274	735	1010
CAL YR 1984	TOTAL	1984.07		MEAN	5.42	MAX	423	MIN	.00	AC-FT	3940	
WTR YR 1985	TOTAL	2847.52		MEAN	7.80	MAX	58	MIN	.28	AC-FT	5650	



## 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 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1984 to current year.

GAGE.--Water-stage recorder with concrete control. Elevation of gage is 7,830 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 7-26. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for municipal water supply of Orogrande. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22 ft<sup>3</sup>/s, Aug. 14, 1984, gage height, 2.24 ft; minimum, 0.80 ft<sup>3</sup>/s, July 16, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20 ft<sup>3</sup>/s, Sept. 3, gage height, 2.06 ft; minimum, 2.0 ft<sup>3</sup>/s, part of each day Oct. 8-11, 14, 15, 17-20.

DISCHARGE, IN 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	2.3	3.0	3.4	13	10	9.2	9.0	8.3	6.9	5.2	4.0	3.1
2	2.3	3.0	3.4	13	9.7	9.2	9.0	8.5	6.8	5.5	4.4	3.1
3	3.2	3.0	3.5	13	10	9.1	9.0	8.3	6.7	5.4	4.0	5.9
4	2.8	3.0	3.6	13	9.8	9.0	9.0	8.2	6.6	5.1	4.7	5.7
5	2.3	3.1	3.8	13	9.4	9.0	8.9	7.9	7.6	5.0	4.2	3.9
6	2.3	3.2	3.8	13	10	9.0	9.0	7.8	6.9	4.9	4.0	3.6
7	2.2	3.2	3.9	13	11	8.9	9.0	7.8	6.7	4.8	3.7	3.5
8	2.1	3.2	4.3	13	10	8.9	9.0	7.8	6.6	4.8	3.5	3.5
9	2.1	3.2	4.3	13	10	8.9	9.0	7.9	6.6	4.7	3.6	3.4
10	2.1	3.2	4.2	12	10	9.0	8.8	7.9	6.5	4.8	4.1	3.6
11	2.1	3.3	5.2	12	10	9.0	8.8	7.9	6.3	4.8	3.9	4.2
12	2.3	3.3	4.9	13	10	9.1	8.8	7.8	6.3	4.7	4.2	3.4
13	2.2	3.4	5.0	13	10	9.2	8.8	7.7	6.2	4.6	3.7	3.3
14	2.1	3.4	4.5	12	10	9.3	8.8	7.7	6.0	4.5	3.6	3.2
15	2.7	3.4	4.4	12	9.9	9.7	8.6	7.7	6.1	4.6	3.6	3.4
16	2.4	3.4	4.3	12	9.9	9.7	8.6	7.6	6.1	4.5	3.5	4.0
17	2.1	3.8	4.4	12	9.9	9.5	8.6	7.8	6.1	5.6	3.8	3.3
18	2.0	3.4	4.5	12	9.8	9.2	8.6	7.9	6.0	4.8	4.0	3.5
19	2.0	3.3	4.9	12	9.7	9.7	8.3	7.7	6.0	4.5	4.5	4.8
20	2.9	3.3	7.4	12	9.7	9.7	8.3	7.6	5.9	4.5	3.6	6.0
21	2.6	3.3	8.0	12	9.6	9.5	8.3	7.5	5.8	4.3	3.5	4.1
22	2.6	3.4	8.0	12	9.6	9.4	8.3	7.2	5.9	4.3	3.3	4.0
23	2.4	4.1	8.5	11	9.6	9.2	8.1	7.2	5.8	4.3	3.4	3.9
24	2.4	4.5	8.8	11	9.6	9.2	8.1	7.1	5.8	4.2	4.3	3.8
25	2.7	3.9	8.9	11	9.5	9.2	8.1	7.0	6.6	4.1	3.6	3.8
26	3.9	3.5	9.0	12	9.5	9.2	8.1	7.0	5.7	4.4	3.3	3.8
27	3.5	3.4	9.2	12	9.4	9.2	8.2	7.0	5.6	5.4	3.2	3.8
28	3.1	3.5	11	11	9.8	9.2	8.9	6.9	5.5	4.2	3.2	4.8
29	3.0	3.4	11	11	---	9.5	8.2	6.9	5.4	4.2	3.3	4.3
30	3.0	3.4	12	11	---	9.4	8.2	6.9	5.3	4.3	3.1	3.9
31	3.0	---	13	11	---	9.1	---	7.0	---	4.0	3.1	---
TOTAL	78.7	101.5	195.1	376	275.4	286.4	258.4	235.5	186.3	145.0	115.9	118.6
MEAN	2.54	3.38	6.29	12.1	9.84	9.24	8.61	7.60	6.21	4.68	3.74	3.95
MAX	3.9	4.5	13	13	11	9.7	9.0	8.5	7.6	5.6	4.7	6.0
MIN	2.0	3.0	3.4	11	9.4	8.9	8.1	6.9	5.3	4.0	3.1	3.1
AC-FT	156	201	387	746	546	568	513	467	370	288	230	235
WTR YR 1985 TOTAL	2372.8			MEAN	6.50	MAX	13	MIN	2.0	AC-FT	4710	

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

PERIOD OF RECORD.--Streamflow records, 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. 27 to Dec. 17, and Dec. 22 to Mar. 12. Records good 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 ft<sup>3</sup>/s, 457,900 acre-ft/yr, prior to completion of Azotea tunnel.

15 years (water years 1971-85), 630 ft<sup>3</sup>/s, 456,400 acre-ft/yr, since completion of Azotea tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft<sup>3</sup>/s, Sept. 6, 1970, gage height, 8.34 ft, from rating curve extended above 6,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, about 5 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Dec. 28	0400	----	a *9.55	May 6	0730	4,590	6.03
Mar. 12	Unknown	*7,210	7.27	May 30	1000	4,210	5.80
Apr. 16	0700	4,120	5.69	June 9	0700	6,550	6.93
Apr. 29	0700	4,230	5.75				

a Backwater from ice

Minimum daily discharge, 140 ft<sup>3</sup>/s, Feb. 2.

DISCHARGE, IN 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	235	524	270	290	160	270	1140	2080	3200	2180	760	185
2	332	529	280	220	140	290	1220	1960	3290	2000	1170	182
3	607	535	300	250	190	270	1470	2260	3540	1900	1240	189
4	833	524	300	260	190	240	1930	2870	3410	1850	1080	207
5	743	501	300	260	220	230	1950	3620	2890	1780	850	204
6	665	501	270	250	190	250	1900	3950	2880	1690	727	198
7	560	475	260	270	180	240	2060	3560	3740	1500	646	182
8	519	449	280	270	200	240	2300	3650	5060	1360	566	179
9	491	438	300	260	200	380	2630	3700	6070	1320	553	182
10	469	375	300	250	190	740	2670	3720	5710	1250	502	179
11	448	365	310	230	160	1400	2820	3210	5180	1240	483	185
12	473	397	300	210	200	6700	2790	2620	4950	1130	485	750
13	646	398	300	190	250	3180	2990	2320	5130	1100	414	442
14	657	402	300	190	210	2020	3250	1940	5070	1100	352	327
15	663	370	300	200	190	1610	3440	1780	4850	1020	342	361
16	560	356	290	200	200	2060	3560	1940	5140	1050	317	810
17	587	369	270	190	210	1780	3420	2010	4680	959	296	503
18	818	365	276	200	230	1690	3180	2270	4320	883	279	449
19	666	342	287	210	220	1930	2990	2380	4410	890	279	1340
20	566	317	308	210	240	1290	2290	2300	4210	804	271	1070
21	547	296	287	220	230	1350	2140	2230	4230	761	268	1310
22	519	291	170	220	220	1340	2530	2190	4120	757	256	1050
23	512	312	150	210	230	1110	2190	2410	3910	709	242	908
24	569	320	170	210	190	1180	2000	2480	3800	664	231	757
25	536	329	190	200	230	1410	1900	2750	4180	584	221	671
26	512	297	260	200	230	1760	1700	3020	3900	530	218	601
27	540	200	260	210	230	1300	1490	3500	3080	510	207	548
28	518	220	530	200	260	1210	1520	3650	2700	501	195	519
29	491	290	470	200	---	1290	3370	4010	2490	1210	195	666
30	501	270	380	190	---	1080	2490	4060	2280	1320	195	632
31	528	---	320	160	---	1050	---	3630	---	929	189	---
TOTAL	17311	11357	8988	6830	5790	40890	71330	88070	122420	35481	14029	15786
MEAN	558	379	290	220	207	1319	2378	2841	4081	1145	453	526
MAX	833	535	530	290	260	6700	3560	4060	6070	2180	1240	1340
MIN	235	200	150	160	140	230	1140	1780	2280	501	189	179
AC-FT	34340	22530	17830	13550	11480	81110	141500	174700	242800	70380	27830	31310
CAL YR 1984	TOTAL	268263	MEAN	733	MAX	5370	MIN	150	AC-FT	532100		
WTR YR 1985	TOTAL	438282	MEAN	1201	MAX	6700	MIN	140	AC-FT	869300		

## 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, 5.2 mi northeast of Arboles Post Office, and 8 mi upstream from mouth.

DRAINAGE AREA.--629 mi<sup>2</sup>.

PERIOD OF RECORD.--Streamflow records, 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. Datum 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: May 1-9, Aug. 11-14, and Sept. 23-30. Records good except for estimated daily discharges, which are fair. 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.--23 years, 397 ft<sup>3</sup>/s, 287,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,370 ft<sup>3</sup>/s, Sept. 6, 1970, gage height, 6.38 ft recorded, 7.55 ft, from floodmarks, from rating curve extended above 4,400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 11 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Mar. 12	0400	2,420	3.91	May 29	0700	2,430	3.87
Apr. 19	0200	*3,180	*4.37	June 9	0600	2,720	4.07
Unknown	----	3,120	*4.37				

Minimum daily discharge, 88 ft<sup>3</sup>/s, Sept. 10.

DISCHARGE, IN 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	158	294	125	163	108	198	534	2500	1730	788	392	97
2	212	285	128	143	100	221	612	2600	1700	719	484	92
3	319	285	117	130	120	206	1050	2700	1780	698	810	101
4	442	269	123	146	120	162	1700	2700	1710	663	637	110
5	411	253	138	152	120	155	1970	2800	1540	663	530	106
6	376	253	120	152	120	173	2150	2800	1610	635	445	102
7	336	249	110	146	120	164	2290	2700	1950	590	386	94
8	309	241	120	143	120	155	2370	2700	2460	547	327	92
9	299	237	128	138	120	216	2360	2700	2580	517	308	92
10	277	196	133	135	110	578	2360	2660	2360	528	282	88
11	265	205	135	132	115	1310	2360	2300	2280	471	270	127
12	273	209	146	128	117	1700	2360	1960	2210	446	260	400
13	329	205	146	115	125	834	2490	1680	2140	421	250	242
14	335	202	146	120	125	673	2600	1420	2000	454	220	181
15	330	191	143	125	122	636	2740	1310	2010	401	201	180
16	278	188	134	128	120	717	2820	1440	2120	400	198	323
17	307	191	133	128	125	712	2680	1410	1970	395	187	227
18	312	195	128	127	143	698	2770	1390	1800	395	159	213
19	294	177	128	130	149	747	2770	1360	1790	401	155	1050
20	266	161	135	117	161	631	2080	1330	1670	341	143	735
21	261	158	135	122	168	669	1830	1270	1620	330	143	912
22	253	158	123	130	158	684	1900	1240	1500	384	143	799
23	249	164	108	130	167	555	1680	1290	1400	414	127	700
24	261	164	113	130	149	606	1470	1430	1340	381	115	540
25	253	170	128	130	146	776	1410	1650	1450	315	108	500
26	245	164	149	127	155	976	1390	1880	1360	294	103	400
27	261	134	218	127	152	800	1450	2070	1090	273	99	340
28	261	123	483	127	183	707	1430	2210	948	250	99	350
29	257	151	414	130	----	657	2710	2300	892	570	106	400
30	265	135	319	122	----	560	2380	2180	812	559	103	450
31	289	----	254	125	----	523	----	1950	----	475	101	----
TOTAL	8983	6007	5060	4098	3738	18399	60716	61930	51822	14718	7891	10043
MEAN	290	200	163	132	134	594	2024	1998	1727	475	255	335
MAX	442	294	483	163	183	1700	2820	2800	2580	788	810	1050
MIN	158	123	108	115	100	155	534	1240	812	250	99	88
AC-FT	17820	11910	10040	8130	7410	36490	120400	122800	102800	29190	15650	19920
CAL YR 1984	TOTAL	168232	MEAN	460	MAX	2640	MIN	99	AC-FT	333700		
WTR YR 1985	TOTAL	253405	MEAN	694	MAX	2820	MIN	88	AC-FT	502600		

## 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 13 mi upstream from mouth.

DRAINAGE AREA.--510 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--Streamflow records, 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 6,143.58 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Feb. 1-13. Records good except for estimated daily discharges, which are fair. 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.--35 years, 229 ft<sup>3</sup>/s, 165,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft<sup>3</sup>/s, July 27, 1957, gage height, 8.95 ft, from rating curve extended above 5,100 ft<sup>3</sup>/s; minimum daily, 6.1 ft<sup>3</sup>/s, May 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred Oct. 5, 1911 at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,190 ft<sup>3</sup>/s, at 0900 hours June 12, gage height, 6.52 ft; minimum daily, 65 ft<sup>3</sup>/s, Feb. 1.

DISCHARGE, IN 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	202	496	70	307	65	125	206	1130	1210	409	347	178
2	249	496	135	286	75	136	226	1080	1180	361	360	178
3	274	490	180	286	95	120	289	1070	1170	350	384	190
4	348	490	181	282	95	98	378	1110	1170	355	375	198
5	287	484	184	282	100	95	411	1180	1170	338	339	214
6	286	484	190	278	100	105	471	1320	1170	334	338	198
7	231	478	261	282	110	93	519	1460	1160	342	318	202
8	218	478	286	286	100	98	555	1430	1270	315	302	210
9	222	478	302	282	100	129	615	1440	1510	224	298	210
10	218	478	294	282	95	297	604	1530	1630	210	298	214
11	214	490	306	282	95	733	498	1480	1740	190	306	238
12	253	490	310	274	95	1260	649	1460	2130	169	330	408
13	270	467	310	270	95	469	824	1450	2080	175	303	300
14	250	362	298	266	100	317	836	1370	2080	169	298	278
15	266	276	306	262	100	275	836	1320	2080	172	294	349
16	297	270	294	108	129	394	907	1190	2060	184	259	428
17	329	276	290	85	151	451	1100	922	2050	181	242	357
18	463	290	286	85	177	313	1120	814	2000	194	246	384
19	584	286	282	85	175	454	1150	710	1790	214	246	558
20	598	278	286	83	172	424	1060	636	1690	238	242	474
21	598	270	278	90	169	328	1040	487	1480	242	242	484
22	580	243	270	90	137	271	1080	466	1340	297	215	443
23	598	234	274	95	154	219	1040	349	1350	310	188	430
24	627	250	270	98	121	222	1020	291	1300	247	184	412
25	610	262	274	103	105	249	1030	189	1230	238	181	412
26	581	246	274	98	105	258	1030	172	1180	250	175	406
27	468	230	387	93	103	227	1070	169	1050	238	169	400
28	231	218	828	83	117	242	1040	288	731	273	178	418
29	466	105	585	88	---	254	1620	777	607	368	178	430
30	490	69	404	76	---	219	1290	1030	539	375	172	412
31	496	---	339	66	---	202	---	1200	---	385	175	---
TOTAL	11804	10464	9234	5633	3235	9077	24514	29520	43147	8347	8182	10013
MEAN	381	349	298	182	116	293	817	952	1438	269	264	334
MAX	627	496	828	307	177	1260	1620	1530	2130	409	384	558
MIN	202	69	70	66	65	93	206	169	539	169	169	178
AC-FT	23410	20760	18320	11170	6420	18000	48620	58550	85580	16560	16230	19860
CAL YR 1984	TOTAL	130490	MEAN 357	MAX 1280	MIN 46	AC-FT 258800						
WTR YR 1985	TOTAL	173170	MEAN 474	MAX 2130	MIN 65	AC-FT 343500						

## 09335000 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 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--Streamflow records, 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: Oct. 27-29, Nov. 26 to Dec. 9, Dec. 22-25, Jan. 1-7, 9, 12-22, Jan. 31 to Feb. 17, Mar. 4-5, 12-15, Mar. 22 to Apr. 3, Apr. 10, 11, and May 4, 5. Records good except for estimated daily discharges, which are poor. Part of flow is return waste from irrigation. Nearly all irrigation in this basin is water diverted from 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.--35 years, 31.4 ft<sup>3</sup>/s, 22,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft<sup>3</sup>/s, Sept. 6, 1970, gage height, 4.62 ft, from rating curve extended above 160 ft<sup>3</sup>/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 ft<sup>3</sup>/s, Nov. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharges, 710 ft<sup>3</sup>/s, Mar. 12, gage height, 2.78 ft; minimum daily, 3.6 ft<sup>3</sup>/s, Jan. 31.

DISCHARGE, IN 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	72	6.9	6.5	8.5	4.2	6.9	24	30	59	71	86	82
2	107	6.5	6.5	8.5	5.0	6.9	22	23	59	74	110	84
3	115	6.5	6.5	8.5	5.0	6.5	22	37	60	74	94	86
4	101	6.5	7.0	8.5	5.0	6.5	22	30	55	72	88	86
5	78	6.1	7.0	9.0	5.5	5.5	24	20	55	72	82	86
6	72	6.5	7.5	10	5.5	4.8	23	9.0	55	71	78	82
7	54	6.5	7.5	9.0	5.0	4.4	23	8.5	59	71	74	84
8	50	6.5	8.0	8.0	4.8	3.9	23	26	62	74	74	86
9	52	6.9	8.0	7.5	4.8	7.3	23	22	62	76	76	84
10	52	5.7	7.9	6.9	4.8	45	20	24	60	80	78	84
11	54	6.5	11	7.4	5.5	148	18	29	59	72	82	112
12	62	6.1	17	6.5	6.0	170	16	29	54	72	82	128
13	59	5.7	17	6.5	7.5	70	14	29	60	71	74	91
14	55	6.1	17	6.5	13	40	12	27	62	72	76	92
15	50	5.7	29	6.5	18	25	11	29	60	74	78	140
16	37	5.7	15	7.0	19	63	9.2	33	64	72	76	120
17	47	6.1	9.3	7.5	17	56	8.5	39	69	72	74	85
18	109	7.4	9.2	8.0	11	30	9.2	37	69	84	80	113
19	48	7.4	8.5	10	11	106	11	37	67	78	82	106
20	22	6.5	7.4	9.5	12	59	8.6	48	62	84	80	92
21	14	5.7	6.5	8.0	11	34	9.2	52	64	90	82	80
22	14	5.7	5.0	6.5	8.6	20	19	54	64	102	80	62
23	12	5.7	5.0	6.2	13	17	19	48	64	90	78	59
24	24	6.9	5.0	6.5	9.3	15	14	50	66	84	80	54
25	18	9.2	9.0	6.9	6.9	15	12	54	72	80	80	54
26	11	7.0	21	6.1	5.7	15	12	54	69	80	80	57
27	9.0	7.0	117	6.1	5.7	17	24	54	69	78	80	59
28	8.0	6.5	173	6.1	6.1	20	18	52	71	90	80	62
29	7.5	6.0	47	5.7	---	24	235	67	71	123	82	62
30	7.2	6.0	21	4.4	---	26	60	62	72	122	80	57
31	7.4	---	11	3.6	---	26	---	60	---	99	80	---
TOTAL	1428.1	193.5	633.3	225.9	235.9	1093.7	765.7	1173.5	1894	2524	2506	2529
MEAN	46.1	6.45	20.4	7.29	8.43	35.3	25.5	37.9	63.1	81.4	80.8	84.3
MAX	115	9.2	173	10	19	170	235	67	72	123	110	140
MIN	7.2	5.7	5.0	3.6	4.2	3.9	8.5	8.5	54	71	74	54
AC-FT	2830	384	1260	448	468	2170	1520	2330	3760	5010	4970	5020
CAL YR 1984 TOTAL	14217.1			MEAN 38.8	MAX 360	MIN 4.4	AC-FT 28200					
WTR YR 1985 TOTAL	15202.6			MEAN 41.7	MAX 235	MIN 3.6	AC-FT 30150					

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

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

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1968 dead storage included.

REMARKS.--Reservoir is formed by earth-rock-fill dam, completed in June 1963; storage began June 27, 1962. Capacity, 1,708,600 acre-ft between elevation 5,720 ft upstream toe of dam and 6,085 ft crest of spillway. Usable capacity 1,696,000 acre-ft above elevation 5,774.9 ft minimum operating level. Dead storage below elevation 5,774.9 ft is 12,600 acre-ft. Figures given herein are usable contents. Reservoir is used for irrigation storage, river regulation, desilting, flood control, and recreation.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 1,731,000 acre-ft, July 2-4, 1973, elevation, 6,087.25 ft; minimum daily 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 daily contents, 1,666,100 acre-ft, June 25, elevation, 6,083.04 ft; minimum daily contents, 1,363,200 acre-ft, Mar. 9, elevation, 6,061.51 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 (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1632800	1635600	1589200	1535600	1460400	1384400	1393300	1501400	1552700	1657200	1634300	1599900
2	1632300	1635300	1587000	1533000	1457000	1383300	1392200	1503600	1554800	1657400	1635200	1597100
3	1633700	1634900	1584400	1530600	1453600	1382400	1392700	1509200	1557400	1657200	1636400	1594400
4	1633300	1634400	1581900	1528000	1450200	1380100	1394200	1515100	1559900	1657700	1637700	1591600
5	1637300	1633800	1579700	1525600	1445600	1377100	1396800	1520800	1561300	1658300	1638400	1588800
6	1637700	1633500	1577200	1523100	1441400	1374000	1400000	1528300	1563900	1658600	1639300	1586100
7	1638100	1632900	1575200	1522200	1437800	1370500	1402600	1534900	1568600	1659100	1639600	1583500
8	1637700	1632000	1573100	1521900	1434000	1367300	1405900	1540900	1577500	1658700	1639600	1580900
9	1636500	1631400	1571100	1521600	1430100	1363200	1409300	1546800	1587600	1658000	1639400	1578400
10	1635000	1630700	1569200	1521100	1426200	1369500	1413300	1550200	1596200	1657700	1639600	1575400
11	1634100	1629900	1568300	1520500	1422100	1387000	1416800	1553800	1604200	1657100	1639300	1575400
12	1633800	1629000	1566800	1519900	1418200	1401400	1421400	1556800	1612200	1655800	1639400	1575000
13	1633500	1627900	1565300	1519200	1414400	1404400	1426200	1557900	1619100	1654800	1638800	1574300
14	1633400	1626400	1563100	1516700	1410000	1405100	1430900	1557300	1626300	1653200	1638100	1573700
15	1632600	1624600	1560900	1513700	1407100	1407300	1437100	1556100	1633500	1651700	1637400	1574900
16	1632800	1622700	1559400	1510500	1404000	1410000	1443200	1554700	1640800	1650500	1636700	1574400
17	1633500	1620700	1557100	1507200	1401100	1411300	1449700	1553100	1646400	1648700	1636100	1573400
18	1634400	1619400	1555300	1504000	1396900	1410000	1456600	1551800	1651400	1647000	1635300	1574400
19	1634400	1617300	1552800	1500700	1393900	1412000	1461000	1550200	1655700	1645200	1633400	1578500
20	1634600	1615200	1550600	1497700	1391300	1411500	1465400	1548600	1658900	1643500	1631000	1580400
21	1634700	1613100	1548300	1494400	1389000	1409900	1469700	1545900	1661000	1641800	1628700	1583800
22	1634400	1611000	1545900	1491700	1388300	1408100	1473900	1543000	1662400	1641400	1626100	1586400
23	1634900	1608900	1543500	1488500	1387900	1406400	1476300	1540200	1663800	1640300	1623900	1586900
24	1635000	1606800	1541000	1485600	1387500	1404700	1477600	1538700	1665300	1638400	1621500	1586700
25	1635200	1604800	1538600	1482600	1386900	1403900	1478700	1538600	1666100	1636400	1618900	1586400
26	1634300	1602500	1536700	1479700	1386300	1403700	1480900	1538900	1665800	1634600	1616100	1586000
27	1633700	1600000	1537400	1476600	1385600	1402200	1483100	1539400	1663800	1632800	1613700	1586000
28	1633400	1597400	1538600	1473600	1385200	1400900	1485300	1541600	1662000	1631600	1610400	1585900
29	1634300	1594800	1539400	1470400	---	1399000	1494500	1544600	1660100	1633400	1608200	1585700
30	1635800	1592300	1538700	1466900	---	1397100	1499500	1547600	1658400	1634600	1605200	1586100
31	1635900	---	1536600	1463200	---	1395200	---	1550900	---	1634300	1602500	---
MAX	1638100	1635600	1589200	1535600	1460400	1412000	1499500	1557900	1666100	1659100	1639600	1599900
MIN	1632300	1592300	1536600	1463200	1385200	1363200	1392200	1501400	1552700	1631600	1602500	1573400
(†)	6081.06	6078.14	6074.30	6069.05	6063.21	6063.98	6071.68	6075.30	6082.54	6080.95	6078.83	6077.72
(††)	+1900	-43600	-55700	-73400	-78000	+10000	+104300	+51400	+107500	-24100	-31800	-16400
CAL YR 1984	MAX	1672400	MIN	1322500	(††)	-9700						
WTR YR 1985	MAX	1666100	MIN	1363200	(††)	-47900						

(†) ELEVATION, IN FEET, AT END OF MONTH.

(††) CHANGE IN CONTENTS, IN ACRE-FEET.

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

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1954 to current year.

REVISED RECORDS.--The annual runoff for the 1958 water year as published in table 2, WSP 1733, 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 mi<sup>2</sup> 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 provided by U.S. Bureau of Reclamation.

AVERAGE DISCHARGE.--7 years (water years 1956-62), 1,304 ft<sup>3</sup>/s, 944,700 acre-ft/yr, prior to closure of Navajo Dam. 23 years (water years 1963-85), 1,180 ft<sup>3</sup>/s, 854,900 acre-ft/yr, since closure of Navajo Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft<sup>3</sup>/s, July 27, 1957, gage height, 11.00 ft, site and datum then in use; minimum determined, 8 ft<sup>3</sup>/s, Feb. 28, 1963. Maximum discharge since construction of Navajo Dam in 1962, 6,500 ft<sup>3</sup>/s, June 20, 1965, gage height, 4.57 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 5,120 ft<sup>3</sup>/s, May 23, 30; minimum daily, 536 ft<sup>3</sup>/s, Oct. 30.

DISCHARGE, IN 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	1120	1410	1800	1830	2150	1240	3190	4420	4590	3410	1590	1500
2	1120	1420	1800	1830	2150	1370	3200	4800	4600	2560	1590	1500
3	1130	1420	1800	1830	2150	1370	3210	4870	4610	2010	1590	1500
4	1120	1420	1800	1830	2160	1690	3400	4860	4600	2120	1590	1500
5	1120	1430	1810	1830	2310	2270	3650	4860	4620	2010	1240	1490
6	1120	1430	1810	1830	2500	2380	3660	4870	4640	1770	707	1490
7	1120	1430	1810	1460	2500	2400	3630	4880	4660	1780	781	1480
8	1120	1430	1810	951	2500	2400	3630	4860	4700	1780	773	1480
9	1250	1420	1810	950	2500	2400	3640	4870	4700	1790	779	1480
10	1460	1420	1820	946	2520	2410	3640	4880	4700	1790	778	1480
11	1530	1420	1830	950	2560	2410	3630	4880	4720	1800	775	1500
12	1540	1430	1830	950	2640	2420	3620	4880	4750	1800	776	1480
13	1540	1470	1830	941	2640	2410	3620	4870	4750	1800	774	1470
14	1540	1590	1830	1390	2640	2410	3620	4880	4760	1810	776	1480
15	1540	1690	1830	2130	2640	2430	3620	4880	4750	1810	777	1500
16	1540	1760	1820	2140	2640	2420	3620	4960	4760	1800	778	1470
17	1540	1780	1830	2140	2640	2430	3620	5100	4780	1800	781	1470
18	1530	1780	1830	2140	2640	2750	3620	5090	4790	1800	780	1490
19	1530	1780	1820	2140	2640	3220	3620	5090	4790	1810	1070	1470
20	1530	1780	1820	2140	2640	3200	3630	5090	4850	1800	1550	1480
21	1530	1780	1810	2140	2420	3200	3650	5090	4900	1810	1500	1470
22	1540	1780	1810	2140	1550	3200	3680	5100	4900	1760	1500	1480
23	1540	1780	1810	2140	1080	3190	3840	5120	4910	1590	1500	1480
24	1550	1800	1810	2150	1080	3180	3890	5110	4920	1590	1500	1470
25	1550	1800	1810	2150	1080	3190	3900	5100	4920	1590	1500	1480
26	1550	1800	1830	2170	1080	3200	3910	5100	4890	1580	1490	1470
27	1550	1800	1840	2170	1080	3200	3880	5100	4860	1580	1500	1480
28	1550	1800	1830	2170	1080	3200	3900	5100	4650	1590	1510	1480
29	1210	1800	1830	2180	---	3190	4090	5100	3980	1580	1500	1480
30	536	1800	1830	2170	---	3180	4310	5120	3800	1590	1500	1270
31	856	---	1830	2170	---	3190	---	4900	---	1590	1500	---
TOTAL	42002	48650	56380	56098	60210	81150	110120	153830	140850	56900	36755	44270
MEAN	1355	1622	1819	1810	2150	2618	3671	4962	4695	1835	1186	1476
MAX	1550	1800	1840	2180	2640	3220	4310	5120	4920	3410	1590	1500
MIN	536	1410	1800	941	1080	1240	3190	4420	3800	1580	707	1270
AC-FT	83310	96500	111800	111300	119400	161000	218400	305100	279400	112900	72900	87810
(†)	4250	0	0	0	0	3680	7930	15210	29220	32630	26440	14990
CAL YR 1984	TOTAL	547878		MEAN	1497	MAX	2530	MIN	536	AC-FT	1087000	
WTR YR 1985	TOTAL	887215		MEAN	2431	MAX	5120	MIN	536	AC-FT	1760000	

(†) DISCHARGE, IN ACRE-FT, 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.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)
NOV									
05...	1230	1430	250	267	8.3	8.5	18.5	9.0	4.7
JAN									
08...	1300	907	235	258	7.9	8.3	6.0	5.0	9.0
MAR									
04...	1430	1710	240	257	9.1	8.8	5.5	6.0	10
APR									
29...	1300	3860	250	281	7.6	8.5	12.0	6.0	20
JUL									
15...	1145	1730	243	262	8.1	8.2	20.0	11.0	4.4
SEP									
09...	1230	1500	240	257	7.8	8.3	27.0	11.0	3.6

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L) AS CACO3 (00900)	HARD- NESS, NONCAR- BONATE (MG/L) 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 IT-FLD (MG/L) AS HCO3 (99440)
NOV									
05...	11.8	100	22	30	6.4	12	.5	1.5	82
JAN									
08...	10.0	98	21	29	6.1	13	.6	1.9	93
MAR									
04...	15.2	74	0	22	4.6	11	.6	1.4	59
APR									
29...	10.8	110	28	31	7.0	15	.7	1.9	95
JUL									
15...	12.0	97	16	28	6.6	13	.6	2.1	91
SEP									
09...	12.2	93	20	27	6.1	12	.6	2.3	88

DATE	CAR- BONATE IT-FLD (MG/L) AS CO3 (99445)	ALKA- LITY FIELD (MG/L) AS CACO3 (00410)	ALKA- LITY, CARBON- ATE IT-FLD (MG/L - CACO3) (99430)	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									
05...	7.0	79	79	47	2.1	.20	10	157	160
JAN									
08...	.000	76	76	47	2.0	.20	12	163	160
MAR									
04...	21	83	83	47	2.2	.20	8.4	144	170
APR									
29...	.000	77	77	51	2.2	.20	11	158	170
JUL									
15...	4.0	81	81	41	2.0	.20	11	157	160
SEP									
09...	.000	79	79	45	2.3	.10	10	158	150



## 09363500 ANIMAS RIVER NEAR CEDAR HILL, NM

LOCATION.--Lat 37°02'17", long 107°52'25", in sec.7, T.32 N., R.9 W., La Plata County, Colorado, Hydrologic Unit 14080104, on right bank 0.8 mi downstream from Florida River, 2.5 mi upstream from Colorado-New Mexico State line, 8.5 mi north of Cedar Hill, and at mile 32.9.

DRAINAGE AREA.--1,090 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for October and November 1933, published in WSP 1313.

REVISED RECORDS.--WSP 1563: 1940 and 1946 (monthly figures only).

GAGE.--Water-stage recorder. 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. 19-21, 25, Jan. 3-6, and Jan. 31 to Feb. 12. 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.--52 years, 915 ft<sup>3</sup>/s, 662,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft<sup>3</sup>/s, June 19, 1949, gage height, 11.45 ft; minimum, 63 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
May 8	1130	5,150	8.03	June 9	1745	*8,450	*9.78
May 29	1345	5,240	8.08				

Minimum daily discharge, 210 ft<sup>3</sup>/s, Feb. 2.

DISCHARGE, IN 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	588	551	315	349	230	345	766	2490	3630	2210	1080	391
2	697	533	339	269	210	360	784	2610	3510	2170	1080	375
3	781	535	326	285	230	370	875	3130	3980	2190	1240	392
4	886	545	326	295	290	390	1080	3980	3930	2170	1090	449
5	865	528	327	300	280	364	1320	4680	3960	2150	959	483
6	879	516	308	310	260	393	1510	4690	4730	2090	858	458
7	837	511	289	315	250	384	1800	4580	5870	1940	800	467
8	788	496	314	355	249	377	2040	4800	6950	1810	762	479
9	795	491	335	369	250	440	2200	4790	7710	1770	710	457
10	795	466	322	332	250	806	2230	4690	7400	1820	669	460
11	816	451	362	303	249	1170	2400	4210	7140	1850	660	627
12	837	459	352	272	245	1640	2440	3470	6650	1770	727	819
13	844	450	344	260	252	901	2720	2990	6280	1790	668	789
14	795	439	355	267	254	728	2950	2570	6030	1810	593	637
15	802	432	384	271	267	710	3260	2420	5810	1660	552	596
16	704	411	340	265	299	811	3590	2570	6070	1510	504	1000
17	753	411	330	276	320	873	3430	2600	5500	1450	520	984
18	746	421	318	299	353	726	3430	2660	5110	1590	523	941
19	767	412	310	293	355	865	3370	2640	4900	1690	523	1740
20	690	377	300	329	361	952	2780	2560	4460	1590	485	1610
21	684	367	300	297	373	838	2500	2410	4340	1470	491	1340
22	666	360	298	344	353	753	2230	2330	4280	1600	489	1230
23	660	364	302	379	347	668	2020	2300	3870	1650	445	1180
24	672	365	300	346	321	690	2000	2600	3450	1380	418	1070
25	648	378	300	335	321	769	1990	3030	3600	1250	415	953
26	624	376	311	315	325	856	1980	3480	3210	1180	390	856
27	606	331	413	306	313	861	1950	4140	2590	1140	384	799
28	606	316	601	297	330	850	1950	4500	2410	1090	383	746
29	600	349	558	282	---	839	2080	4840	2450	1420	389	788
30	590	331	448	267	---	783	2070	4660	2300	1320	390	760
31	585	---	374	250	---	754	---	4200	---	1210	378	---
TOTAL	22606	12972	10801	9432	8137	22266	65745	107620	142120	51740	19575	23876
MEAN	729	432	348	304	291	718	2192	3472	4737	1669	631	796
MAX	886	551	601	379	373	1640	3590	4840	7710	2210	1240	1740
MIN	585	316	289	250	210	345	766	2300	2300	1090	378	375
AC-FT	44840	25730	21420	18710	16140	44160	130400	213500	281900	102600	38830	47360
CAL YR 1984	TOTAL	430469		MEAN	1176	MAX	7640	MIN	242	AC-FT	853800	
WTR YR 1985	TOTAL	496890		MEAN	1361	MAX	7710	MIN	210	AC-FT	985600	

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

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1904 to October 1905 (published as "near Farmington"), September 1912 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1243: 1931. WSP 1313: 1913.

GAGE.--Water-stage recorder. 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.--74 years, 924 ft<sup>3</sup>/s, 669,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 25,000 ft<sup>3</sup>/s, June 29, 1927, gage height, 8.5 ft, site and datum then in use, from rating curve extended above 10,000 ft<sup>3</sup>/s; minimum, 1.0 ft<sup>3</sup>/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 ft<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 16	1715	4,060	7.48	June 10	0345	*9,120	*9.68
May 5	2015	5,480	8.13				

Minimum discharge, 194 ft<sup>3</sup>/s, Feb. 2.

DISCHARGE, IN 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	427	549	360	415	273	377	750	2360	3640	2050	966	236
2	479	536	358	376	219	406	739	2700	3310	1950	933	229
3	722	540	366	332	282	447	813	3030	3670	1920	1060	238
4	855	569	358	350	335	434	945	4040	3790	1910	1050	246
5	837	547	354	358	309	413	1160	5000	3720	1880	931	286
6	864	509	354	363	305	382	1280	5070	4230	1830	811	293
7	815	504	324	367	298	408	1570	5020	5340	1720	731	318
8	734	492	324	376	279	402	1900	4970	6930	1560	652	337
9	729	501	354	400	276	402	2130	5070	8000	1430	617	361
10	718	491	341	390	286	521	2170	4930	8110	1440	569	346
11	703	470	354	357	269	1210	2380	4540	7310	1440	544	669
12	733	471	390	346	243	1620	2500	3710	6560	1430	564	919
13	745	456	395	332	253	1150	2740	3180	5990	1390	572	842
14	741	444	395	329	269	786	3030	2690	5760	1470	480	625
15	748	426	415	323	270	716	3290	2410	5560	1390	427	539
16	670	411	410	327	290	746	3670	2460	5670	1290	393	704
17	682	410	376	312	308	884	3620	2530	5400	1150	372	965
18	785	415	372	319	333	733	3510	2520	4770	1140	383	960
19	766	408	367	342	365	742	3610	2560	4610	1430	366	1470
20	682	393	358	351	352	913	3020	2510	4250	1430	374	1810
21	673	379	367	359	368	857	2570	2330	3900	1310	338	1390
22	647	369	367	350	359	718	2430	2230	3960	1260	342	1250
23	634	367	341	385	380	638	2140	2150	3730	1430	316	1190
24	678	385	354	381	352	609	1980	2350	3360	1260	282	1130
25	637	399	341	353	346	660	1970	2780	3320	1080	263	1020
26	595	407	341	343	357	731	1980	3240	3310	1030	248	890
27	575	377	367	332	356	762	2010	3850	2620	959	231	794
28	589	349	536	332	354	763	2010	4270	2320	907	232	752
29	582	366	638	318	---	766	2310	4710	2270	1060	230	748
30	545	383	579	305	---	717	2070	4680	2180	1230	233	764
31	561	---	478	284	---	676	---	4200	---	1070	239	---
TOTAL	21151	13323	12034	10807	8686	21589	66297	108090	137590	43846	15749	22321
MEAN	682	444	388	349	310	696	2210	3487	4586	1414	508	744
MAX	864	569	638	415	380	1620	3670	5070	8110	2050	1060	1810
MIN	427	349	324	284	219	377	739	2150	2180	907	230	229
AC-FT	41950	26430	23870	21440	17230	42820	131500	214400	272900	86970	31240	44270
CAL YR 1984	TOTAL	402635		MEAN	1100	MAX	7170	MIN	266	AC-FT	798600	
WTR YR 1985	TOTAL	481483		MEAN	1319	MAX	8110	MIN	219	AC-FT	955000	

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 Sept. of 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, 899 microsiemens Sept. 12; minimum daily, 89 microsiemens June 15.

WATER TEMPERATURES: Maximum daily, 26.5°C Aug. 26, 27; minimum daily, 0.0°C several days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 14,000 mg/L Mar. 12; minimum daily mean, 14 mg/L Jan. 12.

SEDIMENT LOADS: Maximum daily, 61,200 tons Mar. 12; minimum daily, 12 tons Sept. 1, 5.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE AIR (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED AS (MG/L) (00300)	HARD- NESS (MG/L CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
NOV 06...	0830	614	500	547	7.9	8.5	13.0	5.0	6.0	11.6	230	95
MAR 06...	1000	381	600	614	8.2	8.1	11.0	6.0	30	12.6	270	94
MAY 01...	1100	2270	350	358	8.5	8.2	25.0	11.0	37	10.6	170	66
SEP 10...	0800	348	650	665	8.1	8.2	17.5	14.0	--	12.0	260	97

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 IT-FLD (MG/L HCO3) (99440)	CAR- BONATE IT-FLD (MG/L CO3) (99445)	ALKA- LINITY FIELD (MG/L CAC03) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L CAC03) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 06...	72	11	23	.7	1.9	160	.000	110	130	130	12
MAR 06...	84	15	25	.7	2.1	180	19	180	180	160	14
MAY 01...	53	8.8	9.4	.3	1.2	110	8.0	100	100	60	4.6
SEP 10...	81	14	33	.9	3.1	170	15	170	170	160	17

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, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHO, DIS- TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 06...	.40	6.9	329	340	<.10	<.010	.040	<.010
MAR 06...	.30	6.7	387	440	.14	.030	.070	.020
MAY 01...	.20	6.9	212	220	.10	.010	.160	<.010
SEP 10...	.40	7.0	412	430	<.10	.080	.010	<.010

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 06...	0830	20	<1	75	.0	<1	<1	<3	5	6	<1
MAR 06...	1000	20	<1	83	<.5	<1	<1	<3	2	15	<1
MAY 01...	1100	40	<1	82	<.5	<1	<1	<3	2	11	7
SEP 10...	0800	<10	<1	90	<.5	<1	--	<3	2	<3	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 06...	34	44	<.1	<10	15	<1	<1	880	<6	15
MAR 06...	29	43	<.1	<10	1	<1	<1	960	<6	12
MAY 01...	14	15	<.1	<10	<1	<1	<1	500	<6	16
SEP 10...	45	11	.2	<10	1	<1	<1	1200	<6	8

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 06...	0830	46	36
MAR 06...	1000	40	K17
MAY 01...	1100	110	120
SEP 10...	0800	130	280

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (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)
NOV 06...	0830	614	5.0	123	204	--	--	--
DEC 28...	1030	536	3.0	2240	3240	46	53	74
MAR 06...	1000	381	6.0	71	73	--	--	--
10...	2230	520	6.5	11100	15600	38	53	83
12...	1600	1650	7.0	18100	80600	34	47	70
21...	1730	818	12.0	2690	5940	39	54	77
APR 27...	2230	1980	9.5	1060	5670	--	--	--
MAY 01...	1100	2270	11.0	101	619	--	--	--
AUG 12...	1800	582	22.5	2730	4290	51	69	95
SEP 12...	1130	890	15.0	11400	27400	43	58	89
19...	1800	1540	16.0	8310	34600	29	36	54

09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

## WATER-QUALITY RECORDS

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	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. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM (70335)
NOV 06...	--	--	--	36	54	77	98	100
DEC 28...	--	--	--	97	99	100	--	--
MAR 06...	--	--	--	93	97	100	--	--
10...	--	--	--	100	--	--	--	--
12...	93	99	100	--	--	--	--	--
21...	--	--	--	95	99	100	--	--
APR 27...	--	--	--	95	98	100	--	--
MAY 01...	--	--	--	97	100	--	--	--
AUG 12...	--	--	--	100	--	--	--	--
SEP 12...	--	--	--	100	--	--	--	--
19...	92	100	--	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	623	571	714	698	749	697	557	362	233	127	410	780
2	619	575	713	705	777	679	533	320	239	126	399	740
3	539	582	710	759	738	677	533	310	246	309	400	732
4	533	580	715	771	750	629	518	256	222	---	---	798
5	---	582	728	693	682	622	411	259	216	270	448	---
6	---	578	734	684	669	633	412	235	220	268	440	715
7	500	600	738	710	704	635	364	245	207	317	480	722
8	492	599	735	689	672	632	349	238	198	317	---	726
9	432	608	724	690	669	---	327	230	187	316	---	707
10	471	617	725	667	669	580	317	234	192	310	---	678
11	474	627	---	689	668	579	309	---	187	301	---	---
12	479	625	674	694	685	506	301	279	192	303	550	899
13	491	635	666	701	688	---	300	309	94	302	510	665
14	488	642	569	707	686	524	286	314	92	333	580	637
15	422	646	615	720	658	541	305	326	89	336	502	633
16	455	670	597	704	643	537	274	327	92	409	600	645
17	491	643	589	697	639	540	279	310	92	373	506	496
18	498	636	717	---	639	562	273	---	134	375	592	523
19	510	550	725	652	642	571	272	305	90	410	610	541
20	510	614	607	646	639	490	296	310	113	---	604	406
21	558	624	623	650	661	532	347	314	97	---	654	394
22	569	661	714	655	676	531	364	308	101	370	690	396
23	596	668	744	521	677	586	354	307	101	352	700	417
24	604	673	695	550	676	548	367	307	---	420	754	419
25	604	672	752	593	696	548	364	252	101	411	756	421
26	616	670	749	594	700	567	355	247	98	408	783	454
27	597	708	598	551	704	502	394	226	122	410	772	---
28	593	704	639	590	711	506	398	219	126	---	695	501
29	---	708	659	615	---	538	403	212	128	355	750	502
30	585	711	653	605	---	540	362	208	134	357	750	511
31	583	---	---	608	---	548	---	229	---	392	783	---
MEAN	533	633	683	660	685	572	364	276	150	332	605	595
WTR YR 1985	MEAN	507		MAX	899	MIN	89					

## 09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	7.5	4.0	.0	.0	6.0	9.0	13.0	15.0	15.5	23.0	22.0
2	13.0	8.0	2.0	.0	.0	5.0	10.0	14.0	14.5	16.0	21.0	22.5
3	11.5	9.0	2.0	.0	.0	4.0	10.0	15.0	12.0	17.0	22.0	23.5
4	12.0	9.5	2.0	.0	.0	5.5	12.0	12.0	14.0	---	---	20.0
5	---	9.0	2.0	2.0	.0	6.0	12.0	11.0	14.0	---	19.5	---
6	---	7.5	2.0	3.0	.0	7.5	14.0	12.5	15.0	18.0	20.0	20.0
7	12.0	7.0	3.5	2.0	.0	7.0	12.0	15.0	16.5	18.0	21.0	20.5
8	12.0	8.0	3.0	2.5	1.0	7.0	15.0	12.5	16.0	19.0	---	19.5
9	13.0	12.0	4.5	2.5	5.0	---	14.0	13.0	17.0	19.0	---	19.5
10	12.5	4.5	5.0	4.5	1.0	6.5	13.0	13.0	17.5	20.5	---	20.0
11	14.5	6.5	---	2.5	1.0	7.0	13.0	---	17.0	20.5	---	---
12	12.0	6.0	3.0	3.0	4.5	7.0	14.0	9.0	13.5	20.5	22.5	15.0
13	12.0	6.5	3.0	3.0	2.0	---	15.0	9.0	16.0	20.5	22.0	19.0
14	10.5	7.0	3.0	3.0	1.5	9.5	15.0	12.0	14.0	21.0	20.5	18.0
15	7.0	7.0	3.0	2.0	5.0	---	15.0	15.0	16.0	20.0	18.5	15.5
16	9.0	6.0	3.0	2.0	7.0	8.5	10.0	15.0	15.5	23.0	24.0	19.0
17	5.5	6.0	3.0	3.0	6.0	9.0	12.0	15.0	16.0	25.0	24.0	19.5
18	9.0	7.5	3.0	---	7.5	9.0	11.0	---	15.0	25.0	24.0	15.5
19	7.5	4.5	3.0	4.0	6.0	9.5	10.0	12.0	15.5	23.0	20.0	16.0
20	7.0	4.5	2.0	5.0	6.0	8.0	8.0	13.5	16.0	---	20.0	16.0
21	6.0	4.0	2.0	5.5	5.0	12.0	8.0	13.0	17.0	---	20.0	16.0
22	6.0	5.5	1.5	4.5	5.0	6.0	9.0	13.0	16.5	23.5	22.5	13.0
23	5.0	6.0	1.5	5.0	6.0	8.0	11.0	15.0	16.0	19.5	25.0	12.0
24	5.0	6.5	1.5	6.0	6.0	9.0	13.5	15.0	---	19.5	---	12.0
25	6.0	4.0	2.0	3.0	6.0	10.0	12.0	16.0	16.0	21.0	25.0	14.0
26	5.5	1.5	3.0	4.0	6.0	11.0	10.0	17.0	16.0	---	26.5	16.0
27	7.0	.0	3.0	5.0	6.0	7.0	9.5	15.0	16.0	22.0	26.5	---
28	9.0	.0	3.0	5.0	6.0	6.0	8.5	13.5	15.0	---	24.5	13.5
29	---	4.0	3.0	3.0	---	7.5	9.0	14.0	15.0	20.0	23.5	12.0
30	9.0	4.0	3.0	2.0	---	8.0	---	12.0	15.0	20.0	25.0	12.0
31	9.0	---	---	.0	---	8.0	---	14.5	---	23.5	22.0	---
MEAN	9.5	6.0	2.5	3.0	3.5	7.5	11.5	13.5	15.5	20.5	22.5	17.0
WTR YR 1985	MEAN	11.0	MAX	26.5	MIN	.0						

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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	50	58	45	67	21	20	52	58	71	52	346	352
2	227	294	49	71	26	25	57	58	83	49	424	465
3	688	1340	43	63	26	26	51	46	33	25	415	501
4	732	1690	45	69	40	39	57	54	22	20	230	270
5	624	1410	29	43	22	21	57	55	39	33	87	97
6	403	940	27	37	15	14	48	47	51	42	67	69
7	259	570	359	489	16	14	48	48	17	14	68	75
8	134	266	327	434	19	17	120	122	50	38	63	68
9	88	173	88	119	26	25	169	183	44	33	67	73
10	77	149	54	72	22	20	51	54	35	27	1770	2490
11	138	262	35	44	26	25	15	14	28	20	11100	36300
12	94	186	23	29	120	126	14	13	23	15	14000	61200
13	98	197	29	36	182	194	21	19	37	25	7760	24100
14	89	178	31	37	353	376	30	27	42	31	1140	2420
15	91	184	32	37	368	412	65	57	45	33	557	1080
16	675	1220	63	70	136	151	43	38	42	33	1940	3910
17	548	1010	34	38	90	91	31	26	288	240	2330	5560
18	362	767	19	21	93	93	45	39	371	334	900	1780
19	183	378	31	34	88	87	48	44	359	354	601	1200
20	121	223	25	27	73	71	40	38	246	234	2690	6630
21	181	329	28	29	67	66	69	67	233	232	2770	6410
22	173	302	18	18	46	46	82	77	242	235	829	1610
23	377	645	28	28	58	53	47	49	351	360	413	711
24	523	957	34	35	56	54	41	42	385	366	404	664
25	133	229	56	60	37	34	32	30	193	180	434	773
26	91	146	51	56	42	39	24	22	113	109	505	997
27	57	88	30	31	693	687	36	32	175	168	366	753
28	50	80	35	33	2110	3050	32	29	211	202	330	680
29	49	77	43	42	930	1600	22	19	---	---	317	656
30	53	78	32	33	75	117	31	26	---	---	314	608
31	42	64	---	---	52	67	51	39	---	---	326	595
TOTAL	---	14490	---	2202	---	7660	---	1472	---	3504	---	163097



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

## WATER-DISCHARGE RECORDS

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. 12-14. Water-discharge records good. 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.--73 years (water years 1913-85), 2,372 ft<sup>3</sup>/s, 1,719,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 68,000 ft<sup>3</sup>/s, June 29, 1927, gage height, 10.2 ft, site and datum then in use, from rating curve extended above 37,000 ft<sup>3</sup>/s; minimum, 14 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 5	1715	9,570	6.37	June 10	0200	*12,600	*7.61
May 29	1845	9,880	6.50				

Minimum discharge, 757 ft<sup>3</sup>/s, Aug. 19.

DISCHARGE, IN 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	1310	1940	2180	2200	2430	1630	3760	6070	8110	5480	2270	1570
2	1400	2010	2180	2150	2370	1910	3760	6890	7660	4570	2310	1590
3	1720	2010	2200	2090	2440	1940	3840	7240	8060	3910	2410	1610
4	1930	2020	2190	2100	2500	1930	4080	8140	8320	3930	2260	1690
5	1890	2000	2210	2110	2500	2520	4730	9130	8220	3870	2040	1720
6	1910	2000	2220	2120	2770	2650	4820	9350	8760	3490	1170	1760
7	1870	1990	2200	2100	2770	2670	5100	9260	9780	3360	1040	1830
8	1780	1970	2200	1390	2780	2670	5350	9260	11100	3200	941	1870
9	1790	1990	2240	1320	2810	2690	5490	9350	11800	3060	900	1930
10	1970	1980	2220	1290	2840	2910	5500	9260	12100	3080	900	1920
11	2090	1970	2230	1250	2820	3730	5700	8940	11500	3050	905	2410
12	2150	1960	2270	1230	2870	4410	5800	8020	10900	3040	1030	2820
13	2150	1940	2300	1220	2870	4240	6070	7390	10400	2970	1030	2620
14	2150	2040	2270	1230	2880	3370	6320	6980	10200	3040	1010	2420
15	2190	2140	2290	2330	2880	3250	6540	6670	9940	2970	889	2300
16	2160	2170	2240	2450	2920	3360	6870	6630	10000	2880	895	2540
17	2310	2160	2210	2440	3190	3450	6860	6950	9830	2750	838	2770
18	2360	2200	2200	2450	3610	3380	6830	6990	9270	2750	798	2740
19	2270	2180	2200	2500	3610	3900	6910	7060	8970	3080	776	3180
20	2190	2170	2190	2510	3370	4260	6260	7080	8750	3020	1400	3630
21	2170	2160	2180	2530	3550	4100	5790	6930	8660	2910	1410	3210
22	2190	2160	2160	2530	2670	3860	5600	6860	8700	2870	1410	3000
23	2150	2160	2140	2590	1880	3750	5380	6770	8450	3260	1370	2920
24	2210	2200	2140	2590	1760	3680	5240	6980	8090	2610	1370	2800
25	2150	2220	2130	2570	1640	3730	5190	7430	8000	2420	1390	2620
26	2100	2190	2140	2560	1550	3790	5190	7920	8000	2350	1470	2440
27	2070	2170	2180	2550	1540	3830	5260	8590	7220	2280	1460	2320
28	2080	2150	2540	2550	1580	3850	5900	9140	6870	2210	1520	2240
29	2060	2170	2590	2540	---	3910	6640	9480	6210	2410	1480	2210
30	1180	2200	2390	2510	---	3850	6000	9510	5730	2850	1480	2220
31	1050	---	2270	2470	---	3790	---	9120	---	2380	1530	---
TOTAL	61000	62620	69300	66470	73400	103010	166780	245390	269600	96050	41702	70900
MEAN	1968	2087	2235	2144	2621	3323	5559	7916	8987	3098	1345	2363
MAX	2360	2220	2590	2590	3610	4410	6910	9510	12100	5480	2410	3630
MIN	1050	1940	2130	1220	1540	1630	3760	6070	5730	2210	776	1570
AC-FT	121000	124200	137500	131800	145600	204300	330800	486700	534800	190500	82720	140600
CAL YR 1984	TOTAL	914670		MEAN	2499	MAX	8980	MIN	1050	AC-FT	1814000	
WTR YR 1985	TOTAL	1326222		MEAN	3633	MAX	12100	MIN	776	AC-FT	2631000	



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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 593 ft<sup>3</sup>/s at 0500 hours Apr. 11, gage height, 3.31 ft; minimum daily, 2.9 ft<sup>3</sup>/s, Aug. 18.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	14	13	24	8.0	29	94	79	108	36	11	3.8
2	7.0	14	13	22	9.0	31	108	92	90	36	9.5	3.8
3	7.5	14	13	20	10	31	132	135	99	34	21	3.8
4	10	14	14	21	10	24	169	230	86	31	21	4.1
5	11	14	14	22	10	24	180	330	86	26	14	4.4
6	8.0	15	14	23	12	26	224	342	101	23	12	4.4
7	8.0	14	15	23	14	22	292	342	145	27	10	5.1
8	8.5	13	20	24	16	21	372	352	188	27	9.0	5.1
9	8.5	14	21	22	15	29	402	338	226	26	8.5	4.8
10	8.0	15	21	21	15	46	458	258	178	27	7.5	5.1
11	9.0	15	23	18	14	173	485	196	131	23	7.5	19
12	10	13	25	17	16	196	425	137	110	19	7.0	16
13	12	11	26	17	16	117	452	101	77	16	5.8	9.0
14	12	12	25	18	16	103	452	58	82	13	5.4	7.5
15	12	12	26	18	18	104	485	43	80	14	5.4	8.5
16	12	12	23	17	20	104	482	42	103	13	5.4	9.0
17	16	12	23	17	22	113	378	45	71	16	4.4	8.0
18	19	12	22	19	26	92	330	56	83	23	2.9	20
19	17	12	23	19	30	114	295	66	79	27	4.1	38
20	16	11	24	21	33	131	206	53	70	21	5.1	66
21	17	11	23	21	32	135	147	50	77	14	5.8	58
22	16	13	19	21	28	111	139	58	80	23	5.4	35
23	17	14	20	19	29	91	110	60	78	21	4.4	31
24	20	16	22	20	26	90	99	66	73	17	3.5	26
25	17	18	24	19	26	101	82	77	80	15	3.8	23
26	15	16	29	20	25	117	80	104	69	16	4.5	22
27	15	13	40	19	24	100	80	171	66	14	4.4	21
28	14	13	43	19	26	94	80	198	54	13	4.8	21
29	14	14	44	20	---	106	80	208	45	16	5.1	21
30	14	13	34	14	---	92	82	175	39	15	5.1	21
31	14	---	30	10	---	86	---	145	---	17	3.8	---
TOTAL	390.3	404	726	605	546.0	2653	7400	4607	2854	659	227.1	524.4
MEAN	12.6	13.5	23.4	19.5	19.5	85.6	247	149	95.1	21.3	7.33	17.5
MAX	20	18	44	24	33	196	485	352	226	36	21	66
MIN	5.8	11	13	10	8.0	21	80	42	39	13	2.9	3.8
AC-FT	774	801	1440	1200	1080	5260	14680	9140	5660	1310	450	1040
CAL YR 1984	TOTAL	14961.3	MEAN	40.9	MAX	242	MIN	3.5	AC-FT	29680		
WTR YR 1985	TOTAL	21595.8	MEAN	59.2	MAX	485	MIN	2.9	AC-FT	42840		

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.

WATER-DISCHARGE RECORDS

REMARKS.--Estimated daily discharges: Nov. 27-29, Dec. 3, 20-26, Jan. 3-9, 13-19, 21, Jan. 29 to Feb. 2, Feb. 3-13, Apr. 25 to May 1, May 13-17, June 2-5, June 27-July 7, July 10-19, Aug. 4-15 and Sept. 20-30. Water-discharge 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,280 ft<sup>3</sup>/s at 2315 hours Sept. 18, gage height, 5.18 ft; minimum daily, 0.10 ft<sup>3</sup>/s, Sept. 10.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	22	23	54	16	34	83	40	56	.31	.78	.14
2	3.1	22	23	42	17	35	95	38	33	.40	.90	.14
3	3.5	22	23	36	18	34	114	46	25	.32	78	.13
4	4.3	22	23	38	20	34	132	181	19	.30	1.8	.11
5	5.5	22	25	40	16	31	153	417	17	.28	1.0	.11
6	5.3	22	24	40	14	32	196	470	18	.25	.56	.11
7	8.3	22	25	43	17	32	269	437	48	.22	.47	.14
8	6.3	22	27	46	20	29	364	424	114	.43	.50	.11
9	6.9	22	29	48	24	31	400	428	190	.53	.43	.11
10	6.7	22	28	47	28	35	479	332	154	.31	.42	.10
11	6.7	23	28	43	32	171	554	215	73	.33	.47	25
12	7.3	23	30	40	34	297	491	129	47	.45	.52	138
13	9.4	22	39	37	35	153	477	50	26	.50	.50	8.8
14	7.8	21	36	38	36	92	533	34	19	.55	.47	6.2
15	8.0	21	33	38	36	88	566	28	18	.40	.40	5.3
16	8.0	21	33	38	38	90	606	26	21	.32	.24	9.4
17	11	22	30	38	40	114	477	24	16	.32	.22	7.1
18	24	23	30	38	39	85	361	20	12	.32	.23	222
19	23	22	29	39	41	114	349	21	11	4.9	.23	238
20	24	21	29	40	39	163	264	48	10	5.7	.26	80
21	23	21	28	40	39	182	144	22	8.0	22	.26	90
22	25	21	26	38	39	113	140	21	5.1	1.3	.24	60
23	26	22	25	37	38	84	116	25	4.6	1.1	.22	35
24	28	25	25	37	37	80	78	24	3.1	.93	.22	30
25	25	29	26	37	36	84	46	25	2.3	.70	.23	25
26	23	24	30	36	34	105	42	22	2.2	.69	.24	20
27	22	23	35	36	34	96	42	61	.96	.68	.22	17
28	22	22	98	34	34	86	40	115	.52	.74	.20	16
29	22	22	78	34	---	101	41	128	.63	.89	.18	15
30	22	22	63	30	---	89	38	106	.30	1.9	.16	14
31	22	---	59	22	---	83	---	74	---	1.2	.15	---
TOTAL	442.1	670	1060	1204	851	2797	7690	4031	954.71	49.27	90.72	1063.00
NEAN	14.3	22.3	34.2	38.8	30.4	90.2	256	130	31.8	1.59	2.93	35.4
MAX	28	29	98	54	41	297	606	470	190	22	78	238
MIN	3.0	21	23	22	14	29	38	20	.30	.22	.15	.10
AC-FT	877	1330	2100	2390	1690	5550	15250	8000	1890	98	180	2110

CAL YR 1984	TOTAL	11591.3	MEAN	31.7	MAX	208	MIN	1.3	AC-FT	22990
WTR YR 1985	TOTAL	20902.80	MEAN	57.3	MAX	606	MIN	.10	AC-FT	41460

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.15W., 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 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--Water years 1978 to current year.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)
NOV 06...	1230	E2010	400	432	7.8	8.3	14.0	8.0	22
JAN 09...	1100	E1280	500	547	8.1	8.2	6.0	4.0	50
MAR 13...	1030	E4360	600	549	8.2	7.8	8.0	3.5	4700
MAY 01...	1400	E5920	340	352	8.2	8.0	21.0	13.0	160
JUL 16...	1500	E2880	280	328	8.3	8.5	24.0	20.0	8.5
SEP 12...	0905	E2850	1100	1100	7.8	7.3	19.5	17.0	30

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CaCO3) (00900)	HARD- NESS, NONCAR- BONATE (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 IT-FLD (MG/L AS HCO3) (99440)
NOV 06...	10.6	160	54	49	9.3	24	.9	1.8	130
JAN 09...	10.6	200	65	60	12	37	1	2.4	150
MAR 13...	11.8	150	51	48	7.2	56	2	2.3	120
MAY 01...	9.5	150	92	47	8.1	19	.7	2.0	66
JUL 16...	11.6	130	45	39	6.9	16	.6	1.9	74
SEP 12...	10.2	340	240	120	10	82	2	4.7	120

DATE	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LITY FIELD (MG/L AS CaCO3) (00410)	ALKA- LITY, CARBON- ATE IT-FLD (MG/L - CaCO3) (99430)	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 06...	.000	87	100	99	6.6	.30	9.1	253	260
JAN 09...	7.0	140	140	150	10	.30	12	364	370
MAR 13...	.000	96	96	160	7.0	.30	8.4	327	350
MAY 01...	3.0	59	59	76	3.9	.20	9.5	198	200
JUL 16...	12	81	81	66	4.8	.20	7.8	193	200
SEP 12...	.000	96	96	400	11	.40	8.1	712	700

## 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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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: Dec. 21 to Jan. 4, Jan. 8-22, Jan. 30 to Feb. 7, Feb. 10-15 and Apr. 29 to May 1. Water-discharge records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--11 years, 1.96 ft<sup>3</sup>/s, 1,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,420 ft<sup>3</sup>/s, May 20, 1978, gage height, 18.94 ft, from floodmark, from rating curve extended above 6.0 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 80 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 20	1500	*115	*7.43	No other peak greater than base discharge.			
No flow for many days.							

DISCHARGE, IN 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	.00	.19	.08	.00	.00	.06	.07	.13	.00	.00	.00	.00
2	.00	.14	.07	.00	.00	.06	.07	.16	.00	.00	.00	.00
3	.19	.07	.07	.00	.00	.06	.06	.14	.00	.00	.00	.00
4	.05	.06	.08	.00	.00	.06	.05	.15	.00	.00	.00	.00
5	.00	.06	.07	.00	.00	.06	.05	.15	.00	.00	.00	.00
6	.00	.07	.07	.00	.00	.06	.05	.14	.00	.00	.00	.00
7	.00	.07	.05	.00	.00	.06	.04	.12	.00	.00	.00	.00
8	.00	.07	.08	.23	.11	.06	.05	.11	.00	.00	.00	.00
9	.00	.06	.08	.31	.12	.07	.06	.12	.00	.00	.00	.00
10	.00	.08	.07	.20	.13	.08	.06	.14	.00	.00	.00	.00
11	.00	.07	.09	.12	.11	.08	.06	.11	.00	.00	.00	.00
12	.00	.08	.11	.12	.11	.13	.06	.12	.00	.00	.00	.00
13	.00	.08	.21	.13	.11	.08	.06	.14	.00	.00	.00	.00
14	.00	.08	.12	.11	.09	.08	.07	.09	.00	.00	.00	.00
15	.00	.07	.11	.13	.09	.08	.08	.09	.00	.00	.00	.00
16	.00	.08	.08	.14	.10	.11	.09	.10	.00	.00	.00	1.0
17	.00	.09	.08	.13	.09	.07	.10	.12	.00	.00	.00	.17
18	.04	.09	.09	.14	.08	.07	.12	.10	.00	.00	.00	5.2
19	.00	.11	.09	.14	.08	.22	.15	.10	.00	.00	.00	12
20	.04	.08	.10	.14	.09	.07	.13	.11	.00	.00	.00	18
21	.00	.08	.20	.13	.09	.07	.17	.09	.00	.00	.00	3.3
22	.00	.07	.18	.12	.07	.07	.16	.12	.00	2.9	.00	.21
23	.09	.08	.16	.10	.07	.06	.11	.11	.00	.15	.00	.11
24	.17	.11	.15	.11	.06	.06	.09	.08	.00	.00	.00	.07
25	.13	.14	.18	.10	.06	.11	.12	.07	.00	.00	.00	.00
26	.00	.09	.27	.12	.06	.07	.14	.07	.00	.00	.00	.00
27	.00	.08	.43	.13	.06	.08	.14	.06	.00	.00	.00	.00
28	.00	.07	.00	.12	.06	.08	.32	.11	.00	.00	.00	.00
29	.00	.08	.00	.03	---	.13	.17	.19	.00	.00	.00	.00
30	.00	.07	.00	.00	---	.07	.11	.10	.00	.00	.00	.00
31	.12	---	.00	.00	---	.07	---	.07	---	.00	.00	---
TOTAL	.83	2.57	3.37	3.00	1.84	2.49	3.01	3.51	.00	3.05	.00	40.06
MEAN	.03	.09	.11	.10	.07	.08	.10	.11	.00	.10	.00	1.34
MAX	.19	.19	.43	.31	.13	.22	.32	.19	.00	2.9	.00	18
MIN	.00	.06	.00	.00	.00	.06	.04	.06	.00	.00	.00	.00
AC-FT	1.6	5.1	6.7	6.0	3.6	4.9	6.0	7.0	.00	6.0	.00	79
CAL YR 1984	TOTAL	22.63	MEAN	.06	MAX	3.5	MIN	.00	AC-FT	45		
WTR YR 1985	TOTAL	63.73	MEAN	.17	MAX	18	MIN	.00	AC-FT	126		

## 09367680 CHACO WASH AT CHACO CANYON 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 Canyon National Monument Visitors Center.

DRAINAGE AREA.--578 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

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. 6-22, Dec. 28 to Jan. 18, Feb. 14-19, 20-25, Feb. 26 to Apr. 1, Apr. 27 to June 5, July 23 to Aug. 20, and Sept. 16-30. Water-discharge records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--9 years, 4.21 ft<sup>3</sup>/s, 3,050 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,260 ft<sup>3</sup>/s, Jan. 18, 1979, gage height, 6.62 ft, from rating curve extended above 350 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Oct. 4	0315	400	3.60	July 23	0330	275	3.01
Feb. 19	2230	128	2.53	July 30	0430	311	3.16
Apr. 28	2015	322	3.21	Aug. 11	0830	*662	*4.59
July 20	0145	122	2.35	Sept. 16	0300	256	2.90

No flow most of time.

DISCHARGE, IN 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	2.1	.30	.00	.00	.00	.14	.00	15	.00	.00	3.2	.00
2	3.1	.25	.00	.00	.00	.00	.00	5.3	.00	.00	2.8	.00
3	40	.22	.00	.00	.00	.00	.00	3.0	.00	.00	2.5	.00
4	157	.18	.00	.00	.00	.00	.00	2.0	.00	.00	2.2	.00
5	66	.10	.00	.00	.00	.00	.00	1.5	.00	.00	2.2	.00
6	18	.00	.00	.00	.00	.00	.00	1.2	.00	.00	2.0	.00
7	13	.00	.00	.00	.00	.00	.00	.94	.00	.00	2.0	.00
8	7.9	.00	.00	7.0	.00	.00	.00	.76	.00	.00	2.2	.00
9	4.1	.00	.00	.92	.00	.00	.00	.66	.00	.00	1.8	.00
10	3.5	.00	.00	.80	.00	.00	.00	.54	.00	.00	7.4	.00
11	3.2	.00	.00	.74	.00	.00	.00	.46	.00	.00	226	.00
12	3.5	.00	.00	.72	.00	5.0	.00	.40	.00	.00	21	.00
13	5.4	.00	.00	.50	.00	27	.00	.35	.00	.00	7.9	.00
14	13	.00	.00	.36	.50	17	.00	.32	.00	.00	4.4	.00
15	8.8	.00	.00	.15	1.0	7.0	.00	.29	.00	1.9	3.8	7.5
16	6.4	.00	.00	.00	4.0	6.0	.00	.26	.00	4.2	3.5	64
17	5.1	.00	.00	.00	25	5.5	.00	.24	.00	.03	2.8	.36
18	9.9	.00	.00	.00	100	5.0	.00	.22	.00	.00	2.0	.00
19	9.4	.00	.00	.00	78	4.0	.00	.20	.00	.28	2.2	9.8
20	7.4	.00	.00	.00	94	3.0	.00	.20	.00	15	2.8	3.3
21	9.9	.00	.00	.00	44	2.0	.00	.18	.00	1.1	1.4	11
22	12	.00	.00	.00	20	1.5	.00	.17	.00	.52	.60	4.0
23	5.8	.00	.00	.00	19	.60	.00	.16	.00	62	.42	1.3
24	3.1	.00	.00	.00	17	.28	.00	.15	.00	2.2	.36	.45
25	1.8	.00	.00	.00	18	.14	.00	.15	.00	1.8	.00	.00
26	1.1	.00	.00	.00	8.2	.00	.52	.14	.00	1.5	.00	.00
27	.67	.00	.00	.00	1.0	.00	.54	.14	.00	1.3	.00	.00
28	.48	.00	8.0	.00	.22	.00	79	.13	.00	5.8	.00	.00
29	.39	.00	7.0	.00	---	.00	189	.12	.00	41	.00	.00
30	.36	.00	6.0	.00	---	.00	61	.10	.00	91	.00	.00
31	.33	---	3.0	.00	---	.00	---	.00	---	5.4	.00	---
TOTAL	422.73	1.05	24.00	11.19	429.92	84.16	330.06	35.28	.00	235.03	307.48	101.71
MEAN	13.6	.03	.77	.36	15.4	2.71	11.0	1.14	.00	7.58	9.92	3.39
MAX	157	.30	8.0	7.0	100	27	189	15	.00	91	226	64
MIN	.33	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	838	2.1	48	22	853	167	655	70	.00	466	610	202
CAL YR 1984	TOTAL	928.89		MEAN	2.54	MAX	157	MIN	.00	AC-FT	1840	
WTR YR 1985	TOTAL	1982.61		MEAN	5.43	MAX	226	MIN	.00	AC-FT	3930	

## 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 mi<sup>2</sup>.

## 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, 11, Oct. 28 to Nov. 6, Jan. 29 to Feb. 3, Feb. 28 to Mar. 5, Apr. 18-26, 29, 30, May 1 to June 4, and Aug. 5 to Sept. 10. 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.--9 years (water years 1977-85), 41.1 ft<sup>3</sup>/s, 29,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Oct. 4	2330	1,160	a 5.62	Aug. 4	0500	1,020	5.29
Apr. 29	1730	*2,490	a*8.54				

a From floodmarks

No flow at times.

DISCHARGE, IN 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	7.7	1.0	.00	.25	21	43	3.3	540	16	18	81	20
2	11	.72	.00	.14	21	37	6.3	370	15	17	32	20
3	23	.58	.00	.09	21	30	15	230	17	17	214	19
4	56	.50	.00	.07	21	24	17	160	18	17	302	19
5	384	.40	.00	.08	21	22	17	100	16	18	115	19
6	126	.35	.00	.17	20	22	19	65	16	18	92	18
7	67	.40	.00	.32	19	16	18	39	15	17	72	18
8	51	.35	.31	3.0	18	1.7	19	29	15	17	64	18
9	38	.33	.42	20	18	1.5	31	36	15	16	55	18
10	22	.26	.41	20	19	1.4	46	39	15	17	65	18
11	21	.37	.46	21	21	1.4	71	30	15	17	45	18
12	20	.33	.45	21	18	4.5	66	24	16	17	40	18
13	22	.29	.82	21	19	21	71	22	16	17	38	19
14	20	.25	2.9	21	19	54	59	21	16	17	37	20
15	21	.23	3.7	21	17	54	60	19	15	18	35	21
16	43	.25	1.3	21	17	27	61	20	16	17	33	23
17	32	.30	2.2	21	52	23	42	20	16	37	31	22
18	24	.33	1.0	21	231	15	38	19	16	18	30	52
19	19	.28	.60	21	234	31	35	18	16	13	29	86
20	4.8	.26	.45	21	169	45	32	17	16	1.1	28	39
21	4.0	.26	.32	21	136	58	30	17	17	24	27	58
22	77	.30	.35	21	160	48	28	16	17	170	26	69
23	56	.29	.33	21	95	21	27	17	17	47	25	51
24	41	.46	.28	21	92	14	26	15	17	21	24	35
25	28	.55	.27	21	82	12	25	19	17	11	23	28
26	18	.41	.39	21	107	5.6	30	20	18	16	23	15
27	12	.00	.55	21	59	4.8	67	22	18	18	22	10
28	6.8	.00	.52	21	47	4.3	551	23	17	14	22	10
29	5.0	.33	.44	21	---	3.8	2260	20	17	16	21	8.8
30	3.2	.00	.29	21	---	3.6	1050	18	17	22	20	8.7
31	2.0	---	.26	21	---	3.3	---	18	---	79	20	---
TOTAL	1265.5	10.38	19.02	485.12	1774	652.9	4820.6	2023	488	782.1	1691	798.5
MEAN	40.8	.35	.61	15.6	63.4	21.1	161	65.3	16.3	25.2	54.5	26.6
MAX	384	1.0	3.7	21	234	58	2260	540	18	170	302	86
MIN	2.0	.00	.00	.07	17	1.4	3.3	15	15	1.1	20	8.7
AC-FT	2510	21	38	962	3520	1300	9560	4010	968	1550	3350	1580
CAL YR 1984	TOTAL	9388.84		MEAN	25.7	MAX	1750	MIN	.00	AC-FT	18620	
WTR YR 1985	TOTAL	14810.12		MEAN	40.6	MAX	2260	MIN	.00	AC-FT	29380	

09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGES: October 1976 to September 1982.

INSTRUMENTATION.--Automatic pumping sediment sampler.

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate sampling method; 26 indicates automatic pump sample, 29 indicates dip or grab sample, and 40 indicates single-stage sample.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 140,000 mg/L Jan. 18, 1979; minimum daily mean, no flow on many days in 1981 and 1982.

SEDIMENT LOADS: Maximum daily, 740,000 tons Sept. 25, 1978; minimum daily, 0 ton on many days in 1981 and 1982.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
NOV 06...	1430	.32	--	10500	11.3	8.1	14.0	8.0	9.2	350	1
MAR 05...	1530	21	1300	1270	8.2	8.3	16.5	14.0	9.8	350	210
APR 30...	1830	960	850	968	7.9	7.7	28.0	17.0	12.1	42	0
SEP 10...	1120	18	1200	1200	8.2	8.1	28.0	18.0	11.2	320	180

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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LITY, FIELD (MG/L AS CACO3) (00410)	ALKA- LITY, CARBON- ATE IT-FLD (MG/L AS CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 06...	41	60	1800	43	21	140	140	290	340	6000	510
MAR 05...	91	30	130	3	5.7	130	18	130	130	450	54
APR 30...	15	1.2	180	13	3.2	--	--	--	--	240	14
SEP 10...	81	29	120	3	5.6	150	13	120	140	430	49

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)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 06...	.70	10	8800	35	33	.180	1.5	37	.050	.020	7.3
MAR 05...	.80	4.8	870	--	--	--	--	--	--	--	--
APR 30...	1.1	15	600	--	--	--	--	--	--	--	--
SEP 10...	.80	4.5	820	--	--	--	--	--	--	--	--

## SAN JUAN RIVER BASIN

09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC	ARSENIC	BORON,	CADMIUM	CADMIUM	CHRO-	CHRO-	COPPER,	COPPER,
		TOTAL (UG/L AS AS) (01002)	DIS- SOLVED (UG/L AS AS) (01000)	DIS- SOLVED (UG/L AS B) (01020)	TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	DIS- SOLVED (UG/L AS CD) (01025)	TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	MIUM, DIS- SOLVED (UG/L AS CR) (01030)	TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	DIS- SOLVED (UG/L AS CU) (01040)
NOV 06...	1430	2	1	2000	1	<1	10	<10	8	5
MAR 05...	1530	--	--	540	--	--	--	--	--	--
APR 30...	1830	--	--	80	--	--	--	--	--	--
SEP 10...	1120	--	--	470	--	--	--	--	--	--

DATE	IRON,	LEAD,	LEAD,	MERCURY	MERCURY	SELE-	SELE-	ZINC,	ZINC,
	DIS- SOLVED (UG/L AS FE) (01046)	TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	DIS- SOLVED (UG/L AS PB) (01049)	TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	DIS- SOLVED (UG/L AS HG) (71890)	NIUM, TOTAL (UG/L AS SE) (01147)	NIUM, DIS- SOLVED (UG/L AS SE) (01145)	TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	DIS- SOLVED (UG/L AS ZN) (01090)
NOV 06...	770	7	7	<.1	<.1	39	42	30	30
MAR 05...	55	--	--	--	--	--	--	--	--
APR 30...	62	--	--	--	--	--	--	--	--
SEP 10...	13	--	--	--	--	--	--	--	--

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
MAR 05...	1530	<22	16	<12	18	<10	16	.18	3.7
APR 30...	1830	19	<3700	7.1	1500	6.1	1200	.07	7.2

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 06...	1430	10	26



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 mi<sup>2</sup>, 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: Feb. 3, 4 and Aug. 9-20. 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.--59 years (water years 1927-85), 2,208 ft<sup>3</sup>/s, 1,600,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD (SINCE 1927).--Maximum discharge, about 80,000 ft<sup>3</sup>/s, Aug. 11, 1929, gage height, 5.7 ft, site and datum then in use; minimum daily, 8 ft<sup>3</sup>/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.--Peaks discharges greater than base discharge of 6,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 16	2215	7,620	7.21	June 10	0915	*13,100	*8.87
May 6	0215	10,800	8.32				

Minimum daily discharge, 920 ft<sup>3</sup>/s, Aug. 9, 10, 18, 19.

DISCHARGE, IN 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	1240	1410	2200	2090	2290	1500	3580	6150	8440	4950	2310	1180
2	1180	1920	2190	2000	2240	1630	3670	6410	7430	4310	2200	1180
3	1470	2010	2230	1870	2250	1770	3710	6840	7630	3660	2440	1170
4	1960	2000	2260	1940	2300	1790	3930	7940	8050	3590	2730	1200
5	2360	2030	2230	1930	2360	2190	4460	9490	7970	3630	2090	1230
6	2130	2050	2210	1950	2620	2560	4700	10300	8160	3320	1570	1250
7	2090	2030	2180	1980	2660	2640	5140	10100	9310	3120	1130	1330
8	1890	1980	2170	1540	2720	2650	5550	9730	11100	2940	1050	1390
9	1650	1990	2210	1370	2710	2760	5770	10000	12000	2710	920	1450
10	1810	1930	2200	1310	2670	2930	5970	9860	12600	2640	920	1460
11	1990	1920	2190	1280	2670	3660	6010	9550	11600	2650	930	1440
12	2220	1920	2270	1210	2730	4340	6060	8480	10900	2710	940	3370
13	2340	1890	2320	1140	2730	4790	6270	7440	10300	2690	950	2620
14	2340	2040	2370	1120	2730	3490	6610	6990	9770	2880	950	2310
15	2340	2220	2240	1850	2740	3120	6880	6410	9660	2780	940	2020
16	2370	2320	2180	2370	2780	3240	7280	6190	9520	2620	930	2040
17	2470	2320	2130	2400	3070	3300	7210	6450	9960	2470	925	2370
18	2730	2330	2110	2400	3780	3170	6890	6640	9070	2380	920	2430
19	2540	2300	2120	2370	4090	3780	6620	6650	8590	2650	920	3820
20	2430	2330	2130	2390	3740	4380	6210	6790	8280	3150	1080	4700
21	2320	2270	2150	2410	4030	4240	5710	6620	8060	3070	1380	3970
22	2400	2240	2120	2390	3250	3930	5460	6370	8150	3000	1300	3410
23	2310	2250	2090	2430	2050	3750	5140	6190	8070	3390	1220	3230
24	2400	2310	2080	2460	1590	3560	5010	6080	7660	2740	1180	2910
25	2260	2370	2120	2460	1510	3640	4750	6380	7440	2270	1170	2630
26	2180	2380	2090	2450	1490	3630	4740	7060	7720	2040	1250	2500
27	2200	2310	2100	2440	1420	3730	4860	7910	6970	1970	1200	2360
28	2140	2210	2390	2410	1450	3790	5250	9020	6300	1900	1300	2250
29	2130	2200	2600	2440	---	3810	8630	9560	5710	1950	1510	2200
30	1560	2200	2340	2430	---	3760	7520	9880	5200	2690	1200	2160
31	979	---	2170	2380	---	3660	---	9550	---	2520	1160	---
TOTAL	64429	63680	68390	63210	72670	101190	169590	243030	261620	89390	40715	67580
MEAN	2078	2123	2206	2039	2595	3264	5653	7840	8721	2884	1313	2253
MAX	2730	2380	2600	2460	4090	4790	8630	10300	12600	4950	2730	4700
MIN	979	1410	2080	1120	1420	1500	3580	6080	5200	1900	920	1170
AC-FT	127800	126300	135700	125400	144100	200700	336400	482100	518900	177300	80760	134000
CAL YR 1984	TOTAL	924636		MEAN	2526	MAX	9880	MIN	844	AC-FT	1834000	
WTR YR 1985	TOTAL	1305494		MEAN	3577	MAX	12600	MIN	920	AC-FT	2589000	

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1941-45, 1951 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1941 to September 1945, July 1957 to current year.

WATER TEMPERATURES: December 1950 to current year.

SUSPENDED-SEDIMENT DISCHARGES: December 1950 to current year.

INSTRUMENTATION.--Continuous water-temperature and specific-conductance recorders since March 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1957-85): Maximum, 4,360 microsiemens July 31, 1959; minimum, 138 microsiemens Nov. 1, 1981.

WATER TEMPERATURES: Maximum, 34.0°C July 20, 1968; minimum, 0.0°C on many days during winter months of most years.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 114,000 mg/L Aug. 11, 1967; minimum daily mean, 2 mg/L May 4, 1963.

SEDIMENT LOADS: Maximum daily, 2,000,000 tons Aug. 11, 1967; minimum daily, 1 ton on several days during 1959, 1962, and 1963.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,760 microsiemens Sept. 12; minimum daily, 241 microsiemens June 15.

WATER TEMPERATURES: Maximum, 24.0°C Aug. 8; minimum, 0.0°C several days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 26,800 mg/L Apr. 29; minimum daily mean, 34 mg/L July 14.

SEDIMENT LOADS: Maximum daily, 624,000 tons Apr. 29; minimum daily, 233 tons Jan. 14.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
NOV 07...	1300	1970	450	468	8.1	8.1	16.0	7.0	25	12.6	170	35
JAN 10...	1100	1370	590	608	7.8	8.2	8.0	4.0	--	10.8	210	120
MAR 05...	1300	2280	450	450	8.2	8.0	8.0	5.0	95	13.2	160	34
APR 30...	1400	7090	500	522	7.6	8.0	22.0	10.5	4400	10.2	85	0
JUL 16...	1130	2600	--	357	8.0	7.9	28.0	21.0	--	9.2	130	53
SEP 10...	1510	1400	450	486	8.2	8.3	28.0	16.0	95	9.1	150	37

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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CAC03) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 07...	50	11	27	.9	1.9	150	8.0	120	140	120	7.9
JAN 10...	63	14	44	1	2.2	120	.000	90	99	170	12
MAR 05...	49	10	29	1	2.0	130	14	110	130	110	7.7
APR 30...	29	3.0	82	4	2.9	140	.000	110	120	130	6.6
JUL 16...	41	7.7	19	.7	2.0	97	1.0	81	81	75	5.7
SEP 10...	43	11	33	1	2.5	130	6.0	110	110	120	9.0

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, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00663)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00671)
NOV 07...	.30	9.5	284	320	.24	.020	.230	.020
JAN 10...	.30	10	--	370	--	--	--	--
MAR 05...	.20	10	272	310	.18	.070	.250	.030
APR 30...	.50	10	367	330	.91	.070	3.60	.030
JUL 16...	.30	7.3	--	210	--	--	--	--
SEP 10...	.20	9.6	290	310	.13	.100	.150	.020

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

## WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	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)
NOV 07...	1300	20	<1	69	.0	--	<1	<1	<3	3	10
JAN 10...	1100	--	--	--	--	40	--	--	--	--	5
MAR 05...	1300	30	<1	60	2.4	--	<1	2	<3	2	18
APR 30...	1400	260	<1	55	1.5	30	<1	<1	<3	5	170
JUL 16...	1130	--	--	--	--	20	--	--	--	--	11
SEP 10...	1510	10	<1	72	<.5	30	<1	<1	<3	2	5

DATE	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)	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 07...	3	26	1	<.1	<10	2	<1	<1	600	<6	4
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
MAR 05...	<1	20	8	<.1	<10	4	<1	<1	540	<6	21
APR 30...	2	13	9	.6	<10	3	2	1	410	<6	20
JUL 16...	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	<1	23	9	.4	<10	1	<1	<1	640	<6	3

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)
NOV 07...	1300	<2.0	12	160	2	<1	4

DATE	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)
NOV 07...	<10	5	1800	10	130	<.10	20

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 07...	1300	<7.5	1.7	4.5	2.9	3.9	2.5	.08	1.5

## SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

## WATER-QUALITY RECORDS

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)
SEP 10...	1510	<.1	<.010	<.1	<.010	<.010	<.010	<.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)
SEP 10...	<.010	<.010	<.010	<.01	<.010	<.010	<.010	<.01	<.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)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
SEP 10...	<.01	<.01	<.01	<.1	<.01	<.1	<.10	<.01

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, PECAL, 0.7 UM-MF (COLS. / 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. / 100 ML) (31673)
NOV 07...	1300	87	25
JAN 10...	1100	K7	34
MAR 05...	1300	K64	K80
APR 30...	1400	570	160
JUL 16...	1130	55	50
SEP 10...	1510	120	160

## PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)
OCT 07...	1600	2120	13.0	1760	10100	44	51	62
NOV 07...	1300	1970	7.0	734	3900	--	--	--
DEC 28...	1600	2560	7.0	3850	26600	44	52	75
JAN 10...	1100	1370	4.0	167	618	--	--	--
FEB 19...	1105	3560	5.0	14500	139000	55	63	77
FEB 24...	1215	1600	4.0	2690	11600	57	69	86
MAR 05...	1300	2280	5.0	1970	12100	13	15	27
APR 28...	0825	4750	8.0	21300	273000	56	63	81
APR 29...	1100	8130	8.0	21600	474000	57	63	79
APR 30...	1400	7090	10.5	15400	295000	64	67	78
MAY 02...	0849	6150	10.0	3420	56800	43	43	61
JUL 23...	1610	3690	20.0	10200	102000	51	67	87
AUG 02...	2200	2210	22.0	12300	73400	62	80	94
SEP 12...	0945	2840	15.0	36700	281000	36	52	80

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

## WATER-QUALITY RECORDS

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70333)
OCT 07...	88	99	100	--	--	--	--
NOV 07...	59	95	99	100	--	--	--
DEC 28...	--	--	--	--	93	99	100
JAN 10...	--	--	--	--	100	--	--
FEB 19...	--	--	--	--	98	100	--
FEB 24...	--	--	--	--	98	100	--
MAR 05...	90	100	--	--	--	--	--
APR 28...	98	100	--	--	--	--	--
APR 29...	97	100	--	--	--	--	--
APR 30...	96	100	--	--	--	--	--
MAY 02...	84	97	100	--	--	--	--
JUL 23...	--	--	--	--	100	--	--
AUG 02...	--	--	--	--	99	100	--
SEP 12...	99	100	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	484	454	435	448	354	615	404	382	283	291	429	505
2	493	454	407	433	340	553	400	418	283	317	528	499
3	508	445	410	425	338	539	398	326	260	348	549	443
4	454	447	387	424	359	501	384	314	264	351	418	452
5	474	443	403	429	333	466	378	294	270	320	417	472
6	483	444	389	428	312	397	347	292	266	329	432	458
7	482	443	397	432	337	382	343	283	248	341	528	450
8	479	446	386	451	317	383	341	285	243	335	535	455
9	471	450	404	647	336	384	335	276	371	348	551	454
10	469	451	408	598	352	392	336	279	303	355	560	454
11	432	453	436	581	361	468	351	282	248	348	566	455
12	428	444	436	567	358	525	332	288	243	348	560	1760
13	444	464	438	569	368	484	326	305	243	348	565	488
14	447	453	447	546	376	479	312	310	242	341	565	471
15	445	429	433	547	364	420	309	313	241	341	585	474
16	470	422	416	424	371	429	303	307	246	351	586	494
17	469	419	415	416	342	456	304	308	248	370	585	429
18	479	423	410	415	506	427	303	309	248	366	577	425
19	479	424	411	430	525	439	312	353	252	433	583	739
20	469	421	430	424	507	484	352	317	254	388	594	408
21	467	432	436	408	453	421	358	315	250	382	457	427
22	484	430	418	414	511	399	382	323	256	426	453	401
23	492	433	406	406	499	411	376	323	261	430	455	400
24	495	436	404	414	580	411	346	320	260	401	452	402
25	491	459	397	403	544	402	345	300	272	394	441	419
26	491	456	395	408	553	399	340	300	270	395	441	437
27	482	437	424	416	482	389	378	276	262	419	434	438
28	476	427	489	415	502	391	655	276	282	406	453	442
29	476	438	492	415	---	409	678	273	299	404	447	446
30	471	446	446	410	---	409	574	267	294	441	453	456
31	613	---	464	410	---	405	---	275	---	427	456	---
MEAN	477	441	422	457	414	441	377	306	265	371	505	502
WTR YR 1985	MEAN	415	MAX	1760	MIN	241						

## SAN JUAN RIVER BASIN

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

## WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. ° C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	----	----	----	625	475	590	----	----	447	455	440	448
2	----	----	----	465	445	456	----	----	442	445	435	438
3	----	----	----	460	450	453	----	----	439	435	420	433
4	----	----	----	460	450	454	----	----	441	440	415	428
5	----	----	----	455	445	452	----	----	442	450	425	433
6	----	----	----	460	445	451	----	----	440	445	430	434
7	----	----	----	460	450	455	----	----	436	440	425	434
8	----	----	----	460	450	455	----	----	439	545	440	470
9	----	----	----	470	450	458	----	----	446	685	555	604
10	----	----	----	470	450	458	----	----	447	615	595	606
11	----	----	----	465	450	458	----	----	444	595	585	589
12	----	----	----	470	455	461	----	----	454	605	575	586
13	----	----	----	465	455	462	----	----	462	590	575	582
14	----	----	----	470	450	462	----	----	488	585	555	570
15	----	----	----	455	430	442	----	----	489	570	420	514
16	----	----	----	440	425	432	----	----	476	425	405	416
17	----	----	----	440	430	432	----	----	459	425	400	413
18	----	----	----	445	435	437	----	----	442	420	400	413
19	----	----	----	445	430	438	----	----	443	430	405	418
20	----	----	----	440	425	432	----	----	442	425	410	419
21	----	----	----	435	425	431	----	----	445	415	405	413
22	----	----	----	435	430	433	----	----	439	420	410	413
23	----	----	----	440	430	433	----	----	425	415	405	410
24	535	470	493	445	435	439	----	----	425	420	410	414
25	525	500	511	470	445	461	----	----	428	410	405	408
26	510	480	489	480	465	472	----	----	424	415	405	409
27	485	470	476	475	435	451	----	----	439	415	410	413
28	475	460	469	450	430	437	555	435	473	420	415	416
29	470	460	464	455	435	446	615	470	538	420	410	415
30	545	460	482	455	440	449	560	465	505	435	415	423
31	625	550	602	----	----	----	460	450	453	415	395	409
MONTH	625	460	498	625	425	453	615	435	452	685	395	458

TEMPERATURE WATER (DEG. ° C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	9.0	3.0	3.0	.0	6.0	7.0	12.0	11.0	13.0	19.0	21.0
2	14.0	9.0	6.0	2.0	.0	6.0	7.0	10.0	12.0	16.0	22.0	18.0
3	13.0	9.0	3.0	4.0	.0	5.0	7.0	11.0	12.0	19.0	21.0	20.0
4	13.0	7.0	5.0	2.0	.0	5.0	8.0	10.0	12.0	19.0	20.0	18.0
5	13.0	7.0	3.0	4.0	.0	3.0	8.0	10.0	13.0	18.0	22.0	21.0
6	12.0	7.0	3.0	4.0	.0	4.0	8.0	10.0	14.0	20.0	18.0	20.0
7	13.0	7.0	3.0	3.0	.0	4.0	9.0	10.0	14.0	18.0	17.0	17.0
8	13.0	7.0	3.0	2.0	2.0	4.0	10.0	10.0	14.0	19.0	24.0	17.0
9	9.0	6.0	3.0	4.0	5.0	8.0	10.0	10.0	14.0	21.0	18.0	18.0
10	9.0	5.0	5.0	3.0	4.0	6.0	10.0	9.0	14.0	19.0	21.0	17.0
11	13.0	5.0	4.0	4.0	4.0	6.0	10.0	10.0	13.0	19.0	19.0	14.0
12	12.0	6.0	3.0	3.0	4.0	7.0	10.0	9.0	13.0	20.0	20.0	15.0
13	10.0	5.0	3.0	2.0	4.0	6.0	10.0	8.0	13.0	22.0	19.0	19.0
14	8.0	5.0	5.0	1.0	4.0	6.0	10.0	9.0	14.0	19.0	20.0	14.0
15	8.0	6.0	4.0	1.0	4.0	6.0	10.0	11.0	14.0	23.0	21.0	17.0
16	10.0	6.0	5.0	1.0	4.0	7.0	10.0	12.0	14.0	22.0	23.0	17.0
17	9.0	8.0	4.0	3.0	5.0	6.0	10.0	13.0	14.0	22.0	22.0	13.0
18	6.0	8.0	3.0	1.0	5.0	8.0	10.0	12.0	14.0	23.0	23.0	15.0
19	5.0	5.0	3.0	4.0	5.0	7.0	10.0	10.0	14.0	20.0	21.0	15.0
20	8.0	5.0	3.0	4.0	5.0	8.0	9.0	10.0	15.0	19.0	19.0	13.0
21	8.0	5.0	3.0	3.0	5.0	5.0	9.0	10.0	14.0	19.0	20.0	15.0
22	7.0	5.0	4.0	5.0	6.0	7.0	8.0	10.0	15.0	19.0	21.0	14.0
23	7.0	5.0	4.0	5.0	6.0	7.0	8.0	12.0	14.0	20.0	21.0	14.0
24	7.0	5.0	4.0	5.0	3.0	7.0	10.0	12.0	13.0	20.0	20.0	13.0
25	7.0	4.0	3.0	5.0	6.0	8.0	10.0	12.0	14.0	20.0	19.0	13.0
26	9.0	4.0	3.0	5.0	5.0	8.0	8.0	12.0	13.0	18.0	19.0	15.0
27	9.0	2.0	4.0	5.0	6.0	5.0	8.0	11.0	12.0	20.0	19.0	16.0
28	9.0	3.0	7.0	5.0	5.0	5.0	8.0	11.0	14.0	19.0	22.0	13.0
29	9.0	3.0	5.0	4.0	---	6.0	8.0	12.0	14.0	20.0	23.0	12.0
30	8.0	4.0	7.0	3.0	---	6.0	10.0	12.0	15.0	18.0	23.0	13.0
31	12.0	---	5.0	.0	---	6.0	---	12.0	---	18.0	20.0	---
MEAN	10.0	5.5	4.0	3.0	3.5	6.0	9.0	10.5	13.5	19.5	20.5	16.0
WTR YR 1985	MEAN	10.0	MAX	24.0	MIN	.0						

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG. ° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	10.0	9.0	9.5	4.5	4.0	4.0	3.5	2.5	3.0
2	---	---	---	9.0	8.0	8.5	4.5	4.0	4.0	2.5	2.0	2.0
3	---	---	---	8.5	7.5	8.0	4.5	3.5	4.0	2.5	2.0	2.0
4	---	---	---	8.0	7.5	8.0	4.5	4.0	4.5	2.5	1.5	2.0
5	---	---	---	7.5	6.5	7.0	4.5	4.0	4.5	3.0	2.0	2.5
6	---	---	---	7.5	7.0	7.0	4.5	4.0	4.0	3.0	2.0	2.5
7	---	---	---	7.5	6.5	7.0	4.5	4.0	4.0	3.5	3.0	3.0
8	---	---	---	7.5	7.0	7.5	5.0	4.5	4.5	4.0	3.5	3.5
9	---	---	---	7.5	7.0	7.0	6.0	5.0	5.5	4.0	3.5	3.5
10	---	---	---	6.5	5.5	6.0	5.5	5.0	5.0	3.5	3.0	3.5
11	14.0	12.5	13.5	6.5	5.5	6.0	6.0	5.0	5.5	3.5	3.5	3.5
12	12.5	11.0	12.0	6.5	5.5	6.0	6.0	5.5	6.0	3.5	3.0	3.5
13	11.5	9.0	10.5	7.5	6.5	7.0	5.5	5.0	5.0	3.5	2.5	3.0
14	10.5	8.5	9.5	7.5	7.0	7.5	5.0	5.0	5.0	3.0	2.5	2.5
15	8.5	6.0	7.0	7.5	6.5	7.0	5.0	4.5	5.0	2.5	2.5	2.5
16	7.0	5.0	6.0	6.5	6.0	6.5	4.5	4.0	4.5	2.5	1.5	2.0
17	8.0	6.5	7.0	7.0	6.0	6.5	5.0	4.0	4.5	3.0	1.5	2.0
18	7.5	5.5	6.5	7.5	6.5	7.0	5.0	4.0	4.5	3.0	2.0	2.5
19	6.0	6.0	6.0	7.0	6.0	6.5	5.0	4.5	4.5	3.5	2.5	3.0
20	7.0	5.5	6.5	6.0	5.0	5.5	5.0	4.5	4.5	3.5	2.5	3.0
21	7.5	6.5	7.0	5.5	5.0	5.5	4.5	3.5	4.0	3.5	3.0	3.5
22	8.0	6.5	7.0	6.0	5.5	5.5	4.0	3.0	3.5	4.0	3.5	3.5
23	8.0	7.0	7.5	6.0	6.0	6.0	3.0	2.5	3.0	4.0	3.5	3.5
24	7.5	6.5	7.0	7.0	6.0	6.5	3.0	2.5	2.5	4.0	3.5	4.0
25	7.0	6.0	6.5	7.0	6.0	6.5	3.0	2.5	2.5	4.5	3.5	4.0
26	8.0	6.0	7.0	6.0	4.0	5.0	4.0	2.5	3.0	4.0	3.0	3.5
27	8.5	7.5	8.0	4.0	3.0	3.5	4.5	4.0	4.0	4.0	3.0	3.5
28	9.0	7.0	8.0	4.0	3.0	3.5	5.0	4.0	4.5	4.5	3.0	4.0
29	9.0	7.0	8.0	4.5	4.0	4.0	5.0	4.5	4.5	4.0	3.0	3.5
30	9.5	7.5	8.5	4.5	4.0	4.5	4.5	3.5	4.0	3.0	2.0	2.5
31	10.0	8.5	9.0	---	---	---	4.0	3.5	4.0	2.0	.5	1.5
MONTH	14.0	5.0	8.0	10.0	3.0	6.5	6.0	2.5	4.5	4.5	.5	3.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	1.0	.5	.5	4.5	4.0	4.5	9.5	6.0	7.5	12.5	11.0	11.5
2	1.0	.5	.5	4.5	4.5	4.5	10.5	7.5	9.0	11.5	10.5	11.0
3	2.0	.5	1.0	4.5	3.5	4.0	11.0	8.0	9.5	11.5	11.0	11.0
4	2.0	1.5	1.5	3.5	3.0	3.5	9.5	8.0	9.0	12.0	11.0	11.5
5	2.0	.5	1.5	5.5	3.0	4.0	10.0	7.0	8.5	12.0	11.0	11.5
6	2.5	1.0	1.5	7.5	5.5	6.5	10.5	8.0	9.5	12.0	11.0	11.5
7	2.5	1.0	1.5	7.0	6.5	6.5	11.0	8.5	9.5	12.0	10.5	11.0
8	4.0	1.5	2.5	6.5	6.5	6.5	10.5	8.5	9.5	11.5	10.5	11.0
9	4.0	3.0	3.5	7.0	6.5	7.0	11.5	9.5	10.5	11.5	10.5	10.5
10	3.5	2.0	3.0	7.5	7.0	7.5	11.0	9.5	10.5	10.5	9.5	10.0
11	2.5	1.5	2.0	7.5	7.5	7.5	11.0	9.5	10.5	10.5	9.5	10.5
12	3.5	1.5	2.5	7.5	6.5	7.0	11.0	9.5	10.0	10.5	8.5	9.5
13	4.0	2.0	3.0	6.5	5.0	6.0	11.0	9.0	10.0	9.5	8.0	8.5
14	4.0	2.5	3.0	8.5	6.0	7.0	11.0	9.0	10.0	10.0	8.0	9.5
15	4.5	2.5	3.5	7.5	7.0	7.0	11.0	9.0	10.0	11.5	9.5	10.5
16	4.5	3.0	3.5	8.0	7.0	7.5	10.5	9.5	10.0	12.0	11.0	11.5
17	4.5	3.0	3.5	9.5	7.0	8.0	11.0	9.5	10.0	13.0	10.5	11.5
18	4.5	3.0	3.5	10.0	7.5	8.5	10.5	9.0	10.0	12.0	11.5	11.5
19	4.0	3.0	3.5	8.5	6.0	7.5	9.0	7.5	8.0	12.0	10.5	11.0
20	4.5	3.0	4.0	8.0	5.5	6.5	9.0	7.0	8.5	11.5	10.0	11.0
21	4.5	3.5	4.0	9.0	7.5	8.0	9.0	7.5	8.5	11.5	10.5	11.0
22	4.0	3.5	3.5	7.5	6.0	7.0	8.0	7.0	7.5	12.0	9.5	10.5
23	3.5	2.5	3.0	7.5	5.0	6.5	9.0	6.5	8.0	13.0	10.5	11.5
24	3.5	3.0	3.0	9.0	6.0	7.5	11.0	8.5	10.0	12.5	11.0	12.0
25	4.0	3.0	3.5	10.0	7.5	8.5	11.0	9.0	10.0	13.5	12.0	12.5
26	4.0	3.5	3.5	9.5	7.5	8.5	9.0	7.5	8.0	13.0	12.0	12.5
27	4.0	3.5	4.0	7.5	6.5	7.0	9.5	6.5	8.0	12.5	11.5	12.0
28	4.5	4.0	4.0	8.0	6.5	7.0	9.5	8.5	9.0	12.5	11.5	12.0
29	---	---	---	7.0	6.0	6.0	10.5	8.0	9.0	12.5	11.5	12.0
30	---	---	---	6.5	5.0	6.0	11.5	9.0	10.5	11.5	10.5	11.0
31	---	---	---	7.0	4.0	5.5	---	---	---	12.0	10.5	11.0
MONTH	4.5	.5	3.0	10.0	3.0	6.5	11.5	6.0	9.5	13.5	8.0	11.0

09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued

## WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG. ° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	12.5	11.0	11.5	16.5	13.5	15.0	20.5	18.5	19.5	22.0	20.0	20.5
2	13.0	11.5	12.5	18.5	14.5	16.5	21.0	18.0	19.5	21.0	19.5	20.0
3	12.5	12.0	12.5	19.5	15.5	17.5	22.0	18.5	20.0	20.5	19.5	20.0
4	12.5	11.0	11.5	20.5	17.0	18.5	20.5	18.5	19.0	21.0	18.5	19.5
5	13.0	10.5	11.5	20.0	17.0	18.5	20.0	18.0	19.0	20.5	17.5	19.0
6	14.0	12.0	13.0	21.5	17.0	19.0	21.0	19.0	20.0	19.5	17.0	18.5
7	14.5	13.0	13.5	21.5	18.5	19.5	22.0	19.5	21.0	19.0	17.0	18.0
8	15.0	13.0	14.0	20.5	18.0	19.0	22.0	21.0	21.5	19.5	16.0	18.0
9	15.0	13.0	14.0	22.0	18.0	19.5	22.5	20.5	21.5	17.5	15.5	16.5
10	15.0	13.0	14.0	21.5	18.0	19.5	22.5	20.5	21.5	17.0	14.5	15.5
11	14.5	12.5	13.5	22.5	18.5	20.5	22.0	20.5	21.0	17.0	14.5	15.5
12	14.0	12.0	13.5	23.0	19.5	21.0	21.5	20.0	21.0	15.5	14.0	14.5
13	14.0	12.5	13.5	23.0	19.5	21.5	21.0	19.0	20.0	16.5	12.5	14.5
14	14.0	13.0	13.5	22.5	19.5	21.0	21.0	19.0	20.0	17.0	14.0	15.5
15	14.0	13.0	13.5	23.5	19.5	21.0	21.0	19.5	20.0	17.5	15.5	16.5
16	14.5	13.5	14.0	22.5	19.5	21.0	21.5	19.5	20.5	18.0	15.5	16.5
17	14.0	12.5	13.5	22.0	20.0	21.0	21.5	19.5	20.5	17.5	15.5	16.5
18	14.0	12.0	13.0	23.5	20.0	21.5	22.5	20.0	21.0	16.5	14.5	15.5
19	15.0	13.5	14.5	22.0	20.0	21.0	23.0	21.0	22.0	15.0	13.5	14.5
20	15.0	14.0	14.5	21.5	18.5	20.0	23.0	21.0	22.0	14.5	13.0	14.0
21	15.0	14.0	14.5	22.0	19.0	20.5	21.5	20.0	20.5	14.5	12.0	13.5
22	15.0	14.0	14.5	21.0	19.5	20.5	21.5	19.5	20.5	15.0	13.5	14.0
23	14.5	13.5	14.0	21.0	19.5	20.0	22.0	19.0	20.5	14.5	13.5	14.0
24	14.5	14.0	14.0	20.5	18.5	19.5	22.0	18.5	20.0	14.0	13.0	13.5
25	15.0	14.0	14.5	20.5	17.5	19.0	22.0	19.0	20.5	13.5	13.0	13.0
26	14.0	13.0	13.5	21.5	17.5	19.5	22.0	19.0	20.5	13.5	12.5	13.0
27	14.0	12.0	13.0	22.5	18.5	20.0	22.5	19.5	21.0	14.0	12.5	13.0
28	14.5	12.5	13.5	20.5	18.0	19.5	22.0	19.5	21.0	14.0	13.0	13.5
29	15.0	13.0	14.0	19.5	17.0	18.5	22.5	19.5	21.0	14.0	11.5	13.0
30	16.0	13.0	14.5	19.0	17.5	18.5	22.0	19.5	21.0	12.5	10.0	11.0
31	---	---	---	20.0	17.0	18.5	22.5	20.0	21.0	---	---	---
MONTH	16.0	10.5	13.5	23.5	13.5	19.5	23.0	18.0	20.5	22.0	10.0	15.5
YEAR	23.5	.5	10.0									

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	228	763	313	1190	204	1210	382	2160	94	581	2480	10000
2	359	1140	324	1680	198	1170	316	1710	665	4020	1720	7570
3	396	1570	317	1720	178	1070	484	2440	289	1760	1140	5450
4	671	3550	165	891	141	860	228	1190	129	801	617	2980
5	1010	6440	219	1200	144	867	273	1420	385	2450	1490	8810
6	1950	11200	168	930	175	1040	286	1510	397	2810	1260	8710
7	1850	10400	382	2090	138	812	240	1280	313	2250	763	5440
8	1690	8620	187	1000	259	1520	245	1020	220	1620	569	4070
9	509	2270	162	870	311	1860	404	1490	290	2120	600	4470
10	266	1300	166	865	295	1750	232	821	292	2110	624	4940
11	480	2580	209	1080	150	887	175	605	250	1800	7230	71400
12	793	4750	155	804	220	1350	128	418	285	2100	10100	118000
13	836	5280	139	709	364	2280	103	317	248	1830	8910	115000
14	591	3730	129	711	743	4750	77	233	252	1860	7370	69400
15	785	4960	213	1280	985	5960	592	2960	283	2090	3210	27000
16	1160	7420	319	2000	336	1980	668	4270	243	1820	884	7730
17	1260	8400	386	2420	262	1510	430	2790	5560	46100	1300	11600
18	2460	18100	267	1680	307	1750	477	3090	14300	146000	868	7430
19	2010	13800	190	1180	230	1320	426	2730	16600	183000	1180	12000
20	1300	8530	217	1370	189	1090	288	1860	14400	145000	2020	23900
21	1320	8270	156	956	211	1220	190	1240	15500	169000	1210	13900
22	1860	12100	147	889	199	1140	197	1270	14000	123000	430	4560
23	1590	9920	144	875	193	1090	198	1300	6380	35300	456	4620
24	1380	8940	263	1640	152	854	207	1370	2660	11400	454	4360
25	625	3810	179	1150	130	744	203	1350	1330	5420	378	3710
26	653	3840	219	1410	160	903	194	1280	1740	7000	347	3400
27	602	3580	167	1040	145	822	314	2070	696	2670	280	2820
28	410	2370	112	668	2010	13000	213	1390	628	2460	269	2750
29	254	1460	188	1120	3590	25200	213	1400	---	---	248	2550
30	192	809	166	986	761	4810	363	2380	---	---	563	5720
31	391	1030	---	---	411	2410	344	2210	---	---	272	2690
TOTAL	---	180932	---	36404	---	87229	---	51574	---	908372	---	576980





## 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 mi<sup>2</sup>, 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: Jan. 31 to Feb. 4 and Apr. 22-29. Water-discharge records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--8 years, 2,561 ft<sup>3</sup>/s, 1,855,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft<sup>3</sup>/s, May 29, 1979, gage height, 6.25 ft; maximum gage height, 14.43 ft, Dec. 12, 1978 (backwater from ice); minimum, 110 ft<sup>3</sup>/s, Aug. 19, 1978.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 6,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 17	1645	7,730	4.55	June 11	0130	*13,300	*5.85
May 8	1045	10,900	5.26				

Minimum daily discharge, 760 ft<sup>3</sup>/s, Aug. 19, 20.

DISCHARGE, IN 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	1470	1360	2160	2410	2450	1590	3610	7590	8580	5500	2460	1240
2	1440	2050	2130	2300	2400	1690	3600	7840	7730	4870	2280	1270
3	1590	2030	2160	2180	2400	1880	3710	7830	7750	4070	2380	1270
4	1980	2090	2180	2210	2350	1830	3970	8200	8040	3560	2900	1330
5	2390	2140	2180	2170	2370	1950	4520	8510	7890	3560	2330	1330
6	2200	2130	2170	2120	2550	2370	4780	8920	7940	3400	1930	1330
7	2140	2070	2230	2180	2780	2410	5110	10200	8540	3150	1140	1400
8	1940	2060	2260	1990	2800	2450	5700	10100	9340	2980	1090	1480
9	1760	2050	2380	1540	2900	2480	6220	10300	10600	2840	1000	1500
10	1880	1980	2390	1500	2970	2550	6310	10400	12000	2700	924	1500
11	2000	2000	2360	1410	2910	3230	6420	10300	12800	2730	974	1500
12	2150	1990	2460	1370	2900	4110	6480	9560	11900	2730	981	2600
13	2280	2010	2530	1290	2960	4560	6610	8910	10800	2700	999	2710
14	2280	2060	2500	1270	2960	3630	6730	8330	10200	2750	986	2490
15	2200	2190	2500	1550	2910	3260	6800	7760	9880	2710	920	2400
16	2250	2250	2460	2350	2870	3390	7040	7440	9640	2610	844	2620
17	2200	2320	2400	2510	3060	3460	7290	7590	9960	2560	807	2510
18	2510	2280	2390	2620	3580	3370	7300	7550	9330	2470	772	2640
19	2440	2300	2300	2630	4030	3440	7330	7600	8940	2590	760	3800
20	2400	2290	2160	2580	3770	4210	7270	7630	8770	3110	760	4210
21	2320	2250	2130	2570	3740	4190	6870	7530	8440	3020	1120	4240
22	2360	2180	2100	2640	3600	3880	6400	7290	8480	3300	1370	3330
23	2240	2180	2110	2680	2590	3700	6200	7190	8430	3480	1370	3110
24	2260	2200	2100	2770	1950	3570	6000	7120	8090	2990	1270	2890
25	2180	2300	2130	2770	1710	3490	5800	7390	7740	2550	1270	2670
26	2120	2320	2170	2680	1670	3570	5600	7740	7940	2300	1270	2550
27	2180	2240	2210	2630	1570	3690	5600	8110	7430	2250	1330	2420
28	2080	2160	2520	2600	1540	3620	5600	8630	6780	2160	1290	2360
29	2070	2210	2910	2580	---	3610	9500	8970	6330	2120	1530	2340
30	1890	2250	2880	2610	---	3680	8580	9310	5810	2680	1300	2300
31	1270	---	2660	2500	---	3560	---	9180	---	2730	1240	---
TOTAL	64470	63940	72220	69210	76290	98420	182950	261020	266100	93170	41597	69340
MEAN	2080	2131	2330	2233	2725	3175	6098	8420	8870	3005	1342	2311
MAX	2510	2320	2910	2770	4030	4560	9500	10400	12800	5500	2900	4240
MIN	1270	1360	2100	1270	1540	1590	3600	7120	5810	2120	760	1240
AC-FT	127900	126800	143200	137300	151300	195200	362900	517700	527800	184800	82510	137500
CAL YR 1984	TOTAL	1015234		MEAN	2774	MAX	9360	MIN	984	AC-FT	2014000	
WTR YR 1985	TOTAL	1358727		MEAN	3723	MAX	12800	MIN	760	AC-FT	2695000	

09371010 SAN JUAN RIVER AT FOUR CORNERS, CO -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978-81, November 1984 to current year.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)
NOV 07...	1000	2070	610	565	7.9	8.2	12.0	6.0	37
JAN 09...	1400	1450	550	617	8.1	8.1	8.0	5.0	70
MAR 05...	1030	1700	500	529	8.4	8.1	4.5	3.0	24
APR 30...	1100	8880	600	638	7.3	7.7	28.0	10.0	4600
JUL 16...	0900	2440	350	371	8.1	8.2	25.0	21.0	7.8
SEP 11...	1430	1500	500	521	8.4	8.5	23.0	17.0	--

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (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 IT-FLD (MG/L AS HCO3) (99440)
NOV 07...	10.4	200	89	55	14	36	1	1.9	130
JAN 09...	10.2	230	87	64	16	41	1	2.2	170
MAR 05...	14.2	200	100	60	13	34	1	2.1	100
APR 30...	9.3	100	0	35	4.0	85	4	2.9	330
JUL 16...	12.8	140	54	43	8.4	20	.8	2.0	91
SEP 11...	10.2	180	65	53	12	32	1	2.7	120

DATE	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LITY 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)	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 07...	--	89	160	10	.30	9.0	348	350
JAN 09...	.000	140	180	11	.30	11	408	410
MAR 05...	11	100	150	9.3	.20	10	330	350
APR 30...	--	270	160	7.0	.40	9.0	376	470
JUL 16...	8.0	--	83	6.0	.30	7.3	223	230
SEP 11...	11	120	140	8.8	.30	8.8	324	340

## LITTLE COLORADO RIVER BASIN

09386900 RIO NUTRIA NEAR RAMAH, NM

LOCATION.--Lat 35°16'57", long 108°33'10", in NW¼SW¼ sec.8, T.12 N., R.16 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank at mouth of Nutria Canyon, 0.9 mi upstream from Nutria Diversion Dam, 1.3 mi northeast of Upper Nutria, and 10.4 mi northwest of Ramah.

DRAINAGE AREA.--71.4 mi<sup>2</sup>.

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: Feb. 21 to Mar. 12. Records good except for estimated daily discharges, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 7.59 ft<sup>3</sup>/s, 5,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 782 ft<sup>3</sup>/s, Apr. 14, 1973, gage height, 5.58 ft, datum then in use, from rating curve extended above 470 ft<sup>3</sup>/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 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Dec. 27	2230	97	5.66	Apr. 22	2000	60	5.40
Mar. 12	0600	*613	a *7.90	Apr. 29	1445	166	6.01

a From floodmark

Minimum daily discharge, 0.16 ft<sup>3</sup>/s, Oct. 9, 10, 14.

DISCHARGE, IN 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	.17	.24	.24	5.5	1.5	40	63	64	2.2	.29	.37	.21
2	.45	.24	.24	5.5	1.4	50	51	104	1.9	.29	.97	.21
3	6.4	.24	.24	5.5	.89	60	50	51	1.5	.29	.86	.21
4	3.9	.24	.24	5.7	.80	60	45	32	1.8	.29	.38	.21
5	.74	.24	.24	8.5	.83	60	37	22	4.1	.30	.30	.21
6	.36	.24	.24	3.9	.80	50	32	17	3.9	.29	.26	.21
7	.25	.24	.24	4.8	.88	45	27	14	3.2	.29	.24	.21
8	.19	.24	.26	1.9	.80	40	23	11	2.5	.29	.22	.21
9	.16	.24	.36	.48	.86	35	21	9.4	2.2	.29	.26	.21
10	.16	.24	.34	.47	.90	30	19	9.1	1.4	.29	.23	.21
11	.17	.24	.38	.41	.97	110	16	7.3	1.1	.29	.23	.21
12	.18	.29	1.1	.40	1.0	414	13	7.0	.89	.29	.21	.21
13	.18	.29	.87	.37	1.4	225	12	6.7	.80	1.0	.21	.21
14	.16	.29	1.6	.35	1.9	164	10	5.9	.80	2.1	.23	.21
15	5.3	.29	2.3	.34	2.6	120	9.1	5.4	.75	.43	.23	.22
16	3.2	.30	2.2	.37	4.4	109	7.9	4.9	.70	.32	.23	.24
17	1.3	.31	2.1	.38	12	108	7.6	5.0	.63	.30	.22	.23
18	.86	.31	1.8	.34	14	132	9.1	4.9	.50	.29	.22	.21
19	.52	.31	1.6	.33	15	144	16	5.8	.47	.29	.22	.23
20	.36	.28	1.8	.40	20	122	12	6.1	.44	.29	.24	.30
21	.37	.23	1.5	.39	40	136	9.9	5.9	.41	.29	.28	.22
22	2.9	.20	1.5	.48	30	124	38	5.9	.40	.33	.24	.20
23	1.4	.17	1.5	.71	20	94	36	6.2	.37	.47	.24	.18
24	.65	.22	1.5	1.1	17	111	20	6.5	.37	.48	.24	.18
25	.48	.24	1.4	1.3	15	117	14	5.5	.37	.31	.24	.18
26	.43	.24	1.2	1.4	15	97	15	4.6	.37	.27	.24	.18
27	.34	.22	12	1.3	20	69	24	3.6	.37	.24	.24	.18
28	.30	.22	43	1.4	30	64	79	3.0	.37	.27	.24	.22
29	.29	.24	18	1.5	---	62	138	2.5	.35	.31	.24	.19
30	.29	.24	5.8	1.3	---	52	81	2.2	.32	.48	.24	.19
31	.28	---	5.3	1.4	---	55	---	2.5	---	.61	.24	---
TOTAL	32.74	7.53	111.09	58.22	269.93	3099	935.6	440.9	35.48	12.57	9.01	6.29
MEAN	1.06	.25	3.58	1.88	9.64	100	31.2	14.2	1.18	.41	.29	.21
MAX	6.4	.31	.43	8.5	.40	414	138	104	4.1	2.1	.97	.30
MIN	.16	.17	.24	.33	.80	30	7.6	2.2	.32	.24	.21	.18
AC-FT	65	15	220	115	535	6150	1860	875	70	25	18	12
CAL YR 1984	TOTAL	1793.42		MEAN	4.90	MAX	216	MIN	.01	AC-FT	3560	
WTR YR 1985	TOTAL	5018.36		MEAN	13.7	MAX	414	MIN	.16	AC-FT	9950	

## 09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM

LOCATION.--Lat 35°06'03", long 108°45'03", in NE¼ sec.17, T.10 N., R.18 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank downstream from highway bridge on State Highway 36, 0.8 mi upstream from flow line of Black Rock Reservoir, 2.3 mi northeast of Black Rock, and 5.9 mi northeast of Zuni Pueblo.

DRAINAGE AREA.--810 mi<sup>2</sup>, approximately.

## 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: Nov. 9 to Feb. 1 and Mar. 20-29. Water-discharge records good except for estimated daily discharges, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 14.9 ft<sup>3</sup>/s, 10,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft<sup>3</sup>/s, Aug. 4, 1974, gage height, 6.61 ft, from rating curve extended above 670 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 15	1000	266	4.13	Mar. 13	1200	*1,750	*6.10
Mar. 3	0030	168	3.77	May 3	1230	177	3.84

No flow at times.

DISCHARGE, IN 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	2.9	1.7	2.1	1.3	4.0	109	112	129	1.9	1.0	9.5	.53
2	3.8	1.7	2.2	1.2	3.8	134	101	130	1.7	.91	9.0	.28
3	14	1.6	2.2	1.1	4.1	140	52	168	1.5	.68	8.7	.07
4	8.2	1.6	2.3	1.1	4.0	137	55	156	1.3	.27	9.5	.00
5	3.4	1.6	2.2	1.1	3.4	138	59	121	1.4	.02	9.8	.00
6	2.6	1.7	2.3	1.2	3.4	125	52	90	1.5	.00	10	.00
7	2.1	1.7	2.2	1.4	3.1	111	46	69	1.3	.00	9.8	.00
8	1.9	1.6	2.1	1.6	3.0	99	44	52	1.0	.00	9.7	.00
9	1.8	1.6	2.4	1.7	3.6	89	42	40	.83	.00	11	.00
10	1.7	1.5	2.3	1.8	59	80	35	31	.68	.00	10	.00
11	1.7	1.5	2.4	1.9	106	105	35	21	4.6	.00	9.8	.00
12	1.6	1.5	2.1	2.0	85	603	30	14	2.2	3.2	9.1	.02
13	1.7	1.5	2.0	2.1	69	1530	25	13	1.5	8.9	8.3	.11
14	1.6	1.4	2.0	2.2	42	964	23	11	1.5	9.2	3.9	.09
15	4.1	1.3	2.7	2.2	109	556	19	10	1.6	9.5	1.3	.53
16	5.8	1.6	2.7	2.3	39	362	17	9.3	1.4	9.8	.76	1.5
17	2.9	1.7	2.8	2.3	34	262	14	8.7	1.4	9.9	1.4	.85
18	2.3	1.7	2.8	2.4	38	216	12	7.0	1.2	10	1.3	.69
19	1.9	1.8	2.8	2.8	56	210	12	6.4	1.2	10	.99	.78
20	1.9	1.9	2.8	3.0	120	238	11	6.3	.82	10	.69	1.3
21	2.3	2.0	2.5	4.5	124	230	10	5.9	.45	10	.52	1.5
22	3.4	2.1	2.4	5.0	108	220	11	5.9	.17	11	2.5	.94
23	3.0	2.0	2.0	6.2	88	210	12	5.6	.01	21	13	.66
24	2.4	2.0	1.7	5.8	74	200	14	4.6	.00	13	9.9	.57
25	2.2	2.0	1.9	5.7	68	190	16	4.1	.00	10	6.8	.53
26	1.9	2.1	2.0	5.5	68	180	16	3.6	.00	9.8	5.4	.53
27	2.1	2.0	2.1	5.3	79	170	20	3.0	.00	9.5	4.2	.51
28	1.8	2.0	2.1	4.7	97	145	25	2.8	.00	9.4	2.9	.32
29	1.7	2.0	2.0	4.3	---	134	35	2.5	.28	9.0	1.8	.31
30	1.7	2.1	1.9	4.2	---	132	86	2.3	1.1	11	1.2	.33
31	1.7	---	1.8	4.1	---	122	---	2.5	---	11	.85	---
TOTAL	92.1	52.5	69.8	92.0	1495.4	8141	1041	1135.5	32.54	208.08	183.61	12.95
MEAN	2.97	1.75	2.25	2.97	53.4	263	34.7	36.6	1.08	6.71	5.92	.43
MAX	14	2.1	2.8	6.2	124	1530	112	168	4.6	21	13	1.5
MIN	1.6	1.3	1.7	1.1	3.0	80	10	2.3	.00	.00	.52	.00
AC-FT	183	104	138	182	2970	16150	2060	2250	65	413	364	26
CAL YR 1984	TOTAL	1466.60		MEAN	4.01	MAX	244	MIN	.00	AC-FT	2910	
WTR YR 1985	TOTAL	12556.48		MEAN	34.4	MAX	1530	MIN	.00	AC-FT	24910	

## LITTLE COLORADO RIVER BASIN

09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.

REMARKS.--Data collected and analyzed by USGS except chemical data analyzed by BIA Laboratory in Gallup, New Mexico.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (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)
OCT 18...	0810	2.3	501	8.5	170	22	48	11	39
NOV 20...	1546	1.8	770	8.5	250	0	60	23	69
JAN 16...	0752	2.3	793	9.2	280	0	70	24	67
APR 24...	0801	14	574	8.2	230	2	62	17	32
JUN 11...	1347	4.6	798	8.2	270	0	62	27	64
JUL 25...	0804	11	454	8.5	170	3	40	16	32
AUG 14...	1407	3.7	400	8.4	170	0	28	24	28

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE FET-FLD (MG/L AS HCO3) (00440)	CAR- BONATE FET-FLD (MG/L AS CO3) (00445)	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)
OCT 18...	1	4.7	180	>2	72	12	.17	315
NOV 20...	2	5.5	320	12	73	18	.31	443
JAN 16...	2	3.9	320	10	100	19	.28	476
APR 24...	1	3.5	240	18	61	12	.21	335
JUN 11...	2	3.1	310	11	120	20	.30	476
JUL 25...	1	4.3	180	8	55	11	.40	285
AUG 14...	.9	2.7	190	17	28	11	.30	239

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)
OCT 18...	0810	840
NOV 20...	1546	720
JAN 16...	0752	710
APR 24...	0801	720
JUN 11...	1347	620
JUL 25...	0804	610
AUG 14...	1407	<50

09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM -- Continued

## WATER-QUALITY RECORDS

PARTICLE SIZE OF SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (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						
17...	1530	2.7	9.0	1540	11	59
NOV						
20...	1430	1.8	9.0	33	.16	57
JAN						
15...	1345	2.6	.0	32	.22	59
FEB						
20...	1715	130	6.5	1820	639	78
MAR						
29...	1245	134	4.0	293	106	94
APR						
23...	1430	12	15.0	13	.42	75
JUN						
11...	1215	4.6	20.0	15	.19	71
AUG						
14...	1300	3.7	20.5	14	.14	24
SEP						
18...	1230	.66	17.0	20	.04	22

## GILA RIVER BASIN

09430500 GILA RIVER NEAR GILA, NM

LOCATION.--Lat 33°03'40", long 108°32'12", in NE¼NW¼ sec.30, T.14 S., R.16 W., Grant County, Hydrologic Unit 15040001, on left bank at Hooker damsite, 1.6 mi upstream from Mogollon Creek, 7 mi northeast of Gila, and at mile 572.5.

DRAINAGE AREA.--1,864 mi<sup>2</sup>.

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.--58 years (water years 1928-85), 147 ft<sup>3</sup>/s, 106,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,200 ft<sup>3</sup>/s, Dec. 28, 1984, gage height, 13.0 ft, from floodmark, from rating curve extended above 7,000 ft<sup>3</sup>/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 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Dec. 20	2000	2,830	4.02	Feb. 21	1745	1,060	2.37
Dec. 28	0830	*35,200	a *13.0	Mar. 3	2215	876	2.13
Jan. 27	0445	3,550	4.38	Mar. 13	0315	5,070	5.35

a From floodmarks

Minimum discharge, 45 ft<sup>3</sup>/s, Sept. 17, 18.

DISCHARGE, IN 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	77	105	77	1350	667	708	463	442	162	57	92	65
2	73	103	76	932	520	808	423	485	149	56	98	61
3	90	101	87	674	460	842	383	521	139	55	134	61
4	117	98	94	535	442	830	374	517	131	54	135	58
5	119	96	115	480	408	717	382	519	129	52	192	55
6	131	92	115	425	362	631	407	516	127	51	130	55
7	122	88	107	400	336	574	439	466	119	51	108	53
8	112	85	105	385	331	538	463	415	112	50	120	52
9	103	85	105	375	365	567	506	373	108	49	109	50
10	95	85	103	340	435	796	492	357	108	47	97	50
11	92	85	111	312	464	1310	475	355	105	46	122	50
12	93	85	212	296	455	1920	463	341	99	48	125	53
13	93	85	332	296	471	4120	459	307	98	54	116	52
14	89	85	405	280	536	2210	455	273	96	52	109	50
15	85	85	344	272	596	1680	446	255	93	53	98	48
16	85	85	296	260	626	1500	457	236	89	58	90	50
17	84	83	256	252	673	1330	459	224	83	62	83	49
18	92	82	252	232	772	1270	452	222	80	60	79	53
19	97	81	340	225	865	1210	465	220	78	67	83	70
20	98	81	1700	226	928	1150	417	216	81	67	85	91
21	99	83	1940	229	1010	1040	365	213	81	69	88	81
22	99	82	1020	227	1020	953	342	207	77	69	81	101
23	98	80	656	234	894	852	314	195	75	76	77	86
24	99	78	495	279	779	761	282	191	72	65	75	76
25	103	78	395	485	661	688	254	183	71	64	77	69
26	103	78	332	1290	588	648	250	175	66	62	97	64
27	106	81	974	2810	554	619	300	178	64	60	89	61
28	105	82	23400	1600	579	595	362	177	62	103	77	63
29	105	81	8740	1120	---	577	393	172	60	88	72	71
30	103	79	4220	934	---	559	384	164	58	77	70	72
31	103	---	2190	818	---	508	---	161	---	71	68	---
TOTAL	3070	2577	49594	18573	16797	32511	12126	9276	2872	1893	3076	1870
MEAN	99.0	85.9	1600	599	600	1049	404	299	95.7	61.1	99.2	62.3
MAX	131	105	23400	2810	1020	4120	506	521	162	103	192	101
MIN	73	78	76	225	331	508	250	161	58	46	68	48
AC-FT	6090	5110	98370	36840	33320	64490	24050	18400	5700	3750	6100	3710

CAL YR 1984	TOTAL	85769	MEAN	234	MAX	23400	MIN	40	AC-FT	170100
WTR YR 1985	TOTAL	154235	MEAN	423	MAX	23400	MIN	46	AC-FT	305900



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 mi<sup>2</sup>.

## 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: Dec. 27-30. Water-discharge records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--18 years, 32.0 ft<sup>3</sup>/s, 23,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft<sup>3</sup>/s, Aug. 12, 1967, gage height, 13.7 ft, from floodmarks, from rating curve extended above 220 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Oct. 3	2045	101	2.55	Mar. 3	0945	144	2.34
Dec. 12	0145	228	2.99	Mar. 12	1730	1,870	6.10
Dec. 20	1115	433	3.71	Apr. 8	0430	165	2.40
Dec. 27	Unknown	*6,430	*10.10	May 1	0300	146	2.33
Jan. 26	2045	437	3.49	Sept. 20	0800	185	2.55
Feb. 18	0415	169	2.47				

No flow July 10, 11.

DISCHARGE, IN 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	6.0	15	23	155	93	130	72	135	11	.68	9.6	3.5
2	5.7	13	20	116	81	136	72	122	9.1	.45	29	3.6
3	47	12	20	90	73	139	93	115	8.3	.44	30	3.4
4	65	11	42	74	67	123	108	123	7.9	.37	21	3.0
5	34	9.7	45	63	60	103	123	114	7.9	.33	14	2.6
6	24	8.9	46	56	59	93	138	90	6.6	.38	11	2.3
7	18	8.6	43	51	61	86	148	77	5.6	.38	10	1.9
8	14	8.2	50	52	63	82	155	67	5.1	.37	8.4	1.7
9	12	8.0	59	47	77	102	141	68	5.1	.30	7.6	1.4
10	10	7.7	53	42	81	227	135	69	4.8	.05	18	1.2
11	9.1	7.5	140	38	89	351	129	58	4.2	.13	50	1.6
12	9.1	7.2	166	38	92	784	134	46	3.7	.69	39	1.7
13	11	7.2	127	34	112	498	127	39	3.6	.77	18	1.3
14	8.0	7.1	101	33	125	256	124	35	3.3	.33	12	1.1
15	7.6	7.2	87	31	129	224	132	31	2.8	.62	8.7	2.7
16	20	7.1	79	32	136	194	123	30	2.3	1.3	6.9	1.9
17	15	13	83	30	151	190	117	31	1.9	1.0	5.8	1.4
18	13	12	98	29	163	186	109	31	2.3	.30	5.0	3.6
19	12	9.4	123	31	155	179	81	30	4.0	.37	9.4	16
20	12	8.7	329	35	155	156	69	29	5.1	1.0	13	95
21	11	8.0	254	39	159	138	68	25	5.9	3.2	8.3	42
22	10	8.0	179	40	142	125	60	22	4.1	6.4	6.4	23
23	9.7	11	145	40	120	114	46	20	2.8	4.1	5.4	15
24	11	26	127	62	101	110	41	20	2.3	4.8	5.4	11
25	13	30	118	79	91	116	48	21	1.8	3.2	7.2	9.3
26	13	29	119	280	86	120	58	21	1.5	2.7	7.2	7.9
27	23	21	848	335	88	122	56	19	1.2	2.8	5.0	7.1
28	21	20	3370	215	110	117	75	16	1.0	9.1	4.0	17
29	18	28	366	162	---	118	76	14	.97	7.2	3.5	28
30	17	27	351	134	---	99	116	13	.86	4.7	4.5	15
31	16	---	214	111	---	82	---	12	---	6.1	3.6	---
TOTAL	515.2	396.5	7825	2574	2919	5500	2974	1543	127.03	64.56	386.9	326.2
MEAN	16.6	13.2	252	83.0	104	177	99.1	49.8	4.23	2.08	12.5	10.9
MAX	65	30	3370	335	163	784	155	135	11	9.1	50	95
MIN	5.7	7.1	20	29	59	82	41	12	.86	.05	3.5	1.1
AC-FT	1020	786	15520	5110	5790	10910	5900	3060	252	128	767	647
CAL YR 1984 TOTAL	12976.39			MEAN	35.5	MAX	3370	MIN	.00	AC-FT	25740	
WTR YR 1985 TOTAL	25151.39			MEAN	68.9	MAX	3370	MIN	.05	AC-FT	49890	

09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
NOV 06...	1200	9.1	80	93	8.0	8.0	15.0	10.0	1.7	9.2	33	5
JAN 10...	1300	38	110	109	7.6	8.0	11.0	4.0	3.0	11.0	39	7
APR 03...	1115	99	75	80	7.3	8.0	17.0	4.5	3.1	10.6	27	7
MAY 23...	1100	22	65	80	7.3	7.9	21.5	14.5	1.5	8.0	29	2
JUL 09...	1200	.36	115	143	7.9	8.5	24.0	19.5	.60	7.6	60	4
SEP 18...	0950	1.5	120	139	--	8.5	22.5	18.0	.50	7.8	51	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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 06...	9.9	2.0	4.7	.4	.90	--	--	--	--	12	1.9
JAN 10...	11	2.7	4.9	.4	1.0	38	.000	32	31	18	1.6
APR 03...	8.0	1.7	3.9	.3	.80	25	--	20	20	14	1.0
MAY 23...	8.5	1.8	4.3	.4	.80	32	.000	26	26	13	.80
JUL 09...	18	3.6	8.1	.5	1.6	68	.000	56	56	15	1.6
SEP 18...	14	4.0	16	1	1.7	59	6	590	590	15	20

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, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00671)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 06...	.30	18	58	67	<.10	.090	.010	.030	2	.05	50
JAN 10...	.30	20	89	78	<.10	<.100	.020	.020	1	.10	78
APR 03...	.20	19	65	61	<.10	.040	.010	.020	4	1.1	53
MAY 23...	.20	20	64	65	<.10	.080	.020	.010	13	.77	65
JUL 09...	.30	22	97	100	<.10	.010	.020	<.010	3	.00	7
SEP 18...	.30	19	95	125	<.10	.050	.020	.030	16	.06	1

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 06...	1200	20	<1	4	.0	1	4	<3	1	13	<1
MAY 23...	1100	100	<1	7	<.5	<1	<1	<3	1	18	4
JUL 09...	1200	20	<1	9	<.5	<1	<1	<3	3	6	1

## GILA RIVER BASIN

09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 06...	4	<1	<.1	<10	<1	<1	<1	49	<6	7
MAY 23...	<4	2	--	<10	1	<1	<1	43	<6	12
JUL 09...	5	3	.1	<10	2	<1	<1	85	<6	8

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
NOV 06...	1200	<1.0	<.4	1.0	<.4	.9	<.4	.05	.05

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 06...	1200	0	K5
JAN 10...	1300	K1	K5
APR 03...	1115	K6	K1
MAY 23...	1100	0	17
JUL 09...	1200	K3	22
SEP 18...	0950	26	21

## GILA RIVER BASIN

09431100 MANGAS CREEK BELOW MANGAS SPRINGS, NM

## WATER-QUALITY RECORDS

LOCATION.--Lat 32°50'48", long 108°30'57", in NW¼NE¼ sec.8, T.17S., R.16W., Grant County, Hydrologic Unit 15040002, 0.4 mi northwest of Mangas Springs.

DRAINAGE AREA.--177 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1970 to current year.

REMARKS.--Location formerly published as lat 32°50'57", long 108°31'13", in SE¼SW¼ sec.5, T.17S., R.16W., 0.1 mi upstream from Blacksmith Canyon and 15 mi southeast of Gila.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
NOV 06...	1645	2.6	650	711	8.0	8.3	20.0	12.0	8.4	320	140
JAN 09...	1630	3.0	780	--	7.8	--	15.0	14.0	8.1	--	--
APR 02...	1620	2.7	650	697	7.6	8.1	26.5	15.0	8.2	320	230
MAY 30...	1400	1.9	600	718	7.7	8.2	25.0	19.0	7.2	320	200
JUL 05...	1330	2.1	650	707	8.0	8.0	27.5	27.0	6.6	310	140

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)	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)
NOV 06...	100	17	29	.7	2.3	150	16	.40	32	450
JAN 09...	--	--	--	--	--	--	--	--	--	--
APR 02...	100	18	30	.8	1.5	150	16	.40	34	410
MAY 30...	100	17	29	.7	1.3	150	19	.40	34	430
JUL 05...	96	17	28	.7	2.6	140	17	.40	30	440

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 06...	1645	40	12
APR 02...	1620	40	<3
MAY 30...	1400	30	9
JUL 05...	1330	40	11

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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1904 to February 1905 (gage heights only). May 1905 to December 1906, January to December 1907 and July to October 1908 (gage heights only). November 1908 to December 1910, January 1911 to January 1912 and May to June 1912 (gage heights only). August 1912 to September 1955, October 1962 to current year. Monthly or annual discharge only for some periods, published in WSP 1313. Published as "near Cliff" 1904-7.

REVISED RECORDS.--WSP 1213: 1906, 1911-15, 1931, 1936-37, 1939, 1941, 1944, 1945(P), 1946(M), 1947. WSP 1283: Drainage area. WSP 1926: 1955. WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Elevation of gage is 4,090 ft above National Geodetic Vertical Datum of 1929, from plane table survey. Prior to Dec. 31, 1907, nonrecording gage at site 13.5 mi upstream at different datum. May 14, 1908, to July 16, 1909, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 28 to Jan. 22. Water-discharge records fair. Diversions for irrigation of about 5,000 acres upstream from station. Gage height and rain gage satellite telemeter at gage.

AVERAGE DISCHARGE.--69 years (water years 1906, 1909-10, 1913-55, 1963-85), 208 ft<sup>3</sup>/s, 150,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,800 ft<sup>3</sup>/s, Dec. 19, 1978, gage height, 29.8 ft, in gage wall, 34.1, ft from floodmarks, from rating curve extended above 9,500 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 2.2 ft<sup>3</sup>/s, Aug. 5, 1947.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 20	2030	4,700	9.56	Jan. 27	1200	5,990	10.07
Dec. 28	Unknown	*39,100	a *25.2	Mar. 13	0915	6,250	11.59

a From floodmarks  
Minimum discharge, 27 ft<sup>3</sup>/s, July 8, 9.

DISCHARGE, IN 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	70	120	78	1500	949	825	720	565	141	40	110	50
2	80	93	71	1100	707	970	616	620	122	33	121	47
3	105	90	76	800	555	1020	555	701	119	33	239	44
4	265	67	100	660	515	1050	528	688	114	34	172	41
5	238	65	122	600	463	953	519	700	108	32	177	46
6	211	77	145	560	396	858	545	714	114	33	207	47
7	188	108	141	520	341	792	595	675	116	32	176	42
8	153	101	130	460	326	748	648	678	107	33	157	39
9	130	85	111	450	367	766	684	605	91	29	149	33
10	132	73	120	420	514	923	747	523	92	31	138	34
11	135	54	140	400	690	1410	687	527	87	34	179	37
12	117	64	358	380	576	2030	629	518	83	33	189	32
13	102	80	590	360	605	4680	622	479	74	32	151	32
14	88	59	928	340	696	2410	607	414	70	33	127	32
15	82	63	819	330	730	1620	609	403	68	40	118	31
16	96	76	721	320	800	1530	612	369	69	33	109	37
17	102	68	664	310	830	1360	648	334	75	31	96	36
18	94	65	659	310	886	1300	674	299	77	31	82	45
19	112	72	862	310	1040	1220	690	287	70	33	103	71
20	96	92	2610	310	1150	1170	623	274	73	35	136	149
21	79	100	3440	310	1250	1070	520	270	67	83	97	145
22	95	79	1830	310	1350	1000	487	230	66	131	93	118
23	120	60	1410	306	1200	937	465	209	54	79	108	122
24	121	87	1140	329	1040	872	437	203	63	76	81	106
25	122	85	1010	438	865	823	364	178	55	67	74	90
26	116	104	907	1000	759	825	330	151	56	65	78	79
27	108	125	919	5170	688	845	383	150	56	62	91	70
28	125	129	23000	2660	690	862	488	149	61	129	77	79
29	132	114	10000	1680	---	868	597	152	44	118	75	103
30	125	92	7000	1330	---	888	547	139	60	104	67	96
31	119	---	3000	1180	---	843	---	145	---	114	55	---
TOTAL	3858	2547	63101	25153	20978	37468	17176	12349	2452	1693	3832	1933
MEAN	124	84.9	2036	811	749	1209	573	398	81.7	54.6	124	64.4
MAX	265	129	23000	5170	1350	4680	747	714	141	131	239	149
MIN	70	54	71	306	326	748	330	139	44	29	55	31
AC-FT	7650	5050	125200	49890	41610	74320	34070	24490	4860	3360	7600	3830
CAL YR 1984	TOTAL	109390		MEAN	299	MAX	23000	MIN	19	AC-FT	217000	
WTR YR 1985	TOTAL	192540		MEAN	528	MAX	23000	MIN	29	AC-FT	381900	

09431500 GILA RIVER NEAR REDROCK, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
NOV 07...	1100	112	370	361	8.6	8.7	18.0	11.0	6.0	10.4	120	0
JAN 08...	1600	521	285	260	8.1	8.0	12.0	10.0	2.6	10.2	91	0
MAR 13...	1400	5140	112	152	7.7	8.0	19.0	9.0	700	10.1	46	0
MAY 22...	1100	238	200	--	8.0	--	23.0	17.0	--	7.5	--	--
JUL 11...	0945	36	310	385	8.4	8.2	25.0	22.0	2.0	7.4	140	1
SEP 19...	1200	79	300	411	--	8.0	28.0	22.0	120	7.6	140	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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD AS CACO3 (00410)	ALKA- LINITY, CARBON- ATE IT-FLD (MG/L - CACO3) (99430)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 07...	36	7.1	29	1	2.0	150	10	140	140	28	11
JAN 08...	27	5.7	18	.9	1.9	88	11	91	91	29	7.2
MAR 13...	14	2.6	7.8	.5	1.2	85	.000	70	70	16	2.0
MAY 22...	--	--	--	--	--	120	.000	97	97	--	--
JUL 11...	42	8.3	31	1	2.9	150	9.0	140	140	36	9.6
SEP 19...	42	8.4	32	1	2.5	--	--	--	--	32	10

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, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	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)
NOV 07...	2.0	34	214	240	<.10	.020	.050	.050	20	6.0	76
JAN 08...	1.2	31	186	190	.39	.020	.140	.050	149	210	73
MAR 13...	.60	23	76	110	<.10	<.010	4.40	.070	6050	84000	72
MAY 22...	--	--	--	--	.16	.070	.090	.040	25	16	93
JUL 11...	1.7	34	243	260	<.10	.020	.050	<.010	7	.68	88
SEP 19...	1.8	33	249	250	.27	.130	.150	.050	221	47	96

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 07...	1100	10	1	17	.0	1	<1	<3	2	11	<1
JUL 11...	0945	<10	2	21	<.5	<1	<1	<3	4	3	1
SEP 19...	1200	60	2	26	<.5	<1	<1	<3	7	38	3

09431500 GILA RIVER NEAR REDROCK, NM -- Continued

## WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 07...	26	3	<.1	<10	<1	<1	<1	140	<6	11
JUL 11...	22	3	1.2	<10	4	<1	<1	170	7	12
SEP 19...	23	9	.1	<10	1	<1	<1	170	6	11

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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 AS U (22703)
NOV 07...	1100	<5.6	.8	<3.0	1.2	<2.6	1.0	.06	1.4
MAY 22...	1100	4.1	.7	<1.6	.6	<1.4	.6	.04	1.0

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 07...	1100	22	46
JAN 08...	1600	K10	27
MAR 13...	1400	K180	K140
MAY 22...	1100	32	43
JUL 11...	0945	35	90
SEP 19...	1200	14	42

## 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 mi<sup>2</sup>, 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: Dec. 29, Dec. 31 to Jan. 14, Jan. 15-26, Feb. 1-4, Mar. 14, 15, Mar. 25 to Apr. 1, May 12 to June 27, and Aug. 17-21. 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.--26 years, 28.3 ft<sup>3</sup>/s, 20,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,830 ft<sup>3</sup>/s, Oct. 1, 1983, gage height, 11.71 ft recorded, 11.3 ft, from outside floodmarks, from rating curve extended above 1,400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 1.0 ft<sup>3</sup>/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 ft<sup>3</sup>/s at Alma (downstream). See WSP 1313.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge 450 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Oct. 3	1000	569	3.33	July 31	1800	1,700	3.98
Dec. 27	2330	*3,170	*5.42	Aug. 3	1645	1,430	3.73
Mar. 12	1845	1,500	3.93	Aug. 10	1730	458	2.38
July 29	1630	2,440	4.60	Aug. 21	1945	1,760	4.06

Minimum discharge, 1.9 ft<sup>3</sup>/s, July 27.

DISCHARGE, IN 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	9.5	15	12	210	60	319	115	101	13	8.9	8.1	11
2	12	15	12	170	57	313	102	90	13	8.3	8.9	11
3	85	15	13	140	55	316	92	79	12	7.9	136	11
4	67	15	18	110	52	198	89	68	12	7.5	45	11
5	34	15	16	90	53	139	88	58	11	6.9	27	11
6	23	15	15	75	51	125	88	51	11	5.9	17	11
7	19	15	14	60	51	132	90	43	10	6.8	14	11
8	16	14	15	58	44	131	92	38	10	7.2	15	11
9	14	14	15	57	43	153	92	34	10	7.3	11	11
10	12	13	15	56	41	362	89	33	10	7.9	55	11
11	12	13	29	55	39	633	88	31	9.8	9.2	39	10
12	12	13	30	54	39	1120	80	28	9.4	9.0	32	10
13	11	12	55	53	39	819	72	25	9.4	7.7	25	10
14	9.9	13	52	52	41	600	66	24	9.4	4.9	20	10
15	10	13	46	51	44	420	64	23	9.2	11	18	10
16	9.4	13	20	49	55	402	61	22	9.0	13	16	9.9
17	8.2	14	18	48	78	403	59	23	8.6	11	14	9.4
18	7.1	14	26	47	108	417	60	23	8.4	7.6	13	22
19	6.6	13	35	46	127	448	65	22	8.2	7.9	12	96
20	6.9	12	65	45	155	420	55	21	8.0	9.2	11	77
21	9.4	12	51	44	202	373	48	19	8.0	7.7	78	30
22	11	12	44	43	189	334	51	18	7.8	14	12	27
23	12	13	37	46	155	283	51	17	7.4	11	9.7	25
24	13	15	31	49	107	259	43	16	7.0	6.5	8.4	22
25	15	14	29	52	92	257	37	17	6.8	4.9	38	19
26	16	14	26	179	100	220	36	16	6.6	4.0	34	20
27	17	12	434	161	121	200	49	15	6.4	1.9	14	20
28	16	13	1950	103	234	180	92	15	6.2	3.2	14	89
29	15	14	801	75	---	160	116	14	8.4	83	13	56
30	15	12	338	69	---	145	114	14	8.3	3.9	11	35
31	15	---	250	63	---	130	---	14	---	64	11	---
TOTAL	539.0	407	4512	2410	2432	10411	2244	1012	274.3	369.2	780.1	717.3
MEAN	17.4	13.6	146	77.7	86.9	336	74.8	32.6	9.14	11.9	25.2	23.9
MAX	85	15	1950	210	234	1120	116	101	13	83	136	96
MIN	6.6	12	12	43	39	125	36	14	6.2	1.9	8.1	9.4
AC-FT	1070	807	8950	4780	4820	20650	4450	2010	544	732	1550	1420
CAL YR 1984	TOTAL	9842.6		MEAN	26.9	MAX	1950	MIN	5.0	AC-FT	19520	
WTR YR 1985	TOTAL	26107.9		MEAN	71.5	MAX	1950	MIN	1.9	AC-FT	51790	



## 09442692 TULAROSA RIVER ABOVE ARAGON, NM

LOCATION.--Lat 33°53'29", long 108°30'54", in NE¼NW¼ sec.9, T.5 S., R.16 W., Catron County, Hydrologic Unit 15040004, on right bank 0.4 mi upstream from first diversion, 1.4 mi northeast of Aragon, and 8 mi upstream from Apache Creek.

DRAINAGE AREA.--94 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1966 to current year. 1955 to 1965 at site 0.6 mi upstream (drainage area, 89 mi<sup>2</sup>), annual maximum only.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 3.47 ft<sup>3</sup>/s, 2,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 660 ft<sup>3</sup>/s Oct. 2, 1983, gage height, 3.90 ft in gage well, 4.23 ft from floodmarks, from rating curve extended above 80 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 3.13 ft and 3.90 ft; minimum, 1.1 ft<sup>3</sup>/s July 22, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Dec. 28	0300	*221	*2.95	Feb. 28	2145	43	1.22
Jan. 26	2030	21	0.59	Mar. 12	1630	122	3.46
Feb. 20	2045	21	0.59	Aug. 4	2045	39	1.10

Minimum discharge, 1.9 ft<sup>3</sup>/s, June 7, 8.

REVISIONS.--The peak discharges and annual maximum (\*) reported for water years 1967, 1968, 1969, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1981, and 1983 have been revised as shown in the following table. They supersede figures published in the reports for those years.

Water Year	Date	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Water Year	Date	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
1967	July 30, 1967	*103	*2.47	1973	Apr. 13, 1973	*108	*2.49
	Aug. 7, 1967	21	1.72		Dec. 29, 1972	35	2.03
	Sept. 4, 1967	28	1.88		Aug. 23, 1973	23	1.78
1968	Feb. 21, 1968	*78	*2.34	1974	July 20, 1974	*30	*1.98
	Apr. 2, 1968	64	2.25	1975	Sept. 12, 1975	*47	*2.13
	July 25, 1968	23	1.75		Oct. 10, 1974	25	1.84
	July 26, 1968	20	1.66		Mar. 9, 1975	26	1.86
	July 29, 1968	28	1.89		Mar. 22, 1975	22	1.89
1969	Sept. 8, 1969	*27	*1.85	1976	Sept. 14, 1976	*101	*2.46
1971	Sept. 1, 1971	*312	*3.13		Feb. 13, 1976	86	2.39
	Aug. 23, 1971	212	2.84	1977	Sept. 2, 1977	*24	*1.81
1972	Dec. 26, 1971	*128	*2.56	1981	July 12, 1981	*260	*3.00
	Oct. 1, 1971	32	2.01	1983	Mar. 28, 1983	*212	*2.92
	Oct. 25, 1971	85	2.38				

## GILA RIVER BASIN

09442692 TULAROSA RIVER ABOVE ARAGON, NM -- Continued

DISCHARGE, IN 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	2.8	2.8	2.9	4.4	2.8	26	3.0	3.0	3.0	2.3	3.2	3.1
2	2.8	2.8	2.9	2.8	2.8	19	3.0	3.0	2.9	2.3	3.3	3.1
3	3.4	2.8	3.0	2.7	2.8	15	3.0	3.0	2.7	2.3	3.3	3.1
4	2.8	2.8	3.1	2.7	2.8	9.5	2.9	2.9	2.7	2.4	4.7	3.1
5	2.8	2.7	3.0	2.7	2.8	7.4	2.9	2.8	2.7	2.3	3.3	3.1
6	2.7	2.7	3.0	2.7	2.8	6.0	2.8	2.6	2.3	2.3	3.1	3.1
7	2.7	2.7	3.0	2.7	2.8	5.2	2.8	2.4	2.1	2.6	3.1	3.1
8	2.6	2.7	3.0	2.7	2.8	5.0	2.8	2.4	2.0	3.0	3.1	3.1
9	2.6	2.7	3.0	2.7	2.8	6.2	3.0	2.5	2.3	3.0	3.2	3.1
10	2.7	2.7	3.0	2.6	2.8	13	2.9	2.6	2.5	3.1	4.3	3.1
11	2.8	2.7	3.2	2.6	2.8	73	2.9	2.6	2.5	3.1	3.3	3.2
12	2.8	2.7	3.1	2.6	2.8	103	2.8	2.9	2.5	3.0	3.2	3.1
13	2.8	2.7	3.2	2.6	3.7	53	2.7	2.9	2.4	3.1	3.2	3.1
14	2.8	2.7	3.1	2.5	6.3	30	2.8	2.9	2.4	3.1	3.1	3.1
15	3.0	2.7	3.1	2.6	7.7	23	2.8	2.9	2.3	3.1	3.1	3.2
16	2.7	2.8	3.1	2.5	7.9	17	2.8	3.0	2.3	3.2	3.1	3.2
17	2.7	2.9	3.0	2.5	8.6	20	2.9	3.1	2.0	3.1	3.1	3.1
18	2.7	2.9	3.1	2.5	9.5	17	2.9	3.0	2.3	3.2	3.1	3.6
19	2.7	2.9	3.1	2.5	9.2	17	2.9	3.0	2.3	3.1	3.1	3.9
20	2.8	2.8	3.2	2.5	13	12	2.6	2.9	2.4	3.2	3.2	4.3
21	2.8	2.9	3.1	2.5	11	11	2.7	2.9	2.4	3.2	3.2	3.4
22	2.8	2.9	3.0	2.5	8.5	9.3	2.9	2.9	2.5	3.2	3.1	3.4
23	2.8	3.0	3.0	2.5	7.9	6.5	2.8	2.9	2.5	3.2	3.2	3.4
24	2.9	3.0	3.0	2.6	5.6	5.3	2.7	3.0	2.5	3.2	3.1	3.4
25	2.9	3.0	3.0	2.5	5.3	4.5	2.6	3.0	2.4	3.1	3.4	3.4
26	2.8	2.9	3.0	6.3	5.3	3.9	2.7	3.0	2.3	3.1	3.4	3.4
27	2.8	2.9	13	9.5	6.6	3.4	3.1	2.9	2.3	3.1	3.2	3.4
28	2.8	2.9	103	4.7	26	3.3	3.4	2.8	2.3	3.2	3.2	4.0
29	2.8	2.9	27	3.4	---	3.3	3.3	2.6	2.3	3.2	3.1	3.5
30	2.8	2.9	11	3.1	---	3.4	3.1	2.7	2.3	3.1	3.1	3.4
31	2.8	---	6.1	2.9	---	3.2	---	2.9	---	3.3	3.1	---
TOTAL	86.7	84.5	239.3	96.6	175.7	534.4	86.5	88.0	72.4	91.7	101.2	99.5
MEAN	2.80	2.82	7.72	3.12	6.27	17.2	2.88	2.84	2.41	2.96	3.26	3.32
MAX	3.4	3.0	103	9.5	26	103	3.4	3.1	3.0	3.3	4.7	4.3
MIN	2.6	2.7	2.9	2.5	2.8	3.2	2.6	2.4	2.0	2.3	3.1	3.1
AC-FT	172	168	475	192	349	1060	172	175	144	182	201	197
CAL YR 1984	TOTAL	1155.4		MEAN	3.16	MAX	103	MIN	2.2	AC-FT	2290	
WTR YR 1985	TOTAL	1756.5		MEAN	4.81	MAX	103	MIN	2.0	AC-FT	3480	

## 09443000 SAN FRANCISCO RIVER NEAR ALMA, NM

LOCATION.--Lat 33°22'05", long 108°54'35", in SW¼SE¼ sec.4, T.11 S., R.20 W., Catron County, Hydrologic Unit 15040004, on right bank 1.2 mi downstream from Alma, 4 mi northwest of Glenwood, 6 mi upstream from Whitewater Creek, and at mile 523.5.

DRAINAGE AREA.--1,546 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1904 to January 1914, fragmentary (see WSP 1313), January 1964 to current year. Prior to October 1911, published as "at Alma".

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

GAGE.--Water-stage recorder. Elevation of gage is 4,840 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Aug. 11, 1912, nonrecording gages at various sites, within 500 ft of each other, 0.8 mi upstream, at different datums. Aug. 11, 1912, to Feb. 2, 1914, nonrecording gage at approximately present site and datum. Jan. 10, 1964 to Nov.1, 1972, at datum 3.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 9, 10, Mar. 1-11, Mar. 14 to Apr. 2. Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,600 acres upstream from station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years (water years 1965-85), 88.4 ft<sup>3</sup>/s, 64,050 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,600 ft<sup>3</sup>/s, Oct. 2, 1983, gage height, 21.44 ft, present datum, from floodmarks in well, from rating curve extended above 9,000 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 18.16 ft and 21.44 ft; no flow many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred Jan. 19 and Oct. 14, 1916, when discharges of 60,000 ft<sup>3</sup>/s were computed at Clifton, Az.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 20	1130	1,340	4.06	Jan. 26	2330	1,100	4.35
Dec. 28	0445	*26,500	*13.64	Mar. 13	0230	4,990	6.79

No flow Sept. 24-28.

REVISIONS.--The daily discharge for Sept. 30, 1983 has been revised to 7,100 ft<sup>3</sup>/s. The revised discharges for September 1983, the 1983 water and calendar years are given below. These figures supersede those published in the reports for 1983 and 1984.

Sept. 30 .... 7100

	TOTAL	MEAN	MAX	MIN	AC-FT
September 1983	9040	301	7100	15	17930
Wtr Yr 1983	63179	173	7100	0	125300
Cal Yr 1983	120192.2	329	22000	2.0	238400

## GILA RIVER BASIN

09443000 SAN FRANCISCO RIVER NEAR ALMA, NM -- Continued

DISCHARGE, IN 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	17	35	25	1210	208	960	290	210	45	3.6	119	3.4
2	16	33	24	593	170	960	270	222	39	3.4	89	3.2
3	155	31	24	548	171	900	240	217	34	3.3	98	3.1
4	173	30	35	421	169	800	237	213	32	3.2	206	2.9
5	119	28	38	343	157	630	237	203	36	3.1	114	3.1
6	70	27	33	267	145	550	239	189	39	3.1	82	3.0
7	44	26	31	221	144	500	242	176	31	2.7	54	2.9
8	29	25	29	227	153	460	249	164	19	2.6	40	2.6
9	18	24	29	228	174	475	248	149	16	2.6	34	2.6
10	14	22	29	207	228	720	243	121	15	2.5	116	2.9
11	12	21	90	195	196	1900	233	114	16	2.5	148	2.9
12	15	20	218	197	200	2600	220	111	14	2.6	76	2.6
13	17	19	279	190	219	3640	209	100	11	6.9	65	2.6
14	15	20	283	181	271	1500	206	88	7.3	8.4	40	2.6
15	13	20	201	177	288	1030	202	79	6.6	5.7	26	2.8
16	14	20	150	172	323	1000	199	70	5.5	4.1	19	2.6
17	16	23	136	165	352	930	196	73	5.3	3.7	14	2.6
18	17	24	149	156	418	850	191	75	5.5	6.1	12	20
19	17	24	226	150	476	800	188	74	5.8	3.8	10	237
20	17	23	896	145	518	760	178	67	5.7	3.3	9.3	164
21	19	23	705	139	589	680	164	54	5.4	5.9	9.3	39
22	24	22	354	136	591	620	167	52	5.2	9.0	38	7.6
23	27	23	235	145	555	550	153	55	4.8	8.8	29	1.9
24	28	31	178	167	478	480	144	60	4.8	11	16	.64
25	32	32	166	182	439	450	130	57	4.4	12	12	.00
26	37	30	161	457	440	420	135	55	4.3	12	25	.00
27	38	26	2090	678	478	400	153	53	4.2	12	39	.00
28	41	24	13100	378	662	380	192	51	4.8	13	20	60
29	40	26	3650	320	---	360	215	47	4.6	24	7.9	161
30	39	27	2260	306	---	350	216	42	3.8	72	4.3	41
31	37	---	1610	272	---	330	---	42	---	62	3.9	---
TOTAL	1170	759	27434	9173	9212	26985	6186	3283	435.0	318.9	1575.7	780.54
MEAN	37.7	25.3	885	296	329	870	206	106	14.5	10.3	50.8	26.0
MAX	173	35	13100	1210	662	3640	290	222	45	72	206	237
MIN	12	19	24	136	144	330	130	42	3.8	2.5	3.9	.00
AC-FT	2320	1510	54420	18190	18270	53520	12270	6510	863	633	3130	1550
CAL YR 1984	TOTAL	39137.29		MEAN	107	MAX	13100	MIN	.00	AC-FT	77630	
WTR YR 1985	TOTAL	87312.14		MEAN	239	MAX	13100	MIN	.00	AC-FT	173200	

## 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 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1931, 1934, 1936-37, 1940-42, 1943-44(M), 1945-47. WSP 1283: Drainage area. WDR NM-78-1: 1977. WDR NM-79-1: 1973, 1975-77 (P).

GAGE.--Water-stage recorder. 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: June 5-25. Water-discharge 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.--58 years, 82.9 ft<sup>3</sup>/s, 60,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,100 ft<sup>3</sup>/s, Oct. 2, 1983, gage height, 18.15 ft recorded, 20.80 ft from outside floodmarks, from rating curve extended above 4,200 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 10.74 ft, 15.6 ft and 20.8 ft; minimum, 1.5 ft<sup>3</sup>/s Aug. 6, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred Jan. 19 and Oct. 14, 1916 when discharges of 60,000 ft<sup>3</sup>/s or greater were computed for station at Clifton, AZ. On Nov. 26, 1905, a peak of 25,000 ft<sup>3</sup>/s was measured (by float-area method) at station at Alma (about 12 mi upstream, drainage area, 1,560 mi<sup>2</sup>); a similar measurement of 21,000 ft<sup>3</sup>/s was made at the Alma station for peak of Dec. 3, 1906.

EXTREMES FOR CURRENT YEAR.--Peaks discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 20	1445	1,460	4.44	Mar. 1	1645	1,140	3.51
Dec. 28	0630	*20,500	*14.83	Mar. 13	0100	5,070	7.43
Jan. 27	0015	1,090	3.52	Sept. 19	2000	1,020	3.30

Minimum discharge, 25 ft<sup>3</sup>/s, Aug. 31, Sept. 1, 2.

DISCHARGE, IN 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	33	53	55	801	330	1030	422	377	77	36	72	27
2	32	53	55	587	261	1030	388	405	75	35	89	28
3	117	54	54	443	234	975	366	396	74	35	84	30
4	207	58	62	381	239	866	364	387	68	37	114	30
5	115	58	63	330	219	698	371	376	67	35	104	30
6	63	58	62	304	199	618	381	333	66	35	73	30
7	46	58	58	297	180	567	405	295	64	36	60	30
8	39	55	58	287	172	532	429	262	62	37	52	32
9	36	54	58	273	178	546	442	248	60	36	49	32
10	33	55	58	240	208	792	447	240	59	35	102	32
11	33	56	71	202	265	1330	437	228	57	32	215	32
12	34	56	210	186	211	2420	432	206	55	32	112	32
13	36	56	261	179	217	3730	431	179	54	34	94	30
14	37	57	287	159	245	1970	417	155	52	38	78	30
15	37	56	225	149	282	1600	410	139	50	37	66	32
16	38	56	170	140	323	1560	400	126	49	34	56	32
17	39	59	130	128	371	1410	383	122	48	32	46	32
18	40	61	123	118	452	1240	373	126	46	35	40	40
19	40	61	161	111	531	1110	358	126	45	37	40	279
20	41	59	890	106	613	1050	314	123	43	34	39	505
21	42	58	817	102	711	935	279	111	42	37	38	234
22	42	58	423	117	747	867	277	102	40	37	39	135
23	47	59	295	99	665	777	241	96	39	40	62	94
24	48	61	236	107	574	659	213	93	38	39	50	73
25	49	62	201	134	499	607	193	93	37	42	46	65
26	53	62	187	331	477	581	196	95	36	41	40	52
27	56	58	1140	880	487	562	214	95	36	42	55	49
28	58	55	12900	655	660	531	261	88	37	41	52	66
29	57	55	4350	498	---	526	286	84	38	47	43	327
30	56	55	1910	482	---	518	329	80	38	49	34	161
31	57	---	1110	439	---	478	---	77	---	69	30	---
TOTAL	1661	1716	26680	9265	10550	32115	10459	5863	1552	1186	2074	2601
MEAN	53.6	57.2	861	299	377	1036	349	189	51.7	38.3	66.9	86.7
MAX	207	62	12900	880	747	3730	447	405	77	69	215	505
MIN	32	53	54	99	172	478	193	77	36	32	30	27
AC-FT	3290	3400	52920	18380	20930	63700	20750	11630	3080	2350	4110	5160
CAL YR 1984	TOTAL	45999	MEAN	126	MAX	12900	MIN	21	AC-FT	91240		
WTR YR 1985	TOTAL	105722	MEAN	290	MAX	12900	MIN	27	AC-FT	209700		

## GILA RIVER BASIN

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to September 1985 (discontinued).

## CHEMICAL AND SEDIMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 06...	0930	54	280	342	7.8	8.5	9.0	10.0	10.0	140	0	39
JAN 07...	1650	275	310	--	8.1	--	9.0	8.0	10.2	--	--	--
APR 02...	1200	368	210	277	8.0	8.4	20.0	15.0	9.5	110	0	31
MAY 29...	1430	89	210	274	8.0	8.2	32.0	23.0	7.2	100	0	30
JUL 10...	1445	34	250	325	8.4	8.2	37.0	30.0	7.0	120	0	36
SEP 17...	1440	33	310	--	10.6	--	38.0	28.0	7.6	--	--	--

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)	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)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 06...	9.5	21	.8	2.0	13	5.4	.40	33	220	46	6.7	50
JAN 07...	--	--	--	--	--	--	--	--	--	--	--	--
APR 02...	7.3	16	.7	2.0	18	6.3	.30	32	180	--	--	--
MAY 29...	7.2	17	.8	2.1	13	4.3	.30	34	180	--	--	--
JUL 10...	8.1	21	.9	2.9	13	7.1	.50	35	210	--	--	--
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 06...	0930	20	10
APR 02...	1200	10	28
MAY 29...	1430	20	17
JUL 10...	1445	20	8

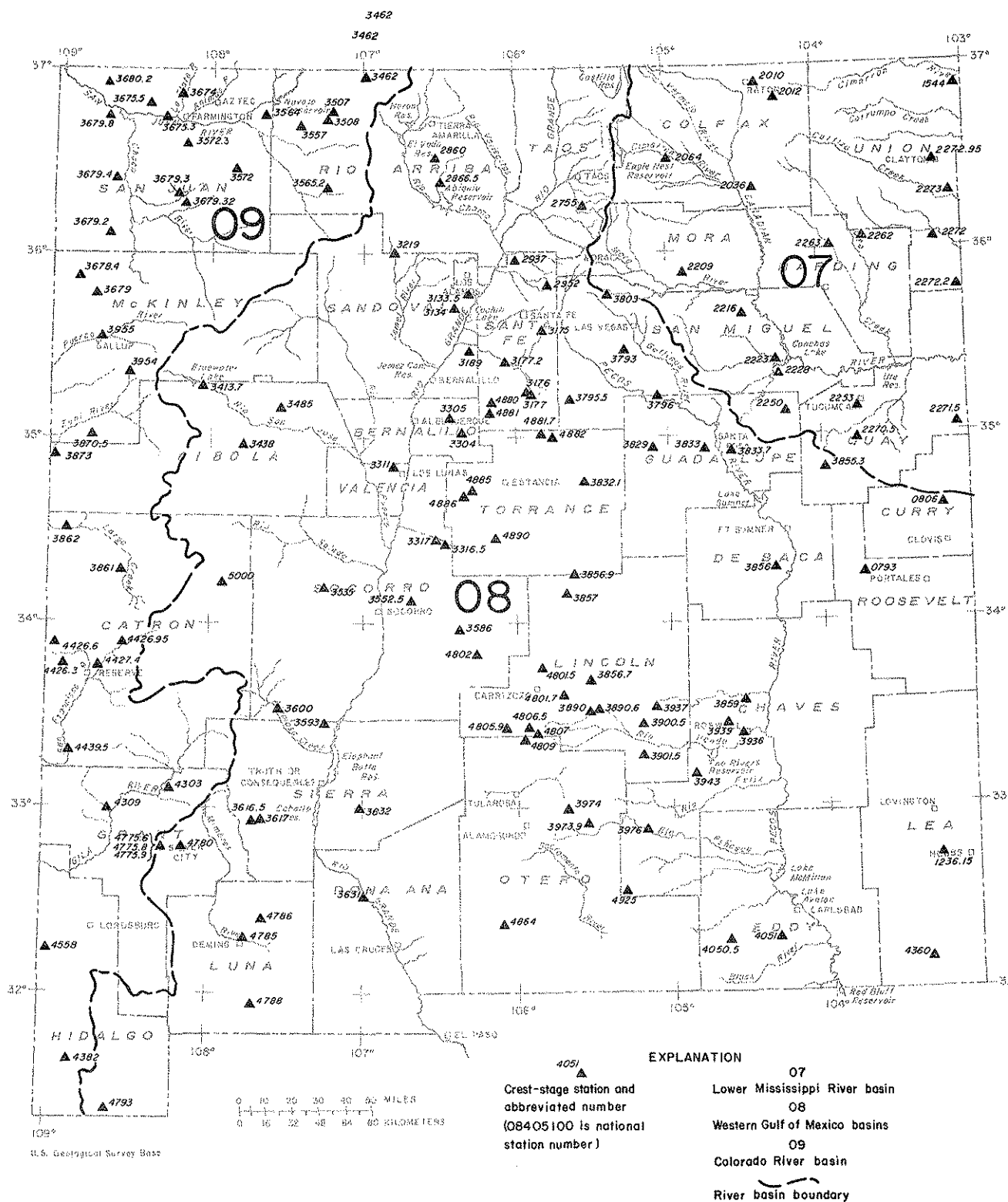


Figure 7.--Map of New Mexico showing location of partial-record stations.

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

Annual maximum discharge at crest-stage partial-record stations						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /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-	5-22-85	3.24	(+)
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-	04- -85	1.00	152
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-	- -85	---	(k)
07203600	Rio del Plano tributary near Taylor Springs.	Lat 36°26'59", long 104°22'34", Colfax County, Hydrologic Unit 11080001, 1.7 mi south of Sauble Ranch, and 11.0 mi northeast of Taylor Springs.	6.71	1971-	05-22-85	8.62	(+)
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-	04-29-85	2.28	36
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-	07-23-85	6.71	208
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.	h1.19	1961-	- -85	---	(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.	h63.9	1959-	05-22-85	4.07	551
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.	h23.0	1971-	06-25-85	7.41	352



## Annual maximum discharge at crest-stage partial-record stations

Annual Maximum Discharge at First Stage Partial Record Stations						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /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 U.S. Highway 66, 1 mi east of Newkirk.	55.0	1954-	09-16-85	2.74	533
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-	05-23-85	4.01	50
07226200	Bueyeros Creek at Bueyeros.	Lat 35°58'10", long 103°41'05", in E½ 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-	05-21-85	3.64	(+)
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-	05-21-85	4.04	420
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.	.36	1952-	08-15-85	7.77	821
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-	06-05-85	2.09	34
07227200	Tramperos Creek near Stead.	Lat 36°04'15", long 103°12'10", in NW¼NW¼ 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-	- -85	---	(k)
07227220	Fullingim Draw near Nara Visa.	Lat 35°45'50", long 103°07'30", Union County, Hydrologic Unit 11090102, upstream from culvert on State Highway 18, 11.3 mi north of Nara Visa.	15.1	1971-	05-22-85	3.11	(+)
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-	05-22-85	2.05	79
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-	05-22-85	3.69	910
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-	- -85	---	(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-	09-30-85	6.97	4,880

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Annual maximum discharge at crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations							Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)	
BRAZOS RIVER BASIN - Continued								
08123615	Monument Draw near Monument.	Lat 32°41'48", long 103°16'10", SW¼SE¼ sec.32, T.18 S., R.37 E., Lea County, Hydrologic Unit 12080003, upstream from culvert on U.S. Highway 62-180, 8 mi west of Hobbs, and 5 mi north of Monument.	17.2	1975-	- -85	---	(k)	
RIO GRANDE BASIN								
08275500	Rio Grande del Rancho near Talpa.	Lat 36°17'52", long 105°34'55", Taos County, Hydrologic Unit 13020101, in Rancho del Rio Grande Grant, 104 mi downstream from Rito de la Olla, 3.2 mi south of Talpa, and 4.3 mi upstream from Rio Chiquito.	83	1952-82* g1983-85	07-16-85	2.70	254	
08286000	Rio Nutrias near Cebolla.	Lat 36°34'45", long 106°30'43", Rio Arriba County, Hydrologic Unit 13020102, upstream from culvert on U.S. Highway 84, 4.8 mi upstream from Canada del Policarpo, and 3.2 mi northwest of Cebolla.	74.3	1980-	04-29-85	2.80	232	
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-	04-29-85	6.50	889	
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.	.72	1971-	08-10-85	7.26	172	
08295200	Rio en Medio near Santa Fe.	Lat 35°47'30", long 105°47'38", Santa Fe County, Hydrologic Unit 13020101, in Santa Fe National Forest, on right bank 300 ft east of Santa Fe Ski Basin parking area, and 10.8 mi northeast of Santa Fe.	0.63	1963-73* 1973-	09-20-85	1.51	12	
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-	03-12-85	2.68	29	
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-	08-10-85	3.54	(+)	
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-	- -85	---	(+)	
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-	09-21-85	4.61	583	
08317700	Tarhole Canyon near Galisteo.	Lat 35°21'55", long 105°50'40", Santa Fe County, Hydrologic Unit 13020201, at culvert on U.S. Highway 285, 6 mi southeast of Galisteo.	2.15	1952-	04-27-85	15.63	415	

## Annual maximum discharge at crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
RIO GRANDE BASIN - Continued							
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.	h1.81	1970-	09-21-85	3.01	133
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-	09-20-85	0.04	110
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-	05-23-58 09-20-85	h5.05 4.37	h530 380
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-	08-24-59 07-15-60 - -61 - -62 - -63 09-04-64 08-03-65 - -66 08-10-67 07-05-68 08-23-69 - -70 07-20-71 08-27-72 - -73 - -74 - -75 08-01-76 - -77 - -78 - -79 08-27-80 06-30-81 07-30-82 07-12-83 - -84 09-20-85	1.12 0.98 (b) (b) (b) 1.03 0.83 (b) 1.10 0.79 0.98 --- 1.33 0.85 --- (b) 0.72 0.98 1.14 --- 0.89 0.77 1.08 0.83 0.76 --- 1.06	41 18 c3 <6 c2 21 10 <6 25 9 18 (k) 44 11 (k) <6 6 18 28 (k) 13 8 24 10 8 (k) 23
08330500	Tijeras Arroyo at Albuquerque.	Lat 35°03'40", long 106°28'40", Bernalillo County, Hydrologic Unit 13020203, 300 ft south of U.S. Highway 66, and 0.4 mi southeast of city limits of Albuquerque.	75.3	1943-48* 1958-	- -85	---	(k)
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.	.16	1952-53 1955-	09-20-85	4.79	190
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-	08-01-85	1.85	219
08331700	Abo Arroyo tributary near Scholle.	Lat 34°24'10", long 106°30'35", Socorro County, Hydrologic Unit 13020203, at culvert on U.S. Highway 60, 2.5 mi southeast of junction of U.S. Highway 60 and State Highway 6, southwest of Scholle.	.23	1954-	08-01-85	15.15	109
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-	09-26-84 08-03-85	h2.81 2.07	h100 32

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Annual maximum discharge at crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations						Annual	Maximum
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
RIO GRANDE BASIN - Continued							
08343800	Sand Canyon near Grants.	Lat 34°42'31", long 107°55'24", Cibola County, Hydrologic Unit 13020207, 23 mi southwest of Acoma Pueblo, and about 30 mi south of junction of I-40 and State Highway 117.	---	hg1981-84	- -84	(b)	(+)
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-	07-29-85	2.20	67
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-	09-04-85	6.58	3,400
08355250	Arroyo del Tajo near Socorro.	Lat 34°02'43", long 106°48'42", Socorro County, Hydrologic Unit 13020203, about 15 mi east of Socorro, and 1/3 mi northeast of Pueblito well.	---	hg1981-84	- -84	---	(k)
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-	- -85	---	(k)
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 U.S. Highway 85, and 13 mi northeast of Monticello.	26.9	1959-	- -85	(b)	(+)
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-	08-03-85	2.91	137
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-	10-11-84	4.59	590
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-	10-11-84	4.65	1,350
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.	.40	1955-	- -85	---	(k)
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-	08-11-85	5.63	1,010
08379300	Tecolote Creek at Tecolote.	Lat 35°27'20", long 105°16'55", San Miguel County, Hydrologic Unit 13060001, on bridge on U.S. Highway 85 at Tecolote.	122	1954-	- -85	---	(k)
08379550	Canon Blanco near Leyba.	Lat 35°13'14", long 105°40'12", San Miguel County, Hydrologic Unit 13060001, 0.2 mi south of White Lakes-Leyba road, and 5.0 mi west of Leyba.	11.2	1971-	04-27-85	4.72	(+)

## Annual maximum discharge at crest-stage partial-record stations

Annual Maximum discharge at crest-stage partial-record stations						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
RIO GRANDE BASIN - Continued							
08379600	Pecos River tributary near Dilia.	Lat 35°12'50", long 105°04'50", Guadalupe County, Hydrologic Unit 13060001, upstream from culvert on U.S. Highway 84, and 1.7 mi northwest of Dilia.	.16	1952-	- -85	(e)	(m)
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-	04-27-85	1.50	70
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 U.S. Highway 66, and 6.8 mi north of Pintada.	.16	1961-	- -85	---	(k)
08383210	Pintada Arroyo tributary near Encino.	Lat 34°48'40", long 105°34'00", Torrance County, Hydrologic Unit 13050002, upstream from culvert on U.S. Highway 285, 0.1 mi south of ranch road, and 12.5 mi northwest of Encino.	h.55	1959-	- -85	---	(k)
08383300	Pintada Arroyo near Santa Rosa.	Lat 34°53'20", long 104°43'50", Guadalupe County, Hydrologic Unit 13060002, at bridge on U.S. Highway 54, and 4.5 mi southwest of Santa Rosa.	896	1959-	08-20-70 08-23-71 08-26-72 10-20-72 - -74 10-10-74 07-24-76 08-14-77 h11-07-77 06-02-79 08-14-80 08-11-81 08-17-82 07-10-83 08-10-84 08-15-85	h5.50 h3.53 8.79 h4.42 h2.24 h7.83 6.29 3.61 h6.16 2.86 5.33 6.28 6.43 3.14 h9.43 3.44	1,650 740 3,950 1,260 184 3,400 2,420 780 2,350 415 1,840 2,410 2,540 545 h4,300 700
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.	.37	1961-	08-15-85	6.68	81
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-	- -85	---	(k)
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-	08-10-84 09-19-85	h1.59 1.93	h700 870
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-	12-20-84	3.59	365
08385690	Bonita Canyon tributary near Corona.	Lat 34°14'04", long 105°37'12", Lincoln County, Hydrologic Unit 13060006, upstream from culvert on U.S. Highway 54, and 1.8 mi southwest of Corona.	a.6	1959-	08-02-85	1.71	31
08385700	Cloud Canyon tributary near Gallinas.	Lat 34°07'53", long 105°40'57", Lincoln County, Hydrologic Unit 13060006, upstream from culvert on U.S. Highway 54, and 2.0 mi southwest of Gallinas.	a10	1957-	04-28-85	3.08	56

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Annual maximum discharge at crest-stage partial-record stations

Annual Maximum discharge at crest-stage partial-record stations						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
RIO GRANDE BASIN - Continued							
8385900	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.	.04	1952-	- -85	---	(k)
8389000	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-	- -85	4.85	(+)
8389060	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.	.72	1955-	- -85	---	(k)
8390050	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.	.23	1971-	- -85	---	(k)
8390150	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-	- -84	---	(k)
8393600	North Spring River at Roswell.	Lat 33°23'47", long 105°32'53", Chavez County, Hydrologic Unit 13060008, Roswell Municipal Golf Course, 2,400 ft upstream from Montana Ave. in Roswell.	19.5	1958-	04-28-85	2.20	1.8
8393700	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-	08-17-85	4.21	(+)
8393900	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-	07-25-85	14.1	320
8394300	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-	- -85	---	(k)
8397390	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-	- -85	---	(k)
8397400	Hyatt Canyon near Cloudercroft.	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 Cloudercroft.	3.08	1953-	- -85	---	(k)
8397600	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-	- -85	<6.19	<25
8405050	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-	07-27-85	1.61	31

## Annual maximum discharge at crest-stage partial-record stations

Annual Maximum discharge at crest-stage partial-record stations						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
RIO GRANDE BASIN - Continued							
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-	05-17-85	3.84	800
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-	- -85	---	(k)
MIMBRES BASIN							
08477560	Little Walnut Creek near Silver City.	Lat 32°48'20", long 108°17'35", Grant County, Hydrologic Unit 13030202, 85 ft upstream from dip on Bear Mountain Road, and 2 mi north of Silver City.	5.10	1959-	09-11-85	1.64	305
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 at Silver City.	10.0	1958-	09-11-85	2.08	170
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 at Silver City.	4.63	1958-	09-11-85	1.95	(+)
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-	09-11-85	(e)	(+)
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-	12-13-84	9.65	(+)
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.	.55	1959-	- -85	(b)	<1
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.	.2	1967-	07-27-85	1.46	<30
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 79, 2.5 mi east of San Luis Pass, and 12 mi west of Antelope Wells.	4.3	1959-	07-25-77 - -78 08-15-79 02-14-80 09- -81 09-19-82 07-21-83 01-25-85	h1.92 h1.40 h1.12 h0.57 h2.52 h1.41 h1.31 1.46	h292 h180 h136 h68 h460 h181 h165 190
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-	10-03-84	1.54	635
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-	10-03-84	2.77	16

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Annual maximum discharge at crest-stage partial-record stations

Annual Maximum discharge at crest-stage partial-record stations						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
TULAROSA BASIN - Continued							
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-	- -85	---	(k)
08480590	Tularosa Valley tributary near Oscura.	Lat 33°24'41", long 106°04'09", Lincoln County, Hydrologic Unit 13050003, 50 ft downstream from culvert on U.S. Highway 54, and 5.2 mi south of Oscura.	3.22	1958-	- -85	(e)	(+)
08480650	Minnie Hall Draw near Three Rivers.	Lat 33°23'40", long 105°58'11", Lincoln County, Hydrologic Unit 13050003, 8 mi northeast of Three Rivers.	9.70	1956-	- -85	j2.17	(+)
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-	07-27-85	2.60	18
08480900	Indian Creek at mouth near Three Rivers.	Lat 33°22'45", long 105°57'25", Otero County, Hydrologic Unit 13050003, 75 ft upstream from diversion dam, 0.35 mi upstream from mouth, and 5.5 mi east of Three Rivers.	10.9	1956-58* 1959-85	- -85	---	(m)
08486400	Tularosa Valley tributary near Orogrande.	Lat 32°24'55", long 106°04'20", Otero County, Hydrologic Unit 13050003, at bridge on U.S. Highway 54, and 2.7 mi northeast of Orogrande.	2.53	1959-	- -85	(e)	(+)
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-	09-21-85	6.73	(+)
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 U.S. Highway 66, 2.5 mi northwest of Edgewood.	a20	1962-	- -85	---	(k)
08488170	Chavez Draw tributary near Clines Corners.	Lat 35°01'06", long 105°49'06", Torrance County, Hydrologic Unit 13050001, 1 mi north of Interstate 40, 13 mi east of Moriarty, and 9 mi west of Clines Corners.	2.73	1968-	04-28-85	3.35	(+)
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 U.S. Highway 66, 7.5 mi west of Clines Corners.	a10	1961-	- -85	---	(k)
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-	08-01-85	1.69	345
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-	08-01-85	2.20	130



## Annual maximum discharge at crest-stage partial-record stations

Annual Maximum Discharge at Crest Stage Partial Record Stations						Annual	Maximum
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
ESTANCIA BASIN - Continued							
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-	08-01-85	4.01	31
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-	- -85	---	(k)
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-	08-03-84 07-22-85	4.61 4.28	23 10
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-	03-12-85	8.12	1,730
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-	09-29-71 09-19-72 10-19-72 07-21-74 04- -75 04- -76 09- -77 - -78 - -79 05-15-80 - -81 09-11-82 09-30-83 11-21-83 03-12-85	3.23 3.43 3.59 3.52 3.56 3.33 3.72 (b) --- 3.49 (b) 3.62 3.70 3.51 3.65	h2 h8 h13 h11 h12 h5 h18 h<1 (k) h10 h<1 h14 h18 h10 15
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-	03-12-85	3.00	148
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-	- -85	---	(k)
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-	09-12-85	1.88	300
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-	- -85	---	(b)
09357200	Gallegos Canyon tributary near Nageezi.	Lat 36°24'59", long 107°51'45", San Juan County, Hydrologic Unit 14080101, at culvert on State Highway 44, 1.1 mi northwest of Huerfano Trading Post, and 12.5 mi northwest of Nageezi.	.20	1952-	07-18-85	1.62	84

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Annual maximum discharge at crest-stage partial-record stations

Annual Maximum discharge at crest-stage partial-record stations						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
SAN JUAN RIVER BASIN - Continued							
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.	.32	1975-	09-08-75	2.43	<17
					07-26-76	4.61	74
					- -77	3.67	42
					09-24-78	h2.53	<17
					- -79	---	(k)
					10-21-79	h2.78	21
					- -80	---	(k)
					- -81	---	(k)
					10-03-81	h3.05	26
					08-26-82	h4.03	54
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 17, and 4.1 mi northwest of Farmington.	1.03	1970-	09-18-85	3.28	99
09367530	Locke Arroyo near Kirtland.	Lat 36°43'51", long 108°17'46", San Juan County, Hydrologic Unit 14080105, on upstream side of abandoned culvert, 200 ft upstream from U.S. Highway 550, 0.4 mi upstream from mouth, and 3.3 mi east of Kirtland.	2.96	1951-	09-18-85	1.68	98
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-	08-19-76	11.89	190
					07-03-77	11.72	142
					09-24-78	10.64	16
					11-12-78	10.68	17
					- -79	---	(k)
					09-10-80	11.27	58
					04-19-81	10.18	2
					10-03-81	11.23	53
					08-22-82	12.24	c315
					01-17-83	11.43	80
09367840	Yazzie Wash near Mexican Springs.	Lat 35°50'40", long 108°53'00", McKinley County, Hydrologic Unit 14080106, 5.0 mi northwest of Mexican Springs, and 23 mi north of Gallup.	2.1	1953-54 1956-	- -85	3.33	180
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-	- -85	3.80	1,080
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-	07-29-85	2.02	(+)
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-	07-18-85	3.64	(+)
09367932	Hunter Wash tributary near Bisti Trading Post.	Lat 36°15'33", long 108°15'06", San Juan County, Hydrologic Unit 14080106, on left bank upstream from culverts, 1.2 mi south of Bisti Trading Post.	8.47	1975-	07-18-85	6.74	(+)
09367940	Pena Blanca Arroyo near Newcomb.	Lat 36°21'39", long 108°43'09", San Juan County, Hydrologic Unit 14080106, on bridge on U.S. Highway 666, 5.2 mi north of Newcomb.	46.8	1967-	- -85	---	(k)

## Annual maximum discharge at crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations							Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)	
SAN JUAN RIVER BASIN - Continued								
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-	03-19-85	2.92	(+)	
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-	- -85	---	(b)	
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-	08-01-85	2.97	550	
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-	- -57 07- -58 08-25-59 09- -60 09- -61 09-25-62 07- -63 09-24-64 08-29-65 - -66 07-23-67 04-22-68 07-24-69 08-09-70 09-29-71 - -72 05- -73 - -74 09-06-75 07-31-76 - -77 - -78 - -79 07-29-80 - -81 09-20-82 - -83 09-26-84 04-28-85	4.00 1.58 7.82 0.37 0.56 0.77 1.43 0.76 7.27 --- 5.29 2.76 1.25 0.14 0.58 --- 4.10 --- 6.24 0.46 2.98 3.59 --- 0.87 4.87 0.21 0.13 2.90 0.69	1,420 440 8,380 200 235 265 405 265 6,200 (k) 2,500 790 365 172 234 (k) 1,470 (k) 3,820 215 880 1,140 (k) 285 2,100 182 172 850 254	
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-	03-12-85	2.00	73	
09387300	Zuni River near NM-AZ State line.	Lat 34°52'35", long 109°02'29", Cibola County, Hydrologic Unit 15020004, about 5 mi southwest of Ojo Caliente.	---	1981-	03-12-85	8.05	2,060	
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-	03-19-83 10-01-83 03-12-85	h1.10 0.64 1.61	h275 h134 500	
09395500	Puerco River at Gallup.	Lat 35°31'49", long 108°44'23", McKinley County, Hydrologic Unit 15020006, on right bank north of the Santa Fe RR freight depot, 1,500 ft upstream from Second Street Bridge at Gallup.	558	1940-46* 1957-77 1977-82* 1983-	- -85	5.10	730	
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 Copperas Canyon Road, and 15 mi north of Pinos Altos.	3.95	1963-	12-28-84	2.66	121	

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Annual maximum discharge at crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations						Annual Maximum	
Station No.	Station Name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
GILA RIVER BASIN - Continued							
09430900	Duck Creek at Cliff.	Lat 32°58'03", long 108°36'36", Grant County, Hydrologic Unit 15040002, at Cliff downstream from bridge on State Highway 211, and 0.6 mi upstream from mouth.	a228	1957-	10-03-84	7.32	4,000
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-	09-16-85	4.60	600
09442630	Mail Hollow near Luna.	Lat 33°47'38", long 108°56'59", Catron County, Hydrologic Unit 15040004, upstream from culvert on U.S. Highway 180, 2.3 mi south of Luna.	4.20	1970-	08-03-85	3.36	89
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-	10-03-84	2.65	455
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-	09-20-85	2.06	325
09442740	Tularosa River near Reserve.	Lat 33°44'00", long 108°42'10", Catron County, Hydrologic Unit 15040004, 150 ft west of Eagle Peak Lookout road, and 3.3 mi northeast of Reserve.	426	1956-	- -85	(e)	(+)
09443950	Red Colt Canyon at Pleasanton.	Lat 33°15'30", long 108°52'15", Catron County, Hydrologic Unit 15040004, upstream from culvert on U.S. Highway 180, and 1 mi south of Pleasanton.	3.00	1959-	09-19-85	8.65	(+)
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-	08-11-84 - -85	1.90 ---	n<100 (k)

&lt; Less than.

+ Discharge not yet determined.

\* Operated as continuous-record gaging station.

a Approximately.

b Peak too low to register on gage.

c Estimated.

d From floodmark.

e Gage height not determined.

f Contributing area.

g Discontinued at end of year.

h Revised.

j May not have been peak for year.

k No evidence of any flow during water year.

m No record.

n Correction.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations are given in the following table.

Discharge measurements made at miscellaneous sites during water year 1985						
Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
ARKANSAS RIVER BASIN						
Chicorica Creek 07199555	Canadian River	Lat 36°57'13", long 104°23'06", Colfax County, Hydrologic Unit 11080001, 200 ft downstream from Lake Alice, and 4.2 mi northeast of Raton.	a15	1983-	10-11-84	0.48
					11-30-84	0.27
					01-10-85	0.28
					02-14-85	0.19
					03-28-85	10.1
					05-09-85	15.8
					06-20-85	1.29
					08-01-85	0.08
					09-11-85	0.14
Raton Creek 07201050	Chicorica Creek	Lat 36°48'01", long 104°24'28", Colfax County, Hydrologic Unit 11080001, at mouth 7.5 mi south of Raton.	a60	1984-	10-11-84	1.95
					11-29-84	1.77
					01-10-85	1.08
					02-14-85	1.43
					03-28-85	2.56
					05-09-85	1.63
					06-20-85	1.47
					08-01-85	0.15
					09-12-85	5.18
RIO GRANDE BASIN						
Turkey Creek 08291900	Santa Clara Creek	Lat 35°58'43", long 106°26'03", Sandoval County, Hydrologic Unit 13020101, at mouth on Santa Clara Indian Reservation, 400 ft downstream from boundary with Baca Location Land Grant, and 19 mi west of Espanola.	a4	1984-	07-22-85	1.03
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	02-08-85	7.34
				1958-71	05-20-85	6.77
				1972-		
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-	10-01-84	3.73
					01-08-85	4.23
					04-02-85	3.63
					07-18-85	2.85
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	10-31-84	12.6
				1919-20	01-30-85	13.1
				1923	04-23-85	13.2
				1935	08-01-85	11.8
				1952-70 1974-		
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-	10-31-84	1.84
					01-30-85	1.41
					04-23-85	0.66
					08-01-85	0.58
GILA RIVER BASIN						
Mangas Creek	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-	09-18-85	2.15

a estimated

## SEEPAGE INVESTIGATIONS

## RIO GRANDE BASIN

## Sacramento River seepage investigation

REACH.--On Sacramento River from initial flow point (river mile 23.4) upstream from gaging station Sacramento River near Sunspot (08492900) to point of zero flow (river mile 3.3), a distance of 20.1 river miles. River miles are referenced upstream on the Sacramento River from the mouth of Surveyors Canyon, which is designated as river mile 0.0.

DATE.--September 25, 1985.

WEATHER.--Weather was favorable for investigation; there was no precipitation for several days prior to run.

STREAMFLOW.--Data from the Sacramento River near Sunspot gage shows that the investigation was made during a period of base flow (sustained fair weather streamflow).

The reach contains all flow on the Sacramento River. Surface flow begins at river mile 23.4 and is present for 0.8 mile. Surface flow reappears at river mile 22.4 and continues downstream 19.1 river miles to river mile 3.3. All measurements were made within this latter part of the reach.

Measurements indicate gains and losses from river mile 22.2 to 13.0 with a small diversion at Sacramento Lake and another immediately downstream from the mouth of Scott Able Creek. Tributary flow was considered a contribution and not a gain: diversion was considered a deduction and not a loss. Diversions were not possible to measure with the conventional measuring equipment used in this seepage investigation. Gains or losses were not calculated for those reaches with diversions or tributary inflow.

Specific conductance measured during the seepage run generally decreased downstream through the reach.

REMARKS.--The investigation is rated as good downstream from river mile 17.6 and fair upstream from that point because the magnitude of the two diversions, though relatively small, is unknown. Indicated gains or losses may be significantly in error due to small inaccuracies in open-channel measurements magnified by the small volumes of discharge. All flowing tributaries were measured and included in this tabulation.

RIO GRANDE BASIN  
Sacramento River seepage investigations

River Mile	Stream	Location	Time	Water Temp (°C)	Spe- cific Conduc- tance (US/CM)	Discharge, in ft <sup>3</sup> /s		
						Main Stream	Trib	Gain or Loss
22.2	Sacramento River	Lat 32°45'31", long 105°46'54", T.18 S., R.11 E. (no sections on map), 2 mi upstream from Moore Canyon.	1005	9.5	595	0.49	--	--
21.9	....do....	Lat 32°45'18", long 105°46'52", T.18 S., R.11 E. (no sections on map), 0.25 mi downstream from Moore Canyon.	1100	11.0	600	2.53	--	+2.04
21.2	....do....	Lat 32°44'48", long 105°46'32", T.18 S., R.11 E. (no sections on map), approx. 0.4 mi down- stream from Sacramento Lake.	1140	12.5	520	2.15	--	-0.38
20.0	....do....	Lat 32°43'46", long 105°46'16", T.18 S., R.11 E. (no sections on map), 1.25 mi downstream from Danley Canyon.	1220	16.0	460	1.76	--	-0.39
18.2	....do....	Gaging station near Sunspot (08492900), lat 32°42'50", long 105°45'15", in SW¼NE¼ sec.30, T.18 S., R.12 E., 3.2 mi downstream from Sacramento Lake.	1315	13.0	510	3.95	--	+2.19
17.6	Scott Able Creek	Lat 32°42'35", long 105°44'34", in SE¼NW¼SW¼ sec.29, T.18 S., R.12 E., approx. 80 ft upstream from mouth.	1400	16.0	375	--	+1.03	--
17.6	Sacramento River	Lat 32°42'32", long 105°44'37", in SE¼NW¼SW¼ sec.29, T.18 S., R.12 E., approx. 80 ft down- stream from mouth of Scott Able Creek.	1430	14.5	440	4.54	--	--
13.0	....do....	Lat 32°39'29", long 105°42'15", in SE¼NW¼ sec.15, T.19 S., R.12 E., entrance crossing to Circle Cross Headquarters.	1525	14.0	440	6.49	--	+1.95
11.3	....do....	Lat 32°38'22", long 105°41'31", in NE¼NW¼SW¼ sec.23, T.19 S., R.12 E., at Timberon Airport.	1625	15.0	370	6.20	--	-0.29
8.8	Carissa Creek	Lat 32°37'23", long 105°39'42", in SE¼NE¼SE¼ sec.25, T.19 S., R.12 E., approx. 200 ft upstream from mouth.	1715	15.0	385	--	+1.40	--
8.4	Sacramento River	Lat 32°37'18", long 105°39'23", in NE¼SW¼SW¼ sec.30, T.19 S., R.13 E., 0.25 mi downstream from mouth of Carissa Creek.	1750	14.0	355	6.69	--	--
4.6	....do....	Lat 32°35'41", long 105°36'08", in SE¼NE¼SW¼ sec.3, T.20 S., R.13 E., approx. 0.9 mi upstream from Ben Williams Canyon.	1840	17.0	330	2.89	--	-3.80

## 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 1984 TO SEPTEMBER 1985

## LITTLE COLORADO RIVER BASIN

09386187 CINDER CONE LAKE NR QUEMADO, NM (LAT 34°26'42" LONG 108°46'07")  
(LOCAL IDENTIFIER - 03N.18W.31.114)

DATE	TIME	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (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)
JUL 18...	1255	151000	137000	8.2	7.9	22.5	25.0	7000	6800	500	1400	38000
AUG 13...	1530	152000	133000	7.8	7.8	28.5	24.0	7500	7300	700	1400	43000
SEP 17...	1300	153000	144000	8.0	7.8	21.0	23.0	8400	8200	390	1800	50000

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	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)
JUL 18...	200	310	8300	77000	.50	26	10	119000	130000	.19	3	<100
AUG 13...	220	310	8800	68000	.60	25	9.7	131000	120000	.15	--	--
SEP 17...	240	290	12000	88000	.60	27	8.4	140000	150000	.18	--	--

DATE	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)	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)	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)
JUL 18...	1	70	2	450	3	150	130	<1	<1	2500	60
AUG 13...	--	--	--	--	--	360	--	--	--	2000	--
SEP 17...	--	--	--	--	--	390	--	--	--	14000	--

09386189 ZUNI SALT LAKE NR QUEMADO, NM (LAT 34°27'07" LONG 108°46'08")  
(LOCAL IDENTIFIER - 03N.18W.30.314)

DATE	TIME	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
JUL 18...	1400	222000	200000	7.5	7.4	24.0	28.5	17000	16000	390
AUG 13...	1530	227000	193000	7.4	7.4	28.5	24.5	14000	14000	480
SEP 17...	1500	219000	205000	7.8	7.4	21.0	19.5	18000	18000	310



## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## LITTLE COLORADO RIVER BASIN -- Continued

09386189 ZUNI SALT LAKE NR QUEMADO, NM (LAT 34°27'07" LONG 108°46'08") -- Continued  
(LOCAL IDENTIFIER - 03N.18W.30.314)

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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SI02) (00955)
JUL 18...	3800	120000	410	820	24000	190000	.40	65	9.4
AUG 13...	3100	110000	410	710	21000	180000	.40	59	8.1
SEP 17...	4300	120000	390	850	34000	220000	.50	74	8.4

DATE	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)	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)
JUL 18...	334000	340000	.20	8	200	<1	220	<1
AUG 13...	336000	320000	.14	--	--	--	--	--
SEP 17...	339000	380000	.18	--	--	--	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	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)
JUL 18...	2	940	<1	1100	370	1	<1	9000	160
AUG 13...	--	--	--	810	--	--	--	5700	--
SEP 17...	--	--	--	910	--	--	--	2200	--

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. Under the heading SAMPLE SOURCE, numerical values are used to indicate method of sampling: 26 indicates automatic pump sample, 29 indicates dip or grab sample, and 40 indicates single-stage sample.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## RIO GRANDE BASIN

## LATIR LAKE 9 NR AMALIA, NM (LAT 36°47'58" LONG 105°28'15")

DATE	TIME	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH LAB (STAND- ARD UNITS) (00403)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (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)
JUL 25...	1100	34	8.6	8	12	0	4.3	.40	1.2	.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- TOTAL (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
JUL 25...	.30	1.2	.25	<.06	.03	5.0	21	<.10	<.10	.040

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, ORTH- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	C-13/ C-12 STABLE ISOTOPE RATIO PER MIL (82081)
JUL 25...	.56	.030	<.010	3.7	2.5	30	<10	16	-8.8

## LATIR LAKE 3 AT 30' DEPTH NR AMALIA, NM (LAT 36°48'08" LONG 105°27'15")

DATE	TIME	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH LAB (STAND- ARD UNITS) (00403)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (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)
JUL 23...	1600	92	7.7	8	41	3	15	.90	2.2	.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- TOTAL (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
JUL 23...	.40	3.7	.31	.20	.05	6.4	52	<.10	<.10	.080

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, ORTH- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	C-13/ C-12 STABLE ISOTOPE RATIO PER MIL (82081)
JUL 23...	.110	.42	<.010	.010	3.2	3.6	<10	16	-3.4

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

RIO GRANDE BASIN -- Continued

LATIR LAKE 3 AT 10' DEPTH NR AMALIA, NM (LAT 36°48'08" LONG 105°27'15")

DATE	TIME	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH LAB (STAND- ARD UNITS) (00403)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L 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)
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JUL 23...	1500	68	7.7	6	30	3	11	.70	1.7
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DATE	TIME	SODIUM AD- SORP- TION RATIO (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	NITRO- GEN, NO2+NO3 DIS- TOTAL (MG/L AS N) (00630)
------	------	--	--	--	--	---	---	--	---	---

JUL 23...	.1	.30	4.5	.20	.20	.04	5.6	41	<.10
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DATE	TIME	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- PHORUS, ORTH- DIS- TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTH- 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)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
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JUL 23...	<.10	.040	.46	.020	.010	3.7	30	<10	16
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LATIR LAKE 8 OUTFLOW NR AMALIA, NM (LAT 36°48'13" LONG 105°27'58")

DATE	TIME	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH LAB (STAND- ARD UNITS) (00403)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L 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)
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JUL 24...	1200	39	7.6	20	17	2	6.0	.50	1.1
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DATE	TIME	SODIUM AD- SORP- TION RATIO (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, NO2+NO3 DIS- TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
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JUL 24...	.1	2.4	2.7	<.20	<.10	.06	4.9	<.10	<.10
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DATE	TIME	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHORUS, ORTH- DIS- TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTH- DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
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JUL 24...	.020	.58	.030	<.010	3.6	3.3	<10	<10	13
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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
RIO GRANDE BASIN -- Continued

LATIR LAKE 8 NR AMALIA, NM (LAT 36°48'13" LONG 105°28'04")

DATE	TIME	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH LAB (STAND- ARD UNITS) (00403)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L 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)
JUL 24...	1100	40	7.7	20	16	0	5.9	.40	1.1	.1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)
JUL 24...	.30	2.3	<.20	<.10	.02	4.9	<.10	<.10	.100

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTH- DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	C-13/ C-12 STABLE ISOTOPE RATIO PER MIL (82081)
JUL 24...	1.8	.040	.010	2.6	3.2	10	<10	10	-3.2

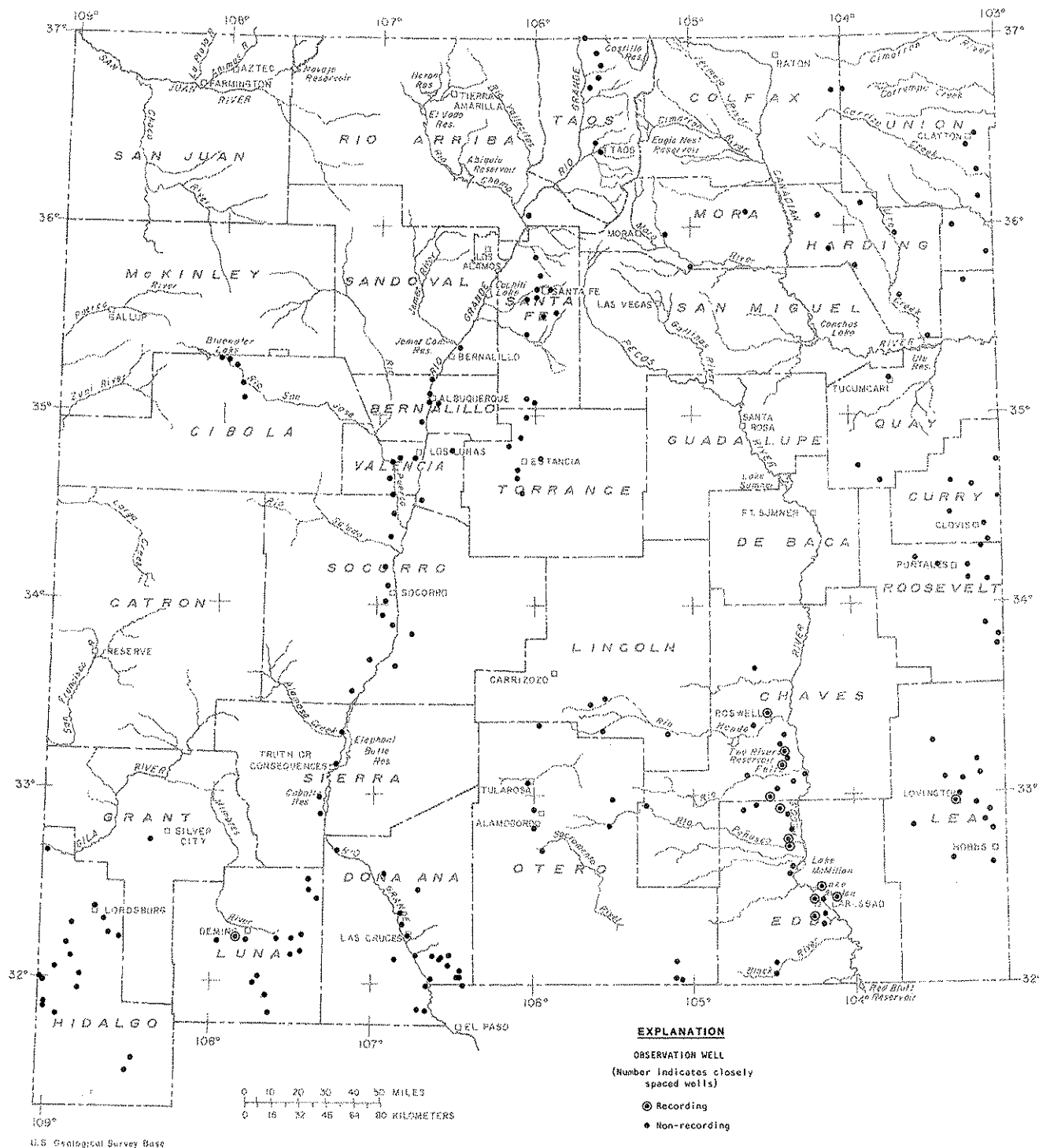


Figure 8.-- Location of observation wells in New Mexico.

## GROUND-WATER LEVELS

BERNALILLO COUNTY  
Albuquerque Area

345730106431001. Local number, 09N.02E.34.322.

LOCATION.--Lat 34°57'30", long 106°43'10", Hydrologic Unit 13020203. Owner: Denison.

AQUIFER.--Santa Fe Group of middle (?) Miocene to Pleistocene (?) Age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 12 in., depth unknown.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,910 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.38 ft above land-surface datum.

PERIOD OF RECORD.--July 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.22 ft below land-surface datum, Aug. 10, 1973; lowest, 16.30 ft below land-surface datum, Jan. 12, 1967.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan.	not measured
July 11	12.56

350655106395001. Local number, 10N.02E.12.223.

LOCATION.--Lat 36°06'55", long 106°39'50", Hydrologic Unit 13020203. Owner: City of Albuquerque.

AQUIFER.--Alluvium and Santa Fe Group.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth 950 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,962 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top north side of casing, 6.00 ft above land-surface datum.

PERIOD OF RECORD.--Apr. 1953, Jan. 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.10 ft below land-surface datum, Apr. 16, 1953, lowest measured, 34.74 ft below land-surface datum, Aug. 31, 1964.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 24	30.89
July 30	31.81

350415106403001. Local number, 10N.02E.24.413.

LOCATION.--Lat 35°04'15", long 106°40'30", Hydrologic Unit 13020203. Owner: City of Albuquerque.

AQUIFER.--Alluvium and Santa Fe Group.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in., depth and casing information not available.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,945 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top east side of casing, 5.50 ft above land-surface datum.

PERIOD OF RECORD.--Nov. 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.72 ft below land-surface datum, July 30, 1985; lowest measured, 27.05 ft below land-surface datum, Aug. 12, 1976.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan.	not measured
July 30	9.72

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 of Permian Age.

WELL CHARACTERISTICS.--Drilled irrigation artesian 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	280.44
Sept. 10	277.25

CHAVES COUNTY  
Roswell Basin

332615104303601. Local number, 10S.24E.21.212.

LOCATION.--Lat 33°26'15", long 104°30'36", Hydrologic Unit 13060008. Owner: U.S. Geological Survey.

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.

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 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	59.25	56.28	54.41	52.81	51.39	51.31	55.68	56.18	57.60	59.03	57.22	59.59
10	58.67	55.95	54.08	52.62	51.26	51.61	55.65	56.37	57.18	60.11	58.27	59.28
15	58.01	55.72	53.78	52.22	51.13	52.37	56.01	56.39	56.15	59.83	58.50	58.88
20	57.71	55.45	53.54	52.20	50.98	52.30	57.52	56.11	56.36	59.62	59.28	58.49
25	57.18	54.85	53.45	52.01	50.90	52.64	57.75	56.72	56.68	59.65	59.04	57.72
EOM	56.54	54.63	53.05	51.66	50.99	54.02	56.71	57.10	57.64	57.54	59.80	56.76

WTR YEAR 1985 HIGHEST 50.90 FEB 25, 1985 LOWEST 62.65 JUL 12, 1985

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 irrigation water-table 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, 16.01 ft below land-surface datum, Jan. 21, 1985; lowest measured, 21.72 ft below land-surface datum, Aug. 26, 1980.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	16.01
Sept. 10	pumping

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 unused water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	76.25
Sept. 10	76.97

331525104245201. (formerly 331205104245101) Local number, 12S.25E.23.344.

LOCATION.--Lat 33°12'05", long 104°24'51", Hydrologic Unit 13060007. Owner: U.S. Geological Survey.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled observation artesian 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, 21.08 ft below land-surface datum, Feb. 5, 1985; lowest, 199.68 ft below land-surface datum, June 20, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	61.04	35.13	27.71	23.78	21.08	30.80	---	---	108.67	129.72	---	99.52
10	55.64	33.68	27.58	23.36	21.50	38.13	---	---	90.71	---	---	93.39
15	52.66	32.75	26.72	22.77	21.66	58.75	---	73.51	70.44	---	---	87.50
20	47.85	31.48	25.96	---	21.79	51.57	---	63.60	86.04	128.30	---	78.54
25	43.05	29.67	25.17	22.42	23.39	---	108.10	84.80	92.01	132.89	102.54	61.55
EOM	36.74	28.47	24.50	21.49	27.55	---	79.22	108.59	108.65	---	102.92	52.18

WTR YEAR 1985 HIGHEST 21.08 FEB 5, 1985 LOWEST 143.88 JUL 18, 1985

## GROUND-WATER LEVELS

CHAVES COUNTY  
Roswell Basin

331524104245101. Local number, 12S.25E.23.344A.  
 LOCATION.--Lat 33°15'24", long 104°24'51", Hydrologic Unit 13060007. Owner: U.S. Geological Survey.  
 AQUIFER.--Valley Fill.  
 WELL CHARACTERISTICS.--Drilled 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.  
 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 1984 TO SEPTEMBER 1985  
 DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	109.66	109.43	109.12	108.70	108.23	107.88	107.67	107.77	107.88	107.90	108.02	108.16
10	109.64	109.37	108.98	108.76	108.20	107.76	107.70	107.72	107.81	107.97	108.09	108.16
15	109.44	109.36	108.97	108.49	107.92	107.81	107.68	107.82	107.85	108.05	108.09	108.13
20	109.53	109.31	108.82	108.68	107.77	107.86	107.69	107.80	107.76	108.05	108.16	108.16
25	109.56	109.16	108.90	108.57	107.86	107.73	107.66	107.69	107.81	108.09	108.15	108.17
EOM	109.38	109.13	108.78	108.41	107.81	107.75	107.84	107.79	107.87	108.03	108.16	108.18

WTR YEAR 1985 HIGHEST 107.60 APR 3, 1985 LOWEST 109.69 OCT 6, 1984

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 irrigation water-table 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: Hole in pump base, 1.27 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	83.13
Sept. 10	86.80

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.--Lost records, 16 days, July-Aug.  
 PERIOD OF RECORD.--1940 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.60 ft above land-surface datum, Feb. 4-5, 1985; lowest, 198.30 ft below land-surface datum, July 18, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
 DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	60.78	28.91	20.25	15.32	12.60	25.35	124.37	57.54	120.55	143.56	146.60	106.20
10	51.75	26.94	19.50	15.15	12.77	37.57	122.30	84.87	96.87	155.18	124.63	97.38
15	44.78	26.38	18.28	15.08	13.19	63.72	111.38	102.60	70.52	146.15	117.50	91.37
20	42.62	25.08	17.56	15.23	14.34	52.02	123.81	89.82	87.47	---	126.00	79.63
25	35.67	22.39	16.81	13.72	16.95	76.27	122.96	90.70	102.28	---	101.42	61.38
EOM	30.94	21.00	16.42	13.05	22.14	86.71	80.40	119.28	120.00	---	111.77	47.81

WTR YEAR 1985 HIGHEST 12.60 FEB 4-5, 1985 LOWEST 163.52 JUL 11, 1985

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 of Permian Age.  
 WELL CHARACTERISTICS.--Drilled stock water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 23	307.95
Sept. 23	309.03



CHAVES COUNTY  
Roswell Basin

330640104174501. Local number, 14S.26E.12.433B.

LOCATION.--Lat 33°06'40", long 104°17'45", Hydrologic Unit 13060007. Owner: C. B. Donaghay.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	19.68
Sept. 10	18.15

325845104295501. Local number, 15S.24E.25.433.

LOCATION.--Lat 32°58'45", long 104°29'55", Hydrologic Unit 13060007. Owner: U.S. Geological Survey.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 8 5/8 in., depth 910 ft, casing 0-548 ft.

INSTRUMENTATION.--Digital recorder, 1-hour punch.

DATUM.--Elevation of land-surface datum is 3,528.92 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 3.15 ft above land-surface datum.

REMARKS.--+ indicates water level above land surface. Lost record, many days, due to well flowing and recorder malfunction.

PERIOD OF RECORD.--1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.67 ft above land-surface datum, Jan. 23, 1984; lowest, 102.30 ft below land-surface datum, July 17, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.27	.66	+1.33			---	---	---	50.82	---	---	---
10	7.39	+0.24	---			---	---	---	30.78	69.37	---	---
15	6.38	.11	---			---	---	---	35.22	58.11	---	---
20	4.01	+0.30	---			---	64.36	---	47.29	---	---	---
25	2.27	+1.29	---			---	55.29	59.07	---	---	---	6.31
DOM	.62	+1.30	---			40.19	26.56	---	---	---	---	3.06
WTR YEAR 1985 HIGHEST +1.33 DEC 1, 1984				LOWEST 71.64 APR 20, 1985								

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 29	31.71
Aug. 13	28.72

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 of Permian Age.

WELL CHARACTERISTICS.--Drilled industrial water-table well, diameter 16 to 12 in., depth 158 ft, perforated to 58 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, 19.86 ft below land-surface datum, Feb. 20, 1953; lowest measured, 39.08 ft below land-surface datum, Aug. 1, 1972.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 6	20.97
Sept. 12	21.84

GROUND-WATER LEVELS  
CIBOLA COUNTY  
Grants-Bluewater Area

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 of Permian Age.  
WELL CHARACTERISTICS.--Drilled unused artesian 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 30	76.55
Aug. 14	74.23

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 unused artesian 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, 93.26 ft below land-surface datum, Aug. 13, 1985; lowest measured, 274.81 ft below land-surface datum, Jan. 23, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan.	not measured
Aug. 13	93.26

351610107513501. Local number, 12N.11W.14.213.  
LOCATION.--Lat 35°16'10", long 107°51'35", Hydrologic Unit 13020207. Owner: Duane Berryhill.  
AQUIFER.--Alluvium of Quaternary Age.  
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in., depth 130 ft, surface casing 5 ft.  
INSTRUMENTATION.--Periodic steel-tape measurements.  
DATUM.--Elevation of land-surface datum is 6,605.4 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 4 in casing, 3.70 ft above land-surface datum (since Feb. 10, 1966).  
PERIOD OF RECORD.--June 1949 to current year.  
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.13 ft below land-surface datum, Sept. 14, 1985; lowest measured, 101.39 ft below land-surface datum, June 10, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 29	82.52
Sept. 12	82.13

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 unused water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	7.91
Aug. 7	8.58

## GROUND-WATER LEVELS

COSTILLA COUNTY (in Colorado)  
Sunshine Valley

427

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 unused water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	129.54
Sept. 23	136.83

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 14	282.55
Aug. 6	291.29

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 of Pliocene Age.

WELL CHARACTERISTICS.--Drilled unused water-table 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, level with concrete base, 0.40 ft above land-surface datum (since 1967).

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, 360.64 ft below land-surface datum, July 23, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 13	354.73
Aug. 6	355.16

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 abandoned 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 10	443.07
Aug. 6	442.53

## GROUND-WATER LEVELS

CURRY COUNTY  
Clovis Area

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 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, 442.44 ft Aug. 30, 1984.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 11	442.42
Aug. 6	pumping

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 irrigation water-table 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, 0.10 ft above concrete base and 0.70 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 289.09 ft below land-surface datum, Aug. 6, 1985; lowest measured, 295.98 ft below land-surface datum, Aug. 15, 1977.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 13	289.10
Aug. 6	289.09

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 25	12.04
Aug. 15	10.48

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Mar. 7	20.77
Aug. 15	20.80

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.--San Andres Limestone of Permian Age.  
WELL CHARACTERISTICS.--Drilled stock water-table well, 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 24	261.09
Sept. 13	261.23

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 irrigation artesian 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, 81.07 ft below land-surface datum, Jan. 24, 1985; lowest measured, 100.54 ft below land-surface datum, Aug. 27, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 24	81.07
Sept. 13	84.10

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 unused water-table 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, 24.41 ft below land-surface datum, July 17, 1961; lowest measured, 31.66 ft below land-surface datum, Aug. 8, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 24	30.35
Sept. 13	29.69

325638104274801. Local number, 16S.25E.11.111A.  
LOCATION.--Lat 32°56'38", long 104°27'48", Hydrologic Unit 13060007. Owner: U.S. Geological Survey.  
AQUIFER.--Valley Fill.  
WELL CHARACTERISTIC.--Drilled 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.  
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, 64.28 ft below land-surface datum, Sept. 20, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	62.45	61.89	61.45	61.07	60.85	60.74	61.81	62.60	63.06	63.65	63.99	64.16
10	62.35	61.81	61.37	61.04	60.83	60.84	62.00	62.66	63.17	63.73	64.01	64.16
15	62.24	61.74	61.29	60.98	60.81	60.99	62.18	62.75	63.28	63.80	64.05	64.19
20	62.16	61.64	61.23	60.98	60.77	61.17	62.35	62.83	63.40	63.88	64.09	64.28
25	62.09	61.55	61.21	60.92	60.75	61.35	62.45	62.91	63.49	63.94	64.14	64.22
EOM	61.97	61.51	61.13	60.88	60.73	61.60	62.54	62.99	63.53	63.97	64.14	64.14
WTR YEAR 1985	HIGHEST	60.73	MAR 1-3, 1985	LOWEST	64.28	SEPT 20, 1985						

## GROUND-WATER LEVELS

EDDY COUNTY  
Roswell Basin

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 irrigation water-table 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: Hole in top of pump, west side, 0.30 ft above top of casing (since 1975).

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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 24	105.07
Sept. 13	112.85

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 public-supply artesian 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, 546.15 ft below land-surface datum, Dec. 31, 1968; lowest measured, 553.18 ft below land-surface datum, Aug. 7, 1974.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 24	535.07
Sept. 13	537.75

324930104234501. Local number, 17S.26E.21.112

LOCATION.--Lat 32°49'30", long 104°23'45", Hydrologic Unit 13060007. Owner: Western Land Co., Inc.

AQUIFER.--Artesia Group.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 12 in., depth 242 ft, cased to 242 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 3,373 ft above National Geodetic Vertical Datum of 1929. Measuring point: 3/4 in. plug on discharge pipe, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--Jan. 1938 to Jan. 1945, Jan. 1947 to Aug. 1958, Jan. 1960 to Jan. 1963, Jan. 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.23 ft below land-surface datum, Jan. 13, 1955; lowest measured, 109.80 ft below land-surface datum, Aug. 12, 1981.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan.	not measured
Sept. 13	pumping

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 observation artesian 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.--Depth to artesian aquifers 768 ft, 820 ft, 889 ft, and 999 ft. Lost record, 21 days, Mar. -Apr.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 71.79 ft below land-surface datum, Jan. 26, 1962; lowest, 209.15 ft below land-surface datum, July 31-Aug. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	132.58	109.87	99.79	92.21	86.11	86.67	---	111.56	138.93	154.21	145.78	158.02
10	127.00	108.29	98.14	91.18	85.28	92.19	---	113.65	132.77	153.96	152.30	153.15
15	121.71	106.08	96.89	89.76	85.03	99.32	---	118.16	129.22	149.81	151.68	144.25
20	117.86	104.35	95.74	89.17	84.68	102.98	142.06	125.85	130.13	149.74	152.22	133.50
25	114.86	102.22	94.72	88.06	84.80	111.14	139.17	134.31	140.04	151.40	155.55	125.69
DOM	111.78	101.11	93.21	86.95	85.22	---	118.71	142.08	148.04	143.36	161.50	120.97
WTR YEAR 1985	HIGHEST		84.50	FEB 18, 1985	LOWEST	163.62	AUG 30, 1985					

EDDY COUNTY  
Roswell Basin

324620104255101. Local number, 18S.26E.06.442B.

LOCATION.--Lat 32°46'20", long 104°25'51", Hydrologic Unit 13060007. Owner: U.S. Geological Survey.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled 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.--Lost record, several days, due to recorder malfunction.

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 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	135.65	131.37	127.42	---	121.19	119.51	124.08	128.97	131.58	134.32	136.16	138.24
10	135.09	130.61	---	---	120.88	119.26	125.29	128.37	132.04	135.23	136.31	138.28
15	134.14	129.98	---	---	120.63	119.67	126.69	128.45	132.16	135.73	136.66	138.41
20	133.55	129.37	---	---	119.88	120.00	128.23	128.96	132.24	136.05	137.09	138.09
25	133.07	128.28	125.15	122.32	119.72	121.06	129.18	129.70	132.73	136.05	137.57	137.36
EOM	131.98	127.82	124.30	121.83	119.50	122.86	129.74	130.74	133.53	136.22	138.03	136.55

WTR YEAR 1985 HIGHEST 119.17 MAR 3, 1985 LOWEST 138.56 SEPT 14, 1985

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 observation water-table 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.

PERIOD OF RECORD.--Aug. 1951 to current year.

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 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	121.69	121.78	121.81	121.79	121.84	121.90	121.85	121.86	122.00	121.92	122.01	122.05
10	121.72	121.80	121.72	121.95	121.85	121.76	121.82	121.86	121.87	121.97	122.02	122.05
15	121.59	121.78	121.78	121.74	121.73	121.82	121.88	121.94	121.88	122.00	122.01	122.02
20	121.66	121.85	121.71	122.04	121.68	121.80	121.88	121.90	121.81	122.00	122.04	122.07
25	121.74	121.66	121.86	121.91	121.80	121.82	121.79	121.86	121.90	121.98	122.04	122.00
EOM	121.69	121.76	121.78	121.95	121.78	121.91	121.94	121.92	121.92	122.01	122.01	122.12

WTR YEAR 1985 HIGHEST 121.58 NOV 3, 1984 LOWEST 122.12 SEPT 13, 30, 1985

323540104232001. 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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 18	68.07
Aug. 26	83.20

## GROUND-WATER LEVELS

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 municipal well, diameter 20 in., depth 327 ft, casing 0-290 ft.

INSTRUMENTATION.--Continuous strip-chart recorder.

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.--Lost record, many days, due to recorder malfunction.

PERIOD OF RECORD.--April 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.23 ft below land-surface datum, Jan. 9 and Feb. 15, 1975; lowest measured, 26.07 ft below land-surface datum, Aug. 2, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.78	21.96	21.83	---	---	---	---	21.94	22.55	22.68	23.43	23.39
10	21.87	21.98	---	---	---	---	---	22.27	22.67	23.02	23.55	23.33
15	21.70	21.93	21.60	---	---	---	---	22.42	22.42	23.06	23.57	23.22
20	22.01	22.00	---	20.91	---	---	21.73	22.00	22.58	23.16	23.70	23.06
25	21.99	21.74	---	20.59	---	---	22.13	21.93	22.55	23.19	23.54	22.92
EOM	21.86	21.78	---	20.32	---	---	21.82	22.06	22.49	23.33	23.68	22.94

WTR YEAR 1985 HIGHEST 20.20 JAN 29, 1985 LOWEST 23.70 AUG 20, 1985

323022104122501. Local number, 21S.27E.05.411.

LOCATION.--Lat 32°30'22", long 104°12'25", Hydrologic Unit 13060011. Owner: U.S. Government.

AQUIFER.--Capitan Limestone.

WELL CHARACTERISTICS.--Drilled oil test well, diameter 13 3/8 in. to 602 ft, 8 5/8 in. 602 to 2,500 ft, perforated 1,007 to 1,170 ft.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 3,280 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 191.84 ft below land-surface datum, Feb. 16, 1975; lowest measured, 201.27 ft below land-surface datum, Aug. 4, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	196.74	196.70	196.64	196.55	196.44	196.17	195.97	195.89	195.90	195.95	195.94	196.09
10	196.72	196.70	196.62	196.53	196.40	196.13	195.96	195.90	195.91	195.94	195.98	196.09
15	196.71	196.68	196.60	196.52	196.36	196.11	195.93	195.90	195.91	195.94	196.01	196.10
20	196.70	196.67	196.60	196.51	196.32	196.07	195.91	195.90	195.93	195.94	196.04	196.11
25	196.69	196.66	196.58	196.50	196.24	196.04	195.90	195.89	195.94	195.94	196.05	196.12
EOM	196.70	196.65	196.57	196.47	196.22	196.00	195.89	195.89	195.95	195.93	196.06	196.13

WTR YEAR 1985 HIGHEST 195.88 MAY 27, 1985 LOWEST 196.75 OCT 1-2, 1984

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 of Permian Age.

WELL CHARACTERISTICS.--Drilled domestic and irrigation artesian 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 18	11.46
Aug. 28	14.56



EDDY COUNTY  
Carlsbad Area

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.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 89.72 ft below land-surface datum, Jan. 9 and Feb. 10, 1975; lowest measured, 98.68 ft below land-surface datum, Aug. 3, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	93.67	93.84	93.66	93.29	92.00	92.08	92.93	93.70	94.45	94.59	95.32	95.30
10	93.76	93.84	93.52	93.22	91.99	92.22	93.15	94.06	94.58	94.91	95.40	95.16
15	93.56	93.87	93.50	92.87	91.86	92.50	93.31	94.19	94.22	94.93	95.40	95.08
20	93.90	93.87	93.36	92.86	91.67	92.33	93.46	93.77	94.34	95.05	95.60	94.74
25	93.90	93.55	93.53	92.54	91.98	92.85	93.90	93.84	94.37	95.12	95.38	94.53
EOM	93.71	93.61	93.29	92.23	92.03	92.88	93.64	93.95	94.31	95.22	95.49	94.49

WTR YEAR 1985 HIGHEST 91.67 FEB 20, 1985 LOWEST 95.60 AUG 20, 1985

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 unused water-table 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.

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 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	169.01	165.01	160.00	156.39	153.96	152.86	156.70	162.07	165.15	167.02	168.96	168.58
10	169.04	164.02	159.13	155.99	153.77	153.02	158.14	162.40	165.77	166.98	168.87	168.33
15	168.57	163.16	158.51	155.37	153.51	153.50	159.35	163.10	165.25	167.71	169.79	169.39
20	168.14	162.39	157.85	155.32	153.19	153.63	160.08	163.55	164.90	168.77	170.52	168.90
25	167.34	161.25	157.51	154.84	153.12	154.41	160.96	163.76	165.80	169.12	170.17	167.84
EOM	165.91	160.55	156.75	154.33	153.03	155.68	161.79	164.42	167.11	169.49	169.27	166.83

WTR YEAR 1985 HIGHEST 152.64 MAR 3, 1985 LOWEST 170.52 AUG 20, 1985

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 18	41.71
Aug. 28	39.69

## GROUND-WATER LEVELS

EDDY COUNTY  
Carlsbad Area

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 observation well, diameter 16 in. 0-20 ft, open hole 20-900 ft.

INSTRUMENTATION.--Continuous strip-chart recorder.

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, 35 days, Jan.-Mar.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 376.94 ft below land-surface datum, Aug. 13, 1984; lowest measured, 404.06 ft below land-surface datum, July 10, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	399.13	399.18	399.21	---	---	397.89	398.98	399.23	400.16	400.25	401.34	401.01
10	399.20	399.18	399.12	398.86	---	398.03	398.90	399.74	400.33	400.61	401.05	400.86
15	399.04	399.29	398.87	398.72	---	398.24	398.93	400.00	400.23	400.91	401.39	400.81
20	399.27	399.29	398.85	---	---	398.05	399.09	399.50	400.61	401.06	401.55	400.68
25	399.21	399.08	398.85	---	397.74	398.62	399.59	399.67	400.46	401.06	401.37	400.41
EOM	399.13	399.11	398.88	---	397.83	398.55	399.15	399.80	400.25	401.22	401.53	400.62

WTR YEAR 1985 HIGHEST 397.61 FEB 21, 1985 LOWEST 401.59 SEPT 2, 1985

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 18	55.55
Aug. 28	60.10

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 irrigation water-table 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, 55.22 ft below land-surface datum, Sept. 21, 1966; lowest measured, 85.10 ft below land-surface datum, Aug. 25, 1967.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 22	56.05
Aug. 27	69.80

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 irrigation water-table 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, 40.08 ft below land-surface datum, Jan. 26, 1982; lowest measured, 54.98 ft below land-surface datum, Sept. 8, 1965.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 22	42.88
Aug. 27	42.56

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 unused water-table 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.--Lost record, 168 days, Dec.-May.

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, 293.45 ft below land-surface datum, Sept. 30, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	290.96	290.46	290.24						289.83	291.24	291.54	292.41
10	290.92	290.06	290.32						289.83	291.54	291.32	292.63
15	290.50	290.10	---						290.32	291.68	291.05	292.86
20	290.70	290.18	---						290.32	291.95	291.55	292.95
25	290.74	290.14	---						290.60	291.87	291.90	293.19
EOM	290.59	289.74	---						291.14	291.78	292.15	293.45

WTR YEAR 1985 HIGHEST 289.44 JUN 1, 1985 LOWEST 293.45 SEPT 30, 1985

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 unused water-table 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: Bottom edge of slot in steel casing, 3.50 ft above land-surface datum.

REMARKS.--a indicates well being pumped.

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, 51.67 ft below land-surface datum, Aug. 7, 1985.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 22	a 54.78
Aug. 7	51.67

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 unused water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 22	83.13
Aug. 7	83.09

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 7	9.65
July 8	13.80

## GROUND-WATER LEVELS

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 8	168.39
July 9	182.70

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 irrigation water-table 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, 49.54 ft below land-surface datum, July 9, 1985.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 8	49.33
July 9	49.54

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 8	87.25
July 9	98.75

## 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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 8	190.37
July 9	pumping

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 irrigation water-table 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, 124.04 ft below land-surface datum, Jan. 3, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 3	124.04
July 28	pumping

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 observation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 9	47.55
July 10	47.45

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 of Pliocene Age.

WELL CHARACTERISTICS.--Drilled unused water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 8	31.90
Aug. 26	31.64

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 8	69.22
Aug. 26	66.71

LEA COUNTY  
Tatum-Lovington-Hobbs Area

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 unused water-table 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.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.04 ft below land-surface datum, Sept. 21, 1985; lowest measured, 67.11 ft below land-surface datum, Aug. 24, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	63.89	63.75	63.55	63.39	63.26	63.22	63.12	63.12	63.19	63.11	63.14	63.09
10	63.87	63.70	63.49	63.45	63.26	63.19	63.12	63.13	63.20	63.11	63.14	63.08
15	63.81	63.68	63.46	63.37	63.24	63.19	63.11	63.20	63.11	63.10	63.11	63.07
20	63.80	63.65	63.44	63.42	63.22	63.12	63.11	63.19	63.12	63.10	63.10	63.06
25	63.80	63.60	63.44	63.36	63.23	63.13	63.11	63.20	63.10	63.10	63.09	63.04
BOM	63.75	63.59	63.41	63.31	63.21	63.12	63.12	63.19	63.11	63.14	63.09	63.04

WTR YEAR 1985 HIGHEST 63.04 SEPT 21, 1985 LOWEST 63.91 OCT 1, 1984

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 of Pliocene Age.

WELL CHARACTERISTICS.--Drilled irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 9	69.60
Aug. 26	67.33

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 of Pliocene Age.

WELL CHARACTERISTICS.--Drilled observation water-table 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, 169.62 ft below land-surface datum, Sept. 28, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 8	168.79
Aug. 27	169.18

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 of Pliocene Age.

WELL CHARACTERISTICS.--Drilled irrigation water-table 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, 0.96 ft above concrete pump base, and 1.91 ft above land-surface datum (since 1971).

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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 8	67.74
Aug. 26	67.01

LEA COUNTY  
Tatum-Lovington Hobbs Area

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 of Pliocene Age.  
WELL CHARACTERISTICS.--Drilled irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 8	58.96
Aug. 26	59.35

LINCOLN COUNTY  
Hondo Valley

333015105382201. Local number, 09S.13E.25.113.  
LOCATION.--Lat 33°30'15", long 105°38'22", Hydrologic Unit 13060008, 0.4 mi southwest of intersection of Magado Creek and State Highway 48. Owner: M. W. Coll.  
AQUIFER.--Alluvium.  
WELL CHARACTERISTICS.--Drilled irrigation and domestic water-table well, diameter 8 in., depth 90 ft, cased to 40 ft.  
INSTRUMENTATION.--Periodic steel-tape measurements.  
DATUM.--Elevation of land-surface datum is 6,750 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, at land-surface datum.  
PERIOD OF RECORD.--Dec. 1955 to current year.  
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.04 ft below land-surface datum, Nov. 25, 1958; lowest measured, 44.36 ft below land-surface datum, Aug. 13, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan.	not measured
Sept. 11	pumping

333242105340701. Local number, 09S.14E.10.132.  
LOCATION.--Lat 33°32'42", long 105°34'07", Hydrologic Unit 13060008, east end of village on south side of Highway U.S. 380. Owner: Village of Capitan.  
AQUIFER.--Mancos Shale of Late Cretaceous Age.  
WELL CHARACTERISTICS.--Drilled public supply water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 3	39.82
Sept. 11	39.95

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 unused water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 3	58.79
Sept. 11	59.95

## GROUND-WATER LEVELS

LINCOLN COUNTY  
Hondo Valley

332157105094101. Local number, 11S.18E.15.333.

LOCATION.--Lat 33°21'57", long 105°09'41", Hydrologic Unit 13060008, 0.4 mi south of Picacho Bridge on east side of Casey Canyon Road. Owner: Lincoln County Livestock Co.

AQUIFER.--Yesso Formation of Permian Age.

WELL CHARACTERISTICS.--Drilled domestic and stock water-table 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, 45.02 ft below land-surface datum, Jan. 25, 1977; lowest measured, 60.18 ft below land-surface datum, Jan. 15, 1959.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 3	45.41
Sept. 11	49.77

LUNA COUNTY  
Nutt-Hockett

322930107221001. Local number, 21S.5W.8.444.

LOCATION.--Lat 32°29'30", long 107°22'10", Hydrologic Unit 13030202. Owner: Leonard Farms (formerly Jack Carter).

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table 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.

REMARKS.--b indicates well pumped recently.

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, 1985.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Mar. 17	b 177.17
Aug. 19	181.13

## 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.--Valley Fill.

WELL CHARACTERISTICS.--Dug and drilled unused water-table well, diameter 36 in., reported depth 132 ft.

INSTRUMENTATION.--Continuous strip-chart recorder.

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.--Lost record, 31 days, May-June.

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 1984 TO SEPTEMBER 1985  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	103.12	102.28	101.98	101.67	101.78	101.99	102.48	102.87	---	103.98	105.01	105.01
10	102.88	102.20	101.69	101.73	101.76	101.96	102.63	103.00	---	104.21	104.94	104.89
15	102.55	102.09	101.91	101.57	101.69	102.02	102.42	103.26	---	104.48	105.04	104.79
20	102.55	102.15	101.67	101.71	101.66	102.16	102.59	---	103.73	104.61	105.04	104.74
25	102.53	101.85	101.76	101.78	101.84	102.16	102.46	---	103.85	104.84	105.11	104.54
EOM	102.28	101.88	101.63	101.62	101.89	102.48	102.88	---	103.95	104.94	105.02	104.49

WTR YEAR 1985 HIGHEST 101.42 DEC 13, 1984 LOWEST 105.11 AUG 25-26, 1985

321415107565501. Local number, 24S.11W.14.122.

LOCATION.--Lat 32°14'15", long 107°56'55", Hydrologic Unit 13030202. Owner: Charles Waldrop.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 12 in., reported depth 210 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	172.00
July 11	pumping



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.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation artesian 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 22	27.01
July 11	24.94

320915104294501. Local number, 25S.06W.07.211.

LOCATION.--Lat 32°09'15", long 104°29'45", Hydrologic Unit 13030202. Owner: H. C. Telles.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 22	86.53
July 11	87.84

315525107374501. Local number, 27S.08W.35.122.

LOCATION.--Lat 31°55'25", long 107°37'45", Hydrologic Unit 13030202. Owner: M. M. Gibson.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	85.41
July 11	83.30

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	38.44
July 11	39.27

## GROUND-WATER LEVELS

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	10.15
July 11	10.40

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 15	6.07
Aug. 8	4.13

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 24	102.12
Aug. 12	109.25

324853105582501. Local number, 17S.09E.24.343.

LOCATION.--Lat 32°48'53", long 105°58'25", Hydrologic Unit 13050003. Owner: U.S. Air Force.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled public supply water-table well, diameter 10 in., depth 236 ft, cased to 236 ft.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 4,144 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1 1/2 in. pipe, 2.10 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.42 ft below land-surface datum, Apr. 6, 1960; lowest measured, 82.18 ft below land-surface datum, Sept. 22, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 24	75.49
Aug. 12	pumping

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 11	93.50
Sept. 3	95.87

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 11	59.13
Sept. 13	67.68

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 of Pliocene Age.

WELL CHARACTERISTICS.--Drilled irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 14	46.77
Aug. 5	46.19

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 of Pliocene Age.

WELL CHARACTERISTICS.--Drilled irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 14	107.43
Aug. 5	103.59

## GROUND-WATER LEVELS

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 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, 203.03 ft below land-surface datum, Aug. 29, 1984.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 10	202.19
Aug. 6	pumping

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 12	86.39
Aug. 5	86.09

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 irrigation water-table 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, 49.26 ft below land-surface datum, Aug. 11, 1969.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 13	46.87
Aug. 6	47.40

## 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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan.	not measured
Aug. 5	97.28

SANDOVAL COUNTY  
Bernalillo Area

352235106282401. Local number, 13N.04E.12.112.  
 LOCATION.--Lat 35°22'35", long 106°28'24", Hydrologic Unit 13020201. Owner: Unknown.  
 AQUIFER.--Valley Fill.  
 WELL CHARACTERISTICS.--Drilled irrigation water-table 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, 21.37 ft below land-surface datum, July 30, 1985; lowest measured, 25.27 ft below land-surface datum, Jan. 31, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 23	23.26
July 30	21.37

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 irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 19	137.65
Aug. 8	pumping

350340106005001. Local number, 10N.09E.29.130.  
 LOCATION.--Lat 35°03'40", long 106°00'50", Hydrologic Unit 13050001. Owner: Glen Terry.  
 AQUIFER.--Glorieta Sandstone of Permian Age.  
 WELL CHARACTERISTICS.--Drilled irrigation water-table 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, 120.20 ft below land-surface datum, Aug. 13, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 19	105.32
Aug. 8	112.90

## Santa Fe Area

353810106025501. Local number, 16N.08E.12.131.  
 LOCATION.--Lat 35°38'10", long 106°02'55", Hydrologic Unit 13020201. Owner: Santa Fe Country Club.  
 AQUIFER.--Ancha Formation(?) and Tesuque Formation(?).  
 WELL CHARACTERISTICS.--Drilled unused well, diameter 5 in., depth 400 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: Top of 3/8 in. hole in cover plate, 0.20 ft above land-surface datum.  
 PERIOD OF RECORD.--Aug. 1951, Jan. 1953 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 247.93 ft below land-surface datum, Jan. 22, 1979; lowest measured, 272.06 ft below land-surface datum, Aug. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 24	251.88
Aug. 20	252.52

## GROUND-WATER LEVELS

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 irrigation water-table 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, 203.12 ft below land-surface datum, Sept. 12, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 28	200.12
Aug. 21	202.27

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 Formation.

WELL CHARACTERISTICS.--Drilled unused irrigation 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, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--Feb. 25, 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 58.17 ft below land-surface datum, Aug. 16, 1985; lowest measured, 65.56 ft below land-surface datum, Feb. 25, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan.	not measured
Aug. 16	58.17

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 used irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 25	33.22
Aug. 16	35.18

## 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 unused water-table 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, 13.03 ft below land-surface datum, Jan. 8, 1975; lowest measured, 27.78 ft below land-surface datum, Jan. 6, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 25	21.45
Aug. 16	15.01

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 observation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	66.52
Sept. 23	72.10

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 irrigation water-table 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, 190.39 ft below land-surface datum, Sept. 23, 1985; lowest measured, 213.53 ft below land-surface datum, Aug. 10, 1965.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	191.70
Sept. 23	190.39

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 domestic and stock water-table 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, 74.78 ft below land-surface datum, Sept. 23, 1985; lowest measured, 84.78 ft below land-surface datum, Jan. 27, 1977.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	77.13
Sept. 23	74.78

TORRANCE COUNTY  
Estancia Valley

343458106042001. Local number, 04N.08E.11.433.  
 LOCATION.--Lat 34°34'58", long 106°04'20", Hydrologic Unit 13050001. Owner: F. D. Breedlove.  
 AQUIFER.--Valley Fill.  
 WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in., reported depth 180 ft, cased to 160 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 6,148 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing at high point on northwest side of well, 0.70 ft above land-surface datum.  
 PERIOD OF RECORD.--Feb. 1950 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.93 ft below land-surface datum, May 2, 1951; lowest measured, 121.08 ft below land-surface datum, Aug. 8, 1983.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 21	112.92
Aug. 9	120.23

## GROUND-WATER LEVELS

TORRANCE COUNTY  
Estancia Valley

344016106064701. Local number, 05N.08E.08.424.

LOCATION.--Lat 34°40'16", long 106°06'47", Hydrologic Unit 13050001. Owner: A.T. Austin.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table 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: Top of casing, 0.80 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, 129.40 ft below land-surface datum, Aug. 30, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 21	126.21
Aug. 9	pumping

344234106074901. Local number, 06N.08E.32.212.

LOCATION.--Lat 34°42'34", long 106°07'49", Hydrologic Unit 13050001. Owner: Revis Strong.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table 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, 80.54 ft below land-surface datum, Aug. 13, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 22	77.98
Aug. 9	pumping

344622105575501. Local number, 06N.09E.11.211.

LOCATION.--Lat 34°46'22", long 105°57'55", Hydrologic Unit 13050001. Owner: R. O. Brown.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table 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 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 22	15.58
Aug. 8	24.22

344937106092201. Local number, 07N.07E.13.4312.

LOCATION.--Lat 34°49'37", long 106°09'22", Hydrologic Unit 13050001. Owner: Woodrow Clements.

AQUIFER.--Madera Formation.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 7 in., depth and casing information not available.

INSTRUMENTATION.--Periodic steel-tape measurements.

DATUM.--Elevation of land-surface datum is 6,500 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, level with concrete slab, 0.2 ft above land-surface datum.

REMARKS.--Old CO<sub>2</sub> well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 110.01 ft below land-surface datum, Jan. 19, 1979; lowest measured, 111.40 ft below land-surface datum, Jan. 10, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 21	110.32
Aug. 8	110.36



TORRANCE COUNTY  
Estancia Valley

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 unused water-table 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, 81.48 ft below land-surface datum, Aug. 8, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Feb. 20	78.26
Aug. 8	81.48

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 unused irrigation water-table 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 indicates 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, 158.42c ft below land-surface datum, July 18, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	150.17
Aug. 7	146.49

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 irrigation water-table 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, 211.98 ft below land-surface datum, July 18, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	209.34
Aug. 7	210.10

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 unused irrigation water-table 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, 91.61 ft below land-surface datum, Aug. 7, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	91.13
Aug. 7	91.61

## GROUND-WATER LEVELS

UNION COUNTY  
Clayton Area

363005103081001. Local number, 26N.36E.07.142.  
 LOCATION.--Lat 36°30'05", long 103°08'10", Hydrologic Unit 11090103. Owner: J. E. Armes.  
 AQUIFER.--Dakota, Purgatoire, and Morrison Sandstone.  
 WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 16 in., depth 770 ft.  
 INSTRUMENTATION.--Periodic steel-tape measurements.  
 DATUM.--Elevation of land-surface datum is 4,980 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 16 in. casing level with concrete base, 1.00 ft above land-surface datum.  
 PERIOD OF RECORD.--Mar. 1971 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 127.41 ft below land-surface datum, Mar. 17, 1971; lowest measured, 252.90 ft below land-surface datum, Aug. 24, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 24	171.00
Aug. 7	159.95

## Capulin Area

364430103595501. Local number, 29N.28E.18.341.  
 LOCATION.--Lat 36°44'30", long 103°59'55", Hydrologic Unit 11040001, 300 ft north of U.S. Highway 64-87 at Capulin.  
 Owner: City of Raton.  
 AQUIFER.--Cinders.  
 WELL CHARACTERISTICS.--Drilled irrigation water-table 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.  
 REMARKS.--a indicates well being pumped.  
 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, 36.23 ft below land-surface datum, Aug. 24, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL
Jan. 21	34.14
Aug. 7	a 53.38

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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; 112 SNTF-Cenozoic, Quaternary, Pleistocene, Santa Fe Group; 121 TSUQ-Cenozoic, Tertiary, Pliocene, Tesuque Formation, Undifferentiated Unit; 122 SNTFL-Cenozoic, Tertiary, Miocene, Santa Fe Group, Lower Part; 221 MRSN-Mesozoic, Upper Jurassic, Morrison Formation; 231 CHNL-Mesozoic, Upper Triassic, Chinle Formation; 310 GLRT-Paleozoic, Permian, Glorieta Sandstone Member of San Andres Formation of Manzano Group; 313 SADG-Paleozoic, Permian, Guadalupian, Queen Formation; 318 ABOU-Paleozoic, Lower Permian, Leonardian, Abo Sandstone (Upper Tongue); 325 MDER-Paleozoic, Middle Pennsylvanian, Des Moinesian, Madera Limestone; 326 MGD-L-Paleozoic, Middle Pennsylvanian, Atokan, Magdalena Group; 400 PCMB-Paleozoic, Cambrian, Precambrian, Precambrian Erathem.

REMARKS.--Ground-water sites in this table are segregated by county, which appear alphabetically. The sites are then listed in ascending local identifiers.

## BERNALILLO COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)
ELENA GALLEGOS LAND GRAN	350836106395601		001	GW	08-07-85	1510	112SNTF	--	143	138
ELENA GALLEGOS LAND GRAN	350821106383701		001	GW	08-13-85	1645	112SNTF	--	127	122
ELENA GALLEGOS LAND GRAN	350821106383702		001	GW	08-13-85	1835	112SNTF	--	89	84
ELENA GALLEGOS LAND GRAN	350821106383703		001	GW	08-14-85	1550	112SNTF	--	45	40
ELENA GALLEGOS LAND GRAN	350827106391302		001	GW	09-13-85	0930	112SNTF	25.40	94	89
ELENA GALLEGOS LAND GRAN	350827106391301		001	GW	09-13-85	1110	112SNTF	25.60	145	140
ELENA GALLEGOS LAND GRAN	350827106391303		001	GW	09-13-85	1250	112SNTF	21.90	45	40
ELENA GALLEGOS LAND GRNT	350836106395603		001	GW	08-07-85	1135	112SNTF	--	35	30
ELENA GALLEGOS LAND GRNT	350836106395602		001	GW	08-07-85	1340	112SNTF	--	94	89
RIO BRAVO 1 MIDDLE WELL	350137106410502		001	GW	05-16-85	1645	112SNTF	10.80	99	94
RIO BRAVO 1 NORTH WELL	350137106410503		001	GW	05-16-85	1500	112SNTF	10.20	33	28
RIO BRAVO 2 MIDDLE WELL	350138106395502		001	GW	05-16-85	1100	112SNTF	10.70	86	81
TOWN OF ATRISCO GRANT	345851106431601		001	GW	08-16-85	1120	112SNTF	--	175	170
TOWN OF ATRISCO GRANT	350035106413401		001	GW	09-15-85	1150	112SNTF	--	--	--
TOWN OF ATRISCO GRANT	350204106411201		001	GW	09-15-85	1610	112SNTF	--	18	14
TOWN OF ATRISCO GRANT	345851106431601		001	GW	09-16-85	1120	112SNTF	--	175	170
TOWN OF ATRISCO GRANT	350223106420801		001	GW	09-19-85	1300	112SNTF	--	68	62
TOWN OF ATRISCO GRANT	350223106420802		001	GW	09-19-85	1615	112SNTF	--	24	20
08N.02E.02.121	345718106421501		001	GW	08-09-85	1015	112SNTF	--	119	112
08N.02E.02.321	345653106421801		001	GW	08-06-85	1145	112SNTF	--	65	62
08N.07E.29.324A EA DOW S	345319106135101		001	GW	05-31-85	1215	326MDER	--	--	--
08N.07E.29.324B CHILILI2	345319106135301		001	GW	06-07-85	1315	325MDER	31.00	--	--
09N.02E.13.431	350005106405401		001	GW	08-08-85	1550	112SNTF	--	50	46
09N.02E.13.443	350003106404001		001	GW	08-08-85	1045	112SNTF	--	58	54
09N.03E.06.444 TRANS. R/	350151106392901		001	GW	06-05-85	1530	110AVMB	--	--	--
09N.03E.18.242	350037106392701		001	GW	08-05-85	1030	112SNTF	--	101	94
09N.03E.20.122	345956106390801		001	GW	08-05-85	1350	112SNTF	--	305	295
10N.04.5E.25.144 GRIEGO	350346106271701		001	GW	12-07-84	1045	110AVMB	22.70	--	--
10N.04.5E.25.234A SALAZA	350347106271901		001	GW	12-03-84	1400	400PCMB	39.20	--	--
10N.04E.25.211 FACH	350406106273501		001	GW	12-05-84	1245	400PCMB	--	--	--
10N.04E.25.341 WAGNER	350341106282401		001	GW	12-06-84	1300	110AVMB	11.90	--	--
10N.04E.36.123 MORRIS	350316106282401		001	GW	12-19-84	1130	400PCMB	--	--	--
10N.05E.02.231 MCKAIGE	350726106222301		001	GW	12-12-84	1245	231CHNL	106.90	--	--
10N.05E.30.213 MCKIVER	350410106262601		001	GW	12-17-84	1215	110AVMB	70.50	--	--
10N.05E.30.322 JARAMILLO	350339106263501		001	GW	12-05-84	1400	110AVMB	2.80	--	--
10N.05E.30.322A MCDANIEL	350301106263002		001	GW	12-10-84	1330	110AVMB	--	--	--
10N.05E.30.324A DICKSON	350336106263501		001	GW	12-06-84	1445	110AVMB	20.00	--	--
10N.05E.31.412 RYMARZ SP	350251106262001		001	SP	11-14-84	1500	400PCMB	--	--	--
10N.06E.07.322 SANDIA DR	350616106202701		001	GW	11-30-84	1245	318ABO U	31.20	--	--
10N.06E.13.224 T.HARRELL	350537106144301		001	GW	04-27-85	1330	325MDER	410.00	--	--
LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF HOLE, TOTAL (FEET) (72001)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)
ELENA GALLEGOS LAND GRAN	08-07-85	148	--	--	--	510	516	7.7	7.9	--
ELENA GALLEGOS LAND GRAN	08-13-85	132	--	--	--	270	298	7.9	8.2	--
ELENA GALLEGOS LAND GRAN	08-13-85	93.50	--	--	--	820	883	7.4	7.8	--
ELENA GALLEGOS LAND GRAN	08-14-85	50.20	--	--	--	1380	1500	7.4	7.6	--
ELENA GALLEGOS LAND GRAN	09-13-85	99.00	--	--	--	800	848	7.4	7.7	--

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

BERNALILLO COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF HOLE, TOTAL (FEET) (72001)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)
ELENA GALLEGOS LAND GRAN	09-13-85	150	--	--	--	700	779	7.2	7.7	--
ELENA GALLEGOS LAND GRAN	09-13-85	49.80	--	--	--	910	966	7.3	7.7	--
ELENA GALLEGOS LAND GRNT	08-07-85	39.70	--	--	--	820	870	7.0	7.6	--
ELENA GALLEGOS LAND GRNT	08-07-85	99.00	--	--	--	600	609	7.5	7.8	--
RIO BRAVO 1 MIDDLE WELL	05-16-85	104	--	--	--	650	655	8.3	8.3	--
RIO BRAVO 1 NORTH WELL	05-16-85	38.40	--	--	--	480	469	7.0	7.9	--
RIO BRAVO 2 MIDDLE WELL	05-16-85	91.20	--	--	--	525	535	7.4	8.0	--
TOWN OF ATRISCO GRANT	08-16-85	176	--	--	--	450	467	8.0	8.1	--
TOWN OF ATRISCO GRANT	09-15-85	59.00	--	--	--	1100	1160	7.6	7.8	--
TOWN OF ATRISCO GRANT	09-15-85	18.00	--	--	--	925	1020	7.3	7.7	--
TOWN OF ATRISCO GRANT	09-16-85	176	--	--	--	450	--	8.0	--	--
TOWN OF ATRISCO GRANT	09-19-85	70.00	--	--	--	825	842	7.6	8.0	--
TOWN OF ATRISCO GRANT	09-19-85	24.00	--	--	--	760	841	7.5	7.7	--
08N.02E.02.121	08-09-85	119	--	--	--	520	537	7.7	8.0	--
08N.02E.02.321	08-06-85	65.00	--	--	--	670	660	7.7	8.0	--
08N.07E.29.324A EA DOW S	05-31-85	100	--	6790.00	--	780	952	7.4	6.3	20.0
08N.07E.29.324B CHILILI2	06-07-85	260	--	6798.00	--	1000	1000	7.3	7.6	30.5
09N.02E.13.431	08-08-85	50.00	--	--	--	420	447	7.7	8.0	--
09N.02E.13.443	08-08-85	58.00	--	--	--	500	509	8.0	8.1	--
09N.03E.06.444 TRANS. R/	06-05-85	--	--	4930.00	--	760	780	7.4	7.8	26.5
09N.03E.18.242	08-05-85	103	--	--	--	580	605	7.6	7.9	--
09N.03E.20.122	08-05-85	305	--	--	--	350	366	7.7	8.1	--
10N.04.5E.25.144 GRIEGO	12-07-84	60.00	--	5835.00	--	1840	--	7.2	--	8.0
10N.04.5E.25.234A SALAZA	12-03-84	200	--	5840.00	--	1300	1420	7.6	7.8	13.5
10N.04E.25.211 FACH	12-05-84	--	--	5990.00	--	840	--	7.6	--	8.0
10N.04E.25.341 WAGNER	12-06-84	60.00	--	5680.00	--	910	--	7.7	--	8.0
10N.04E.36.123 MORRIS	12-19-84	--	--	5880.00	--	1960	--	6.9	--	2.0
10N.05E.02.231 MCKAIGE	12-12-84	260	--	6800.00	--	650	651	9.0	8.9	7.5
10N.05E.30.213 MCIVER	12-17-84	120	--	6030.00	--	740	--	7.6	--	5.0
10N.05E.30.322 JARAMILLO	12-05-84	50.00	--	5890.00	--	1280	--	7.5	--	5.0
10N.05E.30.322A MCDANIEL	12-10-84	60.00	--	5875.00	--	1020	1130	6.6	7.3	13.0
10N.05E.30.324A DICKSON	12-06-84	50.00	--	5870.00	--	885	--	8.0	--	6.0
10N.05E.31.412 RYMARZ SP	11-14-84	--	--	6230.00	--	930	--	7.9	--	--
10N.06E.07.322 SANDIA DR	11-30-84	140	--	6585.00	--	975	980	7.7	7.9	7.0
10N.06E.13.224 T.HARRELL	04-27-85	485	--	6742.00	--	1100	1170	8.7	8.8	11.0

LOCAL IDENT- I- FIER	DATE OF SAMPLE	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)
ELENA GALLEGOS LAND GRAN	08-07-85	15.5	.70	220	62	16	22	.7	9.1	184
ELENA GALLEGOS LAND GRAN	08-13-85	17.5	--	100	30	6.7	17	.8	6.2	120
ELENA GALLEGOS LAND GRAN	08-13-85	17.5	--	370	110	24	55	1	8.8	327
ELENA GALLEGOS LAND GRAN	08-14-85	18.0	--	640	190	39	110	2	9.6	481
ELENA GALLEGOS LAND GRAN	09-13-85	15.5	--	320	88	24	65	2	14	370
ELENA GALLEGOS LAND GRAN	09-13-85	16.5	100	370	98	29	30	.7	15	355
ELENA GALLEGOS LAND GRAN	09-13-85	15.5	--	420	130	22	55	1	7.3	422
ELENA GALLEGOS LAND GRNT	08-07-85	15.5	12	340	110	15	58	1	7.3	386
ELENA GALLEGOS LAND GRNT	08-07-85	15.5	1.0	270	75	19	24	.7	11	221
RIO BRAVO 1 MIDDLE WELL	05-16-85	18.0	--	40	13	1.9	120	9	4.0	110
RIO BRAVO 1 NORTH WELL	05-16-85	18.0	--	190	64	7.8	30	1	4.7	180
RIO BRAVO 2 MIDDLE WELL	05-16-85	18.0	--	140	41	10	50	2	9.5	160
TOWN OF ATRISCO GRANT	08-16-85	18.0	.70	170	50	11	20	.7	7.4	105
TOWN OF ATRISCO GRANT	09-15-85	16.0	--	430	140	20	89	2	7.9	392
TOWN OF ATRISCO GRANT	09-15-85	17.0	--	380	130	14	75	2	6.9	341
TOWN OF ATRISCO GRANT	09-16-85	18.0	--	--	--	--	--	--	--	105
TOWN OF ATRISCO GRANT	09-19-85	17.0	2.5	270	85	13	88	2	6.3	339
TOWN OF ATRISCO GRANT	09-19-85	17.0	.50	300	97	14	70	2	7.5	294
08N.02E.02.121	08-09-85	17.5	1.4	230	75	10	23	.7	7.2	162
08N.02E.02.321	08-06-85	16.0	2.0	260	88	10	44	1	5.3	292

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## BERNALILLO COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)
08N.07E.29.324A EA DOW S	05-31-85	12.0	--	360	120	14	38	.9	2.1	360
08N.07E.29.324B CHILILI2	06-07-85	13.5	--	440	150	15	41	.9	1.6	230
09N.02E.13.431	08-08-85	15.0	.50	130	42	6.5	42	2	4.5	166
09N.02E.13.443	08-08-85	15.5	1.3	100	30	6.1	66	3	6.6	162
09N.03E.06.444 TRANS. R/	06-05-85	17.5	--	280	85	17	50	1	10	230
09N.03E.18.242	08-05-85	20.5	.80	260	82	13	24	.7	7.8	191
09N.03E.20.122	08-05-85	24.0	.60	110	34	6.5	28	1	8.0	133
10N.04.5E.25.144 GRIEGO	12-07-84	15.0	--	--	--	--	--	--	--	620
10N.04.5E.25.234A SALAZA	12-03-84	17.0	--	580	170	38	66	1	9.4	340
10N.04E.25.211 FACH	12-05-84	15.0	--	--	--	--	--	--	--	230
10N.04E.25.341 WAGNER	12-06-84	7.0	--	--	--	--	--	--	--	340
10N.04E.36.123 MORRIS	12-19-84	15.5	--	--	--	--	--	--	--	1370
10N.05E.02.231 MCKAIGE	12-12-84	13.5	--	10	3.2	.54	150	21	.30	280
10N.05E.30.213 MCIVER	12-17-84	11.0	--	--	--	--	--	--	--	240
10N.05E.30.322 JARAMILLO	12-05-84	12.0	--	--	--	--	--	--	--	270
10N.05E.30.322A MCDANIEL	12-10-84	12.5	--	570	170	35	45	.9	2.7	600
10N.05E.30.324A DICKSON	12-06-84	12.0	--	--	--	--	--	--	--	310
10N.05E.31.412 RYMARZ SP	11-14-84	9.5	--	--	--	--	--	--	--	--
10N.06E.07.322 SANDIA DR	11-30-84	11.5	--	400	100	36	43	1	2.2	300
10N.06E.13.224 T.HARRELL	04-27-85	10.5	--	16	3.9	1.6	280	31	3.9	570

LOCAL IDENT- I- FIER	DATE OF SAMPLE	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINEITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINEITY LAB (MG/L AS CACO3) (90410)	SULFIDE TOTAL (MG/L AS S) (00745)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
ELENA GALLEGOS LAND GRAN	08-07-85	--	151	144	--	77	21	.30	.07	65
ELENA GALLEGOS LAND GRAN	08-13-85	--	99	93	--	30	9.8	.40	.05	55
ELENA GALLEGOS LAND GRAN	08-13-85	--	268	256	--	180	29	.20	.11	51
ELENA GALLEGOS LAND GRAN	08-14-85	--	394	377	--	430	26	.30	.09	47
ELENA GALLEGOS LAND GRAN	09-13-85	--	304	295	--	150	13	.20	.07	64
ELENA GALLEGOS LAND GRAN	09-13-85	--	291	274	--	120	15	.20	.07	63
ELENA GALLEGOS LAND GRAN	09-13-85	--	346	329	--	190	13	.60	.07	42
ELENA GALLEGOS LAND GRNT	08-07-85	--	316	301	--	140	19	.40	.08	37
ELENA GALLEGOS LAND GRNT	08-07-85	--	181	178	--	95	24	.20	.08	62
RIO BRAVO 1 MIDDLE WELL	05-16-85	4.0	99	94	--	160	25	1.5	--	35
RIO BRAVO 1 NORTH WELL	05-16-85	--	220	156	--	67	9.5	.50	--	31
RIO BRAVO 2 MIDDLE WELL	05-16-85	--	130	112	--	80	38	.50	--	79
TOWN OF ATRISCO GRANT	08-16-85	--	86	83	--	110	11	.40	.08	60
TOWN OF ATRISCO GRANT	09-15-85	--	321	309	--	250	52	.60	.10	37
TOWN OF ATRISCO GRANT	09-15-85	--	280	272	--	220	37	.60	.10	27
TOWN OF ATRISCO GRANT	09-16-85	--	86	--	--	--	--	--	--	--
TOWN OF ATRISCO GRANT	09-19-85	--	278	252	--	160	29	.60	.10	38
TOWN OF ATRISCO GRANT	09-19-85	--	241	236	--	160	29	.70	.09	32
08N.02E.02.121	08-09-85	--	133	129	--	99	24	.30	.09	51
08N.02E.02.321	08-06-85	--	240	233	--	92	11	.40	.06	34
08N.07E.29.324A EA DOW S	05-31-85	.000	290	278	--	61	27	.20	--	16
08N.07E.29.324B CHILILI2	06-07-85	.000	270	288	--	86	56	.30	--	16
09N.02E.13.431	08-08-85	--	136	132	--	56	16	.50	.03	36
09N.02E.13.443	08-08-85	--	133	127	--	80	20	.70	.08	55
09N.03E.06.444 TRANS. R/	06-05-85	.000	190	145	--	120	57	.40	--	68
09N.03E.18.242	08-05-85	--	156	152	--	78	47	.40	.17	63
09N.03E.20.122	08-05-85	--	109	106	--	30	20	.60	.07	74
10N.04.5E.25.144 GRIEGO	12-07-84	.000	500	--	--	--	--	--	--	--
10N.04.5E.25.234A SALAZA	12-03-84	.000	280	297	--	160	130	2.4	--	26
10N.04E.25.211 FACH	12-05-84	.000	190	--	--	--	--	--	--	--
10N.04E.25.341 WAGNER	12-06-84	.000	280	--	--	--	--	--	--	--
10N.04E.36.123 MORRIS	12-19-84	.000	1120	--	--	--	--	--	--	--
10N.05E.02.231 MCKAIGE	12-12-84	26	270	269	--	33	19	.40	--	10
10N.05E.30.213 MCIVER	12-17-84	.000	190	--	--	--	--	--	--	--
10N.05E.30.322 JARAMILLO	12-05-84	.000	220	--	--	--	--	--	--	--
10N.05E.30.322A MCDANIEL	12-10-84	.000	490	477	--	110	41	1.8	--	28
10N.05E.30.324A DICKSON	12-06-84	.000	250	--	--	--	--	--	--	--
10N.05E.31.412 RYMARZ SP	11-14-84	--	--	--	--	--	--	--	--	--
10N.06E.07.322 SANDIA DR	11-30-84	.000	240	239	--	90	120	.40	--	19
10N.06E.13.224 T.HARRELL	04-27-85	23	510	537	<.5	41	14	7.3	--	8.5

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

BERNALILLO COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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- PHORUS, ORTHO, DIS- SOLVED (MG/L) AS P (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C (00681)
ELENA GALLEGOS LAND GRAN	08-07-85	364	360	--	<.010	<.10	.020	.28	.020	--
ELENA GALLEGOS LAND GRAN	08-13-85	218	210	--	<.010	<.10	.020	--	.010	--
ELENA GALLEGOS LAND GRAN	08-13-85	611	620	--	<.010	<.10	.040	.16	.010	--
ELENA GALLEGOS LAND GRAN	08-14-85	1100	1100	--	<.010	<.10	.160	.24	<.010	--
ELENA GALLEGOS LAND GRAN	09-13-85	583	600	--	<.010	<.10	.060	.24	<.010	--
ELENA GALLEGOS LAND GRAN	09-13-85	527	550	--	<.010	<.10	.050	2.4	.020	--
ELENA GALLEGOS LAND GRAN	09-13-85	670	670	--	<.010	1.0	.250	--	.010	--
ELENA GALLEGOS LAND GRNT	08-07-85	581	580	--	<.010	<.10	.160	.34	.010	--
ELENA GALLEGOS LAND GRNT	08-07-85	418	420	--	<.010	<.10	.030	.37	.010	--
RIO BRAVO 1 MIDDLE WELL	05-16-85	--	420	--	<.010	.96	.010	.29	.010	--
RIO BRAVO 1 NORTH WELL	05-16-85	--	300	--	<.010	<.10	.020	1.8	.010	--
RIO BRAVO 2 MIDDLE WELL	05-16-85	--	390	--	<.010	.40	.010	--	<.010	--
TOWN OF ATRISCO GRANT	08-16-85	333	320	--	<.010	2.7	.060	.34	.020	--
TOWN OF ATRISCO GRANT	09-15-85	797	790	--	<.010	<.10	.290	.41	<.010	--
TOWN OF ATRISCO GRANT	09-15-85	691	680	1.1	.010	1.1	.110	.39	<.010	--
TOWN OF ATRISCO GRANT	09-16-85	--	--	--	--	--	--	--	--	--
TOWN OF ATRISCO GRANT	09-19-85	574	590	--	<.010	<.10	.110	.29	.040	--
TOWN OF ATRISCO GRANT	09-19-85	552	560	--	<.010	.12	.050	.25	.030	--
08N.02E.02.121	08-09-85	370	370	--	<.010	<.10	.080	--	.040	--
08N.02E.02.321	08-06-85	432	430	--	<.010	<.10	.090	.21	.030	--
08N.07E.29.324A EA DOW S	05-31-85	--	460	--	<.010	4.6	.070	.43	.020	--
08N.07E.29.324B CHILILIT2	06-07-85	--	480	--	<.010	16	.050	.55	.020	--
09N.02E.13.431	08-08-85	294	290	--	<.010	<.10	.080	.12	.660	--
09N.02E.13.443	08-08-85	350	350	--	<.010	<.10	.050	--	.020	--
09N.03E.06.444 TRANS. R/	06-05-85	--	520	--	--	.17	--	--	--	--
09N.03E.18.242	08-05-85	417	410	--	<.010	<.10	.030	.57	.010	--
09N.03E.20.122	08-05-85	269	270	.19	.010	.20	.020	--	.010	--
10N.04.5E.25.144 GRIEGO	12-07-84	--	--	14	.020	14	.120	.48	<.010	--
10N.04.5E.25.234A SALAZA	12-03-84	--	770	--	<.010	30	.050	1.8	<.010	2.2
10N.04E.25.211 FACH	12-05-84	--	--	--	<.010	6.7	.010	.39	<.010	--
10N.04E.25.341 WAGNER	12-06-84	--	--	--	<.010	.64	.030	.27	.010	--
10N.04E.36.123 MORRIS	12-19-84	--	--	--	<.010	.22	.270	.03	<.010	--
10N.05E.02.231 MCKAIGE	12-12-84	--	410	--	<.010	.54	<.010	--	<.010	--
10N.05E.30.213 MCIVER	12-17-84	--	--	--	<.010	13	.030	.67	<.010	--
10N.05E.30.322 JARAMILLO	12-05-84	--	--	--	<.010	21	.040	.46	<.010	--
10N.05E.30.322A MCDANIEL	12-10-84	--	740	.35	.030	.38	.110	.09	<.010	--
10N.05E.30.324A DICKSON	12-06-84	--	--	--	<.010	.60	.030	.27	<.010	--
10N.05E.31.412 RYMARZ SP	11-14-84	--	--	--	--	--	--	--	--	--
10N.06E.07.322 SANDIA DR	11-30-84	--	560	--	<.010	3.9	.010	1.6	.020	2.4
10N.06E.13.224 T.HARRELL	04-27-85	--	690	--	--	<.10	--	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	ALUM- INUM, DIS- SOLVED (UG/L) AS AL (01106)	ARSENIC DIS- SOLVED (UG/L) AS AS (01000)	BARIUM, DIS- SOLVED (UG/L) AS BA (01005)	BERYL- LIUM, DIS- SOLVED (UG/L) AS BE (01010)	BORON, DIS- SOLVED (UG/L) AS B (01020)	CADMIUM DIS- SOLVED (UG/L) AS CD (01025)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR (01030)	COBALT, DIS- SOLVED (UG/L) AS CO (01035)	COPPER, DIS- SOLVED (UG/L) AS CU (01040)
ELENA GALLEGOS LAND GRAN	08-07-85	10	5	99	<.5	60	<.1	<.1	<.3	<.1
ELENA GALLEGOS LAND GRAN	08-13-85	10	7	84	<.5	50	<.1	<.1	<.3	<.1
ELENA GALLEGOS LAND GRAN	08-13-85	<.10	4	86	1.4	140	<.1	<.1	<.3	<.1
ELENA GALLEGOS LAND GRAN	08-14-85	<.10	6	55	<.5	180	<.1	<.1	7	<.1
ELENA GALLEGOS LAND GRAN	09-13-85	<.10	4	62	<.5	150	<.1	<.1	<.3	2
ELENA GALLEGOS LAND GRAN	09-13-85	10	3	120	<.5	150	<.1	<.1	<.3	3
ELENA GALLEGOS LAND GRAN	09-13-85	<.10	5	51	<.5	110	<.1	<.1	8	<.1
ELENA GALLEGOS LAND GRNT	08-07-85	<.10	3	79	<.5	120	<.1	<.1	<.3	<.1
ELENA GALLEGOS LAND GRNT	08-07-85	<.10	4	120	<.5	70	<.1	<.1	<.3	3
RIO BRAVO 1 MIDDLE WELL	05-16-85	--	33	25	--	--	<.1	<.10	--	<.1
RIO BRAVO 1 NORTH WELL	05-16-85	--	6	91	--	--	<.1	<.10	--	<.1
RIO BRAVO 2 MIDDLE WELL	05-16-85	--	12	83	--	--	<.1	<.10	--	<.1
TOWN OF ATRISCO GRANT	08-16-85	<.10	7	79	<.5	60	<.1	<.1	<.3	<.1
TOWN OF ATRISCO GRANT	09-15-85	20	3	97	.6	190	<.1	<.1	6	<.1
TOWN OF ATRISCO GRANT	09-15-85	10	2	75	<.5	190	<.1	<.1	<.3	<.1

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## BERNALILLO COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
TOWN OF ATRISCO GRANT	09-16-85	--	--	--	--	--	--	--	--	--
TOWN OF ATRISCO GRANT	09-19-85	10	7	72	<.5	200	<1	<1	<3	<1
TOWN OF ATRISCO GRANT	09-19-85	10	5	97	<.5	150	<1	<1	<3	4
08N.02E.02.121	08-09-85	<10	3	120	<.5	60	<1	<1	<3	<1
08N.02E.02.321	08-06-85	<10	5	75	<.5	90	<1	<1	<3	<1
08N.07E.29.324A EA DOW S	05-31-85	--	--	--	--	--	--	--	--	--
08N.07E.29.324B CHILILI2	06-07-85	--	--	--	--	--	--	--	--	--
09N.02E.13.431	08-08-85	<10	18	92	<.5	110	<1	<1	<3	1
09N.02E.13.443	08-08-85	<10	18	85	<.5	190	<1	<1	<3	<1
09N.03E.06.444 TRANS. R/	06-05-85	--	--	--	--	--	--	--	--	--
09N.03E.18.242	08-05-85	<10	3	200	<.5	80	<1	<1	<3	<1
09N.03E.20.122	08-05-85	<10	15	140	<.5	60	<1	<1	<3	<1
10N.04.5E.25.144 GRIEGO	12-07-84	--	--	--	--	--	--	--	--	--
10N.04.5E.25.234A SALAZA	12-03-84	--	<1	68	--	--	3	<10	--	5
10N.04E.25.211 FACH	12-05-84	--	--	--	--	--	--	--	--	--
10N.04E.25.341 WAGNER	12-06-84	--	--	--	--	--	--	--	--	--
10N.04E.36.123 MORRIS	12-19-84	--	--	--	--	--	--	--	--	--
10N.05E.02.231 MCKAIGE	12-12-84	--	--	--	--	--	--	--	--	--
10N.05E.30.213 MCIVER	12-17-84	--	--	--	--	--	--	--	--	--
10N.05E.30.322 JARAMILLO	12-05-84	--	--	--	--	--	--	--	--	--
10N.05E.30.322A MCDANIEL	12-10-84	--	--	--	--	--	--	--	--	--
10N.05E.30.324A DICKSON	12-06-84	--	--	--	--	--	--	--	--	--
10N.05E.31.412 RYMARZ SP	11-14-84	--	--	--	--	--	--	--	--	--
10N.06E.07.322 SANDIA DR	11-30-84	--	<1	100	--	--	2	<10	--	10
10N.06E.13.224 T.HARRELL	04-27-85	--	<1	--	--	390	--	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
ELENA GALLEGOS LAND GRAN	08-07-85	5	<1	58	32	--	<10	<1	<1
ELENA GALLEGOS LAND GRAN	08-13-85	3	2	30	13	--	<10	6	<1
ELENA GALLEGOS LAND GRAN	08-13-85	4	2	69	52	--	20	4	<1
ELENA GALLEGOS LAND GRAN	08-14-85	660	2	160	4000	--	<10	4	<1
ELENA GALLEGOS LAND GRAN	09-13-85	<3	3	80	49	--	20	4	<1
ELENA GALLEGOS LAND GRAN	09-13-85	4	<1	91	57	--	<10	2	<1
ELENA GALLEGOS LAND GRAN	09-13-85	770	2	100	3200	--	10	22	<1
ELENA GALLEGOS LAND GRNT	08-07-85	640	<1	94	2000	--	<10	<1	<1
ELENA GALLEGOS LAND GRNT	08-07-85	<3	<1	59	84	--	<10	<1	<1
RIO BRAVO 1 MIDDLE WELL	05-16-85	<3	<1	--	3	--	--	--	1
RIO BRAVO 1 NORTH WELL	05-16-85	37	3	--	320	--	--	--	<1
RIO BRAVO 2 MIDDLE WELL	05-16-85	4	<1	--	12	--	--	--	<1
TOWN OF ATRISCO GRANT	08-16-85	5	2	41	7	--	<10	<1	<1
TOWN OF ATRISCO GRANT	09-15-85	760	<1	110	1700	--	20	4	<1
TOWN OF ATRISCO GRANT	09-15-85	210	1	95	840	--	20	5	1
TOWN OF ATRISCO GRANT	09-16-85	--	--	--	--	--	--	--	--
TOWN OF ATRISCO GRANT	09-19-85	210	<1	80	870	--	10	<1	<1
TOWN OF ATRISCO GRANT	09-19-85	<3	4	84	680	--	<10	4	4
08N.02E.02.121	08-09-85	72	<1	45	850	--	<10	<1	<1
08N.02E.02.321	08-06-85	340	<1	65	1000	--	<10	<1	<1
08N.07E.29.324A EA DOW S	05-31-85	<3	--	--	<1	--	--	--	--
08N.07E.29.324B CHILILI2	06-07-85	14	--	--	2	--	--	--	--
09N.02E.13.431	08-08-85	5	<1	52	520	--	<10	<1	<1
09N.02E.13.443	08-08-85	5	<1	83	180	--	<10	<1	<1
09N.03E.06.444 TRANS. R/	06-05-85	810	--	--	22	--	--	--	--
09N.03E.18.242	08-05-85	42	<1	29	4	--	<10	<1	<1
09N.03E.20.122	08-05-85	21	<1	52	3	--	<10	<1	<1
10N.04.5E.25.144 GRIEGO	12-07-84	--	--	--	--	--	--	--	--
10N.04.5E.25.234A SALAZA	12-03-84	7	13	--	4	<.1	--	--	2
10N.04E.25.211 FACH	12-05-84	--	--	--	--	--	--	--	--
10N.04E.25.341 WAGNER	12-06-84	--	--	--	--	--	--	--	--
10N.04E.36.123 MORRIS	12-19-84	--	--	--	--	--	--	--	--
10N.05E.02.231 MCKAIGE	12-12-84	4	--	--	<1	--	--	--	--
10N.05E.30.213 MCIVER	12-17-84	--	--	--	--	--	--	--	--
10N.05E.30.322 JARAMILLO	12-05-84	--	--	--	--	--	--	--	--

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

BERNALILLO COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
10N.05E.30.322A MCDANIEL	12-10-84	8600	--	--	180	--	--	--	--
10N.05E.30.324A DICKSON	12-06-84	--	--	--	--	--	--	--	--
10N.05E.31.412 RYMARZ SP	11-14-84	--	--	--	--	--	--	--	--
10N.06E.07.322 SANDIA DR	11-30-84	6	13	--	3	.2	--	--	2
10N.06E.13.224 T.HARRELL	04-27-85	91	--	--	14	--	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
ELENA GALLEGOS LAND GRAN	08-07-85	<1	790	7	9
ELENA GALLEGOS LAND GRAN	08-13-85	<1	330	6	8
ELENA GALLEGOS LAND GRAN	08-13-85	<1	980	<6	18
ELENA GALLEGOS LAND GRAN	08-14-85	<1	1500	<6	7
ELENA GALLEGOS LAND GRAN	09-13-85	<1	970	<6	7
ELENA GALLEGOS LAND GRAN	09-13-85	<1	1200	<6	14
ELENA GALLEGOS LAND GRAN	09-13-85	<1	960	<6	4
ELENA GALLEGOS LAND GRNT	08-07-85	1	750	<6	14
ELENA GALLEGOS LAND GRNT	08-07-85	<1	840	<6	9
RIO BRAVO 1 MIDDLE WELL	05-16-85	<1	--	--	10
RIO BRAVO 1 NORTH WELL	05-16-85	<1	--	--	11
RIO BRAVO 2 MIDDLE WELL	05-16-85	1	--	--	12
TOWN OF ATRISCO GRANT	08-16-85	<1	740	11	24
TOWN OF ATRISCO GRANT	09-15-85	3	1000	<6	15
TOWN OF ATRISCO GRANT	09-15-85	<1	730	<6	24
TOWN OF ATRISCO GRANT	09-16-85	--	--	--	--
TOWN OF ATRISCO GRANT	09-19-85	<1	680	<6	18
TOWN OF ATRISCO GRANT	09-19-85	<1	660	<6	26
08N.02E.02.121	08-09-85	<1	640	<6	27
08N.02E.02.321	08-06-85	<1	560	<6	14
08N.07E.29.324A EA DOW S	05-31-85	--	--	--	--
08N.07E.29.324B CHILILI2	06-07-85	--	--	--	--
09N.02E.13.431	08-08-85	<1	350	<6	38
09N.02E.13.443	08-08-85	1	320	17	10
09N.03E.06.444 TRANS. R/	06-05-85	--	--	--	--
09N.03E.18.242	08-05-85	<1	610	7	30
09N.03E.20.122	08-05-85	<1	310	13	28
10N.04.5E.25.144 GRIEGO	12-07-84	--	--	--	--
10N.04.5E.25.234A SALAZA	12-03-84	2	--	--	40
10N.04E.25.211 FACH	12-05-84	--	--	--	--
10N.04E.25.341 WAGNER	12-06-84	--	--	--	--
10N.04E.36.123 MORRIS	12-19-84	--	--	--	--
10N.05E.02.231 MCKAIGE	12-12-84	--	--	--	--
10N.05E.30.213 MCIVER	12-17-84	--	--	--	--
10N.05E.30.322 JARAMILLO	12-05-84	--	--	--	--
10N.05E.30.322A MCDANIEL	12-10-84	--	--	--	--
10N.05E.30.324A DICKSON	12-06-84	--	--	--	--
10N.05E.31.412 RYMARZ SP	11-14-84	--	--	--	--
10N.06E.07.322 SANDIA DR	11-30-84	1	--	--	43
10N.06E.13.224 T.HARRELL	04-27-85	--	--	--	--

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)
11N.02E.25.341	350854106403703		001	GW	08-14-85	0930	112SNTF	--	43	38
11N.02E.25.341	350854106403702		001	GW	08-14-85	1055	112SNTF	--	94	89
11N.02E.25.341	350854106403701		001	GW	08-14-85	1240	112SNTF	--	147	142
11N.06E.19.313 WDML BAR	350940106205401		001	GW	12-12-84	1430	110AVMB	77.30	--	--



## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## BERNALILLO COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF HOLE, TOTAL (FEET) (72001)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)
11N.02E.25.341	08-14-85	48.00	--	--	--	430	461	7.9	8.1	--
11N.02E.25.341	08-14-85	99.00	--	--	--	315	356	8.1	8.2	--
11N.02E.25.341	08-14-85	152	--	--	--	419	483	7.9	8.1	--
11N.06E.19.313 WDML BAR	12-12-84	136	--	6865.00	--	1240	1290	7.8	8.1	6.5

LOCAL IDENT- I- FIER	DATE OF SAMPLE	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)
11N.02E.25.341	08-14-85	15.0	--	150	47	8.7	31	1	6.9	172
11N.02E.25.341	08-14-85	16.0	--	100	30	6.2	31	1	6.5	125
11N.02E.25.341	08-14-85	17.0	--	170	51	10	31	1	6.5	156
11N.06E.19.313 WDML BAR	12-12-84	12.5	--	580	160	44	38	.7	1.9	260

LOCAL IDENT- I- FIER	DATE OF SAMPLE	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFIDE TOTAL (MG/L AS S) (00745)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
11N.02E.25.341	08-14-85	--	141	137	--	72	11	.40	.03	46
11N.02E.25.341	08-14-85	--	103	100	--	53	10	.50	.05	61
11N.02E.25.341	08-14-85	--	129	125	--	89	14	.30	.08	57
11N.06E.19.313 WDML BAR	12-12-84	.000	210	218	--	51	260	.40	--	29

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
11N.02E.25.341	08-14-85	312	310	--	<.010	<.10	.080	.12	.020	--
11N.02E.25.341	08-14-85	256	260	--	<.010	<.10	.030	--	<.010	--
11N.02E.25.341	08-14-85	339	340	--	<.010	<.10	.040	--	<.010	--
11N.06E.19.313 WDML BAR	12-12-84	--	710	--	<.010	7.8	.050	.55	<.010	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
11N.02E.25.341	08-14-85	<10	4	62	<.5	80	<1	<1	<3	<1
11N.02E.25.341	08-14-85	<10	7	39	<.5	60	<1	<1	<3	<1
11N.02E.25.341	08-14-85	<10	5	47	<.5	50	<1	<1	<3	<1
11N.06E.19.313 WDML BAR	12-12-84	--	1	340	--	--	<1	<10	--	3

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
11N.02E.25.341	08-14-85	25	<2	43	470	--	10	5	<1
11N.02E.25.341	08-14-85	3	<1	45	9	--	10	6	<1
11N.02E.25.341	08-14-85	<3	1	44	37	--	<10	4	<1
11N.06E.19.313 WDML BAR	12-12-84	12	6	--	4	<.1	--	--	<1

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## BERNALILLO COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
11N.02E.25.341	08-14-85	<1	460	<6	<3
11N.02E.25.341	08-14-85	<1	400	9	7
11N.02E.25.341	08-14-85	<1	580	<6	7
11N.06E.19.313 WDML BAR	12-12-84	1	--	--	80

## CATRON COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)
02N.18W.07.141	342452108460001	003	GW	07-18-85	1012	--	--	193.00	--	6550.00
02N.19W.14.441	342337108473401	003	GW	07-18-85	0915	--	--	151.00	--	6510.00
03N.18W.30.433	342658108454101	003	GW	07-18-85	1520	110AVMB	1.20	3.36	6235.00	
03N.18W.31.314 SMITH SPR	342618108460401	003	SP	07-18-85	1215	110AVMB	--	--	6315.00	

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
02N.18W.07.141	07-18-85	--	7.0	994	1020	7.8	8.6	18.5	13	4.5
02N.19W.14.441	07-18-85	15	4.0	699	707	8.3	8.8	18.5	9	2.9
03N.18W.30.433	07-18-85	--	--	1960	2020	8.5	8.8	21.5	59	12
03N.18W.31.314 SMITH SPR	07-18-85	--	--	1230	1250	7.6	8.4	17.5	85	21

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)
02N.18W.07.141	07-18-85	.35	240	31	1.3	436	62	24	1.4	.19
02N.19W.14.441	07-18-85	.40	180	27	1.0	307	43	8.5	.90	.08
03N.18W.30.433	07-18-85	7.0	430	25	8.1	411	150	290	1.0	.36
03N.18W.31.314 SMITH SPR	07-18-85	7.7	270	13	4.3	474	110	49	2.1	.28

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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, 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)
02N.18W.07.141	07-18-85	11	609	610	<10	<1	48	180	<1	<10
02N.19W.14.441	07-18-85	10	421	430	<10	3	12	120	<1	<10
03N.18W.30.433	07-18-85	21	1160	1200	1.2	4	200	350	1	<10
03N.18W.31.314 SMITH SPR	07-18-85	22	775	770	.32	2	61	210	<1	<10

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
02N.18W.07.141	07-18-85	1	10	1	34	22	<1	<1	140	15
02N.19W.14.441	07-18-85	2	33	2	26	6	3	<1	46	58
03N.18W.30.433	07-18-85	2	20	1	10	<10	3	<1	200	40
03N.18W.31.314 SMITH SPR	07-18-85	2	3	2	12	6	<1	<1	550	13

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## CIBOLA COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)
08N.19W.29.3312 WELL ZS-	345322108520901		006	GW	12-07-84	0940	313SADG	486.00	865	610
09N.05W.12.442 MESITA	350107107183701		006	GW	09-05-85	1530	313SADG	--	--	--
09N.09W.28.1344 ACOMA TE	345850107475401		006	GW	10-04-84	1100	313SADR	230.00	2510	2410
10N.10W.03.423 OJO GALLO	350720107523001		006	SP	09-05-85	1515	313SADG	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	PUMP OR FLOW PRIOR TO SAM- PLING (MIN) (72004)	DEPTH OF HOLE, TOTAL (FEET) (72001)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)
08N.19W.29.3312 WELL ZS-	12-07-84	865	--	6803.00	1150	865	345	1080	1110	6.5
09N.05W.12.442 MESITA	09-05-85	--	--	--	--	1730	E5.0	14300	12900	6.2
09N.09W.28.1344 ACOMA TE	10-04-84	2510	--	6655.00	3780	2510	475	1350	1290	7.1
10N.10W.03.423 OJO GALLO	09-05-85	--	--	--	--	--	--	1430	1410	6.9

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	HARD- NESS (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)
08N.19W.29.3312 WELL ZS-	12-07-84	7.4	28.0	--	510	140	38	52	1	3.3
09N.05W.12.442 MESITA	09-05-85	7.9	27.0	23	1200	200	160	2800	37	12
09N.09W.28.1344 ACOMA TE	10-04-84	7.0	41.5	--	510	140	40	91	2	7.1
10N.10W.03.423 OJO GALLO	09-05-85	7.3	17.0	.30	510	130	44	120	2	6.2

LOCAL IDENT- I- FIER	DATE OF SAMPLE	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
08N.19W.29.3312 WELL ZS-	12-07-84	--	--	--	277	300	37	.50	--	16
09N.05W.12.442 MESITA	09-05-85	1690	.000	1380	1230	3500	2100	2.7	1.4	42
09N.09W.28.1344 ACOMA TE	10-04-84	--	--	--	323	290	73	.70	--	18
10N.10W.03.423 OJO GALLO	09-05-85	376	.000	307	299	340	80	.50	.25	17

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
08N.19W.29.3312 WELL ZS-	12-07-84	--	750	<.010	<.10	.050	.25	<.010	--	13
09N.05W.12.442 MESITA	09-05-85	9500	9700	--	--	--	--	--	<10	18
09N.09W.28.1344 ACOMA TE	10-04-84	--	850	--	<.10	--	--	--	--	2
10N.10W.03.423 OJO GALLO	09-05-85	941	930	--	--	--	--	--	<10	4

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
08N.19W.29.3312 WELL ZS-	12-07-84	28	--	100	<1	<10	--	1	370	1
09N.05W.12.442 MESITA	09-05-85	630	<5.0	3700	<10	1	<30	<1	170	<1
09N.09W.28.1344 ACOMA TE	10-04-84	45	--	270	<1	<10	--	<1	320	2
10N.10W.03.423 OJO GALLO	09-05-85	27	<.5	420	<1	<1	<3	<1	<3	<1

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## CIBOLA COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
08N.19W.29.3312 WELL ZS-	12-07-84	--	7	.4	--	--	<1
09N.05W.12.442 MESITA	09-05-85	240	2400	--	<100	2	<1
09N.09W.28.1344 ACOMA TE	10-04-84	--	4	<.1	--	--	<1
10N.10W.03.423 OJO GALLO	09-05-85	390	1	--	<10	2	6

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
08N.19W.29.3312 WELL ZS-	12-07-84	<1	--	--	47
09N.05W.12.442 MESITA	09-05-85	<1	5300	<60	33
09N.09W.28.1344 ACOMA TE	10-04-84	<1	--	--	260
10N.10W.03.423 OJO GALLO	09-05-85	<1	1900	<6	11

LOCAL IDENT- I- FIER	STATION NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)
10N.10W.03.423 OJO GALLO	350720107523201	006	SP	10-09-84	1445	<29	15	13	.24

LOCAL IDENT- I- FIER	DATE OF SAMPLE	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
10N.10W.03.423 OJO GALLO	10-09-84	6.8

## DONA ANA COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)
22S.04E.12.214 SW-20	322446106290801	013	GW	02-04-85	1030	110BLSN	--	--	--
		013	GW	03-05-85	1000	110BLSN	--	--	--
		013	GW	04-16-85	1125	110BLSN	--	--	--
		013	GW	05-07-85	0815	110BLSN	--	--	--
		013	GW	06-05-85	1420	110BLSN	--	--	--
		013	GW	07-09-85	1120	110BLSN	--	--	--
		013	GW	08-05-85	1215	110BLSN	--	--	--
		013	GW	09-17-85	--	110BLSN	--	--	--
22S.04E.12.414 SW-19	322424106290301	013	GW	10-19-84	0825	110BLSN	--	--	--
		013	GW	11-08-84	1035	110BLSN	--	--	--
		013	GW	12-05-84	0919	110BLSN	--	--	--
		013	GW	01-07-85	0820	110BLSN	--	--	--
		013	GW	02-04-85	1110	110BLSN	--	--	--
		013	GW	03-05-85	1025	110BLSN	--	--	--
		013	GW	04-16-85	1215	110BLSN	--	--	--
		013	GW	05-07-85	0840	110BLSN	--	--	--
		013	GW	06-05-85	1105	110BLSN	--	--	--
		013	GW	07-09-85	1215	110BLSN	--	--	--
		013	GW	08-05-85	1225	110BLSN	--	--	--
		013	GW	09-09-85	1540	110BLSN	--	--	--
		013	GW	09-17-85	--	110BLSN	--	--	--

## DONA ANA COUNTY -- Continued

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)		
22S.04E.12.434 SW-18	322405106290101		013	GW	10-19-84	0850	110BLSN	--	--	--		
			013	GW	11-08-84	1100	110BLSN	--	--	--		
			013	GW	12-05-84	1020	110BLSN	--	--	--		
			013	GW	01-07-85	0900	110BLSN	--	--	--		
			013	GW	02-04-85	1125	110BLSN	--	--	--		
			013	GW	03-05-85	1050	110BLSN	--	--	--		
			013	GW	04-16-85	1220	110BLSN	--	--	--		
			013	GW	05-07-85	0905	110BLSN	--	--	--		
			013	GW	06-05-85	1115	110BLSN	--	--	--		
			013	GW	07-09-85	1320	110BLSN	--	--	--		
			013	GW	08-05-85	1300	110BLSN	--	--	--		
			013	GW	09-17-85	--	110BLSN	--	--	--		
22S.04E.13.241 SW-17	322347106285801		013	GW	10-19-84	0915	110BLSN	--	--	--		
			013	GW	11-08-84	1120	110BLSN	--	--	--		
			013	GW	12-05-84	1045	110BLSN	--	--	--		
			013	GW	01-07-85	0945	110BLSN	--	--	--		
			013	GW	02-04-85	1240	110BLSN	--	--	--		
			013	GW	03-05-85	1110	110BLSN	--	--	--		
			013	GW	04-16-85	1050	110BLSN	--	--	--		
		LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
		22S.04E.12.214 SW-20	02-04-85	838	4354.00	--	619	--	8.2	--	--	--
			03-05-85	838	4354.00	--	598	--	8.0	--	--	--
			04-16-85	838	4354.00	--	574	--	8.2	--	--	--
			05-07-85	838	4354.00	--	579	--	7.6	--	--	--
06-05-85	838		4354.00	--	613	--	7.5	--	--	--		
07-09-85	838		4354.00	--	580	--	7.6	--	--	--		
08-05-85	838		4354.00	--	571	--	7.4	--	--	--		
09-17-85	838		4354.00	--	565	--	7.7	--	--	--		
22S.04E.12.414 SW-19	10-19-84		800	4294.00	--	396	--	7.4	--	--	--	
	11-08-84		800	4294.00	--	406	--	7.7	--	--	--	
	12-05-84		800	4294.00	--	428	--	7.6	--	--	--	
	01-07-85		800	4294.00	--	427	--	8.1	--	--	--	
	02-04-85	800	4294.00	--	407	--	8.2	--	--	--		
	03-05-85	800	4294.00	--	378	--	8.0	--	--	--		
	04-16-85	800	4294.00	--	403	--	8.2	--	--	--		
	05-07-85	800	4294.00	--	388	--	7.5	--	--	--		
	06-05-85	800	4294.00	--	393	--	7.4	--	--	--		
	07-09-85	800	4294.00	--	395	--	7.8	--	--	--		
	08-05-85	800	4294.00	--	398	--	7.5	--	--	--		
	09-09-85	800	4294.00	--	--	378	--	8.2	--	--	--	
22S.04E.12.434 SW-18	09-17-85	800	4294.00	--	--	--	7.8	--	--	--		
	10-19-84	800	4264.00	--	373	--	7.4	--	--	--		
	11-08-84	800	4264.00	--	393	--	7.7	--	--	--		
	12-05-84	800	4264.00	--	370	--	7.4	--	--	--		
	01-07-85	800	4264.00	--	368	--	8.2	--	--	--		
	02-04-85	800	4264.00	--	367	--	8.2	--	--	--		
	03-05-85	800	4264.00	--	366	--	8.3	--	--	--		
	04-16-85	800	4264.00	--	366	--	8.1	--	--	--		
	05-07-85	800	4264.00	--	374	--	7.4	--	--	--		
	06-05-85	800	4264.00	--	373	--	7.3	--	--	--		
	07-09-85	800	4264.00	--	379	--	7.7	--	--	--		
	08-05-85	800	4264.00	--	376	--	7.4	--	--	--		
22S.04E.13.241 SW-17	09-17-85	800	4264.00	--	373	--	7.8	--	--	--		
	10-19-84	900	4260.00	--	367	--	7.4	--	--	--		
	11-08-84	900	4260.00	--	420	--	7.9	--	--	--		
	12-05-84	900	4260.00	--	399	--	7.5	--	--	--		
	01-07-85	900	4260.00	--	391	--	8.0	--	--	--		
	02-04-85	900	4260.00	--	402	--	8.0	--	--	--		
	03-05-85	900	4260.00	--	411	--	8.0	--	--	--		
	04-16-85	900	4260.00	--	359	--	7.9	--	--	--		



## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## DONA ANA COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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 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)
22S.04E.12.434 SW-18	10-19-84	--	--	--	--	--	--	--	--	--
	11-08-84	--	--	--	--	--	--	--	--	--
	12-05-84	--	--	--	--	--	--	--	--	--
	01-07-85	--	--	--	--	--	--	--	--	--
	02-04-85	--	--	--	--	--	--	--	--	--
	03-05-85	--	--	--	--	--	--	--	--	--
	04-16-85	--	--	--	--	--	--	--	--	--
	05-07-85	--	--	--	--	--	--	--	--	--
	06-05-85	--	--	--	--	--	--	--	--	--
	07-09-85	--	--	--	--	--	--	--	--	--
	08-05-85	--	--	--	--	--	--	--	--	--
22S.04E.13.241 SW-17	09-17-85	--	--	--	--	--	--	--	--	--
	10-19-84	--	--	--	--	--	--	--	--	--
	11-08-84	--	--	--	--	--	--	--	--	--
	12-05-84	--	--	--	--	--	--	--	--	--
	01-07-85	--	--	--	--	--	--	--	--	--
	02-04-85	--	--	--	--	--	--	--	--	--
	03-05-85	--	--	--	--	--	--	--	--	--
	04-16-85	--	--	--	--	--	--	--	--	--
LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)
22S.04E.13.241 SW-17	322347106285801		013	GW	05-07-85	0920	110BLSN	--	--	--
			013	GW	06-05-85	1220	110BLSN	--	--	--
			013	GW	07-09-85	1105	110BLSN	--	--	--
			013	GW	08-05-85	1350	110BLSN	--	--	--
			013	GW	09-17-85	--	110BLSN	--	--	--
22S.04E.13.311 SW-13	322331106293801		013	GW	02-04-85	0950	110BLSN	--	--	--
			013	GW	03-09-85	0930	110BLSN	--	--	--
			013	GW	04-16-85	1020	110BLSN	--	--	--
			013	GW	05-07-85	--	110BLSN	--	--	--
			013	GW	06-05-85	1025	110BLSN	--	--	--
			013	GW	07-09-85	1025	110BLSN	--	--	--
			013	GW	08-05-85	1515	110BLSN	--	--	--
22S.04E.13.432 SW-16	322325106290401		013	GW	10-19-84	0945	110BLSN	--	--	--
			013	GW	11-08-84	1230	110BLSN	--	--	--
			013	GW	12-05-84	1115	110BLSN	--	--	--
			013	GW	01-07-85	1020	110BLSN	--	--	--
			013	GW	02-04-85	1220	110BLSN	--	--	--
			013	GW	03-05-85	1125	110BLSN	--	--	--
			013	GW	04-16-85	1040	110BLSN	--	--	--
			013	GW	05-07-85	0950	110BLSN	--	--	--
			013	GW	06-05-85	1050	110BLSN	--	--	--
			013	GW	07-09-85	1320	110BLSN	--	--	--
			013	GW	08-05-85	1430	110BLSN	--	--	--
			013	GW	09-09-85	1510	110BLSN	--	--	--
			013	GW	09-17-85	--	110BLSN	--	--	--
22S.04E.24.112 SW-11	322310106293401		013	GW	10-19-84	1045	110BLSN	--	--	--
			013	GW	11-08-84	0925	110BLSN	--	--	--
			013	GW	12-05-84	1125	110BLSN	--	--	--
			013	GW	01-07-85	1125	110BLSN	--	--	--
			013	GW	02-04-85	0930	110BLSN	--	--	--
			013	GW	03-05-85	0905	110BLSN	--	--	--
			013	GW	04-16-85	0945	110BLSN	--	--	--
			013	GW	05-07-85	1105	110BLSN	--	--	--
			013	GW	06-05-85	0915	110BLSN	--	--	--
			013	GW	07-09-85	0722	110BLSN	--	--	--
			013	GW	08-05-85	1450	110BLSN	--	--	--
			013	GW	09-09-85	1420	110BLSN	--	--	--
			013	GW	09-17-85	--	110BLSN	--	--	--
22S.04E.24.144 SW-15A	322249106291801		013	GW	04-16-85	0940	110BLSN	--	--	--
			013	GW	05-07-85	1100	110BLSN	--	--	--

## DONA ANA COUNTY -- Continued

[illegible]



## DONA ANA COUNTY -- Continued

[illegible]

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DONA ANA COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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 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)
22S.04E.24.112 SW-11	10-19-84	--	--	--	--	--	--	--	--	--
	11-08-84	--	--	--	--	--	--	--	--	--
	12-05-84	--	--	--	--	--	--	--	--	--
	01-07-85	--	--	--	--	--	--	--	--	--
	02-04-85	--	--	--	--	--	--	--	--	--
	03-05-85	--	--	--	--	--	--	--	--	--
	04-16-85	--	--	--	--	--	--	--	--	--
	05-07-85	--	--	--	--	--	--	--	--	--
	06-05-85	--	--	--	--	--	--	--	--	--
	07-09-85	--	--	--	--	--	--	--	--	--
	08-05-85	--	--	--	--	--	--	--	--	--
	09-09-85	24	.40	44	425	380	8.1	--	--	--
	09-17-85	--	--	--	--	--	--	--	--	--
22S.04E.24.144 SW-15A	04-16-85	--	--	--	--	--	--	--	--	--
	05-07-85	--	--	--	--	--	--	--	--	--

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)		
22S.04E.24.144 SW-15A	322249106291801		013	GW	06-05-85	0950	110BLSN	--	--	--		
			013	GW	07-09-85	0815	110BLSN	--	--	--		
			013	GW	08-05-85	1525	110BLSN	--	--	--		
			013	GW	09-09-85	1350	110BLSN	--	--	--		
			013	GW	09-17-85	--	110BLSN	--	--	--		
22S.04E.24.212A SW-10A	322309106290201		013	GW	10-19-84	1025	110BLSN	--	--	--		
			013	GW	11-08-84	0950	110BLSN	--	--	--		
			013	GW	12-05-84	1055	110BLSN	--	--	--		
			013	GW	01-07-85	1050	110BLSN	--	--	--		
			013	GW	02-04-85	0915	110BLSN	--	--	--		
			013	GW	03-05-85	0835	110BLSN	--	--	--		
			013	GW	04-16-85	1035	110BLSN	--	--	--		
			013	GW	05-07-85	1125	110BLSN	--	--	--		
			013	GW	06-05-85	0900	110BLSN	--	--	--		
			013	GW	07-09-85	0840	110BLSN	--	--	--		
			013	GW	08-05-85	1615	110BLSN	--	--	--		
			013	GW	09-09-85	1225	110BLSN	--	--	--		
			013	GW	09-17-85	--	110BLSN	--	--	--		
		22S.05E.19.141 SW-22	322256106282601		013	GW	10-19-84	1100	110BLSN	--	--	--
					013	GW	11-08-84	0900	110BLSN	--	--	--
	013			GW	12-05-84	0815	110BLSN	--	--	--		
	013			GW	01-07-85	1045	110BLSN	--	--	--		
	013			GW	02-04-85	0830	110BLSN	--	--	--		
	013			GW	03-05-85	0810	110BLSN	--	--	--		
	013			GW	04-16-85	0905	110BLSN	--	--	--		
	013			GW	05-07-85	1030	110BLSN	--	--	--		
	013			GW	06-05-85	0835	110BLSN	--	--	--		
	013			GW	07-09-85	0810	110BLSN	--	--	--		
	013			GW	08-05-85	1600	110BLSN	--	--	--		
	013			GW	09-09-85	1325	110BLSN	--	--	--		
22S.05E.19.323 SW-21	322237106282801				013	GW	09-17-85	--	110BLSN	--	--	--
					013	GW	10-19-84	1125	110BLSN	--	--	--
					013	GW	11-08-84	1130	110BLSN	--	--	--
			013	GW	12-05-84	0835	110BLSN	--	--	--		
			013	GW	01-07-85	1120	110BLSN	--	--	--		
			013	GW	05-07-85	1050	110BLSN	--	--	--		
			013	GW	06-05-85	0800	110BLSN	--	--	--		
			013	GW	07-09-85	0750	110BLSN	--	--	--		
			013	GW	08-05-85	1530	110BLSN	--	--	--		
			013	GW	09-17-85	--	110BLSN	--	--	--		

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## DONA ANA COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
22S.04E.24.144 SW-15A	06-05-85	1100	--	--	346	--	7.6	--	--	--
	07-09-85	1100	--	--	346	--	7.7	--	--	--
	08-05-85	1100	--	--	350	--	7.5	--	--	--
	09-09-85	1100	--	--	--	359	--	8.2	--	--
	09-17-85	1100	--	--	353	--	7.8	--	--	--
22S.04E.24.212A SW-10A	10-19-84	805	4273.00	--	362	--	7.0	--	--	--
	11-08-84	805	4273.00	--	348	--	7.4	--	--	--
	12-05-84	805	4273.00	--	350	--	7.2	--	--	--
	01-07-85	805	4273.00	--	372	--	8.0	--	--	--
	02-04-85	805	4273.00	--	372	--	8.1	--	--	--
	03-05-85	805	4273.00	--	381	--	7.7	--	--	--
	04-16-85	805	4273.00	--	369	--	7.2	--	--	--
	05-07-85	805	4273.00	--	362	--	7.1	--	--	--
	06-05-85	805	4273.00	--	352	--	7.4	--	--	--
	07-09-85	805	4273.00	--	338	--	7.6	--	--	--
	08-05-85	805	4273.00	--	337	--	7.3	--	--	--
	09-09-85	805	4273.00	--	--	352	--	8.1	--	--
	09-17-85	805	4273.00	--	379	--	7.5	--	--	--
	10-19-84	733	4217.00	--	350	--	7.4	--	--	--
	11-08-84	733	4273.00	--	344	--	8.0	--	--	--
22S.05E.19.141 SW-22	12-05-84	733	4217.00	--	358	--	7.6	--	--	--
	01-07-85	733	4217.00	--	351	--	8.0	--	--	--
	02-04-85	733	4217.00	--	351	--	8.1	--	--	--
	03-05-85	733	4217.00	--	356	--	8.2	--	--	--
	04-16-85	733	4217.00	--	350	--	8.2	--	--	--
	05-07-85	733	4217.00	--	353	--	7.6	--	--	--
	06-05-85	733	4217.00	--	348	--	7.7	--	--	--
	07-09-85	733	4217.00	--	349	--	7.9	--	--	--
	08-05-85	733	4217.00	--	353	--	7.6	--	--	--
	09-09-85	733	4217.00	--	--	362	--	8.2	--	--
	09-17-85	733	4217.00	--	354	--	7.9	--	--	--
	10-19-84	700	4207.00	--	297	--	7.0	--	--	--
	11-08-84	700	4207.00	--	299	--	7.3	--	--	--
	12-05-84	700	4207.00	--	298	--	7.2	--	--	--
	01-07-85	700	4207.00	--	297	--	8.0	--	--	--
22S.05E.19.323 SW-21	05-07-85	700	4207.00	--	299	--	7.4	--	--	--
	06-05-85	700	4207.00	--	300	--	7.2	--	--	--
	07-09-85	700	4207.00	--	301	--	7.3	--	--	--
	08-05-85	700	4207.00	--	303	--	7.1	--	--	--
	09-17-85	700	4207.00	--	298	--	7.5	--	--	--
22S.04E.24.144 SW-15A	06-05-85	--	--	--	--	--	--	--	--	--
	07-09-85	--	--	--	--	--	--	--	--	--
	08-05-85	--	--	--	--	--	--	--	--	--
	09-09-85	110	34	6.0	28	1	2.0	--	98	42
	09-17-85	--	--	--	--	--	--	--	--	--
22S.04E.24.212A SW-10A	10-19-84	--	--	--	--	--	--	--	--	--
	11-08-84	--	--	--	--	--	--	--	--	--
	12-05-84	--	--	--	--	--	--	--	--	--
	01-07-85	--	--	--	--	--	--	--	--	--
	02-04-85	--	--	--	--	--	--	--	--	--
	03-05-85	--	--	--	--	--	--	--	--	--
	04-16-85	--	--	--	--	--	--	--	--	--
	05-07-85	--	--	--	--	--	--	--	--	--
	06-05-85	--	--	--	--	--	--	--	--	--
	07-09-85	--	--	--	--	--	--	--	--	--
	08-05-85	--	--	--	--	--	--	--	--	--
	09-09-85	120	35	8.0	23	.9	1.9	--	86	49
	09-17-85	--	--	--	--	--	--	--	--	--

LOCAL  
IDENT-  
I-  
FIERDATE  
OF  
SAMPLEHARD-  
NESS  
(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  
FIELD  
(MG/L  
AS  
CAC03)  
(00410)ALKA-  
LINITY  
LAB  
(MG/L  
AS  
CAC03)  
(90410)SULFATE  
DIS-  
SOLVED  
(MG/L  
AS SO4)  
(00945)

### QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## DONA ANA COUNTY -- Continued

[illegible]

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## DONA ANA COUNTY -- Continued

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH OF WATER- BEARING ZONE (FT) (72002)
23S.01E.22.232A (LC-1A)	321745106492501		013	GW	11-06-84	1445	112SNTF	--	--	--
23S.01E.22.232B (LC-1B)	321745106492502		013	GW	10-10-84	1500	112SNTF	--	--	--
23S.01E.22.232C (LC-1C)	321745106492503		013	GW	10-12-84	1145	110AVMB	4.70	--	--
23S.01E.22.241A (LC-2A)	321745106492101		013	GW	11-09-84	1700	112SNTF	--	--	--
23S.01E.22.241B (LC-2B)	321745106492102		013	GW	10-20-84	1515	112SNTF	9.50	--	--
23S.01E.22.241C (LC-2C)	321745106492103		013	GW	10-22-84	1100	110AVMB	5.60	--	--
23S.01E.23.244A (LC-3A)	321740106481001		013	GW	11-17-84	1730	112SNTF	--	--	--
23S.01E.23.244B (LC-3B)	321740106481002		013	GW	11-20-84	1430	112SNTF	--	--	--
23S.01E.23.244C (LC-3C)	321740106481003		013	GW	11-27-84	1200	110AVMB	--	--	--
24S.02E.19.223A (M-2A)	321241106461601		013	GW	12-01-84	1615	112SNTF	--	--	--
24S.02E.19.223B (M-2B)	321241106461602		013	GW	12-05-84	1020	112SNTF	--	--	--
24S.02E.19.223C (M-2C)	321241106461603		013	GW	12-06-84	1030	110AVMB	--	--	--
25S.04E.11.123 DONA ANA	320906106302901		013	GW	07-18-85	1300	110BLSN	--	--	--
25S.06E.19.443 HUECO RAN	320645106215101		013	GW	07-18-85	1500	--	--	--	--
26S.05E.22.114 EDNA WELL	320143106250301		013	GW	07-23-85	0910	110BLSN	--	--	--
26S.05E.22.321 PALOMA WE	320206106242901		013	GW	07-23-85	0920	110BLSN	--	--	--
26S.05E.22.441 ROSENCRA	320134106242101		013	GW	07-23-85	0900	110BLSN	--	--	--
26S.3E.33.214 HORNET WEL	320032106381101		013	GW	06-18-85	1055	110BLSN	--	1050	650
LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
23S.01E.22.232A (LC-1A)	11-06-84	305	3889.00	--	580	560	8.8	8.3	21.0	20.0
23S.01E.22.232B (LC-1B)	10-10-84	105	3889.00	--	1050	1090	8.2	8.2	27.0	20.0
23S.01E.22.232C (LC-1C)	10-12-84	41.00	3889.00	--	705	700	7.0	8.3	22.0	27.0
23S.01E.22.241A (LC-2A)	11-09-84	310	3888.00	--	525	517	8.2	8.4	14.0	17.0
23S.01E.22.241B (LC-2B)	10-20-84	110	3888.00	--	1200	1190	--	8.2	14.0	18.0
23S.01E.22.241C (LC-2C)	10-22-84	40.00	3888.00	--	990	914	--	8.3	12.0	20.0
23S.01E.23.244A (LC-3A)	11-17-84	332	3890.00	--	1300	1280	8.1	8.2	8.0	19.0
23S.01E.23.244B (LC-3B)	11-20-84	120	3890.00	--	2600	2630	7.9	8.1	14.0	19.0
23S.01E.23.244C (LC-3C)	11-27-84	50.00	3890.00	--	2850	2970	7.9	8.0	7.0	21.0
24S.02E.19.223A (M-2A)	12-01-84	319	3859.00	--	590	598	8.3	8.1	12.0	18.0
24S.02E.19.223B (M-2B)	12-05-84	120	3859.00	--	550	572	8.2	8.2	11.0	18.0
24S.02E.19.223C (M-2C)	12-06-84	50.00	3859.00	--	1100	1160	8.1	8.2	11.0	19.0
25S.04E.11.123 DONA ANA	07-18-85	--	--	--	435	595	7.8	8.4	--	29.5
25S.06E.19.443 HUECO RAN	07-18-85	--	--	--	1500	1610	7.8	8.1	--	27.0
26S.05E.22.114 EDNA WELL	07-23-85	--	--	--	900	939	8.1	8.0	--	27.5
26S.05E.22.321 PALOMA WE	07-23-85	--	--	--	850	998	8.0	8.1	--	27.0
26S.05E.22.441 ROSENCRA	07-23-85	--	--	--	750	761	8.1	8.2	--	26.5
26S.3E.33.214 HORNET WEL	06-18-85	1050	--	115	740	--	8.0	--	--	28.5
LOCAL IDENT- I- FIER	DATE OF SAMPLE	HARD- NESS (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- LITY FIELD (MG/L AS CAC03) (00410)	ALKA- LITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
23S.01E.22.232A (LC-1A)	11-06-84	190	62	9.3	41	1	3.2	--	118	81
23S.01E.22.232B (LC-1B)	10-10-84	270	84	14	130	4	4.3	--	172	220
23S.01E.22.232C (LC-1C)	10-12-84	180	52	11	73	2	6.6	--	139	140
23S.01E.22.241A (LC-2A)	11-09-84	160	50	8.0	38	1	3.2	--	132	62
23S.01E.22.241B (LC-2B)	10-20-84	340	110	17	120	3	4.9	--	179	250
23S.01E.22.241C (LC-2C)	10-22-84	220	67	13	110	3	6.1	--	168	190
23S.01E.23.244A (LC-3A)	11-17-84	530	170	26	68	1	5.6	--	200	270
23S.01E.23.244B (LC-3B)	11-20-84	830	240	56	220	3	8.6	--	359	880
23S.01E.23.244C (LC-3C)	11-27-84	1000	330	50	310	4	15	--	374	880
24S.02E.19.223A (M-2A)	12-01-84	170	54	9.2	52	2	3.3	--	152	77
24S.02E.19.223B (M-2B)	12-05-84	170	53	8.7	46	2	3.3	--	139	69
24S.02E.19.223C (M-2C)	12-06-84	320	100	17	120	3	5.5	--	185	250
25S.04E.11.123 DONA ANA	07-18-85	180	41	19	59	2	4.0	--	195	61
25S.06E.19.443 HUECO RAN	07-18-85	460	130	32	110	2	15	--	68	52
26S.05E.22.114 EDNA WELL	07-23-85	180	59	6.9	110	4	5.8	--	46	15
26S.05E.22.321 PALOMA WE	07-23-85	210	70	7.7	110	3	6.0	--	51	34
26S.05E.22.441 ROSENCRA	07-23-85	140	48	5.2	88	3	4.7	--	58	67
26S.3E.33.214 HORNET WEL	06-18-85	72	25	2.4	130	7	4.1	109	--	140

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## DONA ANA COUNTY -- Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	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 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)
23S.01E.22.232A (LC-1A)	11-06-84	51	.40	22	330	340	<.10	--	--	60
23S.01E.22.232B (LC-1B)	10-10-84	110	.40	24	702	690	<.10	--	--	180
23S.01E.22.232C (LC-1C)	10-12-84	50	.60	17	437	430	<.10	--	--	140
23S.01E.22.241A (LC-2A)	11-09-84	41	.30	23	302	300	<.10	--	--	60
23S.01E.22.241B (LC-2B)	10-20-84	130	.30	23	783	760	<.10	--	--	150
23S.01E.22.241C (LC-2C)	10-22-84	73	.60	19	573	580	<.10	--	--	160
23S.01E.23.244A (LC-3A)	11-17-84	150	.20	23	866	830	<.10	--	--	80
23S.01E.23.244B (LC-3B)	11-20-84	120	.20	31	1960	1800	<.10	--	--	230
23S.01E.23.244C (LC-3C)	11-27-84	290	.30	37	2170	2100	<.10	--	--	430
24S.02E.19.223A (M-2A)	12-01-84	52	.20	23	360	360	<.10	--	--	70
24S.02E.19.223B (M-2B)	12-05-84	53	.30	22	339	340	<.10	--	--	60
24S.02E.19.223C (M-2C)	12-06-84	130	.50	22	758	760	<.10	--	--	160
25S.04E.11.123 DONA ANA	07-18-85	29	.40	33	--	360	1.4	10	87	--
25S.06E.19.443 HUECO RAN	07-18-85	420	.40	38	--	840	1.7	4	140	--
26S.05E.22.114 EDNA WELL	07-23-85	240	.40	32	--	500	1.3	9	530	--
26S.05E.22.321 PALOMA WE	07-23-85	240	.40	32	--	530	3.5	9	390	--
26S.05E.22.441 ROSENCRA	07-23-85	150	.40	31	--	430	2.0	12	200	--
26S.3E.33.214 HORNET WEL	06-18-85	64	.40	34	--	470	<.10	--	--	--

LOCAL IDENT- IFIER	DATE OF SAMPLE	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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
23S.01E.22.232A (LC-1A)	11-06-84	--	--	--	13	<1	67	--	--	--
23S.01E.22.232B (LC-1B)	10-10-84	--	--	--	230	3	320	--	--	--
23S.01E.22.232C (LC-1C)	10-12-84	--	--	--	130	3	53	--	--	--
23S.01E.22.241A (LC-2A)	11-09-84	--	--	--	7	<1	78	--	--	--
23S.01E.22.241B (LC-2B)	10-20-84	--	--	--	150	3	660	--	--	--
23S.01E.22.241C (LC-2C)	10-22-84	--	--	--	150	3	320	--	--	--
23S.01E.23.244A (LC-3A)	11-17-84	--	--	--	6	2	460	--	--	--
23S.01E.23.244B (LC-3B)	11-20-84	--	--	--	60	2	2900	--	--	--
23S.01E.23.244C (LC-3C)	11-27-84	--	--	--	40	1	3300	--	--	--
24S.02E.19.223A (M-2A)	12-01-84	--	--	--	10	5	30	--	--	--
24S.02E.19.223B (M-2B)	12-05-84	--	--	--	3	6	120	--	--	--
24S.02E.19.223C (M-2C)	12-06-84	--	--	--	8	5	610	--	--	--
25S.04E.11.123 DONA ANA	07-18-85	<1	<10	1	<3	<1	5	1	<1	5
25S.06E.19.443 HUECO RAN	07-18-85	<1	<10	15	71	<1	6	1	<1	12
26S.05E.22.114 EDNA WELL	07-23-85	<1	<10	<1	11	<1	6	1	<1	4
26S.05E.22.321 PALOMA WE	07-23-85	<1	<10	4	13	<1	5	3	<1	4
26S.05E.22.441 ROSENCRA	07-23-85	<1	<10	<1	5	<1	4	3	<1	8
26S.3E.33.214 HORNET WEL	06-18-85	--	--	--	--	--	--	--	--	--

## MCKINLEY COUNTY

LOCAL IDENT- IFIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)
13N.13W.22.1333 BASS FLO	352037108123701		031	GW	09-04-85	1640	310GLRT	398	762	761
15N.13W.25.1423 W NUCLEA	353017108100401		031	GW	09-06-85	1400	313SADG	3100	358	459
19N.17W.29.230	355104108400601		031	GW	08-28-85	1500	221MRSN	--	655	654

LOCAL IDENT- IFIER	DATE OF SAMPLE	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	HARD- NESS (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)
13N.13W.22.1333 BASS FLO	09-04-85	7.5	7.5	--	12.5	25	240	63	20	77
15N.13W.25.1423 W NUCLEA	09-06-85	7.6	8.0	--	18.0	39	210	49	20	15
19N.17W.29.230	08-28-85	8.4	9.2	25.0	37.0	--	4	1.5	.05	140

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## MCKINLEY COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HC03) (99440)	CAR- BONATE IT-FLD (MG/L AS C03) (99445)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
13N.13W.22.1333 BASS FLO	09-04-85	2	1.7	296	--	242	231	150	6.5	.60
15N.13W.25.1423 W NUCLEA	09-06-85	.5	2.7	--	--	--	150	78	2.5	.30
19N.17W.29.230	08-28-85	32	.60	180	18	180	169	130	5.8	.40

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
13N.13W.22.1333 BASS FLO	09-04-85	.08	9.5	471	480	--	<10	2	15	<.5
15N.13W.25.1423 W NUCLEA	09-06-85	.03	15	280	270	<.10	<10	<1	80	<.5
19N.17W.29.230	08-28-85	--	22	--	430	<.10	--	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
13N.13W.22.1333 BASS FLO	09-04-85	90	<1	<1	20	<1	2000	1	43	43
15N.13W.25.1423 W NUCLEA	09-06-85	40	<1	<1	10	<1	1100	<1	18	64
19N.17W.29.230	08-28-85	--	--	--	--	--	9	--	--	2

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
13N.13W.22.1333 BASS FLO	09-04-85	<10	2	<1	<1	930	<6	7
15N.13W.25.1423 W NUCLEA	09-06-85	<10	3	<1	<1	720	<6	74
19N.17W.29.230	08-28-85	--	--	--	--	--	--	--

## OTERO COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)
19S.06E.28.221 MAR (CW)	323802106194001		035	GW	11-21-84	1530	110AVMB	72.90	201	--
24S.05E.36.131 HBNM-4	321043106235001		035	GW	09-11-85	1400	110BLSN	--	464	3976.00

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	DEPTH OF HOLE, TOTAL (FEET) (72001)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CAC03) (00900)
19S.06E.28.221 MAR (CW)	11-21-84	30	--	30	10500	10200	--	8.2	21.0	1700
24S.05E.36.131 HBNM-4	09-11-85	120	--	30	2400	2490	7.5	8.0	26.5	800

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## OTERO COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
19S.06E.28.221 MAR (CW)	11-21-84	69	370	2000	21	27	120	5700	670	.60
24S.05E.36.131 HBNM-4	09-11-85	250	43	150	2	12	40	37	760	.30

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
19S.06E.28.221 MAR (CW)	11-21-84	22	9930	8900	3.8	--	--	850	--	--
24S.05E.36.131 HBNM-4	09-11-85	22	--	1300	1.4	<1	200	--	<1	<10

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
19S.06E.28.221 MAR (CW)	11-21-84	--	--	--	220	--	--	--	3300	--
24S.05E.36.131 HBNM-4	09-11-85	<1	10	1	--	280	<1	<1	--	140

## SANDOVAL COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)
16N.01E.20.412 SWIM POOL	353606106512001		043	SP	12-02-84	1130	325MDER	6060.00	E20	10500

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (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)
16N.01E.20.412 SWIM POOL	12-02-84	10800	7.0	7.4	19.5	940	280	58	2200	32

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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 AS (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
16N.01E.20.412 SWIM POOL	12-02-84	58	684	1800	2400	4.9	19	7200	<10	33

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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.01E.20.412 SWIM POOL	12-02-84	500	5000	2	<10	2	50	12	3800	150



## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## SANDOVAL COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
16N.01E.20.412 SWIM POOL	12-02-84	<.1	<.1	1	20

## SANTA FE COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)
PACHECO GRANT	353815106032601	049	GW	06-12-85	1500	121TSUQ	--	--	--
PACHECO GRANT	353738106030201	049	GW	06-13-85	1415	121TSUQ	--	--	--
SANTA FE GRANT	354029105563401	049	GW	06-26-85	0955	121TSUQ	--	--	--
SANTA FE GRANT	354132105571901	049	GW	07-09-85	1322	121TSUQ	--	--	--
SEBASTIAN DE VARGAS GRAN	353439105532801	049	GW	06-25-85	1010	121TSUQ	--	--	--
SEBASTIAN DE VARGAS GRAN	353845105564401	049	GW	06-26-85	1535	121TSUQ	--	210	--
SEBASTIAN DE VARGAS GRAN	353739105564601	049	GW	07-11-85	1250	121TSUQ	--	--	--
10N.07E.09.444 HILL	350556106113201	049	GW	11-15-84	1045	325MDER	--	340	--
10N.07E.20.121 M.SILLING	350458106131801	049	GW	05-06-85	1815	325MDER	357.90	435	--
15N.08E.07.32334	353229106081001	049	GW	03-25-85	1615	110AVMB	--	--	--
16N.08E.10.22421 COLONY	353812106042001	049	GW	06-27-85	1110	121TSUQ	--	--	--
16N.08E.10.311 TREATMENT	353753106050901	049	GW	06-28-85	1230	121TSUQ	--	--	--
16N.08E.10.424 RAEI	353743106042501	049	GW	06-13-85	0945	121TSUQ	--	--	--
16N.08E.12.31231	353749106030201	049	GW	04-30-85	1540	121TSUQ	--	340	--
16N.08E.12.32244	353747106024001	049	GW	06-21-85	1155	121TSUQ	--	495	--
16N.08E.13.2314	353711106023401	049	GW	07-12-85	1030	121TSUQ	--	--	--
16N.08E.27.2213 SF DOWNS	353541106043201	049	GW	05-20-85	1125	112ANCH	--	--	--
16N.09E.07.21221 CLARK	353817106012401	049	GW	03-01-85	1050	121TSUQ	--	--	--
16N.10E.08.141	353811105544201	049	GW	07-11-85	1546	121TSUQ	--	270	--
17N.09E.30.422 BUTLER	354028106010801	049	GW	06-25-85	1410	121TSUQ	--	438	--
18N.07E.01.22424	354932106083301	049	GW	01-30-85	1215	121TSUQ	--	1410	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF HOLE, TOTAL (FEET) (72001)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)
PACHECO GRANT	06-12-85	--	--	201	242	7.5	8.4	20.5	16.5	.50
PACHECO GRANT	06-13-85	--	--	205	226	7.7	8.6	26.0	18.0	.50
SANTA FE GRANT	06-26-85	--	--	333	359	7.4	8.1	--	14.0	2.1
SANTA FE GRANT	07-09-85	--	--	530	605	8.2	7.8	26.5	--	.40
SEBASTIAN DE VARGAS GRAN	06-25-85	--	--	480	605	7.0	7.7	19.0	14.0	3.0
SEBASTIAN DE VARGAS GRAN	06-26-85	--	--	463	480	7.7	8.0	21.0	14.0	1.6
SEBASTIAN DE VARGAS GRAN	07-11-85	--	--	478	514	7.5	8.1	--	16.0	.40
10N.07E.09.444 HILL	11-15-84	6584.00	--	790	914	7.6	7.6	13.0	16.5	--
10N.07E.20.121 M.SILLING	05-06-85	6662.00	--	630	235	7.4	7.3	20.0	15.0	--
15N.08E.07.32334	03-25-85	--	--	600	720	7.5	8.0	19.5	12.0	19
16N.08E.10.22421 COLONY	06-27-85	--	--	225	261	7.3	8.2	23.0	15.5	1.8
16N.08E.10.311 TREATMENT	06-28-85	--	--	160	189	7.9	8.5	--	17.5	1.8
16N.08E.10.424 RAEI	06-13-85	--	--	195	224	7.6	8.5	22.0	17.0	.50
16N.08E.12.31231	04-30-85	--	--	210	238	8.0	8.2	21.0	17.0	.50
16N.08E.12.32244	06-21-85	--	--	195	221	7.6	8.3	26.0	17.0	.50
16N.08E.13.2314	07-12-85	--	--	170	194	7.8	8.2	29.0	16.5	.80
16N.08E.27.2213 SF DOWNS	05-20-85	--	--	200	234	7.7	8.1	20.0	15.5	.60
16N.09E.07.21221 CLARK	03-01-85	--	--	200	219	8.0	8.4	21.0	15.0	.60
16N.10E.08.141	07-11-85	--	--	600	630	7.3	7.9	21.5	14.0	30
17N.09E.30.422 BUTLER	06-25-85	--	--	275	298	7.4	8.3	24.5	16.5	.50
18N.07E.01.22424	01-30-85	--	--	310	321	7.8	8.3	1.0	17.5	--

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## SANTA FE COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)
PACHECO GRANT	06-12-85	100	33	4.3	15	.7	1.6	140	.000	--
PACHECO GRANT	06-13-85	100	35	3.7	8.8	.4	1.0	120	.000	--
SANTA FE GRANT	06-26-85	150	51	6.5	17	.6	.90	170	.000	--
SANTA FE GRANT	07-09-85	300	110	6.9	8.1	.2	1.1	170	12	--
SEBASTIAN DE VARGAS GRAN	06-25-85	270	86	14	27	.7	3.1	270	.000	--
SEBASTIAN DE VARGAS GRAN	06-26-85	200	61	11	33	1	1.6	230	.000	--
SEBASTIAN DE VARGAS GRAN	07-11-85	200	56	15	28	.9	3.9	--	--	--
10N.07E.09.444 HILL	11-15-84	490	160	22	16	.3	2.2	510	.000	420
10N.07E.20.121 M.SILLING	05-06-85	110	23	12	6.0	.3	1.9	400	.000	330
15N.08E.07.32334	03-25-85	280	70	26	48	1	6.7	--	--	--
16N.08E.10.22421 COLONY	06-27-85	110	37	4.3	10	.4	1.2	110	.000	--
16N.08E.10.311 TREATMENT	06-28-85	78	27	2.5	9.3	.5	1.0	100	.000	--
16N.08E.10.424 RAEI	06-13-85	94	31	4.0	11	.5	1.5	140	.000	--
16N.08E.12.31231	04-30-85	100	34	4.0	9.7	.4	.90	120	.000	--
16N.08E.12.32244	06-21-85	100	35	4.1	7.7	.3	1.0	110	.000	--
16N.08E.13.2314	07-12-85	83	28	3.2	7.9	.4	1.5	120	.000	--
16N.08E.27.2213 SF DOWNS	05-20-85	100	35	2.9	11	.5	1.4	130	--	--
16N.09E.07.21221 CLARK	03-01-85	98	32	4.5	8.3	.4	1.3	120	.000	--
16N.10E.08.141	07-11-85	350	97	25	25	.6	1.9	--	--	--
17N.09E.30.422 BUTLER	06-25-85	110	36	5.6	22	.9	2.8	150	.000	--
18N.07E.01.22424	01-30-85	48	17	1.3	49	3	1.8	160	.000	--
LOCAL IDENT- I- FIER	DATE OF SAMPLE	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFIDE TOTAL (MG/L AS S) (00745)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
PACHECO GRANT	06-12-85	106	--	9.0	1.7	.30	23	160	<.010	.58
PACHECO GRANT	06-13-85	92	--	6.2	5.2	.20	23	140	<.010	1.3
SANTA FE GRANT	06-26-85	136	--	19	6.6	.20	23	210	<.010	3.9
SANTA FE GRANT	07-09-85	135	--	25	61	.10	18	340	<.010	15
SEBASTIAN DE VARGAS GRAN	06-25-85	160	--	50	48	.60	28	390	<.010	1.7
SEBASTIAN DE VARGAS GRAN	06-26-85	181	--	27	10	.80	33	290	<.010	4.5
SEBASTIAN DE VARGAS GRAN	07-11-85	121	--	34	25	.40	27	260	<.010	1.8
10N.07E.09.444 HILL	11-15-84	400	--	31	16	.30	16	510	<.010	3.5
10N.07E.20.121 M.SILLING	05-06-85	77	<.5	11	8.3	.20	16	280	--	3.8
15N.08E.07.32334	03-25-85	319	--	27	15	1.5	42	430	<.010	<.10
16N.08E.10.22421 COLONY	06-27-85	88	--	9.3	10	.20	25	150	<.010	3.5
16N.08E.10.311 TREATMENT	06-28-85	80	--	6.6	2.8	.20	23	120	<.010	.27
16N.08E.10.424 RAEI	06-13-85	99	--	7.3	2.1	.30	22	150	<.010	.36
16N.08E.12.31231	04-30-85	91	--	10	6.2	.20	22	150	<.010	1.3
16N.08E.12.32244	06-21-85	89	--	5.0	5.1	.20	23	140	<.010	1.3
16N.08E.13.2314	07-12-85	87	--	4.0	2.0	.30	23	130	<.010	.30
16N.08E.27.2213 SF DOWNS	05-20-85	98	--	8.2	3.0	.20	24	150	<.010	.95
16N.09E.07.21221 CLARK	03-01-85	98	--	5.2	2.5	.20	23	140	<.010	.47
16N.10E.08.141	07-11-85	224	--	52	27	.60	23	390	<.010	1.6
17N.09E.30.422 BUTLER	06-25-85	121	--	16	4.4	.40	23	180	<.010	1.4
18N.07E.01.22424	01-30-85	130	--	15	4.0	.50	22	190	<.010	3.2
LOCAL IDENT- I- FIER	DATE OF SAMPLE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	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)
PACHECO GRANT	06-12-85	.030	.17	<.010	.70	--	<1	120	30	<1
PACHECO GRANT	06-13-85	.050	.15	<.010	<.10	--	<1	35	10	<1
SANTA FE GRANT	06-26-85	.020	.28	<.010	.70	--	<1	200	10	<1
SANTA FE GRANT	07-09-85	.030	.67	.010	.70	--	<1	670	<10	<1
SEBASTIAN DE VARGAS GRAN	06-25-85	.050	.25	<.010	<.10	--	<1	61	40	<1
SEBASTIAN DE VARGAS GRAN	06-26-85	.020	.48	.030	.70	--	2	100	50	<1
SEBASTIAN DE VARGAS GRAN	07-11-85	.030	.27	.010	.30	--	3	92	70	<1
10N.07E.09.444 HILL	11-15-84	.030	.67	.010	--	.10	<1	230	--	2
10N.07E.20.121 M.SILLING	05-06-85	--	--	--	--	--	<1	250	30	<1
15N.08E.07.32334	03-25-85	.090	.21	<.010	1.8	--	5	190	90	<1

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## SANTA FE COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	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)
16N.08E.10.22421 COLONY	06-27-85	.030	.27	.020	.30	--	1	130	10	<1
16N.08E.10.311 TREATMENT	06-28-85	.030	.07	<.010	.30	--	6	170	<10	<1
16N.08E.10.424 RAEI	06-13-85	.020	--	.010	<.10	--	<1	130	30	<1
16N.08E.12.31231	04-30-85	.070	--	<.010	<.10	--	<1	120	20	<1
16N.08E.12.32244	06-21-85	.030	.27	<.010	<.10	--	<1	99	<10	<1
16N.08E.13.2314	07-12-85	.020	--	<.010	.60	--	<1	60	10	<1
16N.08E.27.2213 SF DOWNS	05-20-85	.080	.32	<.010	<.10	--	1	240	20	<1
16N.09E.07.21221 CLARK	03-01-85	.040	--	.010	<.10	--	<1	59	20	<1
16N.10E.08.141	07-11-85	.020	.38	.020	2.0	--	<1	96	40	<1
17N.09E.30.422 BUTLER	06-25-85	.120	.08	.010	--	--	9	130	40	<1
18N.07E.01.22424	01-30-85	<.010	--	<.010	<.10	--	<1	8	50	<1

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
PACHECO GRANT	06-12-85	<10	<1	<3	1	--	1
PACHECO GRANT	06-13-85	<10	<1	8	1	--	<1
SANTA FE GRANT	06-26-85	<10	<1	<3	1	--	8
SANTA FE GRANT	07-09-85	<10	3	4	3	--	1
SEBASTIAN DE VARGAS GRAN	06-25-85	<10	1	5	3	--	5
SEBASTIAN DE VARGAS GRAN	06-26-85	<10	3	6	2	--	2
SEBASTIAN DE VARGAS GRAN	07-11-85	<10	1	13	1	--	4
10N.07E.09.444 HILL	11-15-84	<10	48	14	3	--	4
10N.07E.20.121 M.SILLING	05-06-85	<10	7	<3	<1	27	<1
15N.08E.07.32334	03-25-85	10	<1	980	5	--	310
16N.08E.10.22421 COLONY	06-27-85	<10	3	3	4	--	<1
16N.08E.10.311 TREATMENT	06-28-85	<10	3	4	3	--	<1
16N.08E.10.424 RAEI	06-13-85	<10	3	6	6	--	<1
16N.08E.12.31231	04-30-85	<10	<1	7	3	--	<1
16N.08E.12.32244	06-21-85	<10	2	3	4	--	<1
16N.08E.13.2314	07-12-85	<10	2	<3	<1	<4	1
16N.08E.27.2213 SF DOWNS	05-20-85	<10	<1	5	3	--	<1
16N.09E.07.21221 CLARK	03-01-85	<10	12	5	2	--	<1
16N.10E.08.141	07-11-85	<10	2	61	1	--	18
17N.09E.30.422 BUTLER	06-25-85	<10	1	<3	1	--	<1
18N.07E.01.22424	01-30-85	10	<1	3	<1	--	4

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
PACHECO GRANT	06-12-85	<.1	<1	<1	94
PACHECO GRANT	06-13-85	<.1	<1	3	68
SANTA FE GRANT	06-26-85	.1	<1	<1	69
SANTA FE GRANT	07-09-85	<.1	<1	<1	27
SEBASTIAN DE VARGAS GRAN	06-25-85	<.1	<1	<1	57
SEBASTIAN DE VARGAS GRAN	06-26-85	.2	2	<1	77
SEBASTIAN DE VARGAS GRAN	07-11-85	<.1	4	<1	77
10N.07E.09.444 HILL	11-15-84	<.1	3	<1	140
10N.07E.20.121 M.SILLING	05-06-85	--	2	<1	92
15N.08E.07.32334	03-25-85	<.1	<1	<1	210
16N.08E.10.22421 COLONY	06-27-85	<.1	<1	1	16
16N.08E.10.311 TREATMENT	06-28-85	<.1	<1	<1	71
16N.08E.10.424 RAEI	06-13-85	<.1	<1	<1	110
16N.08E.12.31231	04-30-85	<.1	<1	<1	54
16N.08E.12.32244	06-21-85	<.1	<1	<1	200
16N.08E.13.2314	07-12-85	<.1	<1	<1	85
16N.08E.27.2213 SF DOWNS	05-20-85	<.1	<1	<1	24
16N.09E.07.21221 CLARK	03-01-85	<.1	<1	<1	130
16N.10E.08.141	07-11-85	<.1	4	<1	170
17N.09E.30.422 BUTLER	06-25-85	<.1	<1	<1	71
18N.07E.01.22424	01-30-85	<.1	1	<1	6

## QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## SANTA FE COUNTY -- Continued

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90) (80050)	CARBON 14 PERCENT MODERN (82172)
PACHECO GRANT	353738106030201		049	GW	06-13-85	1415	<2.9	<1.6	<1.4	--
SEBASTIAN DE VARGAS GRAN	353439105532801		049	GW	06-25-85	1010	50	14	12	--
SEBASTIAN DE VARGAS GRAN	353845105564401		049	GW	06-26-85	1535	8.0	4.5	3.9	--
SEBASTIAN DE VARGAS GRAN	353739105564601		049	GW	07-11-85	1250	9.1	6.9	4.8	--
15N.08E.07.32334	353229106081001		049	GW	03-25-85	1615	<9.7	6.7	5.8	--
16N.08E.10.22421 COLONY	353812106042001		049	GW	06-27-85	1110	<3.4	<1.7	<1.5	.00
16N.08E.10.311 TREATMENT	353753106050901		049	GW	06-28-85	1230	<2.7	1.3	1.1	--
16N.08E.10.424 RAEI	353743106042501		049	GW	06-13-85	0945	5.0	2.5	2.1	--
16N.08E.12.31231	353749106030201		049	GW	04-30-85	1540	<4.5	<1.7	<1.4	--
16N.08E.12.32244	353747106024001		049	GW	06-21-85	1155	<2.8	<1.5	<1.3	--
16N.08E.13.2314	353711106023401		049	GW	07-12-85	1030	<1.8	2.3	1.7	--
16N.08E.27.2213 SF DOWNS	353541106043201		049	GW	05-20-85	1125	<4.5	2.4	2.1	--
16N.09E.07.21221 CLARK	353817106012401		049	GW	03-01-85	1050	<4.6	<1.8	<1.5	--
16N.10E.08.141	353811105544201		049	GW	07-11-85	1546	28	14	8.7	--
17N.09E.30.422 BUTLER	354028106010801		049	GW	06-25-85	1410	5.7	2.4	2.1	--
18N.07E.01.22424	354932106083301		049	GW	01-30-85	1215	9.4	<2.6	<2.2	--

## SOCORRO COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)
04N.06W.27.4314 BUDDY MA	343218107270801		053	GW	09-05-85	1100	313SADG	784	6020.00	39
LOCAL IDENT- I- FIER	DATE OF SAMPLE	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	HARD- NESS (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)
04N.06W.27.4314 BUDDY MA	09-05-85	3580	3830	6.8	24.0	15	1800	550	100	330
LOCAL IDENT- I- FIER	DATE OF SAMPLE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS S04) (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)
04N.06W.27.4314 BUDDY MA	09-05-85	4	22	483	382	374	1900	110	3.0	.28
LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
04N.06W.27.4314 BUDDY MA	09-05-85	12	3440	3300	10	15	10	<1.5	830	<3
LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
04N.06W.27.4314 BUDDY MA	09-05-85	<1	<9	<1	5700	<1	720	470	<30	4

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

## SOCORRO COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
04N.06W.27.4314 BUDDY MA	09-05-85	<1	<1	7800	<18	52

## TAOS COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)
BIG ARSENIC SPRINGS	364047105411101	055	SP	03-27-85	1100	--	222	239	8.4
		055	SP	07-11-85	1615	--	222	243	8.5
28N.12E.09.BLM VISITOR C	364057105401701	055	GW	03-27-85	1500	122SNTFL	222	237	8.4
		055	GW	07-13-85	1800	122SNTFL	218	240	8.5
28N.12E.09.MOTTLE SPRING	364042105393901	055	SP	03-29-85	1230	122SNTFL	225	236	8.2
		055	SP	07-12-85	1030	122SNTFL	220	239	8.3
28N.12E.17. LITTLE ARSEN	363957105411401	055	SP	03-27-85	1300	122SNTFL	210	222	8.4
29N.12E.20.BLM CHIPLO WE	364422105403201	055	GW	04-01-85	1400	122SNTFL	222	236	8.2
		055	GW	07-13-85	1830	122SNTFL	220	244	8.4

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BICAR- BONATE IT-PLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
BIG ARSENIC SPRINGS	03-27-85	8.1	--	.50	--	--	75	.70	--	1.0
	07-11-85	8.2	17.0	.60	68	.000	--	.70	.010	--
28N.12E.09.BLM VISITOR C	03-27-85	8.3	--	.50	--	--	--	.60	--	--
	07-13-85	8.4	18.0	.70	80	.000	--	.60	.010	--
28N.12E.09.MOTTLE SPRING	03-29-85	8.1	15.5	.60	--	--	--	.60	--	.80
	07-12-85	8.2	18.0	1.0	74	.000	--	.60	.010	--
28N.12E.17. LITTLE ARSEN	03-27-85	8.2	--	.70	--	--	77	.50	--	.80
29N.12E.20.BLM CHIPLO WE	04-01-85	8.4	17.0	2.2	--	--	70	--	--	--
	07-13-85	8.3	18.0	1.2	83	.000	--	.70	.020	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
BIG ARSENIC SPRINGS	03-27-85	<.010	1.0	<3	4	3	6
	07-11-85	<.010	--	6	4	1	9
28N.12E.09.BLM VISITOR C	03-27-85	<.010	.60	7	2	2	32
	07-13-85	.010	2.0	<3	4	<1	37
28N.12E.09.MOTTLE SPRING	03-29-85	<.010	.40	<3	4	2	7
	07-12-85	<.010	--	5	6	2	23
28N.12E.17. LITTLE ARSEN	03-27-85	<.010	.50	6	4	3	9
29N.12E.20.BLM CHIPLO WE	04-01-85	--	.30	29	6	2	85
	07-13-85	<.010	2.0	--	--	--	--

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985  
VALENCIA COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH OF HOLE, TOTAL (FEET) (72001)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)
08N.03W.15.324	355503107082701		061	GW	09-05-85	1500	313SADG	1250	E5.0	14300
LOCAL IDENT- I- FIER	DATE OF SAMPLE	SPE- CIFIC CON- DUC- TANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	HARD- NESS (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)
08N.03W.15.324	09-05-85	16200	6.2	6.6	22.5	35	2900	690	290	3900
LOCAL IDENT- I- FIER	DATE OF SAMPLE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L HCO3) (99440)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)
08N.03W.15.324	09-05-85	32	120	2400	1940	1910	4100	3000	1.2	5.0
LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
08N.03W.15.324	09-05-85	53	12500	13000	10	300	84	<5.0	8500	<10
LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
08N.03W.15.324	09-05-85	<1	<30	7	30000	2	5700	1400	<100	13
LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)				
08N.03W.15.324	09-05-85	<1	<1	10000	<60	160				

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October 1, 1978

## 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). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	$2.54 \times 10^1$	millimeters (mm)
	$2.54 \times 10^{-2}$	meters (m)
feet (ft)	$3.048 \times 10^{-1}$	meters (m)
miles (mi)	$1.609 \times 10^0$	kilometers (km)
<i>Area</i>		
acres	$4.047 \times 10^3$	square meters (m <sup>2</sup> )
	$4.047 \times 10^{-1}$	square hectometers (hm <sup>2</sup> )
	$4.047 \times 10^{-3}$	square kilometers (km <sup>2</sup> )
square miles (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometers (km <sup>2</sup> )
<i>Volume</i>		
gallons (gal)	$3.785 \times 10^0$	liters (L)
	$3.785 \times 10^0$	cubic decimeters (dm <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic meters (m <sup>3</sup> )
million gallons	$3.785 \times 10^3$	cubic meters (m <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
cubic feet (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeters (dm <sup>3</sup> )
	$2.832 \times 10^{-2}$	cubic meters (m <sup>3</sup> )
acre-feet (acre-ft)	$1.233 \times 10^3$	cubic meters (m <sup>3</sup> )
	$1.233 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
	$1.233 \times 10^{-6}$	cubic kilometers (km <sup>3</sup> )
<i>Flow</i>		
cubic feet per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liters per second (L/s)
	$2.832 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$2.832 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
gallons per minute (gal/min)	$6.309 \times 10^{-2}$	liters per second (L/s)
	$6.309 \times 10^{-2}$	cubic decimeters per second (dm <sup>3</sup> /s)
	$6.309 \times 10^{-5}$	cubic meters per second (m <sup>3</sup> /s)
million gallons per day	$4.381 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$4.381 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
<i>Mass</i>		
tons (short)	$9.072 \times 10^{-1}$	megagrams (Mg) or metric tons

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