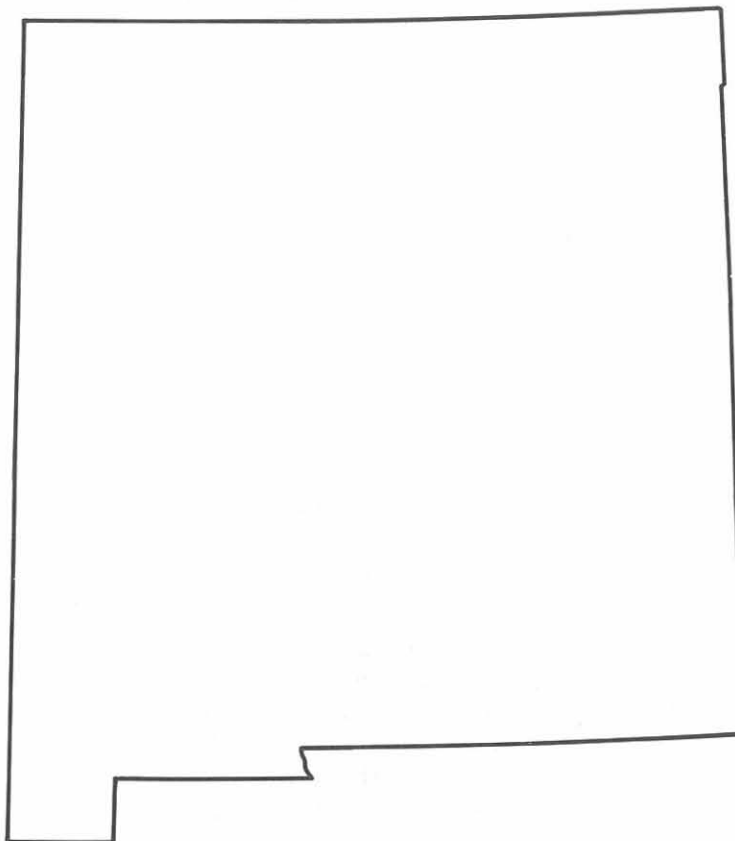




# Water Resources Data New Mexico Water Year 1982



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NM-82-1  
Prepared in cooperation with the State of New Mexico  
and with other agencies



UNITED STATES DEPARTMENT OF THE INTERIOR

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1983

## 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 James F. Daniel, District Chief, and Alfred Clebsch, 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 E. Biesecker, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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## INTRODUCTION

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 197 gaging stations; stage and contents for 25 lakes and reservoirs; water quality for 99 gaging stations, 4 partial-record stations, 2 reservoirs, 32 springs, and 144 wells; and water levels at 89 observation wells. Also included are 140 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. 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 and 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 in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, Virginia 22202.

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. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and the volume number. For example, the 1976 report is identified as "U.S. Geological Survey Water-Data Report NM-76-1." Water-data reports, on a water-year basis, are for sale by the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161.

## COOPERATION

The U.S. Geological Survey and organizations of the State of New Mexico have had cooperative agreements for the systematic collection of streamflow records since 1930, and for water-quality records since 1940. Organizations that assisted in collecting data through cooperative 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, J. J. Hewett, 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.

Financial assistance for the collection of water resources data published in this report was furnished by the Corps of Engineers, U.S. Army, for 32 gaging stations; by the Bureau of Reclamation, U.S. Department of the Interior, for 6 gaging stations; by the Bureau of Indian Affairs, U.S. Department of Interior, for 6 gaging stations; by the Bureau of Land Management, U.S. Department of Interior for 6 gaging stations; by the National Park Service, U.S. Department of Interior, for 3 gaging stations; by the Federal Highway Administration, U.S. Department of Transportation, for research study on small drainage areas.

Assistance in the form of funds or services was also furnished by the New Mexico Environmental Improvement Division, the city of Ruidoso, and the Carlsbad Irrigation District.

Some records have been collected and computed by contractors in accordance with U.S. Geological Survey specifications and under Geological Survey quality control.

Organizations that furnished data are recognized in the station description.

Publication of the annual water-data report requires the combined efforts of a large part of the New Mexico District staff. The following people contributed to the production of the 1982 water-year report:

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## SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

As is common in New Mexico, streamflow varied considerably during the 1982 water year with respect to both time and geographical location. The variations are related to differences in precipitation, temperature, topography, and geology. The monthly mean discharges for 1978-82 water years and the median of monthly mean discharges for 1951-80 water years at four index stations are shown in figure 1.

The combined storage in the 12 major reservoirs increased 473,900 acre-feet during the water year. The contents totaled 3,294,000 acre-feet on September 30, 1982.

The runoff in most unregulated streams in New Mexico was near normal for the first 9 months of the 1982 water year with the notable exception of the Delaware River in the extreme southeastern corner of the State. The discharge of the Delaware River during October 1981-June 1982 was in the greater-than-normal range (in the highest 25 percent of record for 1951-80 water years). This pattern of flow continued until the summer "rainy season" started in July. During the late summer, the streamflow in northern New Mexico was greater than normal whereas the streamflow in southern New Mexico decreased to the normal or less-than-normal range (in the lowest 25 percent of record for 1951-80 water years).

Water-Quality Conditions

Dissolved-solids concentrations decreased in the Rio Grande, San Juan, and Gila River basins and remained the same or increased slightly in the Pecos River basin during the 1982 water year, in comparison to the previous year. Dissolved solids were significantly less than average for the period of record at the NASQAN stations: Rio Grande at Otowi Bridge, Animas River at Farmington, and San Juan River at Shiprock.

Water discharge volumes in the State were much greater during 1982 than during 1981; consequently, suspended-sediment loads were greater. The following table of four selected sites illustrates this condition:

Station	Annual discharge for indicated water year, in acre-feet		Annual suspended-sediment load, for indicated water year, in tons	
	1981	1982	1981	1982
Rio Grande at Otowi	560,100	1,126,000	436,468	1,578,260
Rio Grande At Albuquerque	431,100	1,015,000	393,773	849,813
Pecos River near Artesia	62,690	115,200	218,110	324,828
San Juan River at Shiprock	947,600	1,404,000	1,883,805	4,942,977

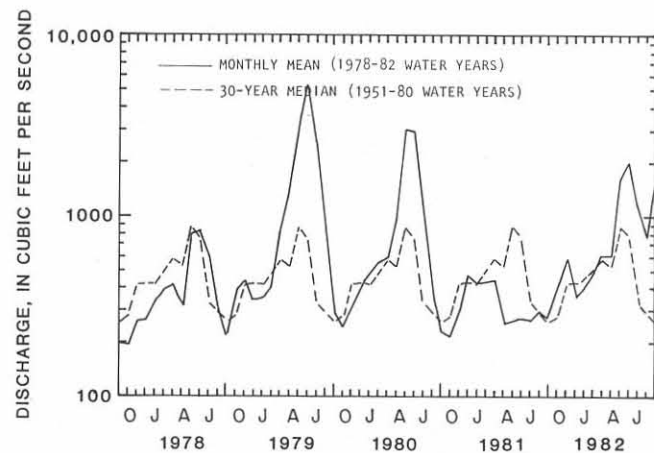
Ground-Water Levels

Ground-water levels are measured periodically in a network of about 5,000 observation wells to record changes in ground-water storage. About 1,000 wells are measured annually and the remaining 4,000 wells are scheduled to be measured at 5-year intervals, staggered so that wells in different areas are measured each year. The areas of water-level observation are within seven 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. Thirty selected wells in various parts of the State are equipped with continuous water-level recording gages.

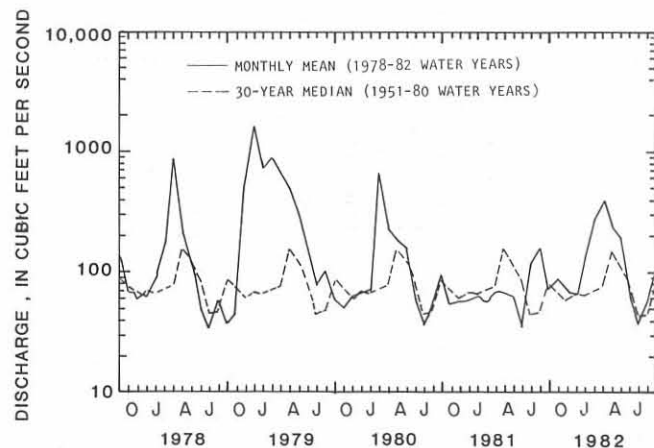
Hydrographs of wells (fig. 2) in the four quadrants of the State illustrate the water-level trends for the last 20 years. The wells in Chaves, Luna, and Union Counties are all in areas of intensive irrigation. The well in Cibola County is in an area where the mining industry has acquired most of the water rights. Ground-water withdrawal for agricultural purposes has decreased considerably for about the last 10 years in Cibola County, and during the last 5 years, withdrawal for mining operations also has decreased.

The water level in the Luna County recorder well (Mimbres Valley) reached the highest level in the past 20 years during February 1982. The water level in the Union County well continued to decline, a situation that is typical of wells on the High Plains of northeastern New Mexico.

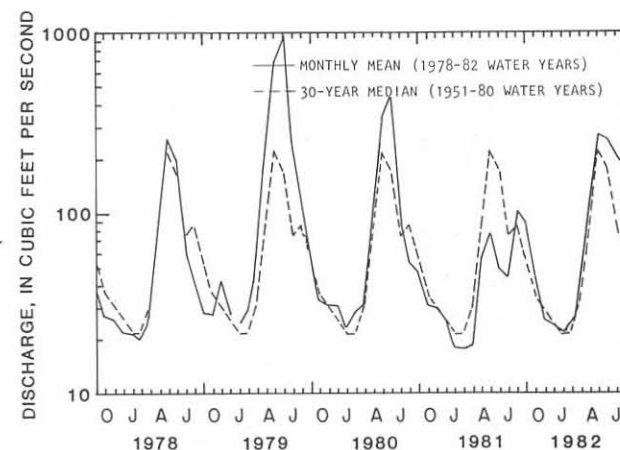
The Chaves County recorder well shows the yearly fluctuations that are typical of the Roswell Artesian Basin. The water level in this well was higher than it has been for about 10 years. However, water levels in the recharge area of the Roswell Artesian Basin and in the southern part of the Roswell Shallow Basin were lower than average for the entire year.



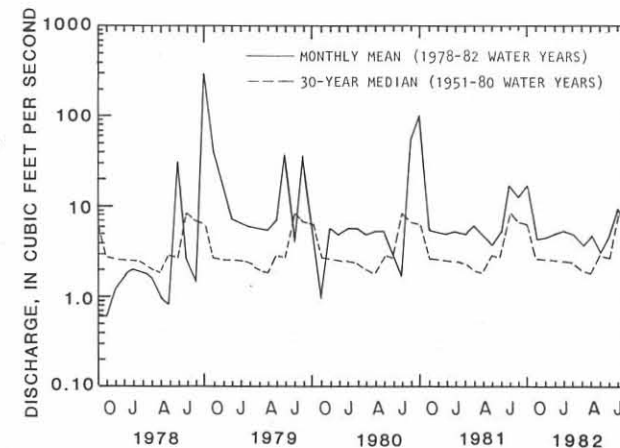
MONTHLY MEAN DISCHARGE AND 30-YEAR MEDIAN DISCHARGE FOR STATION 08276500, RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NEW MEXICO.



MONTHLY MEAN DISCHARGE AND 30-YEAR MEDIAN DISCHARGE FOR STATION 09430500, GILA RIVER NEAR GILA, NEW MEXICO.



MONTHLY MEAN DISCHARGE AND 30-YEAR MEDIAN DISCHARGE FOR STATION 08378500, PECOS RIVER NEAR PECOS, NEW MEXICO.



MONTHLY MEAN DISCHARGE AND 30-YEAR MEDIAN DISCHARGE FOR STATION 08408500, DELAWARE RIVER NEAR RED BLUFF, NEW MEXICO.

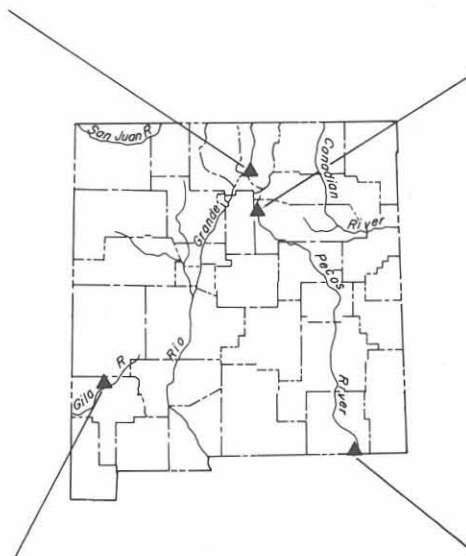


Figure 1.--Comparison of monthly mean discharges (1978-82 water years) to 30-year median (1951-80 water years).

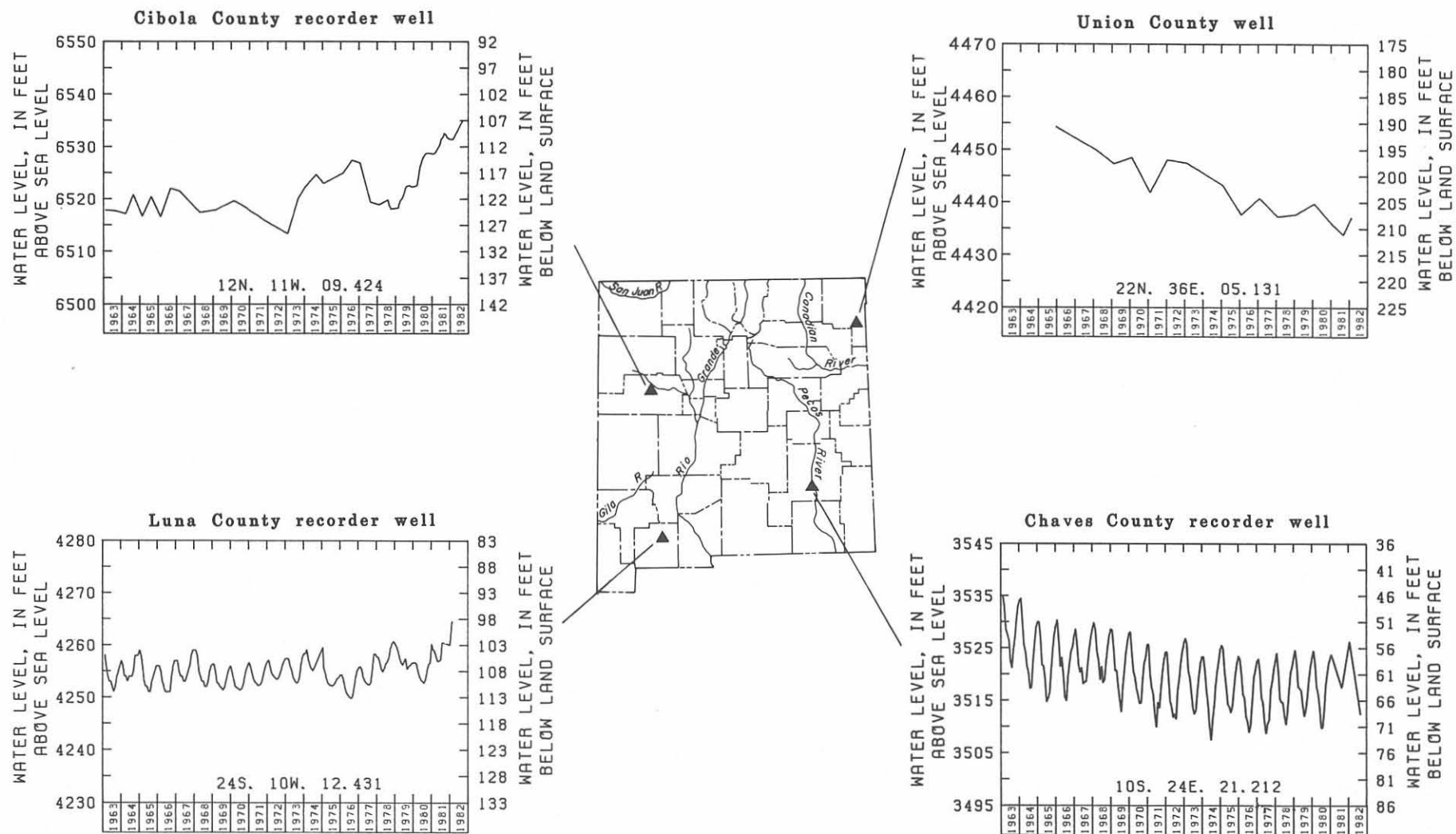


Figure 2.--Ground-water-level trends for last 20 years or period of record.

## 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 the primary energy donor in cellular life process. 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 multi-celled 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 disease, 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 the organisms which produce colonies 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 intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which 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 the number of colonies per 100 mL of sample.

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

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

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m<sup>3</sup>), and periphyton and benthic organisms in grams per square meter (g/m<sup>2</sup>).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for 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 ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass 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 2,447 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 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 (CFSM) 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 (FT<sup>3</sup>/S, ft<sup>3</sup>/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 approximately 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  $\mu$ 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.

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,  $s$  is the total number of individuals, and  $n$  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 specific 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 river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution 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 attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO<sub>3</sub>).



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.

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 substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (UG/G, g/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (UG/L, 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 represent 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 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, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square 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:

Classification	Size (mm)	Method of analysis
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 is 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. Periphyton is a useful indicator of water quality.

Pesticides are chemical compounds used to control the growth of undesirable plants and animals. 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 is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and 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/mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats of floating "moss" in lakes. Their concentrations are expressed as number of cells/mL of sample.

Zooplankton is 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 [ $\text{mg C}/(\text{m}^2 \cdot \text{time})$  for periphyton and macrophytes and  $\text{mg C}/(\text{m}^3 \cdot \text{time})$ ] 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 [ $\text{mg O}_2/(\text{m}^2 \cdot \text{time})$  for periphyton and macrophytes and  $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$ ] 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 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 were 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.

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).

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 the quantity of suspended sediment passing a section in a specified period.

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.

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

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigated farmland.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks 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 micromhos 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 micromhos). 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 lived.

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

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 batificial 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 multi-plate 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, 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 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.....Arthropoda  
Class.....Insecta  
Order.....Ephemeroptera  
Family.....Ephemeridae  
Genus.....Hexagenia  
Species.....Hexagenia limbata

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 milligrams per liter by 0.00136.

Tons per 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 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 determines all of the constituent in the sample.)

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.

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.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

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



## DOWNSTREAM ORDER AND STATION NUMBER

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 main-stream station are listed before that station. A station on a tributary that enters between two main-stream 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 the 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.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. 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 8-digit number for each station such as 08313000, which appears just to the left of the station name, includes the 2-digit part number "08" plus the 6-digit downstream order number "313000." In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. 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).

## NUMBERING SYSTEM FOR WELLS, SPRINGS, AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells, springs, and miscellaneous sites where only random water-quality samples are taken.

The well, spring and miscellaneous site numbering system of the U.S. Geological Survey is based on 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 6 digits denote the degrees of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 3 below.

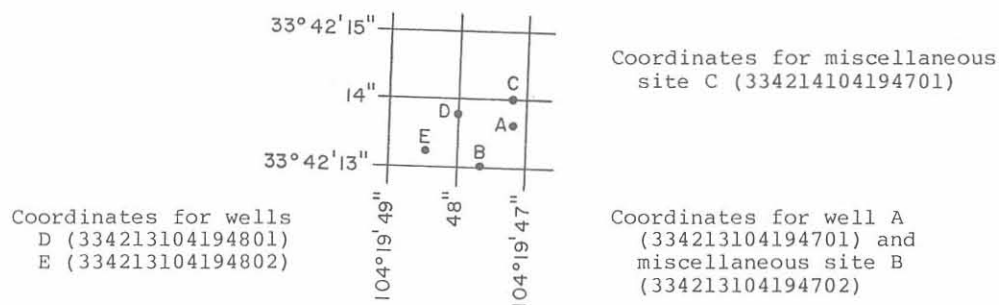


Figure 3.--System for numbering wells, springs, and miscellaneous sites

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 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.

## SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin 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 which 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 data collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality. Included in this network are stations 07227140, Canadian River above New Mexico-Texas State line; 08251500, Rio Grande near Lobatos; 08313000, Rio Grande at Otowi Bridge, near San Ildefonso; 08358300, Rio Grande conveyance channel at San Marcial; 08358400, Rio Grande floodway at San Marcial; 08361000, Rio Grande below Elephant Butte Dam; 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, Rio Tularosa near Bent; 09368000, San Juan River at Shiprock; and 09431500, Gila River near Redrock.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity. Included in this program are the hydrologic bench-mark stations and station 08407500, Pecos River near Red Bluff.

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 Red Rock.

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 statelines. 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; 08311900, 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; 08363500, Rio Grande at Leasburg Dam, near Las Cruces; 08379500, Pecos River near Anton Chico; 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 which 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 STAGE AND WATER-DISCHARGE RECORDS

##### Collection and computation of data

The base data collected at gaging stations 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. 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 the general methods adopted by the Geological Survey. These methods are described in standard text books, in Water-Supply Paper 888, 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 extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharge are computed from the daily figures. 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 engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

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 by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are 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 on the basis of operator's log prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulation of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights or elevations are included for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the current year is shown on the inside of the front cover to facilitate finding the day of the week for any date.

The descriptions of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging stations and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations 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 revised figure was first published is given.

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 5.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging stations is given under "REMARKS." For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of records or for stations where changes in water development during the period of record cause the figure to have little significance. Under "EXTREMES" are given, first, the extremes for the period of record; second, information available outside the period of record; and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.



The daily table for stream-gaging stations gives the 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 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 daily 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 or indefinite stage-relation, or of any other unusual condition 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. 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.

#### Accuracy of field data and computed results

The accuracy of streamflow data 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 observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good" within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft<sup>3</sup>/s; to tenths 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 figure. The same rounding rules apply to discharge figures listed for partial-record stations.

#### 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. Also most gaging station records are 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.

### EXPLANATION OF WATER-QUALITY RECORDS

#### Collection and examination of data

Surface-water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives periods of record for the various types of water-quality data (chemical, specific conductance, biological determination, water temperatures, sediment discharge), period of record, extremes of pertinent data, and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.



### Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

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.

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.

### Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at 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 change; 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.

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

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

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

### Biological data

Generally three types of biological data appear in this report; microbiological data on coliform and streptococci bacteria, phytoplankton data and periphyton data. Methods for the collection and analysis of aquatic biological and aquatic microbiological samples are described by Slack and others (1973). (See reference 5-A4).

### Parameter Codes

During 1978, revisions were made in the terminology used to define 143 of the water-quality parameter codes that have been used by the Geological Survey in its publication of water-quality data and in its WATSTORE data system. These revisions were made to achieve consistency in terminology. They do not represent a change in the way the codes have been used in the past or in the association of specific code numbers with identified analytical procedures. A table showing both old and new terminology is printed at the end of the 1978 report.

The five-digit codes shown in parentheses in the column headings of the tables in this report are parameter codes which uniquely identify the data. These are standard codes used to identify the data stored in the files of the National Water Data Storage and Retrieval System which was implemented and is managed by the Water Resources Division (WRD) of the U.S. Geological Survey. These codes are identical to those used by the U.S. Environmental Protection Agency (EPA) in all cases where EPA has assigned a parameter code.

### EXPLANATION OF GROUND-WATER LEVEL RECORDS

#### Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 3.

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

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 altitude 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.

Thirty-seven manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing 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) is on 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).

NOTE: When ordering 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-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-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.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.



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

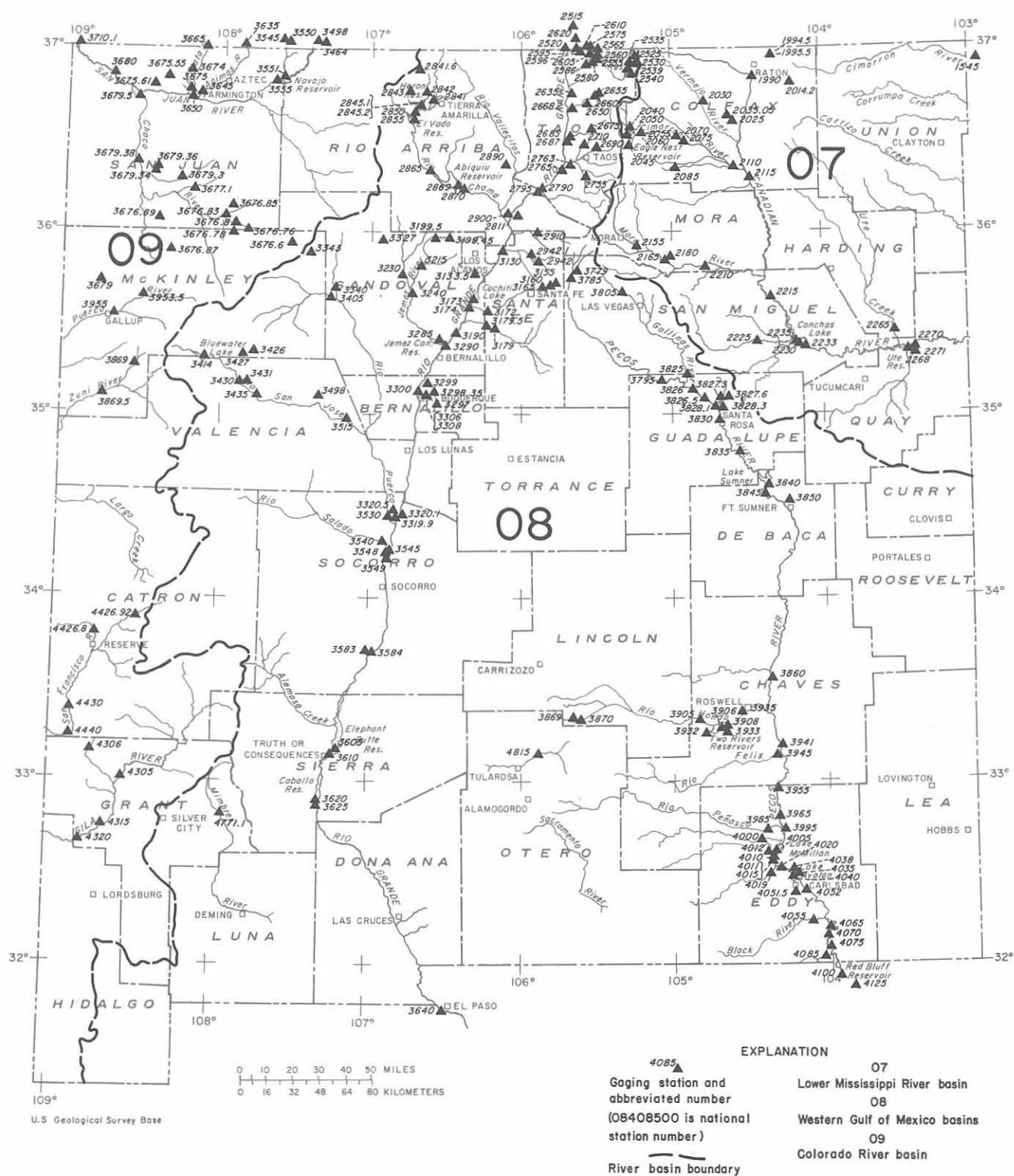


Figure 5.-- Map of New Mexico showing location of surface-water gaging stations.



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

## HYDROLOGIC-DATA STATION RECORDS

## LOWER MISSISSIPPI RIVER BASIN

## ARKANSAS RIVER BASIN

## 07154500 CIMARRON RIVER NEAR KENTON, OK

LOCATION.--Lat 36°55'36", long 102°57'31", in SE¼ sec.4, T.5 N., R.1 E., Cimarron County, Hydrologic Unit 11040001, near right bank on downstream side of pier of county road bridge, 1.5 mi (2.4 km) upstream from North Carrizo Creek, 1.7 mi (2.7 km) northeast of Kenton, 2.2 mi (3.5 km) downstream from Carrizozo Creek, and at mile 594.0 (955.7 km).

DRAINAGE AREA.--1,106 mi<sup>2</sup> (2,865 km<sup>2</sup>), of which 68 mi<sup>2</sup> (176 km<sup>2</sup>) is probably noncontributing.

PERIOD OF RECORD.--April 1904 to July 1905 (gage heights only), October 1950 to current year.

REVISED RECORDS.--WSP 1711: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 4,262.08 ft (1,299.082 m) National Geodetic Vertical Datum of 1929 (levels by State Highway Department). April 1904 to July 1905, nonrecording gage at site 0.9 mi (1.4 km) upstream at different datum. Oct. 1, 1950 to Sept. 19, 1967, water-stage recorder at same site and at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair except those above 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s), which are poor. Extensive diversions for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years (water years 1951-82), 21.9 ft<sup>3</sup>/s (0.620 m<sup>3</sup>/s), 15,870 acre-ft/yr (19.6 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,400 ft<sup>3</sup>/s (1,230 m<sup>3</sup>/s) Oct. 17, 1965, gage height, 22.32 ft (6.803 m), present datum, from rating curve extended above 7,000 ft<sup>3</sup>/s (198 m<sup>3</sup>/s) on basis of contracted-opening measurement of peak flow; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,300 ft<sup>3</sup>/s (93.5 m<sup>3</sup>/s) at 0945 hours June 26, gage height, 12.18 ft (3.712 m), no other peak above base of 2,000 ft<sup>3</sup>/s (57 m<sup>3</sup>/s); no flow Apr. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	1.4	1.6	2.0	1.4	1.5	.16	1.1	.98	13	52	.06
2	2.4	1.3	2.1	2.1	1.0	1.3	.11	1.1	.60	5.8	16	.14
3	2.5	2.6	2.6	1.9	.80	1.4	.06	1.1	.81	2.7	5.6	.18
4	2.4	3.1	2.7	1.5	.35	2.1	.04	.82	1.4	.95	2.2	386
5	2.4	3.2	2.9	2.4	.03	3.2	.02	.70	.89	82	1.2	45
6	2.3	3.3	3.0	1.9	.01	3.6	.02	.84	.39	16	.70	21
7	2.2	3.3	3.2	1.4	.35	3.6	.02	.76	.19	6.6	.94	9.8
8	2.2	3.2	3.5	1.6	.70	2.9	.00	.68	.11	2.6	34	5.4
9	2.1	3.2	3.4	2.2	.10	2.4	.37	.56	.07	2.3	23	123
10	2.1	3.4	3.2	2.4	.25	2.2	1.0	.47	.04	48	11	61
11	1.7	3.5	2.9	1.2	.35	2.1	1.3	.36	143	14	7.0	27
12	1.5	3.7	2.6	1.8	.20	1.8	1.2	.46	19	3.0	52	14
13	1.2	3.9	2.7	1.9	.80	1.5	.98	.55	5.0	.85	9.7	9.9
14	1.0	4.0	2.6	1.8	1.5	1.8	.71	.60	3.2	65	3.1	7.4
15	1.1	3.8	2.4	2.3	3.4	1.4	.57	.56	2.1	109	75	5.3
16	1.6	3.8	2.4	2.0	3.0	.40	.33	.51	1.1	17	87	4.4
17	1.6	3.8	2.4	2.5	3.3	.38	.30	.52	.58	8.0	27	3.7
18	1.2	3.6	2.1	3.2	2.8	.55	.35	.43	.39	4.9	15	3.1
19	1.2	2.9	2.5	3.7	2.0	.85	.28	.30	.27	3.4	11	2.6
20	1.0	2.9	3.3	2.2	1.5	.65	.21	.22	.19	2.1	7.6	2.2
21	1.0	2.9	3.2	1.8	1.4	.38	.24	.16	.13	.98	6.0	1.7
22	1.1	2.9	3.9	1.8	1.4	.38	.24	.13	.10	.45	3.7	1.1
23	1.1	2.9	3.6	1.1	1.2	.36	.22	.10	5.0	.32	3.5	.70
24	1.2	2.7	2.3	1.7	1.1	.32	.24	15	16	.23	1.7	.45
25	1.4	2.7	2.8	2.0	1.2	.22	.24	7.3	162	.17	.88	.45
26	1.8	2.4	2.6	1.6	1.4	.21	.22	49	619	.13	.37	.41
27	2.2	2.2	2.6	1.3	1.6	.25	.37	17	343	.11	.23	.31
28	2.5	2.1	2.0	1.1	1.7	.30	.52	4.1	73	.09	.16	.23
29	2.7	2.1	1.5	1.3	---	.31	.57	2.1	45	354	.07	.16
30	2.4	1.9	2.3	1.2	---	.24	.96	1.3	25	587	1.2	.17
31	2.0	---	2.3	1.2	---	.20	---	1.3	---	222	.19	---
TOTAL	55.8	88.7	83.2	58.1	34.84	38.80	11.85	110.13	1468.54	1572.68	459.24	736.86
MEAN	1.80	2.96	2.68	1.87	1.24	1.25	.40	3.55	49.0	50.7	14.8	24.6
MAX	2.7	4.0	3.9	3.7	3.4	3.6	1.3	49	619	587	87	386
MIN	1.0	1.3	1.5	1.1	.01	.20	.00	.10	.04	.09	.07	.06
AC-FT	111	176	165	115	69	77	24	218	2910	3120	911	1460
CAL YR 1981	TOTAL	7036.43	MEAN	19.3	MAX	2160	MIN	.00	AC-FT	13960		
WTR YR 1982	TOTAL	4718.74	MEAN	12.9	MAX	619	MIN	.00	AC-FT	9360		

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 (5.0 km) north of Hebron, 5.0 mi (8.0 km) upstream from Chicorica Creek, 8.0 mi (12.9 km) south of Raton, and at mile 888.1 (1,429.0 km).

DRAINAGE AREA.--229 mi<sup>2</sup> (593 km<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. Altitude of gage is 6,248 ft (1,904 m), from topographic map. See WSP 1921 for history of changes prior to Aug. 18, 1965.

REMARKS.--Records poor. Diversions above station for irrigation of a few hundred acres. Part or all of low flow can be diverted to left bank 1.6 mi (2.6 km) above station for stock water, off-channel storage and irrigation.

AVERAGE DISCHARGE.--36 years, 7.88 ft<sup>3</sup>/s (0.223 m<sup>3</sup>/s), 5,710 acre-ft/yr (7.04 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,400 ft<sup>3</sup>/s (1,770 m<sup>3</sup>/s) June 17, 1965, gage height, 28.2 ft (8.60 m), from floodmarks, present datum, from rating curve extended above 1,300 ft<sup>3</sup>/s (37 m<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 (8.5 m), present datum, at site 150 ft (46 m) upstream, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft<sup>3</sup>/s (28 m<sup>3</sup>/s) and maximum (\*), from rating curve extended above 56 ft<sup>3</sup>/s (1.6 m<sup>3</sup>/s) as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
June 12	1830	1650 46.7	5.17 1.576	Aug. 17	0230	3980 113	6.31 1.923
July 29	0130	2100 59.5	5.41 1.649	Aug. 18	2000	*4800 136	6.68 2.036
Aug. 4	2300	1980 56.1	5.35 1.631	Aug. 22	1700	1700 48.1	5.20 1.585
Aug. 5	2200	3720 105	6.19 1.887	Aug. 27	1630	4490 127	6.54 1.993
Aug. 15	2330	1450 41.1	5.06 1.542	Aug. 29	0030	1220 34.6	4.93 1.503

Minimum discharge, 0.02 ft<sup>3</sup>/s (0.0006 m<sup>3</sup>/s) Mar. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	3.4	4.2	3.4	1.3	.09	.15	.15	.09	.27	.50	18
2	16	3.8	4.2	3.4	1.0	.09	.12	.15	.09	.18	.20	18
3	17	4.2	4.2	3.0	.80	.09	.12	.15	.12	.18	17	15
4	8.9	4.6	3.8	3.5	.50	.09	.12	.12	.12	.15	.97	14
5	6.2	4.6	3.8	3.0	.50	.09	.12	.18	.07	.18	370	13
6	5.1	4.6	3.8	2.7	.50	.09	.12	.18	.07	.18	170	18
7	6.2	4.6	3.4	2.5	.50	.09	.09	.15	.07	.18	12	10
8	7.2	4.2	3.4	2.5	.50	.09	.09	.15	.07	.33	11	9.4
9	6.7	4.2	3.4	2.5	.50	.07	.09	.12	.07	.33	17	8.3
10	6.2	4.2	3.4	2.0	.50	.07	.09	.12	.12	.27	14	7.8
11	5.6	4.2	3.4	2.0	.50	.07	.09	.12	.12	31	56	9.1
12	4.2	3.8	3.4	2.0	.50	.09	.07	.12	.44	2.1	21	14
13	4.2	3.8	3.8	2.0	1.0	.12	.09	.12	2.0	.30	12	18
14	3.8	4.2	3.4	1.5	1.5	.12	.09	.15	.40	.30	6.7	14
15	3.8	4.2	3.4	2.0	2.7	.12	.07	.12	.22	.30	175	12
16	4.6	4.2	3.8	2.5	.67	.09	.07	.12	13	.30	327	11
17	4.6	4.2	3.8	3.0	.48	.09	.07	.12	.48	.80	533	12
18	4.2	4.2	3.8	4.6	.48	.12	.07	.13	5.2	.50	506	13
19	3.8	4.2	3.5	4.2	.33	.09	.07	.18	10	.30	254	14
20	1.9	4.2	3.4	3.8	.27	.09	.09	.09	2.2	.30	249	15
21	.18	4.2	3.4	3.0	.27	.12	.12	.09	.48	.30	70	17
22	.50	4.2	3.8	.50	.22	.12	.12	.09	23	.30	148	16
23	2.4	4.6	3.7	.30	.22	.12	.15	.09	.90	.30	51	13
24	2.7	4.6	3.4	.30	.13	.12	.15	.15	.48	.30	42	11
25	2.4	4.6	3.4	.27	.15	.12	.15	8.5	.40	.30	36	9.4
26	2.7	4.6	3.4	.22	.15	.12	.15	.15	.97	.30	28	8.3
27	3.0	4.6	3.0	.22	.09	.12	.13	.09	.40	35	222	7.8
28	3.4	4.6	2.7	1.0	.09	.12	.13	.09	.33	70	34	7.8
29	3.4	5.1	3.0	3.0	---	.15	.15	.07	.27	130	165	7.2
30	3.4	5.1	2.7	2.7	---	.15	.15	.07	.27	8.0	29	14
31	3.4	---	2.7	1.9	---	.15	---	.07	---	1.0	21	---
TOTAL	152.78	129.8	108.5	69.51	16.40	3.27	3.39	12.25	106.01	284.25	3699.40	375.1
MEAN	4.93	4.33	3.50	2.24	.59	.11	.11	.40	3.53	9.17	119	12.5
MAX	17	5.1	4.2	4.6	2.7	.15	.18	8.5	44	130	533	18
MIN	.18	3.4	2.7	.22	.09	.07	.07	.07	.07	.15	.20	7.2
AC-FT	303	257	215	138	33	6.5	6.7	24	210	564	7340	744

CAL YR 1981	TOTAL	10326.76	MEAN	28.3	MAX	2760	MIN	.00	AC-FT	20480
WTR YR 1982	TOTAL	4960.66	MEAN	13.6	MAX	538	MIN	.07	AC-FT	9840



## ARKANSAS RIVER BASIN

## 07199450 LAKE MALOYA NEAR RATON, NM

LOCATION.--Lat 36°59'02", long 104°22'24", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, near spillway of dam on Chicorica Creek, 6.5 mi (10.5 km) northeast of Raton, and at mile 21.5 (34.6 km).

DRAINAGE AREA.--20.8 mi<sup>2</sup> (53.9 km<sup>2</sup>).

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

GAGE.--Nonrecording gage. Altitude 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 (72,700 m<sup>3</sup>). Reservoir enlarged in 1916; capacity, 1,130 acre-ft (1.39 hm<sup>3</sup>), spillway elevation, 7,479.0 ft (2,279.60 m). Reservoir enlarged again in 1948; capacity, 3,690 acre-ft (4.55 hm<sup>3</sup>), spillway elevation, 7,511.0 ft (2,289.35 m). Elevation of lowest outlet, 7,439.0 ft (2,267.41 m). 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.--Month-end elevations furnished by city of Raton. Capacity table furnished by New Mexico Interstate Stream Commission.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 3,970 acre-ft (4.90 hm<sup>3</sup>) May 31, 1975, elevation, 7,510.79 ft (2,289.289 m); maximum elevation observed, 7,511.00 ft (2,289.353 m) May 31, 1980; minimum observed, 911 acre-ft (1.12 hm<sup>3</sup>) Feb. 28, 1979, elevation, 7,479.85 ft (2,279.858 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,690 acre-ft (4.55 hm<sup>3</sup>) at month-end except Oct. 31, July 31, and Sept. 30, elevation, 7,511.00 ft (2,289.353 m); minimum observed, 3,170 acre-ft (3.91 hm<sup>3</sup>) Sept. 30, elevation, 7,506.51 ft (2,287.984 m).

## 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 (7.1 km) northeast of Raton, and at mile 19.2 (30.9 km).

DRAINAGE AREA.--29.4 mi<sup>2</sup> (76.1 km<sup>2</sup>).

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

GAGE.--Nonrecording gage. Altitude 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 (123,000 m<sup>3</sup>), spillway elevation, 7,078.0 ft (2,157.37 m). Reservoir rehabilitated in 1941; capacity, 71 acre-ft (87,500 m<sup>3</sup>), spillway elevation, 7,089.6 ft (2,160.91 m). Elevation of lowest outlet, 7,064.1 ft (2,153.14 m). 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.--Month-end elevations furnished by city of Raton.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 71 acre-ft (87,500 m<sup>3</sup>) Apr. 30, May 31, 1980, June 30, July 31, Aug. 31, Sept. 30, 1981, elevation, 7,089.60 ft (2,160.910 m); minimum observed, 40 acre-ft (49,300 m<sup>3</sup>) May 31, 1978, elevation, 7,083.27 ft (2,158.981 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 71 acre-ft (87,500 m<sup>3</sup>) at month-end except July 31, elevation, 7,089.60 ft (2,160.910 m); minimum observed, 61 acre-ft (75,200 m<sup>3</sup>) July 31, elevation, 7,087.73 ft (2,160.340 m).

## MONTHEND ELEVATION AND CONTENTS AND MONTHLY DIVERSIONS, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	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, 1981....	7,510.75	3,660	-	7,089.60	71	-	-
Oct. 31.....	7,510.17	3,590	-70	7,089.60	71	0	102
Nov. 30.....	7,511.00	3,690	+100	7,089.60	71	0	84
Dec. 31.....	7,511.00	3,690	0	7,089.60	71	0	95
CAL YR 1981	-	-	+900	-	-	+8	1,280
Jan. 31, 1982....	7,511.00	3,690	0	7,089.60	71	0	94
Feb. 28.....	7,511.00	3,690	0	7,089.60	71	0	93
Mar. 31.....	7,511.00	3,690	0	7,089.60	71	0	112
Apr. 30.....	7,511.00	3,690	0	7,089.60	71	0	122
May 31.....	7,511.00	3,690	0	7,089.60	71	0	157
June 30.....	7,511.00	3,690	0	7,089.60	71	0	155
July 31.....	7,510.06	3,580	-110	7,087.73	61	-10	190
Aug. 31.....	7,511.00	3,690	+110	7,089.60	71	+10	137
Sept. 30.....	7,506.51	3,170	-520	7,089.60	71	0	124
WTR YR 1982	-	-	-490	-	-	0	1,470

LOCATION.--Lat 36°48'52", long 104°13'57", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.24, T.30 N., R.25 E., Colfax County, Hydrologic Unit 11080001, on right bank 1.0 mi (1.6 km) downstream from Throttle Dam and 13 mi (21 km) southeast of Raton.

DRAINAGE AREA.--49.5 mi<sup>2</sup> (128.2 km<sup>2</sup>).

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

REVISED RECORDS.--WRD NM-77-1: 1975 (M), 1976 (M).

GAGE.--Water-stage recorder. Altitude of gage is 6,635 ft (2,020 m), from topographic map.

REMARKS.--Water-discharge records fair except those for winter period and those above 10 ft<sup>3</sup>/s (0.28 m<sup>3</sup>/s), which are poor. Flow regulated by Throttle Reservoir, capacity 3,300 acre-ft (4.07 hm<sup>3</sup>) 1 mi (1.6 km) upstream.

AVERAGE DISCHARGE.--7 years, 1.63 ft<sup>3</sup>/s (0.046 m<sup>3</sup>/s), 1,180 acre-ft/yr (1.45 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 526 ft<sup>3</sup>/s (14.9 m<sup>3</sup>/s) Sept. 4, 1977, gage height, 4.24 ft (1.292 m), from rating curve extended above 5.9 ft<sup>3</sup>/s (0.17 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 167 ft<sup>3</sup>/s (4.73 m<sup>3</sup>/s) Aug. 5, gage height, 3.14 ft (0.957 m), from rating curve extended above 11 ft<sup>3</sup>/s (0.31 m<sup>3</sup>/s) as explained above; no flow many days.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	5.2	.14	.10	.09	3.4	4.7	2.5	.00	.00	.00	.01
2	8.9	4.1	.15	.12	.08	3.6	4.8	2.5	.01	.00	.00	.01
3	8.9	4.0	.15	.12	.04	3.6	4.8	2.5	.02	.00	.66	.83
4	8.6	4.0	.14	.10	.01	3.6	4.6	2.5	.01	.00	.20	2.0
5	8.6	4.0	.13	.08	.00	1.3	4.6	.74	.00	.00	4.0	3.4
6	8.0	4.1	.15	.10	.00	.08	4.9	.04	.00	.00	.02	3.4
7	7.8	4.1	.14	.04	.00	.07	4.9	.03	.00	2.6	.02	3.4
8	7.8	4.0	.13	.02	.00	1.2	4.8	.02	.00	2.4	.00	2.0
9	12	3.8	.13	.10	.00	2.2	4.7	.03	.00	2.4	.00	1.2
10	14	1.9	.13	.10	.01	3.3	2.8	.02	.00	2.4	2.1	1.1
11	3.9	.34	.12	.12	.02	4.5	2.0	.03	.00	2.5	.02	.93
12	5.2	.33	.12	.08	.04	4.3	.98	.03	.00	2.5	.00	.90
13	6.4	.33	.12	.04	.10	4.3	.04	.02	.00	2.5	.00	.78
14	7.5	.32	.11	.10	.18	4.3	.03	.02	.00	2.5	.00	.78
15	8.4	.32	.13	.12	.25	4.3	.03	.02	.00	2.5	.01	2.5
16	8.5	.32	.12	.12	.40	4.3	.03	.03	.01	2.4	.00	3.6
17	8.4	.32	.08	.16	.78	4.2	.03	.04	.02	1.3	.00	3.6
18	8.5	.33	.12	.16	1.0	6.1	.02	.02	.02	.02	.01	3.5
19	8.4	.28	.17	.16	1.3	7.6	.02	.02	.02	.01	.00	3.1
20	8.5	.20	.15	.14	1.8	7.6	.02	.01	.02	.00	.00	3.0
21	8.6	.17	.13	.12	2.4	7.8	.02	.00	.02	.00	.00	2.8
22	5.5	.18	.04	.12	3.0	8.0	.02	.01	.01	.00	.02	1.8
23	4.1	.18	.00	.09	3.6	5.9	.02	.02	.01	.00	.02	1.0
24	4.3	.17	.00	.14	3.4	3.8	.03	.02	.01	.00	.02	1.1
25	4.1	.16	.02	.16	2.7	5.1	.03	.08	.00	.00	.02	.97
26	4.1	.16	.04	.16	2.2	5.0	2.4	.12	.00	.00	.02	.87
27	4.2	.16	.06	.16	3.0	5.0	2.3	.06	.00	.00	.03	.88
28	4.1	.17	.02	.14	3.2	5.0	2.3	.02	.00	.01	.02	1.0
29	4.3	.17	.06	.12	---	4.8	2.3	.00	.00	.02	.01	1.3
30	5.6	.16	.09	.12	---	4.5	2.4	.00	.00	.02	.01	.55
31	5.5	---	.08	.12	---	4.5	---	.00	---	.00	.01	---
TOTAL	221.3	43.97	3.17	3.53	29.60	133.25	60.62	11.45	.18	26.08	7.22	52.41
MEAN	7.14	1.47	.10	.11	1.06	4.30	2.02	.37	.006	.84	.23	1.75
MAX	14	5.2	.17	.16	3.6	8.0	4.9	2.5	.00	2.6	4.0	3.6
MIN	3.9	.16	.00	.02	.00	.07	.02	.00	.00	.00	.00	.01
AC-FT	439	87	6.3	7.0	59	264	120	23	.4	52	14	104
CAL YR 1981	TOTAL	693.85	MEAN	1.90	MAX	14	MIN	.00	AC-FT	1380		
WTR YR 1982	TOTAL	592.78	MEAN	1.62	MAX	14	MIN	.00	AC-FT	1180		

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 18...	0930	--	--	40	--	--	--	--	--	--
MAR 03...	0930	--	--	40	--	--	--	--	--	--
MAY 04...	1010	1	1	40	1	3	20	X10	3	3
AUG 03...	0900	--	--	70	--	--	--	--	--	--

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 18...	91	--	--	--	--	--	--	--	--
MAR 03...	75	--	--	--	--	--	--	--	--
MAY 04...	X9	2	1	.3	X.1	1	1	140	140
AUG 03...	13	--	--	--	--	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 18...	0930	.30	9.5	4	.00
JUN 02...	1630	.01	21.0	3	.00

## 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 (8 m) upstream from concrete drop structure, 300 ft (91 m) upstream from Crow Creek, and 7.5 mi (12.1 km) 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. Altitude of gage is 6,110 ft (1,860 m), from topographic map. Prior to May 1975, at site about 200 ft upstream at different datum.

REMARKS.--Records fair except those for winter period, which are poor. Eagle Tail ditch diverts water from Chicorica Creek for use near Maxwell. No diversions above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years (water years 1946-49, 1976-82), 4.90 ft<sup>3</sup>/s (0.139 m<sup>3</sup>/s), 3,550 acre-ft/yr (4.38 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 217 ft<sup>3</sup>/s (6.15 m<sup>3</sup>/s) Aug. 27, 1946, from rating curve extended above 85 ft<sup>3</sup>/s (2.4 m<sup>3</sup>/s); no flow at times each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.84	.23	4.5	2.6	1.0	8.0	4.2	.41	.19	.93	.77	3.5
2	.96	.14	3.7	3.0	.50	10	3.1	.72	.10	1.3	.11	3.3
3	9.5	.11	4.1	1.8	.10	8.0	3.1	.59	.25	1.1	.43	3.1
4	6.4	.96	3.7	2.5	.00	8.0	2.8	.55	.38	.54	24	3.2
5	2.2	1.5	3.6	2.0	.00	8.6	2.2	.54	.36	.20	97	3.2
6	1.3	.73	3.5	3.0	.00	7.5	1.1	.59	.75	.06	155	9.3
7	1.0	.27	3.2	2.4	.00	6.4	1.1	.94	.28	.15	37	77
8	.90	.18	3.5	2.3	.10	5.8	1.2	.95	.03	.02	10	8.2
9	.80	2.1	2.9	1.3	.05	5.9	1.1	.75	.00	.00	7.2	4.0
10	.70	2.8	2.5	.22	.08	5.5	1.1	.48	.00	.00	6.7	2.3
11	.60	1.3	3.0	.00	.05	6.2	1.1	.56	.00	.00	6.6	1.8
12	.50	1.4	2.3	.00	.08	9.5	1.1	.54	.00	2.3	14	2.5
13	.40	1.5	2.6	.00	.10	18	.98	.52	11	17	4.4	2.8
14	.30	1.6	1.6	.00	1.0	16	1.3	.51	14	1.9	2.4	2.6
15	.28	2.2	2.1	.00	2.0	17	1.4	.52	2.6	.37	15	1.8
16	.26	2.1	3.0	.00	2.0	16	.85	.55	17	.23	124	1.6
17	.46	2.4	1.7	.00	2.0	13	.93	.48	15	.10	161	1.8
18	1.0	1.7	1.5	.00	1.5	12	.66	.46	2.7	.10	48	1.9
19	.72	1.8	2.6	.18	2.0	11	.58	1.2	7.2	.00	48	2.9
20	.59	2.6	2.8	.69	5.0	10	.74	.99	14	.00	64	8.0
21	.64	2.2	3.0	.00	6.0	8.0	.58	.44	9.0	.11	16	2.7
22	.88	1.9	3.2	.00	7.0	7.1	.53	.37	11	.05	9.8	1.9
23	.79	2.0	2.2	.00	10	6.6	.92	.18	42	.00	15	1.7
24	.84	1.9	2.4	.00	9.0	6.2	.75	.60	11	.00	8.2	1.5
25	1.0	1.6	2.8	.00	7.0	5.6	.91	.86	4.3	.00	7.1	1.4
26	1.3	1.9	3.0	.73	6.0	6.1	.62	3.9	3.6	.00	7.1	1.4
27	1.1	1.9	2.4	2.2	7.0	5.2	.37	2.5	19	.13	6.1	1.3
28	.84	2.5	2.6	2.5	8.0	5.4	.91	.94	5.5	.27	88	1.1
29	.45	1.9	2.1	2.1	---	4.4	.98	.52	2.8	.04	14	.88
30	.32	1.9	2.6	1.8	---	4.6	.52	.41	1.8	6.8	5.6	.93
31	.29	---	2.5	1.6	---	4.9	---	.32	---	2.5	3.9	---
TOTAL	38.16	47.32	87.2	32.92	77.56	266.5	37.73	23.89	195.84	36.20	1006.41	159.61
MEAN	1.23	1.58	2.81	1.06	2.77	8.60	1.26	.77	6.53	1.17	32.5	5.32
MAX	9.5	2.8	4.5	3.0	10	18	4.2	3.9	42	17	161	77
MIN	.26	.11	1.5	.00	.00	4.4	.37	.18	.00	.00	.11	.88
AC-FT	76	94	173	65	154	529	75	47	388	72	2000	317
CAL YR 1981	TOTAL	2136.78	MEAN	5.85	MAX	161	MIN	.00	AC-FT	4240		
WTR YR 1982	TOTAL	2009.34	MEAN	5.51	MAX	161	MIN	.00	AC-FT	3990		

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 (2.1 km) north of Dawson, 2.3 mi (3.7 km) upstream from Rail Canyon, and at mile 28.2 (45.4 km).

DRAINAGE AREA.--301 mi<sup>2</sup> (780 km<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. Altitude of gage is 6,365 ft (1,940 m), from topographic map. See WSP 1311 or 1731 for history of changes prior to Sept. 24, 1953.

REMARKS.--Water-discharge records fair except those for winter period and those for August, which are poor. Diversions for irrigation of small acreage and mountain meadows above station.

AVERAGE DISCHARGE.--58 years (water years 1916-17, 1920, 1928-82), 18.0 ft<sup>3</sup>/s (0.510 m<sup>3</sup>/s), 13,040 acre-ft/yr (16.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1926).--Maximum discharge, 12,600 ft<sup>3</sup>/s (357 m<sup>3</sup>/s) June 17, 1965, gage height, 15.25 ft (4.648 m), from rating curve extended above 400 ft<sup>3</sup>/s (11 m<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 (280 m<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft<sup>3</sup>/s (23 m<sup>3</sup>/s) and maximum (\*), from rating curve extended above 130 ft<sup>3</sup>/s (3.7 m<sup>3</sup>/s) as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
July 12	0300	940 26.6	5.85 1.783	Aug. 15	1830	*3460 98.0	8.94 2.725
Aug. 3	2145	2230 63.2	7.43 2.265	Aug. 28	2145	2310 65.4	7.48 2.280
Aug. 10	2100	1240 35.1	6.18 1.884				

Minimum discharge, 4.5 ft<sup>3</sup>/s (0.13 m<sup>3</sup>/s) Apr. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	14	7.0	9.1	6.0	7.8	6.0	8.7	33	13	21	50
2	20	14	7.4	9.6	6.3	7.7	6.2	9.1	29	11	16	40
3	20	14	7.8	9.1	5.6	7.7	5.9	12	28	11	152	40
4	20	13	8.7	9.3	5.6	7.2	5.5	14	28	13	85	35
5	19	12	10	7.3	5.3	7.4	6.2	20	28	14	71	30
6	18	12	11	7.8	5.3	7.0	5.8	23	26	13	62	25
7	18	12	11	6.6	5.6	7.0	6.3	23	24	9.6	32	40
8	18	14	10	6.0	5.6	7.4	6.3	18	23	9.3	37	52
9	17	14	10	6.6	5.6	7.3	5.9	21	20	9.6	32	44
10	16	13	9.6	6.3	6.0	7.0	6.4	21	15	8.2	221	56
11	16	12	10	6.3	6.0	7.0	6.7	14	15	8.5	117	55
12	15	12	9.4	7.4	6.6	6.6	6.5	12	20	136	58	75
13	14	12	9.6	7.0	6.6	7.3	6.5	15	22	40	49	42
14	13	12	8.7	6.6	7.0	8.3	7.2	15	22	14	41	37
15	13	12	8.2	7.0	10	7.4	8.0	17	15	12	477	34
16	14	11	8.7	6.6	9.6	6.6	9.8	23	15	11	165	33
17	13	11	6.3	7.0	12	6.2	11	23	14	9.5	175	32
18	13	11	6.0	8.7	10	6.3	12	14	15	9.5	120	31
19	13	10	8.3	9.1	8.2	6.2	12	15	24	17	140	33
20	12	8.0	14	7.4	9.1	6.0	10	17	37	21	135	38
21	12	8.3	11	7.0	7.4	6.3	8.9	18	28	14	140	44
22	13	9.0	9.6	7.0	7.8	7.0	7.4	18	23	9.7	160	35
23	14	9.5	6.6	7.4	7.3	6.6	7.1	22	14	8.0	170	31
24	14	8.9	6.0	7.4	7.3	6.3	7.2	30	14	7.6	190	27
25	15	9.0	7.0	8.2	7.4	6.3	7.2	42	12	8.0	170	26
26	15	8.9	6.6	8.2	7.0	6.3	6.8	39	16	7.8	150	25
27	14	8.5	7.4	9.1	8.2	6.9	7.5	32	15	9.9	130	24
28	13	9.0	7.8	8.2	8.2	7.4	7.9	36	17	31	340	23
29	13	11	7.8	6.3	---	6.8	6.6	28	14	54	174	22
30	13	9.1	9.1	6.6	---	6.5	7.3	33	12	36	89	29
31	13	---	9.1	6.0	---	5.9	---	34	---	28	70	---
TOTAL	469	334.2	269.7	232.2	202.6	213.7	224.1	666.8	618	604.2	3989	1108
MEAN	15.1	11.1	8.70	7.49	7.24	6.89	7.47	21.5	20.6	19.5	129	36.9
MAX	20	14	14	9.6	12	8.3	12	42	37	136	477	75
MIN	12	8.0	6.0	6.0	5.3	5.9	5.5	8.7	12	7.6	16	22
AC-FT	930	663	535	461	402	424	445	1320	1230	1200	7910	2200
CAL YR 1981	TOTAL	8131.4	MEAN	22.3	MAX	768	MIN	1.2	AC-FT	16130		
WTR YR 1982	TOTAL	8931.5	MEAN	24.5	MAX	477	MIN	5.3	AC-FT	17720		

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]



ARKANSAS RIVER BASIN  
07203000 VERMEJO RIVER NEAR DAWSON, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 17	1200	--	--	20	--	--	--	--	--	--
MAR 03...	1230	--	--	20	--	--	--	--	--	--
MAY 04...	1640	1	<1	20	<1	3	<10	<10	5	2
AUG 03...	1500	--	--	20	--	--	--	--	--	--

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, 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 17...	16	--	--	--	--	--	--	--	--	--
MAR 03...	25	--	--	--	--	--	--	--	--	--
MAY 04...	18	5	<1	<1	<1	<1	1	1	70	39
AUG 03...	5	--	--	--	--	--	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 14...	1500	13	17.5	37	1.3	--
NOV 17...	1200	11	11.0	4	.12	--
DEC 22...	1315	9.7	2.5	22	.58	--
JAN 28...	1000	7.4	2.0	55	1.1	--
MAR 03...	1230	7.4	9.0	10	.20	--
APR 06...	1500	5.7	16.5	28	.43	--
JUN 02...	1030	28	15.5	99	7.5	94
JUN 30...	1600	12	23.0	32	1.0	88
AUG 03...	1500	13	27.0	33	1.2	94

## ARKANSAS RIVER BASIN

07203505 VERMEJO DITCH NEAR COLFAX, NM

LOCATION.--Lat 36°34'42", long 104°41'33", Colfax County, Hydrologic Unit 11080001, in Maxwell Grant, on right bank 2.8 mi (4.5 km) southeast of Colfax, and 5.7 mi (9.2 km) downstream from head.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,155 ft (1,875 m), from topographic map.

REMARKS.--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, 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s) Aug. 12, 1981; no flow several days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	13	6.5	7.4	4.7	7.4	3.0	2.4	32	4.3	14	.00
2	21	13	7.0	7.4	4.2	7.2	3.2	3.6	26	3.3	9.0	.00
3	21	13	7.0	5.2	3.8	6.9	3.1	5.9	13	1.2	13	.00
4	19	12	6.5	5.8	3.8	6.5	3.0	3.6	11	4.8	58	.50
5	18	11	9.0	5.4	3.7	6.0	3.3	7.8	11	5.5	76	.10
6	16	11	9.0	5.8	3.7	4.7	3.2	24	17	1.3	73	1.9
7	16	11	9.0	5.4	3.8	5.1	2.7	11	16	19	51	1.0
8	16	13	8.0	4.7	3.8	6.8	2.7	13	10	7.3	54	36
9	15	13	7.5	5.4	3.8	6.5	2.5	8.1	8.2	5.6	50	25
10	14	11	7.0	4.9	4.0	6.0	2.5	11	6.3	2.7	69	25
11	14	11	8.5	4.9	4.2	5.6	2.6	9.0	5.1	4.0	88	37
12	13	11	8.2	5.6	4.7	5.4	2.6	5.0	6.7	46	62	46
13	12	11	8.6	5.1	4.7	5.7	2.5	4.2	9.4	28	35	27
14	12	11	7.5	4.9	5.4	8.4	2.9	4.5	8.2	12	32	29
15	12	11	7.5	4.9	8.5	7.3	1.8	3.8	6.7	10	68	26
16	13	11	8.0	4.9	8.2	5.9	1.7	9.2	20	8.0	81	27
17	12	10	5.5	5.1	11	5.1	2.9	13	11	6.0	45	26
18	12	9.8	4.5	6.9	8.3	4.9	4.0	5.9	17	5.5	9.2	27
19	12	9.6	7.0	6.9	7.2	5.0	5.7	1.7	41	10	10	28
20	11	9.0	12	5.4	8.5	4.5	9.1	1.6	49	17	.02	28
21	11	7.8	9.5	4.9	6.9	3.9	12	2.9	45	13	.00	39
22	12	8.4	8.5	4.9	7.7	4.4	11	3.0	33	8.0	9.0	29
23	13	9.2	5.0	5.4	7.7	4.5	8.7	6.6	16	6.0	31	26
24	13	8.7	3.1	5.4	7.3	4.8	8.0	15	10	5.0	47	24
25	14	8.6	5.5	5.8	7.4	4.5	8.3	35	7.8	4.0	11	22
26	14	8.2	5.0	5.8	6.6	4.6	6.2	31	5.9	4.5	3.3	20
27	13	7.7	6.0	7.2	7.2	5.3	4.6	28	6.2	22	1.2	19
28	12	8.2	5.0	6.2	7.1	5.6	6.7	39	5.9	18	5.5	18
29	12	9.5	6.2	4.7	---	5.6	.79	30	7.3	42	34	17
30	12	8.0	7.7	5.1	---	5.5	.47	26	5.5	40	.65	22
31	12	---	7.7	4.4	---	4.4	---	34	---	22	7.5	---
TOTAL	436	309.7	223.0	171.8	168.4	174.0	131.76	398.8	467.2	386.7	1052.37	626.50
MEAN	14.1	10.3	7.19	5.54	6.01	5.61	4.39	12.9	15.6	12.5	33.9	20.9
MAX	21	13	12	7.4	11	8.4	12	39	49	46	88	46
MIN	11	7.7	3.1	4.4	3.7	3.9	.47	1.6	5.1	1.2	.00	.00
AC-FT	865	614	442	341	334	345	261	791	927	767	2090	1240
CAL YR 1981	TOTAL	4703.52	MEAN 12.9	MAX 100	MIN .00	AC-FT 9330						
WTR YR 1982	TOTAL	4546.23	MEAN 12.5	MAX 88	MIN .00	AC-FT 9020						

## 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 (53 m) upstream from U.S. Highway 64, 250 ft (76 m) northwest of intersection of U.S. Highway 64 and State Highway 38, about 1,000 ft (300 m) upstream from high-water line of Eagle Nest Lake at Eagle Nest.

DRAINAGE AREA.--73.8 mi<sup>2</sup> (191.1 km<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 (2,498.564 m) 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 (49 m) downstream at datum 1.41 ft (0.430 m) lower.

REMARKS.--Records good. Diversions for irrigation of about 1,200 acres (4.9 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 240 ft<sup>3</sup>/s (6.80 m<sup>3</sup>/s) Sept. 1, 1946, gage height, 3.10 ft (0.945 m), site and datum then in use; maximum gage height, 3.55 ft (1.082 m) May 12, 1973; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 114 ft<sup>3</sup>/s (3.23 m<sup>3</sup>/s) at 2030 hours Aug. 23, gage height, 3.26 ft (0.994 m), no other peak above base of 35 ft<sup>3</sup>/s (0.99 m<sup>3</sup>/s); no flow Oct. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03						---	9.6	8.8	1.7	.86	10
2	.06						---	12	7.9	1.5	.73	9.3
3	.15						---	13	7.1	1.4	.63	9.0
4	.18						---	14	6.6	1.3	.76	8.3
5	.18						---	19	6.2	1.2	2.1	9.4
6	.14						4.3	21	5.5	1.1	2.2	7.5
7	.14						5.0	16	5.1	1.1	1.9	8.3
8	.12						4.5	12	5.0	1.0	1.8	8.7
9	.10						4.1	11	4.1	.94	1.5	9.1
10	.09						3.8	8.6	3.4	.88	1.4	7.5
11	.06						3.8	8.5	3.2	.77	4.3	7.3
12	.04						4.7	9.2	2.8	.72	3.1	9.7
13	.03						5.0	10	2.7	.72	2.3	9.1
14	.02						4.5	11	2.5	.67	1.9	9.9
15	.00						4.0	9.6	2.4	.58	1.7	8.0
16	.01						4.0	9.6	2.4	.50	3.2	7.3
17	.04						4.1	9.2	2.4	.44	3.6	8.6
18	.04						4.3	8.9	2.4	.50	2.7	10
19	.06						4.7	8.2	3.8	.54	3.2	13
20	.07						5.0	7.9	3.6	.47	7.0	10
21	.08						5.6	8.3	3.2	.44	4.9	9.6
22	.10						6.9	11	2.8	.41	6.2	8.4
23	.10						6.4	21	2.7	.30	26	7.5
24	.11						6.2	19	2.5	.28	25	7.2
25	.14						5.9	22	2.4	.28	26	6.8
26	---						5.4	17	2.4	.30	27	6.6
27	---						5.4	14	2.1	.40	22	6.2
28	---						5.2	15	2.0	.62	20	5.9
29	---						5.0	12	1.9	.98	15	6.5
30	---						5.0	11	1.7	1.0	12	6.5
31	---						---	9.6	---	.95	13	---
TOTAL	---						---	388.2	111.6	23.99	243.98	251.2
MEAN	---						---	12.5	3.72	.77	7.87	8.37
MAX	---						---	22	8.8	1.7	27	13
MIN	---						---	7.9	1.7	.28	.63	5.9
AC-FT	---						---	770	221	48	484	498

## ARKANSAS RIVER BASIN

07204500 CIENEGUILLA CREEK NEAR EAGLE NEST, NM

LOCATION.--Lat 36°29'07", long 105°15'54", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on right bank 0.1 mi (0.2 km) downstream from Schoolhouse Draw, 0.4 mi (0.6 km) upstream from high-water line of Eagle Nest Lake, 0.5 mi (0.8 km) east of U.S. Highway 64, and 4.7 mi (7.6 km) south of Eagle Nest.

DRAINAGE AREA.--56 mi<sup>2</sup> (145 km<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. Altitude of gage is 8,195 ft (2,498 m), 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 (0.3 km) downstream at different datums.

REMARKS.--Records good. Diversions for irrigation of about 1,000 acres (4.0 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 505 ft<sup>3</sup>/s (14.3 m<sup>3</sup>/s) June 16, 1965, gage height, 5.61 ft (1.710 m), from rating curve extended above 110 ft<sup>3</sup>/s (3.1 m<sup>3</sup>/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49 ft<sup>3</sup>/s (1.39 m<sup>3</sup>/s) May 5, gage height, 3.65 ft (1.113 m), no peak above base of 70 ft<sup>3</sup>/s (2.0 m<sup>3</sup>/s); minimum determined, 0.13 ft<sup>3</sup>/s (0.004 m<sup>3</sup>/s) July 24, 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89						---	42	11	1.8	1.6	2.5
2	1.1						---	41	9.8	1.3	.87	6.3
3	2.3						---	43	12	.94	.68	9.0
4	2.5						---	45	10	.75	.53	4.5
5	1.6						---	45	8.8	.61	.48	3.1
6	1.3						18	46	8.1	.53	.49	2.5
7	1.4						21	40	7.3	1.3	6.7	2.4
8	1.5						17	34	5.6	5.3	6.7	2.3
9	1.3						14	28	4.8	1.3	3.4	2.2
10	1.1						13	25	4.5	.66	4.2	1.9
11	1.1						13	23	5.4	.46	2.9	3.1
12	1.1						23	23	6.6	.50	1.7	5.3
13	1.1						29	22	6.3	.66	1.4	4.1
14	1.1						29	22	5.5	.52	1.5	3.2
15	1.1						28	19	4.2	.39	1.3	2.6
16	1.1						30	18	3.9	.29	1.6	2.3
17	1.1						30	16	2.9	.22	1.7	3.5
18	1.1						31	15	2.4	.18	5.7	5.3
19	1.1						32	13	3.2	.20	3.9	7.4
20	1.2						31	11	3.6	.25	3.5	5.3
21	1.2						26	10	3.3	.23	3.1	4.2
22	1.3						22	14	2.7	.18	2.7	3.8
23	1.3						20	26	2.1	.16	4.1	3.0
24	1.3						20	24	1.6	.13	4.0	2.5
25	1.4						17	23	1.5	.13	7.0	2.4
26	---						17	19	1.5	.17	5.3	2.3
27	---						20	16	1.3	.60	3.4	2.3
28	---						26	14	1.2	.56	4.2	2.3
29	---						31	13	1.2	1.4	3.2	2.3
30	---						37	13	1.5	2.5	2.9	2.3
31	---						---	12	---	3.4	3.2	---
TOTAL	---						---	755	143.8	27.62	93.95	106.2
MEAN	---						---	24.4	4.79	.89	3.03	3.54
MAX	---						---	46	12	5.3	7.0	9.0
MIN	---						---	10	1.2	.13	.48	1.9
AC-FT	---						---	1500	285	55	186	211

## 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 (76 m) downstream from concrete box culvert on U.S. Highway 64, and 2.6 mi (4.2 km) southwest of Eagle Nest.

DRAINAGE AREA.--10.5 mi<sup>2</sup> (27.2 km<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 (2,497.885 m) National Geodetic Vertical Datum of 1929. Prior to May 18, 1928, nonrecording gage at site 88 ft (27 m) upstream at datum 0.98 ft (0.299 m) higher. May 18, 1928 to Sept. 11, 1938, water-stage recorder at site 88 ft (27 m) upstream at datum 0.43 ft (0.131 m) higher.

REMARKS.--Records good. Diversions for irrigation of about 300 acres (1.2 km<sup>2</sup>) above 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 (0.071 m<sup>3</sup>/s), 1,820 acre-ft/yr (2.24 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (1930-55 and SINCE 1957).--Maximum discharge, 128 ft<sup>3</sup>/s (3.62 m<sup>3</sup>/s) Aug. 5, 1969, gage height, 2.86 ft (0.871 m), from rating curve extended above 32 ft<sup>3</sup>/s (0.91 m<sup>3</sup>/s); maximum gage height recorded, 3.38 ft (1.030 m) Apr. 2, 1937 (ice jam), site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15 ft<sup>3</sup>/s (0.4 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Apr. 19	unknown	15 0.42	1.17 0.357	Aug. 25	0415	16 0.45	1.23 0.375
May 4	0600	*29 .82	1.49 .454				

Minimum discharge determined, 0.10 ft<sup>3</sup>/s (0.003 m<sup>3</sup>/s) Oct. 15, result of regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49						---	22	11	3.6	1.9	4.9
2	.52						---	24	10	3.4	1.3	4.8
3	.82						---	25	9.2	3.3	1.6	5.0
4	.63						---	28	7.7	3.1	1.9	4.6
5	.55						---	25	5.5	3.0	1.7	4.4
6	.49						4.9	20	5.1	2.7	1.8	4.0
7	.49						5.9	14	5.4	2.6	1.9	5.4
8	.63						6.1	12	7.1	2.4	1.7	5.3
9	.36						4.8	12	6.9	1.2	1.5	5.0
10	.86						4.5	14	6.8	1.2	1.5	4.6
11	.85						4.5	15	6.7	1.1	5.8	5.4
12	.83						8.0	17	6.6	1.4	3.6	5.3
13	.83						10	16	6.5	1.4	3.1	5.1
14	.83						10	14	6.5	1.2	3.2	5.3
15	.85						9.5	13	6.6	1.0	2.9	4.7
16	.86						11	12	6.4	.99	2.9	4.4
17	.86						11	12	5.9	1.2	4.7	5.9
18	.86						12	12	6.2	1.4	5.0	6.5
19	.86						13	13	7.0	1.8	7.8	6.9
20	.81						11	13	6.3	1.8	7.4	6.7
21	.81						9.9	13	5.9	1.4	8.3	6.1
22	.81						7.6	15	5.3	1.2	11	5.5
23	.84						7.0	16	4.9	1.1	11	5.0
24	.86						6.1	15	4.6	1.1	10	4.6
25	.86						4.9	17	4.9	1.0	14	4.4
26	---						4.8	15	5.3	1.1	11	4.2
27	---						4.9	15	4.4	1.2	8.8	4.0
28	---						5.7	14	4.0	1.5	7.6	4.1
29	---						9.4	13	3.8	2.7	6.4	3.8
30	---						16	13	3.7	2.1	5.7	3.8
31	---						---	12	---	2.6	5.3	---
TOTAL	---						---	491	186.2	56.79	162.3	149.7
MEAN	---						---	15.8	6.21	1.83	5.24	4.99
MAX	---						---	28	11	3.6	14	6.9
MIN	---						---	12	3.7	.99	1.3	3.8
AC-FT	---						---	974	369	113	322	297



## 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 (4.0 km) southeast of Eagle Nest, 6.7 mi (10.8 km) west of Ute Park, and at mile 48.7 (78.4 km).

DRAINAGE AREA.--167 mi<sup>2</sup> (433 km<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 (2,455.71 m) National Geodetic Vertical Datum of 1929. Prior to October 1964 gage heights were raised by addition of 8,000 ft (2,438.4 m) 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 (97.6 hm<sup>3</sup>) between gage heights 35.0 ft (10.67 m), sill of outlet gate, and 137.0 ft (41.76 m), 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 (10 km<sup>2</sup>) above reservoir.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 78,800 acre-ft (97.2 hm<sup>3</sup>) May 31, 1942, gage height, 136.9 ft (41.73 m); minimum observed, 635 acre-ft (783,000 m<sup>3</sup>) Dec. 14, 1954, gage height, 61.33 ft (18.693 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 34,230 acre-ft (42.2 hm<sup>3</sup>) June 7, gage height, 113.85 ft (34.701 m); minimum observed, 28,310 acre-ft (34.9 km<sup>3</sup>) Nov. 30, gage height, 109.55 ft (33.391 m).

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

105	22,850
110	28,900
115	35,920

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	28900	28960	---	---	---	---	---	---
2	---	29900	---	---	---	---	---	---	---	---	30780	31720
3	---	---	---	---	---	---	---	32100	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	31400	---	---	---	---	29780	---	---	---	32800	---	---
6	---	---	---	---	---	---	---	32700	---	---	---	31810
7	---	---	---	---	---	---	31260	---	34230	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	29500	---	---	---	---	---	---	---	---	30780	---
10	---	---	---	---	---	---	---	33010	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	31190	---	---	---	---	---	31190	---	---	32170	---	---
13	---	---	---	---	---	---	---	---	---	---	---	31960
14	---	---	---	---	---	---	---	---	33940	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	29170	---	---	---	---	---	---	---	---	30850	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	30920	28900	---	---	---	---	31470	---	---	31470	---	---
20	---	---	---	---	---	---	---	33510	---	---	---	32170
21	---	---	---	---	---	---	---	---	33580	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	28570	26520	---	---	---	---	---	33300	---	31050	---
24	---	---	---	---	---	---	---	33480	---	---	---	---
25	---	---	---	28950	---	---	---	---	---	---	---	---
26	30300	---	---	---	---	---	31600	---	---	30780	---	---
27	---	---	---	---	---	---	---	---	---	30710	---	32310
28	---	---	---	---	28950	---	---	---	33220	---	---	32310
29	---	---	---	---	---	30780	---	---	---	---	---	---
30	---	28310	---	---	---	---	31900	---	33050	---	31600	32300
31	30000	---	28380	28900	---	30900	---	34160	---	30750	31600	---
(†)	---	109.55	109.60	---	---	---	---	113.80	---	---	---	---
(‡)	-1300	-1690	+70	+520	+50	+1950	+1000	+2260	-1110	-2300	+850	+700

CAL YR 1981..... ‡ -11150

WTR YR 1982..... ‡ + 1000

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

NOTE.--Monthend contents interpolated or estimated on basis of inflow to and releases from Lake Oct. 31, Jan. 31, Feb. 28, Mar. 31, Apr. 30, June 30, July 31, Aug. 31, Sept. 30.

## 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 (91 m) downstream from Eagle Nest Dam, 2.5 mi (4.0 km) southeast of Eagle Nest, 6.7 mi (10.8 km) west of Ute Park, and at mile 48.6 (78.2 km).

DRAINAGE AREA.--167 mi<sup>2</sup> (433 km<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. Altitude of gage is 8,080 ft (2,463 m), from topographic map. Prior to May 15, 1951, at datum 0.81 ft (0.247 m) higher.

REMARKS.--Water-discharge records good except those for winter period, which are poor. Flow regulated by Eagle Nest Lake (station 07205500). Diversions for irrigation of 2,500 acres (10 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--32 years, 13.7 ft<sup>3</sup>/s (0.388 m<sup>3</sup>/s), 9,930 acre-ft/yr (12.2 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 205 ft<sup>3</sup>/s (5.81 m<sup>3</sup>/s) June 14, 1955, gage height, 2.79 ft (0.850 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 58 ft<sup>3</sup>/s (1.64 m<sup>3</sup>/s) July 13; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	30	9.8	.00	.00	.01	16	6.5	3.2	34	.90	3.7
2	.08	30	3.7	.00	.00	.01	16	14	4.9	28	.90	3.8
3	.07	30	.33	.00	.00	.01	4.8	20	6.0	10	7.8	4.0
4	.05	30	.33	.00	.00	.01	.07	20	6.2	26	16	4.0
5	.05	30	.33	.00	.00	.01	.00	15	3.0	40	16	4.0
6	.05	30	.33	.00	.00	.01	13	.04	6.7	47	16	4.0
7	.05	30	.33	.00	.00	.01	18	.00	16	50	16	4.0
8	.05	30	.33	.00	.00	.01	18	.00	22	48	16	4.0
9	.05	30	.28	.00	.00	.01	18	7.5	28	48	16	4.0
10	9.5	30	.00	.00	.00	.05	18	10	30	26	16	4.0
11	15	30	.00	.00	.00	.05	17	14	30	39	16	4.0
12	14	30	.00	.00	.00	.07	17	16	22	56	16	6.7
13	8.2	30	.00	.00	.00	.05	17	16	28	58	16	7.8
14	9.0	31	.00	.00	.00	.05	17	16	34	56	16	8.0
15	14	31	.00	.00	.00	.04	17	7.5	39	54	16	8.4
16	18	31	.00	.00	.00	.05	17	6.5	41	52	15	8.7
17	21	31	.00	.00	.00	.05	17	8.5	41	32	32	5.4
18	25	31	.00	.00	.00	.05	20	40	41	43	15	.11
19	25	31	.00	.00	.00	.05	21	52	20	55	.63	.11
20	25	31	.00	.00	.00	.05	21	52	31	55	.63	.11
21	27	31	.00	.00	.00	15	21	52	44	52	.63	.11
22	28	31	.00	.00	7.7	11	21	45	44	42	.63	.11
23	27	31	.00	.00	18	11	21	.06	44	42	.69	.11
24	29	17	.00	.00	13	11	21	2.0	44	33	2.5	.11
25	29	9.8	.00	.00	13	10	21	.87	44	29	3.8	.11
26	28	9.8	.00	.00	13	10	20	.05	14	29	3.7	.06
27	28	9.8	.00	.00	9.9	10	20	.04	26	26	3.7	.04
28	30	9.8	.00	.00	.01	14	20	.03	43	18	3.6	.02
29	30	9.8	.00	.00	---	16	20	.00	44	6.1	3.5	.02
30	30	9.8	.00	.00	---	16	21	2.1	44	.90	3.7	.02
31	30	---	.00	.00	---	16	---	4.0	---	.90	3.7	---
TOTAL	500.20	775.8	15.76	.00	74.61	140.65	508.87	427.69	844.0	1135.90	295.01	89.54
MEAN	16.1	25.9	.51	.000	2.66	4.54	17.0	13.8	28.1	36.6	9.52	2.93
MAX	30	31	9.8	.00	18	16	21	52	44	58	32	8.7
MIN	.05	9.8	.00	.00	.00	.01	.00	.00	3.0	.90	.63	.02
AC-FT	992	1540	31	.00	148	279	1010	848	1670	2250	585	178
CAL YR 1981	TOTAL	6078.20	MEAN	16.7	MAX	92	MIN	.00	AC-FT	12060		
WTR YR 1982	TOTAL	4808.03	MEAN	13.2	MAX	58	MIN	.00	AC-FT	9540		

NOTE.--No gage-height record Dec. 13 to Feb. 22.

ARKANSAS RIVER BASIN  
07206000 CIMARRON RIVER BELOW EAGLE NEST DAM, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
OCT 26...	1320	28	300	--	9.6	--	9.0	9.5	--	--
APR 07...	1600	18	350	--	8.2	--	6.5	3.0	--	--
MAY 26...	1200	.10	320	353	8.3	8.8	19.0	13.5	--	--
JUN 23...	1515	44	320	344	8.0	8.0	14.5	19.5	157	0
JUL 27...	1310	24	337	350	7.8	8.4	14.0	16.0	158	0
SEP 02...	1700	3.6	300	349	7.7	7.6	15.0	17.0	146	1

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 26...	--	--	--	--	--	--	--	--	--	--
APR 07...	--	--	--	--	--	--	--	--	--	--
MAY 26...	--	--	--	--	--	--	--	--	--	--
JUN 23...	48	8.9	12	.4	2.8	16	5.0	.5	9.6	199
JUL 27...	48	9.3	14	.5	2.5	17	5.4	.4	8.3	204
SEP 02...	44	8.8	12	.4	3.0	21	5.4	.4	5.9	188

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
JUN 23...	1515	4	4	20	<1	3	<10	<10	2	7
JUL 27...	1310	--	--	100	--	--	--	--	--	--
SEP 02...	1700	--	--	150	--	--	--	--	--	--

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)
JUN 23...		<3	1	6	.1	<.1	1	<1	10	49
JUL 27...		9	--	--	--	--	--	--	--	--
SEP 02...		19	--	--	--	--	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 23...	1515	44	19.5	11	1.3	89

## 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 (370 m) downstream from Turkey Creek Canyon, 3.6 mi (5.8 km) west of Cimarron, and at mile 31.6 (50.8 km).

DRAINAGE AREA.--294 mi<sup>2</sup> (761 km<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 (2,011.552 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for winter period, which are poor. Flow regulated by Eagle Nest Lake (station 07205500). Diversions above station for irrigation of about 3,500 acres (14 km<sup>2</sup>), part of which is below station. Philmont ditch (formerly known as Cimarroncito ditch) diverts from left bank 1.5 mi (2.3 km) above station, flumes under river 0.9 mi (1.4 km) above and bypasses station for off-channel storage and irrigation below; see tabulation below for monthly diversions.

AVERAGE DISCHARGE.--32 years, 20.7 ft<sup>3</sup>/s (0.586 m<sup>3</sup>/s), 15,000 acre-ft/yr (18.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft<sup>3</sup>/s (439 m<sup>3</sup>/s) June 17, 1965, gage height, 12.42 ft (3.786 m), from floodmark, from rating curve extended above 800 ft<sup>3</sup>/s (23 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 4.88 ft (1.487 m) and 12.42 ft (3.786 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 80 ft<sup>3</sup>/s (2.27 m<sup>3</sup>/s) June 18, gage height, 1.86 ft (0.567 m); minimum, 1.0 ft<sup>3</sup>/s (0.028 m<sup>3</sup>/s) Jan. 23, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	29	14	5.5	4.5	9.8	28	42	42	46	12	21
2	2.6	29	15	5.5	4.4	8.6	27	34	37	31	11	20
3	2.9	29	11	4.7	4.0	8.1	27	46	35	27	9.6	21
4	3.0	29	9.9	4.9	4.0	7.6	21	51	33	15	15	20
5	2.7	29	8.9	5.0	3.1	7.5	15	55	31	36	18	19
6	2.6	29	8.3	5.2	2.6	6.8	13	42	28	38	20	18
7	2.7	30	7.8	5.5	2.9	7.0	23	35	34	44	25	22
8	2.5	30	7.4	4.8	3.4	7.4	25	31	38	43	24	22
9	2.3	30	7.0	5.5	3.4	7.3	25	30	41	42	22	19
10	2.3	30	6.9	4.8	3.8	7.1	25	36	45	37	21	17
11	6.3	30	6.7	4.4	3.6	7.1	25	38	45	24	22	17
12	5.9	30	6.6	4.8	3.8	13	27	43	42	45	20	18
13	2.9	30	6.3	4.7	4.7	15	31	45	37	49	20	19
14	1.9	29	6.2	4.7	5.0	13	34	42	46	48	20	19
15	2.1	29	6.2	5.0	5.4	12	35	38	47	46	22	19
16	4.7	29	5.7	5.4	5.4	11	36	27	46	44	27	18
17	7.1	29	5.5	5.2	5.6	11	35	31	43	37	30	18
18	13	29	5.2	5.2	5.3	11	35	40	48	27	42	17
19	14	29	5.5	4.9	5.3	10	38	62	47	45	22	15
20	14	29	6.0	4.7	5.2	10	38	64	33	44	18	14
21	15	30	5.2	4.2	5.3	10	38	66	54	44	17	15
22	18	30	5.1	4.3	5.3	22	36	71	54	35	19	16
23	18	30	3.2	4.4	11	20	36	47	52	33	23	15
24	19	27	3.9	4.7	14	16	35	37	51	30	33	14
25	23	17	4.4	4.7	14	16	33	45	54	23	34	14
26	26	16	4.1	4.9	15	15	33	46	46	23	31	15
27	25	16	5.0	4.8	16	14	33	48	25	24	29	13
28	27	16	4.4	4.5	13	14	36	45	47	21	28	13
29	27	16	5.0	4.7	---	16	37	44	49	22	25	13
30	27	17	5.0	4.8	---	29	42	43	51	21	24	13
31	28	---	5.2	4.5	---	28	---	45	---	15	23	---
TOTAL	351.1	802	206.6	150.9	179.0	390.3	922	1369	1281	1059	706.6	514
MEAN	11.3	26.7	6.66	4.87	6.39	12.6	30.7	44.2	42.7	34.2	22.8	17.1
MAX	28	30	15	5.5	16	29	42	71	54	49	42	22
MIN	1.9	16	3.2	4.2	2.6	6.8	13	27	25	15	9.6	13
AC-FT	696	1590	410	299	355	774	1830	2720	2540	2100	1400	1020
(†)	117	0	0	0	0	0	0	0	165	243	0	0

CAL YR 1981 TOTAL 6256.2 MEAN 17.1 MAX 79 MIN 1.9 AC-FT 12410 † 855  
WTR YR 1982 TOTAL 7931.5 MEAN 21.7 MAX 71 MIN 1.9 AC-FT 15730 † 525

† Diversion, in acre-feet, by Philmont ditch; data furnished by Cimarron River Watermaster.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]



ARKANSAS RIVER BASIN  
07207000 CIMARRON RIVER NEAR CIMARRON, NM -- Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	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, AMONIA TOTAL (MG/L) AS N) (00610)	NITRO- GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO- GEN- ORGANIC TOTAL (MG/L) AS N) (00605)	PHOS- PHORUS, ORTHO, DIS-SOLVED (MG/L) AS P) (00665)	PHOS- PHORUS, DIS-SOLVED (MG/L) AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L) AS C) (00680)
OCT 16...	--	--	--	--	--	--	--	--	--
NOV 16...	192	--	--	--	--	--	--	--	--
DEC 23...	--	--	--	--	--	--	--	--	--
JAN 26...	--	--	--	--	--	--	--	--	--
MAR 05...	220	--	--	--	--	--	--	--	--
APR 07...	--	--	--	--	--	--	--	--	--
MAY 05...	125	<.10	<.10	.150	.240	.95	.110	.030	9.8
JUN 04...	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--
AUG 04...	194	--	--	--	--	--	--	--	--
SEP 07...	--	--	--	--	--	--	--	--	--
JUL 04...	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--
AUG 04...	194	--	--	--	--	--	--	--	--
SEP 07...	--	--	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 (UG/L) AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L) AS CD) (01025)	CHRO- MIUM, TOTAL (UG/L) AS CR) (01034)	CHRO- MIUM, DIS-SOLVED (UG/L) AS CR) (01030)	COPPER, TOTAL (UG/L) AS CU) (01042)	COPPER, DIS-SOLVED (UG/L) AS CU) (01040)
NOV 16...	1450	--	--	30	--	--	--	--	--	--
MAR 05...	1045	--	--	20	--	--	--	--	--	--
MAY 05...	1210	2	1	10	<1	<3	<10	<10	8	1
AUG 04...	1400	--	--	20	--	--	--	--	--	--

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 16...	<10	--	--	--	--	--	--	--	--
MAR 05...	52	--	--	--	--	--	--	--	--
MAY 05...	84	5	<1	<.1	<.1	<1	<1	50	42
AUG 04...	7	--	--	--	--	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 16...	1450	30	9.5	19	1.5	--
JUN 04...	0930	35	12.0	32	3.0	--
JUL 01...	1200	52	17.0	82	12	57

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 (2.6 km) downstream from confluence of North and South Ponil Creeks, and 4.7 mi (7.6 km) northwest of Cimarron.

DRAINAGE AREA.--171 mi<sup>2</sup> (443 km<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. Altitude of gage is 6,630 ft (2,021 m), from topographic map. Prior to May 8, 1922, at site 0.1 mi (0.2 km) downstream at different datum. May 8, 1922 to Aug. 8, 1929, at site 0.4 mi (0.6 km) upstream at different datum.

REMARKS.--Water-discharge records good except those for winter period, which are poor. Diversions for irrigation of about 250 acres (1.0 km<sup>2</sup>) above station. Diversions 1,000 ft (300 m) below station for irrigation of about 300 acres (1.2 km<sup>2</sup>).

AVERAGE DISCHARGE.--43 years (water years 1916-25, 1928, 1951-82), 11.2 ft<sup>3</sup>/s (0.317 m<sup>3</sup>/s), 8,110 acre-ft/yr (10.0 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,630 ft<sup>3</sup>/s (159 m<sup>3</sup>/s) June 17, 1965, gage height, 11.13 ft (3.392 m), from rating curve extended above 230 ft<sup>3</sup>/s (6.5 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 3.56 ft (1.085 m), 5.80 ft (1.768 m), 7.15 ft (2.179 m), and 11.13 ft (3.392 m); 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 (150 m<sup>3</sup>/s) by State Engineer.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft<sup>3</sup>/s (5.7 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Aug. 10	2115	*238 6.74	3.03 0.924	Aug. 19	2215	223 6.32	2.97 0.905

Minimum discharge, 0.38 ft<sup>3</sup>/s (0.011 m<sup>3</sup>/s) Jan 22, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	3.2	1.7	2.6	2.0	3.0	5.7	23	27	5.1	6.6	29
2	5.7	3.4	1.9	2.3	1.8	3.2	6.1	26	24	4.1	5.5	25
3	6.0	3.5	2.3	2.0	1.7	3.2	5.3	31	22	3.4	4.5	26
4	5.9	3.5	1.8	2.0	1.6	3.1	6.7	38	20	3.0	7.2	22
5	5.4	3.4	2.2	2.5	1.5	3.0	6.7	46	18	2.9	15	20
6	5.2	3.2	2.3	2.3	1.5	3.2	7.5	46	16	2.6	15	18
7	5.2	3.3	2.2	2.0	1.6	3.5	8.7	42	15	2.8	13	31
8	4.9	3.6	1.8	1.5	1.8	3.4	8.0	38	13	2.6	11	23
9	4.6	3.4	1.8	1.8	1.6	3.2	8.0	35	12	2.3	9.8	18
10	4.5	3.1	2.5	2.0	1.7	3.1	7.3	34	12	1.9	26	15
11	4.4	3.1	2.0	1.7	1.7	3.2	7.4	34	11	1.8	26	14
12	4.1	3.1	2.2	1.9	1.8	5.7	9.7	34	10	1.8	13	25
13	3.9	3.1	2.1	1.7	2.0	8.0	15	34	9.3	4.2	9.0	19
14	3.7	3.1	2.2	2.0	2.0	6.9	19	32	8.3	2.6	8.7	18
15	3.9	3.0	1.8	2.5	2.1	6.3	21	29	8.0	1.9	8.9	16
16	4.0	2.9	2.0	2.0	2.3	5.8	22	26	8.9	1.4	15	15
17	3.8	2.8	1.4	2.2	2.4	5.7	20	24	8.4	1.1	17	16
18	3.7	2.7	2.1	2.3	2.2	5.7	20	23	9.3	1.5	33	16
19	3.7	2.5	3.2	2.5	2.3	5.4	19	21	16	1.8	39	20
20	3.6	2.2	2.6	2.3	2.4	4.6	19	21	17	2.1	59	18
21	3.4	2.2	1.8	2.0	2.3	4.6	18	22	13	2.7	61	19
22	3.5	2.2	2.2	2.0	2.4	4.7	17	24	11	1.6	83	18
23	3.5	2.3	1.7	2.1	2.7	5.0	16	34	8.9	1.2	94	18
24	3.5	2.4	2.0	2.1	2.8	4.4	15	35	8.6	.86	118	16
25	3.5	2.5	2.5	2.2	2.9	4.3	13	38	7.9	.71	100	15
26	3.5	2.3	2.5	2.3	2.5	4.5	13	38	7.1	.63	81	14
27	3.3	2.3	2.8	2.1	3.0	4.8	14	38	6.1	1.3	65	13
28	3.4	2.3	2.1	2.0	3.1	4.7	14	37	5.4	3.7	57	12
29	3.3	2.4	2.4	2.3	---	5.0	15	34	5.5	5.1	44	11
30	3.1	2.4	2.8	2.9	---	5.1	18	32	5.3	10	46	11
31	3.2	---	2.6	2.0	---	4.5	---	29	---	7.5	38	---
TOTAL	128.8	85.4	67.5	66.1	59.7	140.8	395.1	998	364.0	86.20	1129.2	551
MEAN	4.15	2.85	2.18	2.13	2.13	4.54	13.2	32.2	12.1	2.78	36.4	18.4
MAX	6.0	3.6	3.2	2.9	3.1	8.0	22	46	27	10	118	31
MIN	3.1	2.2	1.4	1.5	1.5	3.0	5.3	21	5.3	.63	4.5	11
AC-FT	255	169	134	131	118	279	784	1980	722	171	2240	1090

CAL YR 1981 TOTAL 1517.74 MEAN 4.16 MAX 94 MIN .00 AC-FT 3010  
WTR YR 1982 TOTAL 4071.30 MEAN 11.2 MAX 118 MIN .63 AC-FT 8080

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

ARKANSAS RIVER BASIN  
07207500 PONIL CREEK NEAR CIMARRON, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 17...	0930	20	28
MAR 04...	0945	10	180
MAY 05...	1010	< 10	30
AUG 04...	1000	10	12

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 16...	1100	4.1	12.0	2	.02	--
NOV 17...	0930	2.8	6.5	6	.05	--
DEC 23...	1050	1.1	.5	4	.01	--
JAN 26...	1445	2.3	5.0	5	.03	--
MAR 04...	0945	3.1	4.0	2	.02	--
APR 07...	0900	9.0	7.0	58	1.4	--
JUN 03...	1015	23	12.0	26	1.6	--
JUL 01...	0930	5.4	16.5	14	.20	89
AUG 04...	1000	7.0	18.0	571	11	95
SEP 08...	1500	21	17.5	230	13	94

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 (4.0 km) upstream from State Highway 21, 4.0 mi (6.4 km) downstream from Bonito Creek, and 9.8 mi (15.8 km) southwest of Cimarron.

DRAINAGE AREA.--65 mi<sup>2</sup> (168 km<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(P), 1942(M), 1944(M), drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Concrete control since Oct. 13, 1976. Altitude of gage is 6,720 ft (2,048 m), 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 (82 m) downstream at datum 2.79 ft (0.850 m) lower.

REMARKS.--Water-discharge records good except those for winter period, which are poor. No diversion above station.

AVERAGE DISCHARGE.--63 years (water years 1912, 1914, 1916-20, 1924, 1928-82), 13.7 ft<sup>3</sup>/s (0.388 m<sup>3</sup>/s), 9,930 acre-ft/yr (12.2 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (1909-12, and SINCE 1913).--Maximum discharge, 9,000 ft<sup>3</sup>/s (250 m<sup>3</sup>/s) June 17, 1965, gage height, 11.5 ft (3.51 m), from floodmarks, from rating curve extended above 70 ft<sup>3</sup>/s (2.0 m<sup>3</sup>/s) on basis of field estimate of peak flow; minimum, 0.03 ft<sup>3</sup>/s (0.001 m<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.--Maximum discharge, 56 ft<sup>3</sup>/s (1.59 m<sup>3</sup>/s) May 5, gage height, 3.06 ft (0.933 m), no peak above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s); maximum gage height, 3.39 ft (1.033 m) Feb. 12, 13 (backwater from ice); minimum discharge, 0.45 ft<sup>3</sup>/s (0.013 m<sup>3</sup>/s) Nov. 30, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	3.8	1.5	3.0	2.4	4.4	10	34	31	8.2	7.3	14
2	5.2	4.0	2.5	3.0	2.0	4.7	11	36	29	7.6	6.0	13
3	8.5	4.2	3.5	2.5	2.0	4.7	9.8	39	26	6.7	5.3	13
4	6.2	4.1	3.0	2.5	2.0	4.2	12	46	25	6.5	5.1	11
5	5.1	3.8	2.9	3.0	1.8	3.2	13	53	23	6.2	8.0	10
6	4.8	3.7	2.6	2.5	2.0	3.0	14	48	21	5.9	12	9.4
7	4.7	3.8	2.5	2.5	2.0	3.0	16	44	19	5.8	8.5	9.6
8	4.5	4.2	2.3	2.0	2.5	4.0	14	42	17	6.1	13	8.9
9	4.3	3.9	2.2	2.5	2.0	4.5	13	39	16	5.5	9.9	8.4
10	4.1	3.8	2.7	2.5	2.5	4.8	13	37	15	5.0	13	8.1
11	4.1	3.5	2.6	2.0	3.0	5.5	13	37	14	4.8	12	8.0
12	3.9	3.7	2.5	2.2	2.8	9.5	21	37	13	5.1	11	9.6
13	3.9	3.7	2.3	2.0	2.8	10	26	36	12	5.7	14	8.2
14	3.7	3.7	2.3	2.5	3.1	9.0	29	36	11	5.4	13	7.5
15	3.9	3.4	2.1	3.0	3.2	9.0	30	33	10	4.7	12	7.3
16	4.1	3.5	2.8	2.5	3.3	8.2	30	32	11	4.3	12	7.0
17	3.9	3.4	2.84	3.0	3.3	8.5	28	30	10	4.3	20	9.5
18	3.7	3.2	1.7	3.2	3.5	9.1	28	29	11	4.3	26	9.2
19	3.7	2.4	3.0	3.1	3.3	8.5	28	29	16	6.9	27	11
20	3.7	1.8	2.8	2.9	3.7	7.5	28	27	12	7.9	25	9.5
21	3.5	2.6	2.4	2.9	4.2	7.3	26	27	11	5.3	27	8.9
22	3.5	2.9	2.1	2.9	4.3	7.3	24	30	9.3	4.6	24	11
23	3.5	2.8	1.6	3.0	4.8	6.9	22	38	8.2	4.3	23	9.4
24	3.5	2.9	2.0	3.1	4.8	6.7	21	39	7.5	4.1	24	8.7
25	3.6	2.6	2.8	3.2	4.5	7.2	18	41	7.3	4.1	26	8.7
26	3.7	1.8	2.6	3.2	4.0	7.7	18	39	7.2	4.2	22	8.2
27	3.5	2.6	2.8	3.0	4.6	7.3	18	40	6.7	4.8	20	8.0
28	3.5	3.3	2.5	2.8	4.3	7.3	19	40	6.4	7.0	19	8.0
29	3.5	2.8	2.0	2.8	---	8.7	23	37	6.4	9.3	16	7.9
30	3.3	1.6	2.7	2.5	---	6.2	30	35	10	14	16	8.1
31	3.7	---	2.7	2.5	---	8.5	---	34	---	10	16	---
TOTAL	129.4	97.5	74.84	84.3	88.7	206.4	605.8	1144	422.0	188.6	493.1	279.1
MEAN	4.17	3.25	2.41	2.72	3.17	6.66	20.2	36.9	14.1	6.08	15.9	9.30
MAX	8.5	4.2	3.5	3.2	4.8	10	30	53	31	14	27	14
MIN	3.3	1.6	.84	2.0	1.8	3.0	9.8	27	6.4	4.1	5.1	7.0
AC-FT	257	193	148	167	176	409	1200	2270	837	374	978	554
CAL YR 1981	TOTAL	1782.74	MEAN	4.88	MAX	26	MIN	.84	AC-FT	3540		
WTR YR 1982	TOTAL	3813.74	MEAN	10.4	MAX	53	MIN	.84	AC-FT	7560		



CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS, (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
OCT 16...	1300	4.0	162	--	8.1	--	17.0	14.5	--	--
NOV 16...	1130	3.7	180	147	8.6	8.2	23.0	10.0	71	3
DEC 23...	1325	1.9	200	192	7.5	8.1	-4.0	1.0	--	--
JAN 26...	1100	3.0	160	159	8.7	8.2	18.5	5.0	--	--
MAR 04...	1230	3.4	153	153	7.8	8.1	8.0	9.5	73	0
APR 07...	1200	14	110	--	7.5	--	10.0	10.0	--	--
MAY 05...	1450	56	78	78	7.1	7.5	8.5	4.0	30	0
JUN 03...	1300	27	60	79	8.6	7.4	20.5	15.0	--	--
JUL 01...	1735	8.0	110	121	7.3	7.8	24.5	23.0	--	--
AUG 04...	1200	5.2	130	144	8.4	9.0	24.5	22.0	63	0
SEP 07...	1500	11	110	124	8.3	7.3	17.5	16.5	--	--

[illegible]

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 16...	1130	10	28
MAR 04...	1230	10	20
MAY 05...	1450	<10	150
AUG 04...	1200	<10	18

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 16...	1300	4.0	14.5	3	.03	--
NOV 12...	1135	3.3	10.0	2	.02	--
DEC 23...	1325	1.9	1.0	2	.01	--
JAN 26...	1100	3.0	5.0	1	.00	--
MAR 04...	1230	3.4	9.5	2	.02	--
APR 07...	1200	14	10.0	10	.38	--
JUN 03...	1300	27	15.0	7	.51	--
JUL 01...	1735	8.0	23.0	8	.17	78
AUG 04...	1200	5.2	22.0	15	.21	54
SEP 07...	1500	11	16.5	49	1.5	75

## ARKANSAS RIVER BASIN

07211000 CIMARRON RIVER AT SPRINGER, NM

LOCATION.--Lat 36°21'37", long 104°35'53", Colfax County, Hydrologic Unit 11080002, in Maxwell Grant, on left bank at Springer, 400 ft (120 m) downstream from bridge on State Highway 199, 0.3 mi (0.5 km) upstream from Salado Creek, and at mile 8.2 (13.2 km).

DRAINAGE AREA.--1,032 mi<sup>2</sup> (2,673 km<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. Altitude of gage is 5,770 ft (1,759 m), from topographic map. See WSP 1311 or 1731 for history of changes prior to July 17, 1942.

REMARKS.--Records good. Flow partly regulated by Eagle Nest Lake (station 07205500). Diversions for irrigation of about 23,000 acres (93 km<sup>2</sup>) above station and a few hundred acres between station and mouth. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--58 years (water years 1921, 1925, 1927-82), 16.8 ft<sup>3</sup>/s (0.476 m<sup>3</sup>/s), 12,170 acre-ft/yr (15.0 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1930).--Maximum discharge, 29,500 ft<sup>3</sup>/s (835 m<sup>3</sup>/s) June 18, 1965, gage height, 19.96 ft (6.084 m), from floodmarks, from rating curve extended above 1,800 ft<sup>3</sup>/s (51 m<sup>3</sup>/s) on basis of contracted-opening measurement of peak flow; no flow at times in 1954, 1956-57, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 22 ft (6.7 m) 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 (280 m<sup>3</sup>/s), but probably were less than the 1965 flood.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 86 ft<sup>3</sup>/s (2.44 m<sup>3</sup>/s) Aug. 27, gage height, 4.05 ft (1.234 m), no peak above base of 280 ft<sup>3</sup>/s (7.9 m<sup>3</sup>/s); no flow July 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	3.2	3.8	5.0	5.7	5.8	3.2	3.4	3.2	2.0	6.5	7.7
2	5.5	2.7	4.9	5.1	4.3	5.6	2.9	3.7	2.9	1.5	4.7	7.1
3	7.4	2.7	4.6	4.2	4.0	5.5	2.9	2.8	2.9	.77	3.4	6.6
4	7.1	2.7	4.4	4.5	4.0	5.1	4.0	3.0	2.5	.67	2.5	6.7
5	7.2	2.9	4.8	4.9	3.5	5.4	3.7	5.4	2.1	.60	2.1	6.6
6	6.5	3.4	4.6	4.9	3.5	5.4	3.7	12	1.7	.38	1.0	5.0
7	4.8	3.7	4.6	4.8	4.5	5.3	2.9	11	1.2	.69	.78	2.7
8	4.5	3.4	4.5	4.9	6.0	5.0	2.5	9.0	2.3	2.5	3.0	3.5
9	3.5	3.3	4.5	5.0	6.8	4.9	2.4	6.4	3.2	1.7	3.2	2.1
10	2.9	3.2	4.1	5.2	6.4	4.9	4.4	4.6	1.7	1.2	3.1	1.9
11	2.7	3.1	4.1	5.4	6.4	4.6	5.5	3.8	4.7	.72	4.3	1.5
12	2.5	3.3	4.4	5.6	6.1	4.4	6.4	6.0	6.0	.61	3.1	2.0
13	2.2	3.4	5.5	5.4	6.4	4.4	4.5	7.6	5.6	1.3	2.9	13
14	2.2	3.6	5.4	5.4	7.0	5.3	5.0	7.7	5.6	3.2	2.6	4.9
15	2.3	3.4	5.5	5.2	8.0	5.4	4.8	8.8	6.9	4.3	1.3	2.6
16	2.8	3.3	5.5	4.7	9.1	4.5	3.2	9.1	7.6	2.0	1.8	2.3
17	2.7	3.4	5.0	5.4	9.7	4.3	2.9	11	4.5	1.2	2.5	3.3
18	2.7	3.6	4.3	5.8	8.7	4.0	2.6	11	3.8	.97	12	5.4
19	2.9	3.3	4.5	5.6	8.1	3.9	2.1	10	8.1	.65	20	4.9
20	2.9	3.3	4.6	5.8	7.1	3.6	4.1	7.4	9.5	.48	10	4.0
21	2.8	3.3	4.9	5.4	6.5	3.4	3.0	12	5.6	.31	7.4	2.9
22	2.8	3.3	5.7	4.9	5.9	3.5	2.2	15	3.7	.12	5.7	1.9
23	3.1	3.1	5.3	4.5	5.6	3.5	2.4	44	2.8	.12	4.7	1.5
24	3.5	3.0	4.7	5.3	5.4	3.5	2.6	21	3.1	.10	4.3	1.1
25	3.6	3.0	4.7	5.6	5.6	3.4	2.6	15	3.5	.08	4.2	1.9
26	4.4	2.8	4.4	5.5	6.1	3.3	3.2	13	3.0	.03	3.4	1.1
27	4.6	3.4	5.1	5.4	5.9	3.8	3.7	8.7	4.4	1.0	18	.71
28	3.9	4.0	4.9	5.3	5.9	4.1	3.4	6.7	4.4	.32	25	.44
29	3.9	4.9	4.5	5.7	---	3.9	3.5	4.4	2.7	2.9	11	.37
30	3.4	5.0	4.9	5.9	---	3.5	3.5	3.4	2.9	7.8	8.6	.61
31	3.6	---	4.9	5.9	---	3.2	---	2.8	---	7.8	8.2	---
TOTAL	119.7	100.7	147.6	162.2	172.2	136.4	103.8	289.7	122.1	48.02	191.23	106.33
MEAN	3.86	3.36	4.76	5.23	6.15	4.40	3.46	9.35	4.07	1.55	6.17	3.54
MAX	7.4	5.0	5.7	5.9	9.7	5.8	6.4	44	9.5	7.8	25	13
MIN	2.2	2.7	3.8	4.2	3.5	3.2	2.1	2.8	1.2	.03	.78	.37
AC-FT	237	200	293	322	342	271	206	575	242	95	379	211

CAL YR 1981 TOTAL 2374.42 MEAN 6.51 MAX 413 MIN .06 AC-FT 4710  
WTR YR 1982 TOTAL 1700.03 MEAN 4.66 MAX 44 MIN .03 AC-FT 3370

## 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 (3.2 km) south of Taylor Springs, 2.3 mi (3.7 km) downstream from Cimarron River, 2.4 mi (3.9 km) upstream from Chico Creek, 7.1 mi (11.4 km) southeast of Springer, and at mile 847.9 (1,364.3 km).

DRAINAGE AREA.--2,850 mi<sup>2</sup> (7,380 km<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. Altitude of gage is 5,635 ft (1,718 m), from topographic map. Prior to June 10, 1964, water-stage recorder at site 1.7 mi (2.7 km) downstream at different datum; operated as crest-stage gage at that site and datum during water years 1959-64.

REMARKS.--Records poor. Diversions for irrigation of about 30,000 acres (120 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years (water years 1940-58, 1965-82), 79.4 ft<sup>3</sup>/s (2,249 m<sup>3</sup>/s), 57,530 acre-ft/yr (70.9 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 162,000 ft<sup>3</sup>/s (4,590 m<sup>3</sup>/s) June 18, 1965, gage height, 47.4 ft (14.448 m), from floodmarks, from rating curve extended above 7,000 ft<sup>3</sup>/s (200 m<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 (2,580 m<sup>3</sup>/s) in WSP 842,847.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,710 ft<sup>3</sup>/s (76.7 m<sup>3</sup>/s) Aug. 24, gage height, 4.98 ft (1.518 m), no peak above base of 3,000 ft<sup>3</sup>/s (85 m<sup>3</sup>/s); no flow July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	14	13	19	16	8.7	8.7	14	5.7	8.5	24	45
2	9.0	13	14	18	15	9.9	7.8	13	5.0	7.5	15	25
3	10	12	15	17	15	11	6.9	11	4.5	6.5	8.6	12
4	30	12	14	16	14	11	7.7	7.3	4.2	6.0	35	11
5	28	12	15	18	12	11	7.9	12	3.7	5.0	39	9.7
6	24	11	14	20	16	9.0	7.7	21	3.1	4.0	81	7.3
7	21	11	15	18	18	13	7.5	22	2.7	3.0	67	440
8	20	12	15	18	21	12	6.4	16	2.5	111	44	53
9	20	10	15	20	23	11	6.4	14	3.4	20	32	43
10	18	10	14	19	28	11	6.4	9.4	2.6	7.9	30	32
11	17	10	15	21	30	10	8.2	7.5	3.1	3.8	290	23
12	15	11	14	22	29	9.9	9.7	7.3	5.4	2.6	55	23
13	15	11	16	22	30	9.0	7.9	11	5.1	7.6	40	34
14	14	11	15	21	29	12	7.3	10	6.6	11	36	28
15	14	11	15	21	31	11	7.3	11	8.7	8.2	32	19
16	15	10	15	20	36	9.8	9.0	13	33	4.9	236	61
17	15	10	13	21	29	9.1	7.9	15	17	2.8	207	282
18	16	11	14	20	20	8.6	7.6	18	20	2.0	130	35
19	16	10	16	19	17	8.3	7.0	17	22	2.4	218	23
20	16	10	16	18	15	7.1	6.7	12	23	2.6	153	17
21	14	10	17	18	12	7.4	10	13	18	.76	120	14
22	13	11	16	16	11	7.4	9.3	25	12	.31	58	13
23	12	11	15	16	10	7.7	9.3	50	26	.05	143	14
24	12	10	14	17	10	7.2	9.0	30	23	.01	345	12
25	13	9.8	18	18	9.2	7.1	9.0	24	64	.00	71	9.3
26	14	9.3	19	18	11	7.3	9.0	27	18	.01	66	11
27	15	9.3	19	17	11	7.9	11	23	22	7.2	145	11
28	15	11	18	15	9.6	8.6	12	17	17	3.8	83	9.0
29	14	11	18	14	---	6.2	15	11	14	13	99	6.4
30	13	15	19	14	---	7.3	13	7.8	11	104	82	6.7
31	15	---	20	15	---	7.6	---	6.7	---	44	58	---
TOTAL	493.0	329.4	486	566	527.8	286.1	258.6	496.0	406.3	405.44	3042.6	1329.4
MEAN	15.9	11.0	15.7	18.3	18.9	9.23	8.62	16.0	13.5	13.1	98.1	44.3
MAX	30	15	20	22	36	13	15	50	64	111	345	440
MIN	9.0	9.3	13	14	9.2	7.1	6.4	6.7	2.5	.00	8.6	6.4
AC-FT	978	653	964	1120	1050	567	513	984	806	804	6030	2640
CAL YR 1981	TOTAL	24077.50	MEAN	66.0	MAX	3500	MIN	1.6	AC-FT	47760		
WTR YR 1982	TOTAL	8626.64	MEAN	23.6	MAX	440	MIN	.00	AC-FT	17110		

## 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 (14 m) upstream from bridge on State Highway 3 at La Cueva, 0.3 mi (0.5 km) downstream from La Cueva damsite, and at mile 86.8 (139.7 km).

DRAINAGE AREA.--173 mi<sup>2</sup> (448 km<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. Altitude of gage is 7,000 ft (2,134 m), from topographic map. Prior to Apr. 15, 1931, nonrecording gage, and Apr. 15, 1931 to Apr. 18, 1962, water-stage recorder near present site at different datums. Apr. 19, 1962 to Mar. 13, 1974, water-stage recorder at site 700 ft (210 m) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation of about 7,000 acres (28 km<sup>2</sup>), part of which is below 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.--55 years (water years 1907-10, 1932-82), 26.9 ft<sup>3</sup>/s (0.762 m<sup>3</sup>/s), 19,490 acre-ft/yr (24.0 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1930).--Maximum discharge, 1,530 ft<sup>3</sup>/s (43.3 m<sup>3</sup>/s) Sept. 23, 1941, gage height, 7.58 ft (2.310 m), site and datum then in use, from rating curve extended above 400 ft<sup>3</sup>/s (11 m<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 (570 m<sup>3</sup>/s); another major flood occurred June 11, 1913, but is believed less than that of 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 445 ft<sup>3</sup>/s (12.6 m<sup>3</sup>/s) at 2130 hours Aug. 20, gage height, 4.58 ft (1.396 m), from rating curve extended above 69 ft<sup>3</sup>/s (2.0 m<sup>3</sup>/s), no other peak above base of 300 ft<sup>3</sup>/s (8.5 m<sup>3</sup>/s); minimum, 0.67 ft<sup>3</sup>/s (0.019 m<sup>3</sup>/s) Jan. 27, result of regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	1.7	2.2	1.9	5.0	6.3	5.6	4.9	72	65	43	62
2	13	1.7	2.0	2.2	6.0	6.2	5.4	4.8	70	46	30	57
3	28	1.7	1.7	2.0	5.5	6.0	5.6	9.8	71	36	25	60
4	24	3.4	1.7	4.0	5.0	6.0	5.6	21	71	30	28	51
5	22	3.5	2.0	6.6	4.5	6.1	5.5	46	66	20	24	44
6	21	2.5	1.9	5.8	4.5	6.3	4.8	58	50	13	23	45
7	16	3.6	1.7	5.8	5.0	6.7	3.0	40	42	20	32	49
8	16	2.1	1.8	6.0	7.0	6.3	3.9	24	36	19	46	58
9	16	2.0	1.8	6.6	9.0	5.2	4.1	18	38	21	31	48
10	20	1.1	1.8	6.3	12	3.1	3.5	16	40	17	27	49
11	24	1.6	1.9	6.3	14	3.0	4.9	12	42	15	47	48
12	19	1.7	1.6	6.1	7.3	3.2	3.9	10	48	16	32	51
13	16	1.4	1.7	6.0	8.5	3.2	3.1	14	50	16	37	47
14	21	1.2	1.6	5.0	6.6	4.3	2.4	19	51	16	36	41
15	14	1.2	1.5	3.5	10	5.7	2.2	15	42	18	32	36
16	9.5	1.4	1.4	2.5	10	6.3	2.7	16	31	19	56	32
17	12	1.4	1.5	2.2	7.6	6.1	4.9	17	29	19	67	53
18	14	1.2	1.5	1.8	9.0	6.0	1.7	17	40	19	96	69
19	13	1.0	1.5	3.4	11	5.7	2.0	16	67	21	81	91
20	11	1.1	1.7	6.9	12	5.7	2.1	21	81	19	114	70
21	10	1.1	1.3	6.4	11	6.1	4.9	37	73	16	94	64
22	3.8	1.1	1.2	5.7	7.9	5.9	2.9	41	63	15	75	54
23	4.2	1.1	1.2	7.0	2.3	5.8	4.6	69	55	16	88	48
24	1.9	1.3	1.1	8.5	4.2	5.4	5.5	72	47	15	92	44
25	1.0	1.2	1.2	8.6	6.6	5.4	4.6	77	50	14	120	43
26	1.2	1.2	1.3	6.2	7.2	5.6	4.6	68	50	16	83	41
27	1.3	1.4	1.5	3.9	7.2	5.9	6.9	81	43	15	86	39
28	1.5	1.6	1.4	8.5	6.6	6.1	5.4	83	40	22	82	36
29	2.5	2.9	1.5	7.4	---	5.9	4.4	93	40	26	74	40
30	3.0	2.7	1.6	4.5	---	5.9	3.4	105	43	48	77	45
31	1.7	---	1.5	1.8	---	5.6	---	93	---	62	77	---
TOTAL	372.6	52.1	49.3	159.4	212.5	171.0	124.1	1218.5	1541	735	1855	1515
MEAN	12.0	1.74	1.59	5.14	7.59	5.52	4.14	39.3	51.4	23.7	59.8	50.5
MAX	28	3.6	2.2	8.6	14	6.7	6.9	105	81	65	120	91
MIN	1.0	1.0	1.1	1.8	2.3	3.0	1.7	4.8	29	14	23	32
AC-FT	739	103	98	316	421	339	246	2420	3060	1460	3680	3010
(†)	789	740	714	311	255	377	321	428	1150	415	1050	1020

CAL YR 1981 TOTAL 3597.75 MEAN 9.86 MAX 152 MIN .95 AC-FT 7140 † 5130  
WTR YR 1982 TOTAL 8005.50 MEAN 21.9 MAX 120 MIN 1.0 AC-FT 15880 † 7560

† Diversion, in acre-feet, by La Cueva Canal.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]



ARKANSAS RIVER BASIN  
07215500 MORA RIVER AT LA CUEVA, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 05...	1230	30	<10
FEB 18...	1200	30	16
MAY 11...	1200	30	<9
AUG 20...	1415	30	14

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 07...	1130	14	12.0	26	.98	--
NOV 05...	1230	4.8	10.5	7	.09	--
DEC 08...	1100	1.7	6.0	29	.13	--
FEB 18...	1200	8.8	4.0	53	1.3	--
MAR 16...	1200	6.2	8.0	55	.92	--
APR 13...	1235	4.0	16.5	53	.57	--
MAY 11...	1200	13	14.5	84	2.9	89
JUN 09...	1200	43	14.5	71	8.2	84
JUL 14...	1600	17	21.0	40	1.8	70
AUG 20...	1415	68	19.0	141	26	83
SEP 22...	1415	55	14.0	53	7.9	73

## 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 (1.1 km) upstream from bridge on State Highway 160, 1.2 mi (1.9 km) east of Golondrin, 1.9 mi (3.1 km) upstream from Coyote Creek, 4.7 mi (7.6 km) downstream from Rito Cebolla, and at mile 75.8 (122.0 km).

DRAINAGE AREA.--267 mi<sup>2</sup> (692 km<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. Altitude of gage is 6,750 ft (2,057 m), from topographic map. Mar. 10, 1915 to June 4, 1921, water-stage recorder at site 2.8 mi (4.5 km) upstream at different datum. July 6, 1921 to Jan. 5, 1929, nonrecording gage or water-stage recorder at site 0.7 mi (1.1 km) downstream at datum about 14 ft (4.3 m) lower and Jan. 6, 1929 to Apr. 1, 1972, water-stage recorder at site 0.7 mi (1.1 km) downstream at datum about 15 ft (4.6 m) lower.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 12,000 acres (49 km<sup>2</sup>) above 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.--65 years (water years 1916-20, 1922, 1924-82), 32.9 ft<sup>3</sup>/s (0.932 m<sup>3</sup>/s), 23,840 acre-ft/yr (29.4 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft<sup>3</sup>/s (396 m<sup>3</sup>/s) Aug. 22, 1952, gage height, 14.4 ft (4.39 m), site and datum then in use, from rating curve extended above 660 ft<sup>3</sup>/s (19 m<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 (710 m<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 500 ft<sup>3</sup>/s (14.2 m<sup>3</sup>/s) at 0200 hours Aug. 21, gage height, 3.07 ft (0.936 m), no other peak above base of 400 ft<sup>3</sup>/s (11 m<sup>3</sup>/s); minimum, 1.1 ft<sup>3</sup>/s (0.031 m<sup>3</sup>/s) Dec. 26, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	3.6	5.0	4.8	3.0	6.4	5.4	2.4	75	65	41	69
2	12	2.8	4.5	5.3	3.0	5.4	3.1	2.5	70	44	26	60
3	25	2.6	4.5	4.0	7.0	4.9	3.2	2.3	69	28	20	65
4	29	2.9	4.5	7.6	6.5	5.2	2.4	4.7	71	23	19	55
5	25	4.6	4.7	13	6.0	5.6	2.3	34	69	17	23	46
6	26	4.3	4.6	8.0	6.0	7.0	2.1	68	47	12	20	40
7	22	4.0	4.3	8.0	7.0	8.0	1.8	49	36	15	20	55
8	19	4.2	4.2	8.0	9.0	8.6	1.8	23	30	14	52	68
9	16	3.6	4.1	9.0	10	8.4	1.7	12	23	15	29	55
10	18	4.7	4.1	8.0	12	6.1	1.8	9.1	36	12	22	49
11	22	4.0	4.2	7.0	15	5.1	1.6	6.7	37	7.7	41	56
12	22	4.4	4.0	10	14	4.6	1.6	5.3	43	7.0	27	59
13	16	4.2	3.9	9.0	13	5.3	1.3	5.2	49	3.6	30	52
14	19	4.0	3.8	8.0	14	7.4	1.3	9.4	48	9.0	32	42
15	18	3.8	3.6	7.0	13	7.8	1.3	8.2	37	9.5	27	37
16	11	3.9	3.4	5.0	14	9.0	1.3	9.1	25	12	54	33
17	11	3.9	3.4	4.5	13	8.8	1.3	10	24	11	70	55
18	13	4.0	3.4	6.0	13	9.1	1.4	9.9	23	13	93	77
19	15	3.8	3.4	5.7	13	8.7	1.4	11	65	15	110	132
20	9.1	3.6	3.9	6.9	16	8.1	1.5	11	75	16	80	85
21	14	3.7	3.7	10	15	6.8	1.9	25	88	13	182	76
22	4.1	3.8	3.5	9.0	14	6.9	3.0	32	61	9.5	87	63
23	3.8	3.3	3.0	10	6.2	6.5	2.7	77	55	9.0	112	54
24	4.6	3.2	3.0	11	3.4	6.4	2.7	79	43	8.4	124	47
25	4.7	3.0	2.5	12	3.3	6.4	2.4	87	44	7.1	195	45
26	4.0	2.8	3.0	10	4.7	6.6	1.9	78	54	8.8	108	44
27	3.9	2.8	3.5	6.0	6.0	7.2	2.5	83	42	10	97	41
28	3.9	3.5	3.5	6.6	6.3	7.4	2.9	88	34	17	108	37
29	3.6	5.1	3.5	13	---	6.9	2.8	98	37	22	81	40
30	3.9	4.5	4.0	12	---	6.9	2.2	113	34	41	98	46
31	4.8	---	5.3	7.0	---	7.0	---	110	---	59	92	---
TOTAL	414.4	112.6	120.0	251.4	266.4	214.5	64.6	1162.8	1449	558.6	2120	1683
MEAN	13.4	3.75	3.87	8.11	9.51	6.92	2.15	37.5	48.3	18.0	68.4	56.1
MAX	29	5.1	5.3	13	16	9.1	5.4	113	88	65	195	132
MIN	3.6	2.6	2.5	4.0	3.0	4.6	1.3	2.3	23	7.0	19	33
AC-FT	822	223	238	499	528	425	128	2310	2870	1110	4210	3340
CAL YR 1981	TOTAL	4779.64	MEAN 13.1	MAX 361	MIN .53	AC-FT 9480						
WTR YR 1982	TOTAL	8417.30	MEAN 23.1	MAX 195	MIN 1.3	AC-FT 16700						

## 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 (0.8 km) downstream from Coyote Creek damsite, 2.3 mi (3.7 km) northeast of Golondrin, and at mile 2.7 (4.3 km).

DRAINAGE AREA.--215 mi<sup>2</sup> (557 km<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. Altitude of gage is 6,785 ft (2,068 m), from topographic map. Prior to Apr. 26, 1938, at site 0.4 mi (0.6 km) downstream at different datum (nonrecording gage prior to Apr. 20, 1929). Apr. 26, 1938 to Sept. 25, 1946, at site 139 ft (42 m) downstream at same datum.

REMARKS.--Records fair except those for winter period, which are poor. Diversions (including off-channel storage) for irrigation of about 4,000 acres (16 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--54 years, 11.3 ft<sup>3</sup>/s (0.320 m<sup>3</sup>/s), 8,190 acre-ft/yr (10.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,050 ft<sup>3</sup>/s (115 m<sup>3</sup>/s) Aug. 17, 1961, gage height, 9.60 ft (2.926 m), from rating curve extended above 250 ft<sup>3</sup>/s (7.1 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 5.54 ft (1.689 m), 7.74 ft (2.359 m), and 9.60 ft (2.926 m); maximum gage height, 10.1 ft (3.08 m) Aug. 30, 1936 (site and datum then in use); no flow Aug. 4, 1945, Apr. 10, May 9, 10, 1956, Feb. 20, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft<sup>3</sup>/s (5.1 m<sup>3</sup>/s) and maximum (\*), from rating curve extended above 210 ft<sup>3</sup>/s (5.9 m<sup>3</sup>/s) as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Aug. 18	about 1630	*530 15.0	4.60 1.402	Aug. 23	1700	186 5.27	3.42 1.042

Minimum discharge, 0.87 ft<sup>3</sup>/s (0.025 m<sup>3</sup>/s) part or all of each day June 8-12, but may have been less during periods of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	4.9	5.3	7.5	5.0	8.8	3.3	2.3	12	3.1	2.4	29
2	4.7	4.9	6.1	7.5	5.5	6.6	3.7	2.2	6.6	2.3	2.3	22
3	12	4.9	6.9	4.0	6.8	6.1	4.0	2.2	5.1	1.6	2.4	19
4	9.1	4.5	6.5	5.3	5.7	5.5	3.5	1.7	4.1	1.6	2.2	16
5	5.5	4.5	7.2	7.1	4.5	5.3	2.7	2.4	1.9	1.8	2.9	25
6	3.7	4.5	6.8	8.0	5.2	5.3	3.0	2.3	1.4	1.7	10	17
7	3.1	4.7	7.0	6.1	7.8	5.1	3.0	2.1	1.2	1.3	20	19
8	2.8	5.1	6.8	6.3	8.8	5.1	1.9	7.3	1.0	1.2	29	28
9	2.6	5.3	7.1	6.6	9.7	4.3	1.7	12	.96	1.3	17	33
10	2.1	4.7	7.1	6.6	8.5	4.2	1.5	8.7	.87	1.3	9.5	33
11	2.1	4.0	7.3	7.5	9.7	3.8	1.5	5.5	.87	1.7	25	25
12	2.5	4.1	7.5	8.3	10	5.9	1.5	4.3	.94	1.8	14	16
13	2.7	4.0	7.3	7.8	11	15	1.7	3.7	1.1	1.6	8.4	14
14	2.5	3.9	7.1	8.8	12	11	1.5	4.4	2.3	1.6	11	12
15	2.8	3.8	7.1	6.8	14	15	1.5	4.8	1.3	1.6	6.6	10
16	3.2	3.7	7.5	6.3	15	13	1.4	4.8	1.2	1.6	19	7.0
17	3.2	3.7	6.1	8.8	14	12	1.4	5.9	1.4	1.6	25	21
18	3.4	3.3	6.1	3.4	12	6.6	1.4	4.0	1.3	1.9	109	24
19	3.6	3.3	6.6	7.8	10	5.9	1.4	2.9	3.4	1.8	58	35
20	3.6	3.4	7.8	7.7	9.9	5.1	1.6	2.9	2.8	1.7	31	26
21	3.8	3.5	7.1	7.1	9.1	4.5	2.3	2.9	2.3	1.7	37	20
22	4.3	3.6	6.8	6.5	8.6	3.6	2.6	2.9	1.5	1.8	55	19
23	4.5	3.3	5.7	5.3	8.2	2.9	2.2	5.3	1.4	1.7	59	17
24	4.7	3.3	6.3	7.3	8.1	3.5	2.1	11	2.3	1.4	47	16
25	4.7	3.8	4.9	8.0	8.4	3.4	1.9	29	3.2	1.4	81	14
26	4.9	4.2	3.7	8.0	8.2	3.1	2.0	49	2.1	1.5	72	13
27	4.7	4.5	6.8	8.3	9.1	3.8	2.0	44	2.1	1.6	48	11
28	4.3	4.8	6.3	6.8	9.4	4.3	2.0	38	2.1	3.3	48	11
29	4.3	5.3	7.1	7.4	---	3.9	1.8	26	2.8	7.5	40	11
30	4.3	4.8	7.1	6.3	---	3.6	2.2	21	3.4	2.6	36	12
31	4.5	---	7.3	6.1	---	3.3	---	17	---	2.5	40	---
TOTAL	130.8	126.3	206.3	220.3	254.2	189.5	64.3	332.5	74.94	61.1	967.7	575.0
MEAN	4.22	4.21	6.65	7.11	9.08	6.11	2.14	10.7	2.50	1.97	31.2	19.2
MAX	12	5.3	7.8	8.8	15	15	4.0	49	12	7.5	109	35
MIN	2.1	3.3	3.7	4.0	4.5	2.9	1.4	1.7	.87	1.2	2.2	7.0
AC-FT	259	251	409	437	504	376	128	660	149	121	1920	1140

CAL YR 1981 TOTAL 2934.05 MEAN 8.04 MAX 187 MIN .29 AC-FT 5820  
WTR YR 1982 TOTAL 3202.94 MEAN 8.78 MAX 109 MIN .87 AC-FT 6350

NOTE.--No gage-height record Aug. 18.

## 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 (8.8 km) east of Shoemaker, 12.3 mi (19.8 km) upstream from Pedros Creek, and at mile 39.4 (63.4 km).

DRAINAGE AREA.--1,104 mi<sup>2</sup> (2,859 km<sup>2</sup>), of which 71 mi<sup>2</sup> (184 km<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), 1933-34(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. Altitude of gage is 6,145 ft (1,873 m), from topographic map. Prior to Oct. 10, 1934, at site 2,000 ft (610 m) upstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 26,000 acres (110 km<sup>2</sup>) above 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.--64 years (water years 1915-18, 1920-24, 1928-82), 55.2 ft<sup>3</sup>/s (1.563 m<sup>3</sup>/s), 39,990 acre-ft/yr (49.3 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft<sup>3</sup>/s (430 m<sup>3</sup>/s) June 3, 1948, gage height, 12.79 ft (3.898 m), from rating curve extended above 2,800 ft<sup>3</sup>/s (79 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 10.09 ft (3.075 m) and 12.79 ft (3.898 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORDS.--Floods of Sept. 29, 1904, and June 11, 1913, probably exceeded 30,000 ft<sup>3</sup>/s (850 m<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft<sup>3</sup>/s (23 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
July 8	0415	*11000 312	11.18 3.408	Aug. 6	1945	930 26.3	4.02 1.225
July 29	2045	2400 68.0	5.98 1.823				

Minimum discharge, 1.7 ft<sup>3</sup>/s (0.048 m<sup>3</sup>/s) Feb, 1, 2, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	7.8	9.3	19	14	5.2	6.1	4.8	60	7.7	49	109
2	9.4	7.5	9.9	18	14	4.6	4.3	4.5	34	8.1	35	87
3	11	7.5	10	17	13	6.0	4.2	4.4	22	8.2	20	78
4	21	7.5	12	15	12	5.6	4.5	4.4	14	7.2	14	77
5	23	7.5	12	17	13	5.0	5.3	4.9	9.6	6.9	12	66
6	20	7.0	12	20	17	4.5	6.5	4.7	8.1	7.1	109	57
7	24	7.0	13	19	22	4.3	5.7	4.4	6.3	7.9	72	83
8	21	7.5	11	18	27	5.8	4.6	4.3	5.3	1040	53	63
9	17	8.0	11	18	27	7.3	4.4	4.8	5.0	47	71	83
10	14	8.0	11	17	29	5.4	4.5	4.7	6.6	21	49	82
11	11	7.5	11	19	29	4.2	4.5	4.8	6.0	14	34	83
12	9.5	7.5	11	20	25	4.3	4.3	4.2	5.7	12	47	76
13	8.9	7.0	11	20	24	4.4	5.0	4.2	16	11	32	73
14	5.5	7.5	11	16	24	6.8	5.9	4.4	13	10	26	64
15	4.9	8.0	10	19	24	6.7	5.0	4.2	8.5	10	34	57
16	4.9	8.5	10	18	23	5.4	4.7	3.9	8.1	9.5	31	59
17	4.8	8.0	10	17	24	4.4	5.2	4.0	7.8	9.5	71	55
18	5.2	8.0	11	19	20	4.6	5.1	4.0	7.8	10	84	83
19	5.8	8.0	15	19	7.5	4.5	4.9	3.8	7.7	12	348	127
20	6.1	8.0	17	17	6.4	5.4	5.7	3.4	14	9.9	198	135
21	6.4	8.1	18	16	6.2	4.6	6.7	3.4	25	8.9	178	120
22	6.9	8.0	18	11	6.2	4.7	5.5	3.8	35	9.0	145	105
23	7.4	8.0	17	13	5.9	4.4	4.8	4.8	21	8.4	126	86
24	7.6	8.1	14	14	5.8	4.2	4.4	7.1	15	9.3	163	77
25	7.6	8.4	15	17	5.4	4.3	4.5	36	9.8	8.9	187	71
26	11	7.9	17	17	5.1	4.3	4.7	59	8.2	8.1	202	68
27	11	8.0	20	16	4.8	4.3	4.5	50	11	9.2	138	63
28	9.0	8.3	19	14	4.7	4.9	4.5	60	12	24	146	53
29	8.7	8.2	17	13	---	4.8	4.3	58	9.9	308	144	52
30	7.0	8.6	18	13	---	5.0	4.6	62	8.6	176	118	57
31	8.3	---	13	14	---	6.7	---	74	---	46	120	---
TOTAL	330.9	234.9	419.2	520	439.0	156.6	148.9	504.9	421.0	1884.8	3056	2349
MEAN	10.7	7.83	13.5	16.8	15.7	5.05	4.96	16.3	14.0	60.8	98.6	78.3
MAX	24	8.6	20	20	29	7.3	6.7	74	60	1040	348	135
MIN	4.8	7.0	9.3	11	4.7	4.2	4.2	3.4	5.0	6.9	12	52
AC-FT	656	466	831	1030	871	311	295	1000	835	3740	6060	4660

CAL YR 1981	TOTAL	6708.72	MEAN 18.4	MAX 1090	MIN .70	AC-FT 13310
WTR YR 1982	TOTAL	10465.20	MEAN 28.7	MAX 1040	MIN 3.4	AC-FT 20760

## 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 (300 m) downstream from bridge on State Highway 65, 0.9 mi (1.4 km) upstream from Lagartija Creek, 3.2 mi (5.1 km) northeast of Sanchez, 10 mi (16 km) downstream from Mora River, 25 mi (40 km) southwest of Mosquero, and at mile 777.0 (1,250.2 km).

DRAINAGE AREA.--6,015 mi<sup>2</sup> (15,579 km<sup>2</sup>), of which 303 mi<sup>2</sup> (785 km<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). The revised figures of discharge for September 1942, as published in WSP 1281, supersede those published in WSP 1311.

GAGE.--Water-stage recorder. Altitude of gage is 4,495 ft (1,370 m), from topographic map. See WSP 2121 for history of changes prior to November 1966. Supplemental water-stage recorder at site 0.6 mi (1.0 km) upstream used at various times since 1966.

REMARKS.--Water-discharge records fair. Diversions for irrigation of about 56,000 acres (230 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--49 years (water years 1913-14, 1936-82), 186 ft<sup>3</sup>/s (5.268 m<sup>3</sup>/s), 134,800 acre-ft/yr (166 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft<sup>3</sup>/s (4,110 m<sup>3</sup>/s) June 18, 1965, gage height, about 36.6 ft (11.16 m), revised, from floodmarks, present site and datum, from rating curve extended above 91,000 ft<sup>3</sup>/s (2,600 m<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 (2,800 m<sup>3</sup>/s), but is believed to have been less than the peak of June 18, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft<sup>3</sup>/s (99 m<sup>3</sup>/s) and maximum (\*), from rating curve extended above 2,600 ft<sup>3</sup>/s (74 m<sup>3</sup>/s) as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
June 14	0245	6900 195	10.31 3.142	July 30	0730	15900 450	14.37 4.380
July 8	0800	*19900 564	15.66 4.773	Aug. 20	0930	8030 227	10.96 3.341
July 28	0700	3990 113	8.31 2.533	Aug. 28	0430	7250 205	10.52 3.206
July 29	1230	8420 238	11.17 3.405				

Minimum discharge, 3.1 ft<sup>3</sup>/s (0.088 m<sup>3</sup>/s) Jan. 17, result of freezeup.

REVISIONS.--The gage height for the maximum discharge for period of record, which occurred June 18, 1965, has been revised to 36.6 ft (11.16 m), from floodmarks, present site and datum; the previous figure, published since 1967, was in error. The maximum discharge for water year 1979 has been revised to 16,600 ft<sup>3</sup>/s (470 m<sup>3</sup>/s), May 21, 1979, gage height, 14.60 ft (4.450 m), superseding figure published in the report for 1979.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	43	18	32	31	22	11	7.2	72	64	391	252
2	20	35	18	31	24	21	10	7.4	81	51	243	215
3	199	29	18	29	23	20	9.3	8.1	65	41	186	182
4	68	26	17	25	20	21	9.6	12	44	32	145	157
5	61	24	19	27	25	21	9.2	15	37	26	118	145
6	62	22	23	30	28	21	9.8	15	28	21	133	135
7	54	20	22	33	29	20	11	14	21	47	279	582
8	48	20	26	25	29	20	9.8	13	15	6520	599	473
9	45	23	27	24	29	20	8.9	11	11	625	308	339
10	41	22	27	24	40	19	8.5	9.5	8.9	207	204	206
11	37	20	27	27	42	18	8.4	7.5	7.6	169	176	186
12	34	18	25	31	42	17	8.3	12	9.2	97	249	170
13	31	17	25	27	44	17	8.0	13	44	60	285	156
14	28	18	26	25	42	21	7.8	11	1730	43	186	134
15	27	20	25	28	46	21	6.7	9.4	236	34	151	125
16	26	21	26	27	45	17	6.1	15	135	43	123	124
17	25	20	25	22	44	16	6.7	10	275	39	1010	119
18	24	19	23	31	46	16	7.2	6.7	246	22	506	311
19	22	17	25	31	50	15	6.0	6.1	193	18	525	237
20	21	17	23	29	60	16	5.6	5.3	512	16	2180	203
21	19	17	23	30	59	17	6.0	3.8	371	27	645	220
22	21	17	23	30	45	16	7.9	6.0	135	13	414	186
23	21	17	22	28	36	15	8.4	32	73	8.8	316	167
24	22	18	20	29	30	14	8.6	36	71	9.5	525	142
25	22	16	23	27	27	13	8.1	176	73	9.6	501	122
26	22	16	26	29	26	13	7.8	312	132	7.0	331	112
27	22	15	30	26	25	13	8.9	117	289	5.2	463	102
28	22	15	28	26	24	13	9.7	91	146	1250	2220	92
29	21	18	31	23	---	12	8.5	76	133	3730	619	83
30	21	20	30	25	---	12	6.6	76	87	7900	352	85
31	38	---	30	30	---	11	---	70	---	1120	308	---
TOTAL	1143	620	751	861	1011	528	248.4	1204.0	5280.7	22255.1	14691	5762
MEAN	36.9	20.7	24.2	27.2	36.1	17.0	8.28	38.8	176	718	474	192
MAX	199	43	31	33	60	22	11	312	1730	7900	2220	582
MIN	19	15	17	22	20	11	5.6	3.8	7.6	5.2	113	83
AC-FT	2270	1230	1490	1710	2010	1050	493	2390	10470	44140	29140	11430

CAL YR 1981 TOTAL 37931.44 MEAN 104 MAX 5000 MIN .00 AC-FT 75240  
WTR YR 1982 TOTAL 54355.20 MEAN 149 MAX 7900 MIN 3.8 AC-FT 107800

ARKANSAS RIVER BASIN  
07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
OCT										
20...	1500	22	1210	--	8.4	--	23.5	17.0	9.4	--
NOV										
17...	1200	21	1350	1370	10.1	8.2	27.0	12.0	--	36
DEC										
16...	1205	29	1600	1530	8.1	8.0	11.0	6.0	--	--
JAN										
18...	1520	33	1200	1410	8.2	8.2	20.5	6.5	10.4	16
FEB										
24...	1300	30	1650	--	8.0	--	--	10.0	--	--
24...	1500	30	1600	--	8.4	--	12.5	11.0	--	--
MAR										
22...	1100	15	1560	1580	8.5	8.2	12.5	11.5	11.4	11
APR										
20...	1300	6.1	1750	1790	9.5	8.1	17.0	12.0	--	--
MAY										
17...	1500	8.0	2150	2270	8.1	7.8	23.0	20.0	20.0	21
JUN										
14...	1610	860	470	607	7.8	7.2	34.0	15.0	--	--
AUG										
10...	1200	211	370	400	8.1	7.9	25.5	24.0	7.2	24

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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT										
20...	--	--	--	--	--	--	--	--	--	--
NOV										
17...	518	358	110	59	120	2.4	3.4	540	25	.4
DEC										
16...	--	--	--	--	--	--	--	--	--	--
JAN										
18...	535	345	112	62	110	2.1	2.9	550	26	.4
FEB										
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAR										
22...	724	564	143	89	160	2.7	3.3	850	39	.4
APR										
20...	--	--	--	--	--	--	--	--	--	--
MAY										
17...	877	747	170	110	210	3.2	5.4	1100	48	.5
JUN										
14...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	151	60	39	13	25	.9	3.2	100	5.9	.2



ARKANSAS RIVER BASIN  
07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT 20...	--	--	--	--	--	--	--	--	--	--
NOV 17...	7.8	962	.10	.11	.150	1.1	1.3	.010	<.020	6.5
DEC 16...	--	--	--	--	--	--	--	--	--	--
JAN 18...	10	988	<.09	<.09	.140	.40	--	.060	.020	2.6
FEB 24...	--	--	--	--	--	--	--	--	--	--
MAR 22...	4.9	1390	<.10	<.10	.100	.16	--	<.010	.010	3.1
APR 20...	--	--	--	--	--	--	--	--	--	--
MAY 17...	2.1	1720	<.10	<.10	.090	.91	--	.100	.020	5.1
JUN 14...	--	--	--	--	--	--	--	--	--	--
AUG 10...	12	255	.13	.13	.130	1.4	1.6	.160	.020	8.6

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 17...	1200	1	1	100	<1	<1	10	<10	6	5
JAN 18...	1520	--	--	80	--	--	--	--	--	--
MAR 22...	1100	--	--	100	--	--	--	--	--	--
MAY 17...	1500	1	1	130	<1	1	<10	<10	7	2
AUG 10...	1200	--	--	40	--	--	--	--	--	--

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 17...	<10	2	1	<.1	<.1	1	1	20	6
JAN 18...	<10	--	--	--	--	--	--	--	--
MAR 22...	20	--	--	--	--	--	--	--	--
MAY 17...	<10	2	2	.1	<.1	1	1	10	150
AUG 10...	880	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN  
07221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
------	------	---	---	--	--	---	---

MAY 17...	1500	<2.0	1.4	1400	4	1	1
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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 ZN) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
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MAY 17...	<10	70	1900	10	310	.02	8
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RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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)
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MAY 17...	1500	<42	1.1	<20	2.0	<20	1.9	.10	5.1
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PESTICIDE ANALYSES, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
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MAY 17...	1500	<.01	<.01	<.01
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ARKANSAS RIVER BASIN  
7221500 CANADIAN RIVER NEAR SANCHEZ, NM -- Continued  
WATER-QUALITY RECORDS

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 17...	K2200	K0
JAN 18...	0	0
MAR 22...	K2	K40
MAY 17...	130	220
AUG 10...	590	470

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 20...	1500	22	17.0	63	3.7	99
NOV 17...	1200	21	12.0	56	3.2	80
JAN 18...	1520	33	6.5	13	1.2	85
MAR 22...	1100	15	11.5	70	2.8	88
APR 20...	1300	6.1	12.0	38	.63	84
MAY 17...	1500	8.0	20.0	57	1.2	85
AUG 10...	1200	211	24.0	296	169	98

## 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 (2.4 km) northeast of Variadero, 14 mi (23 km) west of Conchas Dam, and at mile 15.0 (24.1 km).

DRAINAGE AREA.--523 mi<sup>2</sup> (1,355 km<sup>2</sup>), of which 130 mi<sup>2</sup> (337 km<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. Altitude of gage is 4,390 ft (1,340 m), from topographic map. Prior to Mar. 30, 1942, at site 1.5 mi (2.4 km) upstream at different datum. Mar. 30, 1942 to May 18, 1950, at present site at datum 0.5 ft (0.15 m) higher.

REMARKS.--Records poor. Diversions for irrigation of about 300 acres (1.2 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years, 14.8 ft<sup>3</sup>/s (0.419 m<sup>3</sup>/s), 10,720 acre-ft/yr (13.2 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,000 ft<sup>3</sup>/s (1,250 m<sup>3</sup>/s) Sept. 1, 1942, gage height, 19.96 ft (6.084 m), present datum, from rating curve extended above 760 ft<sup>3</sup>/s (22 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 10.5 ft (3.20 m) and 19.96 ft (6.084 m), present datum; no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,210 ft<sup>3</sup>/s (119 m<sup>3</sup>/s) at about 0700 hours July 11, gage height, 7.30 ft (2.225 m), no other peak above base of 1,500 ft<sup>3</sup>/s (42 m<sup>3</sup>/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.00	.00	.01	.00	.00	.00	.00	.00	1.4	18	5.0
2	.17	.00	.00	.02	.01	.00	.00	.00	.00	.91	7.4	2.0
3	2.0	.01	.00	.02	.01	.00	.00	.00	.00	.48	4.7	1.0
4	19	.01	.00	.02	.01	.00	.00	.00	.00	.39	3.3	.90
5	5.7	.01	.00	.02	.00	.00	.00	.00	.00	.35	2.6	.80
6	3.9	.01	.00	.01	.00	.00	.00	.00	.00	.35	19	.80
7	3.3	.01	.00	.01	.00	.00	.00	.00	.00	.31	62	.79
8	2.1	.01	.00	.01	.00	.00	.00	.00	.00	279	7.4	190
9	1.6	.01	.00	.01	.00	.00	.00	.00	.00	67	3.9	28
10	1.0	.01	.00	.01	.00	.00	.00	.00	.00	18	2.7	10
11	.79	.01	.00	.02	.00	.00	.00	.00	.00	1010	2.1	5.1
12	.58	.01	.00	.02	.00	.00	.00	.00	.00	76	1.8	3.9
13	.35	.01	.00	.02	.00	.00	.00	.00	.00	36	1.7	2.4
14	.23	.01	.00	.03	.00	.00	.00	.00	134	23	1.5	1.9
15	.20	.01	.00	.03	.00	.00	.00	.00	47	11	1.3	1.6
16	.17	.01	.01	.03	.00	.00	.00	.00	12	12	22	1.5
17	.14	.01	.01	.02	.00	.00	.00	.00	4.4	13	121	1.4
18	.11	.00	.01	.02	.00	.00	.00	.00	2.1	3.2	200	2.5
19	.09	.00	.01	.01	.00	.00	.00	.00	1.5	2.5	100	2.8
20	.04	.00	.01	.01	.00	.00	.00	.00	153	2.3	200	2.4
21	.04	.00	.01	.01	.00	.00	.00	.00	342	2.1	50	2.1
22	.04	.00	.01	.01	.00	.00	.00	.00	26	1.8	20	2.0
23	.04	.00	.01	.00	.00	.00	.00	.00	8.0	1.9	10	1.7
24	.03	.00	.01	.00	.00	.00	.00	.00	3.8	2.0	50	1.6
25	.02	.00	.01	.00	.00	.00	.00	4.2	2.2	1.6	20	1.4
26	.02	.00	.01	.00	.00	.00	.00	38	1.4	1.3	10	1.2
27	.02	.00	.01	.00	.00	.00	.00	7.5	.85	1.2	20	1.1
28	.01	.00	.01	.00	.00	.00	.00	2.0	6.6	107	200	.91
29	.01	.01	.01	.00	---	.00	.00	.68	18	20	100	.73
30	.01	.01	.01	.00	---	.00	.00	.23	2.9	232	25	4.1
31	.00	---	.01	.00	---	.00	---	.00	---	53	10	---
TOTAL	41.88	.17	.16	.37	.03	.00	.00	52.61	765.75	1981.09	1297.4	281.63
MEAN	1.35	.006	.005	.012	.001	.000	.000	1.70	25.5	63.9	41.9	9.39
MAX	19	.01	.01	.03	.01	.00	.00	38	342	1010	200	190
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.31	1.3	.73
AC-FT	83	.3	.3	.7	.06	.00	.00	104	1520	3930	2570	559
CAL YR 1981	TOTAL	3715.84	MEAN	10.2	MAX	1500	MIN	.00	AC-FT	7370		
WTR YR 1982	TOTAL	4421.09	MEAN	12.1	MAX	1010	MIN	.00	AC-FT	8770		

## ARKANSAS RIVER BASIN

## 07223000 BELL RANCH CANAL BELOW CONCHAS DAM, NM

LOCATION.--Lat 35°24'10", long 104°11'07", San Miguel County, Hydrologic Unit 11080006, in Pablo Montoya Grant, on left bank 1,270 ft (390 m) downstream from Conchas Dam, and 23.5 mi (37.8 km) north of Newkirk.

PERIOD OF RECORD.--October 1942 to current year. Prior to October 1965, published as "near Conchas Dam."

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 4,150 ft (1,265 m), from headgate elevations.

REMARKS.--Records good except those below 1.0 ft<sup>3</sup>/s (0.03 m<sup>3</sup>/s), which are poor. Canal diverts from Conchas Lake (station 07223500) for irrigation of about 700 acres (3 km<sup>2</sup>) on Bell Ranch. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 21 ft<sup>3</sup>/s (0.595 m<sup>3</sup>/s) July 10-13, Sept. 7-10, 1948, June 27, Aug. 7, 1951; no flow many days each year.

## MONTHLY DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Month	Maximum	Minimum	Mean	Diversion in acre-feet
October.....	4.4	0	1.17	72
November.....	1.4	0	.087	5.2
December.....	0	0	0	0
CAL YR 1981.....	8.3	0	2.47	1,780
January.....	0	0	0	0
February.....	6.0	0	.32	18
March.....	6.4	0	2.93	180
April.....	6.2	5.7	5.89	350
May.....	5.9	0	4.41	271
June.....	7.2	0	4.53	269
July.....	8.8	0	3.54	218
August.....	10	0	6.45	397
September.....	7.8	4.4	4.62	275
WTR YR 1982.....	10	0	2.84	2,060

## 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 below Conchas Dam, and 21.5 mi (34.6 km) north of Newkirk.

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

GAGE.--Flowmeters in each of two 90-in (2.286 m) diameter steel diversion conduits. Prior to Nov. 19, 1948, water-stage recorder at site 0.2 mi (0.3 km) downstream. Nov. 19, 1948 to Dec. 13, 1973, and Jan. 1 to Dec. 31, 1979, water-stage recorder at site 1.0 mi (1.6 km) downstream.

REMARKS.--Water is diverted from Conchas Lake for irrigation of about 35,000 acres (140 km<sup>2</sup>) on Tucumcari Project (1966 conditions).

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 751 ft<sup>3</sup>/s (21.3 m<sup>3</sup>/s) Aug. 31, 1961; no flow many days each year.

## MONTHLY DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Month	Mean	Diversion in acre-feet
October.....	81.2	4,990
November.....	0	0
December.....	0	0
CAL YR 1981.....	67.3	48,710
January.....	0	0
February.....	0	0
March.....	0	0
April.....	204	12,130
May.....	154	9,440
June.....	82.2	4,890
July.....	183	11,250
August.....	160	9,830
September.....	220	13,110
WTR YR 1982.....	90.7	65,640

## 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 (39 km) north of Newkirk, and at mile 746.0 (1,200.3 km).

DRAINAGE AREA.--7,409 mi<sup>2</sup> (19,189 km<sup>2</sup>), of which 433 mi<sup>2</sup> (1,121 km<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 (407 hm<sup>3</sup>) between elevations 4,060.0 ft (1,237.49 m) and 4,201.0 ft (1,280.46 m), crest of 300 ft (91.4 m) ungated service spillway. Inactive storage, 70,490 acre-ft (86.9 hm<sup>3</sup>) at elevation 4,155.0 ft (1,266.44 m). Lake usually not drawn below elevation, 4,157.35 ft (1,267.160 m), sill of irrigation outlet, capacity, 77,790 acre-ft (95.9 hm<sup>3</sup>), except for minor sluicing; at times irrigation water is pumped into Conchas Canal. Capacity of 198,800 acre-ft (245 hm<sup>3</sup>) between elevations 4,201.0 ft (1,280.46 m), crest of 300 ft (91.4 m) ungated service spillway, and 4,218.0 ft (1,285.65 m), crest of 3,000 ft (914 m) 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 above station for irrigation of about 57,000 acres (230 km<sup>2</sup>). Direct diversions through Conchas Dam to Bell Ranch Canal and Conchas Canal (stations 07223000, 07223300) irrigate about 36,000 acres (150 km<sup>2</sup>) near Tucumcari, and on Bell Ranch.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 479,600 acre-ft (591 hm<sup>3</sup>) Apr. 24, 1942, elevation, 4,208.41 ft (1,282.723 m); minimum after initial filling, 78,080 acre-ft (96.3 hm<sup>3</sup>) Sept. 18, 1976, elevation, 4,157.44 ft (1,267.188 m); minimum elevation, 4,155.80 ft (1,266.688 m) Sept. 24, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 245,100 acre-ft (302 hm<sup>3</sup>) Aug. 31 to Sept. 1, elevation, 4,191.08 ft (1,277.441 m); minimum, 125,900 acre-ft (155 hm<sup>3</sup>) June 13-14, elevation, 4,170.18 ft (1,271.071 m).

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

4,170	125,100	4,190	237,100
4,180	173,900	4,200	320,500

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155700	151000	150300	150300	150800	151600	150500	135700	128700	148300	222000	245000
2	155500	151000	150300	150300	150800	151600	150100	135400	128600	148100	222300	244800
3	155400	151000	150200	150300	150800	151600	149600	135000	128500	147900	222500	244700
4	155300	151000	150200	150300	150800	151500	149100	134700	128400	147500	222900	244100
5	155100	151000	150200	150300	150800	151500	148600	134400	128200	147300	223000	243600
6	155000	151000	150200	150300	150800	151500	148100	134100	127800	147100	223200	243500
7	154900	151000	150200	150300	150800	151500	147600	133800	127500	146600	224200	243800
8	154700	151000	150200	150300	150800	151500	147100	133500	127100	146000	225000	244500
9	154400	150900	150200	150300	150800	151500	146700	133000	126800	191100	225500	245000
10	154300	150900	150200	150300	150800	151500	146200	132600	126400	191400	225500	244900
11	154100	150900	150200	150300	150900	151500	145700	132300	126100	200400	225300	244700
12	153800	150900	150200	150300	150900	151500	145000	131900	126000	201100	225100	244300
13	153400	150900	150200	150500	151000	151500	144300	131400	125900	201100	225000	243600
14	153100	150900	150200	150500	151100	151500	143700	131000	129300	201100	224800	243400
15	152800	150800	150200	150500	151100	151400	142900	130600	130300	200900	224600	243000
16	152500	150800	150200	150500	151100	151400	142200	130200	130700	200500	224300	242600
17	152200	150800	150200	150500	151100	151300	141600	129800	131100	199900	225800	242400
18	151900	150800	150200	150600	151200	151300	141100	129400	131700	199500	228100	242900
19	151800	150700	150200	150600	151300	151200	140400	128900	136200	199100	228900	243000
20	151700	150700	150200	150600	151300	151100	139900	128400	142500	198600	231100	243100
21	151600	150700	150300	150600	151400	151100	139400	127900	144800	198100	233400	243100
22	151600	150600	150300	150600	151400	151000	139000	127500	145200	197600	233900	242900
23	151600	150600	150300	150600	151400	151000	138500	127000	145200	197000	234400	242800
24	151500	150500	150300	150600	151400	151000	138100	126600	145200	196300	235400	242600
25	151400	150400	150300	150700	151400	150900	137700	127800	145300	196600	236400	242300
26	151400	150400	150300	150700	151500	150900	137300	128900	146800	195000	236800	242100
27	151400	150400	150300	150700	151500	150900	137000	129300	147800	194800	238200	241800
28	151400	150400	150300	150700	151500	150900	136700	129200	148100	196400	242900	241300
29	151300	150400	150300	150700	---	150800	136300	129000	148300	202900	244500	240800
30	151200	150300	150300	150700	---	150700	136000	128900	148400	218100	244900	241800
31	151100	---	150300	150800	---	150500	---	128800	---	221000	245100	---
MAX	155700	151000	150300	150800	151500	151600	150500	135700	148400	221000	245100	245000
MIN	151100	150300	150200	150300	150800	150500	136000	126600	125900	146600	222000	240800
(†)	4175.63	4175.47	4175.46	4175.56	4175.72	4175.51	4172.45	4170.84	4175.07	4187.72	4191.08	4190.63
(‡)	-4800	-800	0	+500	+700	-1000	-14500	-7200	+19600	+72600	+24100	-3300

CAL YR 1981 MAX 158200 MIN 77440 † Elevation, in feet, at end of month.  
WTR YR 1982 MAX 245100 MIN 125900 ‡ Change in contents, in acre-feet.



## ARKANSAS RIVER BASIN

07226500 UTE CREEK NEAR LOGAN, NM

LOCATION.--Lat 35°26'18", long 103°31'31", in NW¼SE¼ sec. 15, T. 14 N., R. 32 E., Harding County, Hydrologic Unit 11090007, on right bank 1.9 mi (3.1 km) downstream from Alamosa Creek, 4.5 mi (7.2 km) upstream from State Road 155, 4.7 mi (7.6 km) upstream from high-water line of Ute Reservoir, 8.2 mi (13.2 km) northwest of Logan, and at mile 10.0 (16.1 km).

DRAINAGE AREA.--2,060 mi<sup>2</sup> (5,335 km<sup>2</sup>), of which 617 mi<sup>2</sup> (1,598 km<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. Altitude of gage is 3,815 ft (1,163 m), from topographic map. See WSP 2121 for history of changes prior to Oct. 1, 1964.

REMARKS.--Records poor. Diversions for irrigation of a few hundred acres above station. Several observations of water temperatures were made during the year.

AVERAGE DISCHARGE.--40 years, 24.7 ft<sup>3</sup>/s (0.700 m<sup>3</sup>/s), 17,900 acre-ft/yr (22.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft<sup>3</sup>/s (694 m<sup>3</sup>/s) May 28, 1946, July 12, 1951, gage height, 8.4 ft (2.56 m), site and datum then in use, from rating curve extended above 7,700 ft<sup>3</sup>/s (220 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 5.2 ft (1.58 m) and 7.2 ft (2.19 m); maximum gage height, 9.94 ft (3.030 m) 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 (6.995 m) site and datum then in use. Another major flood reached a stage of 16.0 ft (4.88 m), 1942 datum, sometime in 1941, from information furnished by Bureau of Reclamation; discharge, about 70,000 ft<sup>3</sup>/s (2,000 m<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft<sup>3</sup>/s (100 m<sup>3</sup>/s) and maximum (\*), from rating curve extended above 2,800 ft<sup>3</sup>/s (79 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 9.0 ft (2.74 m) and 9.94 ft (3.030 m):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
July 8	1300	6260 177	6.25 1.905	Aug. 18	0300	4890 138	5.50 1.676
July 30	0600	*8430 239	7.35 2.240				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	140	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	90	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	65	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.5	50	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	35	.00
6	.28	.00	.00	.00	.00	.00	.00	.00	.00	.00	181	.00
7	8.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	154	161
8	6.7	.00	.00	.00	.00	.00	.00	.00	.00	1310	240	265
9	3.9	.00	.00	.00	.00	.00	.00	.00	.00	215	75	99
10	2.0	.00	.00	.00	.00	.00	.00	.00	.00	85	30	39
11	.78	.00	.00	.00	.00	.00	.00	.00	.01	40	15	16
12	.10	.00	.00	.00	.00	.00	.00	.00	.00	20	7.6	3.3
13	.00	.00	.00	.00	.00	.00	.00	.00	189	10	2.4	.18
14	.00	.00	.00	.00	.00	.00	.00	.00	540	13	.57	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	146	161	.04	.00
16	.00	.00	.00	.00	.00	.00	.00	.11	69	84	5.6	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	29	55	178	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	14	21	889	28
19	.00	.00	.00	.00	.00	.00	.00	.00	7.4	21	91	41
20	.00	.00	.00	.00	.00	.00	.00	.00	199	4.4	37	19
21	.00	.00	.00	.00	.00	.00	.00	.00	326	7.5	40	7.6
22	.00	.00	.00	.00	.00	.00	.00	.04	94	.01	1.5	2.0
23	.00	.00	.00	.00	.00	.00	.00	.05	27	.00	.45	.14
24	.00	.00	.00	.00	.00	.00	.00	2.2	8.5	.00	7.6	.00
25	.00	.00	.00	.00	.00	.00	.00	205	244	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	90	156	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	32	40	9.1	.00	.00
28	.00	.00	.00	.00	.00	.00	.76	10	15	28	.00	.00
29	.00	.00	.00	.00	.00	.00	.20	1.0	2.0	544	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	3920	.00	106
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	379	.00	.00
TOTAL	22.26	.00	.00	.00	.00	.00	.96	340.40	2105.91	6929.51	2335.76	787.22
MEAN	.72	.000	.000	.000	.000	.000	.032	11.0	70.2	224	75.3	26.2
MAX	8.5	.00	.00	.00	.00	.00	.76	205	540	3920	889	265
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	44	.00	.00	.00	.00	.00	1.9	675	4180	13740	4630	1560

CAL YR 1981	TOTAL	18256.27	MEAN 50.0	MAX 5000	MIN .00	AC-FT 36210
WTR YR 1982	TOTAL	12522.02	MEAN 34.3	MAX 3920	MIN .00	AC-FT 24840

## 07226800 UTE RESERVOIR NEAR LOGAN, NM

LOCATION.--Lat 35°20'35", long 103°26'37", in NW¼ sec.21, T.13N., R.33 E., Quay County, Hydrologic Unit 11080006, on face of Ute Dam on Canadian River, 2.5 mi (4.0 km) southwest of Logan, 3.5 mi (5.6 km) downstream from Ute Creek, and at mile 673.1 (1.083.0 km).

DRAINAGE AREA.--11,140 mi<sup>2</sup> (28,853 km<sup>2</sup>), of which 1,110 mi<sup>2</sup> (2,875 km<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.--Reservoir is formed by earthfill dam 121 ft (37 m) high above streambed, 2,050 ft (620 m) long; an earth-dike section on north (left) bank of Canadian River is 2,860 ft (870 m) long and has a maximum height of 27 ft (8 m); a concrete spillway section 840 ft (260 m) long is constructed between main embankment and the dike. Construction completed in May 1963; storage began Dec. 13, 1962. Capacity, 90,470 acre-ft (112 hm<sup>3</sup>) at elevation 3,760.0 ft (1,146.05 m), crest of 840 ft (260 m) ungated service spillway. Top of dam is at elevation 3,801.0 ft (1,158.54 m). Maximum design capacity of 285,700 acre-ft (352 hm<sup>3</sup>) at elevation 3,791.0 ft (1,155.50 m), 31.0 ft (9.4 m) above crest of spillway, allows 195,200 acre-ft (241 hm<sup>3</sup>) of capacity for protection of the structure. Dead storage, 12,620 acre-ft (15.6 hm<sup>3</sup>) at elevation 3,725.0 ft (1,135.38 m), sill of outlet gate; inactive pool of 37,530 acre-ft (46.3 hm<sup>3</sup>) below elevation 3,741.6 ft (1,140.44 m) is maintained for fish and wildlife. Figures given herein represent total contents. Reservoir is planned to furnish water for municipal and industrial uses and for recreational purposes; some incidental flood control. Diversions above station for irrigation of about 90,000 acres (360 km<sup>2</sup>).

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 119,900 acre-ft (148 hm<sup>3</sup>) June 17, 1969, elevation, 3,762.4 ft (1,146.78 m); minimum since reservoir first filled in September 1965, 68,680 acre-ft (84.7 hm<sup>3</sup>) Apr. 12, 1977, elevation, 3,753.59 ft (1,144.094 m); minimum elevation observed, 3,752.8 ft (1,143.85 m) May 29, 1966, contents, 82,360 acre-ft (102 hm<sup>3</sup>).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 94,920 acre-ft (117 hm<sup>3</sup>) July 31, elevation, 3,761.13 ft (1,146.392 m); minimum, 70,310 acre-ft (86.7 hm<sup>3</sup>) Sept. 30, elevation, 3,754.11 ft (1,144.253 m).

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Geological Survey and New Mexico Interstate Stream Commission in 1975)

3,754	69,960	3,760	90,470
3,756	76,380	3,762	98,490
3,758	83,150		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83500	82600	81830	81420	80870	80730	79850	78630	82980	90820	92650	84920
2	83540	82600	81830	81380	80840	80700	79680	78630	82770	90320	91870	84210
3	83470	82530	81800	81280	80800	80560	79610	78630	82770	89670	90980	83650
4	83360	82530	81760	81420	80770	80560	79510	78600	82770	91950	90390	82940
5	83290	82490	81760	81280	80730	80530	79370	78500	82870	91290	90050	82180
6	83260	82530	81800	81070	80670	80560	79370	78470	82700	90550	91910	81520
7	83330	82530	81760	81070	80630	80560	79340	78470	82560	89980	91250	81550
8	83500	82420	81760	81070	80600	80560	79310	78430	82460	92260	91910	82770
9	83360	82420	81760	81110	80670	80560	79270	78400	82280	92490	91790	82700
10	83400	82420	81730	80970	80600	80600	79210	78270	82730	92570	90900	82210
11	83470	82420	81690	80940	80600	80600	79210	78160	83220	92890	90360	82250
12	83430	82420	81660	80900	80630	80460	79210	78100	83260	93560	89860	80870
13	83400	82390	81660	80940	80670	80460	79110	78030	83500	92100	89330	80150
14	83260	82420	81660	80970	80670	80460	79040	77930	85170	91440	88720	79540
15	83150	82320	81620	80970	80630	80490	78970	77900	85350	91090	88090	78840
16	83190	82280	81590	80940	80670	80430	78900	77900	85930	90550	87350	78300
17	83080	82250	81590	80940	80670	80390	78840	77860	86540	90010	87650	77600
18	83080	82280	81550	80970	80670	80460	78770	77800	87430	89290	91320	77200
19	82940	82250	81490	80940	80670	80320	78630	77770	87870	88840	91290	76710
20	82980	82210	81590	80940	80670	80260	78570	77670	90130	88310	90820	76210
21	82870	82180	81550	81010	80670	80120	78570	77600	92450	87830	90430	75690
22	82840	82180	81490	80900	80730	80150	78600	77730	93430	87240	89980	75100
23	82870	82110	81450	80900	80670	80150	78530	77830	92410	86510	89520	74450
24	82770	82180	81490	80900	80560	80150	78470	78060	91090	85820	89140	73870
25	82670	82210	81490	80940	80560	80120	78430	79000	91480	85210	88800	73260
26	82670	82010	81450	80970	80600	80090	78400	78270	90900	84530	88390	72680
27	82700	81940	81450	80970	80670	80020	78570	82840	90940	84810	87720	71980
28	82630	81940	81420	80940	80630	80090	78670	83080	91710	85100	87320	71250
29	82670	82010	81450	80900	---	80090	78630	83120	92220	86250	86760	70620
30	82560	81900	81490	80670	---	79880	78600	83050	91600	94880	86110	71030
31	82600	---	81310	80900	---	79850	---	82940	---	93560	85570	---
MAX	83540	82600	81830	81420	80870	80730	79850	83120	93480	94880	92650	84920
MIN	82560	81900	81310	80870	80560	79850	78400	77600	82280	84530	85570	70620
(†)	3757.84	3757.64	3757.47	3757.35	3757.27	3757.04	3756.67	3757.94	3760.29	3760.79	3758.68	3754.34
(‡)	-1120	-700	-590	-410	-270	-780	-1250	+4340	+8660	+1960	-7990	-14540
CAL YR 1981	MAX	96260	MIN	66590	‡ + 6760	† Elevation, in feet, at end of month.						
WTR YR 1982	MAX	94880	MIN	70620	‡ -12690	‡ 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 year 1963 to current year.

REMARKS.--Samples for chemical analyses are collected semi-annually at surface, and/or bottom levels of selected sites. Site locations are as follows: Site A, 0.4 mi (0.6 km) upstream from Ute Dam; Site B, 0.6 mi (1.0 km) upstream from Ute Dam; Site C, 1.9 mi (3.1 km) upstream from Ute Dam; Site D, on the Ute Creek arm, 5.7 mi (9.2 km) upstream from Ute Dam; Site E, 3.8 mi (6.1 km) upstream from Ute Dam at confluence of Ute Creek and Canadian River arms; Site F, on the Canadian River arm, 9.1 mi (14.6 km) upstream from Ute Dam; Site G, on the Ute Creek arm, 6.9 mi (11.1 km) upstream from Ute Dam; Site H, on the Canadian River arm, 12.8 mi (20.6 km) upstream from Ute Dam; Site I, on the Canadian River arm, 5.0 mi (8.0 km) upstream from Ute Dam.

07226510 - UTE RE AT SITE F, 9.1 MILES AB UTE DAM, NM

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
MAY 19...	1125	730	8.3	19.0	8.3

07226515 - UTE RE AT SITE I, 5.0 MILES AB UTE DAM, NM

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
MAY 19...	1149	720	8.2	18.5	8.5

07226520 - UTE RE AT SITE G, 6.9 MILES AB UTE DAM, NM

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
MAY 19...	1215	710	8.1	21.5	8.0

07226560 - UTE RE AT SITE B, 0.6 MILES AB UTE DAM, NM

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
MAY 19...	1036	.00	51	--	--	8.7	--	28.5	17.5	9.5	--
19...	1037	5.00	51	--	--	8.6	--	28.5	17.0	9.5	--
19...	1038	10.0	51	--	--	8.5	--	28.5	16.5	9.4	--
19...	1039	15.0	51	--	--	8.5	--	28.5	16.0	9.2	--
19...	1040	20.0	51	--	--	8.4	--	28.5	15.5	9.1	--
19...	1041	25.0	51	--	--	8.4	--	28.5	15.5	9.0	--
19...	1042	30.0	51	--	--	8.4	--	28.5	15.0	9.0	--
19...	1043	35.0	51	--	--	--	--	--	--	8.9	--
19...	1044	40.0	51	--	--	--	--	--	--	8.5	--
19...	1045	45.0	51	760	705	8.2	8.2	28.5	17.5	9.5	23
19...	1046	50.0	51	--	--	--	--	28.5	--	8.1	--

ARKANSAS RIVER BASIN  
07226800 UTE RESERVOIR NEAR LOGAN, NM -- Continued  
WATER-QUALITY RECORDS

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07226560 - UTE RE AT SITE B, 0.6 MILES AB UTE DAM, NM

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	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)
MAY										
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	140	0	33	14	97	3.7	5.2	140	28	.8
19...	--	--	--	--	--	--	--	--	--	--

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITU- ENTS DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- 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)
MAY										
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
19...	4.2	431	.10	<.10	.190	.91	1.2	.060	.020	4.0
19...	--	--	--	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
MAY									
19...	1045	2	3	160	<1	<3	40	<10	4

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
MAY									
19...	2	<9	1	<1	.1	.1	1	10	<12

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

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		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)	
DATE	TIME							
MAY 19...	1045	< 2.0	3.8	3600	7	1	5	
		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)
DATE	TIME							
MAY 19...	<10	280	6000	20	390	.05	26	

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 (PCI/L AS SR/ METHOD (UG/L AS U) (22703)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
MAY 19...	1045	<13	<.9	<6.3	1.5	<6.0	1.5	.09	6.5

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN, TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)
MAY 19...	1045	<.10	<.01	<.10	<.01	<.01	<.01	<.01	<.01	<.01
DATE	TIME	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)
MAY 19...	1045	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
DATE	TIME	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)	THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
MAY 19...	1045	<.01	<1	<.01	.03	<.01	<.01	<.10	<.10	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
MAY 19...	1045	0	2

## 07227000 CANADIAN RIVER AT LOGAN, NM

LOCATION.--Lat 35°21'25" N, long 103°25'03" W, in NE¼NE¼ sec.15, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080006, on left bank 1,100 ft (340 m) upstream from bridge on U.S. Highway 54, 0.7 mi (1.1 km) south of Logan, 1.4 mi (2.3 km) upstream from Chicago, Rock Island & Pacific Railroad Co. bridge, 2.0 mi (3.2 km) downstream from Ute Dam, 4.3 mi (6.9 km) upstream from Revuelto Creek, and at mile 672.0 (1,081.2 km).

DRAINAGE AREA.--11,141 mi<sup>2</sup> (28,855 km<sup>2</sup>), of which 1,110 mi<sup>2</sup> (2,875 km<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 (1,118.04 m) National Geodetic Vertical Datum of 1929.

See WSP 1311 or 1731 for history of changes prior to Oct. 1, 1934.

REMARKS.--Records fair. Flow regulated by Conchas Lake, 45 mi (72 km) upstream (station 07223500) and Ute Reservoir, 2 mi (3 km) upstream (station 07226800). Diversions for irrigation of about 90,000 acres (360 km<sup>2</sup>) above 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 (11.10 m<sup>3</sup>/s) 284,000 acre-ft/yr (350 hm<sup>3</sup>/yr), prior to completion of Conchas Dam; 24 years (water years 1939-62), 257 ft<sup>3</sup>/s (7.278 m<sup>3</sup>/s), 186,200 acre-ft/yr (230 hm<sup>3</sup>/yr), prior to completion of Ute Dam; 20 years (water years 1963-82), 37.9 ft<sup>3</sup>/s (1.073 m<sup>3</sup>/s) 27,460 acre-ft/yr (33.9 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1925).--Maximum discharge, 219,000 ft<sup>3</sup>/s (6,200 m<sup>3</sup>/s) Sept. 22, 1941, gage height, 29.3 ft (8.93 m) from floodmarks, from rating curve extended above 75,000 ft<sup>3</sup>/s (2,100 m<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 (7,870 m<sup>3</sup>/s) Sept. 30, 1904, gage height, about 36.5 ft (11.13 m), site and datum used in 1909, from rating curve extended above 14,000 ft<sup>3</sup>/s (400 m<sup>3</sup>/s), from Ninth Biennial Report of State Engineer.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,640 ft<sup>3</sup>/s (103 m<sup>3</sup>/s) July 31, gage height 7.67 ft (2.338 m); minimum, 1.4 ft<sup>3</sup>/s (0.040 m<sup>3</sup>/s) June 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	2.1	2.2	2.3	2.3	2.4	2.0	2.3	1.8	418	1910	313
2	3.4	2.0	2.3	2.3	2.4	2.3	2.0	2.2	1.8	282	1470	313
3	3.0	2.1	2.3	2.3	2.4	2.4	2.1	2.2	1.9	274	698	314
4	2.8	2.0	2.3	2.4	2.3	2.4	2.1	2.2	1.8	371	347	312
5	2.4	2.1	2.3	2.4	2.2	2.5	2.0	2.1	1.8	671	292	311
6	2.6	2.1	2.3	2.3	2.1	2.5	2.1	2.2	1.8	339	380	312
7	4.3	2.2	2.3	2.3	2.3	2.5	2.0	2.2	1.7	264	985	311
8	3.9	2.1	2.4	2.4	2.3	2.5	2.0	2.2	1.7	415	744	313
9	3.3	2.1	2.4	2.4	2.3	2.4	2.0	2.1	1.7	1020	1330	315
10	3.0	2.1	2.3	2.3	2.3	2.4	2.0	2.1	2.1	1270	682	314
11	2.8	2.2	2.4	2.3	2.3	2.4	2.0	2.1	2.4	1660	363	312
12	2.6	2.2	2.4	2.3	2.3	2.4	2.0	2.1	1.9	1760	322	308
13	2.4	2.1	2.4	2.3	2.3	2.3	2.0	2.1	1.9	1580	322	307
14	2.2	2.1	2.4	2.4	2.3	2.4	1.9	2.1	1.7	635	319	306
15	3.0	2.1	2.4	2.3	2.4	2.3	1.9	2.1	1.6	428	316	305
16	2.3	2.1	2.4	2.3	2.4	2.3	1.9	2.1	1.6	250	315	303
17	2.2	2.2	2.4	2.5	2.5	2.3	2.0	2.2	1.5	195	311	303
18	2.0	2.2	2.4	2.3	2.5	2.2	2.0	2.1	1.5	199	337	301
19	2.0	2.1	2.4	2.2	2.5	2.1	1.9	2.1	1.6	205	691	296
20	1.9	2.1	2.3	2.1	2.5	2.3	2.0	2.0	1.7	208	469	294
21	2.0	2.1	2.3	2.1	2.6	2.2	2.0	2.0	558	207	342	292
22	2.0	2.0	2.4	2.1	2.6	2.2	2.1	2.3	1630	207	318	290
23	2.0	2.0	2.4	2.3	2.7	2.2	2.1	2.2	1530	207	317	290
24	2.0	2.1	2.4	2.3	2.7	2.1	2.2	2.1	660	208	311	289
25	2.0	2.1	2.4	2.3	2.7	2.1	2.2	2.3	738	209	308	284
26	2.0	2.1	2.4	2.2	2.6	2.1	2.2	2.2	401	210	308	283
27	2.0	2.1	2.4	2.2	2.5	2.2	2.3	2.1	320	214	309	282
28	2.0	2.1	2.4	2.2	2.4	2.1	2.8	2.0	492	216	309	279
29	2.0	2.2	2.3	2.2	---	2.1	2.3	1.9	934	289	309	277
30	2.0	2.2	2.3	2.2	---	2.0	2.3	1.9	782	1330	312	285
31	2.3	---	2.2	2.4	---	1.9	---	1.9	---	3100	312	---
TOTAL	78.5	63.3	72.9	70.9	67.7	70.5	62.4	65.7	8080.5	18841	16058	9014
MEAN	2.53	2.11	2.35	2.29	2.42	2.27	2.08	2.12	269	608	518	300
MAX	4.3	2.2	2.4	2.5	2.7	2.5	2.8	2.3	1630	3100	1910	315
MIN	1.9	2.0	2.2	2.1	2.1	1.9	1.9	1.9	1.5	195	292	277
AC-FT	156	126	145	141	134	140	124	130	16030	37370	31850	17880
CAL YR 1981	TOTAL	31387.7	MEAN	86.0	MAX	6280	MIN	1.6	AC-FT	62260		
WTR YR 1982	TOTAL	52545.4	MEAN	144	MAX	3100	MIN	1.5	AC-FT	104200		



## ARKANSAS RIVER BASIN

07227100 REVUELTO CREEK NEAR LOGAN, NM

LOCATION.--Lat 35°20'29", long 103°23'37", in SW¼NW¼ sec.24, T.13 N., R.33 E., Quay County, Hydrologic Unit 11080008, on right bank 0.3 mi (0.5 km) upstream from bridge on State Highway 39, 1.9 mi (3.1 km) southeast of Logan, and at mile 2.3 (3.7 km).

DRAINAGE AREA.--786 mi<sup>2</sup> (2,036 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 3,665 ft (1,117 m), from topographic map. Prior to Jan. 16, 1981, at site 320 ft (98 m) upstream at datum 0.56 ft (0.171 m) higher.

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

AVERAGE DISCHARGE.--23 years, 45.6 ft<sup>3</sup>/s (1.291 m<sup>3</sup>/s), 33,040 acre-ft/yr (40.7 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft<sup>3</sup>/s (756 m<sup>3</sup>/s) July 9, 1960, gage height, 14.3 ft (4.36 m), 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> (379 m<sup>3</sup>/s) Sept. 18, 1946, gage height, 9.04 ft (2.755 m), at site 180 ft (55 m) downstream at different datum, from unpublished records collected by Bureau of Reclamation.

A peak of 26,100 ft<sup>3</sup>/s (739 m<sup>3</sup>/s), date unknown, gage height, 12.9 ft (3.93 m) at former site and datum, was measured by slope-area method in May 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft<sup>3</sup>/s (99 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
June 11	0145	4060 115	6.37 1.942	July 4	2130	*6740 191	7.97 2.429
June 20	0415	5530 157	7.30 2.225	July 30	0315	4220 120	6.48 1.975

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	4.6	1.6	1.0	.42	.58	.02	4.6	.00	.01	78	3.1
2	2.5	3.4	1.1	1.0	.40	.32	.00	3.8	.00	.00	16	2.0
3	2.3	3.0	1.4	.98	.35	.27	.01	2.3	.00	.00	11	1.0
4	3.3	3.0	1.1	.74	.30	.23	.02	1.4	.00	549	7.5	1.0
5	3.3	2.9	.92	.41	.25	.40	.00	.97	.00	122	3.6	1.3
6	69	2.8	1.1	.35	.25	.29	.02	2.2	.00	3.6	154	3.3
7	174	2.8	1.3	.49	.30	.53	.00	1.9	.00	4.0	279	95
8	21	2.7	1.4	.52	.35	.61	.00	.89	.00	297	95	192
9	13	1.9	1.5	.49	.35	.37	.02	.29	.00	17	80	57
10	5.8	1.7	1.5	.79	.50	.26	.31	.17	50	1.2	20	16
11	5.8	1.7	1.5	2.0	.60	.24	.32	.08	739	527	9.7	6.1
12	6.3	1.7	1.7	2.6	.70	.15	.09	.05	87	186	8.6	4.1
13	5.0	1.5	1.7	1.8	.90	.18	.06	.03	18	103	6.3	2.5
14	2.5	1.5	1.8	1.3	.97	.26	.02	.06	8.2	35	5.4	1.7
15	14	1.4	1.6	2.9	.79	.17	.00	.06	3.7	20	4.3	1.9
16	90	1.3	1.7	2.3	.71	.18	.01	.10	60	5.9	7.5	5.4
17	28	1.3	1.5	2.7	.87	.06	.00	.06	105	2.3	13	5.7
18	16	1.3	1.4	1.9	.77	.16	.00	.03	31	1.0	220	104
19	13	1.1	1.7	1.1	.54	.09	.04	.00	57	1.8	169	46
20	12	.89	2.5	.74	.40	.11	.20	.00	1280	123	65	19
21	11	.80	2.3	.71	.36	.12	.15	.01	199	26	116	21
22	11	.80	2.0	.49	.28	.14	.32	.75	38	76	156	19
23	11	.80	1.3	.40	.20	.15	1.1	.10	22	35	67	13
24	11	.80	1.2	.28	.20	.10	3.1	123	9.8	8.8	331	9.2
25	8.5	.80	1.3	.29	.45	.08	7.0	202	130	4.6	16	3.0
26	7.3	.81	1.7	.41	.46	.09	5.3	660	4.0	1.4	8.4	2.1
27	6.0	.80	1.7	.29	.71	.10	48	72	1.2	25	4.8	1.5
28	5.0	1.0	1.4	.21	.80	.10	37	7.2	.42	276	3.4	.80
29	4.1	1.9	1.5	.24	---	.05	14	1.1	.15	514	7.5	.80
30	3.3	2.1	1.4	.33	---	.00	5.8	.21	.04	2220	3.8	94
31	3.3	---	1.5	.43	---	.03	---	.01	---	546	3.2	---
TOTAL	571.3	53.10	47.32	30.19	14.18	6.42	122.91	1085.37	2843.51	5731.61	1970.0	732.50
MEAN	18.4	1.77	1.53	.97	.51	.21	4.10	35.0	94.8	185	63.5	24.4
MAX	174	4.6	2.5	2.9	.97	.61	48	660	1280	2220	331	192
MIN	2.3	.80	.92	.21	.20	.00	.00	.00	.00	.00	3.2	.80
AC-FT	1130	105	94	60	28	13	244	2150	5640	11370	3910	1450

CAL YR 1981	TOTAL	30639.94	MEAN 83.9	MAX 6450	MIN .00	AC-FT 60770
WTR YR 1982	TOTAL	13208.41	MEAN 36.2	MAX 2220	MIN .00	AC-FT 26200

ARKANSAS RIVER BASIN  
07227100 REVUELTO CREEK NEAR LOGAN, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
OCT										
21...	1500	11	1220	--	8.7	--	14.0	13.0	--	--
NOV										
19...	1400	.96	2070	2070	8.4	8.2	8.0	4.5	273	43
DEC										
15...	1315	1.6	2170	2040	8.3	8.2	7.0	12.5	--	--
JAN										
19...	1400	1.1	2400	2490	8.4	8.0	12.5	8.0	--	--
FEB										
25...	1500	.68	4000	4300	8.6	8.3	-1.0	7.0	298	0
MAR										
24...	1000	.14	5380	--	8.3	--	13.5	10.5	--	--
APR										
21...	1500	.10	4200	4070	8.5	8.3	17.5	15.0	--	--
MAY										
19...	1500	.01	5600	5860	8.4	8.1	31.0	27.0	492	90
JUN										
15...	1500	3.1	1490	1580	8.5	8.0	29.0	27.5	--	--
AUG										
12...	1400	8.5	1000	992	8.6	8.5	34.5	33.0	164	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)
OCT										
21...	--	--	--	--	--	--	--	--	--	--
NOV										
19...	60	30	360	9.7	4.1	410	290	.5	8.5	1300
DEC										
15...	--	--	--	--	--	--	--	--	--	--
JAN										
19...	--	--	--	--	--	--	--	--	--	--
FEB										
25...	55	39	860	22	4.6	340	1100	.9	8.5	2610
MAR										
24...	--	--	--	--	--	--	--	--	--	--
APR										
21...	--	--	--	--	--	--	--	--	--	--
MAY										
19...	65	80	1100	22	8.0	510	1500	1.2	11	3520
JUN										
15...	--	--	--	--	--	--	--	--	--	--
AUG										
12...	41	15	160	5.6	4.0	240	55	.5	11	634

ARKANSAS RIVER BASIN  
07227100 REVUELTO CREEK NEAR LOGAN, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 19...	1400	310	15
FEB 25...	1500	520	60
MAY 19...	1500	680	10
AUG 12...	1400	250	7

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
OCT 21...	1500	11	13.0	794	24	--	--	--	--	17
NOV 19...	1400	.96	4.5	21	.05	--	--	--	--	89
DEC 15...	1315	1.6	12.5	17	.07	--	--	--	--	24
JAN 19...	1400	1.1	8.0	13	.04	--	--	--	--	80
FEB 25...	1500	.68	7.0	13	.02	--	--	--	--	82
MAR 24...	1000	.14	10.5	67	.03	--	--	--	--	91
APR 21...	1500	.10	15.0	74	.02	--	--	--	--	84
MAY 19...	1500	.01	27.0	132	.00	--	--	--	--	91
JUN 15...	1500	3.1	27.5	86	.72	--	--	--	--	92
AUG 12...	1400	8.5	33.0	261	6.0	--	--	--	--	90
SEP 08...	1600	119	24.5	21400	6880	73	85	98	100	--

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

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 (0.2 km) upstream from New Mexico-Texas State line, 5.5 mi (8.8 km) downstream from Rana Canyon, and 14.7 mi (23.7 km) north of Glenrio.

DRAINAGE AREA.--12,616 mi<sup>2</sup> (32,675 km<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 ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH  (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)
NOV 18...	1050	11	9330	9330	8.3	8.0	16.5	11.0	19
JAN 20...	1100	10	9000	10100	8.4	8.0	14.5	8.5	8.5
MAR 23...	1100	6.4	9000	8900	8.5	7.9	18.0	17.0	1.9
MAY 18...	1100	2.2	8300	8740	8.2	7.9	26.5	25.5	26
AUG 11...	1200	498	700	703	8.4	8.4	27.0	26.0	1800
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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 18...	--	659	439	140	75	1700	30	9.1	440
JAN 20...	12.7	654	384	130	80	1800	31	9.6	500
MAR 23...	9.0	675	445	130	85	1700	29	9.0	93
MAY 18...	7.8	662	437	120	88	1600	28	9.9	450
AUG 11...	7.2	118	0	29	11	97	4.0	4.8	100
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, 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)
NOV 18...	2800	.4	11	5280	5310	.39	.160	.010	.030
JAN 20...	2900	.5	11	5640	5590	.33	.280	.010	.020
MAR 23...	2800	.6	10	5410	4970	.22	.110	<.010	.020
MAY 18...	2700	.7	9.2	4990	5110	<.10	.090	.080	.020
AUG 11...	64	.6	7.5	427	403	.15	.080	.050	.010

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

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
NOV 18...	1050	2	1	200	100	< 1	< 1	10	< 10	< 1
MAR 23...	1100	1	1	< 100	< 100	< 1	1	10	< 10	3
MAY 18...	1100	2	1	200	200	< 1	< 1	10	10	< 1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
NOV 18...	1	4	4	300	40	2	< 1	100	90	< .1
MAR 23...	1	8	3	200	40	5	< 1	220	210	< .1
MAY 18...	< 1	15	2	470	30	5	2	170	100	.4

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 18...	< .1	2	3	< 1	1	< 1	< 1	20	20
MAR 23...	< .1	2	1	< 1	< 1	< 1	< 1	30	10
MAY 18...	.1	3	4	1	1	< 1	< 1	40	20

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 18...	K17	220
JAN 20...	K0	20
MAR 23...	K5	K16
MAY 18...	21	21
AUG 11...	210	320

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 18...	1050	11	11.0	73	2.2	86
JAN 20...	1100	10	8.5	31	.84	52
MAR 23...	1100	6.4	17.0	87	1.5	90
MAY 18...	1100	2.2	25.5	125	.74	90
AUG 11...	1200	498	26.0	421	566	98



## 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 (10 km) north of Colorado-New Mexico State line, 7 mi (11 km) downstream from Culebra Creek, 10 mi (16 km) east of Lobatos, 14 mi (23 km) east of Antonito and at mile 1,722.1 (2,770.9 km).

DRAINAGE AREA.--7,700 mi<sup>2</sup> (19,900 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 (2,263.942 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 8, 1910, nonrecording gages at same site and datum.

REMARKS.--Water-discharge records good except those for winter period, 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 (23.96 m<sup>3</sup>/s), 612,900 acre-ft/yr (756 hm<sup>3</sup>/yr), includes period of extensive development for irrigation; 52 years (water years 1931-82), 414 ft<sup>3</sup>/s (11.72 m<sup>3</sup>/s), 299,900 acre-ft/yr (370 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 13,200 ft<sup>3</sup>/s (374 m<sup>3</sup>/s) June 8, 1905, gage height, 9.1 ft (2.77 m), from rating curve extended above 8,000 ft<sup>3</sup>/s (230 m<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, 1,950 ft<sup>3</sup>/s (55.2 m<sup>3</sup>/s) June 1, gage height, 3.72 ft (1.134 m); maximum gage height, 3.83 ft (1.167 m) June 30; minimum daily discharge, 100 ft<sup>3</sup>/s (2.83 m<sup>3</sup>/s) Dec. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1961 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	294	140	130	280	440	385	557	1360	1690	556	296
2	118	296	180	130	260	445	390	907	1570	1630	445	250
3	118	286	200	125	275	450	370	1240	1350	1610	405	355
4	110	375	230	130	275	466	380	1340	1480	1450	435	430
5	108	466	245	145	275	440	375	1460	1620	1330	520	430
6	142	514	250	180	265	405	380	1500	1670	1290	526	466
7	123	514	260	190	250	360	365	1420	1320	1160	478	496
8	105	520	255	195	245	330	330	1270	1350	1190	450	520
9	108	538	250	200	240	335	290	1200	1340	1110	460	472
10	105	544	260	215	245	360	246	1300	1420	872	478	466
11	128	538	245	225	250	370	234	1290	1460	970	508	490
12	138	514	215	230	260	395	254	1320	1460	979	538	544
13	192	496	205	235	260	410	306	1320	1480	792	520	472
14	354	496	195	235	260	425	379	1130	1490	706	478	608
15	350	490	190	230	270	425	385	961	1500	720	466	792
16	330	472	135	225	270	415	415	864	1490	643	460	840
17	395	466	135	230	275	405	455	872	1530	508	508	848
18	390	455	110	235	280	400	445	907	1550	466	496	1060
19	375	445	125	235	280	405	472	925	1620	514	410	1110
20	350	425	160	245	290	320	490	925	1730	478	410	1090
21	325	400	200	250	305	355	415	934	1730	395	395	1210
22	325	375	120	250	315	335	345	832	1560	320	375	1400
23	315	375	100	250	330	320	306	943	1380	282	435	1530
24	310	405	150	250	350	320	315	1030	1320	234	580	1320
25	320	410	140	255	360	325	315	986	1340	246	636	1160
26	315	395	140	255	375	325	310	1050	1350	254	752	1070
27	310	370	130	260	405	345	360	1160	1390	242	1030	1020
28	298	320	125	270	425	360	415	1250	1470	212	934	934
29	260	290	120	275	---	380	460	1460	1560	266	556	656
30	250	260	120	280	---	400	532	1500	1680	395	526	840
31	262	---	130	280	---	405	---	1750	---	544	430	---
TOTAL	7477	12734	5520	6840	6190	11931	11119	35805	45290	23346	16236	23377
MEAN	241	424	179	221	297	385	371	1155	1510	760	524	779
MAX	395	544	260	280	425	466	532	1750	1260	1690	1030	1530
MIN	105	260	100	125	240	320	234	557	1320	212	375	250
AC-FT	14800	25160	10950	13570	16240	23670	22050	71020	64830	46710	32200	46370

CAL YR 1981 TOTAL 66297 MEAN 182 MAX 344 MIN 36 AC-FT 151500  
WTR YR 1982 TOTAL 203067 MEAN 570 MAX 1360 MIN 100 AC-FT 412700

RIO GRANDE BASIN

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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. (Discontinued)

WATER TEMPERATURE: October 1975 to 1981. (Discontinued)

INSTRUMENTATION.--Water-quality monitor October 1975 to 1981. (Discontinued)

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,140 micromhos Sept. 18, 1977; minimum daily, 84 micromhos May 9, 1979.

WATER TEMPERATURES: Maximum, 30.0°C July 17, 1977; minimum, freezing point on many days during winter period.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
OCT 06...	1210	229	229	215	8.9	8.6	13.0	2.7	10.5	84	0
NOV 03...	1345	282	158	--	8.5	--	8.1	--	10.1	--	--
JAN 12...	1430	232	--	243	7.1	7.8	.0	2.5	11.5	81	0
MAR 22...	1445	335	--	196	8.0	8.0	10.0	7.0	9.8	74	4
APR 20...	1130	--	202	--	--	--	7.3	--	--	--	--
MAY 24...	1615	970	--	127	7.8	7.6	6.0	18	9.5	54	7
JUN 29...	1345	2140	190	197	7.8	8.0	20.0	7.4	6.8	66	10
SEP 09...	1415	808	161	153	8.4	8.5	19.0	15	6.9	58	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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 06...	26	4.6	19	.9	4.2	27	4.9	.4	21	167
NOV 03...	--	--	--	--	--	--	--	--	--	--
JAN 12...	25	4.5	14	.7	3.6	27	5.2	.3	36	187
MAR 22...	23	4.1	14	.7	3.1	28	4.1	.2	27	150
APR 20...	--	--	--	--	--	--	--	--	--	--
MAY 24...	17	2.7	7.2	.4	2.3	20	2.2	.2	21	108
JUN 29...	20	3.9	12	.7	3.2	41	3.6	.2	19	173
SEP 09...	18	3.2	12	.7	2.5	20	3.5	.2	23	115

RIO GRANDE BASIN  
08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CYANIDE TOTAL (MG/L AS CN) (00720)
OCT 06...	161	<.10	.22	.150	.150	.54	.65	.150	--	<.01
NOV 03...	--	--	<.09	--	.080	--	--	.080	.060	--
JAN 12...	167	--	.35	--	.210	--	--	.130	.130	--
MAR 22...	146	--	.18	--	.070	--	--	.110	.060	--
APR 20...	--	--	--	--	--	--	--	--	--	--
MAY 24...	101	--	.13	--	.130	--	--	.170	.090	--
JUN 29...	137	--	<.10	--	.100	--	--	.120	.050	--
SEP 09...	118	--	.25	--	.120	--	--	.080	.090	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
OCT 06...	1210	3	3	100	22	1	<1	0	0	0
JAN 12...	1430	2	2	<100	32	2	<1	<10	<10	1
MAR 22...	1445	2	1	100	24	1	<1	10	<10	<1
JUN 29...	1345	2	1	100	22	<1	<1	<10	<10	1
SEP 09...	1415	2	1	<100	25	<1	3	<10	<10	1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
OCT 06...	<3	5	4	410	61	5	0	70	18	.3
JAN 12...	<3	7	7	270	71	5	4	60	40	.4
MAR 22...	<1	4	9	1100	85	5	2	140	47	.3
JUN 29...	<1	4	4	1000	150	3	2	100	4	.5
SEP 09...	<1	8	11	940	170	2	4	80	20	1.0

RIO GRANDE BASIN  
08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 06...	.1	2	0	0	0	0	0	30	94
JAN 12...	.1	2	1	<1	<1	<1	<1	140	55
MAR 22...	.4	3	2	<1	<1	<1	<1	40	6
JUN 29...	.3	6	3	<1	<1	<1	<1	20	46
SEP 09...	.3	9	7	<1	<1	<1	<1	40	16

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. (UG/L AS UNAT) (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)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
JAN 12...	1430	<5.1	<.4	4.0	.6	3.8	.6	.06	.9	.70
JUN 29...	1345	<2.9	<1.2	3.0	1.0	2.9	1.0	.05	--	.11

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39516)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39330)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39350)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39360)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39365)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)
NOV 03...	1345	--	0	--	.0	--	.0	--	.1	--	.0
APR 20...	1130	<.10	--	<.01	--	<.10	--	<.01	--	<.01	--
MAY 24...	1615	<.10	<1	<.01	<.1	<.10	<1.0	<.01	.2	<.01	.2

DATE	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39370)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN, TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)
NOV 03...	--	.0	--	--	.0	--	--	.0	--	--
APR 20...	<.01	--	<.01	<.01	--	<.01	<.01	--	<.01	<.01
MAY 24...	<.01	.3	<.01	<.01	<.1	<.01	<.01	<.1	<.01	<.01

DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR, EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)
NOV 03...	.0	--	.0	--	.0	--	--	.0	--	--
APR 20...	--	<.01	--	<.01	--	<.01	<.01	--	<.01	<.01
MAY 24...	<.1	<.01	<.1	<.01	<.1	<.01	<.01	<.1	<.01	<.01

RIO GRANDE BASIN  
08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued  
WATER-QUALITY RECORDS

DATE	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
NOV 03...	--	--	.0	--	--	--	--	--	--	--
APR 20...	<.01	<1	--	<.01	<.01	<.01	<.01	<.10	<.10	<.01
MAY 24...	<.01	<1	<10	<.01	<.01	<.01	<.01	<.10	<.10	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 06...	--	K20
NOV 03...	K34	K44
JAN 12...	188	K4
MAR 22...	K2	K40
MAY 24...	K76	K80
JUN 29...	60	66
SEP 09...	30	100

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 06...	1210	229	13.0	14	8.7	--
NOV 03...	1345	282	8.1	8	6.1	--
JAN 12...	1430	232	.0	11	6.9	46
MAR 22...	1445	335	10.0	34	31	85
MAY 24...	1615	970	6.0	58	152	72
JUN 29...	1345	2140	20.0	24	139	--
SEP 08...	1415	808	--	35	76	--

RIO GRANDE BASIN  
08251500 RIO GRANDE NEAR LOBATOS, CO -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.°C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	269	228	244	170	148	153						
2	271	228	244	171	148	156						
3	259	219	234	159	148	152						
4	238	218	229	---	---	---						
5	240	225	232	---	---	---						
6	240	187	214	---	---	---						
7	196	158	175	---	---	---						
8	208	167	178	---	---	---						
9	230	187	205	---	---	---						
10	225	188	208	---	---	---						
11	220	195	212	---	---	---						
12	226	180	204	---	---	---						
13	180	157	168	---	---	---						
14	176	150	159	---	---	---						
15	170	119	145	---	---	---						
16	147	126	131	---	---	---						
17	147	118	132	---	---	---						
18	150	127	131	---	---	---						
19	140	128	132	---	---	---						
20	135	127	129	---	---	---						
21	139	128	135	---	---	---						
22	159	137	144	---	---	---						
23	158	137	149	---	---	---						
24	160	148	151	---	---	---						
25	156	131	148	---	---	---						
26	158	138	143	---	---	---						
27	167	138	144	---	---	---						
28	167	141	152	---	---	---						
29	169	148	157	---	---	---						
30	188	149	160	---	---	---						
31	178	157	163	---	---	---						
MONTH	271	118	173	171	148	154						

WATER TEMPERATURE (DEG.°C), RECORDER MAXIMUM, AND MEAN, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	13.0	9.5	11.0	8.0	3.0	5.5						
2	14.5	9.5	11.5	8.5	4.0	6.0						
3	16.0	10.0	12.0	7.0	4.5	5.5						
4	16.5	9.0	12.0	---	---	---						
5	18.0	9.5	13.5	---	---	---						
6	17.5	11.5	13.5	---	---	---						
7	18.0	10.0	13.0	---	---	---						
8	15.5	9.5	12.0	---	---	---						
9	16.5	9.5	12.0	---	---	---						
10	16.5	8.0	11.5	---	---	---						
11	15.0	9.0	11.5	---	---	---						
12	14.5	9.5	11.5	---	---	---						
13	14.5	9.5	11.5	---	---	---						
14	14.0	9.0	11.0	---	---	---						
15	14.0	10.0	11.5	---	---	---						
16	11.5	8.5	10.0	---	---	---						
17	11.5	6.5	9.0	---	---	---						
18	12.0	6.5	9.0	---	---	---						
19	12.0	7.0	9.5	---	---	---						
20	12.0	7.0	9.5	---	---	---						
21	10.0	7.0	8.5	---	---	---						
22	11.0	6.0	8.5	---	---	---						
23	10.5	7.0	8.5	---	---	---						
24	7.5	5.5	6.5	---	---	---						
25	9.5	5.0	7.0	---	---	---						
26	9.5	4.5	7.0	---	---	---						
27	9.5	6.0	7.5	---	---	---						
28	8.5	6.0	7.0	---	---	---						
29	10.0	6.0	8.0	---	---	---						
30	7.0	5.0	6.0	---	---	---						
31	8.5	3.5	5.5	---	---	---						
MONTH	18.0	3.5	10.0	8.5	4.0	5.5						



LOCATION.--Lat 37°00'03", long 105°43'19", Costilla County, Hydrologic Unit 13010002, in Sangre de Cristo Grant, on left bank 0.6 mi (1.0 km) upstream from Colorado-New Mexico State line, 1.7 mi (2.7 km) upstream from Costilla Creek, 5.5 mi (8.8 km) west of Jaroso, and at mile 1,713.3 (2,756.7 km).

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,390 ft (2,252 m), from topographic map.

REMARKS.--Records good except those for winter period, 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. Several observations of water temperature were made during the year.

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

AVERAGE DISCHARGE.--29 years, 352 ft<sup>3</sup>/s (9.969 m<sup>3</sup>/s), 255,000 acre-ft/yr (314 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 5,000 ft<sup>3</sup>/s (142 m<sup>3</sup>/s) June 10, 1979, gage height, 7.77 ft (2.368 m); no flow at times in 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 8, 1905, which reached a daily discharge of 13,100 ft<sup>3</sup>/s (371 m<sup>3</sup>/s) at station near Lobatos, 5.8 mi (9.3 km) upstream, was probably the greatest since at least 1828, based on information from area residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,920 ft<sup>3</sup>/s (54.4 m<sup>3</sup>/s) June 1, gage height, 5.21 ft (1.588 m); minimum daily discharge, 101 ft<sup>3</sup>/s (2.86 m<sup>3</sup>/s) Oct. 5.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	320	180	135	285	475	404	670	1890	1630	559	333
2	110	314	170	135	285	490	391	870	1630	1610	462	268
3	110	314	200	130	280	500	394	1200	1370	1540	421	336
4	108	375	230	130	280	512	394	1300	1440	1400	431	425
5	101	476	250	145	280	484	394	1440	1590	1260	501	428
6	128	527	260	175	275	431	388	1490	1610	1230	523	459
7	138	539	265	190	260	394	378	1450	1480	1130	494	498
8	110	539	265	195	250	365	359	1300	1330	1110	462	519
9	106	555	260	200	245	372	317	1200	1270	1080	459	490
10	110	559	265	215	250	388	271	1280	1350	865	484	480
11	108	563	260	225	255	398	249	1310	1420	895	508	490
12	180	539	230	230	265	414	246	1330	1410	938	535	547
13	192	512	220	235	265	445	305	1330	1400	780	527	494
14	234	508	210	240	265	470	398	1160	1400	694	501	583
15	333	504	200	235	270	462	394	980	1430	694	480	761
16	372	498	200	230	275	456	431	875	1420	640	484	825
17	388	490	172	230	280	442	473	875	1420	527	515	820
18	398	484	135	235	285	428	476	910	1450	476	523	998
19	378	476	130	240	290	425	484	920	1530	504	442	1090
20	368	459	150	245	290	408	531	910	1720	508	428	1050
21	343	438	200	250	310	385	445	920	1730	428	425	1160
22	340	408	155	255	320	368	391	835	1580	365	404	1360
23	336	398	120	255	335	352	333	900	1380	320	418	1480
24	330	421	120	255	360	349	340	1010	1290	298	539	1330
25	340	435	145	255	375	352	356	938	1310	277	591	1140
26	340	431	150	255	390	352	340	980	1330	289	689	1030
27	336	385	145	260	425	368	385	1110	1360	277	880	980
28	330	352	135	270	450	385	440	1300	1410	246	885	900
29	292	317	130	275	---	388	480	1470	1500	283	555	840
30	271	280	130	280	---	401	550	1460	1620	375	501	820
31	302	---	135	285	---	431	---	1750	---	498	448	---
TOTAL	7642	13416	5817	6890	8395	12890	11737	35473	44070	23167	16074	22934
MEAN	247	447	188	222	300	416	391	1144	1469	747	519	764
MAX	398	563	265	285	450	512	550	1750	1890	1630	885	1480
MIN	101	280	120	130	245	349	246	670	1270	246	404	268
AC-FT	15160	26610	11540	13670	16650	25570	23280	70360	87410	45950	31880	45490
CAL YR 1981	TOTAL	66829	MEAN 183	MAX	563	MIN	42	AC-FT	132600			
WTR YR 1982	TOTAL	208505	MEAN 571	MAX	1890	MIN	101	AC-FT	413600			

## 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 (580 m) upstream from normal high-water line of Costilla Reservoir, 2.1 mi (3.4 km) northeast of Costilla Dam, 16 mi (26 km) southeast of Costilla, and at mile 36.9 (59.4 km).

DRAINAGE AREA.--25.1 mi<sup>2</sup> (65.0 km<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. Altitude of gage is 9,429 ft (2,874 m), from topographic map. See WSP 1923 for history of changes prior to Sept. 17, 1965.

REMARKS.--Records good. Natural flow may be augmented by transbasin diversions or irrigation returns from about 1,300 acres (5.3 km<sup>2</sup>) 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 (110 m<sup>3</sup>/s) July 22, 1954, gage height, about 4.8 ft (1.46 m), 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 above base of 40 ft<sup>3</sup>/s (1.1 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 23	2145	40 1.13	2.63 0.802	Aug. 27	2345	85 2.41	3.04 0.927
Aug. 6	2345	50 1.42	2.75 .838	Sept. 11	1915	48 1.36	2.71 .826
Aug. 17	1430	*a218 6.17	3.72 1.134				

a From rating curve extended above 54 ft<sup>3</sup>/s (1.53 m<sup>3</sup>/s).

Minimum discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6						---	15	23	6.8	5.5	11
2	3.9						---	18	21	6.0	4.9	11
3	5.2						---	21	21	5.5	6.2	9.9
4	4.1						---	21	19	5.2	8.7	8.9
5	3.6						---	21	19	5.2	7.6	8.1
6	3.5						---	20	17	4.9	8.2	7.8
7	3.6						---	18	15	4.9	12	7.6
8	---						---	16	15	4.8	8.7	7.6
9	---						---	16	14	4.5	6.0	7.5
10	---						---	16	14	4.2	5.4	6.9
11	---						---	17	14	4.0	11	18
12	---						---	19	14	3.9	5.3	13
13	---						17	17	13	3.9	5.1	11
14	---						15	15	14	3.8	4.8	12
15	---						14	14	13	3.4	6.2	9.1
16	---						11	13	13	3.1	13	8.3
17	---						11	13	13	3.0	38	11
18	---						12	14	13	3.5	13	11
19	---						11	15	20	4.1	12	12
20	---						8.9	17	16	4.8	11	15
21	---						8.7	18	13	3.1	11	12
22	---						8.0	21	12	2.8	13	11
23	---						7.6	23	11	2.8	14	9.8
24	---						6.6	28	11	2.7	12	9.4
25	---						9.5	27	10	2.7	12	9.0
26	---						8.5	22	9.4	4.7	11	8.5
27	---						8.7	24	8.6	3.6	19	8.2
28	---						9.7	25	8.2	6.2	25	8.2
29	---						12	24	7.6	7.4	14	7.4
30	---						14	24	7.5	8.8	16	7.5
31	---						---	23	---	7.7	14	---
TOTAL	---						---	595	419.3	142.0	353.6	297.7
MEAN	---						---	19.2	14.0	4.58	11.4	9.92
MAX	---						---	28	23	8.8	38	18
MIN	---						---	13	7.5	2.7	4.8	6.9
AC-FT	---						---	1180	832	282	701	590

## 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 (61 m) downstream from road crossing, 900 ft (270 m) upstream from normal high-water line of Costilla Reservoir, 1.8 mi (2.9 km) northeast of Costilla Dam, and 16 mi (26 km) southeast of Costilla.

DRAINAGE AREA.--16.6 mi<sup>2</sup> (43.0 km<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. Altitude of gage is 9,404 ft (2,866 m), from topographic map. Prior to July 18, 1940, water-stage recorder and wooden control 100 ft (30 m) downstream at datum 1.56 ft (0.475 m) lower.

REMARKS.--Records good. Diversion 3.5 mi (5.6 km) upstream for irrigation of about 1,300 acres (5.3 km<sup>2</sup>), 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 (5.13 m<sup>3</sup>/s) July 20, 1971, gage height, 2.07 ft (0.631 m), from rating curve extended above 85 ft<sup>3</sup>/s (2.4 m<sup>3</sup>/s); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 35 ft<sup>3</sup>/s (1.0 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 24	1615	36 1.02	1.10 0.335	Aug. 20	2230	46 1.30	1.19 0.363
June 19	0330	41 1.16	1.16 .354	Aug. 22	1730	57 1.61	1.28 .390
Aug. 3	2115	*63 1.78	*1.35 .411	Aug. 27	2230	*63 1.78	1.33 .405
Aug. 7	0015	36 1.02	1.10 .335	Aug. 30	1800	45 1.27	1.19 .363
Aug. 11	0100	59 1.67	1.31 .399	Sept. 11	1730	39 1.10	1.13 .344
Aug. 17	1615	52 1.47	1.24 .378				

Minimum discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9						---	13	32	23	16	17
2	8.0						---	13	32	21	15	17
3	9.8						---	15	32	20	23	16
4	8.0						---	16	32	19	20	15
5	7.3						---	17	32	19	16	15
6	6.9						---	20	32	18	15	14
7	7.3						---	19	30	17	21	14
8	---						---	17	30	17	18	14
9	---						---	17	30	16	14	13
10	---						---	16	30	15	16	12
11	---						---	17	30	14	29	20
12	---						---	18	31	14	15	17
13	---						---	18	32	14	14	17
14	---						8.0	17	33	14	14	16
15	---						7.3	16	32	12	18	13
16	---						6.5	16	32	12	22	12
17	---						7.5	15	29	13	23	14
18	---						7.4	15	29	14	20	16
19	---						7.3	16	34	14	18	16
20	---						6.5	17	30	14	20	19
21	---						6.5	20	28	13	21	16
22	---						7.3	23	26	12	26	15
23	---						7.1	24	26	12	24	14
24	---						6.5	27	26	12	20	14
25	---						8.0	27	26	12	20	14
26	---						7.1	24	25	13	20	13
27	---						7.9	26	25	12	27	13
28	---						8.2	28	25	16	24	13
29	---						8.6	30	25	16	18	13
30	---						9.1	30	24	19	24	12
31	---						---	32	---	17	20	---
TOTAL	---						---	619	880	474	616	444
MEAN	---						---	20.0	29.3	15.3	19.9	14.8
MAX	---						---	32	34	23	29	20
MIN	---						---	13	24	12	14	12
AC-FT	---						---	1230	1750	940	1220	881

## 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 (61 m) upstream from road crossing, 1,300 ft (400 m) upstream from normal high-water line of Costilla Reservoir, 0.6 mi (1.0 km) north of Costilla Dam, and 16 mi (26 km) southeast of Costilla.

DRAINAGE AREA.--2.15 mi<sup>2</sup> (5.57 km<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. Altitude of gage is 9,487 ft (2,892 m), from topographic map. Prior to June 27, 1940, water-stage recorder and wooden control at datum 0.99 ft (0.302 m) lower.

REMARKS.--Records fair. No diversions above or below station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18 ft<sup>3</sup>/s (0.51 m<sup>3</sup>/s) Aug. 11, 1941, July 12, 1957; maximum gage height, 1.73 ft (0.527 m) Aug. 11, 1941; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6.6 ft<sup>3</sup>/s (0.19 m<sup>3</sup>/s) at 2115 hours Aug. 10, gage height, 0.80 ft (0.244 m), no other peak above base of 6 ft<sup>3</sup>/s (0.2 m<sup>3</sup>/s); minimum not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0						---	1.2	3.8	3.8	1.8	2.0
2	1.1						---	1.4	3.9	3.7	1.7	2.1
3	1.2						---	1.6	4.0	3.5	2.2	2.1
4	1.1						---	1.6	4.1	3.4	2.2	2.0
5	1.1						---	1.7	4.0	3.2	2.0	2.0
6	1.1						---	1.6	4.1	3.1	2.0	2.0
7	1.1						---	1.5	4.0	3.1	2.2	2.1
8	---						---	1.4	4.1	2.9	2.0	2.0
9	---						---	1.4	4.4	2.8	1.8	2.0
10	---						---	1.4	4.4	2.7	2.1	1.9
11	---						---	1.5	4.5	2.6	2.8	2.4
12	---						---	1.6	4.5	2.5	2.0	2.3
13	---						---	.98	4.6	2.4	1.9	2.2
14	---						---	.94	4.8	2.4	2.0	2.2
15	---						---	.98	4.8	2.3	2.2	2.0
16	---						---	.94	4.8	2.2	2.3	1.9
17	---						---	.94	4.7	2.2	2.2	1.9
18	---						---	.91	4.8	2.1	2.1	2.0
19	---						---	.88	5.4	2.3	2.0	2.0
20	---						---	.94	5.0	2.1	2.0	2.1
21	---						1.1	2.6	4.8	2.0	2.1	1.9
22	---						1.0	2.8	4.6	1.9	2.1	1.8
23	---						.94	2.9	4.6	1.9	2.1	1.8
24	---						.94	3.1	4.5	1.8	2.0	1.7
25	---						1.0	3.3	4.4	1.9	2.1	1.7
26	---						1.0	3.2	4.3	1.9	2.1	1.6
27	---						.97	3.3	4.1	1.9	2.3	1.6
28	---						1.0	3.6	4.0	2.0	2.2	1.7
29	---						1.1	3.6	4.0	2.2	2.0	1.5
30	---						1.1	3.7	3.9	2.4	2.3	1.5
31	---						---	3.6	---	2.0	2.2	---
TOTAL	---						---	65.7	131.9	77.2	65.0	58.0
MEAN	---						---	2.12	4.40	2.49	2.10	1.93
MAX	---						---	3.7	5.4	3.8	2.8	2.4
MIN	---						---	1.2	3.8	1.8	1.7	1.5
AC-FT	---						---	130	262	153	129	115

## RIO GRANDE BASIN

## 08253900 COSTILLA RESERVOIR NEAR COSTILLA, NM

LOCATION.--Lat 36°52'32", long 105°16'45", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on face of Costilla Dam on Costilla Creek, 16 mi (26 km) southeast of Costilla, and at mile 34.8 (56.0 km).

DRAINAGE AREA.--54.6 mi<sup>2</sup> (141.4 km<sup>2</sup>).

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

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Inclined staff gage painted on base of railroad rail on left side of control tower of Dam. Altitude of gage is -107 ft (-33 m), from topographic map.

REMARKS.--Reservoir is formed by earthfill dam faced with rock. Storage began in 1920. Capacity 15,740 acre-ft (19.4 hm<sup>3</sup>) between gage heights 9,405.0 ft (2,866.64 m), sill of outlet, and 9,513.0 ft (2,899.56 m), crest of ungated spillway cut in natural rock. No dead storage. By order of New Mexico State Engineer storage is limited to 14,540 acre-ft (17.9 hm<sup>3</sup>) maximum, and 10,880 acre-ft (13.4 hm<sup>3</sup>) for not to exceed 60 days. Diversions for irrigation of about 1,300 acres (5.26 km<sup>2</sup>) above Reservoir. Reservoir is used for irrigation.

COOPERATION.--Gage readings were collected in cooperation with New Mexico Interstate Stream Commission.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 15,130 acre-ft (18.7 hm<sup>3</sup>) June 13, 1938, June 20-23, 1941, gage height, 9,511.5 ft (2,899.11 m); no storage October 1925 to February 1926, September 1956, Aug. 22 to Sept. 24, 1972, July 29 to Sept. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 8,220 acre-ft (10.1 hm<sup>3</sup>) June 6, gage height, 9,491.5 ft (2,893.01 m); minimum observed, 1,590 acre-ft (1.96 hm<sup>3</sup>) Oct. 7, gage height, 9,458.5 ft (2,882.95 m).

Capacity table (gage height, in feet, and contents, in acre-ft)  
(Based on original survey, furnished by New Mexico Interstate Stream Commission)

9,450	959	9,480	5,270
9,460	1,760	9,490	7,790
9,470	3,260	9,500	10,880

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
CNCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	7740	7110	4230	---
2	---	---	---	---	---	---	---	---	---	7060	4130	---
3	---	---	---	---	---	---	---	---	7910	---	3910	---
4	---	---	---	---	---	---	---	---	---	6950	3780	---
5	---	---	---	---	---	---	---	---	---	---	3720	---
6	---	---	---	---	---	---	---	---	8220	6870	3630	---
7	1590	---	---	---	---	---	---	---	---	6740	---	---
8	---	---	---	---	---	---	---	---	---	6640	3720	---
9	---	---	---	---	---	---	---	---	---	6540	3680	---
10	---	---	2750	---	---	---	---	---	8160	---	3630	---
11	---	---	---	---	---	---	---	---	---	6590	3530	---
12	---	---	---	---	---	---	---	---	---	6490	3440	---
13	---	---	---	---	---	---	4770	---	3190	6360	3400	---
14	---	---	---	---	---	---	---	6490	---	6240	---	---
15	---	---	---	---	---	---	---	---	7930	6020	3440	---
16	---	---	---	---	---	---	---	---	7790	5950	3400	---
17	---	---	---	---	---	---	---	6740	---	---	3350	---
18	---	---	---	---	---	---	---	---	7710	6000	3350	---
19	---	---	---	---	---	---	---	6870	---	5880	3480	---
20	---	---	---	---	---	---	---	6870	7790	5640	3530	---
21	---	---	---	---	---	---	---	---	7680	5290	---	---
22	---	---	---	---	---	---	---	---	7630	5340	3630	4930
23	---	---	---	---	---	---	---	---	7520	5180	3630	---
24	---	---	---	---	---	---	---	7160	7410	---	---	---
25	---	---	---	---	---	---	---	7240	7300	5180	---	---
26	---	---	---	---	---	---	---	7270	---	4850	---	---
27	---	---	---	---	---	---	---	---	7300	4810	---	---
28	---	---	---	---	3800	---	5360	7380	7240	4640	---	---
29	---	---	---	---	---	---	---	---	7190	4430	---	---
30	---	2600	---	---	---	---	5500	---	7140	4230	---	5400
31	2100	---	3000	3400	---	4400	---	7600	---	4230	4000	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
(†)	---	---	---	---	---	---	---	---	9487.6	---	---	---
(‡)	+700	+500	+400	+400	+400	+600	+1100	+2100	-460	-2910	-230	+1400

CAL YR 1981..... ‡ -2500

WTR YR 1982..... ‡ +4000

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

NOTE.--Contents interpolated at end of each month except June.

## 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 (38 m) downstream from Costilla Dam, 16 mi (26 km) southeast of Costilla, and at mile 34.7 (55.8 km).

DRAINAGE AREA.--54.6 mi<sup>2</sup> (141.4 km<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. Altitude of gage is 9,290 ft (2,832 m), from topographic map.

REMARKS.--Records good except those below 1.0 ft<sup>3</sup>/s (0.03 m<sup>3</sup>/s), which are poor. Flow regulated by Costilla Reservoir (station 08253900). Diversions for irrigation of about 1,300 acres (5.3 km<sup>2</sup>) above Reservoir. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years (water years 1945-47, 1950-82), 16.6 ft<sup>3</sup>/s (0.470 m<sup>3</sup>/s), 12,030 acre-ft/yr (14.8 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 301 ft<sup>3</sup>/s (8.52 m<sup>3</sup>/s) June 19, 1979, gage height, 3.04 ft (0.927 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 131 ft<sup>3</sup>/s (3.71 m<sup>3</sup>/s) July 25, gage height, 2.11 ft (0.643 m); minimum not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.02	.02	.02	.01	.01	.02	.02	17	63	53	12
2	.02	.02	.02	.02	.01	.01	.02	.02	17	48	120	12
3	.01	.02	.02	.02	.01	.01	.02	.02	16	35	100	12
4	.01	.02	.02	.02	.01	.01	.02	.03	16	45	86	12
5	.01	.01	.02	.02	.01	.01	.02	.04	16	68	86	17
6	.01	.01	.02	.02	.01	.01	.02	.04	16	76	50	19
7	.02	.02	.02	.02	.01	.01	.01	.05	29	84	19	19
8	.02	.02	.02	.02	.01	.01	.02	.03	49	84	30	19
9	.02	.02	.02	.02	.01	.01	.02	.02	59	50	66	19
10	.02	.02	.02	.02	.01	.01	.02	.02	59	21	66	15
11	.02	.02	.02	.02	.01	.01	.02	.02	59	35	66	12
12	.02	.02	.02	.02	.01	.01	.02	.04	59	84	66	12
13	.03	.02	.02	.02	.01	.01	.02	.05	69	84	44	12
14	.03	.02	.02	.02	.01	.01	.02	.05	91	84	22	5.5
15	.03	.02	.02	.02	.01	.01	.02	.05	91	83	32	.01
16	.03	.02	.02	.02	.01	.02	.02	.05	91	50	60	.01
17	.03	.02	.02	.02	.01	.02	.01	.05	91	12	43	.01
18	.03	.02	.02	.02	.01	.02	.02	.05	64	39	25	.02
19	.03	.02	.02	.02	.01	.01	.02	.05	46	102	25	.02
20	.03	.02	.02	.02	.01	.01	.02	7.3	58	102	25	.02
21	.03	.02	.02	.02	.01	.01	.02	16	94	101	25	.02
22	.03	.02	.02	.02	.01	.01	.03	16	94	101	29	.02
23	.03	.02	.02	.02	.01	.01	.02	16	93	62	39	.02
24	.03	.02	.02	.02	.01	.01	.01	28	93	19	29	.01
25	.03	.02	.02	.02	.01	.01	.01	37	61	54	29	.02
26	.03	.02	.02	.02	.01	.01	.01	37	42	130	29	.02
27	.03	.02	.02	.02	.01	.01	.02	37	48	129	21	.03
28	.03	.02	.02	.02	.01	.01	.02	26	63	128	12	.04
29	.03	.02	.02	.02	---	.01	.01	17	63	128	12	.04
30	.02	.02	.02	.02	---	.01	.01	17	63	75	12	.05
31	.03	---	.02	.02	---	.02	---	17	---	29	12	---
TOTAL	.77	.58	.62	.62	.28	.35	.54	272.00	1727	2205	1333	197.86
MEAN	.025	.019	.020	.020	.010	.011	.018	8.77	57.6	71.1	43.0	6.60
MAX	.03	.02	.02	.02	.01	.02	.03	37	94	130	120	19
MIN	.01	.01	.02	.02	.01	.01	.01	.02	16	12	12	.01
AC-FT	1.5	1.2	1.2	1.2	.6	.7	1.1	540	3430	4370	2640	392

CAL YR 1981 TOTAL 6524.36 MEAN 17.9 MAX 112 MIN .01 AC-FT 12940  
WTR YR 1982 TOTAL 5738.62 MEAN 15.7 MAX 130 MIN .01 AC-FT 11380

NOTE.--No gage-height record Nov. 20 to Feb. 23.

## 08254500 COSTILLA CREEK NEAR AMALIA, NM

LOCATION.--Lat 36°52'33", long 105°23'22", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on right bank 0.5 mi (0.8 km) upstream from second bridge upstream from Amalia, 2.4 mi (3.9 km) downstream from Latir Creek, 5.8 mi (9.3 km) southeast of Amalia, 10.5 mi (16.9 km) southeast of Costilla, and at mile 25.4 (40.9 km).

DRAINAGE AREA.--152 mi<sup>2</sup> (394 km<sup>2</sup>).

PERIOD OF RECORD.--May 1949 to September 1959 and April 1961 to September 1981 (discontinued). No winter records. Monthly discharge only for some periods, published in WSP 1732.



## RIO GRANDE BASIN

08255500 COSTILLA CREEK NEAR COSTILLA, NM

LOCATION.--Lat 36°58'01", long 105°30'23", Taos County, Hydrologic Unit 13020101, in Sangre de Cristo Grant, on right bank 70 ft (21 m) downstream from bridge on State Highway 196, 0.5 mi (0.8 km) upstream from diversion dam, 1.6 mi (2.6 km) southeast of Costilla, and at mile 15.9 (25.6 km).

DRAINAGE AREA.--195 mi<sup>2</sup> (505 km<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. Altitude of gage is 7,900 ft (2,408 m), from topographic map. Prior to June 18, 1944, at site 200 ft (61 m) downstream at different datum. June 18, 1944 to Sept. 30, 1964, at site 0.4 mi (0.6 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Costilla Reservoir (station 08253900) 19 mi (31 km) upstream. Diversions for irrigation of about 2,000 acres (8.1 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--41 years (water years 1942-82), 41.2 ft<sup>3</sup>/s (1.167 m<sup>3</sup>/s), 29,850 acre-ft/yr (36.8 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,150 ft<sup>3</sup>/s (32.6 m<sup>3</sup>/s) May 11, 1942, gage height, 5.37 ft (1.637 m), site and datum then in use; minimum, 0.34 ft<sup>3</sup>/s (0.010 m<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, 282 ft<sup>3</sup>/s (7.99 m<sup>3</sup>/s) July 30, gage height, 3.58 ft (1.091 m); minimum, 1.3 ft<sup>3</sup>/s (0.037 m<sup>3</sup>/s) Dec. 9, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.5	9.6	10	5.9	9.0	19	62	90	80	48	47
2	11	12	10	8.0	5.5	12	21	63	86	75	113	44
3	17	11	13	6.0	5.7	13	15	70	81	57	118	44
4	15	11	11	5.0	5.9	11	19	77	76	54	103	40
5	13	9.7	11	7.7	4.6	8.8	21	77	72	73	103	41
6	12	11	10	9.5	4.0	11	23	74	70	77	93	43
7	12	12	9.0	9.0	3.7	11	23	67	71	88	49	43
8	12	13	9.5	5.5	7.0	11	18	59	82	91	44	43
9	12	12	10	4.6	9.0	12	18	54	93	84	68	43
10	12	10	11	5.7	8.0	11	17	57	92	44	75	40
11	12	10	8.8	6.8	7.1	13	18	60	93	39	95	40
12	12	11	8.8	7.4	6.4	21	40	65	92	75	81	46
13	12	11	8.7	7.7	5.3	19	51	62	90	86	73	45
14	12	11	9.0	6.6	6.0	18	52	60	122	86	43	46
15	12	11	9.2	6.9	7.0	17	51	56	126	35	43	32
16	12	11	8.1	7.0	8.0	16	48	51	124	81	91	28
17	11	9.8	7.5	7.4	8.5	16	38	48	122	34	92	32
18	11	11	7.0	7.4	9.0	17	42	48	112	32	59	32
19	11	8.3	6.3	7.6	8.5	14	41	47	100	95	56	36
20	12	9.6	7.9	7.9	9.0	12	38	51	90	110	56	34
21	12	11	8.2	7.9	9.0	12	34	67	124	104	75	33
22	12	11	4.4	7.1	9.5	13	34	78	120	102	66	29
23	12	10	4.0	6.9	10	13	31	95	119	92	83	28
24	11	10	3.5	6.5	9.5	12	30	96	121	40	75	26
25	11	9.0	4.0	6.8	9.0	13	26	114	105	35	77	25
26	10	8.3	5.0	7.1	7.0	15	28	112	72	114	78	25
27	11	8.3	7.0	7.4	8.0	14	28	116	70	126	74	24
28	11	10	8.2	7.1	8.5	14	30	121	80	128	62	24
29	11	11	8.7	7.7	---	18	38	105	81	138	52	23
30	10	9.4	11	7.0	---	9.5	48	102	81	137	51	23
31	11	---	10	6.4	---	14	---	96	---	59	58	---
TOTAL	366	313.4	259.4	221.6	204.6	420.3	940	2310	2857	2521	2254	1059
MEAN	11.8	10.4	8.37	7.15	7.31	13.6	31.3	74.5	95.2	81.3	72.7	35.3
MAX	17	13	13	10	10	21	52	121	126	138	118	47
MIN	10	8.3	3.5	4.6	3.7	8.8	15	47	70	32	43	23
AC-FT	726	622	515	440	406	834	1860	4580	5670	5000	4470	2100

CAL YR 1981 TOTAL 10434.3 MEAN 28.6 MAX 105 MIN 3.5 AC-FT 20700  
WTR YR 1982 TOTAL 13726.3 MEAN 37.6 MAX 138 MIN 3.5 AC-FT 27230

NOTE.--No gage-height record Jan. 8 to Mar. 1

## 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 (180 m) downstream from new diversion dam, 1.1 mi (1.8 km) southeast of Costilla, and at mile 15.3 (24.6 km).

DRAINAGE AREA.--197 mi<sup>2</sup> (510 km<sup>2</sup>).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,861 ft (2,396 m), from topographic map.

REMARKS.--Records poor. Flow partly regulated by Costilla Reservoir (station 08253900) 20 mi (32 km) upstream, and by canal headgates or sluice gates at diversion dam. Diversions above station for irrigation of about 5,000 acres (20 km<sup>2</sup>), 3,000 acres (12 km<sup>2</sup>) of which are below station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 540 ft<sup>3</sup>/s (15.3 m<sup>3</sup>/s) June 9, 1979, gage height, 4.66 ft (1.420 m), from rating curve extended above 220 ft<sup>3</sup>/s (6.2 m<sup>3</sup>/s); maximum gage height, 5.05 ft (1.539 m) July 24, 1957 (backwater from debris); no flow Oct. 14, 1963.

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 (28 m<sup>3</sup>/s), based on records for upstream station (station 08255500).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 275 ft<sup>3</sup>/s (7.79 m<sup>3</sup>/s) July 30, gage height, 4.76 ft (1.451 m); minimum not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4						---	24	14	9.3	1.2	21
2	3.4						---	24	14	8.9	10	18
3	2.3						---	31	13	7.5	12	16
4	1.8						---	38	24	7.1	2.1	12
5	1.9						---	38	25	8.2	2.1	12
6	1.8						---	35	9.8	8.6	3.7	12
7	---						---	29	8.6	8.6	.43	11
8	---						---	22	6.1	8.6	.19	9.3
9	---						---	17	7.1	11	2.6	9.0
10	---						---	15	9.3	1.9	2.9	9.2
11	---						---	14	9.8	1.6	14	22
12	---						---	19	8.9	7.7	4.6	33
13	---						---	17	8.6	8.6	19	14
14	---						---	15	17	6.1	21	17
15	---						12	12	12	7.1	5.4	15
16	---						10	10	12	23	8.6	10
17	---						8.4	10	11	8.9	5.0	3.8
18	---						8.7	7.4	11	5.7	5.9	3.3
19	---						8.4	5.3	11	5.7	7.5	3.0
20	---						8.1	5.3	10	4.3	5.0	2.6
21	---						9.1	6.6	14	7.1	26	2.4
22	---						8.9	8.3	16	5.0	26	2.2
23	---						8.9	20	21	3.8	31	2.1
24	---						8.9	15	24	1.7	25	2.1
25	---						8.6	15	15	1.7	23	1.9
26	---						9.2	12	11	2.1	32	2.1
27	---						9.3	16	11	2.6	31	2.0
28	---						9.6	18	12	3.7	27	1.9
29	---						11	14	12	5.0	24	9.8
30	---						13	14	9.3	32	24	6.4
31	---						---	14	---	1.3	26	---
TOTAL	---						---	540.9	387.5	224.4	433.22	286.1
MEAN	---						---	17.4	12.9	7.24	14.0	9.54
MAX	---						---	38	25	32	32	33
MIN	---						---	5.3	6.1	1.3	.19	1.9
AC-FT	---						---	1070	769	445	359	567

## RIO GRANDE BASIN

08261000 COSTILLA CRÉEK 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 (0.6 km) downstream from old State Highway 3, 0.5 mi (0.8 km) upstream from New Mexico-Colorado State line, 0.9 mi (1.4 km) south of Garcia, and at mile 13.3 (21.4 km).

DRAINAGE AREA.--200 mi<sup>2</sup> (520 km<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. Altitude of gage is 7,758 ft (2,365 m), from topographic map. Prior to Apr. 20, 1950, at site 0.4 mi (0.6 km) downstream at different datum.

REMARKS.--Records fair. Flow partly regulated by Costilla Reservoir (station 08253900) 22 mi (35 km) upstream. Diversions above station for irrigation of about 5,500 acres (22 km<sup>2</sup>), 2,000 acres (8.1 km<sup>2</sup>) of which are below station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 460 ft<sup>3</sup>/s (13.0 m<sup>3</sup>/s) July 24, 1957, gage height, 4.76 ft (1.451 m); 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 (28 m<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 85 ft<sup>3</sup>/s (2.41 m<sup>3</sup>/s) July 30, gage height, 3.42 ft (1.042 m); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05						---	19	6.8	.00	.13	16
2	.09						---	20	6.6	.00	2.1	13
3	.06						---	26	5.7	.00	7.7	11
4	.00						---	30	7.6	.00	.48	7.7
5	.00						---	31	9.7	.00	.00	7.3
6	---						---	29	2.2	.00	.84	7.4
7	---						---	24	2.3	.00	.09	7.4
8	---						---	19	.34	.10	.09	6.8
9	---						---	16	.07	1.3	.07	6.7
10	---						---	13	1.1	.14	.06	6.6
11	---						---	12	.63	.00	7.5	11
12	---						---	17	.00	.00	1.1	21
13	---						---	16	.00	.00	8.2	9.2
14	---						---	14	3.7	.09	12	14
15	---						---	10	3.3	.06	.39	11
16	---						7.8	5.0	2.6	5.7	.87	8.0
17	---						6.3	4.6	3.0	.68	2.2	1.8
18	---						6.3	3.0	3.3	.04	1.6	1.4
19	---						6.0	1.1	3.1	.05	2.9	1.1
20	---						6.0	.96	2.4	.00	2.1	.89
21	---						6.3	2.3	5.8	.32	16	.74
22	---						7.6	4.0	9.6	.00	19	.59
23	---						7.6	14	13	.00	21	.45
24	---						7.3	11	14	.00	18	.41
25	---						6.8	12	8.5	.00	19	.27
26	---						6.8	8.8	3.9	.00	21	.16
27	---						6.9	11	1.8	.00	22	.09
28	---						6.9	13	.85	.00	20	.00
29	---						7.6	8.5	.85	.00	18	5.7
30	---						10	7.9	.00	14	17	4.4
31	---						---	6.9	---	.96	18	---
TOTAL	---						---	410.06	122.74	23.44	259.42	182.10
MEAN	---						---	13.2	4.09	.76	8.37	6.07
MAX	---						---	31	14	14	22	21
MIN	---						---	.96	.00	.00	.00	.00
AC-FT	---						---	313	243	46	515	361

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

Records of discharge are collected at 8 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 below 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 (41 m) downstream from new diversion dam, and 1.2 mi (1.9 km) 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. Altitude of gage is 7,870 ft (2,399 m), 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 (1.42 m<sup>3</sup>/s) June 25, 1944, July 31, 1945; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) July 21; no flow Apr. 30.

08256500 MESA DITCH NEAR GARCIA, CO.--Lat 36°59'50", long 105°30'49", Costilla County, Hydrologic Unit 13020101, on left bank 429 ft (130 m) north of milepost No. 136 + 54 on New Mexico-Colorado State line, and 1.4 mi (2.3 km) east of Garcia. PERIOD OF RECORD, June 1944 to September 1965, May 1969 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,780 ft (2,371 m), from topographic map. Prior to June 1971, recording gage and June 1971 to April 1977, nonrecording gage near present site at different datums. Ditch diverts from right bank of Acequia Madre for irrigation in Colorado.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 21 ft<sup>3</sup>/s (0.59 m<sup>3</sup>/s) June 25, 1944, Aug. 3, 7, 1945; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 0.96 ft<sup>3</sup>/s (0.027 m<sup>3</sup>/s) May 15; no flow most of time.

08257500 CORDILLERA DITCH AT GARCIA, CO.--Lat 36°59'41", long 105°31'39", Taos County, Hydrologic Unit 13020101, on left bank 570 ft (170 m) south of New Mexico-Colorado State line, and 0.9 mi (1.4 km) southeast of Garcia. PERIOD OF RECORD, June 1944 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,750 ft (2,362 m), from topographic map. Ditch diverts from left bank of Acequia Madre for irrigation in Colorado.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 10 ft<sup>3</sup>/s (0.28 m<sup>3</sup>/s) June 13, 15, July 11, 1961; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4.9 ft<sup>3</sup>/s (0.14 m<sup>3</sup>/s) Aug. 3; no flow Apr. 30, Sept. 13.

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 (410 m) downstream from new diversion dam, and 1.2 mi (1.9 km) 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. Altitude of gage is 7,870 ft (2,399 m), from topographic map. Canal diverts from left bank of Costilla Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 139 ft<sup>3</sup>/s (3.94 m<sup>3</sup>/s) July 10, 1980; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 121 ft<sup>3</sup>/s (3.43 m<sup>3</sup>/s) July 29; no flow part of Aug. 14.

08258600 CERRO CANAL BELOW ASSOCIATION DITCH AT COSTILLA, NM.--Lat 36°57'41", long 105°32'05", Taos County, Hydrologic Unit 13020101, on left bank 220 ft (67 m) downstream from Association ditch, and 1.2 mi (1.9 km) south of the intersection of State Highways 3 and 196 at Costilla. PERIOD OF RECORD, May 1972 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,820 ft (2,384 m), from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 81 ft<sup>3</sup>/s (2.29 m<sup>3</sup>/s) July 18, 19, 1973; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 48 ft<sup>3</sup>/s (1.36 m<sup>3</sup>/s) Aug. 3; minimum daily, 3.2 ft<sup>3</sup>/s (0.091 m<sup>3</sup>/s) July 17, Sept. 12.

08259500 NEW MEXICO BRANCH CERRO CANAL NEAR JAROSO, CO.--Lat 36°59'37", long 105°34'28", Taos County, Hydrologic Unit 13020101, on right bank 45 ft (14 m) downstream from headgate, and 2.7 mi (4.3 km) east of Jaroso. PERIOD OF RECORD, June 1944 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,680 ft (2,341 m), from topographic map. Canal diverts from left bank of Cerro Canal for irrigation in New Mexico.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 29 ft<sup>3</sup>/s (0.82 m<sup>3</sup>/s) July 21, 1948; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 11 ft<sup>3</sup>/s (0.31 m<sup>3</sup>/s) Aug. 3; no flow May 6, July 18, Aug. 1.

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 (240 m) downstream from head of N. Mex. branch Cerro Canal, and 2.7 mi (4.3 km) east of Jaroso. PERIOD OF RECORD, April 1973 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,680 ft (2,341 m), from topographic map. Flow measured is delivered to Colorado.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 68 ft<sup>3</sup>/s (1.93 m<sup>3</sup>/s) July 18, 19, 1973; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 44 ft<sup>3</sup>/s (1.25 m<sup>3</sup>/s) June 24; minimum daily, 1.3 ft<sup>3</sup>/s (0.037 m<sup>3</sup>/s) Sept 12.

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 (230 m) downstream from headgate, and 2.8 mi (4.5 km) north of Jaroso. PERIOD OF RECORD, June 1944 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,585 ft (2,312 m), 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 (3.17 m<sup>3</sup>/s) May 16, 1958; no flow for long periods.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 31 ft<sup>3</sup>/s (0.88 m<sup>3</sup>/s) Apr. 14; no flow many days.

## RIO GRANDE BASIN

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

## MONTHLY DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	08256000 Acequia Madre	08256500 Mesa ditch	08257500 Cordillera ditch	08258000 Cerro Canal at Costilla	08258600 Cerro Canal below Association ditch	08259500 New Mexico branch Cerro Canal	08259600 Cerro Canal at State line nr Jaroso	08262000 Eastdale No. 1 intake canal
October .....	-	-	-	-	-	-	-	0.3
November .....	-	-	-	-	-	-	-	0
December .....	-	-	-	-	-	-	-	-
January .....	-	-	-	-	-	-	-	-
February .....	-	-	-	-	-	-	-	-
March .....	-	-	-	-	-	-	-	179
April .....	-	-	-	-	-	-	-	854
May .....	592	8.4	60	2,870	1,600	350	1,220	527
June .....	705	1.1	88	4,100	1,590	214	1,340	4.1
July .....	715	.06	85	3,790	1,510	236	1,200	7.8
August .....	642	1.2	116	2,930	1,380	151	1,190	339
September ...	307	2.5	26	1,190	904	53	814	608

## 08263500 RIO GRANDE NEAR CERRO, NM

LOCATION.--Lat 36°44'24", long 105°40'59", in NW¼ sec. 20, T.29 N., R.12 E., Taos County, Hydrologic Unit 13020101, on left bank 4 mi (6 km) southwest of Cerro, 5.5 mi (8.8 km) northwest of Questa, 7.4 mi (11.9 km) upstream from Red River, and at mile 1,693.1 (2,724.2 km).

DRAINAGE AREA.--8,440 mi<sup>2</sup> (21,860 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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. Altitude of gage is 7,110 ft (2,167 m), from topographic map.

REMARKS.--Water-discharge records good. Diversions above station for irrigation of about 620,000 acres (2,500 km<sup>2</sup>) in Colorado and 7,000 acres (28 km<sup>2</sup>) in New Mexico.

AVERAGE DISCHARGE.--34 years, 396 ft<sup>3</sup>/s (11.21 m<sup>3</sup>/s), 286,900 acre-ft/yr (354 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,740 ft<sup>3</sup>/s (276 m<sup>3</sup>/s) June 22, 1949, gage height, 15.78 ft (4.810 m); minimum, about 40 ft<sup>3</sup>/s (1.13 m<sup>3</sup>/s) Sept. 10, 11, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft<sup>3</sup>/s (28 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 6	2015	1580 44.7	7.61 2.320	Aug. 28	1445	1010 28.6	6.14 1.871
June 1	0500	*1920 54.4	8.31 2.533	Sept. 24	0130	1500 42.5	7.50 2.286

Minimum discharge, about 90 ft<sup>3</sup>/s (2.55 m<sup>3</sup>/s) Dec. 24, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	342	277	159	317	512	489	706	1910	1640	627	417
2	135	344	165	159	316	542	442	892	1760	1640	567	307
3	142	342	215	159	301	540	449	1160	1480	1590	488	303
4	137	351	235	152	305	571	446	1350	1440	1500	457	419
5	133	474	273	155	306	565	452	1460	1600	1360	511	467
6	130	560	285	196	303	506	447	1540	1650	1320	586	478
7	161	611	296	217	287	469	438	1520	1590	1260	569	527
8	154	606	320	225	276	423	426	1420	1450	1170	522	565
9	133	616	312	227	271	403	387	1300	1340	1210	499	564
10	134	627	306	237	270	417	336	1310	1400	1050	523	526
11	135	633	326	251	275	438	294	1380	1470	957	553	524
12	148	625	294	254	269	455	283	1380	1480	1080	577	579
13	207	592	272	263	288	484	294	1400	1470	970	599	579
14	222	574	251	263	290	524	408	1320	1470	840	571	548
15	293	571	220	262	294	528	443	1150	1490	786	531	743
16	391	565	213	256	302	522	476	1030	1480	792	543	896
17	411	555	188	254	301	502	510	983	1480	671	538	884
18	443	545	155	261	312	497	568	1040	1510	561	614	975
19	431	530	135	267	317	480	535	1040	1540	554	520	1130
20	418	511	169	268	325	473	596	1040	1710	599	462	1100
21	392	488	206	277	340	450	567	1040	1770	524	472	1140
22	372	459	224	281	350	422	480	1010	1670	443	449	1310
23	373	426	154	282	362	401	405	934	1500	374	425	1430
24	361	436	120	276	394	390	362	1130	1380	333	521	1410
25	367	470	166	281	414	393	393	1080	1370	307	640	1220
26	376	468	172	285	423	393	382	1090	1390	311	690	1120
27	374	442	171	287	460	399	388	1160	1400	307	895	1070
28	370	350	163	295	492	422	469	1300	1440	290	1000	1020
29	352	351	155	301	---	437	534	1520	1500	289	755	943
30	309	315	151	311	---	446	608	1490	1600	340	552	916
31	301	---	150	306	---	475	---	1670	---	470	530	---
TOTAL	8442	14781	6739	7667	9180	14479	13307	37845	45740	25538	17786	24110
MEAN	272	493	217	247	328	467	444	1221	1525	824	574	804
MAX	443	633	326	311	492	571	608	1670	1910	1640	1000	1430
MIN	130	315	120	152	270	390	283	706	1340	289	425	303
AC-FT	16740	29320	13370	15210	18210	28720	26390	75070	90730	50650	35280	47620
CAL YR 1981	TOTAL	79121	MEAN	217	MAX	633	MIN	79	AC-FT	156900		
WTR YR 1982	TOTAL	225614	MEAN	618	MAX	1910	MIN	120	AC-FT	447500		

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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RIO GRANDE BASIN  
08263500 RIO GRANDE NEAR CERRO, NM--Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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)
NOV 05...	1445	<1	--	64	--	7	3	<10	20	5
FEB 19...	1215	<1	6	52	1	7	<1	<10	20	<3
APR 29...	1430	0	5	120	--	12	<1	<1	60	30
JUL 06...	1300	--	2	120	--	10	<1	<1	20	<3
SEP 27...	1200	0	2	61	--	4	<1	<1	20	<3

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)
NOV 05...	6

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT 06...	1700	130	12.0	33	12
NOV 05...	1445	498	6.0	29	39
FEB 19...	1215	318	2.0	33	28
APR 29...	1430	513	13.0	75	104
JUL 06...	1300	1310	18.0	49	173
SEP 27...	1200	1100	15.0	46	137

RIO GRANDE BASIN  
08264500 RED RIVER BELOW ZWERGLE DAMSITE NEAR RED RIVER, NM

LOCATION.--Lat 36°40½25", long 105°22'46", in Taos County Hydrologic Unit 130020101, in Carson National Forest, 2,000 ft. (610 m) upstream from Goose Creek 1.9 mi (3.1 Km) downstream from Bear Canyon and 2.8 mi (4.5 Km) southeast of Red River.

DRAINAGE AREA.--28.9 mi<sup>2</sup> (74.9 Km<sup>2</sup>).

PERIOD OF RECORD.--Water years 1962-65, 1979 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT 09...	1100	6.0	168	175	8.0	8.2	10.0	6.0	1.4	8.4
NOV 05...	1330	5.3	180	183	8.1	7.9	11.0	5.0	.20	9.2

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 FETFLD AS HCO3) (00440)	CAR- BONATE FETFLD (MG/L AS CO3) (00445)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)
OCT 09...	90	8	29	4.3	2.3	.1	1.1	100	0	82
NOV 05...	94	13	30	4.6	2.5	.1	.7	--	--	--

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
OCT 09...	13	.2	.1	7.4	106	.18	--	.030	--
NOV 05...	15	.6	.1	1.0	104	.17	.17	.020	.020

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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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)
OCT 09...	.21	.21	.110	--	--	--	.140	.100	1.5
NOV 05...	.19	.19	.170	.150	.22	.58	.010	<.010	.6

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	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...	1100	0	10	4	2	<10	50	4
NOV 05...	1330	<1	25	58	3	<10	130	130

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)
NOV 05...	0

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 09...	1100	6.0	6.0	13	.21
NOV 05...	1330	5.3	5.0	8	.11

DRAINAGE AREA.--78.3 mi<sup>2</sup> (203 Km<sup>2</sup>).

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

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT 09...	1315	13	258	255	7.7	7.6	--	8.0	2.7	8.6
NOV 05...	1200	8.8	270	281	7.8	8.0	12.0	3.0	3.3	9.8
SEP 16...	1330	E42	195	--	7.6	--	--	12.5	--	7.9

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 09...	1315	0	--	<10	130	3	<10	50	17
NOV 05...	1200	<1	--	14	180	4	<10	150	35
SEP 16...	1330	0	12	52	78	<1	<1	30	10

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	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)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01063)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
SEP 16...	1330	<1	15	6500	20	85	1	35

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)
NOV 05...	3

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT 09...	1315	13	8.0	20	.67
NOV 05...	1200	8.8	3.0	17	.40
SEP 16...	1330	E42	12.5	28	--

## 08265000 RED RIVER NEAR QUESTA, NM

LOCATION.--Lat 36°42'12", long 105°34'04", in NE1/4 sec.32, T.29 N., R.13 E. (projected), Taos County, Hydrologic Unit 13020101, in Carson National Forest, on left bank 1.3 mi (2.1 km) upstream from Cabresto Creek, 1.5 mi (2.4 km) east of Questa, and at mile 9.0 (14.5 km).  
DRAINAGE AREA.--113 mi<sup>2</sup> (293 km<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 to 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 (2,271.345 m) National Geodetic Vertical Datum of 1929. See WSP 1923 for history of changes prior to Oct. 4, 1938.

REMARKS.--Water-discharge records good. Diversions for irrigation of a few hundred acres above station. Figures of discharge do not include flow in South ditch which diverts from left bank 1,500 ft (460 m) upstream and bypasses gage for irrigation and stock water below.

Since January 1966 surface and ground water diversions by Molybdenum Corp. of America (Molycorp) refinery 5.5 mi (8.8 km) upstream bypass gage in tailings pipelines on left bank and discharge into settling pond 3 mi (5 km) 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 (1.583 m<sup>3</sup>/s), 40,500 acre-ft/yr (49.9 hm<sup>3</sup>/yr), prior to extensive upstream diversions by Molycorp; 17 years (water years 1966-82), 33.5 ft<sup>3</sup>/s (0.949 m<sup>3</sup>/s), 24,270 acre-ft/yr (29.9 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1929).--Maximum discharge, 886 ft<sup>3</sup>/s (25.1 m<sup>3</sup>/s) May 25, 1942, from rating curve extended above 450 ft<sup>3</sup>/s (13 m<sup>3</sup>/s); maximum gage height, 5.80 ft (1.768 m) June 8, 1979; minimum discharge, 0.60 ft<sup>3</sup>/s (0.017 m<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.--Maximum discharge, 277 ft<sup>3</sup>/s (7.84 m<sup>3</sup>/s) at 2345 hours Aug. 10, gage height, 4.24 ft (1.292 m), no other peak above base of 160 ft<sup>3</sup>/s (4.5 m<sup>3</sup>/s); minimum, 3.7 ft<sup>3</sup>/s (0.10 m<sup>3</sup>/s) Dec. 24, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	12	7.9	13	12	13	16	48	141	99	48	50
2	14	13	6.8	12	10	14	16	53	137	96	44	47
3	19	13	7.3	8.6	12	14	15	60	134	90	45	49
4	18	13	8.3	9.9	13	13	16	85	129	86	61	45
5	17	13	9.4	12	11	13	17	87	127	82	51	42
6	17	13	10	12	9.9	11	17	76	119	77	48	40
7	15	14	10	11	13	12	16	65	115	73	48	41
8	14	14	11	7.7	14	13	16	60	115	70	51	42
9	14	14	10	11	13	14	16	63	116	67	45	42
10	14	14	10	13	13	14	15	71	118	64	50	40
11	13	14	12	13	13	14	16	79	120	62	70	48
12	13	14	12	14	12	20	18	83	121	60	55	57
13	13	13	13	12	12	18	20	75	126	59	49	59
14	13	13	12	9.2	14	17	23	66	129	58	45	59
15	13	14	11	11	13	17	28	63	126	54	46	53
16	13	14	13	12	13	16	30	60	120	51	53	52
17	13	14	9.1	13	13	16	29	57	120	55	45	58
18	13	14	7.8	12	12	16	31	59	121	69	43	62
19	14	12	9.3	13	12	15	32	66	134	61	43	69
20	14	10	12	12	13	14	33	74	125	58	45	67
21	13	12	13	12	13	14	31	86	116	52	48	65
22	13	13	12	12	13	14	29	99	112	50	51	62
23	13	13	7.7	11	13	15	28	111	110	47	61	59
24	13	13	5.4	13	13	15	26	108	108	45	65	57
25	13	13	7.7	13	13	15	24	111	107	43	85	55
26	12	12	9.2	13	13	15	24	112	112	44	76	52
27	13	12	11	12	13	15	24	122	108	43	71	52
28	12	14	9.5	11	13	15	25	126	107	43	66	52
29	12	15	10	12	---	16	29	139	107	44	60	51
30	12	13	12	10	---	14	35	142	102	53	62	49
31	13	---	12	10	---	14	---	140	---	50	59	---
TOTAL	427	395	311.4	360.4	351.9	456	695	2646	3582	1905	1689	1576
MEAN	13.8	13.2	10.0	11.6	12.6	14.7	23.2	85.4	119	61.5	54.5	52.5
MAX	19	15	13	14	14	20	35	142	141	99	85	69
MIN	12	10	5.4	7.7	9.9	11	15	48	102	43	43	40
AC-FT	847	783	618	715	698	904	1380	5250	7160	3780	3350	3130
(†)	37	18	46	104	120	61	88	91	67	71	92	70

CAL YR 1981 TOTAL 5173.5 MEAN 14.2 MAX 47 MIN 2.8 AC-FT 10260 † 3530  
WTR YR 1982 TOTAL 14394.7 MEAN 39.4 MAX 142 MIN 5.4 AC-FT 28550 † 865

† Bypass flow of water, in acre-feet, through tailings pipelines; records furnished by Molycorp. Mill did not operate during year.





[illegible][illegible]

RIO GRANDE BASIN  
08265000 RED RIVER NEAR QUESTA, NM = Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, 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...	1400	0	--	<10	--	390	7	10	110	43
NOV 05...	1100	<1	--	20	--	460	8	<10	120	78
FEB 17...	1150	<1	36	27	<1	590	10	10	160	110
MAR 24...	1415	1	23	10	--	510	8	7	120	72
APR 29...	1330	0	17	72	--	270	4	4	90	46
JUN 02...	1500	0	17	39	--	86	3	2	50	30
JUL 06...	1500	0	8	19	--	5	4	2	60	36
AUG 20...	1700	0	26	<3	--	270	17	45	70	5
SEP 16...	1435	0	23	19	--	260	4	3	70	59

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	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)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01063)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
SEP 16...	1435	<1	9	2800	10	110	2	36

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

COLI-  
FORM,  
FECAL,  
0.7  
UMMF  
(COLS./  
100 ML)  
(31625)

OCT  
09... 0  
NOV  
05... 0

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 09...	1400	15	12.0	30	1.2
NOV 05...	1100	13	5.0	11	.39
FEB 17...	1150	13	2.0	39	1.4
MAR 24...	1415	15	9.0	32	1.3
JUN 02...	1500	131	11.0	99	35
JUL 06...	1500	76	13.5	22	4.5
AUG 20...	1700	43	15.0	397	46
SEP 16...	1435	51	13.0	63	8.7

## RIO GRANDE BASIN

08266000 CABRESTO CREEK NEAR QUESTA, NM

LOCATION.--Lat 36°43'50", long 105°33'12", in SE¼SE¼ sec.21, T.29 N., R.13 E., Taos County, Hydrologic Unit 13020101, in Carson National Forest, on right bank 900 ft (270 m) downstream from Llano ditch heading, 2.6 mi (4.2 km) downstream from Lake Fork, 3 mi (5 km) northeast of Questa, and at mile 3.5 (5.6 km).

DRAINAGE AREA.--36.7 mi<sup>2</sup> (95.1 km<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. Altitude of gage is 7,845 ft (2,391 m), from river-profile map.

REMARKS.--Water-discharge records good. Llano ditch (station 08265500), the only diversion above station, diverts from right bank 900 ft (270 m) above gage for irrigation of about 800 acres (3.2 km<sup>2</sup>) below. 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 or 903,000 m<sup>3</sup>, after reconstruction in 1928) on Lake Fork 1 mi (2 km) above mouth. Present capacity of Cabresto Reservoir is 1,100 acre-feet (1.36 hm<sup>3</sup>) after further rehabilitation between 1959 and 1961.

AVERAGE DISCHARGE.--39 years, 9.67 ft<sup>3</sup>/s (0.274 m<sup>3</sup>/s), 7,010 acre-ft/yr (8.64 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176 ft<sup>3</sup>/s (4.98 m<sup>3</sup>/s) June 8, 1957, gage height, 4.44 ft (1.353 m); maximum gage height, 4.53 ft (1.381 m) May 29, 1979; minimum discharge, 0.44 ft<sup>3</sup>/s (0.012 m<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, 44 ft<sup>3</sup>/s (1.25 m<sup>3</sup>/s) May 26, gage height, 2.29 ft (0.698 m); minimum, 0.62 ft<sup>3</sup>/s (0.018 m<sup>3</sup>/s) Dec. 24, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1931 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	4.9	1.9	3.3	3.9	4.1	5.1	15	19	12	12	13
2	4.3	4.7	2.0	3.4	3.4	4.2	5.5	13	19	13	11	13
3	5.7	4.6	2.7	2.9	4.1	4.1	4.9	13	19	13	11	13
4	5.5	4.4	3.1	3.1	4.1	4.1	5.5	17	17	13	13	12
5	5.1	4.2	3.1	3.5	3.7	3.9	5.8	16	15	13	12	12
6	4.9	4.2	3.1	3.4	3.1	3.4	6.0	12	15	13	12	12
7	4.8	4.5	3.1	3.3	3.9	3.2	5.7	12	14	13	12	11
8	4.8	4.8	3.2	2.2	4.3	4.1	5.2	12	14	13	11	12
9	4.5	4.3	3.3	3.3	4.0	4.1	5.4	13	14	12	10	12
10	4.5	3.1	3.3	3.5	4.0	4.2	5.2	15	13	12	10	11
11	4.3	2.8	3.2	3.5	4.1	4.3	5.5	17	14	11	15	13
12	4.3	2.8	3.2	3.6	4.0	5.4	6.5	18	15	11	12	16
13	3.8	2.8	3.3	3.5	4.0	4.8	8.3	15	14	11	11	16
14	2.8	2.8	3.3	3.0	4.2	4.7	11	14	12	10	11	16
15	2.6	2.9	3.2	3.5	3.9	4.6	12	13	13	11	12	14
16	2.4	2.9	3.4	3.5	3.8	4.5	13	13	13	12	14	14
17	2.5	2.9	2.5	3.7	3.8	4.6	12	13	13	13	12	15
18	2.5	2.9	2.2	3.7	3.7	4.7	13	12	13	13	11	15
19	2.6	2.7	3.3	3.5	3.6	4.6	13	14	14	15	11	16
20	2.4	2.3	3.3	3.5	3.8	4.1	13	16	13	15	12	15
21	2.4	2.6	3.1	3.5	3.8	3.9	12	16	13	16	15	15
22	2.5	2.7	3.3	3.5	3.8	4.2	12	17	13	9.3	13	14
23	3.7	2.9	2.0	3.1	4.0	4.5	11	20	13	10	13	14
24	6.2	3.0	1.2	3.6	4.0	4.5	11	18	13	9.6	14	14
25	6.4	3.0	2.3	3.6	4.0	4.6	10	17	13	11	15	14
26	6.1	2.9	3.0	3.7	3.7	4.9	10	33	12	12	15	13
27	6.1	2.7	3.5	3.6	3.9	4.9	10	32	12	11	15	13
28	5.8	3.1	3.3	3.5	4.0	4.8	11	22	13	11	14	13
29	5.8	3.3	3.1	3.7	---	5.0	13	22	12	12	13	13
30	5.9	3.2	3.4	3.5	---	4.2	17	21	12	13	14	13
31	5.5	---	3.3	3.4	---	4.6	---	20	---	12	15	---
TOTAL	134.8	100.9	91.2	105.6	108.6	135.8	278.6	521	419	375.9	391	407
MEAN	4.35	3.36	2.94	3.41	3.88	4.38	9.29	16.8	14.0	12.1	12.6	13.6
MAX	6.4	4.9	3.5	3.7	4.3	5.4	17	33	19	16	15	16
MIN	2.4	2.3	1.2	2.2	3.1	3.2	4.9	12	12	9.3	10	11
AC-FT	267	200	181	209	215	269	553	1030	831	746	776	807
(†)	0	---	---	---	---	---	5.7	866	779	312	.7	0

CAL YR 1981 TOTAL 2550.2 MEAN 6.99 MAX 14 MIN 1.2 AC-FT 5060  
WTR YR 1982 TOTAL 3069.4 MEAN 8.41 MAX 33 MIN 1.2 AC-FT 6090

† Diversion, in acre-feet, by Llano ditch.

RIO GRANDE BASIN  
08266000 CABRESTO CREEK NEAR QUESTA, NM - Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 05...	1000	4.5	152	152	7.5	8.0	9.0	3.0	.20	9.9
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 FETFLD (MG/L AS HCO3) (00440)	CAR- BONATE FETFLD (MG/L AS CO3) (00445)
NOV 05...		72	26	23	3.5	3.4	.2	.7	56	0
DATE		ALKA- LILITY 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, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
NOV 05...		46	29	.6	.3	11	99	.10	<.020	.020
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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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 05...		.12	.12	.130	.120	.11	.36	.020	.020	.9

RIO GRANDE BASIN  
08266000 CABRESTO CREEK NEAR QUESTA, NM - Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	CADMIUM	IRON,	MANGA-	MOLYB-	MOLYB-	ZINC,	ZINC,
		TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	DIS- SOLVED (UG/L AS FE) (01046)	NESE, DIS- SOLVED (UG/L AS MN) (01056)	DENUM, RECOV- ERABLE (UG/L AS MO) (01062)	DENUM, DIS- SOLVED (UG/L AS MO) (01060)	TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	DIS- SOLVED (UG/L AS ZN) (01090)
NOV 05...	1000	<1	<10	7	2	<10	31	31

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)
NOV 05...	1

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
		NOV 05...	1000	4.5	3.0

DRAINAGE AREA.--160 mi<sup>2</sup> (414 Km<sup>2</sup>).

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

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH (STAND- ARD UNITS)	PH LAB (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)
		(00061)	(00095)	(90095)	(00400)	(00403)	(00010)	(00076)	(00300)	(00900)
NOV 04...	1440	7.5	310	315	7.4	7.7	9.0	3.9	8.3	145
FEB 17...	1145	14	300	--	7.3	--	3.0	--	10.4	--
MAR 24...	1530	E12	325	--	7.3	--	10.0	--	8.0	--
APR 29...	1230	30	260	--	7.3	--	11.0	--	9.8	--
JUN 02...	1615	E132	165	--	7.4	--	12.0	--	8.0	--
JUL 08...	1500	72	210	--	7.4	--	12.0	--	8.2	--
AUG 20...	1600	E45	240	--	7.8	--	16.0	--	7.6	--
SEP 16...	1530	E57	230	--	7.3	--	13.0	--	8.0	--

[illegible][illegible]

RIO GRANDE BASIN  
08266500 RED RIVER BELOW QUESTA, NM - Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	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)	CYANIDE TOTAL (MG/L AS CN) (00720)
NOV 04...	.23	.130	.120	.19	.54	.020	.010	1.0	.01
FEB 17...	--	--	--	--	--	--	--	--	--
MAR 24...	--	--	--	--	--	--	--	1.3	--
APR 29...	--	--	--	--	--	--	--	--	--
JUN 02...	--	--	--	--	--	--	--	--	--
JUL 08...	--	--	--	--	--	--	--	1.5	--
AUG 20...	--	--	--	--	--	--	--	--	--
SEP 16...	--	--	--	--	--	--	--	3.6	<.01

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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)
NOV 04...	1440	<1	--	<10	--	230	9	<10	70	41
FEB 17...	1145	<1	23	<10	<1	370	10	10	120	62
MAR 24...	1530	1	18	<9	--	370	8	7	110	45
APR 29...	1230	0	18	13	--	190	8	6	80	28
JUN 02...	1615	0	17	32	--	72	6	3	60	19
JUL 08...	1500	--	8	4	--	160	7	5	100	29
AUG 20...	1600	0	25	<3	--	210	5	8	60	4
SEP 16...	1530	0	30	29	--	180	5	4	80	12



CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	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)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01063)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
SEP 16...	1530	<1	34	4800	10	160	2	49

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

COLI-  
FORM,  
FECAL,  
0.7  
UMMF  
(COLS./  
100 ML)  
(31625)  
NOV  
04... <1

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 04...	1440	7.5	9.0	191	3.9
FEB 17...	1145	14	3.0	32	1.2
MAR 24...	1530	E12	10.0	48	--
JUN 02...	1615	E132	12.0	95	--
JUL 08...	1500	72	12.0	27	5.3
AUG 20...	1600	E45	16.0	340	--
SEP 16...	1530	E57	13.0	216	--

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

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT 08...	1230	E22	415	405	8.0	7.9	16.0	12.0	2.6	8.3
NOV 04...	1400	E13	450	456	8.1	8.4	16.0	10.0	.70	8.2
FEB 18...	1115	E18	390	--	7.8	--	--	3.0	--	10.6
MAR 24...	1230	E21	390	--	8.0	--	--	9.0	--	9.3
APR 27...	1320	E34	340	--	7.9	--	--	10.5	--	8.0
JUN 03...	1415	E140	180	--	8.1	--	--	10.0	--	9.1
JUL 10...	1100	E77	272	--	7.7	--	--	11.0	--	8.5
AUG 19...	1530	E58	295	--	8.0	--	--	18.0	--	7.5
SEP 20...	1500	E80	260	--	7.8	--	--	11.5	--	8.4

[illegible][illegible]

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	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)	CYANIDE TOTAL (MG/L AS CN) (00720)
OCT 08...	.23	.120	--	.22	.54	.040	<.020	1.1	<.01
NOV 04...	.24	.200	.080	.28	.72	.020	<.010	1.3	.01
FEB 18...	--	--	--	--	--	--	--	.8	<.01
MAR 24...	--	--	--	--	--	--	--	1.3	<.01
APR 27...	--	--	--	--	--	--	--	--	--
JUN 03...	--	--	--	--	--	--	--	--	--
JUL 10...	--	--	--	--	--	--	--	--	--
AUG 19...	--	--	--	--	--	--	--	--	--
SEP 20...	--	--	--	--	--	--	--	1.8	<.01

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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 08...	1230	0	--	<10	--	120	140	140	30	10
NOV 04...	1400	<1	--	<10	--	110	160	160	20	14
FEB 18...	1115	<1	13	<10	<1	260	120	130	60	29
MAR 24...	1230	0	20	8	--	220	150	120	70	18
APR 27...	1320	0	9	22	--	160	96	83	60	29
JUN 03...	1415	0	14	31	--	68	27	23	50	21
JUL 10...	1100	--	6	4	--	170	52	41	50	21
AUG 19...	1530	0	21	<3	--	170	50	57	60	<3
SEP 20...	1500	0	30	9	--	330	41	41	80	17

RIO GRANDE BASIN  
08266790 RED RIVER ABOVE STATE FISH HATCHERY NEAR QUESTA, NM - Continued

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	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)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01063)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
SEP 20...	1500	1	56	6000	20	360	21	130

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

COLI-  
FORM,  
FECAL,  
0.7  
UMMF  
(COLS./  
100 ML)  
(31625)

DATE

NOV  
04... 4

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT 08...	1230	E22	12.0	11	--
NOV 04...	1400	E13	10.0	36	--
MAR 24...	1230	E21	9.0	24	--
APR 27...	1320	E34	10.5	24	--
JUN 03...	1415	E140	10.0	79	--
JUL 10...	1100	E77	11.0	26	--
AUG 19...	1530	E58	18.0	191	--
SEP 20...	1500	E80	11.5	164	--

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 (0.5 km) downstream from State Fish Hatchery, 3.5 mi (5.6 km) upstream from mouth, and 3.7 mi (6.0 km) southwest of Questa.

DRAINAGE AREA.--185 mi<sup>2</sup> (479 km<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. Altitude of gage is 7,070 ft (2,155 m), from topographic map. Prior to Aug. 16, 1979, at site about 250 ft (76 m) upstream at datum 5.55 ft (1.692 ft) higher.

REMARKS.--Water-discharge records good. Diversions for irrigation of about 3,000 acres (12 km<sup>2</sup>) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 755 ft<sup>3</sup>/s (21.4 m<sup>3</sup>/s) June 8, 1979, gage height, 5.30 ft (1.615 m), site and datum then in use; minimum, 24 ft<sup>3</sup>/s (0.68 m<sup>3</sup>/s) Feb. 7, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 165 ft<sup>3</sup>/s (4.7 m<sup>3</sup>/s) and maximum (\*), from rating curve extended above 150 ft<sup>3</sup>/s (4.2 m<sup>3</sup>/s):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
June 19	0545	172 4.87	2.79 0.850	Sept. 3	1745	*647 18.3	4.50 1.372
Aug. 11	0100	239 6.77	3.18 .969				

Minimum discharge, 24 ft<sup>3</sup>/s (0.68 m<sup>3</sup>/s) Feb. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	38	32	37	37	41	40	74	155	133	79	88
2	38	33	32	37	33	42	41	78	158	128	76	84
3	43	32	32	33	37	42	42	82	158	121	80	98
4	42	34	32	30	38	42	43	101	150	117	98	73
5	41	34	32	36	36	42	43	115	150	112	90	71
6	41	34	32	37	31	39	42	106	141	108	84	68
7	38	36	33	36	28	38	42	95	137	100	84	69
8	35	41	33	30	32	42	41	92	134	98	86	70
9	35	40	33	33	32	43	41	93	138	95	78	72
10	35	39	35	34	31	42	40	99	141	91	74	70
11	34	39	37	35	35	43	41	108	140	89	119	83
12	35	39	37	36	35	49	42	110	142	88	93	99
13	35	38	37	35	36	48	43	109	149	90	89	98
14	35	38	36	32	37	48	44	100	152	90	83	95
15	35	38	34	35	38	47	48	93	154	84	82	87
16	35	38	37	34	37	46	57	90	152	80	95	91
17	36	38	33	36	38	45	59	87	152	81	86	95
18	35	38	31	37	37	43	53	85	152	104	83	97
19	36	37	33	36	36	43	54	89	167	99	80	103
20	40	35	35	36	38	41	55	99	161	96	82	98
21	39	35	37	38	39	41	56	107	150	87	84	99
22	36	36	37	37	40	41	59	119	141	82	87	98
23	36	36	31	34	40	41	57	131	138	75	96	92
24	36	36	29	38	40	41	56	140	137	67	104	90
25	38	36	31	38	40	41	53	142	135	64	130	87
26	38	35	33	37	39	42	52	146	140	64	118	84
27	37	35	35	37	39	42	52	165	136	64	108	81
28	37	36	35	36	40	41	53	157	134	65	103	83
29	37	37	35	37	---	40	56	156	132	68	97	81
30	36	37	37	35	---	39	62	159	130	81	99	78
31	37	---	37	34	---	39	---	155	---	83	100	---
TOTAL	1147	1098	1053	1096	1019	1314	1467	3482	4356	2804	2847	2582
MEAN	37.0	36.6	34.0	35.4	36.4	42.4	48.9	112	145	90.5	91.8	86.1
MAX	43	41	37	38	40	49	62	165	167	133	130	103
MIN	34	32	29	30	28	38	40	74	130	64	74	68
AC-FT	2280	2180	2090	2170	2020	2610	2910	6910	8640	5560	5650	5120

CAL YR 1981	TOTAL	14662	MEAN	40.2	MAX	83	MIN	29	AC-FT	29080
WTR YR 1982	TOTAL	24265	MEAN	66.5	MAX	167	MIN	28	AC-FT	48130

RIO GRANDE BASIN  
08266820 RED RIVER BELOW FISH HATCHERY, NEAR QUESTA, NM--Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 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 ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT 08...	1330	34	355	338	7.9	7.9	--	14.0	2.4	7.9
NOV 04...	1145	33	355	373	7.8	7.9	8.0	12.0	4.8	8.2
FEB 18...	1330	36	340	367	7.6	7.9	--	9.0	--	9.6
MAR 24...	1330	40	340	340	8.1	8.1	--	11.0	--	8.4
APR 27...	1400	52	320	345	7.8	8.3	--	12.0	--	7.5
JUN 03...	1500	158	198	218	8.0	8.1	--	11.0	--	8.5
JUL 10...	1200	91	278	294	7.9	7.7	--	13.5	--	8.0
18...	1430	105	345	--	7.9	--	--	15.5	--	7.6
AUG 19...	1615	76	285	314	8.0	8.1	--	18.0	--	7.2
SEP 20...	1600	98	265	282	7.6	7.8	--	13.0	--	8.0

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 FETFLD (MG/L AS HCO3) (00440)	CAR- BONATE FETFLD (MG/L AS CO3) (00445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)
OCT 08...	134	52	40	8.3	20	.8	2.5	100	0	82
NOV 04...	140	61	42	8.5	21	.8	2.1	96	0	79
FEB 18...	134	62	40	8.3	19	.7	2.0	88	0	72
MAR 24...	140	83	42	8.5	20	.8	2.4	70	0	57
APR 27...	131	59	39	8.1	16	.6	1.7	--	--	--
JUN 03...	87	40	27	4.8	6.7	.3	1.2	--	--	--
JUL 10...	115	49	35	6.8	11	.5	1.5	80	0	66
18...	--	--	--	--	--	--	--	--	--	--
AUG 19...	120	53	36	7.3	12	.5	1.7	82	0	67
SEP 20...	115	45	35	6.6	9.9	.4	1.4	--	--	70

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 08...	87	6.2	1.0	24	236	.27	--	.030	--	.30
NOV 04...	90	.8	1.0	25	239	.32	.33	.040	.030	.36
FEB 18...	93	6.6	1.0	22	238	--	--	--	--	.27
MAR 24...	93	6.6	1.0	23	244	--	--	--	--	.27
APR 27...	89	5.7	.9	19	--	--	--	--	--	.15
JUN 03...	44	2.5	.4	12	128	--	--	--	--	.14
JUL 10...	69	4.0	.7	14	177	--	--	--	--	.18
18...	--	--	--	--	--	--	--	--	--	--
AUG 19...	77	4.3	.7	17	196	--	--	--	--	.21
SEP 20...	69	3.3	.7	14	181	--	--	--	--	.20

RIO GRANDE BASIN  
08266820 RED RIVER BELOW FISH HATCHERY, NEAR QUESTA, NM--Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	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)	CYANIDE TOTAL (MG/L AS CN) (00720)
OCT 08...	.29	.190	--	.37	.86	.030	.040	1.3	> .01
NOV 04...	.36	.280	.310	.34	.98	.090	.030	1.4	.01
FEB 18...	.30	.130	--	.32	.72	.060	.020	1.2	<.01
MAR 24...	.27	.130	--	.38	.78	.050	.040	1.4	<.01
APR 27...	.12	.170	--	.73	1.1	.040	.020	--	<.01
JUN 03...	.15	.110	--	.49	.74	.100	.020	--	<.01
JUL 10...	.23	.090	--	.51	.78	.080	.020	1.5	<.01
JUL 18...	--	--	--	--	--	--	--	--	--
AUG 19...	.22	.190	--	.91	1.3	.160	.010	2.2	<.01
SEP 20...	.19	.100	--	.60	.90	.070	.030	2.2	<.01

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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 08...	1330	30	0	--	<10	--	55	74	80	40	<3
NOV 04...	1145	30	<1	--	11	--	60	77	80	30	23
FEB 18...	1330	30	<1	8	24	3	120	76	80	40	5
MAR 24...	1330	20	0	13	9	--	110	70	70	130	20
APR 27...	1400	20	0	6	<3	--	<1	62	60	60	<3
JUN 03...	1500	10	0	12	28	--	59	25	23	50	10
JUL 10...	1200	20	0	5	<3	--	120	39	38	40	18
JUL 18...	1430	--	--	38	16	--	230	35	32	120	6
AUG 19...	1615	20	0	12	17	--	130	46	55	40	<3
SEP 20...	1600	10	0	28	7	--	260	37	41	70	10



RIO GRANDE BASIN  
08266820 RED RIVER BELOW FISH HATCHERY, NEAR QUESTA, NM--Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	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)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01063)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
MAR 24...	1330	1	4	33	--	10	--	10	--
SEP 20...	1600	<1	--	17	5500	20	290	4	55

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)
MAR 24...	1330	<1	<.1	<1.0	<.1	.2	<.1

DATE	TIME	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)
MAR 24...		<.1	<.1	<.1	<.1	<.1	<.1	<10

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)
OCT 08...	5
NOV 04...	5
FEB 18...	6
APR 27...	3

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 08...	1330	34	14.0	117	11	--
NOV 04...	1145	33	12.0	143	13	--
FEB 18...	1330	36	9.0	26	2.5	--
MAR 24...	1330	40	11.0	21	2.3	--
APR 27...	1400	52	12.0	25	3.5	--
JUN 03...	1500	158	11.0	78	33	--
JUL 10...	1200	91	13.5	27	6.6	--
JUL 18...	1430	105	15.5	651	185	94
AUG 19...	1615	76	18.0	142	29	--
SEP 20...	1600	98	13.0	181	48	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

RIO GRANDE BASIN  
08267000 RED RIVER AT MOUTH, NEAR QUESTA, NM--Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	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)	CYANIDE TOTAL (MG/L AS CN) (00720)
OCT 06...	.37	.120	--	.40	.86	.030	.030	1.5	--
NOV 06...	.42	.180	.160	.34	.94	.030	.020	.9	--
FEB 19...	--	--	--	--	--	--	--	1.2	--
APR 28...	--	--	--	--	--	--	--	--	--
JUN 08...	--	--	--	--	--	--	--	--	--
JUL 06...	--	--	--	--	--	--	--	1.8	--
18...	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	2.4	--
SEP 27...	--	--	--	--	--	--	--	1.7	<.01

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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 06...	1430	0	--	<10	--	19	57	60	40	<3
NOV 06...	1130	<1	--	52	--	16	57	60	10	6
FEB 19...	1445	<1	17	<10	1	46	59	60	50	<3
APR 28...	1145	0	4	10	--	41	54	50	30	4
JUN 08...	1530	0	8	16	--	40	29	23	30	3
JUL 06...	1000	--	3	6	--	77	33	31	20	21
18...	1130	--	110	12	--	320	45	17	280	6
AUG 20...	1300	0	15	<3	--	82	37	39	30	<3
SEP 27...	1430	0	17	7	--	180	38	41	50	11

RIO GRANDE BASIN  
08267000 RED RIVER AT MOUTH, NEAR QUESTA, NM--Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	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)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01063)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
SEP 27...	1430	<1	13	3500	10	390	4	55

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 06...	1430	62	14.0	9	1.5	--
NOV 06...	1130	44	11.0	114	14	--
FEB 19...	1445	50	11.0	25	3.4	--
APR 28...	1145	63	11.0	24	4.1	--
JUN 08...	1530	149	14.0	59	24	--
JUL 06...	1000	130	15.0	41	14	--
JUL 18...	1130	E128	--	2740	--	99
AUG 20...	1300	89	18.0	154	37	--
SEP 27...	1430	E90	13.0	103	--	--

DRAINAGE AREA.--Undetermined.

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

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT 07...	1530	252	240	238	8.5	8.6	18.0	15.0	4.6	9.5
NOV 03...	1300	413	190	187	8.2	8.3	15.0	8.0	3.0	9.9
FEB 17...	1330	406	200	--	8.0	--	--	6.0	--	10.3
MAR 24...	1630	472	215	--	8.2	--	--	10.0	--	8.9
APR 27...	1515	498	190	--	7.5	--	--	12.0	--	8.4
JUN 02...	1245	1960	135	--	7.0	--	--	13.0	--	8.1
JUL 07...	1200	1430	190	--	7.9	--	--	16.0	--	7.7
18...	1215	711	255	--	7.5	--	--	19.0	--	6.8
AUG 19...	1300	656	170	--	8.3	--	--	21.0	--	7.2
SEP 20...	1300	1260	140	--	7.3	--	--	14.5	--	7.7

[illegible][illegible]

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	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)	CYANIDE TOTAL (MG/L AS CN) (00720)
OCT 07...	.23	.120	--	.25	.58	.070	.070	2.4	--
NOV 03...	.14	.160	.190	.38	.73	.060	.060	2.4	--
FEB 17...	--	--	--	--	--	--	--	1.6	--
MAR 24...	--	--	--	--	--	--	--	2.6	--
APR 27...	--	--	--	--	--	--	--	--	--
JUN 02...	--	--	--	--	--	--	--	--	--
JUL 07...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG 19...	--	--	--	--	--	--	--	--	--
SEP 20...	--	--	--	--	--	--	--	4.0	<.01

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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 07...	1530	1	--	13	--	10	13	20	20	<3
NOV 03...	1300	<1	--	45	--	8	9	<10	10	7
FEB 17...	1330	<1	12	51	3	15	10	<10	20	6
MAR 24...	1630	0	6	44	--	18	8	7	10	<4
APR 27...	1515	0	2	110	--	14	7	7	60	3
JUN 02...	1245	0	6	150	--	15	2	<1	30	21
JUL 07...	1200	--	2	91	--	10	3	3	20	69
18...	1215	--	80	14	--	190	24	5	200	7
AUG 19...	1300	0	6	17	--	8	4	8	20	<3
SEP 20...	1300	0	8	55	--	10	4	3	40	6

RIO GRANDE BASIN  
08267400 RIO GRANDE ABOVE RIO HONDO AT DUNN BRIDGE, NM -- Continued

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	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)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01063)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
SEP 20...	1300	<1	8	3800	10	270	1	25

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)
OCT 07...	2
NOV 03...	0

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 07...	1530	252	15.0	12	8.2	--
NOV 03...	1300	413	8.0	33	37	--
FEB 17...	1330	406	6.0	22	24	--
MAR 24...	1630	472	10.0	37	47	--
APR 27...	1515	498	12.0	58	78	--
JUN 02...	1245	1960	13.0	117	619	--
JUL 07...	1200	1430	16.0	50	193	--
18...	1215	711	19.0	2370	4550	99
AUG 19...	1300	656	21.0	137	243	--
SEP 20...	1300	1260	14.5	92	313	--



## 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 (150 m) upstream from first diversion, 1.6 mi (2.6 km) east of Valdez, 3.8 mi (6.1 km) downstream from South Fork, and at mile 9.2 (14.8 km).

DRAINAGE AREA.--36.2 mi<sup>2</sup> (93.8 km<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. Altitude of gage is 7,650 ft (2,332 m), from topographic map. Prior to Oct. 28, 1938, at datum 1.92 ft (0.585 m) lower.

REMARKS.--Records good. No diversions above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--48 years, 33.9 ft<sup>3</sup>/s (0.960 m<sup>3</sup>/s), 24,560 acre-ft/yr (30.3 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 541 ft<sup>3</sup>/s (15.3 m<sup>3</sup>/s) May 13, 1941; maximum gage height, 4.81 ft (1.466 m) Jan. 5, 1970 (ice jam); minimum discharge, about 1 ft<sup>3</sup>/s (0.03 m<sup>3</sup>/s) Jan. 27, 1942, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 129 ft<sup>3</sup>/s (3.65 m<sup>3</sup>/s) at 0145 hours May 29, gage height, 2.78 ft (0.847 m), no other peak above base of 80 ft<sup>3</sup>/s (2.3 m<sup>3</sup>/s); minimum, 5.3 ft<sup>3</sup>/s (0.15 m<sup>3</sup>/s) Jan 31, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	9.0	8.7	8.1	11	12	43	120	84	31	39
2	12	11	8.0	8.5	7.5	11	14	50	117	81	32	39
3	17	11	8.7	7.5	8.0	11	13	59	113	77	33	38
4	15	11	9.0	6.5	8.5	11	15	65	111	75	36	37
5	13	10	9.2	8.0	7.0	10	17	66	109	72	31	36
6	13	10	9.1	8.1	6.5	10	16	60	105	67	31	34
7	12	11	9.0	8.2	6.4	9.0	15	54	105	64	31	34
8	12	11	9.0	6.5	7.0	10	14	51	109	60	30	33
9	12	11	9.0	7.5	8.1	9.9	13	51	115	58	29	33
10	12	11	9.0	7.9	8.1	10	13	56	114	56	29	31
11	12	10	9.0	7.8	7.9	11	15	63	113	54	39	38
12	12	10	9.0	8.1	7.0	19	21	68	114	52	33	48
13	12	10	8.9	8.3	8.0	17	26	67	119	50	31	59
14	12	10	8.7	7.5	8.5	15	29	60	121	48	30	57
15	12	10	8.7	8.0	8.3	14	31	56	116	46	29	54
16	12	10	8.6	8.5	8.3	13	30	53	111	44	30	51
17	12	10	8.0	3.5	8.4	13	27	52	110	45	31	52
18	12	10	7.5	7.9	8.4	13	27	53	111	46	29	61
19	12	9.3	3.5	7.8	8.4	12	28	59	110	43	29	75
20	12	8.8	3.3	7.8	8.8	12	28	70	106	42	30	73
21	12	9.1	8.3	7.8	9.4	12	26	84	103	38	29	69
22	12	9.4	8.5	7.8	10	11	24	94	101	37	31	65
23	12	9.3	8.0	7.5	11	11	22	103	99	36	33	61
24	12	9.4	7.0	7.8	11	11	21	104	97	35	33	59
25	12	9.0	7.5	7.8	10	12	20	95	96	36	48	56
26	12	8.9	8.0	7.7	9.5	12	19	95	95	35	46	55
27	11	8.3	9.0	7.8	9.8	12	19	107	92	33	44	52
28	11	9.3	8.5	8.1	10	12	21	115	91	33	42	50
29	11	9.7	8.0	8.1	---	12	27	124	90	35	40	48
30	11	9.6	8.3	8.4	---	11	34	124	88	35	39	46
31	11	---	8.4	8.0	---	12	---	120	---	34	40	---
TOTAL	376	298.6	263.7	244.4	237.9	369.9	637	2321	3201	1551	1049	1483
MEAN	12.1	9.95	8.51	7.88	8.50	11.9	21.2	74.9	107	50.0	33.8	49.4
MAX	17	11	9.2	8.7	11	19	34	124	121	84	48	75
MIN	11	8.8	7.0	6.5	6.4	9.0	12	43	88	33	29	31
AC-FT	746	592	523	485	472	734	1260	4600	6350	3080	2080	2940
CAL YR 1981	TOTAL	5858.4	MEAN	16.1	MAX	53	MIN	7.0	AC-FT	11620		
WTR YR 1982	TOTAL	12032.5	MEAN	33.0	MAX	124	MIN	6.4	AC-FT	23870		

## 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 (1.4 km) downstream from Arroyo Hondo, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--65.6 mi<sup>2</sup> (169.9 km<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.

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. Altitude of gage is 6,670 ft (2,033 m), 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 (8 m) downstream on right bank at same datum.

REMARKS.--Water-discharge records good. Diversions above station for irrigation of about 2,500 acres (10 km<sup>2</sup>), of which about 1,700 acres (6.9 km<sup>2</sup>) is a transbasin diversion to Rio Lucero.

AVERAGE DISCHARGE.--66 years (water years 1913-28, 1933-82), 26.6 ft<sup>3</sup>/s (0.753 m<sup>3</sup>/s), 19,270 acre-ft/yr (23.8 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1937).--Maximum discharge, 1,060 ft<sup>3</sup>/s (30.0 m<sup>3</sup>/s) July 19, 1948, gage height, 3.75 ft (1.143 m), from rating curve extended above 200 ft<sup>3</sup>/s (5.7 m<sup>3</sup>/s); maximum gage height, 5.06 ft (1.542 m) June 8, 1979, backwater from debris; minimum discharge, 3.3 ft<sup>3</sup>/s (0.093 m<sup>3</sup>/s) May 7, 1977. Maximum gage height observed, 5.45 ft (1.661 m), site and datum then in use, Aug. 23, 1935; discharge uncertain, but probably exceeded 1,200 ft<sup>3</sup>/s (34 m<sup>3</sup>/s). A minimum daily discharge of 3 ft<sup>3</sup>/s (0.08 m<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 above base of 75 ft<sup>3</sup>/s (2.1 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Aug. 24	2030	*118 3.34	3.29 1.003	Sept. 19	1900	83 2.35	3.03 0.924

Minimum discharge, 5.2 ft<sup>3</sup>/s (0.15 m<sup>3</sup>/s) Apr. 28, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	7.7	8.4	17	14	17	13	9.8	53	34	11	23
2	7.9	7.8	9.1	16	12	17	15	24	52	29	12	23
3	8.8	7.9	11	13	14	17	16	30	48	25	13	22
4	7.5	8.0	15	10	14	16	16	39	43	25	18	22
5	7.5	7.9	18	18	12	16	17	44	45	22	18	21
6	7.6	8.1	16	18	9.4	15	15	42	42	21	17	20
7	7.6	8.8	16	16	12	14	14	38	42	21	16	18
8	7.5	8.5	16	11	16	15	13	32	42	26	15	19
9	7.5	8.1	16	14	16	15	12	23	46	33	15	19
10	7.4	8.2	15	15	16	15	11	23	48	29	15	18
11	7.4	8.2	16	15	16	16	11	23	48	29	20	22
12	7.5	8.3	15	18	15	23	14	24	46	20	17	29
13	7.5	8.3	15	16	15	23	15	24	50	16	16	36
14	7.6	8.3	15	12	16	20	18	20	53	12	16	46
15	7.6	8.6	15	15	16	18	20	17	53	11	17	50
16	7.5	8.6	15	15	15	17	21	16	49	11	18	47
17	7.5	8.6	14	16	16	16	18	13	48	11	18	50
18	7.6	8.6	13	16	16	17	19	8.0	52	11	18	58
19	7.6	8.6	17	17	16	17	17	7.0	59	13	17	73
20	7.6	8.8	17	15	17	16	7.8	7.4	53	12	18	78
21	7.7	8.9	16	15	17	14	6.2	8.7	49	11	16	74
22	7.6	9.0	16	14	17	13	6.8	19	49	11	16	71
23	7.6	9.0	13	13	17	13	5.9	34	42	10	19	67
24	7.7	9.0	10	15	17	13	6.0	36	40	10	30	63
25	7.7	8.7	13	15	17	13	5.8	37	40	10	31	62
26	7.7	8.4	13	15	16	14	5.7	37	39	10	30	62
27	7.8	8.7	19	15	17	14	5.6	40	37	12	27	63
28	7.8	8.9	16	14	18	13	5.6	46	36	13	24	61
29	7.9	9.6	16	14	---	13	5.5	58	37	17	25	56
30	7.7	8.8	17	14	---	13	5.6	59	36	14	24	50
31	7.7	---	17	13	---	13	---	52	---	13	23	---
TOTAL	236.9	254.9	458.5	460	429.4	486	361.5	890.9	1377	542	590	1323
MEAN	7.64	8.50	14.8	14.6	15.3	15.7	12.1	28.7	45.9	17.5	19.0	44.1
MAX	8.8	9.6	19	18	18	23	21	59	59	34	31	73
MIN	7.3	7.7	8.4	10	9.4	13	5.5	7.0	36	10	11	16
AC-FT	470	506	909	912	852	964	717	1770	2730	1080	1170	2620

CAL YR 1981 TOTAL 3693.0 MEAN 10.1 MAX 19 MIN 6.0 AC-FT 7330  
WTR YR 1982 TOTAL 7410.1 MEAN 20.3 MAX 78 MIN 5.5 AC-FT 14700

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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RIO GRANDE BASIN  
08268500 ARROYO HONDO AT ARROYO HONDO, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 07...	1630	0	--	<10	4	7	<10	50	4
NOV 03...	1400	<1	--	<10	4	8	<10	10	4
AUG 19...	1330	--	2	<3	8	3	7	10	<3

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)
OCT 07...	80
NOV 03...	9

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 07...	1630	7.3	17.0	13	.26
NOV 03...	1400	7.9	11.5	127	2.7
AUG 19...	1330	16	21.0	27	1.2

## 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 (110 m) downstream from Arroyo Hondo, 400 ft (120 m) downstream from bridge on county road, 2.2 mi (3.5 km) west of Arroyo Hondo, 11.6 mi (18.7 km) northwest of Taos, and at mile 1,677.4 (2,698.9 km).

DRAINAGE AREA.--8,760 mi<sup>2</sup> (22,690 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<sup>2</sup>) in closed basin in San Luis Valley, CO.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,470 ft (1,972 m), from topographic map.

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres (2,500 km<sup>2</sup>) in Colorado and 15,000 acres (61 km<sup>2</sup>) in New Mexico. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 582 ft<sup>3</sup>/s (16.48 m<sup>3</sup>/s), 421,700 acre-ft/yr (520 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft<sup>3</sup>/s (177 m<sup>3</sup>/s) June 11, 1979, gage height, 7.34 ft (2.237 m); minimum, 136 ft<sup>3</sup>/s (3.85 m<sup>3</sup>/s) Aug. 2, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft<sup>3</sup>/s (40 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 7	0145	1800 51.0	3.87 1.180	June 21	0800	2060 58.3	4.20 1.280
June 1	0915	*2230 63.2	4.33 1.320	Sept. 24	0615	1740 49.3	3.86 1.177

Minimum discharge, 196 ft<sup>3</sup>/s (5.55 m<sup>3</sup>/s) Dec. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	420	381	282	435	592	567	803	2190	1870	724	620
2	253	428	266	285	425	622	537	975	2080	1860	727	506
3	258	421	308	272	417	621	534	1260	1770	1810	643	475
4	255	422	315	262	426	628	532	1530	1680	1720	644	569
5	249	499	365	268	421	647	538	1670	1850	1550	653	620
6	241	593	381	309	404	596	533	1770	1900	1480	715	614
7	255	648	390	333	398	552	528	1750	1850	1430	720	658
8	276	653	412	334	400	525	513	1630	1700	1330	675	696
9	244	658	416	343	391	495	497	1490	1570	1380	642	716
10	235	669	405	349	393	503	454	1470	1620	1220	662	668
11	241	674	411	369	395	523	409	1580	1710	1070	738	684
12	234	672	411	377	407	548	394	1580	1740	1190	725	764
13	290	645	384	379	400	569	400	1610	1720	1100	742	783
14	312	623	352	376	408	602	472	1540	1740	961	717	736
15	348	619	330	384	416	610	560	1350	1750	889	680	878
16	450	615	320	375	414	601	575	1180	1740	901	698	1060
17	494	606	303	375	417	589	617	1110	1730	808	694	1070
18	506	597	271	378	422	578	661	1150	1770	723	744	1140
19	518	587	256	384	429	564	644	1160	1810	690	684	1360
20	505	571	250	384	437	559	670	1170	1960	728	624	1350
21	495	553	315	390	450	542	691	1190	2020	676	619	1360
22	464	531	339	400	460	517	610	1190	1930	595	608	1520
23	455	502	277	394	475	497	545	1120	1760	525	599	1650
24	450	498	234	395	488	485	499	1320	1610	474	691	1680
25	443	524	260	399	519	483	512	1300	1580	445	847	1460
26	454	530	279	402	508	488	514	1300	1610	431	897	1340
27	454	521	288	403	548	486	507	1380	1610	445	1010	1260
28	452	463	282	406	571	509	566	1530	1650	435	1160	1210
29	442	443	271	418	---	522	630	1790	1720	425	991	1120
30	402	407	266	420	---	526	701	1790	1820	511	736	1080
31	382	---	266	418	---	542	---	1920	---	597	717	---
TOTAL	11309	16592	10004	11263	12274	17121	16410	43603	53190	30269	22726	29647
MEAN	365	553	323	363	438	552	547	1407	1773	976	733	988
MAX	518	674	416	420	571	647	701	1920	2190	1370	1160	1680
MIN	234	407	234	262	391	483	394	803	1570	425	599	475
AC-FT	22430	32910	19840	22340	24350	33960	32550	86500	105500	60040	45080	58800
CAL YR 1981	TOTAL	120155	MEAN 329	MAX 674	MIN 188	AC-FT 238300						
WTR YR 1982	TOTAL	274413	MEAN 752	MAX 2190	MIN 234	AC-FT 544300						

## 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 (3.7 km) east of Taos Pueblo, 4.5 mi (7.2 km) northeast of Taos, 5.8 mi (9.3 km) upstream from Rio Lucero, and at mile 15.1 (24.3 km).

DRAINAGE AREA.--66.6 mi<sup>2</sup> (172.5 km<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. Altitude of gage is 7,380 ft (2,249 m), from topographic map. See WSP 1923 for history of changes prior to Nov. 20, 1962.

REMARKS.--Records good except those for winter period, which are fair. No diversions above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years (water years 1911-16, 1941-51, 1963-82), 28.1 ft<sup>3</sup>/s (0.796 m<sup>3</sup>/s), 20,360 acre-ft/yr (25.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft<sup>3</sup>/s (29.7 m<sup>3</sup>/s) May 26, 1979, gage height, 3.42 ft (1.042 m), from rating curve extended above 370 ft<sup>3</sup>/s (10 m<sup>3</sup>/s); maximum gage height, 3.90 ft (1.189 m), from floodmark, May 14, 1941, site and datum then in use; minimum discharge, about 0.9 ft<sup>3</sup>/s (0.03 m<sup>3</sup>/s) Jan. 9, 1964, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft<sup>3</sup>/s (1.7 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Apr. 15	2245	70 1.98	1.28 0.390	May 22	2245	*145 4.11	1.67 0.509
May 4	0300	142 4.02	1.66 .506	Sept. 18	2030	63 1.78	1.25 .381

Minimum discharge, 2.7 ft<sup>3</sup>/s (0.076 m<sup>3</sup>/s) Dec. 18, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	4.8	3.8	5.6	5.0	8.0	16	94	116	44	22	23
2	6.0	4.9	4.4	5.5	4.8	9.0	21	109	114	40	20	23
3	10	4.9	6.0	5.0	4.6	9.1	19	115	109	39	20	27
4	8.0	4.9	5.9	4.5	4.4	8.5	21	136	102	36	18	25
5	6.8	4.9	5.7	6.0	4.2	7.6	26	128	100	34	17	23
6	6.2	4.9	5.7	5.9	4.0	5.7	26	102	88	32	18	20
7	6.2	5.2	5.6	5.9	4.0	5.5	24	79	81	29	21	23
8	6.1	5.7	5.5	5.5	4.5	6.9	20	71	82	28	25	24
9	6.0	5.5	5.4	5.0	5.0	6.9	18	75	83	26	20	23
10	5.9	5.2	5.3	5.0	5.6	7.2	17	87	83	25	19	21
11	5.8	5.0	5.6	5.2	5.6	8.6	19	96	51	25	33	23
12	5.7	5.1	5.6	5.4	5.6	28	40	100	80	23	29	27
13	5.7	5.1	5.6	5.4	5.0	23	53	90	85	22	26	36
14	5.7	5.0	5.3	5.0	5.5	15	60	74	91	21	28	34
15	5.8	4.9	4.8	5.0	5.9	13	64	65	89	20	24	32
16	5.9	4.7	4.5	5.2	5.6	11	62	61	81	19	22	30
17	5.9	4.7	4.1	5.4	5.7	11	54	59	76	19	24	39
18	5.5	4.6	4.1	5.5	5.6	13	56	63	75	19	21	46
19	5.5	3.8	5.3	5.3	5.5	13	58	75	75	19	21	62
20	5.5	3.4	5.6	5.3	5.7	11	54	90	69	19	22	56
21	5.4	4.5	5.6	5.1	6.0	10	44	102	65	16	21	51
22	5.4	4.8	5.5	5.0	6.7	10	36	112	61	15	25	47
23	5.5	4.7	5.0	4.8	7.9	10	31	127	58	15	25	42
24	5.5	4.7	4.5	5.0	8.7	11	29	119	56	14	26	39
25	5.5	4.7	4.0	5.3	7.9	12	26	115	55	14	40	35
26	5.5	4.4	4.5	5.3	6.3	14	24	115	56	15	39	32
27	5.5	3.8	5.0	5.1	7.5	14	25	124	53	16	36	30
28	5.5	5.1	5.2	5.2	6.8	13	31	123	50	17	34	28
29	5.2	5.1	5.3	5.3	---	15	46	133	48	25	31	27
30	4.9	5.0	5.2	4.9	---	14	72	132	47	23	28	25
31	4.9	---	5.3	5.0	---	13	---	121	---	25	26	---
TOTAL	182.3	144.0	158.9	162.6	159.6	357.0	1092	3092	2309	734	781	973
MEAN	5.88	4.80	5.13	5.25	5.70	11.5	36.4	99.7	77.0	23.7	25.2	32.4
MAX	10	5.7	6.0	6.0	8.7	28	72	136	116	44	40	62
MIN	4.9	3.4	3.8	4.5	4.0	5.5	16	59	47	14	17	20
AC-FT	362	286	315	323	317	708	2170	6130	4580	1460	1550	1930

CAL YR 1981	TOTAL	3347.8	MEAN	9.17	MAX	30	MIN	3.4	AC-FT	6640
WTR YR 1982	TOTAL	10145.4	MEAN	27.8	MAX	136	MIN	3.4	AC-FT	20120

## 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 (61 m) upstream from diversion dam for Tenorio and Indian ditches, 2.2 mi (3.5 km) east of Arroyo Seco, 7.4 mi (11.9 km) northeast of Taos, and at mile 8.1 (13.0 km).

DRAINAGE AREA.--16.6 mi<sup>2</sup> (43.0 km<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 (2,454.070 m) National Geodetic Vertical Datum of 1929. See WSP 1923 for history of changes prior to Nov. 21, 1962.

REMARKS.--Records good. No diversions above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years (water years 1911-15, 1934-51, 1963-82), 21.5 ft<sup>3</sup>/s (0.609 m<sup>3</sup>/s), 15,580 acre-ft/yr (19.2 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 310 ft<sup>3</sup>/s (8.78 m<sup>3</sup>/s) June 8, 1979, gage height, 2.33 ft (0.710 m); maximum gage height, 3.12 ft (0.951 m), May 13, 1941, datum then in use; minimum discharge, about 1.4 ft<sup>3</sup>/s (0.04 m<sup>3</sup>/s) Nov. 2, 1951, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 98 ft<sup>3</sup>/s (2.78 m<sup>3</sup>/s) at 2200 hours June 14, gage height, 1.72 ft (0.524 m), no other peak above base of 70 ft<sup>3</sup>/s (2.0 m<sup>3</sup>/s); minimum, 3.0 ft<sup>3</sup>/s (0.085 m<sup>3</sup>/s) Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	6.6	5.0	4.8	4.5	6.7	7.2	35	80	55	31	30
2	8.8	6.5	4.5	4.7	4.4	6.9	7.8	37	79	53	31	29
3	13	6.5	6.0	4.5	4.4	6.7	8.0	40	77	50	31	28
4	9.1	6.4	6.6	4.2	4.3	6.2	8.7	44	73	48	28	27
5	8.5	6.3	6.9	4.8	4.0	5.9	9.9	42	75	46	27	25
6	8.1	6.2	6.6	4.8	3.8	5.7	10	37	70	43	27	24
7	8.1	6.6	6.5	4.8	3.5	5.5	9.5	31	67	41	27	25
8	8.4	6.7	6.0	4.8	4.0	5.4	8.8	29	71	40	26	24
9	8.3	6.5	5.5	4.7	4.4	5.5	8.2	30	73	38	25	23
10	8.1	6.3	5.5	4.6	4.4	5.7	8.0	35	73	37	24	22
11	7.9	6.3	5.3	4.7	4.6	6.1	9.5	39	70	35	32	25
12	7.9	6.2	5.1	4.7	4.4	9.0	14	42	74	33	30	30
13	8.0	6.2	4.9	4.6	4.3	7.1	16	38	83	31	29	37
14	7.7	6.2	4.8	4.5	4.4	6.8	20	33	90	30	28	39
15	8.2	6.1	4.8	4.7	4.4	6.6	23	29	84	29	27	39
16	8.1	6.0	4.8	4.6	4.4	6.3	23	26	73	28	26	39
17	8.1	5.9	4.7	4.6	4.6	6.5	20	26	70	30	27	41
18	7.8	5.8	4.5	4.5	4.6	6.8	20	27	72	30	24	48
19	7.7	5.2	5.0	4.6	4.6	6.6	20	34	72	28	24	57
20	7.7	5.5	5.0	4.6	4.7	6.4	19	42	68	26	24	56
21	7.7	6.3	5.0	4.6	5.2	6.4	16	49	64	24	24	51
22	7.7	6.3	5.0	4.5	5.8	6.1	14	56	64	23	25	46
23	7.7	6.2	4.6	4.3	5.9	5.9	13	59	63	22	25	42
24	7.7	5.9	4.3	4.3	5.9	5.8	12	59	63	22	27	39
25	7.7	5.6	4.5	4.4	5.7	6.1	11	59	65	22	40	36
26	7.4	4.6	4.6	4.5	5.3	6.4	11	60	66	23	44	34
27	7.3	6.4	4.8	4.6	5.5	6.5	11	67	64	22	44	32
28	7.3	5.9	4.8	4.6	5.9	6.7	13	71	63	23	41	31
29	7.2	5.6	4.7	4.6	---	7.0	18	79	63	28	38	28
30	6.9	5.1	4.7	4.5	---	6.8	26	82	58	27	36	27
31	6.9	---	4.8	4.5	---	7.0	---	78	---	31	33	---
TOTAL	248.6	181.9	159.8	142.2	131.9	199.1	415.6	1415	2127	1018	925	1034
MEAN	8.02	6.06	5.15	4.59	4.71	6.42	13.9	45.6	70.9	32.8	29.8	34.5
MAX	13	6.7	6.9	4.8	5.9	9.0	26	82	90	55	44	57
MIN	6.9	4.6	4.3	4.2	3.5	5.4	7.2	26	58	22	24	22
AC-FT	493	361	317	282	262	395	824	2810	4220	2020	1830	2050
CAL YR 1981	TOTAL	4013.4	MEAN 11.0	MAX 45	MIN 2.0	AC-FT 7960						
WTR YR 1982	TOTAL	7998.1	MEAN 21.9	MAX 90	MIN 3.5	AC-FT 15860						



## 08275500 RIO GRANDE DEL RANCHO NEAR TALPA, NM

LOCATION.--Lat 36°17'52", long 105°34'55", Taos County, Hydrologic Unit 13020101, in Carson National Forest, Rancho del Rio Grande Grant, on right bank 1.4 mi (2.3 km) downstream from Rito de la Olla (locally known as Pot Creek), 3.2 mi (5.1 km) south of Talpa, 4.3 mi (6.9 km) upstream from Rio Chiquito, and at mile 6.9 (11.1 km).

DRAINAGE AREA.--83 mi<sup>2</sup> (210 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 7,238 ft (2,206 m), from topographic map. Prior to Nov. 11, 1952, nonrecording gage at site 1,035 ft (320 m) downstream at lower datum. Nov. 11, 1952 to Nov. 5, 1968, water-stage recorder at site 1,000 ft (300 m) downstream at lower datum. Nov. 6, 1968 to Aug. 28, 1980, water-stage recorder at present site on left bank at same datum.

REMARKS.--Records good except those for December, January, April, and May, which are fair. Minor diversions for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 19.7 ft<sup>3</sup>/s (0.558 m<sup>3</sup>/s), 14,270 acre-ft/yr (17.6 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 497 ft<sup>3</sup>/s (14.1 m<sup>3</sup>/s) May 21, 1973, gage height 3.87 ft (1.180 m); maximum gage height, 4.01 ft (1.222 m) Sept. 10, 1964, site and datum then in use; minimum discharge, 0.2 ft<sup>3</sup>/s (0.01 m<sup>3</sup>/s) Jan. 5, 1955, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft<sup>3</sup>/s (1.7 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 5	unknown	92 2.61	1.63 0.497	May 30	0415	- -	*1.90 0.579
May 29	0700	*129 3.65	1.89 .576				

Minimum discharge, 1.6 ft<sup>3</sup>/s (0.045 m<sup>3</sup>/s) Dec. 18, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	3.7	2.7	4.0	4.1	5.3	9.6	30	112	22	11	8.6
2	2.5	3.5	2.8	4.0	3.0	5.5	11	40	108	17	8.6	8.1
3	3.7	3.5	3.7	3.0	4.4	5.5	10	60	102	16	7.9	8.8
4	5.0	3.6	3.7	2.0	4.4	5.5	11	80	95	15	9.1	8.1
5	4.9	3.7	3.7	3.0	4.4	5.5	12	100	89	14	7.9	7.3
6	4.5	3.7	3.6	4.0	3.8	4.2	13	80	83	13	8.5	6.9
7	4.1	3.7	3.7	3.5	4.7	3.8	13	60	74	13	9.2	8.6
8	3.8	4.1	3.7	3.0	4.6	5.4	13	55	68	12	8.9	9.3
9	3.7	4.2	3.8	4.1	4.2	5.4	13	58	64	12	7.6	7.3
10	3.5	4.2	3.8	4.4	4.3	5.5	11	67	61	10	6.4	6.6
11	3.4	4.0	4.0	4.2	4.3	5.9	11	75	58	9.8	6.3	7.0
12	3.3	4.0	3.7	4.6	4.6	9.5	16	81	56	9.3	6.0	11
13	3.2	4.0	3.7	4.1	4.4	9.0	23	79	54	9.5	6.4	13
14	3.2	4.0	3.9	3.3	4.5	8.6	30	70	53	8.8	7.8	9.3
15	3.3	4.0	3.7	4.2	4.5	8.3	34	64	51	8.2	6.8	7.9
16	3.3	4.0	4.0	3.8	4.2	7.4	35	59	47	7.5	7.3	7.3
17	3.4	4.6	2.9	4.1	4.4	7.4	32	58	43	7.3	8.6	9.1
18	3.4	4.1	2.8	4.0	4.1	7.7	33	60	39	7.0	7.5	12
19	3.4	3.7	4.0	4.1	4.1	7.6	34	70	38	6.9	7.2	15
20	3.4	3.1	4.0	4.0	4.2	6.7	35	82	36	7.3	7.5	12
21	3.4	3.1	3.5	3.5	4.4	5.9	31	94	34	6.9	7.0	11
22	3.4	3.1	3.6	3.7	4.4	6.2	29	107	30	6.1	8.0	9.9
23	3.5	3.2	2.5	3.3	4.7	6.5	27	119	27	6.0	8.6	9.5
24	3.5	3.2	2.0	4.1	5.0	6.4	27	122	24	5.7	11	9.2
25	3.5	3.5	2.5	4.2	5.0	6.9	25	117	23	5.6	15	9.0
26	3.6	3.5	3.0	4.1	4.7	7.6	20	114	22	5.9	11	8.7
27	3.5	3.5	4.0	4.4	4.9	3.1	15	122	20	6.1	9.2	8.6
28	3.5	3.5	3.8	3.9	5.1	8.5	12	124	19	7.9	9.6	8.5
29	3.5	3.9	3.5	4.3	---	9.3	15	127	19	15	9.1	8.5
30	3.5	4.1	3.8	3.4	---	8.9	20	125	19	20	9.8	8.0
31	3.6	---	4.0	3.2	---	8.4	---	119	---	16	9.7	---
TOTAL	109.8	112.0	108.1	117.5	123.4	212.4	620.6	2618	1568	326.8	264.5	274.1
MEAN	3.54	3.73	3.49	3.79	4.41	6.85	20.7	84.5	52.3	10.5	8.53	9.14
MAX	5.0	4.6	4.0	4.6	5.1	9.5	35	127	112	22	15	15
MIN	2.3	3.1	2.0	2.0	3.0	3.8	9.6	30	19	5.6	6.0	6.6
AC-FT	218	222	214	233	245	421	1230	5190	3110	648	525	544
CAL YR 1981	TOTAL	2051.0	MEAN	5.62	MAX	18	MIN	2.0	AC-FT	4070		
WTR YR 1982	TOTAL	6455.2	MEAN	17.7	MAX	127	MIN	2.0	AC-FT	12800		

## 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 (3.1 km) southwest of Los Cordovas, 2.5 mi (4.0 km) downstream from Rio Grande del Rancho, and at mile 5.1 (8.2 km).

DRAINAGE AREA.--380 mi<sup>2</sup> (984 km<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. Concrete control since July 16, 1963. Altitude of gage is 6,652 ft (2,028 m), from topographic map.

REMARKS.--Records fair. Diversions for irrigation of about 12,000 acres (49 km<sup>2</sup>) above station, of which about 1,700 acres (6.9 km<sup>2</sup>) is irrigated by water from Rio Hondo. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 51.1 ft<sup>3</sup>/s (1.447 m<sup>3</sup>/s), 37,020 acre-ft/yr (45.6 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,380 ft<sup>3</sup>/s (67.4 m<sup>3</sup>/s) Aug. 24, 1957, gage height, 5.80 ft (1.768 m), from rating curve extended above 900 ft<sup>3</sup>/s (25 m<sup>3</sup>/s); minimum, 1.9 ft<sup>3</sup>/s (0.054 m<sup>3</sup>/s) July 31, Aug. 1, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 230 ft<sup>3</sup>/s (6.5 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 22	2115	324 9.18	3.15 0.960	Aug. 23	1615	1210 34.3	5.06 1.542
July 30	1930	*1580 44.7	6.00 1.829	Sept. 12	1830	297 8.41	3.00 .914

Minimum discharge, 6.6 ft<sup>3</sup>/s (0.19 m<sup>3</sup>/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	11	19	29	24	33	32	78	191	50	22	31
2	8.8	12	18	29	23	34	35	100	189	44	19	31
3	12	12	18	25	22	34	36	124	175	37	23	32
4	9.6	12	19	22	21	30	35	174	151	35	20	33
5	9.0	12	20	26	20	29	37	191	140	33	20	32
6	9.0	12	20	26	19	29	43	174	114	28	20	30
7	9.3	13	20	27	19	28	43	121	96	26	23	30
8	9.0	16	21	25	22	27	39	88	91	24	24	34
9	9.1	14	21	23	23	28	36	83	91	23	21	33
10	9.0	14	22	24	25	27	31	101	89	20	19	30
11	8.9	14	22	25	24	28	27	108	89	19	27	39
12	8.9	15	22	26	24	39	37	123	86	19	28	61
13	9.0	14	22	25	24	46	59	137	84	18	27	53
14	9.0	14	22	25	24	40	77	113	87	18	24	44
15	9.2	14	22	25	24	35	85	85	86	17	23	39
16	9.1	15	22	25	25	34	88	67	88	15	21	37
17	9.1	15	20	25	29	31	66	58	82	15	21	48
18	9.4	15	20	25	28	29	56	57	82	13	22	73
19	10	15	21	25	31	29	56	65	89	13	21	86
20	10	15	22	26	40	28	58	93	83	13	22	81
21	10	17	22	27	39	27	52	124	83	13	22	77
22	10	17	22	26	36	27	45	188	74	12	23	74
23	10	18	21	24	35	27	40	268	69	12	98	69
24	11	18	20	25	32	27	38	264	63	10	48	60
25	10	19	19	26	31	27	33	244	61	11	64	55
26	10	19	22	27	31	30	27	213	59	11	40	48
27	11	19	25	28	34	32	26	224	52	12	36	46
28	11	19	25	26	37	30	25	250	49	16	34	44
29	11	20	25	25	---	31	30	263	46	25	33	43
30	11	21	25	25	---	32	46	250	49	150	32	44
31	11	---	25	25	---	31	---	216	---	64	33	---
TOTAL	300.3	461	664	792	766	959	1338	4644	2790	816	910	1437
MEAN	9.69	15.4	21.4	25.5	27.4	30.9	44.6	150	93.0	26.3	29.4	47.9
MAX	12	21	25	29	40	46	88	268	191	150	98	86
MIN	6.9	11	18	22	19	27	25	57	48	10	19	30
AC-FT	596	914	1320	1570	1520	1900	2650	9210	5530	1620	1800	2850

CAL YR 1981	TOTAL	5885.9	MEAN 16.1	MAX 153	MIN 3.8	AC-FT 11670
WTR YR 1982	TOTAL	15877.3	MEAN 43.5	MAX 268	MIN 6.9	AC-FT 31490

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 (2.7 km) downstream from bridge on State Highway 96, 2.0 mi (3.2 km) downstream from Rio Pueblo de Taos, 11.8 mi (19.0 km) southwest of Taos, and at mile 1,657.7 (2,667.2 km).

WATER-DISCHARGE RECORDS

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft<sup>3</sup>/s (45 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	(m <sup>3</sup> /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft <sup>3</sup> /s)	(m <sup>3</sup> /s)	Gage height (ft)	(m)
May 6	0530	2000	56.6	5.53	1.686	Aug. 23	1630	1690	47.9	5.28	1.609
June 2	0430	2500	70.8	5.88	1.792	Aug. 24	2300	2520	71.4	5.89	1.795
July 30	2115	*7680	217	8.43	2.569	Sept. 24	1030	1880	53.2	5.43	1.655

Minimum discharge, 212 ft<sup>3</sup>/s (6.00 m<sup>3</sup>/s) Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	270	413	417	315	450	628	606	835	2420	1990	735	685
2	273	432	331	323	441	650	592	994	2370	1970	778	577
3	289	426	296	302	445	666	581	1290	2040	1910	694	503
4	284	426	315	288	446	652	577	1670	1870	1830	701	607
5	274	476	367	300	439	683	586	1860	2020	1650	708	659
6	267	578	386	328	421	645	591	1970	2060	1560	739	653
7	272	642	391	356	428	594	585	1910	2030	1510	762	685
8	300	656	407	350	430	568	569	1760	1870	1400	725	730
9	274	656	420	364	417	538	551	1600	1730	1440	688	759
10	256	668	409	370	422	537	510	1570	1760	1310	686	711
11	266	672	410	387	424	556	460	1690	1850	1120	734	765
12	257	673	428	400	429	588	447	1710	1890	1210	770	830
13	300	651	396	399	425	618	463	1740	1860	1180	782	862
14	334	634	375	392	436	640	530	1690	1880	1020	761	793
15	361	628	359	404	444	649	643	1460	1890	933	726	382
16	452	626	335	397	442	636	649	1270	1890	934	732	1070
17	501	619	323	397	455	628	675	1170	1880	865	741	1150
18	515	610	306	399	456	603	696	1180	1910	772	764	1220
19	532	601	276	408	467	594	707	1220	1960	723	742	1470
20	516	588	265	409	482	587	705	1260	2110	757	672	1510
21	507	579	328	411	498	571	740	1310	2200	731	663	1480
22	477	562	353	421	505	548	659	1380	2100	645	653	1630
23	471	535	325	412	517	535	602	1360	1920	580	768	1760
24	469	520	263	422	527	527	546	1510	1740	519	836	1620
25	453	544	254	420	562	526	536	1550	1680	486	1070	1590
26	469	554	303	426	547	530	542	1500	1720	464	943	1440
27	469	556	316	429	584	532	527	1580	1720	482	1070	1340
28	460	506	315	429	614	545	566	1750	1760	480	1200	1280
29	456	470	304	440	---	561	637	2020	1810	483	1100	1190
30	416	451	301	439	---	569	713	2050	1900	1110	795	1130
31	394	---	301	444	---	577	---	2120	---	815	765	---
TOTAL	11844	16952	10575	11981	13153	18281	17791	47979	57840	32879	24553	31781
MEAN	382	565	341	386	470	590	593	1548	1928	1061	792	1059
MAX	532	673	428	444	614	683	740	2120	2420	1990	1200	1820
MIN	256	413	254	288	417	526	447	835	1680	464	653	503
AC-FT	23490	33620	20980	23760	26090	36260	35290	95170	114700	65220	48700	63040
CAL YR 1981	TOTAL		127516	MEAN	349	MAX	673	MIN	214	AC-FT	252900	
WTR YR 1982	TOTAL		295609	MEAN	810	MAX	2420	MIN	254	AC-FT	586300	

RIO GRANDE BASIN  
08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT 07...	0930	274	258	254	8.1	8.4	--	12.5	3.0	9.5
NOV 02...	1600	432	212	221	8.0	7.1	--	8.0	3.0	--
FEB 17...	1515	445	220	212	7.9	8.3	9.0	6.0	--	10.4
MAR 23...	1130	540	220	216	7.7	8.4	13.0	7.0	--	10.3
APR 27...	0932	520	200	222	7.8	7.3	--	10.5	--	9.2
JUN 07...	1400	2020	168	179	7.7	8.2	--	14.0	--	9.6
JUL 08...	0930	1370	195	217	7.8	7.9	--	16.0	--	7.5
AUG 18...	1500	843	--	193	--	8.0	--	21.0	--	6.9
SEP 15...	1430	909	200	215	--	7.3	22.0	15.0	--	8.0

DATE	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)	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 FETFLD AS HCO3) (00440)	CAR- BONATE FETFLD AS CO3) (00445)
OCT 07...	14	95	5	28	6.2	20	.9	3.5	110	0
NOV 02...	21	77	3	23	4.8	14	.7	2.5	90	0
FEB 17...	22	86	4	26	5.2	15	.7	2.7	100	0
MAR 23...	11	82	0	25	4.7	13	.7	2.9	88	0
APR 27...	42	77	1	23	4.8	13	.7	2.6	--	--
JUN 07...	--	66	19	20	3.8	9.4	.5	2.5	--	--
JUL 08...	15	71	9	21	4.4	13	.7	2.8	76	0
AUG 18...	27	66	4	20	4.0	10	.6	2.6	76	0
SEP 15...	17	76	0	23	4.4	13	.7	3.3	--	--

DATE	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, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00613)
OCT 07...	90	38	5.4	.6	27	184	.08	--	.040	--
NOV 02...	74	24	4.2	.4	25	144	.18	.22	.030	.020
FEB 17...	82	30	4.3	.5	29	167	--	--	--	--
MAR 23...	72	30	4.3	.4	26	155	--	--	--	--
APR 27...	--	29	4.3	.4	25	--	--	--	--	--
JUN 07...	--	27	2.7	.2	20	--	--	--	--	--
JUL 08...	62	36	3.6	.3	19	134	--	--	--	--
AUG 18...	62	22	2.8	.3	23	134	--	--	--	--
SEP 15...	--	25	4.3	.3	22	143	--	--	--	--

RIO GRANDE BASIN  
08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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)	CYANIDE TOTAL (MG/L AS CN) (00720)
OCT 07...	.12	.12	.120	--	.28	.52	.080	.080	2.5	>.01
NOV 02...	.21	.24	.140	.130	.36	.71	.050	.040	2.5	.01
FEB 17...	.39	.43	.080	--	.31	.78	.100	.080	1.7	<.01
MAR 23...	.20	.22	.090	--	.59	.88	.090	.050	2.7	<.01
APR 27...	.16	.25	.150	--	.85	1.2	.100	.060	--	<.01
JUN 07...	<.10	<.10	.080	--	.82	--	.150	.050	--	<.01
JUL 08...	<.10	.10	.080	--	.72	--	.150	.050	4.5	<.01
AUG 18...	.11	.32	.100	--	2.1	2.3	.190	.050	4.3	<.01
SEP 15...	.10	.14	<.060	--	--	.80	.230	.060	4.6	<.01

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT 07...	0930	4	2	40	0	<1	0	10	14	2	--
NOV 02...	1600	3	2	20	<1	<1	<10	<10	2	2	--
FEB 17...	1515	3	3	30	<1	<1	10	<10	9	2	12
MAR 23...	1130	--	--	20	0	--	--	--	5	--	33
APR 27...	0932	--	--	30	0	--	--	--	2	--	82
JUN 07...	1400	--	--	20	0	--	--	--	3	--	120
JUL 08...	0930	--	--	20	0	--	--	--	3	--	66
AUG 18...	1500	--	--	20	0	--	--	--	7	--	55
SEP 15...	1430	--	--	30	0	--	--	--	8	--	18

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 RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 07...	2	0	--	.0	.0	13	10	0	0	30	14
NOV 02...	4	<1	--	<.1	<.1	8	<10	<1	<1	10	10
FEB 17...	3	3	11	<.1	.2	9	<10	<1	<1	30	<3
MAR 23...	--	--	10	--	--	8	7	--	--	110	5
APR 27...	--	--	8	--	--	4	6	--	--	20	4
JUN 07...	--	--	9	--	--	5	2	--	--	20	13
JUL 08...	--	--	4	--	--	4	2	--	--	30	13
AUG 18...	--	--	8	--	--	3	8	--	--	20	3
SEP 15...	--	--	7	--	--	5	7	--	--	30	3

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)
MAR 23...	1130	--	--	--	--	<1	1	--
AUG 18...	1500	<2.0	9.2	390	4	<1	1	<10
DATE	TIME	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)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01063)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
MAR 23...	7	--	--	10	--	--	<1	--
AUG 18...	4	2000	<10	180	.01	--	10	--

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39516)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39330)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39350)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39360)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39365)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)
MAR 23...	1130	--	<1	--	<.1	--	<1.0	--	<.1	--	.5
AUG 18...	1500	<.10	--	<.01	--	<.10	--	<.01	--	<.01	--
DATE	TIME	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39370)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39388)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39410)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)
MAR 23...	--	<.1	--	<.1	--	--	<.1	--	<.1	--	--
AUG 18...	<.01	--	<.01	--	<.01	<.01	--	<.01	--	<.01	--
DATE	TIME	HEPTA- CHLOR EPOXIDE TOT. IN BOTOM MATL. (UG/KG) (39423)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39480)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
MAR 23...	<.1	--	<.1	--	<.1	--	<10	--	--	--	--
AUG 18...	--	<.01	--	<.01	--	<1	--	<.10	<.10	<.01	--

RIO GRANDE BASIN  
08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM -- Continued  
WATER-QUALITY RECORDS

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)
OCT	
07...	6
NOV	
02...	1
FEB	
17...	0
APR	
27...	32

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT					
07...	0930	274	12.5	38	28
NOV					
02...	1600	432	8.0	109	127
FEB					
17...	1515	445	6.0	26	31
MAR					
23...	1130	540	7.0	45	66
APR					
27...	0932	520	10.5	77	108
JUN					
07...	1400	2020	14.0	86	469
JUL					
08...	0930	1370	16.0	60	222
AUG					
18...	1500	843	21.0	181	412
SEP					
15...	1430	909	15.0	1250	3070



## 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 (230 m) upstream from U.S. Highway 64, 0.5 mi (0.8 km) upstream from mouth, 0.5 mi (0.8 km) east of Embudo Post Office, and 1.7 mi (2.7 km) northwest of Dixon.

DRAINAGE AREA.--305 mi<sup>2</sup> (790 km<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 (1,785.701 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 30, 1938, at site about 1 mi (2 km) upstream at different datums. Nov. 30, 1938 to Aug. 1, 1941, at site about 0.9 mi (1.4 km) upstream at datum about 59.9 ft (18.26 m) higher. Aug. 2, 1941 to Sept. 1, 1971, at site 750 ft (230 m) downstream at datum 9.10 ft (2.774 m) lower. April 1956 to Sept. 21, 1962, crest-stage gage.

REMARKS.--Water-discharge records good. Diversions above station for irrigation of about 6,500 acres (26 km<sup>2</sup>), a small part of which is below gage.

AVERAGE DISCHARGE.--51 years (water years 1924-25, 1927-55, 1963-82), 76.1 ft<sup>3</sup>/s (2.155 m<sup>3</sup>/s), 55,130 acre-ft/yr (68.0 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1941).--Maximum discharge, 4,200 ft<sup>3</sup>/s (119 m<sup>3</sup>/s) Aug. 29, 1977, gage height, 7.10 ft (2.164 m), from rating curve extended above 1,600 ft<sup>3</sup>/s (45 m<sup>3</sup>/s); maximum gage height, 7.6 ft (2.32 m) Aug. 4, 1967; minimum discharge, 0.06 ft<sup>3</sup>/s (0.002 m<sup>3</sup>/s) June 26, 27, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,680 ft<sup>3</sup>/s (47.6 m<sup>3</sup>/s) at 1945 hours July 30, gage height, 5.13 ft (1.564 m), from rating curve extended above 580 ft<sup>3</sup>/s (16 m<sup>3</sup>/s), no other peak above base of 800 ft<sup>3</sup>/s (23 m<sup>3</sup>/s); minimum, 7.6 ft<sup>3</sup>/s (0.22 m<sup>3</sup>/s) Dec. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	18	17	28	22	30	37	71	240	75	84	76
2	11	19	15	27	16	33	39	94	256	64	70	67
3	24	21	22	19	24	32	35	150	249	53	62	74
4	27	20	26	11	25	29	39	218	235	51	60	65
5	24	19	27	26	23	27	40	227	223	46	56	59
6	23	19	26	30	18	22	42	203	198	41	55	53
7	21	20	26	27	19	23	44	159	173	34	53	49
8	20	20	24	16	25	27	40	131	162	31	55	73
9	20	19	23	20	25	29	35	128	157	32	52	64
10	20	19	22	24	25	30	32	148	154	27	45	62
11	18	20	23	23	25	31	30	165	150	24	42	73
12	17	20	23	27	23	46	39	175	142	22	41	109
13	14	18	23	24	21	44	48	184	153	21	41	99
14	11	21	22	17	21	43	52	167	166	21	44	86
15	14	21	20	22	25	39	60	134	160	17	41	77
16	16	19	21	21	23	35	65	112	148	16	39	74
17	14	20	13	23	25	34	58	101	134	15	37	97
18	13	20	11	24	24	34	51	100	128	17	42	145
19	13	19	18	26	23	33	54	113	134	17	38	170
20	14	18	26	25	25	28	58	144	138	14	46	137
21	14	19	29	21	28	28	51	170	125	14	62	126
22	13	19	26	24	29	29	50	206	113	12	66	118
23	13	17	14	16	33	30	47	276	93	12	76	109
24	14	18	11	23	33	28	47	259	77	11	93	98
25	14	21	14	25	30	30	44	248	74	11	129	92
26	16	19	18	25	27	33	40	239	71	12	105	87
27	17	18	27	26	29	36	34	263	68	13	98	82
28	19	23	24	22	28	33	30	267	61	16	96	79
29	18	24	21	25	---	36	32	277	57	46	88	78
30	17	26	24	21	---	34	52	268	58	232	84	77
31	18	---	28	17	---	33	---	251	---	113	89	---
TOTAL	519	594	664	705	694	999	1325	5653	4297	1130	1989	2655
MEAN	16.7	19.8	21.4	22.7	24.8	32.2	44.2	182	143	36.5	64.2	88.5
MAX	27	26	29	30	33	46	65	277	256	232	129	170
MIN	11	17	11	11	16	22	30	71	57	11	37	49
AC-FT	1030	1180	1320	1400	1380	1980	2630	11210	8520	2240	3950	5270
CAL YR 1981	TOTAL	6678.4	MEAN	18.3	MAX	170	MIN	4.5	AC-FT	13250		
WTR YR 1982	TOTAL	21224.0	MEAN	58.1	MAX	277	MIN	11	AC-FT	42100		

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
OCT										
27...	1125	17	440	--	8.3	--	15.5	12.5	--	--
NOV										
24...	1320	17	420	392	7.6	8.2	15.5	10.0	215	25
DEC										
28...	1200	23	430	417	8.3	8.2	3.0	4.0	--	--
JAN										
26...	1000	20	380	393	8.6	8.1	3.0	3.0	--	--
FEB										
24...	1300	32	340	350	8.2	8.2	13.0	5.5	172	12
MAR										
25...	1400	26	356	--	8.2	--	16.0	13.0	--	--
APR										
27...	1200	37	320	326	8.2	8.1	12.0	13.0	--	--
MAY										
27...	1230	261	190	204	7.3	7.6	26.0	13.0	87	2
JUN										
29...	1200	70	290	--	8.2	--	26.0	17.5	--	--
JUL										
27...	0900	11	480	466	8.6	8.2	23.0	17.5	--	--
AUG										
27...	1600	98	270	317	8.2	8.7	31.0	21.0	148	16
SEP										
27...	1300	85	287	--	8.2	--	15.5	14.5	--	--

[illegible]

RIO GRANDE BASIN  
08279000 EMBUDO CREEK AT DIXON, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 24...	1320	20	17
FEB 24...	1300	20	20
MAY 27...	1230	<10	60
AUG 27...	1600	20	12

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 24...	1320	17	10.0	15	.69	--
MAY 27...	1230	261	13.0	182	128	47

08279500 RIO GRANDE AT EMBUDO, NM

LOCATION.--Lat 36°12'20", long 105°57'49", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.23, T.23 N., R.9 E., Rio Arriba County, Hydrologic Unit 13020101, on right bank 0.2 mi (0.3 km) downstream from bridge at Embudo, 2.8 mi (4.5 km) downstream from Embudo Creek, and at mile 1,643.1 (2,643.7 km).

DRAINAGE AREA.--10,400 mi<sup>2</sup> (26,940 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 (1,764.530 m) National Geodetic Vertical Datum of 1929. Jan. 1 to Feb. 28, 1889, nonrecording gage 1.2 mi (1.9 km) upstream at different datum. March 1889 to December 1903, nonrecording gage 1,300 ft (400 m) upstream at different datum. September 1912 to June 1914, water-stage recorder on downstream end of bridge pier at site 200 ft (60 m) upstream at present datum.

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres (2,500 km<sup>2</sup>) in Colorado and 40,000 acres (160 km<sup>2</sup>) 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 (35.06 m<sup>3</sup>/s), 896,900 acre-ft/yr (1.11 km<sup>3</sup>/yr); 52 years (water years 1931-82), 777 ft<sup>3</sup>/s (22.00 m<sup>3</sup>/s), 562,900 acre-ft/yr (694 hm<sup>3</sup>/yr), subsequent to upstream development.

EXTREMES FOR PERIOD OF RECORD (1889-1903 AND SINCE 1911).--Maximum discharge, 16,200 ft<sup>3</sup>/s (459 m<sup>3</sup>/s) June 19, 1903, gage height, about 15.9 ft (4.85 m); minimum daily, 130 ft<sup>3</sup>/s (3.68 m<sup>3</sup>/s) June 30, 1902. A flood of about 14,000 ft<sup>3</sup>/s (400 m<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 above base of 2,000 ft<sup>3</sup>/s (57 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 6	0500	2110 59.8	5.54 1.689	July 31	0115	*5010 142	8.56 2.609
June 2	0800	2670 75.6	6.16 1.878	Aug. 25	0230	2490 70.5	6.00 1.829

Minimum discharge, 240 ft<sup>3</sup>/s (6.80 m<sup>3</sup>/s) Dec. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	429	440	337	463	644	625	884	2550	2010	785	766
2	282	458	381	345	455	662	621	1050	2580	1980	836	655
3	310	454	324	321	467	688	602	1350	2300	1900	749	587
4	307	453	360	302	468	678	605	1800	2070	1820	705	638
5	295	479	401	323	453	706	611	1960	2180	1660	769	699
6	287	582	427	344	420	673	623	2070	2220	1540	761	700
7	285	641	428	375	420	619	618	2000	2180	1480	791	717
8	310	667	444	364	453	601	599	1850	2020	1380	762	790
9	296	664	452	375	440	566	581	1700	1860	1400	717	816
10	277	674	442	387	437	562	532	1670	1860	1310	688	781
11	277	678	446	399	442	581	484	1800	1940	1120	775	829
12	274	679	467	421	440	627	473	1840	1980	1160	773	924
13	291	663	430	417	436	660	494	1900	1960	1160	779	998
14	337	642	413	405	444	682	548	1850	2000	1030	775	900
15	359	632	398	412	460	688	670	1610	1990	935	739	943
16	435	629	369	412	454	672	688	1410	2000	923	728	1100
17	496	624	351	411	468	663	715	1290	1960	868	742	1230
18	508	617	329	414	467	647	719	1270	1980	774	748	1340
19	533	607	307	429	473	640	762	1330	2040	721	761	1570
20	523	595	301	431	486	621	751	1390	2180	739	689	1600
21	520	582	345	426	509	609	787	1450	2270	735	690	1550
22	493	566	375	442	519	588	720	1570	2190	652	686	1650
23	482	541	362	424	533	568	655	1640	1990	590	779	1800
24	480	525	292	437	544	550	600	1690	1780	525	780	1870
25	472	546	275	439	581	546	569	1780	1710	489	1250	1680
26	480	560	326	445	567	553	578	1700	1730	467	1010	1530
27	482	555	341	450	587	561	554	1790	1720	478	1090	1430
28	480	527	337	445	621	561	579	1960	1740	484	1210	1370
29	478	478	321	457	---	582	647	2190	1790	525	1170	1290
30	450	477	321	453	---	589	744	2280	1880	818	836	1220
31	421	---	325	458	---	593	---	2290	---	1430	835	---
TOTAL	12200	17224	11530	12500	13507	19180	18754	52364	60650	33103	25458	33973
MEAN	394	574	372	403	482	619	625	1689	2022	1068	821	1132
MAX	533	679	467	458	621	706	787	2290	2580	2010	1250	1870
MIN	274	429	275	302	420	546	473	884	1710	467	686	587
AC-FT	24200	34160	22870	24790	26790	38040	37200	103900	120300	65660	50500	67390
CAL YR 1981	TOTAL	134368	MEAN 368	MAX 679	MIN 221	AC-FT 266500						
WTR YR 1982	TOTAL	310443	MEAN 851	MAX 2580	MIN 274	AC-FT 615800						

## 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 (1.3 km) upstream from bridge on State Highway 74, 1.0 mi (1.6 km) northwest of San Juan Pueblo, 1.8 mi (2.9 km) upstream from Rio Chama, 5.1 mi (8.2 km) north of Espanola, and at mile 1,630.1 (2,622.8 km).

DRAINAGE AREA.--10,550 mi<sup>2</sup> (27,320 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<sup>2</sup>) in closed basin in San Luis Valley, CO.

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

GAGE.--Water-stage recorder. Altitude of gage is 5,630 ft (1,716 m), from topographic map.

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres (2,500 km<sup>2</sup>) in Colorado and 42,000 acres (170 km<sup>2</sup>) in New Mexico. Several observations of water temperature were made during the year. San Juan lateral (station 08280100) 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 below station. See tabulation below for monthly diversion, as furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--19 years, 706 ft<sup>3</sup>/s (19.99 m<sup>3</sup>/s), 511,500 acre-ft/yr (631 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,220 ft<sup>3</sup>/s (233 m<sup>3</sup>/s) June 9, 1979, gage height, 6.94 ft (2.115 m); minimum, 92 ft<sup>3</sup>/s (2.61 m<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 above base of 2,000 ft<sup>3</sup>/s (57 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)		Gage height (ft) (m)		Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)		Gage height (ft) (m)	
May 6	0730	2190	62.0	3.30	1.006	July 31	0515	*4180	118	4.69	1.430
June 2	0945	2640	74.8	3.63	1.106	Aug. 25	0445	2360	66.8	3.41	1.039

Minimum discharge, 230 ft<sup>3</sup>/s (6.51 m<sup>3</sup>/s) Dec. 24, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	269	440	448	339	486	678	685	836	2500	2030	803	805
2	276	481	407	353	481	700	685	1060	2540	2020	897	671
3	304	475	315	330	465	738	657	1390	2230	1970	808	587
4	316	473	367	292	469	722	664	1820	2070	1900	738	612
5	309	487	384	310	475	768	671	2020	2200	1750	778	676
6	303	607	419	340	432	738	685	2150	2220	1620	754	680
7	287	690	430	380	422	671	678	2100	2170	1550	804	693
8	293	749	437	370	466	643	664	1990	2010	1510	767	775
9	302	750	457	375	482	602	643	1820	1870	1480	714	803
10	283	768	453	385	454	589	589	1760	1910	1460	676	784
11	275	776	450	396	466	615	531	1880	1980	1250	755	798
12	278	783	473	433	459	671	488	1940	2020	1170	768	964
13	280	764	443	428	454	730	506	2030	2000	1240	762	1040
14	330	725	426	417	460	760	549	2010	2020	1090	771	943
15	343	717	397	419	479	768	708	1760	2030	973	738	946
16	408	716	365	427	473	745	732	1560	2030	929	710	1140
17	501	701	350	422	487	730	772	1410	2010	904	721	1320
18	517	686	320	428	483	700	783	1360	2050	815	720	1450
19	539	683	295	442	494	692	802	1400	2100	747	797	1610
20	528	660	291	446	511	671	760	1460	2190	743	717	1660
21	534	645	321	441	537	664	800	1520	2290	760	694	1600
22	512	624	371	453	549	636	715	1620	2240	672	684	1650
23	491	589	371	435	562	602	640	1780	2070	589	733	1780
24	485	552	295	457	569	569	550	1780	1880	510	868	1880
25	484	578	265	466	608	569	505	1930	1810	465	1270	1740
26	500	601	317	471	595	582	515	1830	1810	432	1060	1580
27	512	593	330	475	608	608	482	1880	1800	430	1120	1450
28	508	560	339	473	650	608	484	2050	1810	423	1250	1400
29	497	497	322	482	---	636	545	2210	1840	491	1270	1340
30	467	503	324	481	---	650	653	2300	1920	645	974	1270
31	436	---	329	486	---	657	---	2280	---	1610	887	---
TOTAL	12367	18873	11511	12852	14121	20712	19141	54936	61620	34178	26008	34649
MEAN	399	629	371	415	504	668	638	1772	2054	1103	839	1155
MAX	539	783	473	486	650	768	802	2300	2540	2030	1270	1880
MIN	269	440	265	292	422	569	482	836	1800	423	676	587
AC-FT	24530	37430	22830	25490	28010	41080	37970	109000	122200	67790	51590	68730
(†)	19	---	---	---	---	---	19	76	83	105	39	103
(††)	232	---	---	---	---	---	112	363	327	293	363	132
(‡)	451	88	---	---	---	---	85	284	143	150	87	404

CAL YR 1981 TOTAL 130879 MEAN 359 MAX 783 MIN 165 AC-FT 259600  
WTR YR 1982 TOTAL 320968 MEAN 879 MAX 2540 MIN 265 AC-FT 636600

† Estimated diversion, in acre-feet, by San Juan lateral.

†† Diversion, in acre-feet, by San Juan Pueblo ditch.

‡ 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 (1.1 km) downstream from Rito de Tierra Amarilla, 3.1 mi (5.0 km) southwest of La Puente, 6.7 mi (10.8 km) upstream from flow line of El Vado Reservoir, and at mile 91.4 (147.1 km).

DRAINAGE AREA.--480 mi<sup>2</sup> (1,200 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Concrete control since Nov. 9, 1965. Altitude of gage is 7,083 ft (2,159 m), from river-profile map.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 10,300 acres (42 km<sup>2</sup>) above station (1962 determination). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--27 years, 319 ft<sup>3</sup>/s (9.034 m<sup>3</sup>/s), 231,100 acre-ft/yr (285 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s (317 m<sup>3</sup>/s) May 28, 1979, gage height, 6.35 ft (1.935 m), from rating extended above 5,400 ft<sup>3</sup>/s (153 m<sup>3</sup>/s); minimum, 4.0 ft<sup>3</sup>/s (0.11 m<sup>3</sup>/s) Sept. 19, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of about 9,000 ft<sup>3</sup>/s (250 m<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 (280 m<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft<sup>3</sup>/s (57 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 4	0145	*4740 134	5.24 1.597	May 27	0200	4360 123	5.22 1.591

Minimum discharge, 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) Dec. 17, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	71	45	70	55	80	270	2840	2530	523	215	160
2	51	77	35	65	55	80	308	3150	2310	471	177	138
3	201	79	40	60	50	75	266	3510	2180	394	166	127
4	179	74	45	60	55	70	350	3870	1990	351	152	122
5	123	71	50	60	50	70	419	3380	1890	316	138	161
6	101	70	55	70	50	65	382	2690	1650	275	122	143
7	91	73	55	65	45	60	360	2220	1510	243	140	126
8	85	79	56	65	50	65	340	2350	1460	228	151	122
9	88	76	55	60	55	70	343	2510	1360	233	121	122
10	81	73	54	60	60	78	378	2480	1270	213	111	117
11	77	69	60	65	70	93	526	2570	1090	192	139	390
12	125	69	54	70	70	160	1150	2480	1090	176	182	749
13	226	69	58	70	60	166	1420	1900	1100	167	136	764
14	218	68	56	65	65	165	1420	1540	1050	159	136	791
15	200	66	48	65	75	155	1460	1480	974	146	148	559
16	181	66	50	65	75	133	1410	1390	901	129	178	439
17	161	65	45	65	75	143	1260	1440	891	134	183	524
18	141	63	45	70	70	152	1320	1850	892	132	160	441
19	128	51	50	70	70	137	1350	2220	906	126	147	442
20	117	39	50	75	70	123	1290	2360	837	122	198	438
21	106	47	55	70	80	117	1080	2730	914	108	177	457
22	101	52	60	60	80	122	928	2850	804	104	209	352
23	97	54	50	55	90	135	960	2580	737	101	217	302
24	93	56	40	60	90	148	820	2590	708	94	306	266
25	86	55	40	65	80	171	813	2650	646	92	399	242
26	82	50	40	70	70	188	1000	2850	581	101	474	225
27	86	38	50	75	75	187	1120	3270	568	103	290	209
28	83	45	45	70	75	226	1480	2820	546	207	229	218
29	82	61	45	70	---	262	2060	3100	519	265	191	224
30	77	58	50	65	---	184	2530	2900	497	308	225	234
31	70	---	60	60	---	183	---	2610	---	303	199	---
TOTAL	3578	1884	1541	2035	1865	4063	28713	79180	34401	6516	6066	9604
MEAN	115	62.8	49.7	65.6	66.6	131	957	2554	1147	210	196	320
MAX	226	79	60	75	90	262	2530	3870	2530	523	474	791
MIN	41	38	35	55	45	60	266	1390	497	92	111	117
AC-FT	7100	3740	3060	4040	3700	8060	56950	157100	68230	12920	12030	19050
CAL YR 1981	TOTAL	54874	MEAN 150	MAX 1550	MIN 22	AC-FT 108800						
WTR YR 1982	TOTAL	179446	MEAN 492	MAX 3870	MIN 35	AC-FT 355900						

## 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 (0.3 km) upstream from Azotea Creek, and 6.2 mi (10.0 km) 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 (2,292.056 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

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

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--12 years, 134 ft<sup>3</sup>/s (3.795 m<sup>3</sup>/s), 97,080 acre-ft/yr (120 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft<sup>3</sup>/s (33.1 m<sup>3</sup>/s) May 17, 1978, gage height, 7.85 ft (2.393 m); no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,030 ft<sup>3</sup>/s (29.2 m<sup>3</sup>/s) June 18, gage height, 7.23 ft (2.204 m); minimum daily, 0.02 ft<sup>3</sup>/s (0.0006 m<sup>3</sup>/s) Oct. 30 to Apr. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.02	.02	.02	.02	.02	.02	856	996	635	7.8	1.3
2	.14	.02	.02	.02	.02	.02	.02	891	985	417	45	1.2
3	.13	.02	.02	.02	.02	.02	.02	1000	974	234	90	.84
4	.13	.02	.02	.02	.02	.02	.02	964	930	81	79	.84
5	.12	.02	.02	.02	.02	.02	.02	1010	900	80	64	.69
6	.12	.02	.02	.02	.02	.02	30	826	814	88	55	.69
7	.12	.02	.02	.02	.02	.02	79	666	816	105	56	.69
8	.11	.02	.02	.02	.02	.02	96	644	860	94	51	22
9	.11	.02	.02	.02	.02	.02	110	660	836	65	39	71
10	.10	.02	.02	.02	.02	.02	145	668	804	54	16	52
11	.10	.02	.02	.02	.02	.02	234	689	813	54	.69	116
12	.10	.02	.02	.02	.02	.02	591	636	882	125	.69	59
13	.09	.02	.02	.02	.02	.02	608	543	926	165	.69	.69
14	.09	.02	.02	.02	.02	.02	649	445	937	79	.69	.44
15	.08	.02	.02	.02	.02	.02	721	399	892	56	.69	.33
16	.08	.02	.02	.02	.02	.02	671	368	826	56	.69	.33
17	.08	.02	.02	.02	.02	.02	601	368	888	56	.65	.23
18	.07	.02	.02	.02	.02	.02	626	431	949	56	14	.23
19	.07	.02	.02	.02	.02	.02	602	522	965	46	36	.23
20	.07	.02	.02	.02	.02	.02	536	590	796	27	33	.23
21	.06	.02	.02	.02	.02	.02	418	785	768	13	36	.23
22	.06	.02	.02	.02	.02	.02	339	871	766	23	50	30
23	.05	.02	.02	.02	.02	.02	303	777	812	37	72	70
24	.05	.02	.02	.02	.02	.02	260	795	786	32	1.3	80
25	.05	.02	.02	.02	.02	.02	294	829	836	32	.33	79
26	.04	.02	.02	.02	.02	.02	326	900	832	29	.23	67
27	.04	.02	.02	.02	.02	.02	390	942	811	13	.23	59
28	.04	.02	.02	.02	.02	.02	507	919	874	11	.33	60
29	.03	.02	.02	.02	---	.02	707	1000	861	10	.23	56
30	.03	.02	.02	.02	---	.02	803	998	788	10	38	69
31	.02	---	.02	.02	---	.02	---	977	---	8.4	50	---
TOTAL	2.52	.60	.62	.62	.56	.62	10646.10	22969	25923	2791.4	844.24	899.19
MEAN	.081	.020	.020	.020	.020	.020	355	741	864	90.0	27.2	30.0
MAX	.14	.02	.02	.02	.02	.02	803	1010	996	635	90	116
MIN	.02	.02	.02	.02	.02	.02	.02	368	766	8.4	.23	.23
AC-FT	5.0	1.2	1.2	1.2	1.1	1.2	21120	45560	51420	5540	1670	1780
CAL YR 1981	TOTAL	27173.20	MEAN	74.4	MAX	886	MIN	.02	AC-FT	53900		
WTR YR 1982	TOTAL	64078.47	MEAN	176	MAX	1010	MIN	.02	AC-FT	127100		



## 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 (61 m) downstream from bridge, 0.2 mi (0.3 km) downstream from Iron Spring Creek, 3.3 mi (5.3 km) west of Los Ojos, and at mile 9.7 (15.6 km).

DRAINAGE AREA.--112 mi<sup>2</sup> (290 km<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 (2,193.429 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 1, 1971, at site 900 ft (270 m) 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 furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--8 years (water years 1963-70), 10.5 ft<sup>3</sup>/s (0.297 m<sup>3</sup>/s), 7,610 acre-ft/yr (9.38 hm<sup>3</sup>/yr), prior to completion of Azotea tunnel; 12 years (water years 1971-82), 145 ft<sup>3</sup>/s (4.106 m<sup>3</sup>/s), 105,100 acre-ft/yr (130 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft<sup>3</sup>/s (45.3 m<sup>3</sup>/s) Aug. 11, 1967, gage height, 3.88 ft (1.182 m), site and datum then in use, prior to completion of Azotea tunnel; no flow at times most years prior to 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,270 ft<sup>3</sup>/s (36.0 m<sup>3</sup>/s) Apr. 12, gage height, 5.12 ft (1.561 m); minimum, 0.02 ft<sup>3</sup>/s (0.0006 m<sup>3</sup>/s) Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	.56	.24	.06	.03	.29	226	913	994	654	12	3.6
2	.40	.52	.18	.06	.08	.30	200	975	968	384	19	1.0
3	14	.52	.15	.06	.09	.27	158	1060	978	259	96	.59
4	4.6	.49	.15	.06	.10	.30	310	1000	885	91	84	.38
5	1.7	.38	.18	.06	.10	.34	290	1060	912	88	66	.36
6	.76	.30	.20	.06	.10	.63	249	884	807	88	51	.34
7	.45	.27	.21	.06	.10	.96	294	685	802	111	53	.34
8	.36	.30	.23	.06	.11	1.8	245	648	873	108	55	8.1
9	.29	.30	.23	.06	.11	2.8	237	659	840	82	43	82
10	.21	.29	.22	.06	.11	4.6	273	653	840	62	22	59
11	.16	.27	.22	.06	.11	7.8	411	695	807	60	7.3	168
12	.32	.24	.23	.06	.12	13	890	638	884	103	1.4	144
13	.72	.23	.21	.06	.12	20	862	553	935	191	.88	29
14	.63	.22	.21	.06	.13	32	807	452	940	97	.59	23
15	1.7	.21	.19	.06	.13	46	829	402	907	60	.59	8.2
16	3.2	.19	.16	.06	.15	66	736	358	813	59	.40	3.0
17	2.2	.18	.11	.06	.15	90	643	345	868	59	.40	9.2
18	1.4	.16	.11	.06	.16	75	682	389	935	57	.42	4.8
19	.88	.15	.10	.06	.18	59	644	485	980	55	26	2.6
20	.72	.12	.10	.06	.18	57	583	548	818	37	42	3.2
21	.52	.12	.12	.06	.19	48	452	737	780	16	40	3.4
22	.42	.12	.16	.06	.19	51	366	857	759	15	55	6.7
23	.42	.12	.16	.06	.20	55	327	743	813	38	86	77
24	.40	.13	.10	.06	.26	64	311	769	779	33	43	65
25	.38	.13	.04	.06	.30	93	323	786	846	33	8.6	86
26	.36	.13	.06	.06	.22	96	375	968	846	36	18	77
27	.40	.12	.06	.06	.21	98	402	963	807	20	6.6	64
28	.49	.12	.06	.06	.26	191	500	901	872	16	4.5	64
29	.56	.16	.06	.06	---	140	730	975	896	33	2.4	60
30	.59	.26	.06	.06	---	55	824	975	807	18	14	66
31	.59	---	.06	.06	---	103	---	907	---	18	76	---
TOTAL	40.28	7.31	4.57	1.86	4.24	1472.09	14229	22883	25991	2981	935.08	1139.81
MEAN	1.30	.24	.15	.060	.15	47.5	474	738	866	96.2	30.2	38.0
MAX	14	.56	.24	.06	.30	191	890	1060	994	654	96	168
MIN	.16	.12	.04	.06	.08	.27	158	345	759	15	.40	.34
AC-FT	80	14	9.1	3.7	8.4	2920	28220	45390	51550	5910	1850	2260
CAL YR 1981	TOTAL	27445.38	MEAN	75.2	MAX	813	MIN	.04	AC-FT	54440		
WTR YR 1982	TOTAL	69689.24	MEAN	191	MAX	1060	MIN	.04	AC-FT	138200		

## 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 (6.0 km) northwest of Heron Dam, 7.8 mi (12.6 km) downstream from Horse Lake, and 9.9 mi (15.9 km) west of Los Ojos.

DRAINAGE AREA.--45 mi<sup>2</sup> (120 km<sup>3</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 (2,191.161 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to July 1, 1971, at site 1,100 ft (340 m) upstream at higher datums.

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

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--11 years (water years 1963-73), 1.10 ft<sup>3</sup>/s (0.031 m<sup>3</sup>/s), 797 acre-ft/yr (983,000 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft<sup>3</sup>/s (112 m<sup>3</sup>/s) July 30, 1968, gage height, 4.9 ft (1.49 m), site and datum then in use, from rating curve extended above 37 ft<sup>3</sup>/s (1.05 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 3.20 ft (0.975 m) and 4.9 ft (1.49 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 110 ft<sup>3</sup>/s (3.12 m<sup>3</sup>/s) at 1130 hours Apr. 1, gage height, 2.55 ft (0.777 m), no other peak above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00					.00	42	1.5	.02	.00	.12	1.2
2	.02					.00	19	2.0	.01	.00	.01	1.0
3	1.2					.00	16	2.2	.01	.00	.06	.80
4	.42					.00	37	1.6	.01	.00	.00	.48
5	.03					.00	29	2.0	.01	.00	.00	.33
6	.00					.00	18	1.7	.00	.00	.00	.24
7	.00					.00	18	1.2	.00	.00	.56	.16
8	.00					.00	11	.80	.00	.00	.06	3.7
9	.00					.08	9.3	.54	.00	.00	.00	1.8
10	.00					.47	8.1	.42	.00	.00	.00	.64
11	.00					.13	8.9	.36	.00	.00	.16	16
12	.00					.27	11	.33	.00	.00	.20	5.2
13	.00					4.4	10	.61	.00	.00	.57	3.2
14	.00					8.0	8.5	1.2	.00	.00	.54	2.9
15	.00					12	7.1	.92	.00	.00	.48	1.4
16	.00					18	5.7	.54	.00	.00	.45	.79
17	.00					31	4.0	.39	.00	.00	.44	.57
18	.00					12	3.6	.30	.00	.00	.51	.48
19	.00					14	2.9	.22	.00	.00	.36	.46
20	.00					9.1	2.2	.14	.00	.00	.36	.39
21	.00					8.0	2.2	.08	.00	.21	.35	.28
22	.00					8.6	2.2	.07	.00	.80	1.4	.16
23	.00					11	2.2	.20	.00	.54	1.3	.10
24	.00					16	2.6	.16	.00	.38	1.7	.06
25	.00					24	2.2	.16	.00	.88	3.4	.05
26	.00					22	1.7	.07	.00	1.0	4.5	.05
27	.00					27	1.6	.05	.00	.69	1.7	.04
28	.00					40	1.4	.05	.00	.77	1.6	.03
29	.00					24	1.2	.03	.00	1.2	1.1	.03
30	.00					9.0	1.2	.02	.00	1.5	13	.03
31	.00					13	---	.01	---	1.0	3.4	---
TOTAL	1.67					312.05	289.8	19.87	.06	9.07	38.33	42.61
MEAN	.054					10.1	9.66	.64	.002	.29	1.24	1.42
MAX	1.2					40	42	2.2	.02	1.5	13	16
MIN	.00					.00	1.2	.01	.00	.00	.00	.03
AC-FT	3.3					619	575	39	.1	18	76	85

## 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 (0.3 km) upstream from Rio Chama, 5.1 mi (8.2 km) northeast of El Vado Dam, and 8.7 mi (14.0 km) southwest of Los Ojos.

DRAINAGE AREA.--193 mi<sup>2</sup> (500 km<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 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 (495 hm<sup>3</sup>) at elevation 7,186.1 ft (2,190.32 m), low point on crest of uncontrolled spillway, including 1,340 acre-ft (1.65 hm<sup>3</sup>) of dead storage at elevation 7,003.0 ft (2,134.51 m), 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 furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 401,800 acre-ft (495 hm<sup>3</sup>) July 28, 1982, elevation, 7,186.19 ft (2,190.351 m); no storage prior to Oct. 21, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 401,800 acre-ft (495 hm<sup>3</sup>) July 28, elevation, 7,186.19 ft (2,190.351 m); minimum, 291,200 acre-ft (359 hm<sup>3</sup>) Apr. 10, elevation, 7,165.72 ft (2,184.111 m).

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Bureau of Reclamation in 1971)

7,160	263,900	7,180	366,200
7,170	312,600	7,190	424,700

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	324500	322200	320000	294400	293800	295000	295500	311700	354700	400900	400600	400900
2	324700	322200	319900	294500	293800	295200	295200	313000	356900	400800	400600	400800
3	324900	322200	319900	294400	293900	295300	295100	314600	358800	400800	400700	400500
4	324900	322100	319800	294400	294200	295300	295200	316400	360300	400900	400800	400400
5	324800	322100	319800	294700	294200	295400	295300	318200	362300	400800	400800	400400
6	324700	322000	319800	294800	294200	295500	294700	319700	363700	400800	400800	400300
7	324500	322000	317600	294800	294200	295500	293100	321100	365200	401000	401100	400400
8	324400	322000	313300	294800	294200	295500	292200	322300	367200	401100	401100	400300
9	324300	322100	309000	294700	294200	295500	291800	323400	368700	401200	401100	400200
10	324300	322000	304600	294600	294300	295500	291200	324700	370300	401300	401200	400300
11	324200	322000	301900	294700	294600	295700	291400	326000	371800	401300	401500	400800
12	324300	321700	301200	294700	294600	296300	292300	327200	373600	401200	401400	401100
13	324200	321500	300500	294600	294600	296700	293200	328400	375400	401100	401300	401200
14	324100	321500	299800	294600	294600	297000	294400	329200	377100	401100	401200	401000
15	323900	321400	299200	294600	294600	297300	295900	330000	378800	401100	401100	400700
16	323800	321400	298500	294500	294600	297500	297200	330700	380400	401100	401000	400700
17	323800	321400	297900	294600	294600	297800	298400	331300	382000	401100	400900	400700
18	323700	321100	297300	294500	294600	298100	299600	332100	383900	401300	400700	400700
19	323700	321000	296700	294500	294600	298300	300600	333100	385700	401400	400600	400700
20	323600	321000	296000	294500	294600	298400	301600	334200	387400	401300	400600	400700
21	323600	321000	295400	294500	294600	298500	302400	335700	388800	401300	400600	400600
22	323500	320900	294700	294400	294600	298700	303000	337600	390200	401300	400800	400400
23	323500	320900	294500	294400	294700	298800	303100	339100	391700	401300	401000	400300
24	323400	320600	294500	294400	294800	299000	303700	340600	393200	401300	401100	400300
25	323300	320100	294500	294300	294800	299300	304300	342100	394700	401200	401300	400300
26	322900	320100	294400	294100	294900	299200	305000	344000	396000	401300	401000	400400
27	322600	320100	294400	293700	294900	298600	305800	345700	397200	401600	400700	400400
28	322500	320100	294300	293700	294900	298100	306800	347300	398300	401800	400700	400300
29	322400	320200	294200	293800	---	297200	308200	349200	400100	401600	400500	400000
30	322300	320100	294200	293800	---	295900	309900	351100	400700	401000	401100	400100
31	322300	---	294200	293800	---	295400	---	353100	---	400700	401100	---
MAX	324900	322200	320000	294800	294900	299300	309900	353100	400700	401800	401500	401200
MIN	322300	320100	294200	293700	293800	295000	291200	311700	354700	400700	400500	400000
(†)	7171.87	7171.45	7166.34	7166.24	7166.48	7166.57	7169.47	7177.64	7185.99	7185.99	7186.07	7185.90
(‡)	-2200	-2200	-25900	-400	+1100	+500	+14500	+43200	+47600	0	+400	-1000
CAL YR 1981	MAX	351600	MIN	294200	‡	-23500						
WTR YR 1982	MAX	401800	MIN	291200	‡	+75600						

† 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 (0.3 km) upstream from Rio Chama, 5.1 mi (8.2 km) northeast of El Vado Dam, and 8.7 mi (14.0 km) southwest of Los Ojos.

DRAINAGE AREA.--193 mi<sup>2</sup> (500 km<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 (0.356 m) and 120-in (3.048 m) in diameter.

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--11 years, 101 ft<sup>3</sup>/s (2.860 m<sup>3</sup>/s), 73,170 acre-ft/yr (90.2 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,220 ft<sup>3</sup>/s (62.9 m<sup>3</sup>/s) Dec. 12, 1973; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,130 ft<sup>3</sup>/s (60.3 m<sup>3</sup>/s) Dec. 8; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	321	72	.00	591	.00	66
2	.00	.00	.00	.00	.00	.00	321	72	.00	406	.00	13
3	.00	.00	.00	.00	.00	.00	321	109	.00	189	.00	12
4	.00	.00	.00	.00	.00	.00	321	160	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	321	161	.00	.00	.00	.00
6	66	.00	.00	.00	.00	.00	641	63	.00	.00	.00	.00
7	51	.00	1260	.00	.00	.00	1130	.00	.00	.00	.00	.00
8	.00	.00	2130	.00	.00	.00	746	.00	.00	.00	.00	77
9	.00	.00	2110	.00	.00	.00	540	.00	.00	.00	.00	52
10	.00	.00	2110	.00	.00	.00	569	.00	.00	.00	.00	.00
11	.00	.00	1390	.00	.00	.00	563	.00	.00	.00	.00	.00
12	.00	93	362	.00	.00	.00	569	.00	.00	179	.00	.00
13	.00	65	362	.00	.00	.00	492	.00	.00	181	13	64
14	.00	.00	331	.00	.00	.00	223	.00	.00	.00	25	134
15	97	.00	313	.00	.00	.00	103	.00	.00	.00	25	58
16	.00	7.0	313	.00	.00	.00	103	.00	.00	.00	15	.00
17	.00	15	312	.00	.00	.00	104	.00	.00	.00	66	.00
18	.00	15	313	.00	.00	.00	104	.00	.00	.00	104	.00
19	.00	15	340	.00	.00	.00	89	.00	.00	.00	18	.00
20	.00	6.0	340	.00	.00	.00	31	.00	.00	.00	.00	.00
21	.00	.00	340	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	261	.00	.00	.00	113	.00	.00	.00	.00	95
23	.00	.00	77	.00	.00	.00	290	.00	.00	12	.00	81
24	.00	180	.00	.00	.00	.00	.00	.00	.00	35	26	.00
25	.00	147	.00	.00	.00	.00	.00	.00	120	35	101	.00
26	164	.00	.00	198	.00	312	.00	51	197	20	191	.00
27	132	.00	.00	143	.00	600	.00	103	76	.00	86	.00
28	.00	.00	.00	.00	.00	600	.00	42	.00	86	.00	62
29	.00	.00	.00	.00	---	669	.00	.00	368	402	.00	92
30	.00	.00	65	.00	---	724	33	.00	594	391	.00	.00
31	.00	---	46	.00	---	481	---	.00	---	103	101	---
TOTAL	510.00	543.00	12775.00	341.00	.00	3386.00	8053.00	833.00	1355.00	2630.00	771.00	806.00
MEAN	16.5	18.1	412	11.0	.000	109	268	26.9	45.2	84.8	24.9	26.9
MAX	164	190	2130	198	.00	724	1130	161	594	591	191	134
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1010	1080	25340	676	.00	6720	15970	1650	2690	3220	1530	1600
CAL YR 1981	TOTAL	34350.00	MEAN 94.1	MAX 2130	MIN .00	AC-FT 68130						
WTR YR 1982	TOTAL	32003.00	MEAN 87.7	MAX 2130	MIN .00	AC-FT 63480						

## RIO GRANDE BASIN

08285000 EL VADO RESERVOIR NEAR TIERRA AMARILLA, NM

LOCATION.--Lat 36°35'39", long 106°44'00", Rio Arriba County, Hydrologic Unit 13020102, Tierra Amarilla Grant, at outlet tower of dam on Rio Chama, at village of El Vado, 12.4 mi (20.0 km) southwest of Tierra Amarilla, and at mile 77.7 (125.0 km).

DRAINAGE AREA.--873 mi<sup>2</sup> (2,261 km<sup>2</sup>), of which about 100 mi<sup>2</sup> (260 km<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 hrs.

GAGE.--Water-stage recorder. Prior to October 1967, nonrecording gage only below gage height 6,879.3 ft (2,096.81 m). Datum of gage is 8.21 ft (2.502 m) 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 (242 hm<sup>3</sup>) between gage heights 6,759.0 ft (2,060.14 m) and 6,902.0 ft (2,103.73 m), top of spillway gate. Dead storage, 1,060 acre-ft (1.31 hm<sup>3</sup>) below 6,775.0 ft (2,065.02 m), 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 (50 m<sup>3</sup>/s) to about 6,000 ft<sup>3</sup>/s (170 m<sup>3</sup>/s).

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 204,900 acre-ft (253 hm<sup>3</sup>), of which 7,400 acre-ft (9.12 hm<sup>3</sup>) was uncontrolled storage, June 4, 5, 1948, gage height, 6,904.2 ft (2,104.40 m); no storage at times prior to December 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 106,900 acre-ft (132 hm<sup>3</sup>) Sept. 12, gage height, 6,869.94 ft (2,093.958 m); minimum, 78,950 acre-ft (97.3 hm<sup>3</sup>) Oct. 1, gage height, 6,855.71 ft (2,089.620 m).

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

6,855	77,690
6,860	86,770
6,870	107,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78950	79180	79270	98990	99240	99220	99240	99140	104500	106200	105800	105900
2	79090	79220	79200	98910	99220	99270	99410	99840	104700	106100	105300	105900
3	79390	79240	79180	98790	99240	99310	99370	99910	105100	106000	105000	106000
4	79500	79240	79240	98730	99310	99270	99410	99870	105600	106200	106000	106000
5	79410	79240	79310	98830	99290	99220	99160	99100	106200	106200	106000	106000
6	79340	79240	79340	98830	99240	99140	98990	98110	106300	106000	106000	106000
7	79270	79270	81710	98750	99220	99040	98910	98220	106300	106000	106000	106000
8	79240	79320	85940	98670	99240	99040	98730	98690	106200	106000	106100	106000
9	79180	79290	89940	98650	99240	99080	98670	98790	106200	106100	106000	106000
10	79130	79240	93970	98650	99240	99140	98670	98770	106200	106200	105800	106000
11	79040	79180	96790	98670	99390	99270	98930	98730	106100	106300	106000	106400
12	79110	79150	97460	98650	99350	99580	99930	98710	106200	106300	106000	106900
13	79410	79160	98130	98650	99270	99820	100100	98650	106500	106200	106000	106500
14	79530	79200	98460	98620	99180	99580	99310	98670	106500	105900	106000	105900
15	79130	79200	98500	98620	99100	99270	98690	98790	106300	105900	105900	105700
16	79070	79200	98600	98600	99040	99180	98400	98750	106100	105900	105900	106000
17	79130	79240	98670	98580	99080	99290	97950	98830	106200	105900	105900	106200
18	79130	79240	98670	98560	99080	99330	97970	99390	106300	106000	105900	105900
19	79200	79220	98710	98580	99080	99330	98600	99760	106400	106000	105900	105300
20	79160	79220	98750	98620	99080	99220	99010	99740	106400	106000	106000	105900
21	79220	79220	98810	98620	99100	99100	99040	100200	106300	106000	106000	106000
22	79240	79180	98810	98620	99140	99060	98870	100700	106100	106000	106100	106000
23	79240	79200	98790	98620	99160	99060	98930	100300	106000	106000	106000	106000
24	79240	79240	98790	98600	99270	99120	98670	100300	106100	105900	106100	106000
25	79240	79250	98830	98600	99310	99240	98480	100700	106200	106100	106200	106200
26	79160	79240	98850	98870	99310	99500	98810	101200	106000	106200	106100	106300
27	79090	79250	98390	99140	99270	99520	99080	101300	105900	106200	105700	106100
28	79130	79250	98930	99140	99240	99600	99250	100900	106000	106400	105600	105900
29	79180	79380	99100	99200	---	99720	99310	102600	106200	106400	105600	106000
30	79180	79360	99060	99220	---	99310	99080	103800	106100	106200	106000	106100
31	79200	---	98930	99220	---	98990	---	104200	---	106000	106000	---
MAX	79530	79380	99100	99220	99390	99820	100100	104200	105500	106400	106200	106900
MIN	78950	79150	79130	98560	99040	98990	97950	98110	104500	105900	105600	105700
(†)	6855.85	6855.94	6866.20	6866.34	6866.35	6866.23	6866.27	6868.71	6869.60	6869.55	6869.52	6969.59
(‡)	+230	+160	+19570	+290	+20	-250	+90	+5120	+1900	-100	0	+100

CAL YR 1981 MAX 126000 MIN 78860 ‡ -8970  
WTR YR 1982 MAX 106900 MIN 78950 ‡ +27130

† 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 (2.4 km) downstream from El Vado Dam, 2.8 mi (4.5 km) upstream from Rio Nutrias, 13 mi (21 km) southwest of Tierra Amarilla, and at mile 76.2 (122.6 km).

DRAINAGE AREA.--877 mi<sup>2</sup> (2,271 km<sup>2</sup>), of which about 100 mi<sup>2</sup> (260 km<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 (2,040.977 m) National Geodetic Vertical Datum of 1929. Prior to October 1935, at site 1.5 mi (2.4 km) upstream at different datum. October 1935 to September 1938 at site 1.1 mi (1.8 km) upstream at datum 30.34 ft (9.248 m) higher.

REMARKS.--Records good. Flow regulated by El Vado Reservoir (station 08285000) since 1935. Flow affected by release of transmountain water from Heron Reservoir (station 08284510) since May 1971. Diversions for irrigation of about 10,600 acres (43 km<sup>2</sup>) above 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 (12.69 m<sup>3</sup>/s), 324,600 acre-ft/yr (400 hm<sup>3</sup>/yr), prior to completion of El Vado Dam; 35 years (water years 1936-70), 373 ft<sup>3</sup>/s (10.56 m<sup>3</sup>/s), 270,200 acre-ft/yr (333 hm<sup>3</sup>/yr), prior to release of transmountain water; 12 years (water years 1971-82), 403 ft<sup>3</sup>/s (11.41 m<sup>3</sup>/s), 292,000 acre-ft/yr (360 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft<sup>3</sup>/s (255 m<sup>3</sup>/s) May 22, 1920, gage height, 12 ft (3.7 m), site and datum then in use, from rating curve extended above 3,500 ft<sup>3</sup>/s (99 m<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 (170 m<sup>3</sup>/s) May 17, 1941, gage height, 6.89 ft (2.100 m).

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, 4,090 ft<sup>3</sup>/s (116 m<sup>3</sup>/s) May 4, gage height, 6.04 ft (1.841 m); minimum, 22 ft<sup>3</sup>/s (0.62 m<sup>3</sup>/s) Jan 4-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	65	71	88	63	88	505	2680	2550	950	290	242
2	43	65	65	88	71	86	541	3060	2410	949	164	99
3	102	65	58	88	71	102	565	3750	2080	566	118	88
4	140	65	45	63	71	116	633	4000	1860	259	118	91
5	148	67	35	55	69	116	850	3910	1640	313	133	124
6	189	69	35	91	69	116	1050	3100	1640	329	116	153
7	166	69	75	96	70	116	1450	1960	1550	267	113	133
8	107	69	118	80	80	94	1100	1910	1560	217	113	175
9	107	80	101	70	80	76	793	2270	1450	195	175	190
10	107	99	101	70	70	78	823	2380	1310	178	167	112
11	107	101	32	70	60	83	825	2500	1140	181	133	183
12	107	142	60	70	60	150	1100	2430	1020	333	166	443
13	99	135	60	70	70	193	1690	1880	1030	445	159	970
14	188	67	161	67	80	354	1950	1470	1050	280	143	1230
15	381	67	309	65	83	368	1800	1340	1110	141	143	663
16	274	67	284	64	83	212	1560	1350	1010	136	121	271
17	121	67	284	64	63	153	1460	1300	861	121	152	381
18	121	67	318	57	63	161	1300	1490	844	121	214	486
19	121	67	343	52	63	189	1000	1970	816	138	110	462
20	121	60	343	52	63	205	1010	2330	869	148	94	390
21	96	52	343	53	63	210	970	2650	970	130	94	369
22	81	52	283	57	60	178	1010	2880	958	115	154	401
23	86	52	124	60	60	154	1000	2890	783	107	181	335
24	86	175	29	60	74	154	871	2700	651	133	245	211
25	86	229	24	61	83	155	776	2610	737	138	449	146
26	227	40	24	86	88	410	710	2860	884	123	678	143
27	267	40	24	94	96	767	830	3430	675	136	534	237
28	71	40	24	57	96	768	1190	3060	523	244	253	314
29	54	40	34	52	---	894	1810	2540	783	697	189	236
30	60	53	117	52	---	1070	2470	2560	1000	994	118	140
31	65	---	131	52	---	811	---	2570	---	565	270	---
TOTAL	3973	2326	4105	2104	2022	8627	33642	77830	35764	9649	6107	9418
MEAN	128	77.5	132	67.9	72.2	278	1121	2511	1192	311	197	314
MAX	381	229	343	96	96	1070	2470	4000	2550	994	678	1230
MIN	43	40	24	52	60	76	505	1300	523	107	94	88
AC-FT	7880	4610	8140	4170	4010	17110	66730	154400	70940	19140	12110	18680
CAL YR 1981	TOTAL	91766	MEAN	251	MAX	1240	MIN	16	AC-FT	182000		
WTR YR 1982	TOTAL	195567	MEAN	536	MAX	4000	MIN	24	AC-FT	387900		



## 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 (12 m) downstream from site of former bridge, 7.7 mi (12.4 km) downstream from Rio Gallina, 9 mi (14 km) northwest of Youngsville, 15.6 mi (25.1 km) upstream from Abiquiu Dam, 30.3 mi (48.8 km) downstream from El Vado Dam, and at mile 47.4 (76.3 km).

DRAINAGE AREA.--1,600 mi<sup>2</sup> (4,144 km<sup>2</sup>), of which about 100 mi<sup>2</sup> (260 km<sup>2</sup>) is probably noncontributing.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 6,275 ft (1,913 m), from topographic map.

REMARKS.--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 (61 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--9 years (water years 1962-70), 358 ft<sup>3</sup>/s (10.14 m<sup>3</sup>/s), 259,400 acre-ft/yr (320 hm<sup>3</sup>/yr), prior to release of transmountain water; 12 years (water years 1971-82), 430 ft<sup>3</sup>/s (12.18 m<sup>3</sup>/s), 311,500 acre-ft/yr (384 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,550 ft<sup>3</sup>/s (185 m<sup>3</sup>/s) May 20, 1973, gage height, 8.70 ft (2.652 m); minimum 7.5 ft<sup>3</sup>/s (0.21 m<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, 3,850 ft<sup>3</sup>/s (109 m<sup>3</sup>/s) May 5, gage height, 6.85 ft (2.088 m); minimum, 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) Dec. 29, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	67	62	108	58	127	481	2690	2560	943	394	395
2	47	68	84	89	73	127	542	2850	2490	934	207	109
3	141	68	75	86	82	140	559	3480	2170	815	143	95
4	159	68	65	71	80	132	563	3750	1960	258	108	80
5	157	71	51	60	80	127	796	3750	1680	256	123	103
6	182	73	42	57	77	118	915	3260	1660	318	133	134
7	230	76	40	100	80	116	1460	2210	1620	287	142	167
8	132	76	98	80	85	120	1310	1800	1570	217	116	149
9	116	74	114	80	85	101	780	2270	1520	192	107	228
10	114	93	104	81	77	118	813	2360	1340	166	223	146
11	114	105	108	89	70	151	815	2460	1250	160	123	128
12	114	105	78	85	67	403	957	2470	1040	163	152	411
13	116	181	62	73	90	354	1670	2140	1030	423	132	765
14	103	96	62	75	95	360	2030	1620	1030	365	143	1320
15	307	69	251	75	104	448	1940	1410	1100	151	133	898
16	391	68	287	75	111	304	1690	1400	1100	125	140	277
17	140	73	287	75	82	173	1530	1360	882	111	110	275
18	130	75	295	75	65	206	1480	1390	859	101	220	484
19	130	74	346	62	67	182	1030	1840	803	115	151	444
20	128	74	349	56	63	211	1060	2270	825	130	96	427
21	128	63	352	60	71	203	991	2490	914	124	95	328
22	87	56	358	59	70	201	999	2820	997	107	179	375
23	90	56	228	70	70	152	1070	2840	838	89	204	366
24	95	56	68	70	67	154	883	2790	666	97	232	271
25	94	283	37	70	83	161	835	2560	616	115	334	151
26	94	102	30	75	92	185	708	2770	852	130	644	144
27	344	46	35	103	104	754	768	3160	778	101	707	150
28	120	46	33	88	115	785	1060	3250	491	138	261	298
29	69	48	33	55	---	805	1650	2570	562	437	248	310
30	54	47	48	54	---	1070	2380	2570	1020	1300	148	150
31	62	---	146	56	---	999	---	2550	---	896	141	---
TOTAL	4244	2457	4228	2312	2268	9492	33765	77150	36223	9764	6344	9578
MEAN	137	81.9	136	74.6	81.0	306	1126	2489	1207	315	205	319
MAX	391	283	358	108	115	1070	2380	3750	2560	1300	707	1320
MIN	47	46	30	54	58	101	481	1360	491	89	95	80
AC-FT	8420	4870	8390	4590	4500	18830	66970	153000	71350	19370	12530	19000
CAL YR 1981	TOTAL	94912	MEAN 260	MAX 1230	MIN 25	AC-FT 188300						
WTR YR 1982	TOTAL	197825	MEAN 542	MAX 3750	MIN 30	AC-FT 392400						



RIO GRANDE BASIN  
08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, NM -- Continued  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--Water year 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.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	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 (70331)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)
OCT											
29...	1250	60	424	12.0	69	11	--	--	--	83	--
NOV											
23...	1150	56	479	5.0	22	3.3	--	--	--	--	--
FEB											
03...	1200	91	438	.5	60	15	--	--	--	69	--
MAR											
10...	1100	131	595	--	7090	2510	63	79	98	--	100
APR											
15...	1200	2040	337	7.5	1040	5730	--	--	--	61	--
MAY											
12...	1400	2580	167	8.0	621	4330	--	--	--	28	--
JUN											
08...	1020	1470	134	10.0	162	643	--	--	--	33	--
JUL											
07...	1203	294	180	15.5	34	27	--	--	--	92	--
SEP											
14...	1300	1410	275	19.0	2720	10400	--	--	--	77	--

## 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 (10.6 km) northwest of Abiquiu, and at mile 32.1 (51.6 km).

DRAINAGE AREA.--2,146 mi<sup>2</sup> (5,558 km<sup>2</sup>), of which about 100 mi<sup>2</sup> (260 km<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 Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam, completed Feb. 5, 1963. Capacity, 1,212,000 acre-ft (1.49 km<sup>3</sup>) between elevations 6,060 ft (1,847 m), invert of outlet tunnel, and 6,350 ft (1,935 m), 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 (2.5 km<sup>3</sup>) was maintained from May 1968 to 1974, when it was increased to 4,000 acre-ft (4.9 km<sup>3</sup>) and continued until December 1975.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 205,300 acre-ft (253 km<sup>3</sup>) June 22, 1973, elevation, 6,219.93 ft (1,895.835 m); no storage at times prior to May 1968 and Jan. 11 to Mar. 25, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 84,540 acre-ft (104 km<sup>3</sup>) June 4, elevation, 6,185.80 ft (1,885.432 m); minimum, 32,250 acre-ft (39.8 km<sup>3</sup>) Sept. 30, elevation 6,159.24 ft (1,877.336 m).

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

6,155	26,880	6,180	70,600
6,160	33,350	6,190	95,360
6,170	49,900		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35960	35680	35390	35340	35300	35570	35120	39080	53050	33500	33720	33000
2	36120	35730	35460	35320	35300	35440	35200	41560	84090	33680	32860	32620
3	36260	35700	35630	35260	35360	35460	35220	45600	84520	32760	32790	32650
4	36060	35620	35650	35270	35440	35500	35300	50360	84520	32960	32820	32790
5	35940	35600	35600	35400	35450	35520	35330	54680	84020	33130	32880	32790
6	35970	35600	35510	35340	35460	35480	35300	58230	83340	33710	32980	32720
7	36110	35660	35440	35390	35440	35450	35220	59250	82680	33780	33140	32690
8	35930	35790	35420	35280	35440	35450	35020	59290	81810	33260	32880	32690
9	35920	35710	35520	35450	35300	35450	34810	60290	80830	33230	32800	32690
10	35960	35660	35600	35520	35280	35400	35100	61280	79410	33400	32860	32650
11	36060	35740	35650	35510	35340	35460	35650	62390	77910	33530	32860	32800
12	36090	35650	35630	35440	35260	35920	35630	63500	76010	33560	32960	33320
13	36040	35700	35630	35360	35360	36260	36260	64050	74090	33790	32970	33500
14	35940	35660	35520	35330	35460	36560	37360	63660	72220	33650	32910	33560
15	35930	35710	35620	35320	35600	36700	33120	62920	70480	33230	32860	32660
16	36090	35560	35420	35300	35520	36080	36190	62080	63540	33170	32800	32440
17	35970	35540	35420	35230	35450	35300	37500	61150	66190	33200	32850	32610
18	35970	35540	35500	35260	35340	35150	37380	60310	63900	33190	32940	33350
19	35970	35520	35730	35280	35390	35160	38360	60290	61660	33320	32540	34090
20	35970	35540	35940	35270	35340	35340	39020	61130	59360	33230	32880	34270
21	35960	35540	36040	35300	35330	35500	37210	62540	57200	33130	32860	33200
22	35800	35560	35960	35320	35340	35500	35440	64660	54640	33060	32920	32630
23	35740	35560	35600	35300	35360	35220	34840	66880	52960	33060	33620	32660
24	35760	35560	35360	35340	35360	35220	34040	68380	50660	33030	35210	32690
25	35800	35760	35440	35390	35390	35340	34670	70350	47500	32940	34420	32620
26	35740	35300	35460	35360	35400	34960	34820	72220	45090	32900	33660	32490
27	35960	35070	35460	35340	35500	35210	34820	75040	42570	32910	33500	32360
28	35790	35440	35440	35320	35620	35530	34740	77960	39510	33060	33060	32420
29	35630	35340	35400	35300	---	35460	34990	79290	36260	33970	32640	32420
30	35630	35440	35440	35300	---	35270	35730	80600	34220	35150	32760	32320
31	35620	---	35340	35290	---	35270	---	81860	---	34960	32720	---
MAX	36260	35790	36040	35520	35620	36700	39020	81860	84520	35150	35210	34270
MIN	35630	35330	35340	35260	35260	34960	34740	39080	34220	32760	32540	32320
(†)	6161.53	6161.39	6161.33	6161.29	6161.51	6161.28	6162.23	6184.72	6160.59	6161.08	6159.57	6159.29
(‡)	-330	-210	-100	-60	+340	-350	+1460	+45130	-47640	+740	-2240	-400
CAL YR 1981	MAX	40940	MIN	35330	‡	-4980						
WTR YR 1981	MAX	24520	MIN	32320	‡	-3660						

† 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 (1.3 km) downstream from Abiquiu Dam, 5.9 mi (9.5 km) northwest of Abiquiu, and at mile 31.3 (50.4 km).

DRAINAGE AREA.--2,147 mi<sup>2</sup> (5,561 km<sup>2</sup>), of which about 100 mi<sup>2</sup> (260 km<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. Altitude of gage is 6,040 ft (1,841 m), from topographic map. Prior to Jan. 25, 1966, at datum 1.60 ft (0.488 m) lower.

REMARKS.--Water-discharge records good. Flow controlled by El Vado Reservoir (station 08285000) 46.4 mi (74.7 km) upstream and Abiquiu Reservoir (station 08286900) 0.8 mi (1.3 km) upstream. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 54.5 mi (87.7 km) upstream. Diversions for irrigation of about 17,600 acres (71 km<sup>2</sup>) above station. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--9 years (water years 1962-70), 384 ft<sup>3</sup>/s (10.87 m<sup>3</sup>/s), 278,200 acre-ft/yr (343 hm<sup>3</sup>/yr), prior to release of transmountain water; 12 years (water years 1971-82), 457 ft<sup>3</sup>/s (12.94 m<sup>3</sup>/s), 331,100 acre-ft/yr (408 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft<sup>3</sup>/s (84.7 m<sup>3</sup>/s) July 1, 1965, gage height, 6.69 ft (2.039 m), datum then in use; maximum gage height, 7.29 ft (2.222 m) Jan. 14, 1967 (backwater from ice); minimum discharge, about 0.5 ft<sup>3</sup>/s (0.01 m<sup>3</sup>/s) Mar. 17, 1966, Jan. 28, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,170 ft<sup>3</sup>/s (61.5 m<sup>3</sup>/s) June 25, gage height, 5.16 ft (1.573 m); minimum, 3.3 ft<sup>3</sup>/s (0.093 m<sup>3</sup>/s) Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	46	68	160	62	153	597	2010	2030	1260	993	292
2	83	45	19	117	62	202	533	2020	2030	811	592	298
3	141	77	13	91	62	157	586	2040	2030	906	226	103
4	233	97	50	61	62	121	590	2070	2030	593	121	104
5	201	87	73	42	62	131	790	1990	2030	123	102	123
6	162	57	72	79	62	149	1080	1850	2030	90	102	186
7	159	47	73	79	62	150	1380	1860	2030	253	141	186
8	194	46	77	67	89	134	1430	1860	2050	407	248	186
9	130	103	77	43	139	115	910	1860	2090	257	152	218
10	84	113	77	43	85	146	713	1970	2080	105	176	204
11	57	66	77	76	61	146	715	2080	2080	91	173	160
12	94	130	79	120	68	200	1040	2090	2070	120	140	239
13	135	139	79	96	68	269	1640	2000	2070	308	182	697
14	137	106	77	66	68	266	1780	1950	2060	429	182	1330
15	239	84	200	72	68	427	1890	1950	2090	336	182	1310
16	358	126	358	72	132	536	1940	1950	2120	147	172	516
17	199	104	274	72	172	608	1940	1940	2110	130	132	211
18	127	69	233	72	127	330	1940	1940	2090	133	168	211
19	121	63	242	72	78	149	865	1940	2080	135	235	211
20	124	55	244	73	99	149	906	1940	2070	162	140	390
21	124	55	326	61	96	149	1920	1940	2090	175	111	784
22	161	56	370	49	86	212	2000	1950	2120	150	170	696
23	114	55	381	49	72	266	1490	1960	2110	101	207	383
24	80	57	188	49	89	177	996	1970	2100	105	380	285
25	79	134	21	49	112	124	920	1960	2120	138	788	215
26	123	242	21	86	97	342	867	1970	2130	144	1020	215
27	211	108	36	104	74	650	889	1980	2110	124	827	215
28	211	23	45	100	72	653	1260	2000	2090	138	504	264
29	141	23	42	102	---	876	1750	2020	2070	508	390	327
30	67	93	34	62	---	1120	1920	2020	2050	1050	217	233
31	46	---	177	62	---	1030	---	2020	---	1120	177	---
TOTAL	4414	2506	4103	2346	2386	10137	37327	61100	62260	10549	9350	10792
MEAN	142	83.5	132	75.7	85.2	327	1244	1971	2075	340	302	360
MAX	358	242	381	160	172	1120	2000	2090	2130	1260	1020	1330
MIN	46	23	13	42	61	115	533	1850	2030	90	102	103
AC-FT	8760	4970	8140	4650	4730	20110	74040	121200	123500	20920	18550	21410
CAL YR 1981	TOTAL	100730	MEAN	276	MAX	1400	MIN	13	AC-FT	199800		
WTR YR 1982	TOTAL	217270	MEAN	595	MAX	2130	MIN	13	AC-FT	431000		

RIO GRANDE BASIN  
08287000 RIO CHAMA BELOW ABIQUIU DAM, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 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.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (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							
29...	1555	96	509	12.0	61	16	100
NOV							
23...	1520	53	497	10.0	21	3.0	--
FEB							
03...	1400	62	514	4.0	35	5.9	--
MAR							
10...	1315	144	468	--	27	10	86
APR							
15...	1500	1960	454	8.5	39	206	83
MAY							
13...	1350	1930	223	10.0	53	276	85
JUN							
08...	1345	2030	158	12.0	43	236	84
JUL							
08...	1325	369	230	17.0	295	294	99
SEP							
14...	1600	1470	500	19.0	73	290	97

## 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 (120 m) upstream from bridge on State Highway 96, 2.4 mi (3.9 km) south of La Madera, 2.6 mi (4.2 km) downstream from confluence of Rio Vallecitos and Rio Tusas, 3.1 mi (5.0 km) north of Ojo Caliente, and at mile 19.9 (32.0 km).

DRAINAGE AREA.--419 mi<sup>2</sup> (1,085 km<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 (1,938.174 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 23, 1934, at site about 2.6 mi (4.2 km) upstream at different datum. Apr. 23, 1934 to Apr. 21, 1936, at datum 12.58 ft (3.834 m) lower and Apr. 22, 1936 to Oct. 26, 1956, at datum 13.84 ft (4.218 m) lower, both at site 1,400 ft (430 m) downstream.

REMARKS.--Records good. Diversions above station for irrigation of about 3,500 acres (14 km<sup>2</sup>), 1962 determination. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years, 66.9 ft<sup>3</sup>/s (1.895 m<sup>3</sup>/s), 48,470 acre-ft/yr (59.8 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,140 ft<sup>3</sup>/s (88.9 m<sup>3</sup>/s) Apr. 21, 1958, gage height, 6.42 ft (1.957 m), from rating curve extended above 1,300 ft<sup>3</sup>/s (37 m<sup>3</sup>/s); maximum gage height, 7.25 ft (2.210 m), from floodmarks, June 19, 1966; minimum discharge 0.2 ft<sup>3</sup>/s (0.006 m<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 above base of 600 ft<sup>3</sup>/s (17 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 4	0115	*1210 34.3	5.83 1.777	Aug. 25	1830	1040 29.5	5.78 1.762
Aug. 19	1815	791 22.4	5.45 1.661				

Minimum discharge, 5.6 ft<sup>3</sup>/s (0.16 m<sup>3</sup>/s) July 15, 22, 24, 25, 26, Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	11	12	16	16	28	79	666	214	12	12	22
2	14	12	11	16	17	31	110	855	189	11	9.3	18
3	10	11	13	13	17	32	86	922	167	9.7	3.7	15
4	9.0	11	13	14	16	29	101	992	143	9.2	8.1	15
5	9.7	11	14	16	16	27	150	854	133	8.8	8.0	16
6	9.3	11	13	16	16	26	141	627	114	8.7	7.7	18
7	9.3	11	14	16	17	23	130	478	100	7.8	7.9	15
8	9.0	12	13	15	17	26	119	506	86	7.5	10	16
9	8.6	12	13	16	17	28	114	540	75	7.5	9.1	20
10	9.0	12	13	16	17	28	111	494	68	7.2	7.4	16
11	9.0	12	15	16	18	33	136	518	66	7.2	6.3	18
12	8.6	12	14	16	18	104	289	490	59	7.0	6.4	29
13	9.0	12	14	16	18	113	336	370	55	6.5	6.5	38
14	8.6	12	15	15	18	102	375	314	52	6.6	7.0	47
15	9.0	12	13	16	19	92	396	307	47	6.6	7.4	37
16	9.7	12	15	16	20	72	393	285	42	6.4	7.4	26
17	9.7	12	13	16	21	69	356	301	42	6.5	33	23
18	9.7	13	12	16	21	77	390	344	39	6.3	20	28
19	9.3	13	13	16	20	64	405	385	40	7.3	58	25
20	9.0	12	14	17	21	56	363	390	40	7.7	20	25
21	9.0	12	15	16	22	49	292	396	37	6.3	17	25
22	9.3	13	15	16	23	49	258	425	34	5.9	17	24
23	10	14	12	16	25	49	222	405	30	5.9	15	21
24	11	14	11	16	26	46	201	353	28	5.9	18	19
25	11	13	12	17	25	49	202	377	24	5.8	81	17
26	9.7	13	13	17	25	57	276	363	20	5.8	42	16
27	10	12	14	18	25	56	325	367	19	6.8	27	16
28	11	12	13	17	27	63	427	289	17	7.0	25	16
29	11	14	13	18	---	85	567	318	13	9.1	24	16
30	11	14	13	17	---	70	682	273	12	15	21	16
31	11	---	15	16	---	61	---	236	---	14	22	---
TOTAL	302.4	367	413	498	558	1696	8012	14440	2005	245.0	569.2	653
MEAN	9.75	12.2	13.3	16.1	19.9	54.7	267	466	66.8	7.90	18.4	21.8
MAX	14	14	15	18	27	113	682	992	214	15	81	47
MIN	8.6	11	11	13	16	23	79	236	12	5.8	6.3	15
AC-FT	600	728	819	988	1110	3360	15890	28640	3980	486	1130	1300
CAL YR 1981	TOTAL	7399.2	MEAN 20.3	MAX 173	MIN 3.2	AC-FT 14680						
WTR YR 1982	TOTAL	24753.6	MEAN 81.5	MAX 992	MIN 5.8	AC-FT 59030						

## 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 (0.8 km) west of Chamita, 2.5 mi (4.0 km) northwest of San Juan Pueblo, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--3,144 mi<sup>2</sup> (8,143 km<sup>2</sup>), of which about 100 mi<sup>2</sup> (260 km<sup>2</sup>) is probably noncontributing.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1912 to current year. Monthly discharge only for some periods, published 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 (1,723.220 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 4, 1933, at railroad bridge 2.3 mi (3.7 km) downstream at different datums. Oct. 4, 1933 to Mar. 1, 1942, at site 50 ft (15 m) downstream at datum 0.22 ft (0.067 m) higher. Mar. 2, 1942 to Dec. 31, 1963, at site 200 ft (60 m) downstream, present datum.

REMARKS.--Water-discharge records good. Diversions above station for irrigation of about 27,600 acres (112 km<sup>2</sup>). Chamita ditch (station 08289500), on left bank, and Hernandez ditch (station 08289800), on right bank, bypass gage for irrigation of several hundred acres below 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 (120.5 km) and 29.3 mi (47.1 km) upstream respectively. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 83.0 mi (133.5 km) upstream. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--58 years (water years 1913-70), 541 ft<sup>3</sup>/s (15.32 m<sup>3</sup>/s), 392,000 acre-ft/yr (483 hm<sup>3</sup>/yr), prior to release of transmountain water; 12 years (water years 1971-82), 503 ft<sup>3</sup>/s (14.24 m<sup>3</sup>/s), 364,400 acre-ft/yr (449 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft<sup>3</sup>/s (425 m<sup>3</sup>/s) May 22, 1920, from rating curve extended above 2,300 ft<sup>3</sup>/s (65 m<sup>3</sup>/s); maximum gage height, 10.45 ft (3.185 m) 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 (420 m<sup>3</sup>/s). Another major flood occurred in 1884, from newspaper accounts.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,730 ft<sup>3</sup>/s (106 m<sup>3</sup>/s) July 30, gage height, 6.39 ft (1.948 m); maximum gage height, 6.46 ft (1.969 m) May 22; minimum discharge, 24 ft<sup>3</sup>/s (0.68 m<sup>3</sup>/s) Oct. 11, Jan. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

## SIONAL DATA

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	58	127	244	92	134	808	2610	2120	1650	1190	190
2	45	44	62	132	95	223	565	2830	2120	800	770	438
3	116	37	54	121	98	246	579	2950	2080	900	356	154
4	174	71	44	94	86	170	577	3070	2070	800	167	117
5	179	82	81	97	81	168	617	3020	2070	150	97	113
6	159	67	95	99	81	181	1050	2620	2070	80	84	127
7	108	62	82	112	75	187	1280	2350	2050	100	151	149
8	154	63	81	101	80	189	1730	2330	2050	300	221	172
9	141	61	96	91	160	160	1380	2370	2130	382	186	172
10	90	122	104	84	154	173	851	2360	2110	92	123	206
11	56	83	106	77	117	186	776	2540	2140	65	225	205
12	45	62	105	133	111	202	963	2540	2130	62	171	400
13	79	153	102	175	113	335	1890	2400	2110	110	171	450
14	95	111	104	91	112	338	2160	2250	2110	351	172	1150
15	103	109	102	109	115	373	2300	2190	2110	348	150	1450
16	325	89	332	108	112	522	2340	2170	2150	164	174	768
17	240	153	330	112	200	536	2300	2190	2160	98	149	259
18	115	79	251	111	198	552	2300	2200	2150	91	124	279
19	109	73	265	108	134	259	1800	2250	2200	111	185	252
20	107	69	260	106	131	229	675	2270	2200	120	215	299
21	107	68	276	106	140	222	2020	2290	2190	117	105	572
22	116	68	380	90	140	217	2080	2490	2250	119	116	769
23	156	67	398	72	128	292	1730	2490	2240	82	169	400
24	70	66	361	86	123	280	1140	2410	2220	56	369	326
25	58	67	102	87	141	198	987	2390	2220	69	658	241
26	62	202	62	85	171	183	1040	2390	2260	85	1070	224
27	146	227	56	140	133	503	1020	2340	2230	85	955	212
28	179	61	68	111	127	610	1370	2220	2220	97	540	212
29	176	44	63	153	---	684	1980	2220	2190	333	531	300
30	89	52	72	116	---	1090	2460	2190	2180	1500	265	306
31	64	---	61	95	---	1210	---	2150	---	1220	259	---
TOTAL	3699	2570	4707	3446	3448	10852	42618	75090	64530	10537	10138	10914
MEAN	119	85.7	152	111	123	350	1427	2422	2151	340	327	364
MAX	325	227	398	244	200	1210	2460	3070	2260	1650	1190	1450
MIN	36	37	44	72	75	134	565	2150	2050	56	84	113
AC-FT	7340	5100	9340	6840	6840	21520	84930	148900	128000	20900	20110	21650
(†)	662	---	---	---	---	---	778	939	1110	1160	880	836
(‡)	1080	---	---	---	---	---	900	1100	1510	341	153	387

CAL YR 1981 TOTAL 95353 MEAN 261 MAX 1330 MIN 30 AC-FT 189100 † Diversion, in acre-feet, by Chamita ditch.  
WTR YR 1982 TOTAL 242749 MEAN 665 MAX 3070 MIN 36 AC-FT 481500 ‡ Diversion, in acre-feet, by Hernandez ditch.

RIO GRANDE BASIN  
08290000 RIO CHAMA NEAR CHAMITA, NM -- Continued  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--Water year 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.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PEN- DED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PEN- DED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
OCT								
27...	1410	175	545	13.0	518	245	--	--
NOV								
24...	1500	68	510	10.0	124	23	--	--
DEC								
29...	1500	51	580	3.0	49	6.7	--	--
FEB								
01...	1400	91	586	.5	290	71	--	--
MAR								
11...	1145	192	480	--	371	192	--	--
APR								
14...	1100	2230	434	10.0	2470	14900	9	10
MAY								
14...	1230	2350	233	11.5	1010	6410	--	--
JUN								
09...	1040	2070	176	13.0	476	2660	--	--
JUL								
09...	1008	430	263	19.5	303	352	--	--
AUG								
10...	1410	109	530	25.0	123	36	--	--
SEP								
15...	1430	1520	487	19.0	653	2680	39	39

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
OCT							
27...	--	40	--	--	--	--	--
NOV							
24...	--	--	--	--	--	--	--
DEC							
29...	--	--	--	--	--	--	--
FEB							
01...	--	--	--	--	--	--	--
MAR							
11...	--	16	--	--	--	--	--
APR							
14...	15	--	30	57	86	99	100
MAY							
14...	--	8	--	--	--	--	--
JUN							
09...	--	17	--	--	--	--	--
JUL							
09...	--	88	--	--	--	--	--
AUG							
10...	--	--	--	--	--	--	--
SEP							
15...	50	--	79	98	100	--	--



## DIVERSIONS FROM RIO CHAMA

During the irrigation season records of discharge are collected on all 17 ditches and 2 pumps which divert from Rio Chama below 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 below the most downstream wasteway and above 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 (14.2 km) southwest of Alire, and 24 mi (39 km) northwest of Abiquiu. PERIOD OF RECORD, April 1972 to current year.
- 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 (1.4 km) downstream from heading located on left bank of Rio Chama, and 4.5 mi (7.2 km) northeast of Abiquiu. PERIOD OF RECORD, April 1972 to current year.
- 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 (210 m) downstream from ditch heading located on left bank of Rio Chama, and 1.4 mi (2.3 km) west of Abiquiu. PERIOD OF RECORD, April 1972 to current year.
- 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 (0.8 km) downstream from Winfield Morton pump, 0.6 mi (1.0 km) downstream from heading located on left bank of Rio Chama, and 1.2 mi (1.9 km) west of Abiquiu. PERIOD OF RECORD, April 1972 to current year.
- 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 (0.3 km) downstream from heading located on right bank of Rio Chama, and 0.4 mi (0.6 km) northwest of Abiquiu. PERIOD OF RECORD, April 1972 to current year.
- 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 (30 m) downstream from culvert on U.S. Highway 84, 0.4 mi (0.6 km) downstream from heading located on right bank of Rio Chama, and 2.5 mi (4.0 km) east of Abiquiu. PERIOD OF RECORD, April 1972 to current year.
- 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 (30 m) upstream from culvert on U.S. Highway 84, 0.2 mi (0.3 km) downstream from heading located on right bank of Rio Chama, and 2.6 mi (4.2 km) east of Abiquiu. PERIOD OF RECORD, April 1972 to current year.
- 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 (0.3 km) downstream from heading located on left bank of Quintana ditch (station 08287250), and 2.8 mi (4.5 km) east of Abiquiu. PERIOD OF RECORD, April 1972 to current year.
- 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 (0.8 km) downstream from heading located on left bank of Rio Chama, and 2.9 mi (4.7 km) east of Abiquiu. PERIOD OF RECORD, April 1972 to current year.
- 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 (12 m) upstream from forest boundary, 0.2 mi (0.3 km) downstream from culvert on State Highway 96, 0.4 mi (0.6 km) downstream from tail of Mariano ditch (station 08287300), 0.9 mi (1.4 km) downstream from heading located on left bank of Rio Chama, and 4.4 mi (7.1 km) east of Abiquiu. PERIOD OF RECORD, April 1972 to current year.
- 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 (1.8 km) downstream from heading located on right bank of Rio Chama, and 3.5 mi (5.6 km) northwest of Medanales. PERIOD OF RECORD, April 1972 to current year.
- 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 (0.2 km) downstream from heading located on left bank of Rio Chama, and 2.9 mi (4.7 km) northwest of Medanales. PERIOD OF RECORD, April 1972 to current year.
- 08288100 MANZANARES AND MONTTOYA 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 (0.3 km) downstream from heading located on right bank of Rio Chama, and 1.7 mi (2.7 km) northeast of Medanales. PERIOD OF RECORD, April 1972 to current year.
- 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 (0.8 km) downstream from tail of Jose V. Martinez ditch (station 08288050), 0.7 mi (1.1 km) downstream from heading located on left bank of Rio Chama, and 1.3 mi (2.1 km) northwest of Medanales. PERIOD OF RECORD, April 1972 to current year.

## DIVERSIONS FROM RIO CHAMA --Continued

- 08288200 MARTINEZ AND DURANCES 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 (91 m) downstream from tail of Manzanares and Montoya ditch (station 08288100), 0.7 mi (1.1 km) downstream from heading located on right bank of Rio Chama, and 1.1 mi (1.8 km) northwest of Medanales. PERIOD OF RECORD, April 1972 to current year.
- 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 (1.4 km) downstream from culvert on State Highway 233, 1.4 mi (2.3 km) south of Medanales, 2.5 mi (4.0 km) downstream from "upper" gage (station 08288200), and 3.2 mi (5.1 km) downstream from heading located on right bank of Rio Chama. PERIOD OF RECORD, April 1972 to current year.
- 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 (0.6 km) downstream from heading located on right bank of Rio Chama, 0.5 mi (0.8 km) upstream from siphon under Rio del Oso, and 4.1 mi (6.6 km) northwest of Hernandez. PERIOD OF RECORD, April 1972 to current year.
- 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 (9 m) upstream from flume over Arroyo de la Penita, 0.7 mi (1.1 km) downstream from heading located on left bank of Rio Chama, and 1.0 mi (1.6 km) northwest of Chamita. PERIOD OF RECORD, March 1936 to April 1941, February 1963 to current year (records furnished by 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 (1.1 km) downstream from heading located on right bank of Rio Chama, 1.1 mi (1.8 km) north of Hernandez, and 1.3 mi (2.1 km) northwest of Chamita. PERIOD OF RECORD, March 1963 to current year (records furnished by 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 (0.2 km) downstream from heading located on right bank of Rio Chama, and 0.6 mi (1.0 km) east of Hernandez. PERIOD OF RECORD, April 1972 to current year.

## DIVERSIONS FROM RIO CHAMA, IN ACRE-FEET, IRRIGATION SEASON 1982

Diversion	APR	MAY	JUN	JUL	AUG	SEP	OCT
08286300 Monastery pump	0	1.5	1.4	1.1	0.3	0.1	0.7
08287020 Abeyta Trujillo ditch	97	117	124	74	20	12	10
08287040 Winfield Morton pump	19	101	104	16	16	2.0	0
08287060 Jose Pablo Gonzales ditch	a550	1430	980	708	889	927	a830
08287150 Gonzales ditch	29	a67	65	all	.7	.9	.6
08287200 La Puente ditch	97	243	122	a140	185	102	.6
08287250 Quintana ditch	15	48	34	20	7.6	16	.1
08287270 Valentine Martinez ditch	.1	4.5	.2	.2	.3	.2	0
08287300 Mariano ditch	1.0	198	230	2.6	4.2	.5	1.0
08287400 Ferran ditch	208	328	111	3.6	2.8	4.6	33
08287600 Tierra Azul ditch	330	535	730	712	509	226	0
08288050 Jose V. Martinez ditch	131	98	122	169	154	58	64
08288100 Manzanares and Montoya ditch	a1.9	a10	a75	54	8.6	.9	0
08288150 Rio de Chama ditch	463	705	667	406	371	476	551
08288200 Martinez and Duranes ditch (upper)	709	998	845	690	640	589	507
08288250 Martinez and Duranes ditch (lower)	a510	a585	570	a600	22	295	103
08288300 Chili ditch	324	58	290	93	200	225	188
08289500 Chamita ditch	778	939	1110	all160	880	836	1300
08289800 Hernandez ditch	a900	all100	1510	341	153	387	a1000
08290100 Salazar ditch	271	321	631	293	121	230	170

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 (41 m) downstream from bridge on State Highway 4, 200 ft (61 m) downstream from confluence of Rio Medio and Rio Frijoles, 0.6 mi (1.0 km) northwest of Cundiyo, 1.8 mi (2.9 km) upstream from Santa Cruz Dam, and at mile 11.9 (19.1 km).

DRAINAGE AREA.--86 mi<sup>2</sup> (220 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for 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. Altitude of gage is 6,460 ft (1,969 m), from topographic map. Sept. 1, 1930 to Aug. 12, 1932, water-stage recorder at site about 1 mi (2 km) downstream at different datum. Aug. 13, 1932 to Oct. 29, 1934, water-stage recorder at site 35 ft (11 m) upstream at datum 0.42 ft (0.128 m) higher. Oct. 30, 1934 to Jan. 2, 1954, water-stage recorder at present site at datum 0.64 ft (0.195 m) lower.

REMARKS.--Remarks good except those for winter period and those for August and September, which are poor. Diversions for irrigation of about 1,000 acres (4.05 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--52 years, 28.6 ft<sup>3</sup>/s (0.810 m<sup>3</sup>/s), 20,720 acre-ft/yr (25.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft<sup>3</sup>/s (68.5 m<sup>3</sup>/s) Sept. 24, 1931, gage height, 7.8 ft (2.38 m), site and datum then in use, from rating curve extended above 170 ft<sup>3</sup>/s (4.81 m<sup>3</sup>/s); minimum, 0.19 ft<sup>3</sup>/s (0.005 m<sup>3</sup>/s) Mar. 13, 1954, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,010 ft<sup>3</sup>/s (28.6 m<sup>3</sup>/s) about Aug. 25, gage height, 4.38 ft (1.335 m) from recorded range-in-stage, no other peak above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s); minimum, 0.80 ft<sup>3</sup>/s (0.023 m<sup>3</sup>/s) Nov. 20, 27, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	7.0	3.8	7.5	6.5	11	12	36	35	23	29	28
2	15	7.7	5.2	6.9	6.0	12	14	42	85	26	20	25
3	30	7.8	7.8	6.0	5.5	11	12	50	82	23	19	25
4	18	7.4	9.5	5.0	6.5	10	14	54	79	19	17	24
5	14	7.2	9.7	6.0	6.7	8.8	16	55	78	18	19	22
6	13	8.0	9.7	7.4	6.0	7.5	16	46	72	16	20	20
7	13	8.4	9.0	6.6	5.5	10	14	40	71	17	18	18
8	12	8.5	8.5	6.0	6.0	10	11	36	69	19	24	20
9	12	8.0	9.1	6.5	6.5	9.5	12	38	66	18	18	25
10	10	6.7	9.9	7.0	6.6	10	12	40	66	14	15	22
11	9.9	7.3	8.2	7.0	6.9	12	11	44	67	16	15	25
12	9.4	7.9	7.9	7.4	6.5	14	19	45	64	16	15	40
13	9.4	7.5	7.6	7.1	7.6	14	25	46	64	14	16	45
14	9.6	8.3	7.0	6.0	7.3	13	29	45	65	14	17	50
15	10	7.9	7.0	6.5	7.0	12	32	43	62	13	15	30
16	9.5	8.2	7.2	7.0	7.1	11	33	41	58	12	14	20
17	9.3	7.1	6.0	7.2	7.6	11	29	40	55	13	16	31
18	9.3	7.5	6.0	7.0	7.3	13	28	42	52	14	22	47
19	9.2	3.6	7.0	6.9	7.4	12	26	49	50	13	19	69
20	9.1	2.7	9.9	6.8	8.0	9.4	24	55	48	13	21	63
21	9.0	5.7	8.2	6.5	9.0	9.2	21	61	47	13	31	54
22	9.1	8.9	6.8	6.2	10	12	20	67	43	11	24	47
23	8.9	8.6	6.0	6.0	11	11	20	71	40	9.5	24	43
24	8.9	3.3	5.0	6.5	11	11	19	73	38	9.0	30	36
25	8.5	8.0	6.0	7.2	10	11	16	80	35	9.8	100	35
26	8.0	3.8	7.5	7.2	9.9	13	17	80	32	11	50	32
27	8.7	4.4	8.4	7.2	9.6	13	17	86	31	9.9	40	27
28	8.3	11	7.3	7.1	9.6	13	18	87	30	14	35	25
29	8.5	8.7	6.4	7.2	---	14	25	89	28	27	30	25
30	8.2	7.0	6.8	6.5	---	12	33	85	28	39	30	25
31	7.7	---	7.4	6.6	---	11	---	84	---	40	30	---
TOTAL	334.1	219.1	231.8	208.0	214.6	351.4	595	1752	1690	529.2	793	1000
MEAN	10.8	7.30	7.48	6.71	7.66	11.3	19.8	56.5	56.3	17.1	25.6	33.3
MAX	30	11	9.9	7.5	11	14	33	89	85	40	100	69
MIN	7.7	2.7	3.8	5.0	5.5	7.5	11	36	28	9.0	14	18
AC-FT	663	435	460	413	426	697	1180	3480	3350	1050	1570	1780

CAL YR 1981 TOTAL 4107.9 MEAN 11.3 MAX 60 MIN 2.7 AC-FT 8150  
WTR YR 1982 TOTAL 7918.2 MEAN 21.7 MAX 100 MIN 2.7 AC-FT 15710

NOTE.--No gage-height record Aug. 24 to Sept. 16.

## 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 Nambe Indian Reservation, 300 ft (91 m) upstream from Nambe Falls, 2.6 mi (4.2 km) upstream from Rio En Medio, 4.4 mi (7.1 km) southeast of Nambe Pueblo, and 5.4 mi (8.7 km) southeast of Nambe.

DRAINAGE AREA.--34.1 mi<sup>2</sup> (88.3 km<sup>2</sup>).

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

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

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

REMARKS.--Reservoir is formed by a concrete arch and earthfill dam, storage began Feb. 23, 1976. Total capacity, 2,020 acre-ft (2.49 hm<sup>3</sup>) at elevation 6,826.6 ft (2,080.75 m), crest of ogee weir spillway, including 237 acre-ft (292,000 m<sup>3</sup>) of storage in a permanent pool between elevation 6,760.9 ft (2,060.72 m), invert of outlet conduits, and 6,780.0 ft (2,066.54 m). Dead storage 121 acre-ft (149,000 m<sup>3</sup>) below elevation 6,760.9 ft (2,060.72 m). Outlet conduits are one 6-in (0.152 m) and two 12-in (0.305 m) diameter pipes. Reservoir is used for storage of irrigation water and for recreation. Figures given herein represent total storage.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,060 acre-ft (2.54 hm<sup>3</sup>) June 9, 1979, elevation, 6,827.24 ft (2,080.943 m); no storage prior to Feb. 23, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,520 acre-ft (1.87 hm<sup>3</sup>) Sept. 30, elevation, 6,817.10 ft (2,077.852 m); minimum, 465 acre-ft (0.57 hm<sup>3</sup>) Oct. 1, elevation, 6,785.55 ft (2,068.236 m).

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Bureau of Reclamation in 1976)

6,785	454	6,810	1,200
6,790	565	6,820	1,660
6,800	838		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	465	523	533	665	794	911	1040	1080	1060	810	898	841
2	467	529	537	670	798	916	1050	1040	1100	813	925	833
3	461	536	543	675	802	920	1050	1010	1110	813	952	834
4	464	543	549	677	806	925	1060	966	1120	813	970	838
5	466	549	555	682	809	928	1060	956	1120	813	982	838
6	468	555	560	686	814	923	1070	959	1120	813	998	841
7	471	562	564	690	818	935	1080	966	1120	813	1020	844
8	494	566	565	693	822	939	1080	970	1120	813	1040	844
9	496	574	568	697	825	944	1090	977	1120	816	1050	844
10	500	580	567	701	829	948	1090	984	1120	819	1060	847
11	503	586	573	706	834	953	1100	991	1130	825	1080	850
12	505	592	578	709	838	958	1110	987	1140	828	1100	856
13	511	591	581	713	842	964	1120	980	1160	831	1110	863
14	514	595	588	720	847	969	1130	977	1160	831	1120	863
15	514	577	592	725	850	974	1140	966	1160	831	1140	866
16	512	570	597	729	854	978	1140	956	1150	831	1130	876
17	511	561	597	732	858	982	1150	952	1130	834	1130	892
18	509	554	600	736	862	987	1150	949	1110	831	1120	942
19	506	543	604	741	867	992	1150	949	1100	831	1100	1010
20	509	540	613	745	871	995	1150	949	1090	828	1060	1090
21	510	546	618	749	875	999	1150	952	1060	828	1020	1160
22	512	553	622	753	880	1000	1150	959	1040	828	984	1230
23	515	556	624	756	884	1010	1150	970	1020	825	959	1280
24	516	554	626	761	889	1010	1150	973	998	825	942	1330
25	516	551	631	765	894	1020	1150	973	966	822	935	1370
26	516	547	636	768	898	1020	1150	977	942	822	928	1400
27	513	542	643	773	903	1030	1150	998	915	825	912	1430
28	510	540	647	777	907	1030	1150	1020	897	825	895	1470
29	507	536	650	782	912	1040	1130	1040	869	831	876	1500
30	506	534	654	786	916	1040	1100	1050	839	850	860	1520
31	515	---	658	790	---	1040	---	1070	---	876	851	---
MAX	516	592	658	790	907	1040	1150	1080	1160	895	1140	1520
MIN	465	523	533	665	794	911	1040	949	839	810	831	834
(†)	6787.83	6788.67	6793.71	6798.42	6802.13	6806.02	6807.62	6806.70	6800.03	6801.20	6800.40	6817.10
(‡)	+48	+19	+124	+132	+117	+133	+60	-30	-231	+37	-25	+669

CAL YR 1981 MAX 1600 MIN 334 ‡ -402  
WTS YR 1982 MAX 1520 MIN 465 ‡ +1053

† 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 (91 m) upstream from Nambe Falls, 2.6 mi (4.2 km) upstream from Rio En Medio, 4.4 mi (7.1 km) southeast of Nambe Pueblo and 5.4 mi (8.7 km) southeast of Nambe.

DRAINAGE AREA.--34.1 mi<sup>2</sup> (88.3 km<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 (0.152 m) and two 12-in (0.305 m) diameter pipes. During periods of spill at Nambe Falls Dam, record computed at site 1,100 ft (335 m) downstream, site of discontinued station 58294300, Rio Nambe at Nambe Falls.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 312 ft<sup>3</sup>/s (8.84 m<sup>3</sup>/s) June 9, 1979, gage height, 1.96 ft (0.597 m) at site 1,100 ft (335 m) downstream (maximum release and spill computed at Nambe Falls Dam, 250 ft<sup>3</sup>/s, 7.08 m<sup>3</sup>/s, June 9, 1979); minimum daily discharge, 0.13 ft<sup>3</sup>/s (0.004 m<sup>3</sup>/s) May 3, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 31 ft<sup>3</sup>/s (0.88 m<sup>3</sup>/s) Aug. 21; minimum daily discharge, 0.48 ft<sup>3</sup>/s (0.014 m<sup>3</sup>/s) Dec. 16-31

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	.50	2.5	.49	.49	.49	.49	20	15	25	3.8	21
2	5.4	.50	2.5	.49	.49	.49	.49	20	15	12	3.8	13
3	5.4	.50	2.5	.49	.49	.49	.49	20	15	4.1	3.9	12
4	5.4	.50	1.6	.49	.49	.49	.49	20	15	4.2	3.8	8.7
5	5.4	.50	.99	.49	.49	.49	.49	11	15	4.1	3.8	8.7
6	4.0	.50	.99	.49	.49	.49	.49	8.8	15	4.1	3.9	8.8
7	4.0	.50	.99	.49	.49	.49	.49	10	18	4.1	3.9	9.1
8	4.0	.50	.99	.49	.49	.49	.49	6.0	21	4.1	3.9	8.9
9	4.0	.50	.99	.49	.49	.49	.49	6.0	22	4.1	3.9	8.4
10	4.0	.50	.99	.49	.49	.49	.49	6.0	24	4.1	3.9	8.5
11	4.0	.50	.99	.49	.49	.49	.49	6.0	21	4.1	3.9	8.7
12	4.0	.50	.99	.49	.49	.49	.49	10	18	5.5	3.9	8.7
13	1.9	4.0	.99	.49	.49	.49	.49	14	18	5.5	3.9	8.7
14	2.8	6.7	.76	.49	.49	.49	.49	14	20	5.5	3.9	8.7
15	5.3	6.7	.49	.49	.49	.49	3.1	14	20	5.5	3.9	8.7
16	5.3	6.7	.48	.49	.49	.49	5.4	14	23	5.5	4.2	8.7
17	5.3	6.7	.48	.49	.49	.49	5.4	13	24	5.1	4.5	8.7
18	5.3	6.7	.48	.49	.49	.49	5.4	13	24	5.1	13	3.4
19	5.3	6.7	.48	.49	.49	.49	5.4	13	24	5.1	22	.61
20	5.3	4.3	.48	.49	.49	.49	5.4	13	24	5.1	23	.61
21	3.4	2.5	.48	.49	.49	.49	5.4	13	25	5.1	31	.61
22	2.8	2.5	.48	.49	.49	.49	5.3	13	25	5.2	29	.64
23	2.8	2.5	.48	.49	.49	.49	5.3	13	25	5.1	23	.64
24	2.8	2.5	.48	.49	.49	.49	5.3	14	25	5.1	21	.64
25	2.8	2.5	.48	.49	.49	.49	5.3	15	25	5.1	16	.65
26	4.0	2.5	.48	.49	.49	.49	5.3	15	25	4.4	14	.66
27	5.3	2.5	.48	.49	.49	.49	5.3	15	25	3.6	18	.66
28	5.3	2.5	.48	.49	.49	.49	5.3	15	25	3.6	21	.67
29	5.3	2.5	.48	.49	---	.49	14	15	25	3.6	21	.67
30	2.5	2.4	.48	.49	---	.49	22	15	25	3.6	21	.67
31	.50	---	.48	.49	---	.49	---	15	---	3.6	21	---
TOTAL	129.00	79.40	26.94	15.19	13.72	15.19	115.46	409.8	641	169.9	360.8	179.13
MEAN	4.16	2.65	.87	.49	.49	.49	3.85	13.2	21.4	5.48	11.6	5.97
MAX	5.4	6.7	2.5	.49	.49	.49	22	20	25	25	31	21
MIN	.50	.50	.48	.49	.49	.49	.49	6.0	15	3.6	3.8	.61
AC-FT	256	157	53	30	27	30	229	813	1270	337	716	355
CAL YR 1981	TOTAL	1837.32	MEAN	5.03	MAX	29	MIN	.13	AC-FT	3640		
WTR YR 1982	TOTAL	2155.53	MEAN	5.91	MAX	31	MIN	.48	AC-FT	4230		



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 (120 m) downstream from bridge on State Highway 4, 1.8 mi (2.9 km) southwest of San Ildefonso Pueblo, 2.5 mi (4.0 km) downstream from Pojoaque River, 6.8 mi (10.9 km) west of Pojoaque, and at mile 1,614.2 (2,597.2 km).  
DRAINAGE AREA.--14,300 mi<sup>2</sup> (37,040 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 (1,672.889 m) National Geodetic Vertical Datum of 1929. See WSP 1312, 1732, or 1923 for history of changes prior to June 1, 1910.  
REMARKS.--Water-discharge records good. Considerable regulation by Heron Reservoir (station 08284510), El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900) on Rio Chama, which can contribute a major portion of the total flow. Flow affected by release of transmountain water from Heron Reservoir since May 1971. Diversions above station for irrigation of about 620,000 acres (2,500 km<sup>2</sup>) in Colorado and 75,000 acres (300 km<sup>2</sup>) in New Mexico. Gage-height telemeter at station.  
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft<sup>3</sup>/s (691 m<sup>3</sup>/s) May 23, 1920; maximum gage height, 14.5 ft 4.42 m) Sept. 29, 1904, present site and datum; minimum daily discharge, 60 ft<sup>3</sup>/s (1.70 m<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 above base of 5,200 ft<sup>3</sup>/s (150 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 5	1515	5240 148	6.62 2.018	July 31	0645	*5460 155	6.75 2.057

Minimum discharge, 294 ft<sup>3</sup>/s (8.33 m<sup>3</sup>/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	319	527	603	591	599	833	1530	3450	4660	3780	1940	1030
2	364	561	559	547	602	941	1300	3740	4750	2780	1740	1100
3	477	559	435	497	603	1030	1330	4190	4530	2810	1280	817
4	512	579	462	416	600	934	1350	4700	4210	2750	966	730
5	565	607	486	453	596	951	1370	5030	4200	2000	913	785
6	514	697	565	462	548	938	1790	4790	4290	1660	861	805
7	466	761	584	523	503	899	1960	4440	4280	1560	925	846
8	473	306	567	494	619	866	2320	4260	4110	1700	1020	921
9	511	801	614	481	643	816	1930	4130	3980	1810	956	960
10	429	859	617	506	679	789	1420	4000	3930	1500	827	1020
11	380	872	612	512	637	827	1350	4250	4010	1270	915	955
12	355	839	626	588	593	877	1380	4300	4060	1200	953	1380
13	376	891	609	637	593	1100	2250	4290	4040	1280	894	1450
14	465	855	587	559	590	1140	2570	4150	4040	1370	908	2100
15	492	824	551	537	611	1140	2800	3840	4030	1310	848	2380
16	701	799	712	573	617	1330	2960	3590	4090	1120	850	2090
17	826	843	793	571	700	1340	2980	3440	4060	1010	880	1660
18	704	808	648	570	734	1420	2990	3420	4080	907	880	1960
19	691	773	627	584	687	968	2830	3480	4170	853	924	1890
20	677	760	625	592	661	916	1400	3550	4250	356	924	1950
21	685	745	632	584	702	897	2770	3640	4370	880	809	2200
22	669	730	819	586	716	872	2880	3820	4390	815	774	2610
23	686	697	840	546	719	942	2640	4240	4210	718	885	2270
24	623	664	770	560	722	942	1910	4050	3970	595	1160	2250
25	594	674	464	592	775	799	1640	4220	3860	551	1990	2020
26	600	805	412	594	808	799	1710	4210	3560	538	2240	1800
27	666	888	437	629	791	1260	1630	4180	3840	534	2160	1670
28	735	723	444	637	805	1360	1910	4280	3820	536	1860	1590
29	730	620	437	649	---	1400	2600	4450	3810	758	1850	1600
30	636	618	439	642	---	1790	3110	4600	3860	1910	1540	1570
31	559	---	430	599	---	1880	---	4530	---	2820	1160	---
TOTAL	17480	22185	18026	17311	18453	32996	62610	127260	123760	44181	36852	46409
MEAN	564	740	581	558	659	1064	2087	4105	4125	1425	1189	1547
MAX	826	891	840	649	808	1880	3110	5030	4750	3780	2240	2610
MIN	319	527	412	416	503	789	1300	3420	3810	534	774	730
AC-FT	34670	44000	35750	34340	36600	65450	124200	252400	245500	87630	73100	92050
CAL YR 1981	TOTAL	242892	MEAN	665	MAX	1950	MIN	246	AC-FT	481800		
WTR YR 1982	TOTAL	567523	MEAN	1555	MAX	5030	MIN	319	AC-FT	1126000		

RIO GRANDE BASIN  
08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued  
WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1946 to current year.

WATER TEMPERATURES: October 1948 to current year.

SUSPENDED SEDIMENT DISCHARGE: 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 micromhos Aug. 5, 1963; minimum daily, 152 micromhos July 23, 1979.

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

SEDIMENT LOADS: Maximum daily, 366,000 tons (332,000 tonnes) Aug. 23, 1961; minimum daily, 3 tons (2.7 tonnes) July 27, 1963.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 900 micromhos Aug. 26; minimum daily, 165 micromhos June 3.

WATER TEMPERATURES: Maximum, 25.5°C Aug. 15-17; minimum, 0.0°C on several days in December and January.

SEDIMENT CONCENTRATIONS: Maximum daily, 16,600 mg/L Aug. 26; minimum daily, 34 mg/L Nov. 1.

SEDIMENT LOADS: Maximum daily, 100,000 tons (90,700 tonnes) Aug. 26; minimum daily, 44 tons (40 tonnes) Jan. 4.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 23...	1445	696	283	270	8.9	8.8	19.5	7.5	7.3	10.8
FEB 01...	1300	592	288	304	8.5	8.5	-1.5	1.5	3.0	11.8
MAR 09...	0900	841	280	--	--	--	4.5	7.0	--	--
APR 06...	0928	1810	398	415	8.1	8.0	10.5	8.5	48	9.9
JUN 03...	1000	4610	165	184	7.9	7.5	21.5	14.0	39	8.6
AUG 04...	1000	914	300	293	8.4	8.2	20.0	20.5	46	7.9
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)	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 23...	100	8	31	5.5	15	.7	2.7	42	7.3	.3
FEB 01...	113	13	35	6.3	19	.8	2.5	44	6.2	.4
MAR 09...	--	--	--	--	--	--	--	--	--	--
APR 06...	152	52	46	8.9	25	.9	2.7	110	6.0	.4
JUN 03...	67	7	21	3.6	7.5	.4	1.9	24	2.1	.2
AUG 04...	108	18	34	5.6	16	.7	2.6	49	3.9	.3



DATE	SILICA, DIS- SOLVED (MG/L AS SIO2 (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	NITRO- GEN, NITRIE 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)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CYANIDE TOTAL (MG/L AS CN) (00720)
NOV 23...	22	188	181	--	.11	.170	.010	.030	>.01
FEB 01...	24	202	198	--	.24	.090	<.010	.070	--
MAR 09...	--	--	--	--	--	--	--	--	--
APR 06...	17	286	276	--	.14	.080	.020	.020	<.01
JUN 03...	16	109	113	<.020	<.10	.090	.350	.050	<.01
AUG 04...	19	197	185	--	<.10	.140	.160	.030	--

DATE	TIME	ARSENIC	ARSENIC	BARIUM,	BARIUM,	BORON,	CADMIUM	CADMIUM	CHRO-	CHRO-	COBALT,
		TOTAL	DIS-	TOTAL	DIS-	DIS-	TOTAL	DIS-	M-IUM,	DIS-	TOTAL
		(UG/L	SOLVED	RECOV-	SOLVED	SOLVED	RECOV-	SOLVED	RECOV-	SOLVED	RECOV-
		AS AS)	(UG/L	ERABLE	(UG/L	(UG/L	ERABLE	(UG/L	ERABLE	(UG/L	ERABLE
		AS AS)	AS AS)	AS BA)	AS BA)	AS B)	AS CD)	AS CD)	AS CR)	AS CR)	AS CO)
		(01002)	(01000)	(01007)	(01005)	(01020)	(01027)	(01025)	(01034)	(01030)	(01037)
NOV 23...	1445	3	2	100	45	40	<1	<1	<10	<10	<1
FEB 01...	1300	--	--	--	--	30	--	--	--	--	--
APR 06...	0928	3	2	200	65	30	1	<3	<10	<10	7
JUN 03...	1000	2	1	<100	38	20	<1	<1	<10	<10	<1
AUG 04...	1000	--	--	--	--	30	--	--	--	--	--

DATE	COBALT,	COPPER,	COPPER,	IRON,	IRON,	LEAD,	LEAD,	MANGA-	MANGA-	MERCURY
	DIS-	TOTAL	DIS-	TOTAL	DIS-	TOTAL	DIS-	NESE,	NESE,	TOTAL
	SOLVED	RECOV-	SOLVED	RECOV-	SOLVED	RECOV-	SOLVED	ERABLE	SOLVED	ERABLE
	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
	AS CO	AS CU	AS CU	AS FE	AS FE	AS PB	AS PB	AS MN	AS MN	AS HG
	(01035)	(01042)	(01040)	(01045)	(01046)	(01051)	(01049)	(01055)	(01056)	(71900)
NOV 23...	<3	4	4	530	18	3	5	60	9	<.1
FEB 01...	--	--	--	--	14	--	--	--	--	--
APR 06...	<1	12	1	5800	9	13	3	230	13	.1
JUN 03...	<1	12	2	2700	59	7	<1	160	5	<.1
AUG 04...	--	--	--	--	19	--	--	--	--	--

[illegible]

RIO GRANDE BASIN  
08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH <sub>4</sub> 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)
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JUN 03...	1000	<2.0	4.8	200	3	<1	<1
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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)
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JUN 03...	<10	<1	1100	10	73	<.10	7
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RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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)	URIANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URIANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
NOV 23...	1445	7.3	.7	4.6	1.1	4.4	1.1	.09	2.8	--
JUN 03...	1000	<2.2	8.8	1.4	6.6	1.4	6.2	.05	--	.36

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
JUN 03...	1000	<.01	<.01	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI-FORM, FECAL, 0.7 UMMF (COLS./100 ML) (31625)	STREP-TOCOCCHI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 23...	K5	K13
FEB 01...	26	62
APR 06...	K35	210
JUN 03...	K60	340
AUG 04...	40	500

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)
OCT 03...	0835	435	14.0	2110	2480	45	60	80	97
FEB 01...	1300	592	1.5	40	64	--	--	--	--
MAR 16...	0645	1350	8.0	1290	4700	6	9	12	48
APR 06...	0928	1810	8.5	1680	8210	3	3	6	20
15...	0650	2780	9.0	2330	17500	5	7	9	25
MAY 02...	1845	3990	16.0	2040	22000	11	16	19	42
JUL 01...	0810	3990	18.0	230	2480	--	--	--	--
30...	1700	1800	23.0	5510	26800	35	49	77	95
31...	0640	5460	20.0	23200	342000	28	47	72	92
AUG 01...	0830	1930	20.5	965	5030	21	29	47	64
17...	0650	860	21.0	224	520	24	41	62	--
25...	0645	1790	20.5	12200	59000	43	51	74	91
SEP 01...	0650	1100	19.0	1850	5490	5	6	8	40
13...	0645	1530	14.0	6790	28000	50	56	75	87

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)
OCT 03...	99	100	--	--	--	--	--	--
FEB 01...	--	--	--	--	45	--	--	--
MAR 16...	76	95	100	--	--	--	--	--
APR 06...	60	91	98	100	--	--	--	--
15...	61	93	100	--	--	--	--	--
MAY 02...	69	91	98	100	--	--	--	--
JUL 01...	--	--	--	--	36	--	--	--
30...	97	99	100	--	--	--	--	--
31...	97	99	100	--	--	--	--	--
AUG 01...	75	87	97	100	--	--	--	--
17...	--	--	--	--	90	92	97	100
25...	97	99	100	--	--	--	--	--
SEP 01...	86	99	100	--	--	--	--	--
13...	92	99	100	--	--	--	--	--

RIO GRANDE BASIN  
08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	389	---	---	---	---	---	405	---	175	225	300	---
2	388	---	---	---	---	---	386	---	180	230	319	---
3	382	---	---	---	---	---	386	---	178	234	264	---
4	376	---	---	---	---	---	385	235	178	230	---	---
5	404	---	---	---	---	---	386	227	---	230	---	---
6	---	---	---	---	---	---	420	219	---	245	---	---
7	---	---	---	---	---	---	423	219	---	248	---	---
8	---	---	---	---	---	---	448	221	---	254	---	---
9	---	---	---	---	---	---	429	212	---	237	---	---
10	---	---	---	---	---	304	395	215	---	237	---	---
11	---	---	---	---	---	321	397	215	---	235	---	---
12	---	---	---	---	---	315	399	211	---	247	---	---
13	---	---	---	---	---	353	---	207	---	261	---	---
14	---	---	---	---	---	332	---	208	---	253	---	---
15	---	---	---	---	---	328	---	207	---	245	---	---
16	---	---	---	---	---	354	---	207	---	254	---	---
17	---	---	---	---	---	360	---	209	---	260	---	---
18	---	---	---	---	---	362	---	209	---	261	---	---
19	---	---	---	---	---	314	---	205	---	263	---	---
20	---	---	---	---	---	313	---	206	---	282	---	---
21	---	---	---	---	---	311	---	210	---	275	---	---
22	---	---	---	---	---	316	---	214	---	271	---	---
23	---	---	---	---	---	346	---	254	---	266	---	---
24	---	---	---	---	---	344	---	205	208	272	---	---
25	---	---	---	---	---	325	---	190	215	288	---	---
26	---	---	---	---	---	324	307	184	220	301	---	---
27	---	---	---	---	---	384	292	194	226	307	---	---
28	---	---	---	---	---	395	292	185	227	310	---	---
29	---	---	---	---	---	403	292	194	231	292	---	---
30	---	---	---	---	---	429	285	185	227	338	---	---
31	---	---	---	---	---	431	---	188	---	406	---	---
MEAN	388	---	---	---	---	349	372	208	206	266	293	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	394	379	389	325	312	318	316	255	272	460	388	424
2	398	347	391	322	297	312	309	260	283	432	398	412
3	412	344	385	315	300	309	307	287	298	418	402	410
4	411	362	386	330	303	318	332	296	308	440	386	414
5	414	401	407	333	312	322	329	296	316	444	388	413
6	412	401	408	322	296	308	341	303	321	426	388	405
7	416	393	405	298	284	292	322	296	309	416	384	402
8	411	401	408	285	262	270	327	297	313	404	376	389
9	410	388	399	272	258	264	331	298	315	430	364	390
10	412	385	399	288	256	273	332	299	317	404	346	376
11	406	376	396	289	258	272	332	303	317	400	342	367
12	399	378	387	271	255	263	326	297	312	380	344	369
13	401	370	381	289	265	278	322	302	314	382	354	371
14	399	370	381	293	271	283	329	303	318	384	336	356
15	382	371	374	290	269	278	339	309	328	382	330	348
16	407	374	390	280	265	273	386	330	362	402	332	355
17	400	350	371	302	277	287	396	382	390	384	336	357
18	357	311	330	300	272	283	396	375	384	374	342	358
19	314	291	302	286	274	279	406	386	397	370	350	359
20	303	288	297	286	270	277	422	389	403	364	346	355
21	306	294	302	285	267	276	422	396	407	360	344	354
22	311	294	303	288	272	280	420	409	414	360	346	354
23	326	308	317	292	270	281	418	408	412	358	320	341
24	324	283	302	288	272	280	435	400	425	376	326	341
25	302	290	296	287	278	283	435	388	418	376	324	347
26	309	295	302	319	275	295	410	373	397	364	328	344
27	331	290	312	311	306	309	417	373	397	374	332	352
28	336	328	331	307	255	279	410	382	392	372	350	360
29	339	328	334	272	256	261	428	380	398	370	346	359
30	344	310	325	283	257	268	439	376	384	368	342	354
31	328	312	320	---	---	---	418	382	392	356	334	344
MONTH	416	283	356	333	255	286	439	255	355	460	320	370

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	350	324	337	342	324	335	---	---	---	286	268	277
2	346	318	332	372	336	349	---	---	---	278	250	262
3	350	312	336	358	342	349	---	---	---	252	250	251
4	346	326	334	352	320	331	---	---	---	---	---	---
5	344	312	327	326	312	320	---	---	---	---	---	---
6	364	302	334	330	308	318	---	---	---	---	---	---
7	366	316	345	334	316	324	---	---	---	---	---	---
8	376	322	349	340	328	334	---	---	---	---	---	---
9	380	314	348	342	320	329	---	---	---	---	---	---
10	380	352	366	---	---	---	---	---	---	---	---	---
11	378	338	357	---	---	---	---	---	---	---	---	---
12	364	340	352	---	---	---	---	---	---	---	---	---
13	362	346	354	---	---	---	414	394	402	---	---	---
14	360	346	354	---	---	---	420	392	403	---	---	---
15	366	342	352	---	---	---	404	378	388	---	---	---
16	364	338	348	---	---	---	388	358	372	---	---	---
17	376	344	364	---	---	---	368	350	358	---	---	---
18	374	364	371	---	---	---	354	322	339	---	---	---
19	374	346	361	---	---	---	334	288	315	---	---	---
20	358	330	345	---	---	---	286	234	247	---	---	---
21	366	338	352	---	---	---	322	238	310	---	---	---
22	372	340	355	---	---	---	328	316	326	---	---	---
23	364	340	350	---	---	---	330	324	327	---	---	---
24	352	336	345	---	---	---	324	308	315	---	---	---
25	358	338	349	---	---	---	320	310	314	---	---	---
26	352	338	342	---	---	---	322	298	310	---	---	---
27	354	332	342	---	---	---	304	288	298	---	---	---
28	342	328	335	---	---	---	304	280	291	---	---	---
29	---	---	---	---	---	---	302	282	290	---	---	---
30	---	---	---	---	---	---	294	278	285	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	380	302	348	372	308	332	420	234	327	286	250	263
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	260	218	225	---	---	---	366	332	353
2	---	---	---	266	220	230	---	---	---	426	342	399
3	178	172	174	292	216	233	---	---	---	428	350	381
4	182	176	179	262	224	229	316	298	309	378	330	351
5	188	180	183	266	224	229	326	292	309	358	330	343
6	188	180	183	290	234	245	304	288	297	364	336	352
7	186	178	182	310	238	248	300	286	291	360	340	347
8	182	174	178	286	240	254	336	280	302	340	324	332
9	186	176	180	---	---	---	324	302	315	324	314	320
10	186	180	186	---	---	---	302	292				

RIO GRANDE BASIN  
08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued  
WATER-QUALITY RECORDS

TEMPERATURE, WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	2.0	10.0	7.0	11.0	13.5	18.0	20.5	19.0
2	---	---	---	---	3.0	7.5	8.0	11.5	13.0	17.5	21.0	19.5
3	---	---	---	---	3.5	7.5	6.5	11.5	13.5	17.0	20.5	19.5
4	---	---	---	---	.5	5.0	8.5	11.0	13.0	17.0	20.0	19.0
5	---	---	---	---	3.0	4.0	9.0	11.0	13.0	18.5	21.0	---
6	---	---	---	---	1.0	5.0	9.0	9.0	12.0	17.5	20.0	---
7	---	---	---	---	.5	5.0	8.5	9.0	12.5	17.5	20.5	---
8	---	---	---	---	2.5	9.5	11.0	10.0	13.5	18.0	20.0	---
9	---	---	---	---	3.5	11.5	8.0	10.5	13.0	19.0	20.0	---
10	---	---	---	---	5.5	10.0	7.5	10.0	14.0	18.0	21.0	---
11	---	---	---	---	6.5	8.0	10.0	10.5	15.0	20.0	21.0	---
12	---	---	---	---	6.5	10.0	12.0	10.5	14.5	19.0	20.0	---
13	---	---	---	---	6.5	9.0	10.0	10.0	15.0	20.0	21.0	---
14	---	---	---	---	6.0	8.0	9.0	9.0	15.0	20.0	21.0	---
15	---	---	---	---	7.0	8.0	9.0	11.0	14.0	20.0	21.0	---
16	---	---	---	---	9.0	7.0	9.0	10.5	15.0	20.0	20.5	---
17	---	---	---	---	9.5	7.0	8.5	10.5	15.0	20.0	21.0	---
18	---	---	---	---	7.5	9.0	9.0	11.5	15.5	21.0	22.0	---
19	---	---	---	---	9.5	6.0	9.0	11.5	15.0	20.0	22.0	---
20	---	---	---	---	10.0	5.5	9.0	11.5	15.0	20.0	21.5	---
21	---	---	---	---	6.0	5.5	7.0	11.5	14.5	20.5	21.0	---
22	---	---	---	---	10.5	11.0	8.0	13.0	15.0	21.0	21.0	---
23	---	---	---	---	9.5	12.0	8.0	12.5	15.5	21.0	22.0	---
24	---	---	---	---	7.0	12.5	9.0	12.0	16.0	20.5	20.0	---
25	---	---	---	---	5.0	11.5	8.5	12.5	17.0	21.0	20.5	---
26	---	---	---	---	8.0	7.5	10.5	12.5	16.5	22.0	19.0	---
27	---	---	---	---	5.0	7.0	11.0	13.0	17.0	22.0	19.0	---
28	---	---	---	---	5.5	8.5	10.0	13.0	18.5	21.0	20.0	---
29	---	---	---	---	---	9.0	11.0	13.0	18.0	21.0	19.5	---
30	---	---	---	---	---	5.0	11.0	13.0	18.5	23.0	19.5	---
31	---	---	---	---	---	5.5	---	13.0	---	20.0	19.0	---
MEAN	---	---	---	---	5.5	8.0	9.0	11.5	15.0	19.5	20.5	19.0

TEMPERATURE, WATER (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.5	15.0	16.0	10.5	7.0	9.0	3.0	1.0	2.0	4.5	3.5	4.0
2	16.0	15.0	15.5	10.5	6.5	8.5	3.5	.0	2.0	4.5	2.5	3.5
3	16.5	14.5	15.5	10.5	7.0	9.0	4.5	.5	2.5	2.5	.0	1.5
4	16.0	13.5	15.0	10.5	6.5	8.5	4.5	2.0	3.5	1.0	.0	.5
5	17.0	13.0	15.5	10.0	6.5	8.5	5.5	3.0	4.0	2.0	.0	1.0
6	16.5	14.0	14.5	10.5	8.0	9.5	6.0	2.0	4.0	3.5	.5	2.0
7	15.5	13.0	14.0	10.0	7.5	9.0	6.5	3.0	4.5	3.5	1.5	2.5
8	15.5	13.5	14.5	10.5	8.0	9.5	6.0	2.5	4.5	1.5	.0	.5
9	17.0	13.5	15.0	10.5	7.5	9.5	5.5	2.5	4.0	2.0	.0	1.0
10	16.0	12.5	14.5	9.5	6.5	8.0	5.0	2.0	4.0	2.0	.0	1.0
11	16.5	13.5	15.0	9.0	6.0	7.5	6.0	4.5	5.0	2.0	.0	1.0
12	15.5	13.0	14.5	9.0	5.5	7.5	5.5	2.5	4.5	2.5	1.0	2.0
13	16.0	12.5	14.5	8.5	5.5	7.5	5.5	3.5	4.5	4.0	1.0	2.5
14	16.0	13.0	14.5	8.0	6.0	7.0	6.0	3.5	4.5	3.0	.0	1.5
15	16.0	14.0	15.0	9.0	5.0	7.0	5.5	2.0	4.0	2.5	.0	1.5
16	15.0	12.5	13.5	9.5	6.0	8.0	5.0	2.5	4.0	3.0	.0	1.5
17	13.5	11.0	12.5	9.0	6.0	7.5	3.5	1.0	2.5	4.5	.0	2.0
18	13.0	10.0	11.5	8.5	5.5	7.0	3.0	.0	2.0	3.5	.5	2.5
19	13.0	9.5	11.5	8.5	4.5	6.0	3.5	1.0	2.5	3.5	1.5	2.5
20	13.0	9.5	11.5	6.5	3.5	5.0	5.0	2.0	4.0	5.5	2.0	3.5
21	12.0	9.0	10.5	6.5	3.5	5.0	6.0	2.5	4.5	4.5	1.5	3.0
22	13.0	9.5	11.0	7.5	4.0	5.5	5.0	3.0	4.0	3.5	1.5	2.5
23	12.0	9.5	11.0	7.0	4.5	5.5	3.5	1.0	2.0	3.0	.0	1.5
24	11.5	9.0	10.5	7.5	3.5	5.5	1.5	.0	1.0	3.5	.0	1.5
25	11.5	8.5	10.0	7.0	4.0	5.5	2.0	.0	1.0	5.0	1.0	3.5
26	11.5	7.5	9.5	6.0	3.5	4.5	1.5	.5	1.0	5.5	1.5	3.5
27	10.5	7.5	9.0	4.0	3.0	3.5	3.0	1.0	2.0	6.5	3.0	5.5
28	10.5	8.0	9.5	4.5	2.5	3.5	3.0	.5	1.5	4.5	2.0	3.5
29	12.5	9.5	11.0	7.0	4.5	5.5	2.5	.5	1.5	4.0	2.5	3.5
30	11.5	9.0	10.0	6.5	3.0	4.5	3.0	.5	2.0	5.0	2.0	3.5
31	11.0	7.5	9.5	---	---	---	4.5	2.0	3.0	4.5	1.5	3.0
MONTH	17.5	7.5	13.0	10.5	2.5	7.0	6.5	.0	3.0	6.5	.0	2.5

RIO GRANDE BASIN  
08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued  
WATER-QUALITY RECORDS

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TEMPERATURE WATER (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1							---	---	---	23.5	19.0	21.0
2							---	---	---	22.5	19.0	21.0
3							---	---	---	22.5	18.5	21.0
4							---	---	---	22.5	18.5	21.0
5							---	---	---	22.5	18.5	21.0
6							---	---	---	22.5	18.0	21.0
7							---	---	---	21.0	18.5	19.0
8							---	---	---	21.5	17.5	19.5
9							---	---	---	21.0	18.0	19.0
10							---	---	---	21.0	18.0	19.5
11							25.0	21.0	24.0	19.0	17.0	18.0
12							24.0	20.0	22.0	17.0	15.0	16.5
13							24.5	20.0	22.5	17.0	14.0	15.5
14							23.5	20.5	22.5	18.5	15.0	16.5
15							25.5	19.5	23.0	18.5	15.5	17.0
16							25.5	20.0	22.5	19.0	15.5	17.5
17							25.5	21.0	23.0	19.5	16.5	18.5
18							24.5	21.0	22.5	18.0	16.0	16.5
19							24.0	21.0	22.5	18.0	14.5	16.5
20							24.0	20.5	22.5	17.5	15.5	16.5
21							23.5	20.0	22.0	19.0	15.5	17.5
22							24.5	20.0	22.5	19.5	15.0	18.0
23							25.0	21.5	22.5	19.5	16.0	18.5
24							23.0	19.0	21.0	19.0	15.5	18.0
25							22.0	19.5	20.5	19.0	16.5	18.0
26							21.5	18.5	20.0	19.0	16.0	18.0
27							22.0	18.5	20.5	17.0	15.5	16.5
28							22.0	19.0	20.5	16.5	13.5	15.0
29							22.0	19.0	20.5	15.5	11.5	13.5
30							21.5	19.0	20.0	14.5	13.0	13.5
31							22.0	18.0	20.5	---	---	---
MONTH							25.5	18.0	22.0	23.5	11.5	18.0

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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	53	46	34	48	112	182	137	219	40	65	185	416
2	475	467	45	68	90	136	81	120	58	94	517	1310
3	2500	3220	55	83	71	83	40	54	87	142	496	1380
4	1650	2280	49	77	48	60	39	44	69	112	377	951
5	440	671	58	95	44	58	61	75	111	179	381	978
6	190	264	134	252	75	114	73	91	106	157	385	975
7	124	156	229	471	86	136	67	95	104	141	250	607
8	160	204	284	618	56	89	90	120	225	376	190	444
9	153	211	240	519	65	108	60	78	190	330	170	375
10	94	109	341	791	63	105	72	98	174	319	145	309
11	65	67	398	937	58	96	106	147	172	296	170	380
12	52	50	240	544	64	108	124	197	99	159	190	450
13	82	83	245	589	50	82	381	655	139	223	1430	4250
14	112	141	210	485	48	76	123	186	89	142	1790	5510
15	107	142	142	316	35	52	102	148	61	101	500	1540
16	397	803	160	345	200	384	92	142	80	133	1150	4130
17	710	1580	211	480	198	424	79	122	190	359	1240	4490
18	329	625	180	393	113	198	83	128	192	381	1240	4750
19	268	500	223	465	69	117	67	106	120	223	457	1190
20	223	408	124	254	58	98	61	98	100	178	308	762
21	181	335	89	179	59	101	80	126	143	271	335	811
22	147	266	75	148	249	551	78	123	139	269	282	664
23	176	326	78	147	258	585	62	91	121	235	402	1020
24	117	197	74	133	211	439	70	106	120	234	338	860
25	93	149	79	144	67	84	71	113	194	406	238	513
26	73	118	309	672	48	53	58	93	204	445	185	399
27	120	216	247	592	48	57	95	161	188	402	1060	3610
28	184	365	120	234	48	58	153	263	184	400	742	2720
29	168	331	58	97	43	51	99	173	---	---	150	567
30	85	146	68	113	55	65	84	146	---	---	1920	9280
31	47	71	---	---	50	58	45	73	---	---	1630	8270
TOTAL	---	14547	---	10289	---	4808	---	4391	---	6772	---	63911



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	1000	4130	1900	17700	800	10100	220	2250	915	4790	1550	4310
2	690	2420	1830	18500	770	9880	488	3660	595	2800	802	2380
3	925	3320	1870	21200	512	6260	418	3170	382	1320	752	1660
4	750	2730	2050	26000	675	7670	530	3940	208	543	460	907
5	725	2680	1950	26500	697	7900	360	1940	352	868	937	1990
6	1580	7640	1450	18800	690	7990	479	2150	288	670	390	848
7	1480	7830	1240	14900	465	5370	300	1260	277	692	640	1460
8	2040	12800	1110	12800	497	5520	750	3440	1690	4650	567	1410
9	1350	7030	1180	13200	455	4890	370	1810	261	674	620	1610
10	852	3270	945	10200	535	5680	278	1130	116	259	1700	4680
11	1020	3720	775	8890	398	4310	209	717	603	1490	1150	2970
12	907	3380	840	9750	533	5840	251	813	3700	9520	4300	16200
13	2800	17000	800	9270	342	3730	531	1840	803	1940	5040	19700
14	2550	17700	848	9500	519	5660	290	1070	238	583	2990	17000
15	2250	17000	1240	12900	408	4440	260	920	152	348	2150	13800
16	1980	15800	675	6540	424	4680	198	599	219	503	1460	8240
17	1850	14900	840	7800	429	4700	146	398	498	1180	3510	15900
18	1570	12700	778	7180	340	3750	165	404	1280	3040	3430	19200
19	1880	13700	840	7890	320	3600	441	1020	651	1620	2610	13300
20	1490	5630	703	6740	289	3320	246	569	800	2000	2000	10500
21	1490	11100	640	6290	481	5680	150	356	451	985	2110	12500
22	1710	13300	792	8170	310	3670	112	246	690	1440	1840	13000
23	1560	11100	1480	16900	306	3480	114	221	1520	3630	1600	9810
24	1410	7270	800	8750	278	2980	64	103	2700	8460	991	6020
25	1300	5760	635	7240	398	4150	91	135	15000	81300	951	5190
26	1250	5770	695	7900	252	2630	65	94	16600	100000	755	3670
27	1110	4890	724	8170	220	2280	70	101	2150	12700	1160	5230
28	1640	8460	690	7970	355	3660	63	91	1170	5880	470	2020
29	2300	16100	835	10000	269	2770	452	925	1350	6740	405	1750
30	2210	18600	800	9940	241	2510	7680	44600	3990	18100	440	1870
31	---	---	838	10200	---	---	10700	92800	2650	8300	---	---
TOTAL	---	277730	---	367790	---	149100	---	172772	---	287025	---	219125
TOTAL LOAD FOR YEAR:			1578260	TONS.								

## 08313350 RITO DE LOS FRIJoles IN BANDELIER NATIONAL MONUMENT, NM

LOCATION.--Lat 35°46'35", long 106°16'06", Sandoval County, Hydrologic Unit 13020201, in Bandelier National Monument, on right bank 800 ft (240 m) downstream from Monument headquarters, 6.5 mi (10.5 km) south of Los Alamos, 18.5 mi (29.8 km) northwest of Santa Fe, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--18.1 mi<sup>2</sup> (46.9 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1963 to September 1969, July 1977 to September 1982 (discontinued).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,035 ft (1,839 m), from topographic map. Prior to Oct. 3, 1979, at site 1.0 mi (1.6 km) upstream at different datum.

REMARKS.--Water-discharge records good except those for winter period, which are poor. One small diversion from left bank about 1.0 mi (1.6 km) upstream for irrigation of small orchard. The La Mesa forest fire which occurred during mid-June 1977 burned about 40% of the forest cover of this watershed and evidently changed the flow characteristics.

AVERAGE DISCHARGE.--11 years (water years 1964-69, 1978-82), 1.44 ft<sup>3</sup>/s (0.041 m<sup>3</sup>/s), 1,040 acre-ft/yr (1.28 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,030 ft<sup>3</sup>/s (85.8 m<sup>3</sup>/s) July 21, 1978, gage height, 6.34 ft (1.932 m), site and datum then in use, from rating curve extended above 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 3.88 ft (1.183 m), 5.02 ft (1.530 m), and 6.34 ft (1.932 m); no flow Feb. 6, 1968, result of freezeup. The maximum discharge prior to the forest fire of June 1977 was 19 ft<sup>3</sup>/s (0.54 m<sup>3</sup>/s) June 18, 1965, gage height, 1.49 ft (0.454 m), site and datum then in use, from rating curve extended above 7.6 ft<sup>3</sup>/s (0.22 m<sup>3</sup>/s) on basis of theoretical rating.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 4.0 ft<sup>3</sup>/s (0.11 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Mar. 13	1945	4.2 0.12	2.01 0.613	Aug. 21	2130	10 0.28	2.23 0.680
Apr. 18	0630	4.4 .12	2.03 .619	Aug. 25	0230	4.1 .12	1.96 .597
July 2	1645	4.6 .13	1.98 .604	Sept. 16	2230	*a47 1.33	2.93 .893
Aug. 18	1530	8.9 .25	2.18 .664				

a From rating curve extended above 4.8 ft<sup>3</sup>/s (0.14 m<sup>3</sup>/s).

Minimum discharge, 0.06 ft<sup>3</sup>/s (0.002 m<sup>3</sup>/s) July 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.82	.81	.69	1.0	1.0	1.3	2.2	2.3	.85	.27	.69	2.7
2	1.2	.81	.54	.80	.80	1.7	2.2	2.3	.85	.32	.53	2.4
3	1.3	.81	.94	.60	.60	1.6	2.2	2.2	.81	.31	.78	2.4
4	1.0	.81	.93	.50	.80	1.5	2.2	1.9	.78	.26	.82	2.3
5	.89	.81	.94	.55	.60	1.1	2.3	2.0	.76	.23	.53	2.2
6	.81	.81	.94	.60	.55	1.0	2.3	2.0	.78	.20	.47	1.9
7	.85	.84	.91	.55	.55	1.2	2.5	1.8	.61	.19	.49	2.0
8	.85	.87	.87	.50	.60	1.3	2.7	1.8	.62	.19	.50	1.8
9	.81	.87	.87	.50	.60	1.4	2.7	1.7	.60	.17	.41	1.5
10	.79	.87	.90	.55	.60	1.6	2.8	1.6	.57	.14	.40	1.5
11	.78	.87	.94	.55	.70	2.1	2.8	1.5	.74	.33	.52	1.5
12	.79	.87	.94	.60	.60	2.7	2.8	1.4	.75	.55	.40	1.5
13	.83	.87	.94	.55	.60	3.2	3.2	1.4	.66	.47	.33	1.6
14	.81	.87	.94	.50	.65	3.2	3.6	1.4	.60	.47	.54	1.4
15	.85	.87	.89	.55	.70	3.0	4.2	1.4	.57	.26	.45	1.3
16	.84	.87	.88	.60	.75	2.8	4.2	1.3	.47	.15	.35	3.0
17	.81	.84	.64	.70	1.1	2.7	4.0	1.5	.35	.25	.35	2.5
18	.81	.81	.55	.80	1.0	2.7	4.1	1.4	.39	.25	.69	2.3
19	.81	.81	1.0	.90	1.1	2.7	4.0	1.2	.40	.57	.71	2.1
20	.81	.81	1.0	1.0	1.1	2.6	4.0	1.1	.67	.40	.59	2.7
21	.81	.84	.97	1.1	1.2	2.4	3.7	1.1	.86	.38	1.1	2.9
22	.81	.87	.93	1.0	1.4	2.4	3.7	1.2	.75	.26	2.6	2.8
23	.81	.87	.70	.60	1.6	2.4	3.5	1.3	.51	.22	1.6	2.8
24	.85	.87	.60	.70	1.4	2.4	3.4	1.3	.34	.17	1.3	2.9
25	.81	.86	.50	.90	1.3	2.3	2.9	1.3	.34	.26	3.2	2.9
26	.81	.84	.55	1.0	1.2	2.3	2.7	1.1	.34	.40	2.7	2.8
27	.81	.86	.65	1.0	1.2	2.3	2.6	1.0	.33	.38	2.5	2.5
28	.81	.90	.70	1.1	1.3	2.3	2.4	.98	.30	.41	2.7	2.4
29	.81	1.4	.80	1.1	---	2.3	2.3	1.0	.23	.85	2.6	2.3
30	.81	1.2	.90	1.0	---	2.3	2.3	.94	.24	1.3	2.8	2.2
31	.81	---	1.0	1.0	---	2.2	---	.88	---	1.1	3.0	---
TOTAL	26.41	26.31	25.60	23.40	25.60	67.0	90.5	45.30	17.07	11.71	36.65	67.1
MEAN	.85	.88	.83	.75	.91	2.16	3.02	1.46	.57	.38	1.18	2.24
MAX	1.3	1.4	1.0	1.1	1.6	3.2	4.2	2.3	.86	1.3	3.2	3.0
MIN	.78	.81	.50	.50	.55	1.0	2.2	.88	.23	.14	.33	1.3
AC-FT	52	52	51	46	51	133	180	90	34	23	73	133

CAL YR 1981 TOTAL 334.27 MEAN .92 MAX 5.3 MIN .11 AC-FT 663  
WTR YR 1982 TOTAL 462.65 MEAN 1.27 MAX 4.2 MIN .14 AC-FT 918

RIO GRANDE BASIN  
08313350 RITO DE LOS FRIJOLES IN BANDELIER NATIONAL MONUMENT, NM--Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1977 to current year.

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT						
05...	1530	.87	138	7.0	5	.01
12...	1030	.81	117	8.0	3	.00
16...	1430	.81	120	5.0	5	.01
24...	1130	.87	118	6.0	3	.00
30...	1100	.81	116	6.0	3	.00
NOV						
11...	1400	.87	112	6.5	3	.00

## 08315500 MCCLURE RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'18", long 105°50'06", in NE¼SW¼ sec.24, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, at McClure Dam on Santa Fe River, 2.1 mi (3.4 km) upstream from Nichols Reservoir, 5.8 mi (9.3 km) east of Santa Fe, and at mile 37.1 (59.7 km).

DRAINAGE AREA.--17.4 mi<sup>2</sup> (45.1 km<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. Altitude of gage is 7,788 ft (2,374 m), 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 (50.57 m) lower.

REMARKS.--Reservoir is formed by earthfill dam, completed in 1926, capacity, 561 acre-ft (692,000 m<sup>3</sup>), raised 3 ft (0.9 m) in 1935, capacity, 650 acre-ft (801,000 m<sup>3</sup>), and raised 36.5 ft (11.13 m) more in 1947, capacity, 2,615 acre-ft (3.22 hm<sup>3</sup>) at gage height 96.6 ft (29.44 m), 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 (3.70 hm<sup>3</sup>). Radial gates were removed during 1972, capacity, 2,615 acre-ft (3.22 hm<sup>3</sup>). No dead storage. Water is for municipal use of city of Santa Fe.

COOPERATION.--Capacity table furnished by Public Service Co. of New Mexico.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,140 acre-ft (3.87 hm<sup>3</sup>) June 25, 1960, gage height, 103.7 ft (31.61 m); no contents Jan. 25 to May 8, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,340 acre-ft (2.89 hm<sup>3</sup>) Sept. 30, gage height, 92.63 ft (28.234 m); minimum, 818 acre-ft (1.01 hm<sup>3</sup>) Oct. 23, gage height, 64.26 ft (19.586 m).

Capacity table (gage height, in feet, and contents, in acre-feet)  
(Based on survey by Public Service Co. of New Mexico in 1947)

60	668	80	1,550
65	846	85	1,840
70	1,050	90	2,160
75	1,280	95	2,500

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	990	843	876	846	830	882	982	1170	1680	1820	1460	1650
2	984	844	876	845	831	887	985	1180	1710	1800	1460	1660
3	988	846	878	843	832	893	988	1190	1740	1790	1460	1670
4	983	848	878	841	832	897	991	1200	1760	1780	1450	1680
5	976	850	878	841	833	901	995	1220	1780	1770	1460	1690
6	968	852	879	839	834	904	997	1240	1800	1750	1480	1690
7	961	853	880	837	835	909	999	1250	1810	1740	1490	1700
8	953	856	880	835	835	913	1000	1250	1820	1730	1510	1710
9	945	857	881	833	834	917	1000	1260	1840	1720	1510	1710
10	936	859	880	831	835	920	1010	1270	1850	1700	1520	1710
11	923	860	879	829	837	927	1010	1280	1860	1690	1520	1710
12	918	862	878	826	837	935	1010	1290	1870	1680	1530	1720
13	910	864	876	827	838	941	1030	1300	1880	1670	1530	1720
14	901	865	875	825	839	946	1040	1310	1880	1650	1520	1730
15	891	867	873	823	840	952	1050	1320	1890	1640	1520	1730
16	881	868	871	823	840	957	1060	1330	1890	1620	1520	1740
17	871	869	868	824	843	961	1070	1330	1900	1610	1520	1760
18	861	871	867	824	843	965	1080	1340	1900	1590	1520	1790
19	851	871	866	824	845	966	1100	1350	1900	1580	1520	1840
20	841	871	865	825	846	969	1110	1350	1900	1570	1530	1920
21	832	872	864	824	851	970	1110	1370	1890	1550	1530	1990
22	821	874	861	825	854	971	1120	1390	1890	1540	1530	2060
23	819	875	858	825	858	971	1130	1410	1890	1530	1540	2120
24	822	876	856	825	863	971	1130	1440	1880	1510	1540	2160
25	825	875	854	825	866	970	1140	1460	1870	1500	1560	2200
26	829	874	852	827	870	972	1140	1490	1860	1480	1570	2240
27	832	874	851	828	874	973	1150	1520	1860	1470	1560	2270
28	835	874	848	827	878	975	1150	1550	1850	1460	1600	2290
29	839	877	847	829	---	977	1160	1580	1840	1460	1610	2320
30	840	876	846	830	---	978	1170	1610	1820	1460	1620	2340
31	842	---	844	830	---	980	---	1650	---	1460	1640	---
MAX	990	877	881	846	878	980	1170	1650	1900	1820	1640	2340
MIN	819	843	844	823	830	882	982	1170	1680	1460	1450	1650
(†)	64.90	65.78	64.95	64.58	65.82	68.31	72.47	81.67	84.68	78.39	81.49	92.63
(‡)	-158	+34	-32	-14	+48	+102	+190	+480	+170	-360	+180	+700
CAL YR 1981	MAX	1250	MIN	819	‡	-196						
WTR YR 1982	MAX	2340	MIN	819	‡	+1340						

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

## RIO GRANDE BASIN

08316000 SANTA FE RIVER NEAR SANTA FE, NM

LOCATION.--Lat 35°41'12", long 105°50'35", in NE¼SE¼ sec.23, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, on left bank 0.4 mi (0.6 km) downstream from McClure Dam, 5.3 mi (8.5 km) east of Santa Fe, and at mile 36.6 (58.9 km).

DRAINAGE AREA.--18.2 mi<sup>2</sup> (47.1 km<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. Altitude of gage is 7,718 ft (2,352 m), from topographic map. See WSP 1312 for history of changes prior to Oct. 1, 1947.

REMARKS.--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.--69 years, 7.82 ft<sup>3</sup>/s (0.221 m<sup>3</sup>/s), 5,670 acre-ft/yr (6.99 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft<sup>3</sup>/s (42.5 m<sup>3</sup>/s) Aug. 14, 1921, gage height, 5.17 ft (1.576 m), site and datum then in use, from rating curve extended above 150 ft<sup>3</sup>/s (4.2 m<sup>3</sup>/s); minimum, 0.05 ft<sup>3</sup>/s (0.001 m<sup>3</sup>/s) Apr. 7, 8, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 1,000 ft<sup>3</sup>/s (28 m<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 (42 m<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11 ft<sup>3</sup>/s (0.31 m<sup>3</sup>/s) Aug. 20, gage height, 1.95 ft (0.594 m); minimum, 0.06 ft<sup>3</sup>/s (0.002 m<sup>3</sup>/s) Nov. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	1.0	1.2	2.0	.81	.94	3.5	6.6	8.3	8.9	8.3	3.1
2	7.1	1.1	1.2	2.0	.84	.98	3.5	6.6	8.3	8.8	8.3	3.2
3	7.0	.96	1.2	2.0	.81	.98	3.5	6.7	8.3	8.8	3.2	3.1
4	7.0	.93	1.2	2.0	.81	.98	3.3	6.6	8.3	8.7	8.2	3.1
5	7.0	.81	1.2	2.0	.81	.98	3.3	6.8	8.3	8.7	8.3	3.1
6	7.0	.66	1.2	2.0	.89	.97	3.3	6.8	8.4	8.7	8.3	3.1
7	7.0	.67	1.2	2.0	.92	.94	3.3	6.8	8.5	8.7	8.3	3.1
8	6.9	.67	1.2	2.0	.81	.94	3.3	6.8	8.5	8.7	8.3	3.1
9	6.8	.71	1.4	2.0	.89	.98	3.3	6.8	8.9	8.6	8.3	3.1
10	6.8	.73	2.0	2.0	.89	.98	3.3	6.9	8.9	8.6	8.3	3.1
11	6.8	.73	2.0	2.0	.90	1.0	3.1	7.0	8.9	8.6	8.3	3.1
12	6.8	.73	2.1	2.0	.89	2.6	3.1	7.0	9.9	8.6	8.3	3.1
13	6.8	.73	2.2	2.0	.89	3.8	3.1	7.0	8.9	8.6	8.3	3.1
14	6.6	.73	2.1	2.0	.89	3.8	3.1	7.0	8.9	8.6	8.3	3.1
15	6.8	.73	2.0	1.4	.89	3.8	3.1	7.0	8.9	8.6	8.3	3.1
16	6.8	.73	2.0	.80	.89	3.8	3.2	7.0	8.9	8.6	6.4	3.1
17	6.8	.73	2.1	.73	.89	3.8	3.1	7.0	8.9	8.6	4.9	3.4
18	6.8	.73	2.0	.73	.89	3.8	2.9	7.0	8.9	8.6	4.9	3.4
19	6.6	.73	2.0	.73	.89	3.8	2.9	7.1	8.9	8.6	4.9	3.5
20	6.5	.73	2.2	.73	.89	3.8	2.9	7.3	8.9	8.6	5.2	3.7
21	6.5	.81	2.2	.73	.89	3.8	2.9	7.3	8.9	8.6	5.1	3.7
22	6.5	.81	2.2	.73	.89	3.8	2.9	7.4	8.9	8.4	5.0	2.5
23	2.7	.81	2.2	.81	.93	3.8	2.9	7.5	8.9	8.3	4.0	1.7
24	.46	.78	2.2	.81	.94	3.8	2.9	7.6	8.9	8.3	3.1	1.6
25	.42	1.1	2.2	.81	.93	3.8	2.9	7.6	8.9	8.3	3.1	1.6
26	.42	1.2	2.0	.82	.91	3.8	2.9	8.0	8.9	8.3	3.1	1.6
27	.42	1.2	2.0	.81	.92	3.8	2.9	8.0	8.9	8.3	3.1	1.6
28	.46	1.2	2.0	.82	.93	3.5	2.9	8.0	8.9	8.3	3.1	1.6
29	.44	1.2	2.0	.82	---	3.5	2.9	8.0	8.9	8.3	3.1	1.6
30	.69	1.2	2.0	.81	---	3.5	4.4	8.2	8.9	8.3	3.1	1.6
31	.98	---	2.0	.81	---	3.5	---	8.3	---	8.3	3.1	---
TOTAL	157.09	25.85	56.7	41.90	24.73	84.27	94.6	223.9	262.7	264.9	139.5	82.8
MEAN	5.07	.86	1.83	1.35	.83	2.72	3.15	7.22	8.76	8.55	6.11	2.78
MAX	7.1	1.2	2.2	2.0	.94	3.8	4.4	8.3	8.9	8.9	8.3	3.7
MIN	.42	.66	1.2	.73	.81	.94	2.9	6.6	8.3	8.3	3.1	1.6
AC-FT	312	51	112	83	49	167	133	444	521	525	376	164
CAL YR 1981	TOTAL	1071.92	MEAN	2.94	MAX	13	MIN	.14	AC-FT	2130		
WTR YR 1982	TOTAL	1508.94	MEAN	4.13	MAX	8.9	MIN	.42	AC-FT	2990		

## 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 (1.0 km) east of Twomile Reservoir, 3.3 mi (5.3 km) east of Santa Fe, and at mile 34.4 (55.3 km).

DRAINAGE AREA.--22.8 mi<sup>2</sup> (59.1 km<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 (2,229.06 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam. No contents prior to Mar. 16, 1943. Capacity, 685 acre-ft (845,000 m<sup>3</sup>) between gage heights 121.2 ft (36.94 m), bottom of lower operational gate and 167.0 ft (50.90 m), crest of spillway. Dead storage, 14 acre-ft (17,300 m<sup>3</sup>). Water is for municipal use of city of Santa Fe.

COOPERATION.--Survey to compute capacity table furnished by Public Service Co. of New Mexico.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 836 acre-ft (1.03 km<sup>3</sup>) June 8, 1952, gage height, 171.8 ft (52.36 m); minimum, 16 acre-ft (19,700 m<sup>3</sup>) Feb. 11 to Mar. 10, 1944, Feb. 1-19, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 527 acre-ft (650,000 m<sup>3</sup>) Aug. 16, gage height, 161.34 ft (49.176 m); minimum, 232 acre-ft (286,000 m<sup>3</sup>) Mar. 9-11, gage height, 146.97 ft (44.796 m).

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		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268	431	410	378	385	264	268	250	303	428	459	471
2	275	431	410	381	385	260	266	253	304	424	468	461
3	284	431	408	383	385	256	265	255	306	421	476	451
4	292	431	407	383	384	251	264	258	307	417	482	442
5	299	430	406	387	383	244	263	261	309	413	485	432
6	301	429	405	388	380	238	262	264	310	409	487	423
7	302	427	408	390	378	235	260	266	312	406	491	414
8	312	426	408	393	376	232	259	268	313	403	496	413
9	321	425	408	395	372	232	258	269	319	399	503	410
10	329	424	408	397	366	232	257	271	326	396	509	407
11	340	423	410	400	362	234	257	272	333	394	512	404
12	350	422	412	402	356	238	256	274	340	391	515	400
13	356	421	413	404	350	242	255	276	346	388	517	395
14	358	420	415	406	344	245	254	277	352	385	522	390
15	358	419	416	408	339	249	253	278	358	386	524	383
16	362	417	414	407	333	252	252	280	363	385	524	379
17	371	416	410	406	327	255	252	281	368	387	521	378
18	382	414	414	404	322	257	251	282	374	388	517	385
19	394	412	411	402	317	258	250	283	382	389	513	395
20	407	410	405	399	312	259	250	284	388	390	515	404
21	418	409	400	397	306	261	249	285	396	391	514	407
22	431	407	403	394	300	262	249	286	404	393	515	405
23	437	405	404	392	294	263	249	287	411	398	513	398
24	436	404	402	390	289	264	248	288	418	403	509	390
25	435	403	394	388	284	264	248	289	425	406	506	379
26	434	402	396	387	277	265	248	292	432	410	503	366
27	434	401	378	387	273	266	247	294	438	413	502	350
28	433	403	373	386	268	267	249	296	440	420	503	332
29	432	407	372	385	---	267	248	298	436	431	500	314
30	430	409	374	385	---	269	247	299	432	441	491	296
31	430	---	375	384	---	269	---	301	---	450	480	---
MAX	437	431	416	408	385	269	268	301	440	450	524	471
MIN	268	401	372	376	263	232	247	250	303	385	459	296
(†)	157.39	156.46	154.99	155.41	149.31	149.37	147.91	151.16	157.47	158.23	159.55	150.88
(‡)	+169	-21	-34	+9	-116	+1	-22	+54	+131	+18	+30	-184
CAL YR 1981	MAX 437	MIN 206	‡ +79									
WTR YR 1982	MAX 524	MIN 232	‡ +35									

† 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 (8.0 km) upstream from Cochiti Dam, 6.3 mi (10.1 km) east of Pena Blanca, and at mile 7.9 (12.7 km).

DRAINAGE AREA.--231 mi<sup>2</sup> (598 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 5,505 ft (1,678 m), from topographic map.

REMARKS.--Water-discharge records good. 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 (1.6 km<sup>2</sup>) above 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 (0.6 km) upstream and bypasses gage; ditch flow not included in record.

AVERAGE DISCHARGE.--12 years, 8.48 ft<sup>3</sup>/s (0.240 m<sup>3</sup>/s), 6,140 acre-ft/yr (7.57 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft<sup>3</sup>/s (323 m<sup>3</sup>/s) July 26, 1971, gage height, 9.58 ft (2.920 m), from rating curve extended above 160 ft<sup>3</sup>/s (4.5 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 5.69 ft (1.734 m) and 9.58 ft (2.920 m); no flow July 16-18, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft<sup>3</sup>/s (8.5 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
July 28	2000	*1180 33.4	4.16 1.268	Sept. 17	0330	845 23.9	3.73 1.137
July 30	0245	374 10.6	2.82 .860				

Minimum discharge, 0.77 ft<sup>3</sup>/s (0.022 m<sup>3</sup>/s) July 24, result of regulation.

## DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND, OF DITCH, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Oct. 5	0	Feb. 16	0	May 21	0	Sept. 21	0
Nov. 3	0	Mar. 22	0	July 22	0		
Jan. 11	0	Apr. 19	0	Aug. 23	.15		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	6.7	8.8	10	9.2	9.5	8.8	5.6	4.7	2.5	6.5	4.2
2	6.7	7.0	9.0	11	9.2	9.0	8.0	6.3	5.3	1.7	3.9	4.5
3	26	6.7	8.8	9.5	9.2	8.5	8.6	5.7	4.1	1.5	4.5	5.1
4	7.0	6.4	8.8	9.1	8.6	9.4	8.0	5.6	3.4	2.1	5.2	4.3
5	6.7	6.6	8.7	9.5	7.9	9.7	7.7	5.1	3.5	1.5	5.1	4.5
6	6.6	6.7	8.8	8.9	8.4	9.2	8.2	6.5	4.4	1.7	4.9	3.5
7	6.8	6.8	8.7	8.6	7.5	9.1	7.5	6.1	4.4	1.7	5.1	11
8	6.6	6.5	8.5	8.0	9.5	9.1	8.1	5.9	3.7	2.6	3.9	4.5
9	6.4	6.8	8.4	8.9	9.5	9.1	8.0	5.0	3.5	1.9	3.6	2.5
10	6.3	6.9	8.8	11	9.9	9.2	7.8	4.6	4.0	1.8	2.5	4.5
11	5.3	6.5	8.8	8.9	12	9.6	6.4	5.3	4.2	6.5	3.4	5.7
12	5.1	5.9	8.7	8.9	11	10	6.4	4.9	3.7	7.4	4.3	5.7
13	5.8	6.1	8.7	8.9	9.9	9.9	7.8	5.0	2.8	3.1	18	5.3
14	5.9	6.5	8.6	8.1	9.9	10	6.4	5.8	2.0	3.0	17	5.3
15	5.9	6.8	8.7	8.1	10	9.5	6.5	4.9	2.0	4.1	6.7	4.0
16	6.7	7.2	8.7	8.9	10	9.3	5.2	5.0	2.1	3.1	4.7	4.6
17	6.8	7.3	8.6	8.9	9.9	8.6	5.4	5.3	2.5	2.5	4.6	90
18	6.7	7.4	9.1	8.6	9.5	9.6	5.3	4.8	1.8	2.5	3.7	36
19	6.5	7.2	8.6	8.6	9.6	9.4	5.4	4.9	2.0	3.4	4.9	12
20	6.5	7.8	8.7	8.6	9.6	9.4	5.9	4.2	2.6	2.6	11	24
21	6.9	7.6	8.7	8.6	9.4	9.3	6.6	5.1	2.3	3.3	9.1	9.7
22	6.5	7.4	8.2	8.6	9.3	8.9	7.5	4.6	2.1	2.8	5.4	7.9
23	6.6	6.8	9.1	8.3	9.1	9.0	7.6	5.9	2.6	3.6	6.2	6.9
24	6.6	7.6	8.8	9.0	9.2	8.9	6.3	5.6	3.2	2.9	9.4	6.5
25	6.3	7.8	8.9	8.9	9.5	8.7	5.6	5.1	2.9	1.1	5.9	6.1
26	6.6	7.8	8.0	8.9	9.7	9.1	6.4	5.0	3.0	1.5	4.9	5.5
27	6.5	7.7	8.6	8.6	9.3	9.2	6.1	5.4	1.8	1.9	5.8	4.4
28	6.5	8.1	8.3	8.6	9.6	9.8	6.3	4.3	1.9	66	5.1	5.3
29	6.4	9.0	8.9	8.9	---	8.5	5.9	4.7	2.4	14	5.2	5.6
30	6.6	8.7	8.9	8.9	---	8.6	5.2	5.6	1.5	47	4.9	5.9
31	6.7	---	9.2	8.6	---	8.7	---	4.0	---	24	4.6	---
TOTAL	217.8	214.3	270.1	276.9	265.9	285.6	204.9	161.8	90.4	225.3	190.0	305.0
MEAN	7.03	7.14	8.71	8.93	9.50	9.22	6.83	5.22	3.01	7.27	6.13	10.2
MAX	26	9.0	9.2	11	12	10	8.8	6.5	5.3	66	18	90
MIN	5.1	5.9	8.0	8.0	7.5	8.5	5.2	4.0	1.5	1.1	2.5	2.5
AC-FT	432	425	536	549	527	567	406	321	179	447	377	605

CAL YR 1981 TOTAL 2500.8 MEAN 6.85 MAX 89 MIN 1.6 AC-FT 4960  
WTR YR 1982 TOTAL 2708.2 MEAN 7.42 MAX 90 MIN 1.1 AC-FT 5370



CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

RIO GRANDE RIVER BASIN  
08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) AS N) (00630)	NITRO- GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L) AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N) (00605)	NITRO- GEN, TOTAL (MG/L) AS N) (00600)	PHOS- 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)
OCT 05...	--	--	--	--	--	--	--	--	--
NOV 03...	482	1.6	1.6	<.070	--	15	6.20	.840	18
DEC 10...	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	--	--	--	--	--	--	--
FEB 16...	--	--	--	--	--	--	--	--	--
MAR 22...	346	--	--	--	--	--	--	--	--
APR 19...	--	--	--	--	--	--	--	--	--
MAY 21...	386	1.1	1.2	12.0	4.0	17	5.50	1.40	16
JUN 14...	--	--	--	--	--	--	--	--	--
JUL 22...	--	--	--	--	--	--	--	--	--
AUG 23...	333	--	--	--	--	--	--	--	--
SEP 21...	--	--	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS-SOLVED (UG/L) AS B) (01020)	IRON, DIS-SOLVED (UG/L) AS FE) (01046)
NOV 03...	1100	290	57
MAR 22...	1130	220	52
MAY 21...	0930	230	77
AUG 23...	1445	200	13

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
NOV 03...	1100	6.0	8.0	20	.32	--	--	--	--	80
MAR 22...	1130	7.9	10.0	74	1.6	--	--	--	--	85
MAY 21...	0930	5.1	12.5	68	.94	--	--	--	--	86
AUG 23...	1445	3.3	28.5	510	4.5	70	81	96	100	--

## 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 (2.7 km) northeast of Cochiti Pueblo, and at mile 1,588.1 (2,555.3 km).

DRAINAGE AREA.--14,900 mi<sup>2</sup> (38,600 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 Corps of Engineers). Prior to Apr. 15, 1975, at site 1.3 mi (2.1 km) 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 (624 hm<sup>3</sup>) between elevations 5,247.0 ft (1,599.29 m) and 5,450.0 ft (1,661.16 m), crest of service spillway. Dead storage 732 acre-ft (903,000 m<sup>3</sup>) below elevation 5,255.0 ft (1,601.72 m), invert of outlet structure. Lake was created primarily for flood and sediment control. A 50,000 acre-ft (62 hm<sup>3</sup>) permanent pool is authorized for recreational purposes.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 184,400 acre-ft (227 hm<sup>3</sup>) June 21, 1979, elevation, 5,387.99 ft (1,642.259 m); no storage prior to Nov. 12, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 48,700 acre-ft (60.0 hm<sup>3</sup>) June 3, elevation, 5,328.71 ft (1,624.191 m); minimum, 39,390 acre-ft (48.6 hm<sup>3</sup>) Apr. 24, elevation, 5,320.35 ft (1,621.643 m).

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

Oct. 1 to Dec. 31 (Based on survey by Corps of Engineers in 1978)		Jan. 1 to Sept. 30 (Based on Survey by Corps of Engineers in 1981)	
5,320	44,490	5,320	39,040
5,325	50,600	5,325	44,350
		5,330	50,310

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46290	46220	46240	40750	40580	40580	40400	40660	45460	45020	43610	41790
2	46320	46350	46240	40350	40560	40660	40410	40880	44280	42800	42920	41600
3	46410	46330	46110	40660	40540	40730	40600	41110	48690	42420	41990	41860
4	46330	46270	46180	40520	40530	40620	40540	41300	47970	42330	42000	42100
5	46290	46290	46350	40710	40600	40570	40440	42130	46690	42240	42380	42170
6	46260	46410	46560	40720	40620	40560	40660	42560	45610	42240	42250	42100
7	46260	46450	46420	40630	40520	40520	40590	42290	44570	42220	42220	42070
8	46260	46420	46270	40480	40720	40480	40570	41740	43210	42200	42280	42140
9	46330	46360	46320	40480	40680	40450	40710	40990	41590	42300	42210	42220
10	46240	46360	46380	40660	40610	40440	40590	40610	40740	42210	42060	42240
11	46220	46300	46330	40570	40500	40600	40470	40970	40940	42040	42180	42080
12	46230	46180	46360	40610	40510	40570	40510	41600	41070	41990	42320	41960
13	46200	46270	46410	40730	40550	40690	41010	41870	41170	42260	42110	42010
14	46330	46210	46350	40660	40590	40660	40630	41750	40890	42180	42140	42220
15	46350	46180	46200	40490	40570	40560	40510	41100	40660	42040	42090	42650
16	46500	46260	46200	40510	40540	40690	40660	40380	40940	41950	42040	43000
17	46400	46350	46350	40520	40570	40620	40360	40360	40820	41910	42140	42530
18	46180	46330	46030	40540	40600	40890	40600	40610	40550	41760	42180	42810
19	46060	46230	46050	40580	40470	40740	40470	40900	40510	41820	42080	42930
20	46150	46260	46440	40550	40470	40500	39920	40930	40620	42010	42010	42560
21	46210	46230	46300	40550	40620	40560	40820	40810	40930	42200	41830	42240
22	46240	46220	46210	40540	40550	40550	40600	40360	40810	42360	41880	42620
23	46300	46210	46390	40510	40510	40570	40470	40990	40470	42360	41980	42590
24	46220	46210	46600	40440	40540	40570	40260	40330	40320	42200	42180	42150
25	46180	46180	46500	40510	40580	40510	40550	40520	40360	42160	42670	41620
26	46320	46340	46120	40570	40580	40610	40620	40770	40620	42210	42700	41490
27	45360	46360	46150	40580	40430	40790	40480	40920	41090	42200	42980	41650
28	46520	46230	46270	40550	40520	40720	40700	41220	44490	42200	43070	41960
29	46400	46160	46200	40530	---	40570	41030	41620	42880	41940	43020	41930
30	46340	46200	46210	40530	---	40790	40920	42570	42140	42480	42530	41980
31	46210	---	46240	40490	---	40660	---	43460	---	43980	41930	---
MAX	46520	46450	46600	40650	40720	40890	41030	43460	43690	45020	43610	43000
MIN	46060	46160	46030	40440	40430	40440	39920	40330	40320	41760	41830	41490
(†)	5321.44	5321.43	5321.47	5321.42	5321.45	5321.59	5321.83	5324.20	5322.99	5324.67	5322.79	5322.84
(‡)	-30	-10	+40	a-50	+30	+140	+260	+2540	-1320	+1840	-2050	+50
CAL YR 1981	MAX	49800	MIN	45240	‡	-840						
WTR YR 1982	MAX	48690	MIN	39920	‡	a+1440						

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

a Computed on basis of revised capacity table put into use Jan. 1, 1982.

RIO GRANDE BASIN  
08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM -- Continued  
WATER-QUALITY RECORDS

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

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

REMARKS.--Samples for chemical analyses are collected annually at surface, and/or bottom levels of selected sites. Site locations are as follows: Site A, 500 feet upstream from Outlet Tower (Riser); Site B, 0.4 mile east of Outlet Towers (Riser); Site C, approximately 2.5 miles upstream from Outlet Tower (Riser) and 0.3 mile north of boat ramp on east side of lake; Site D, approximately 5.0 miles 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 1981 TO SEPTEMBER 1982

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
SEP 22...	1215	303	8.2	26.0	17.0

08313412 - COCHITI LAKE AT SITE C (LAT 35 38 57 LONG 106 18 39)  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
SEP 22...	1300	364	8.2	27.0	19.0	7.3

08317298 - COCHITI LAKE AT SITE B (LAT 35 37 06 LONG 106 18 39)  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
SEP 22...	0945	400	8.2	20.0	18.0

08317300 - COCHITI LAKE AT SITE A (LAT 35 38 11 LONG 106 19 05)  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	RESER- VOIR DEPTH (FEET) (72025)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
SEP											
22...	1047	5.00	75	--	--	--	--	17.5	--	8.3	--
22...	1048	10.0	75	--	--	--	--	17.5	--	7.8	--
22...	1049	15.0	75	--	--	--	--	17.5	--	7.6	--
22...	1050	20.0	75	--	--	--	--	17.0	--	7.3	--
22...	1051	25.0	75	--	--	--	--	17.0	--	6.4	--
22...	1052	30.0	75	--	--	--	--	17.0	--	6.1	--
22...	1054	40.0	75	--	--	--	--	16.5	--	5.8	--
22...	1055	45.0	75	--	--	--	--	16.5	--	6.2	--
22...	1056	50.0	75	--	--	--	--	16.0	--	6.0	--
22...	1057	55.0	75	--	--	--	--	16.0	--	6.0	--
22...	1058	60.0	75	--	--	--	--	16.0	--	5.9	--
22...	1100	70.0	75	360	293	8.2	7.9	24.0	18.5	6.8	19

RIO GRANDE BASIN  
08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM -- Continued  
WATER-QUALITY RECORDS

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08317300 - COCHITI LAKE AT SITE A (LAT 35 38 11 LONG 106 19 05)  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	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)
SEP										
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	109	24	36	4.7	14	.6	2.8	47	17	.3

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOSPHATE, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
SEP										
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	19	192	.10	.11	.180	.72	1.0	.140	.050	4.8

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 RECOVERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
SEP										
22...	1100	2	2	30	<1	2	<10	<10	5	1

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	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)
SEP									
22...	15	<1	<1	.2	<.1	<1	<1	50	10

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 35)  
CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG AS N) (00603)	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								
12...	1420	<2.0	100	--	1200	9	6500	3
SEP								
22...	1100	3.0	97	1700	500	10	<1	4

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) (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								
12...		20	61	7200	20	640	.05	49
SEP								
22...		10	16	5500	20	700	.04	33

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
------	------	--	--	--	--	---	---	---	---

SEP									
22...	1100	<4.5	18	4.9	13	4.7	12	.08	2.1

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
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SEP								
22...	1100	<.10	<.01	<.10	<.01	<.01	<.01	<.01

RIO GRANDE BASIN  
08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM -- Continued  
WATER-QUALITY RECORDS

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08317300 - COCHITI LAKE AT SITE A (LAT 35 38 11 LONG 106 19 05)  
PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 22...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.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 22...	<.01	<.01	<.01	<1	<.01	<.10	<.10	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
SEP 22...	75	220

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
SEP 22...	1100	18.5	117	99



## 08317400 RIO GRANDE BELOW COCHITI DAM, NM

LOCATION.--Lat 35°37'05", long 106°19'24", in SW¼NE¼ sec.17, T.16 N., R.6 E., Sandoval County, Hydrologic Unit 13020201, in Pueblo de Cochiti Grant, on right bank 320 ft (98 m) upstream from bridge on State Highway 22, 700 ft (210 m) downstream from Cochiti Dam, 1.4 mi (2.3 km) northeast of Cochiti Pueblo, and at mile 1,587.6 (2,554.4 km).

DRAINAGE AREA.--14,900 mi<sup>2</sup> (38,590 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<sup>2</sup>) in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 5,226.08 ft (1,592.909 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Nov. 14, 1973, at site 2.4 mi (3.9 km) downstream at altitude 5,210 ft (1,588 m), from topographic map. Nov. 14, 1973 to Jan. 8, 1976, at site 320 ft (98 m) downstream at datum 1.79 ft (0.546 m) lower.

REMARKS.--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 above station for irrigation of about 620,000 acres (2,500 km<sup>2</sup>) in Colorado and about 81,000 acres (330 km<sup>2</sup>) 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 (24 km<sup>2</sup>) below station; see tabulation below for monthly and yearly diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 10,300 ft<sup>3</sup>/s (292 m<sup>3</sup>/s) July 26, 1971, gage height, 7.90 ft (2.408 m), site and datum then in use, from rating curve extended above 2,600 ft<sup>3</sup>/s (74 m<sup>3</sup>/s); minimum, 0.51 ft<sup>3</sup>/s (0.014 m<sup>3</sup>/s) Aug. 3-5, 1977, Aug. 27-28, 1978, result of regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 15, 1941, reached a discharge of 23,400 ft<sup>3</sup>/s (663 m<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 (663 m<sup>3</sup>/s), and is likely the highest since 1905.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,230 ft<sup>3</sup>/s (148 m<sup>3</sup>/s) June 1, gage height, 5.38 ft (1.640 m); minimum, 87 ft<sup>3</sup>/s (2.46 m<sup>3</sup>/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	114	498	554	467	595	763	1480	3510	3340	2190	1340	920	
2	158	497	562	579	619	767	1090	3510	5120	3700	1840	880	
3	216	578	522	637	619	814	996	4080	2000	2730	1600	605	
4	332	570	387	515	619	862	1140	4510	4260	2540	817	401	
5	373	570	373	415	555	774	1150	4550	4580	2070	544	526	
6	332	586	482	486	514	746	1340	4560	4530	1480	714	619	
7	296	691	628	583	475	730	1660	4540	4490	1410	689	650	
8	257	754	628	613	519	699	2010	4500	4540	1470	752	648	
9	255	781	554	468	698	666	1710	4470	4560	1550	795	681	
10	317	781	584	490	787	591	1300	4120	4030	1510	672	768	
11	242	860	616	586	743	567	1180	3350	3580	1250	589	809	
12	176	844	583	574	600	660	1090	3860	3650	1030	714	965	
13	189	800	584	589	575	783	1570	4040	3650	996	750	1270	
14	224	870	610	670	594	936	2430	4140	3840	1200	669	1550	
15	289	810	610	654	613	956	2540	4120	3790	1180	670	1760	
16	328	763	614	594	634	1010	2630	3910	3610	1040	619	1870	
17	619	754	703	580	637	1140	2860	3340	3810	927	619	1720	
18	677	817	793	586	719	1040	2590	3150	3850	858	671	1530	
19	536	770	603	598	762	893	2840	3150	3810	662	697	1780	
20	472	718	474	626	648	608	1590	3360	3850	575	831	1940	
21	466	727	679	609	616	627	1820	3510	3900	604	764	2090	
22	462	709	754	607	742	705	2800	3500	4120	559	605	2180	
23	462	682	728	605	717	692	2650	4020	4080	556	538	2180	
24	503	655	676	609	681	747	1930	4120	3730	520	805	2290	
25	411	628	628	555	713	660	1360	3890	3480	366	1370	2150	
26	366	619	562	570	785	587	1460	3820	3400	327	1810	1770	
27	415	838	448	604	829	818	1530	3830	3290	345	1710	1430	
28	453	816	416	680	726	1140	1580	3840	1780	345	1600	1290	
29	530	673	490	644	---	1200	2150	3850	4340	615	1600	1450	
30	514	619	457	682	---	1360	3090	3850	3890	1100	1600	1400	
31	490	---	444	637	---	1640	---	3560	---	1690	1300	---	
TOTAL	11474	21278	17746	18112	18334	26386	55566	121060	114900	37395	30794	40122	
MEAN	370	709	572	584	655	851	1852	3905	3830	1206	993	1337	
MAX	677	870	793	682	829	1640	3090	4560	5120	3700	1840	2290	
MIN	114	497	373	415	475	567	996	3150	1780	327	538	401	
AC-FT	22760	42200	35200	35930	36370	52340	110200	240100	227900	74170	61080	79580	
(†)	6990	.7	0	0	0	6100	7030	8010	8050	8130	7250	5590	
(‡)	4090	.06	0	0	0	3330	4140	4350	4260	4420	4330	3710	
CAL YR 1981 TOTAL	198505	MEAN	544	MAX	1710	MIN	37	AC-FT	393700	†	55180	‡	31290
WTR YR 1982 TOTAL	513167	MEAN	1406	MAX	5120	MIN	114	AC-FT	1018000	†	57150	‡	32620

† Diversion, in acre-feet, by Cochiti eastside main canal at head.

‡ Diversion, in acre-feet, by Sili main canal at head.

PERIOD OF RECORD.--Water year 1972 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURES: July 1971 to current year.

SUSPENDED SEDIMENT DISCHARGE: July 1974 to current year.

INSTRUMENTATION.--Continuous water-temperature recorder and automatic pumping sediment sampler.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 698 micromhos July 19, 1978; minimum daily, 130 micromhos July 30, 1978.

WATER TEMPERATURES: Maximum, 35.5°C Aug. 4, 1977; minimum, 0.0°C on several days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily, 343 mg/L June 16, 1975; minimum daily, 1 mg/L on Jan. 7-8, Feb. 10,

Mar. 28, 1977. Dec. 9-11, 16, 1981.

SEDIMENT LOADS: Maximum daily, 3,540 tons (3,210 tonnes) June 16, 1975; minimum daily, 0.02 tons (0.02 tonnes) Aug. 4, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 539 micromhos Oct. 16; minimum daily, 193 micromhos June 17.

WATER TEMPERATURES: Maximum, 24.0°C on Aug. 24; minimum, 2.0°C on several days in January and February.

SEDIMENT CONCENTRATIONS: Maximum daily, 82 mg/L May 5; minimum daily, 1 mg/L Dec. 9-11, 16.

SEDIMENT LOADS: Maximum daily, 1010 tons (916 tonnes) May 5; minimum daily, 1.5 tons (1.4 tonnes) Oct. 1, Dec. 9.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
MAR 23...	1300	567	8.5	17	26	78
MAY 20...	1145	3640	14.0	44	432	87
JUN 17...	1540	3730	17.0	31	312	84
AUG 26...	1215	1810	23.0	42	205	97

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	444	359	402	392	420	414	398	251	295	350	522
2	---	436	354	405	390	413	426	379	243	308	346	531
3	---	427	---	404	386	414	427	362	257	311	356	529
4	---	424	---	403	394	420	428	349	240	297	358	537
5	---	---	---	408	393	409	424	339	232	290	347	504
6	463	486	---	406	---	406	432	322	226	293	343	494
7	---	468	---	411	387	398	452	308	238	295	349	492
8	---	472	---	408	383	404	447	290	230	285	351	480
9	---	466	356	413	378	401	447	286	225	283	348	479
10	---	454	---	---	383	401	446	279	220	290	348	473
11	---	445	---	---	383	393	468	274	219	289	353	464
12	---	459	398	411	380	393	416	263	218	283	349	456
13	---	429	397	479	380	386	435	263	215	281	341	442
14	---	424	394	467	---	386	447	263	214	279	337	425
15	---	419	391	457	---	385	449	253	214	278	335	439
16	539	413	396	447	---	385	453	249	208	275	336	440
17	510	398	398	443	391	380	449	247	193	275	331	435
18	503	397	391	439	446	374	440	245	316	276	325	451
19	501	410	391	444	447	377	423	237	319	293	324	428
20	498	392	394	439	448	375	419	316	338	274	322	414
21	489	389	399	439	435	379	500	309	318	361	317	395
22	485	381	391	429	427	375	508	317	303	391	315	393
23	473	381	395	435	432	347	491	306	309	370	313	379
24	470	379	398	423	434	418	448	296	325	352	314	374
25	475	370	395	413	432	423	442	295	315	356	305	360
26	460	371	391	407	427	429	441	304	298	362	318	331
27	450	367	421	419	423	424	446	291	297	349	452	314
28	449	363	409	409	426	416	422	270	311	335	481	337
29	468	364	407	401	---	413	416	259	308	331	509	346
30	448	359	402	412	---	419	402	262	295	347	511	308
31	441	---	405	404	---	418	---	261	---	352	519	---
MEAN	478	413	393	423	408	399	442	293	263	311	361	432
WTR YR 1982	MEAN	380	MAX	539	MIN	193						

RIO GRANDE BASIN  
08317400 RIO GRANDE BELOW COCHITI DAM, NM -- Continued  
WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	19.5	19.0	19.0	13.0	13.0	13.0	---	---	---	5.0	5.0	5.0
2	19.5	19.0	19.0	13.0	12.5	12.5	---	---	---	5.0	5.0	5.0
3	19.5	19.0	19.0	13.0	12.5	12.5	---	---	---	5.0	4.5	4.5
4	19.5	18.5	19.0	12.5	12.5	12.5	---	---	---	5.0	4.0	4.5
5	19.0	18.5	19.0	12.5	12.0	12.0	---	---	---	4.5	4.0	4.5
6	19.5	18.5	18.5	12.5	12.0	12.0	---	---	---	4.5	4.5	4.5
7	19.5	19.0	19.0	12.5	12.0	12.0	---	---	---	5.0	4.5	4.5
8	19.5	18.5	19.0	12.5	12.0	12.0	---	---	---	4.5	3.5	4.0
9	19.0	18.5	18.5	12.0	12.0	12.0	7.5	7.0	7.0	4.5	4.0	4.5
10	19.0	18.5	18.5	---	---	---	7.0	7.0	7.0	4.5	4.0	4.0
11	19.0	17.5	18.5	---	---	---	7.0	6.5	7.0	4.5	4.0	4.0
12	18.5	17.5	18.0	---	---	---	6.5	6.5	6.5	4.0	3.0	3.5
13	19.0	17.5	18.0	---	---	---	7.0	6.5	6.5	3.0	2.5	3.0
14	18.5	17.5	18.0	---	---	---	6.5	6.5	6.5	2.5	2.0	2.5
15	18.5	17.5	18.0	---	---	---	6.5	6.5	6.5	3.0	2.5	3.0
16	18.0	17.5	18.0	---	---	---	7.0	6.0	6.5	3.0	2.5	2.5
17	18.0	17.5	17.5	---	---	---	6.5	6.0	6.0	3.0	2.5	2.5
18	17.5	17.0	17.5	---	---	---	6.5	6.0	6.0	3.0	2.5	2.5
19	17.0	16.5	17.0	---	---	---	6.5	6.0	6.0	2.5	2.5	2.5
20	16.5	16.5	16.5	---	---	---	6.5	6.0	6.0	3.0	2.5	3.0
21	16.5	15.5	16.0	---	---	---	6.5	6.0	6.0	3.0	2.5	3.0
22	16.0	15.5	16.0	---	---	---	6.0	6.0	6.0	3.0	2.5	3.0
23	15.5	15.0	15.5	---	---	---	6.0	5.5	6.0	3.0	2.5	2.5
24	15.5	15.0	15.0	---	---	---	5.5	5.5	5.5	2.5	2.5	2.5
25	15.0	14.5	15.0	---	---	---	5.5	5.0	5.5	3.0	2.5	3.0
26	14.5	14.0	14.5	---	---	---	5.5	5.0	5.5	3.0	3.0	3.0
27	14.5	14.0	14.0	---	---	---	5.5	5.0	5.5	3.5	3.0	3.0
28	14.5	14.0	14.0	---	---	---	5.5	5.0	5.0	3.5	3.0	3.0
29	14.0	13.5	14.0	---	---	---	5.5	5.0	5.0	3.5	3.0	3.0
30	14.0	13.5	13.5	---	---	---	5.0	5.0	5.0	3.5	3.0	3.0
31	14.0	13.0	13.5	---	---	---	5.5	5.0	5.0	3.5	3.0	3.0
MONTH	19.5	13.0	17.0	13.0	12.0	12.5	7.5	5.0	6.0	5.0	2.0	3.5
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	3.0	3.0	3.0	6.0	5.5	5.5	9.5	8.0	9.0	13.0	12.5	13.0
2	3.0	2.5	3.0	6.5	5.5	6.0	9.0	8.0	8.5	13.5	12.5	13.0
3	3.0	2.5	3.0	6.0	5.5	5.5	9.0	8.5	8.5	14.5	13.0	13.5
4	3.0	3.0	3.0	6.5	5.5	6.0	9.5	8.5	9.0	14.0	13.0	13.5
5	3.0	2.5	2.5	6.5	6.0	6.0	9.5	9.0	9.0	13.5	13.0	13.5
6	2.5	2.0	2.5	7.0	5.5	6.0	9.5	9.0	9.0	13.0	12.0	13.0
7	2.5	2.0	2.0	7.0	6.0	6.5	10.0	9.5	9.5	12.5	12.0	12.0
8	2.5	2.5	2.5	7.0	6.0	6.5	10.0	9.5	9.5	12.5	11.5	12.5
9	2.5	2.5	2.5	7.5	6.0	6.5	10.5	9.5	10.0	13.0	12.0	12.5
10	3.0	2.5	2.5	7.5	6.5	7.0	10.0	9.5	10.0	13.0	12.0	12.5
11	3.0	2.0	2.5	7.0	6.5	6.5	10.5	9.5	10.0	13.0	12.0	13.0
12	2.5	2.0	2.5	7.0	6.0	6.5	11.0	10.0	10.5	13.5	12.5	13.0
13	2.5	2.0	2.5	7.5	6.5	7.0	11.0	10.0	10.5	13.5	12.5	13.0
14	3.0	2.5	3.0	7.5	7.0	7.0	11.5	10.5	11.0	13.0	12.5	13.0
15	3.0	3.0	3.0	8.5	7.0	7.5	12.0	11.0	11.5	13.5	12.0	12.5
16	3.5	3.0	3.0	7.5	7.5	7.5	12.0	11.5	11.5	13.5	13.0	13.0
17	3.5	3.0	3.5	8.5	7.0	8.0	11.5	11.5	11.5	13.5	13.0	13.0
18	3.5	3.0	3.5	9.0	7.0	8.0	12.5	11.5	12.0	13.0	12.5	13.0
19	4.0	3.5	3.5	8.5	7.5	8.0	12.5	11.5	12.0	14.0	13.0	13.5
20	4.0	3.5	4.0	8.5	8.0	8.0	12.0	11.5	11.5	14.0	13.5	14.0
21	4.5	4.0	4.0	8.5	8.0	8.0	11.5	11.0	11.0	14.5	13.5	14.0
22	4.5	4.0	4.0	8.5	8.0	8.0	11.0	10.5	11.0	14.5	13.5	14.0
23	5.0	3.5	4.5	9.0	8.0	8.5	11.0	10.5	10.5	15.5	14.5	14.5
24	5.0	4.5	4.5	9.0	8.0	8.5	11.0	10.0	10.5	15.0	14.0	14.5
25	4.5	4.5	4.5	8.5	8.0	8.5	10.5	10.0	10.5	14.5	14.0	14.5
26	5.0	4.5	4.5	8.5	8.0	8.5	11.5	10.0	10.5	15.5	14.5	15.0
27	6.5	4.5	5.0	9.0	8.5	8.5	11.5	10.5	11.0	15.5	14.5	15.0
28	7.0	6.0	6.0	9.0	8.5	8.5	12.5	11.5	11.5	15.5	15.0	15.0
29	---	---	---	9.0	8.5	8.5	12.0	11.5	11.5	15.5	15.0	15.0
30	---	---	---	9.0	8.5	8.5	12.5	11.5	12.0	16.0	15.0	15.5
31	---	---	---	9.0	8.5	9.0	---	---	---	16.0	15.5	15.5
MONTH	7.0	2.0	3.5	9.0	5.5	7.5	12.5	8.0	10.5	16.0	11.5	13.5

RIO GRANDE BASIN  
08317400 RIO GRANDE BELOW COCHITI DAM, NM -- Continued  
WATER-QUALITY RECORDS

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TEMPERATURE WATER (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	16.0	14.5	15.5	20.0	19.5	19.5	23.0	22.5	22.5	23.0	22.5	22.5
2	16.0	15.5	16.0	20.0	19.5	20.0	23.0	22.5	22.5	22.5	22.0	22.5
3	16.5	15.0	16.0	20.0	19.5	20.0	23.5	22.5	23.0	22.5	22.0	22.0
4	16.5	16.0	16.0	20.5	19.5	20.0	23.0	22.0	22.5	22.5	22.0	22.0
5	16.5	16.0	16.0	20.5	20.0	20.0	23.0	22.0	22.0	22.5	22.0	22.0
6	16.0	15.5	16.0	20.5	20.0	20.0	23.0	22.5	22.5	22.5	22.0	22.0
7	16.0	15.5	15.5	20.5	20.0	20.0	23.0	22.5	23.0	22.5	22.0	22.0
8	16.5	15.5	16.0	20.5	19.5	20.0	23.0	22.5	22.5	22.0	22.0	22.0
9	16.0	15.5	16.0	21.0	20.0	20.5	23.0	22.5	22.5	22.5	22.0	22.0
10	16.5	15.5	16.0	21.0	20.5	20.5	23.0	22.0	22.5	22.0	22.0	22.0
11	16.5	16.0	16.0	22.0	20.5	20.5	23.0	22.5	22.5	22.0	21.5	22.0
12	17.0	16.0	16.5	21.0	20.0	20.5	23.0	22.5	22.5	21.5	21.0	21.5
13	17.5	16.5	17.0	21.0	20.0	20.5	23.0	22.5	22.5	21.5	21.0	21.0
14	17.5	16.5	17.5	21.0	20.5	21.0	23.0	22.5	23.0	21.0	20.5	20.5
15	18.0	17.0	17.5	21.5	20.5	21.0	23.0	22.5	23.0	20.5	19.5	20.0
16	17.5	16.5	17.0	21.5	20.5	21.0	23.5	22.5	23.0	20.0	19.5	20.0
17	18.0	17.0	17.5	21.5	20.5	21.0	23.5	22.5	23.0	20.0	19.0	19.5
18	18.0	17.0	17.5	22.0	20.5	21.0	23.5	22.5	23.0	19.5	19.0	19.5
19	18.5	17.0	17.5	22.0	21.0	21.5	23.5	23.0	23.0	19.5	19.0	19.5
20	18.5	18.0	18.0	21.5	21.0	21.0	23.5	22.5	23.0	19.5	18.5	19.0
21	19.0	18.0	18.0	21.5	21.0	21.0	23.5	23.0	23.0	19.0	18.5	19.0
22	18.0	17.0	17.5	21.5	21.0	21.0	23.5	22.5	23.0	19.0	18.5	19.0
23	18.0	17.0	17.5	21.5	21.0	21.0	23.5	23.0	23.0	19.5	19.0	19.0
24	18.0	17.0	17.5	21.5	20.5	21.0	24.0	23.0	23.5	19.0	18.5	19.0
25	18.5	17.5	18.0	21.5	20.5	21.0	23.5	23.0	23.0	19.0	18.5	19.0
26	19.0	18.5	18.5	22.0	21.0	21.0	23.5	22.5	23.0	19.5	19.0	19.0
27	19.0	18.5	18.5	22.0	21.0	21.5	23.0	22.5	22.5	19.0	18.5	18.5
28	19.0	17.5	18.5	22.0	21.0	21.5	23.0	22.5	22.5	19.0	18.5	18.5
29	20.0	19.0	19.5	23.0	21.0	22.0	22.5	22.5	22.5	18.5	18.0	18.5
30	20.0	19.0	19.5	23.0	22.5	23.0	23.0	22.5	22.5	18.0	17.5	18.0
31	---	---	---	23.0	22.5	23.0	22.5	22.5	22.5	---	---	---
MONTH	20.0	14.5	17.0	23.0	19.5	21.0	24.0	22.0	22.5	23.0	17.5	20.5
YEAR	24.0	2.0	13.0									

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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												
1	5	1.5	9	12	3	4.5	9	11	3	4.8	6	12
2	6	2.6	15	20	6	9.1	9	14	4	6.7	5	10
3	7	4.1	12	19	5	7.0	9	15	3	5.0	5	11
4	7	6.3	9	14	4	4.2	7	9.7	2	3.3	5	12
5	7	7.0	8	12	4	4.0	7	7.8	5	7.5	6	13
6	8	7.2	7	11	5	6.5	9	12	5	6.9	4	8.1
7	8	6.4	7	13	5	8.5	12	19	4	5.1	17	34
8	7	4.9	9	18	4	6.8	7	12	4	5.6	8	15
9	7	4.8	10	21	1	1.5	9	11	3	5.7	5	9.0
10	8	6.8	8	17	1	1.6	7	9.3	3	6.4	6	9.6
11	7	4.6	8	19	1	1.7	5	7.9	3	6.0	17	26
12	7	3.3	7	16	2	3.1	3	4.6	2	3.2	7	12
13	7	3.6	10	22	2	3.2	8	13	4	6.2	7	15
14	7	4.2	9	21	3	4.9	5	9.0	4	6.4	7	18
15	8	6.2	13	28	2	3.3	4	7.1	4	6.6	9	23
16	10	8.9	9	19	1	1.7	5	8.0	4	6.8	8	22
17	10	17	9	18	13	25	3	4.7	4	6.9	9	28
18	11	20	8	18	8	17	4	6.3	5	9.7	10	28
19	16	23	9	19	2	3.3	3	4.8	5	10	10	24
20	13	17	7	14	3	3.8	6	10	5	8.7	11	24
21	17	21	6	12	4	7.3	5	8.2	6	10	14	24
22	17	21	8	15	3	6.1	2	3.3	12	24	11	21
23	15	19	8	15	5	9.8	4	6.5	7	14	12	22
24	20	27	7	12	5	9.1	5	8.2	8	15	12	24
25	12	13	8	14	3	5.1	7	10	6	12	13	23
26	12	12	7	12	5	7.6	4	6.2	7	15	11	17
27	11	12	9	20	9	11	4	6.5	6	13	11	24
28	17	21	23	51	8	9.0	3	5.5	5	9.8	11	34
29	12	17	7	13	10	13	3	5.2	---	---	12	39
30	11	15	15	25	7	8.6	3	5.5	---	---	12	44
31	7	9.3	---	---	9	11	4	6.9	---	---	14	62
TOTAL	---	346.7	---	540	---	218.3	---	268.2	---	240.3	---	687.7

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)	
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14	56	36	341	36	325	17	101	38	189	26	65
2	18	53	54	512	41	567	31	310	43	214	27	64
3	13	35	53	584	31	167	26	192	37	160	18	29
4	12	37	71	865	37	426	20	137	42	93	18	19
5	12	37	82	1010	33	408	14	78	43	63	18	26
6	13	47	67	825	27	330	21	84	27	52	19	32
7	13	58	78	956	41	497	21	80	23	43	16	28
8	13	71	75	911	33	405	20	79	21	43	15	26
9	13	60	66	797	37	456	12	50	23	49	18	33
10	13	46	56	623	29	316	22	90	23	42	23	48
11	32	102	60	624	38	367	17	57	26	41	20	44
12	12	35	68	709	28	276	15	42	27	52	32	83
13	13	55	59	644	30	296	17	46	18	36	25	86
14	15	98	62	693	30	311	14	45	23	42	26	109
15	15	103	55	612	23	235	19	61	16	29	27	128
16	22	156	47	496	31	302	15	42	29	48	23	116
17	16	124	42	379	29	298	13	33	20	33	14	65
18	28	196	41	349	41	426	20	46	23	42	26	107
19	32	245	40	340	32	329	26	46	19	36	29	139
20	33	142	41	372	40	416	24	37	15	34	28	147
21	37	182	44	417	42	442	25	41	16	33	33	186
22	38	287	41	387	44	489	20	30	22	36	36	212
23	43	308	42	456	37	408	16	24	29	42	33	194
24	50	261	65	723	17	171	21	29	21	46	34	210
25	38	140	63	662	36	338	20	20	30	111	40	232
26	29	114	60	619	30	275	34	30	32	156	34	162
27	22	91	51	527	37	329	23	21	44	203	27	104
28	31	132	54	560	34	163	28	26	32	138	25	87
29	17	99	55	572	27	316	21	35	26	112	34	133
30	15	125	46	478	25	263	23	68	30	130	19	72
31	---	---	38	365	---	---	20	91	27	95	---	---
TOTAL	---	3495	---	18408	---	10347	---	2071	---	2443	---	2986
TOTAL LOAD FOR YEAR:			42051.2	TONS.								

## 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., Santa Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, at Galisteo Dam on Galisteo Creek, 5.0 mi (8.0 km) northwest of Cerrillos, and at mile 11.8 (19.0 km).

DRAINAGE AREA.--596 mi<sup>2</sup> (1,544 km<sup>2</sup>).

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

GAGE.--Water-stage recorder above elevation 5,500.3 ft (1,676.49 m), nonrecording below. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by an earthfill dam, completed Oct. 11, 1970. Capacity 88,990 acre-ft (110 hm<sup>3</sup>) between elevations 5,496.0 ft (1,675.18 m), sill of ungated outlet conduit, and 5,608.0 ft (1,709.32 m), crest of uncontrolled spillway. No dead storage. Reservoir is used for flood control.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,510 acre-ft (3.09 hm<sup>3</sup>) July 26, 1971, elevation, 5,517.00 ft (1,681.582 m); no storage most of time.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,040 acre-ft (1.28 hm<sup>3</sup>) July 30, elevation, 5,513.34 ft (1,680.466 m); no storage most of time.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Corps of Engineers in 1972)

5,500	0	5,504	41	5,510	468
5,501	2	5,505	69	5,512	781
5,502	9	5,506	109	5,514	1,170
5,503	21	5,508	244		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	4	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	87	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	709
17	0	0	0	0	0	0	0	0	0	0	0	2
18	0	0	0	0	0	0	0	0	0	0	0	10
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	47	0
21	0	0	0	0	0	0	0	0	0	0	48	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	492	0	0
30	0	0	0	0	---	0	0	0	0	0	4	0
31	0	---	0	0	---	0	---	0	---	14	0	---
MAX	4.0	.00	.00	.00	.00	.00	.00	.00	.00	492	87	709
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(†)	---	---	---	---	---	---	---	---	---	5502.50	---	---
(‡)	---	---	---	---	---	---	---	---	---	+14	-14	---
CAL YR 1981	MAX 554	MIN .00	‡ 0									
WTR YR 1982	MAX 709	MIN .00	‡ 0									

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

## RIO GRANDE BASIN

08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM

LOCATION.--Lat 35°27'53", long 106°12'49", in NE¼NE¼ sec.8, T.14 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, on right bank 0.4 mi (0.6 km) downstream from Galisteo Dam, 5.3 mi (8.5 km) northwest of Cerrillos, and at mile 11.4 (18.3 km). Prior to Dec. 21, 1981, at site 1,200 ft (370 m) downstream.

DRAINAGE AREA.--597 mi<sup>2</sup> (1,546 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 5,450 ft (1,661 m), from topographic map. Prior to Dec. 21, 1981, at site 1,200 ft (370 m) downstream at different datum.

REMARKS.--Records poor. Flow regulated by Galisteo Reservoir 0.4 mi (0.6 km) upstream. Diversions for irrigation of about 50 acres (20 hm<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 6.73 ft<sup>3</sup>/s (0.191 m<sup>3</sup>/s), 4,880 acre-ft/yr (6.02 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft<sup>3</sup>/s (56.6 m<sup>3</sup>/s) July 27, 1971, gage height, 7.00 ft (2.134 m); maximum gage height, 7.33 ft (2.234 m) July 20, 1971; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,410 ft<sup>3</sup>/s (39.9 m<sup>3</sup>/s) Oct. 3, gage height, 6.89 ft (2.100 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.31	1.3	2.0	.57	.00	.00	.00	46	1.3
2	69	.00	.10	.97	1.5	2.8	.00	.00	.00	.00	.68	105
3	760	.00	.20	.75	1.6	2.4	.00	.00	.00	.00	.13	16
4	55	.00	.30	1.1	.09	2.0	.00	.00	.00	.00	.02	.20
5	7.0	.00	.40	2.3	.00	1.9	.00	.19	.00	.00	.00	.00
6	3.0	.00	.50	1.8	.14	.73	.00	.16	.00	.00	5.2	.00
7	1.0	.00	.60	.54	2.9	.60	.00	.00	.00	.00	1.2	6.6
8	.50	.00	.70	.45	1.8	.64	.00	.00	.00	.00	.09	8.0
9	.10	.00	.80	.96	1.9	1.1	.00	.00	.00	.00	.02	.00
10	.00	.00	1.0	1.5	3.5	1.1	.00	.00	.00	.00	.00	.00
11	.00	.00	1.1	2.6	3.1	1.3	.00	.00	3.0	.00	8.9	.00
12	.00	.00	1.0	5.4	2.9	1.8	.00	.00	.00	5.0	6.0	.00
13	.00	.00	1.0	2.9	2.2	2.2	.00	.00	.00	.60	48	.00
14	.00	.00	1.0	1.5	2.8	2.9	.00	.00	.00	.20	32	.00
15	.00	.00	1.0	1.2	2.8	2.1	.00	.00	.00	.00	.28	.00
16	.00	.00	1.0	1.3	3.2	1.8	.00	.00	.00	.00	.04	228
17	.00	.00	.50	2.8	12	1.5	.00	.00	.00	.00	.00	602
18	.00	.00	.25	1.5	2.0	1.5	.00	.00	.00	.00	.00	251
19	.00	.00	.40	.91	.56	1.4	.00	.00	.00	.00	.00	64
20	.00	.00	.50	.99	.49	1.8	.00	.00	.00	.00	174	59
21	.00	.00	.50	.84	.40	.96	.00	.00	.00	.00	80	46
22	.00	.00	.18	.65	.84	1.1	.00	1.1	.00	.00	85	30
23	.00	.00	.93	.40	1.2	1.0	.00	1.8	.00	.86	20	25
24	.00	.00	1.2	.56	2.4	.85	.00	.00	.00	.00	13	10
25	.00	.00	2.5	.68	2.9	.79	.00	.00	.00	.00	20	5.0
26	.00	.00	2.2	.68	3.1	1.3	.00	.00	.00	.34	13	.00
27	.00	.00	2.1	.79	2.9	1.7	.00	.00	.00	.00	4.0	.00
28	.00	.00	.73	.60	2.4	1.3	.00	.00	.00	.88	.70	.00
29	.00	.00	.87	1.0	---	1.1	.00	.00	.00	32	.52	.00
30	.00	.00	1.1	1.1	---	.73	.00	.00	.00	117	58	.00
31	.00	---	.42	.84	---	.85	---	.00	---	8.6	27	---
TOTAL	895.60	.00	25.08	39.92	62.92	45.25	.57	3.25	3.00	165.48	643.78	1457.10
MEAN	28.9	.000	.81	1.29	2.25	1.46	.019	.10	.10	5.34	20.8	48.6
MAX	760	.00	2.5	5.4	12	2.9	.57	1.8	3.0	117	174	602
MIN	.00	.00	.00	.31	.00	.60	.00	.00	.00	.00	.00	.00
AC-FT	1780	.00	50	79	125	90	1.1	6.4	6.0	328	1230	2890

CAL YR 1981 TOTAL 4391.36 MEAN 12.0 MAX 760 MIN .00 AC-FT 8710  
WTR YR 1982 TOTAL 3341.95 MEAN 9.16 MAX 760 MIN .00 AC-FT 6630



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 (61 m) downstream from Tongue Arroyo, 1,700 ft (520 m) upstream from steel highway bridge, 0.8 mi (1.3 km) upstream from San Felipe Pueblo, 11 mi (18 km) northeast of Bernalillo, and at mile 1,572.7 (2,530.5 km).

DRAINAGE AREA.--16,100 mi<sup>2</sup> (41,670 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 (1,559.275 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1957, at site 1,800 ft (550 m) downstream at datum 5.35 ft (1.63 m) lower, except period May 16, 1945 to Sept. 30, 1946 when it was 5.94 ft (1.81 m) lower than present datum.

REMARKS.--Water-discharge records good. Flow completely regulated since November 1973 by Cochiti Dam (station 08317300) 17 mi (27 km) 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 (2,900 km<sup>2</sup>) above station, some of which is irrigated below 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 (38.91 m<sup>3</sup>/s), 995,500 acre-ft/yr (1.23 km<sup>3</sup>/yr) prior to closure of Cochiti Dam.  
9 years (water years 1974-82), 1,276 ft<sup>3</sup>/s (36.14 m<sup>3</sup>/s), 924,400 acre-ft/yr (1.14 km<sup>3</sup>/yr) since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,300 ft<sup>3</sup>/s (773 m<sup>3</sup>/s) June 26, 1937, gage height, 11.13 ft (3.392 m) site and datum then in use, from rating curve extended above 15,000 ft<sup>3</sup>/s (425 m<sup>3</sup>/s); minimum, 32 ft<sup>3</sup>/s (0.906 m<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, 5,180 ft<sup>3</sup>/s (147 m<sup>3</sup>/s) at 2045 hours June 1, gage height, 6.16 ft (1.878 m); minimum daily, 180 ft<sup>3</sup>/s (5.10 m<sup>3</sup>/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	615	621	410	563	751	1770	3480	3110	2190	2060	1240
2	310	491	606	506	607	858	1300	3630	5070	4020	2060	1550
3	1140	612	632	638	608	938	1090	3960	2540	3030	1950	1260
4	515	644	418	549	611	1010	1170	4590	4130	2780	1260	684
5	537	644	363	337	563	875	1270	4660	4630	2480	658	802
6	515	637	430	375	463	924	1270	4660	4620	1790	869	923
7	425	721	641	506	441	882	1810	4670	4600	1620	858	982
8	350	815	764	590	405	839	2020	4600	4620	1690	871	986
9	330	851	578	500	653	739	1940	4570	4710	1730	990	1000
10	360	855	622	350	794	682	1260	4300	4330	1760	869	1060
11	300	895	672	559	829	569	1220	3900	3650	1510	732	1100
12	230	1010	658	561	655	673	1110	3930	3740	1330	791	1200
13	240	840	609	559	539	842	1320	4070	3750	1090	970	1520
14	280	940	668	656	594	1100	2200	4240	3880	1420	890	1730
15	320	911	569	715	600	1090	2470	4210	3950	1460	830	1890
16	460	801	669	598	641	1210	2570	4100	3680	1310	777	2040
17	550	800	721	595	644	1360	2720	3520	3840	1150	731	2900
18	700	865	911	606	704	1360	2650	3240	3990	1090	816	2250
19	620	901	766	610	799	1000	2750	3230	3900	886	840	2100
20	600	774	474	671	722	1020	2140	3390	4000	643	1010	2240
21	595	794	619	631	584	700	1290	3580	3990	694	1240	2260
22	570	766	857	630	713	712	2860	3580	4280	646	938	2340
23	570	744	800	619	790	747	2720	3960	4320	666	728	2330
24	609	693	765	617	680	767	2400	4290	3950	664	981	2360
25	582	682	672	564	732	764	1390	4040	3680	533	1540	2330
26	427	663	614	527	788	537	1560	3970	3560	434	2090	2020
27	494	827	461	607	893	731	1610	3970	3640	446	2060	1760
28	533	978	322	639	817	1190	1680	3980	1800	450	1960	1440
29	705	739	441	722	---	1360	2030	3980	4260	646	1970	1640
30	674	649	418	632	---	1430	2950	4010	4270	1450	1990	1580
31	618	---	375	688	---	1810	---	4010	---	1930	1730	---
TOTAL	15339	23157	18836	17767	18432	29470	56540	124320	118490	43538	38079	49517
MEAN	495	772	608	573	658	951	1885	4010	3950	1404	1228	1651
MAX	1140	1010	911	722	893	1810	2950	4670	5070	4020	2090	2900
MIN	180	491	322	337	405	537	1090	3230	1800	434	658	684
AC-FT	30420	45930	37360	35240	36560	58450	112100	246600	235000	86360	75530	98220
(+)	3450	0	0	0	0	1740	2610	2880	2560	2670	2270	2010
CAL YR 1981 TOTAL	226512			621	1640	160		449300				
WTR YR 1982 TOTAL	553485			1516	5070	180		1098000				

(+) MONTHLY DIVERSION, IN ACRE-FT, OF COCHITI EASTSIDE CANAL; RECORD OF THIS FLOW FURNISHED BY MIDDLE RIO GRANDE CONSERVANCY DISTRICT.

RIO GRANDE BASIN  
08319000 RIO GRANDE AT SAN FELIPE, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)	
DATE	TIME										
OCT 20...	1300	605	385	--	8.1	--	20.0	14.5	8.6	--	
NOV 17...	1100	761	368	334	8.1	8.1	11.0	8.5	11.1	23	
DEC 02...	1100	547	380	349	8.2	8.1	3.0	5.0	10.6	--	
JAN 08...	1040	565	350	394	8.2	7.2	-4.0	1.0	12.4	<11	
MAR 09...	1045	690	350	--	8.1	--	14.5	8.0	11.0	12	
MAY 04...	1030	4790	280	280	8.3	7.9	17.0	13.0	8.2	33	
JUL 08...	1300	1620	230	--	8.3	--	29.0	22.5	8.1	25	
AUG 31...	1150	1930	340	354	8.1	8.1	26.0	23.0	7.8	32	
		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)	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)
DATE											
OCT 20...	--	--	--	--	--	--	--	--	--	--	
NOV 17...	130	30	41	6.8	20	.8	2.9	57	6.4	.3	
DEC 02...	--	--	--	--	--	--	--	--	--	--	
JAN 08...	137	7	42	7.7	24	.9	3.0	60	7.2	.4	
MAR 09...	--	--	--	--	--	--	--	--	--	--	
MAY 04...	115	30	35	6.7	14	.6	2.9	62	3.7	.4	
JUL 08...	--	--	--	--	--	--	--	--	--	--	
AUG 31...	131	48	42	6.4	18	.7	3.0	75	4.5	.3	
		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)
DATE											
OCT 20...	--	--	--	--	--	--	--	--	--	--	
NOV 17...	21	216	.10	.11	.140	.86	1.1	.040	.050	2.3	
DEC 02...	--	--	--	--	--	--	--	--	--	--	
JAN 08...	23	246	<.09	<.09	.150	.43	--	.070	.030	2.1	
MAR 09...	--	--	.09	<.09	.370	.11	.57	.070	<.020	2.3	
MAY 04...	16	208	<.10	<.10	.240	.54	--	.130	.020	6.6	
JUL 08...	--	--	<.10	<.10	.130	.67	--	.050	.030	4.8	
AUG 31...	19	219	.20	.14	.160	1.3	1.7	.430	.050	9.2	

RIO GRANDE BASIN  
08319000 RIO GRANDE AT SAN FELIPE, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 17...	1100	3	4	40	<1	<1	10	<10	6	6
JAN 08...	1040	--	--	40	--	--	--	--	--	--
MAY 04...	1030	3	2	30	<1	<3	10	<10	12	2
AUG 31...	1150	--	--	160	--	--	--	--	--	--

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 17...	10	10	1	3	<.1	.4	<1	<1	20	9
JAN 08...	<10	--	--	--	--	--	--	--	--	--
MAY 04...	10	11	11	1	<.1	<.1	1	<1	30	<12
AUG 31...	6	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		NITRO- GEN, NITRITE TOT IN BOT MAT (MG/KG AS N) (00616)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITRO- GEN,TOT IN BOT- TOM MA- TERIAL (MG/KG AS N) (00603)	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)	
DATE	TIME								
MAY 04...	1030	<2.0	13	3.2	743	130	4	<1	
		CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
MAY 04...	<1	<10	2	380	<10	110	.09	4	

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 04...	1030	<4.8	13	4.1	8.9	4.0	8.6	.08	1.5

RIO GRANDE BASIN  
08319000 RIO GRANDE AT SAN FELIPE, NM -- Continued  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN, TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)
MAY 04...	1030	--	--	--	--	--	--	--	--	--
AUG 31...	1150	<.10	<.01	<.10	<.01	<.01	<.01	<.01	<.01	<.01

DATE	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)
MAY 04...	--	--	--	--	--	--	--	--	--
AUG 31...	<.01	<.01	<.01	<.01	<.01	<.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)	LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
MAY 04...	--	--	--	<.01	<.01	<.01	--	--	--
AUG 31...	<.01	<1	<.01	--	--	--	<.10	<.10	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 20...	37	77
NOV 17...	25	110
DEC 02...	K17	70
JAN 08...	K3	33
MAR 09...	K2	29
MAY 04...	80	370
JUL 08...	40	80
AUG 31...	490	1500

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 17...	1100	761	8.5	294	604	21
JAN 08...	1040	565	1.0	90	137	20
MAR 09...	1045	690	8.0	59	110	55
MAY 04...	1030	4790	13.0	939	12100	23
JUL 08...	1300	1620	22.5	33	144	68
AUG 31...	1150	1930	23.0	1200	6250	90

## 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 (0.2 km) upstream from Sulphur Creek, 0.7 mi (1.1 km) northeast of intersection of State Highways 7 and 126, and 8.0 mi (13 km) northeast of Jemez Springs.

DRAINAGE AREA.--12.1 mi<sup>2</sup> (31.3 km<sup>2</sup>).

PERIOD OF RECORD.--November 1981 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 7,755 ft (2,364 m) from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Dec. 17 to Feb. 28, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during the period November to September, 18 ft<sup>3</sup>/s (0.51 m<sup>3</sup>/s) at 0315 hours Aug. 22, gage height, 2.12 ft (0.646 m); minimum, 0.18 ft<sup>3</sup>/s (0.005 m<sup>3</sup>/s) Jan. 4, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	.25	.24	.24	1.1	3.3	5.6	1.8	.70	.60	1.2
2		---	.26	.22	.24	1.2	2.3	6.1	1.9	.61	.50	1.0
3		---	.28	.20	.25	1.2	3.0	5.7	1.9	.55	.61	1.0
4		---	.28	.18	.28	1.2	2.7	5.3	1.9	.42	.63	1.0
5		---	.30	.24	.26	1.0	2.3	6.7	1.9	.43	.53	.97
6		---	.29	.26	.24	1.0	2.0	5.8	1.9	.42	.59	.94
7		---	.29	.25	.30	1.0	1.9	4.2	1.8	.43	.59	.96
8		---	.30	.24	.40	1.2	1.7	3.7	1.7	.43	.59	.95
9		---	.30	.24	.44	1.3	1.6	3.4	1.8	.39	.54	.92
10		.60	.29	.25	.45	1.3	1.6	3.1	1.8	.35	.60	1.0
11		.62	.28	.26	.46	1.2	2.1	3.0	1.8	.42	.57	2.2
12		.66	.27	.26	.45	1.3	3.7	2.9	1.6	.42	.36	1.9
13		.68	.28	.23	.50	1.4	4.4	3.4	1.6	.40	.38	1.5
14		.70	.29	.24	.54	1.3	4.6	2.7	1.5	.40	.39	1.2
15		.70	.29	.26	.58	1.2	4.6	2.4	1.4	.37	.35	1.0
16		.72	.29	.27	.56	1.7	4.4	2.2	1.4	.37	1.2	1.1
17		.64	.29	.28	.55	1.8	4.0	2.1	1.3	.38	1.8	1.7
18		.54	.28	.29	.55	1.8	4.0	2.0	1.3	.41	1.8	2.4
19		.50	.28	.30	.60	1.3	3.8	2.0	1.2	.61	.98	1.4
20		.45	.29	.28	.70	1.2	3.6	1.9	1.2	.54	.88	2.7
21		.45	.31	.26	.80	1.5	3.2	1.8	1.2	.41	1.6	1.4
22		.47	.26	.25	.75	1.5	3.0	2.2	1.0	.37	6.2	1.2
23		.48	.23	.25	.70	1.7	2.8	2.3	.96	.35	1.4	1.1
24		.52	.21	.24	.70	2.0	2.8	2.1	.83	.35	1.1	1.0
25		.52	.20	.24	.70	2.4	2.4	2.2	.82	.44	2.1	1.0
26		.45	.22	.25	.70	1.7	2.4	2.0	.81	.41	2.1	1.0
27		.40	.23	.26	.80	1.7	2.5	2.1	.78	.38	1.5	1.0
28		.37	.26	.26	1.0	2.6	2.9	2.1	.70	.54	1.4	.98
29		.46	.25	.26	---	1.9	3.3	1.9	.67	2.1	1.5	.98
30		.35	.24	.25	---	1.3	4.4	1.9	.67	2.0	1.3	1.0
31		---	.25	.24	---	2.4	---	1.9	---	.98	1.4	---
TOTAL		---	8.34	7.75	14.74	46.4	91.3	96.7	41.14	17.38	36.09	37.70
MEAN		---	.27	.25	.53	1.50	3.04	3.12	1.37	.56	1.16	1.26
MAX		---	.31	.30	1.0	2.6	4.6	6.7	1.9	2.1	6.2	2.7
MIN		---	.20	.18	.24	1.0	1.6	1.8	.67	.35	.35	.92
AC-FT		---	17	15	29	92	181	192	82	34	72	75

NOTE: No gage height record Dec. 17 to Feb. 28

## 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 (91 m) downstream from culvert under State Highway 4, 0.2 mi (0.3 km) north at intersection of State Highways 4 and 126, 0.4 mi (0.6 km) upstream from San Antonio Creek, and 7.5 mi (12 km) northeast of Jemez Springs, NM.

DRAINAGE AREA.--38.0 mi<sup>2</sup> (98.4 km<sup>2</sup>).

PERIOD OF RECORD.--November 1981 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage is 7,650 ft (2,332 m) from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Nov. 27 to Mar. 15, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during the period November to September, 29 ft<sup>3</sup>/s (0.821 m<sup>3</sup>/s) at 1745 hours Apr. 12, gage height, 1.95 ft (0.594 m); minimum, 0.04 ft<sup>3</sup>/s (0.001 m<sup>3</sup>/s) July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	.42	.33	.58	1.2	4.2	10	2.1	.71	.76	1.3
2		---	.35	.31	.56	1.2	3.9	10	2.0	.68	.45	1.0
3		---	.30	.30	.58	1.3	4.0	11	2.0	.63	.80	.88
4		---	.30	.29	.64	1.3	4.6	10	1.9	.52	.87	.82
5		---	.32	.32	.58	1.3	5.0	12	1.9	.49	.47	.78
6		---	.30	.37	.60	1.2	4.9	11	1.9	.48	.52	.71
7		---	.28	.33	.66	1.2	5.0	8.4	1.8	.51	.52	.71
8		---	.29	.30	.75	1.3	5.1	7.0	1.7	.42	.52	.71
9		---	.30	.30	.90	1.4	5.1	6.3	1.8	.29	.50	.64
10		.74	.30	.31	.94	1.6	5.7	5.8	1.8	.23	.80	.76
11		.52	.29	.34	.90	1.5	7.7	5.5	1.7	.35	.50	2.2
12		.54	.26	.37	.86	1.7	19	5.7	1.6	.36	.17	2.5
13		.67	.25	.35	.90	2.1	17	7.3	1.5	.32	.21	2.1
14		.66	.25	.41	1.0	1.9	16	6.5	1.4	.26	.13	1.3
15		.68	.24	.46	1.2	1.8	15	5.1	1.3	.20	.07	.97
16		.68	.24	.55	1.0	2.0	13	4.6	1.3	.20	.70	.93
17		.58	.25	.65	1.0	2.3	11	4.1	1.2	.22	2.0	1.7
18		.60	.26	.72	1.0	2.6	10	3.8	1.1	.25	3.1	2.6
19		.48	.27	.80	1.2	1.6	8.6	3.5	1.1	.56	1.2	2.1
20		.38	.28	.76	1.2	1.4	7.2	3.2	1.1	.48	.93	3.4
21		.84	.29	.70	1.3	1.6	5.6	3.0	1.1	.23	2.6	2.2
22		.78	.28	.65	1.1	1.7	5.9	3.2	1.0	.15	7.8	1.6
23		.66	.26	.60	1.0	1.9	5.7	3.8	.95	.13	1.9	1.3
24		.57	.26	.58	.95	2.3	5.8	3.4	.87	.11	1.3	1.1
25		.65	.25	.58	.90	2.6	5.4	3.3	.84	.19	2.4	1.0
26		.53	.28	.60	.95	2.2	4.9	2.8	.82	.10	4.7	.97
27		.50	.29	.63	1.0	2.6	4.8	2.8	.78	.05	2.3	.94
28		.45	.31	.66	1.1	3.1	5.0	2.8	.76	.38	1.9	.90
29		.50	.29	.66	---	3.1	5.6	2.5	.71	2.0	2.2	.88
30		.45	.28	.64	---	2.2	7.3	2.3	.69	3.2	1.7	.97
31		---	.31	.60	---	2.7	---	2.2	---	2.4	1.8	---
TOTAL		---	6.85	15.47	25.35	57.9	228.0	172.9	40.72	17.10	45.82	39.97
MEAN		---	.29	.50	.91	1.87	7.60	5.58	1.36	.55	1.48	1.33
MAX		---	.42	.80	1.3	3.1	19	12	2.1	3.2	7.8	3.4
MIN		---	.24	.29	.56	1.2	3.9	2.2	.69	.05	.07	.64
AC-FT		---	18	31	50	115	452	343	81	34	91	79

NOTE: No gage height record Nov. 27 to Mar. 15

## 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 (0.6 km) downstream from East Fork and boundary of Santa Fe National Forest, 5.3 mi (8.5 km) northeast of Jemez Springs, and at mile 43.0 (69.2 km).

DRAINAGE AREA.--173 mi<sup>2</sup> (448 km<sup>2</sup>).

PERIOD OF RECORD.--July 1949 to October 1950 (gaged separately above 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 6,702.7 ft (2,042.98 m) above mean sea level. Prior to May 1951, at sites 3,000 ft (900 m) upstream, at different datums and on separate channels.

REMARKS.--Records good except those for winter months, which are fair. No diversion above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years (water years 1950, 1959-76, 1982), 28.2 ft<sup>3</sup>/s (0.799 m<sup>3</sup>/s), 20,430 acre-ft/yr (25.2 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 2,500 ft<sup>3</sup>/s (71.4 m<sup>3</sup>/s) Apr. 21, 1958, gage height, 7.35 ft (2.240 m), from rating curve extended above 1,100 ft<sup>3</sup>/s (31 m<sup>3</sup>/s) on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.91 ft<sup>3</sup>/s (0.026 m<sup>3</sup>/s) Jan. 24, 1969, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Apr. 12	0345	*808 22.9	3.70 1.128	Aug. 25	2045	131 3.71	2.02 0.616
May 14	0115	109 3.09	1.91 0.582				

Minimum, 5.4 ft<sup>3</sup>/s (0.15 m<sup>3</sup>/s) Nov. 26, Dec. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	14	10	15	15	19	96	164	26	15	19	31
2	23	13	13	13	12	20	139	198	23	15	16	24
3	53	13	15	11	14	19	143	149	23	14	19	21
4	44	13	14	12	14	17	190	118	23	14	18	20
5	26	13	17	11	12	16	258	130	22	14	15	20
6	22	13	15	12	10	17	276	179	22	14	17	19
7	20	13	16	11	12	18	152	106	21	14	22	18
8	20	14	15	10	14	19	158	85	21	14	18	18
9	19	14	14	12	15	19	150	76	18	13	16	18
10	18	13	14	13	16	20	158	68	18	13	16	18
11	18	13	16	14	16	22	294	63	18	14	15	23
12	16	13	15	15	15	27	610	65	18	14	15	27
13	18	13	16	15	14	31	396	82	18	14	15	28
14	18	14	13	13	15	32	219	91	17	14	14	24
15	18	14	13	15	16	34	165	66	16	13	14	20
16	19	13	16	15	17	30	134	59	16	13	14	19
17	18	13	11	15	18	33	107	55	16	13	16	23
18	18	13	12	15	17	39	100	52	17	13	19	28
19	17	11	14	16	17	35	87	47	17	17	18	34
20	17	11	16	16	17	36	78	40	17	17	16	58
21	17	13	16	15	18	35	68	37	17	16	27	62
22	17	14	15	16	18	38	68	38	17	14	63	36
23	17	14	10	16	19	40	67	45	17	14	43	27
24	17	14	9.0	13	18	47	72	43	16	13	26	24
25	16	14	13	14	17	60	64	40	16	14	58	22
26	16	11	15	14	18	69	55	39	15	14	81	21
27	16	12	14	16	18	64	53	34	15	15	38	19
28	16	16	14	15	18	69	54	34	15	17	27	19
29	15	16	12	16	---	84	58	31	14	22	26	18
30	15	14	14	15	---	55	65	29	15	31	31	18
31	14	---	15	14	---	76	---	27	---	31	41	---
TOTAL	618	399	432.0	433	440	1140	4564	2290	544	483	793	757
MEAN	19.9	13.3	13.9	14.0	15.7	36.8	152	73.9	18.1	15.6	25.6	25.2
MAX	53	16	17	16	19	84	610	198	26	31	81	62
MIN	14	11	9.0	10	10	16	53	27	14	13	14	18
AC-FT	1230	791	857	859	873	2260	9050	4540	1080	958	1570	1500

WTR YR 1982 TOTAL 12393.0 MEAN 35.3 MAX 610 MIN 9.0 AC-FT 25570



## 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 (7.7 km) upstream from mouth, 5 mi (8 km) southwest of Jemez Springs, and 7 mi (11 km) north of Jemez.

DRAINAGE AREA.--235 mi<sup>2</sup> (609 km<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 6,015.5 ft (1,833.52 m) above mean sea level. Prior to 1951 at site 2.4 mi (3.9 km) downstream at lower datums.

REMARKS.--Records good except those for winter months, which are poor. Flow regulated to some extent since October 1958 by San Gregorio Reservoir on Clear Creek, 24 mi (39 km) upstream (capacity, 345 acre-ft or 0.425 hm<sup>3</sup>), and by transmountain diversion into Rio Puerco Basin for irrigation of about 300 acres (1.2 km<sup>2</sup>) in vicinity of Cuba. Several observations of other temperature were made during the year.

AVERAGE DISCHARGE.--24 years (water years 1939-42, 1950, 1959-76, 1982), 43.0 ft<sup>3</sup>/s (1.218 m<sup>3</sup>/s), 31,150 acre-ft/yr (38.4 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,190 ft<sup>3</sup>/s (90.3 m<sup>3</sup>/s) May 13 or 14, 1941, gage height, 8.4 ft (2.56 m) from floodmarks, site and datum in use June 1941 to September 1942, from rating curve extended above 1,000 ft<sup>3</sup>/s (28.3 m<sup>3</sup>/s); minimum, 2.8 ft<sup>3</sup>/s (0.079 m<sup>3</sup>/s) Dec. 9, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Apr. 13	0015	198 5.61	4.62 1.408	July 30	2245	112 3.17	4.19 1.277
May 23	0215	356 10.1	5.16 1.573	Aug. 30	1445	*790 22.4	6.30 1.920

Minimum daily discharge, 4.0 ft<sup>3</sup>/s (0.11 m<sup>3</sup>/s) Jan. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	7.8	7.1	9.0	12	47	167	98	16	21	21
2	12	12	8.9	6.6	7.0	14	58	170	94	16	15	17
3	30	13	8.9	4.0	8.0	14	52	185	85	15	13	14
4	35	12	8.0	5.3	9.0	13	60	200	78	14	13	13
5	21	12	9.4	10	8.0	13	72	180	75	14	13	12
6	15	12	8.9	6.6	5.0	12	77	150	71	14	12	12
7	14	12	8.9	5.5	8.0	12	67	160	66	13	21	12
8	12	13	8.9	5.0	11	13	64	155	65	14	36	11
9	11	13	8.9	7.0	9.0	13	62	160	63	14	21	11
10	11	13	8.7	8.0	10	15	63	170	58	13	15	11
11	11	13	10	9.0	10	19	75	190	55	13	15	16
12	11	12	8.7	10	9.0	25	128	206	50	13	13	25
13	11	11	9.2	10	8.0	33	157	181	46	13	14	38
14	11	11	8.2	7.0	8.0	37	161	168	41	13	21	27
15	11	11	7.3	8.0	9.0	36	143	173	36	11	15	23
16	11	11	8.4	9.0	10	36	163	158	33	11	13	19
17	10	9.9	6.6	10	10	36	152	150	30	11	12	13
18	10	10	6.8	11	11	31	164	158	29	11	13	21
19	9.7	9.1	7.8	11	11	29	163	188	27	13	13	19
20	9.6	8.7	8.0	11	11	28	153	195	25	21	13	22
21	9.2	8.5	7.8	8.0	12	29	127	199	28	18	20	23
22	9.7	8.6	7.8	9.0	13	29	115	204	24	14	34	20
23	9.8	9.0	5.8	6.0	13	31	106	226	22	13	31	17
24	10	9.1	5.0	8.0	13	34	102	177	22	12	24	14
25	9.6	8.8	5.5	9.0	12	38	96	169	20	13	32	13
26	9.5	8.3	6.0	9.0	11	42	97	163	19	18	42	12
27	9.3	7.1	6.8	10	10	46	99	172	18	14	35	11
28	9.8	9.6	5.1	10	11	46	112	150	17	13	27	11
29	11	11	7.5	9.0	---	39	151	144	16	14	24	11
30	11	11	6.6	9.0	---	36	163	120	16	22	51	11
31	11	---	6.4	8.0	---	40	---	107	---	23	27	---
TOTAL	387.2	320.7	238.6	256.1	276.0	851	3249	5295	1127	447	669	505
MEAN	12.5	10.7	7.70	8.26	9.86	27.5	108	171	44.2	14.4	21.6	16.8
MAX	35	13	10	11	13	46	164	226	98	23	51	38
MIN	9.2	7.1	5.0	4.0	5.0	12	47	107	16	11	12	11
AC-FT	768	636	473	508	547	1690	6440	10500	2630	837	1330	1000

WTR YR 1982 TOTAL 13821.6 MEAN 37.9 MAX 226 MIN 4.0 AC-FT 27420

## 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 (1.1 km) downstream from Rio Guadalupe, 3.5 mi (5.6 km) north of Jemez, and at mile 29.5 (47.5 km).

DRAINAGE AREA.--470 mi<sup>2</sup> (1,220 km<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 5,622.3 ft (1,713.68 m) National Geodetic Vertical Datum of 1929. June 22, 1936 to Mar. 11, 1937, at site 60 ft (20 m) upstream at datum 0.50 ft (0.152 m) higher. Mar. 12, 1937, to July 8, 1938, at present site at datum 0.7 ft (0.21 m) higher. July 9, 1938, to May 6, 1941, at site 60 ft (20 m) upstream at datum 0.70 ft (0.213 m) higher.

REMARKS.--Records good except those for winter months, which are poor. Diversions for irrigation of about 300 acres (1.2 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years (water years 1937-40, 1950, 1954-82), 69.6 ft<sup>3</sup>/s (1.971 m<sup>3</sup>/s), 50,430 acre-ft/yr (62.2 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft<sup>3</sup>/s (167 m<sup>3</sup>/s) Apr. 21, 1958, from rating curve extended above 2,200 ft<sup>3</sup>/s (62 m<sup>3</sup>/s) on basis of contracted-opening measurement; maximum gage height, 8.6 ft (2.62 m), May 6, 1941, present datum; minimum, 1.2 ft<sup>3</sup>/s (0.03 m<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 or 170 m<sup>3</sup>/s), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 685 ft<sup>3</sup>/s (19.4 m<sup>3</sup>/s) at 0700 hours Apr. 12, gage height, 5.85 ft (1.783 m); no peak above base of 1,000 ft<sup>3</sup>/s (28.3 m<sup>3</sup>/s); minimum discharge, 6.4 ft<sup>3</sup>/s (0.18 m<sup>3</sup>/s) Dec. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	19	19	23	25	31	105	328	137	27	35	55
2	43	20	21	20	18	34	142	373	131	25	24	40
3	103	23	26	18	24	34	144	348	118	23	41	33
4	99	23	25	16	25	30	178	327	105	23	27	29
5	58	22	27	20	22	26	241	320	94	19	22	25
6	44	23	25	18	14	24	290	338	88	19	21	24
7	40	22	25	16	21	28	220	265	82	20	28	22
8	36	25	25	15	26	33	193	239	78	24	44	23
9	33	27	23	22	24	34	186	231	73	22	28	21
10	31	27	24	24	25	32	186	228	68	21	23	22
11	30	26	28	25	27	39	256	226	67	26	24	34
12	30	25	25	27	24	49	530	217	62	29	22	52
13	29	25	26	26	22	64	489	206	61	26	23	66
14	29	24	22	22	24	70	374	205	58	24	25	55
15	31	22	20	26	26	77	326	192	53	22	21	44
16	31	22	25	26	27	69	298	171	52	19	16	41
17	30	22	19	26	29	66	264	164	51	19	17	45
18	28	21	14	27	28	75	262	165	49	16	18	53
19	25	19	21	27	27	66	254	188	48	15	16	52
20	22	16	25	27	27	61	229	211	44	30	18	91
21	22	19	26	23	28	49	198	228	43	27	23	100
22	22	23	25	26	29	46	180	235	39	21	167	69
23	24	21	16	20	31	51	171	260	37	18	72	49
24	26	21	12	24	30	54	164	227	33	16	47	41
25	26	20	18	23	30	62	151	216	31	16	60	36
26	26	21	22	23	29	81	140	213	29	28	129	34
27	25	19	25	24	27	76	136	223	28	22	80	32
28	25	27	21	24	28	76	152	209	27	21	52	32
29	25	32	20	26	---	91	183	199	27	24	51	31
30	25	31	22	23	---	79	223	170	26	56	71	31
31	24	---	22	21	---	76	---	153	---	56	68	---
TOTAL	1074	687	694	708	717	1683	6865	7275	1839	754	1313	1282
MEAN	34.6	22.9	22.4	22.8	25.6	54.3	229	235	61.3	24.3	42.4	42.7
MAX	103	32	28	27	31	91	530	373	137	56	167	100
MIN	22	16	12	15	14	24	105	153	26	15	16	21
AC-FT	2130	1360	1360	1400	1420	3340	13620	14430	3650	1500	2600	2540

CAL YR 1981 TOTAL 15505.8 MEAN 42.5 MAX 239 MIN 2.1 AC-FT 30760  
WTR YR 1982 TOTAL 24891.0 MEAN 68.2 MAX 530 MIN 12 AC-FT 49370

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	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)
OCT 08...	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	0	49	5.3	66	2.5	11	5.0	92	1.2	43	--
DEC 15...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 17...	--	--	--	--	--	--	--	--	--	--	--
APR 15...	0	24	2.3	9.8	.5	2.8	8.0	8.9	.3	20	133
MAY 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	--	--	--	--	--	--	--	--	--	--	--
SEP 02...	0	43	4.7	47	1.9	8.2	14	53	.7	37	--

[illegible]

RIO GRANDE BASIN  
08324000 JEMEZ RIVER NEAR JEMEZ, NM  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 04...	1150	--	--	690	--	--	--	--	--	--
APR 15...	1045	7	7	--	<1	<3	10	<10	10	2
SEP 02...	1700	--	--	470	--	--	--	--	--	--

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 04...	42	--	--	--	--	--	--	--	--	--
APR 15...	--	<1	<1	.1	<.1	<1	<1	30	<12	
SEP 02...	79	--	--	--	--	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (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 AS SR/ METHOD (09511)	URANIUM DIS- SOLVED (UG/L EXTRAC- TION (80020)
APR 15...	1045	<3.4	14	3.9	6.8	3.7	6.5	.24	.49

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 04...	1150	24	10.0	23	1.5	67
APR 15...	1045	331	9.0	175	156	81

## RIO GRANDE BASIN

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 (4.5 km) upstream from mouth, and 6 mi (10 km) north of Bernalillo.

DRAINAGE AREA.--1,034 mi<sup>2</sup> (2,678 km<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 Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam, completed October 19, 1953. Capacity, 176,200 acre-ft (217 hm<sup>3</sup>), from capacity table adapted June 1, 1975, between elevations 5,125.0 ft (1,562.10 m) sill of outlet gates and 5,252.3 ft (1,600.90 m) operating deck of spillway. Maximum controlled capacity, 106,100 acre-ft (130 hm<sup>3</sup>) at elevation 5,232.0 ft or 1,594.71 m (floor of spillway which is located about 0.8 mi or 1.3 km south of dam). Capacity by original survey was 189,100 acre-ft (233 hm<sup>3</sup>). Original plan for reservoir operation was to desilt all flow above 30 ft<sup>3</sup>/s (0.85 m<sup>3</sup>/s) by storage for one day before releasing to Rio Grande, and for possible detention during flood stage on Rio Grande.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 71,220 acre-ft (87.8 hm<sup>3</sup>) June 8, 1958, elevation, 5,213.36 ft (1,589.032 m); no storage most of time prior to March 1979.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,470 acre-ft (4.28 hm<sup>3</sup>) Sept. 19, 20, elevation, 5,164.42 ft (1,574.115 m); minimum contents, 1,450 acre-ft (1.79 hm<sup>3</sup>) June 2, elevation, 5,157.96 ft (1,572.146 m).

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

5,137	1	5,150	179	5,175	9,540
5,138	2	5,155	811	5,180	13,710
5,140	6	5,160	1,980	5,185	18,620
5,142	13	5,165	3,700	5,190	24,190
5,146	30	5,170	6,180	5,195	30,450

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2010	1990	2020	1840	1680	1760	1800	2610	1520	1850	2200	2230
2	2190	2010	2000	1840	1690	1770	1830	3060	1450	1850	2320	2010
3	2600	2030	1990	1830	1720	1770	1930	3200	1480	1840	2360	1930
4	3030	2020	1980	1820	1740	1760	2030	3090	1530	1830	2250	1930
5	3070	1980	1970	1800	1760	1760	2130	3120	1720	1820	2060	1930
6	3110	1950	1960	1810	1790	1750	2230	3160	1870	1800	1960	1930
7	2830	1940	1960	1810	1820	1750	2130	3040	1990	1800	1970	1930
8	2180	1930	1940	1800	1870	1740	1830	2830	2050	1790	1970	1930
9	1970	1920	1930	1760	1900	1740	1750	2620	2030	1780	2000	1930
10	2000	1920	1930	1720	1890	1740	1910	2340	2010	1760	2010	2060
11	2030	1920	1920	1740	1890	1730	2080	1960	1990	1750	2010	2290
12	2060	1920	1900	1810	1870	1780	2550	1840	1950	1730	2020	2530
13	2060	1920	1890	1870	1830	1890	2800	1840	1910	1720	2020	2590
14	2030	1920	1890	1880	1800	2000	2310	1800	1890	1710	2010	2330
15	2000	1920	1890	1910	1760	2000	1770	1730	1900	1700	2000	2140
16	1990	1920	1880	1930	1750	1900	1750	1660	1920	1700	1990	2500
17	2000	1930	1870	1960	1750	1810	1850	1560	1930	1690	1980	3150
18	2020	1930	1860	1970	1760	1770	1960	1540	1930	1680	1980	3300
19	2040	1930	1860	1920	1780	1770	2030	1650	1930	1680	1970	3470
20	2060	1930	1870	1850	1780	1770	2010	1780	1930	1670	1960	3470
21	2010	1930	1880	1780	1780	1770	1970	1930	1940	1660	1960	2980
22	1950	1930	1880	1720	1770	1750	1920	2110	1940	1650	2870	2320
23	1970	1930	1880	1700	1780	1720	1840	2300	1930	1650	3000	2040
24	1980	1940	1860	1680	1780	1690	1740	2320	1920	1640	2580	1990
25	1990	1950	1870	1710	1780	1680	1640	2170	1910	1640	2570	1940
26	2000	1950	1870	1740	1790	1700	1590	1980	1900	1630	2940	1900
27	2020	1960	1860	1730	1780	1760	1650	1880	1900	1620	3170	1900
28	2050	1980	1880	1720	1770	1830	1780	1860	1880	1620	2910	1930
29	2000	2010	1860	1720	---	1840	1910	1780	1870	1700	2670	1960
30	1960	2040	1850	1710	---	1830	2200	1700	1860	1870	2620	1990
31	1980	---	1840	1700	---	1820	---	1620	---	2030	2610	---
MAX	3110	2040	2020	1970	1900	2000	2800	3200	2050	2030	3170	3470
MIN	1950	1920	1840	1680	1680	1680	1590	1540	1450	1620	1960	1900
(+)	5159.97	5160.18	5190.50	5158.97	5159.23	5159.39	5160.73	5158.67	5159.57	5160.17	5162.03	5160.02
(++)	0	+60	-200	-140	+70	+50	+380	-580	+240	+170	+580	-620

CAL YR 1981 MAX 3110 MIN 1380 (++) +160  
WTR YR 1982 MAX 3470 MIN 1450 (++) +10

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

## 08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, NM

LOCATION.--Lat 35°23'24", long 106°32'03", in NE¼ sec.5, T.13 N., R.4 E., Sandoval County, Hydrologic Unit 13020202, on right bank 0.8 mi (1.3 km) downstream from Jemez Canyon Dam, 2.0 mi (3.2 km) upstream from mouth, and 6 mi (9.6 km) north of Bernalillo.

DRAINAGE AREA.--1,038 mi<sup>2</sup> (2,688 km<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 (1,553.139 m) National Geodetic Vertical Datum of 1929, from Corps of Engineers bench mark. Prior to Apr. 24, 1951, at site 0.8 mi (1.3 km) upstream at datum 24.51 ft (7.471 m) higher. Apr. 24, 1951, to June 25, 1958, at site 37 ft (11 m) upstream at datum 4.40 ft (1.341 m) above present datum. Supplementary water-stage recorder at gages on Jemez Canyon Dam at datum 5,125.00 ft (1,562.100 m) above mean sea level (Corps of Engineers bench mark) used at times since January 1953.

REMARKS.--Water-discharge records good. Subsequent to October 1953, flow at this station can be completely regulated by Jemez Canyon Reservoir (station 08328500). However, reservoir is designed essentially for desilting and flood control rather than storage. Diversions for irrigation of about 3,000 acres (12 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--40 years (water years 1937, 1944-82), 55.5 ft<sup>3</sup>/s (1.572 m<sup>3</sup>/s), 40,210 acre-ft/yr (49.6 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft<sup>3</sup>/s (462 m<sup>3</sup>/s) Aug. 29, 1943, gage height, 5.62 ft (1.713 m), site and datum then in use, from rating curve extended above 3,000 ft<sup>3</sup>/s (85.0 m<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 (453 m<sup>3</sup>/s), but highest observed outside period of record.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 662 ft<sup>3</sup>/s (18.7 m<sup>3</sup>/s) Apr. 14; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.45	15	24	20	22	73	84	152	.23	.23	190
2	.86	.40	20	24	13	22	73	84	106	.21	.23	93
3	.70	.30	20	24	1.9	22	72	308	56	.19	53	38
4	.28	12	20	24	1.9	22	72	443	21	.20	90	1.2
5	.14	18	20	18	1.4	22	124	433	.82	.22	89	1.3
6	.15	14	20	14	1.4	22	216	432	.79	.21	46	1.7
7	206	7.2	20	13	1.4	22	318	430	.70	.23	.30	1.8
8	394	7.2	20	13	6.4	22	351	423	17	.23	.21	1.4
9	129	7.2	20	13	27	22	191	414	38	.22	.15	1.4
10	.65	7.2	20	13	37	22	96	404	30	.18	.13	1.3
11	.53	7.2	21	7.3	35	22	96	397	23	.21	.04	.74
12	.45	7.2	21	1.5	35	22	168	293	23	.22	.00	.35
13	11	7.2	21	1.2	35	23	457	212	23	.20	.00	71
14	26	7.2	18	9.0	35	23	662	211	13	.18	.00	146
15	26	7.2	15	14	34	65	578	209	.31	.15	.00	104
16	18	7.2	15	14	26	107	258	207	.23	.15	.00	32
17	1.5	7.2	15	14	20	102	183	205	.28	.15	.00	103
18	1.5	7.2	14	22	16	68	184	157	.23	.15	.00	261
19	1.5	7.0	10	44	16	50	184	119	.23	.15	.00	178
20	1.5	6.5	9.7	55	20	50	187	119	.23	.15	.00	184
21	38	6.0	10	53	20	50	185	141	.23	.15	.00	352
22	41	6.0	10	33	20	50	183	166	.23	.15	.19	369
23	.62	6.0	10	21	20	50	182	167	.23	.15	162	158
24	.45	6.0	9.9	21	20	50	181	235	.21	.15	285	34
25	.45	6.1	10	10	19	50	180	276	.20	.17	178	34
26	.41	5.9	10	9.2	20	50	133	273	.18	.18	1.4	34
27	.30	6.4	11	20	22	50	77	230	.18	.23	56	16
28	.30	6.4	11	20	22	50	47	160	.18	.24	150	1.7
29	36	6.4	18	20	---	63	47	159	.15	.34	147	1.8
30	28	6.4	25	20	---	71	65	156	.19	39	142	2.0
31	.56	---	25	20	---	77	---	155	---	.41	183	---
TOTAL	966.55	206.65	504.6	609.2	546.4	1363	5823	7702	507.80	45.00	1583.88	2413.69
MEAN	31.2	6.89	16.3	19.7	19.5	44.0	194	248	16.9	1.45	51.1	80.5
MAX	394	18	25	55	37	107	662	443	152	39	285	369
MIN	.14	.30	9.7	1.2	1.4	22	47	84	.15	.15	.00	.35
AC-FT	1920	410	1000	1210	1080	2700	11550	15280	1010	69	3140	4790

CAL YR 1981 TOTAL 10054.38 MEAN 27.5 MAX 394 MIN .00 AC-FT 19940  
WTR YR 1982 TOTAL 22271.77 MEAN 61.0 MAX 662 MIN .00 AC-FT 44180

RIO GRANDE BASIN  
08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1966 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
OCT 07...	1300	.16	2300	--	8.2	--	19.5	19.0	--	--
NOV 02...	1400	.25	2200	2080	8.3	8.0	20.0	16.0	440	160
DEC 01...	1330	21	1750	1650	8.6	8.2	4.0	4.0	--	--
JAN 06...	1400	14	1490	1680	8.3	8.2	9.0	4.0	--	--
FEB 02...	1300	20	1400	1580	8.4	8.2	4.0	1.0	--	--
MAR 03...	1330	24	1500	1480	8.5	8.6	14.0	10.5	208	0
MAY 03...	1500	486	500	478	8.1	7.5	28.0	16.5	106	0
11...	1045	--	402	--	8.2	--	--	--	--	--
19...	1045	123	400	407	8.4	7.9	23.0	15.5	96	0
JUL 07...	1415	.25	1980	1880	7.4	7.7	27.0	25.0	--	--
SEP 07...	0930	1.3	760	796	7.9	7.7	17.0	15.0	214	118

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 07...	--	--	--	--	--	--	--	--	--	--
NOV 02...	140	22	280	6.1	13	450	230	1.0	24	1330
DEC 01...	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--
FEB 02...	--	--	--	--	--	--	--	--	--	--
MAR 03...	65	11	260	8.2	13	220	240	1.5	34	972
MAY 03...	35	4.4	53	2.3	5.3	45	45	.5	25	280
11...	--	--	--	--	--	--	--	--	--	--
19...	32	3.9	44	2.0	4.9	33	34	.5	23	241
JUL 07...	--	--	--	--	--	--	--	--	--	--
SEP 07...	75	6.6	75	2.3	7.1	200	56	.3	12	490

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 02...	1400	1100	10
MAR 03...	1330	1300	4
MAY 03...	1500	270	49
19...	1045	240	36
SEP 07...	0930	280	250



## 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 (30 m) west of southwest corner of University of New Mexico North Golf Course, 200 ft (61 m) downstream from Baretas Stormwater Pumping Station outfall, 600 ft (183 m) downstream from Tucker Road bridge, and 1,500 ft (457 m) northeast of intersection of Lomas and University Blvds. in Albuquerque.

PERIOD OF RECORD.--April to September 1982.

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 5,140 ft (1,567 m), from topographic map.

REMARKS.--Records fair. Recording rain gage at station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 686 ft<sup>3</sup>/s (19.4 m<sup>3</sup>/s) July 31, gage height, 3.20 ft (0.975 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	.00	.00	6.2	.00	.00
2							---	.00	.00	.00	.00	.00
3							---	.00	.00	.00	1.1	.00
4							---	.00	.00	.00	.00	.00
5							---	.00	.00	.00	.00	.00
6							---	.00	.00	.00	.00	.00
7							---	.00	.00	.00	.00	.00
8							---	.00	.00	.00	.00	.00
9							---	.00	.00	.00	.00	.00
10							---	.00	2.2	.00	3.6	.00
11							---	.00	1.1	.00	.00	1.5
12							---	.00	.00	.00	19	.00
13							---	.00	.00	.00	.00	.00
14							---	.00	.00	.00	.00	.00
15							---	.00	.00	.00	.00	.00
16							---	.00	.00	.00	.00	.00
17							---	.00	.00	.00	.00	.00
18							---	.00	.00	.00	.00	17
19							---	.00	.00	6.1	.96	.00
20							.00	.00	.00	.00	.00	4.6
21							.00	.00	.00	.00	.00	4.2
22							.00	18	.00	7.5	1.9	.00
23							.00	.00	.00	.00	.00	.00
24							.00	.00	.00	1.8	8.5	.00
25							.00	.00	.00	.00	1.9	.00
26							.00	.00	.00	.00	.00	.00
27							.00	.00	.00	.00	.00	.00
28							.00	.00	.00	.00	.00	.00
29							.00	.00	.00	.00	.00	.00
30							.00	.00	.00	.00	.00	.00
31							---	.00	---	57	.00	---
TOTAL							---	18.00	3.30	78.60	37.56	27.30
MEAN							---	.58	.11	2.54	1.21	.91
MAX							---	18	2.2	57	19	17
MIN							---	.00	.00	.00	.00	.00
AC-FT							---	36	6.5	156	75	54

## RIO GRANDE BASIN

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 (91 m) downstream (north) of bridge on Candelaria Blvd. NE and 3,000 ft (914 m) downstream from confluence of Campus Wash and Embudo Arroyo in Albuquerque.

PERIOD OF RECORD.--May to September 1982.

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 5,110 ft (1,558 m) from topographic map.

REMARKS.--Records fair.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period May to September, 6,230 ft<sup>3</sup>/s (176 m<sup>3</sup>/s) at 2015 hours July 31, gage height, 11.20 ft (3.414 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	.00	8.9	2C3	.00
2								---	.00	.00	41	.00
3								---	.00	.00	27	.00
4								---	.00	.00	.00	.00
5								---	.00	.00	.00	.00
6								---	.00	.00	12	.00
7								---	.00	.00	.00	5.2
8								---	.00	.00	.00	.00
9								---	.00	.00	.00	.00
10								---	.00	.00	12	.00
11								---	.00	.00	13	37
12								---	.00	.00	197	.00
13								---	.00	.00	.00	.00
14								---	.00	.00	.00	.00
15								---	.00	.00	.00	.00
16								---	.00	.00	.00	.00
17								---	.00	.00	.00	10
18								---	.00	.00	.00	105
19								.00	.00	13	6.1	9.6
20								.00	.00	.00	.00	46
21								.00	.00	.00	7.6	55
22								92	.00	.00	7.2	.00
23								.00	.00	.00	7.1	.00
24								.00	.00	8.9	38	.00
25								.00	.00	.00	12	.00
26								.00	.00	43	.00	.00
27								.00	.00	.00	.00	.00
28								.00	.00	.00	5.1	.00
29								.00	.00	.00	.00	.00
30								.00	.00	93	.00	.00
31								---	---	285	.00	---
TOTAL								---	.00	493.80	588.1C	267.80
MEAN								---	.000	15.9	19.C	8.93
MAX								---	.00	285	2C3	105
MIN								---	.00	.00	.00	.00
AC-FT								---	.00	979	117C	531

## 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 (0.8 km) upstream from Edith Blvd., 1.1 mi (1.8 km) upstream from mouth, and 1.2 mi (1.9 km) 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. Altitude of gage is 5,015 ft (1,529 m), from Corps of Engineers plan and profile map.

REMARKS.--Water-discharge records good except those below 25 ft<sup>3</sup>/s (0.71 m<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 (2.6 km) north of Alameda.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft<sup>3</sup>/s (312 m<sup>3</sup>/s) Aug. 14, 1980, gage height, 10.4 ft (3.170 m) from rating curve extended above 2,900 ft<sup>3</sup>/s (82 m<sup>3</sup>/s); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,400 ft<sup>3</sup>/s (210 m<sup>3</sup>/s) at 2045 hours July 31, gage height, 8.00 ft (2.438 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	.00				---	.00	.00	.00	19	307	.00
2	149	.00				36	.00	.00	.00	.00	56	.00
3	242	.00				5.0	.00	.00	.00	.00	29	.00
4	.00	.00				.00	.00	.00	.00	.00	11	.00
5	.00	.00				.00	.00	.00	.00	.00	.00	22
6	.00	.00				.00	.00	.00	.00	.00	7.5	12
7	.00	18				.00	.00	.00	.00	.00	.00	.00
8	.00	.00				.00	.00	.00	.00	.00	.00	14
9	.00	.00				.00	.00	.00	.00	.00	.00	.00
10	.00	.00				.00	.00	.00	.00	.00	15	10
11	.00	.00				6.7	.00	.00	.00	.00	26	.00
12	.00	.00				.00	.00	.00	.00	.00	261	.00
13	.00	.00				102	.00	.00	.00	.00	19	.00
14	.00	.00				18	.00	.00	.00	.00	.00	17
15	.00	.00				.00	.00	.00	.00	.00	.00	.00
16	.00	.00				.00	.00	.00	.00	.00	.00	.00
17	.00	.00				.00	.00	.00	.00	.00	.00	.00
18	.00	.00				.00	.00	.00	.00	.00	.00	168
19	.00	.00				.00	.00	.00	.00	.00	25	34
20	.00	.00				.00	.00	.00	.00	.00	.00	111
21	.00	.00				.00	.00	.00	.00	.00	16	105
22	.00	.00				.00	.00	.00	.00	.00	6.7	.00
23	.00	.00				.00	5.0	13	.00	.00	18	.00
24	.00	.00				2.0	5.4	6.5	.00	9.0	58	.00
25	.00	.00				.00	.00	3.2	.00	.00	29	.00
26	.00	.00				.00	.00	.00	.00	53	.00	.00
27	.00	.00				9.9	.00	.00	.00	12	.00	.00
28	.00	.00				.00	.00	.00	.00	.00	.00	.00
29	.00	47				.00	.00	.00	.00	.00	.00	.00
30	.00	6.3				.00	.00	.00	.00	109	.00	.00
31	.00	---				.00	---	.00	---	331	.00	---
TOTAL	424.00	71.30				---	10.40	144.70	.00	644.00	884.20	493.00
MEAN	13.7	2.38				---	.35	4.67	.000	20.8	28.5	16.4
MAX	242	47				---	5.4	98	.00	331	307	168
MIN	.00	.00				---	.00	.00	.00	.00	.00	.00
AC-FT	841	141				---	21	287	.00	1280	1750	978

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--March to October 1982.

INSTRUMENTATION.--A U.S. Geological Survey Urban Hydrology Monitoring System (UHMS) was installed in March 1982 in a shelter located about 2500 feet upstream from the surface-water gaging station. The UHMS requires A. C. electricity which is accessible from a nearby powerline at the upstream location. Inflow between the two locations is not appreciable and is runoff from a drainage area of about 6 square miles.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND (00060)	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	HARD- NESS (MG/L AS CACO3) (00900)
MAR												
24...	1000	--	1.0	880	925	8.2	8.1	13.0	13.0	--	--	366
MAY												
22...	1725	--	217	274	274	7.4	7.2	--	16.5	250	> 5.2	97
22...	1735	--	608	249	--	7.4	--	--	17.5	480	> 4.6	--
22...	1740	--	1430	282	282	7.5	7.1	--	17.5	--	> 5.7	89
22...	1755	--	1450	257	--	7.3	--	--	18.0	400	> 5.1	--
22...	1810	--	1370	211	--	7.9	--	--	18.0	--	> 7.6	--
22...	1840	--	1040	155	--	7.8	--	--	17.5	--	> 6.8	--
22...	1910	--	680	167	167	7.9	7.4	--	17.5	--	> 7.9	54
22...	1925	--	483	182	--	7.7	--	--	17.0	170	> 8.4	--
22...	2010	--	182	156	--	8.0	--	--	17.0	--	> 7.4	--
JUL												
22...	1725	--	1100	204	171	7.8	7.6	--	26.5	--	> 6.5	67
22...	1740	--	1720	239	204	7.8	7.5	--	22.5	--	> 6.9	88
22...	1750	--	1690	187	--	7.6	--	--	24.5	240	> 5.2	--
22...	1825	--	1250	163	--	7.6	--	--	25.0	160	> 4.7	--
22...	1840	--	1110	238	210	7.6	7.4	--	25.5	--	> 7.2	101
22...	1925	--	530	237	--	7.3	--	--	27.0	390	> 7.0	--
22...	1940	--	400	234	229	7.3	7.1	--	27.5	--	> 6.9	94
26...	2010	--	410	296	297	7.6	7.6	--	--	--	--	103
26...	2040	--	890	145	--	7.7	--	--	--	--	--	--
26...	2055	--	810	152	--	7.7	--	--	--	170	--	--
26...	2110	--	680	181	--	7.7	--	--	--	--	--	--
26...	2140	--	460	190	--	7.6	--	--	--	--	--	--
26...	2210	--	330	175	--	7.5	--	--	--	--	--	--
30...	0555	--	420	510	472	7.6	7.5	--	--	--	--	143
30...	0915	--	560	201	327	7.5	7.3	--	--	--	--	74
30...	0930	--	1560	144	212	7.3	7.5	--	--	--	--	54
30...	1030	--	640	125	146	7.4	7.4	--	--	--	--	47
30...	1120	--	400	117	135	7.8	7.1	--	--	--	--	44
31...	1310	--	1390	133	107	7.7	7.7	--	--	--	--	43
AUG												
01...	1745	--	1370	121	160	7.7	8.0	--	--	--	--	32
01...	1805	--	6410	122	117	8.1	7.7	--	--	--	--	43
01...	1900	--	2780	109	140	7.8	8.0	--	--	--	--	32
01...	2000	--	1060	138	149	7.8	8.1	--	--	--	--	37
12...	1835	--	920	201	180	8.4	7.9	--	--	--	--	63
12...	1845	--	2840	119	--	8.9	--	--	--	--	--	--
12...	1905	--	3970	95	--	8.9	--	--	--	--	--	--
12...	1950	--	1530	119	--	8.6	--	--	--	--	--	--
12...	2050	--	505	129	--	8.6	--	--	--	--	--	--
13...	1115	<2.0	2.0	460	--	9.3	--	--	30.0	--	--	--

[illegible]

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NO2+NO3 (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 DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	CYANIDE TOTAL (MG/L AS CN) (00720)	PHENOLS TOTAL (UG/L) (32730)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)
MAR												
24...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
22...	<.10	<.10	.800	3.4	--	2.90	.140	41	36	--	--	--
22...	<.10	<.10	.410	5.3	--	1.90	.130	38	34	.01	18	10
22...	<.10	<.10	.620	9.3	--	1.80	.180	40	36	--	--	--
22...	<.10	<.10	.390	2.0	--	1.80	.140	30	31	.01	15	8
22...	.20	.11	.460	4.3	5.0	2.20	.140	--	--	--	--	--
22...	.20	.17	.340	3.9	4.4	2.30	.120	--	--	--	--	--
22...	.40	.29	.330	2.6	3.3	2.40	.120	16	17	--	--	--
22...	.30	.28	.310	3.3	3.9	2.00	.110	14	20	.01	7	3
22...	.40	.33	.400	3.2	4.0	2.00	.120	--	--	--	--	--
JUL												
22...	.52	.51	.380	8.9	9.8	7.70	.120	18	64	--	--	--
22...	.40	.41	.630	2.7	3.7	1.10	.150	30	38	--	--	--
22...	.53	.54	.480	6.0	7.0	3.60	.150	20	28	<.02	13	2
22...	--	--	--	--	--	--	--	13	25	--	14	<1
22...	.34	.33	.400	3.1	3.8	2.70	.150	31	37	--	--	--
22...	--	--	--	--	--	--	--	40	36	<.01	14	<1
22...	.29	.29	.440	3.0	3.7	.880	.230	37	32	--	--	--
26...	.38	.37	.190	2.8	3.4	1.10	.060	27	19	--	--	--
26...	.48	.47	.210	2.3	3.0	1.00	.090	16	18	--	--	--
26...	--	--	--	--	--	--	--	20	15	<.01	9	3
26...	.64	.63	.250	4.3	5.1	2.30	.110	25	19	--	--	--
26...	.60	.59	.200	3.2	4.0	1.80	.110	28	11	--	--	--
26...	.63	.62	.220	4.2	5.0	1.00	.130	28	11	--	--	--
30...	.18	.16	.400	3.7	4.3	.730	.110	17	14	--	--	--
30...	.76	.76	.290	3.2	4.3	1.30	.140	19	13	--	--	--
30...	.48	.47	.290	2.9	3.7	.640	.110	15	11	--	--	--
30...	.42	.42	.220	2.1	2.7	2.50	.120	12	8.2	--	--	--
30...	.40	.41	.200	1.9	2.5	.350	.140	12	> 4.0	--	--	--
31...	.59	.59	.180	19	20	11.0	.120	8.1	32	--	--	--
AUG												
01...	.55	.55	.180	15	16	2.10	.080	7.3	25	--	--	--
01...	.65	.65	.130	4.6	5.4	.730	.080	9.4	15	--	--	--
01...	.39	.39	.230	2.6	3.2	.950	.120	5.8	8.9	--	--	--
01...	.42	.42	.240	3.3	3.9	.540	.120	6.2	15	--	--	--
12...	.30	.36	.200	11	11	.690	.050	13	27	--	--	--
12...	.90	.44	.180	3.2	4.3	.500	.060	9.2	21	--	--	--
12...	.40	.43	.170	2.8	3.4	.440	.060	7.3	24	--	--	--
12...	.40	.43	.130	5.4	5.9	2.00	.070	7.1	20	--	--	--
12...	.50	.51	.140	3.7	4.3	.480	.070	8.1	18	--	--	--
13...	<.10	<.10	.140	.96	--	.190	.070	--	--	--	--	--

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
AUG									
24...	1835	320	178	243	7.3	7.4	--	97	0
SEP									
11...	1540	470	170	220	7.4	7.7	--	82	0
18...	1540	740	90	127	7.4	7.8	--	55	1
18...	1555	1170	100	122	7.4	7.6	--	48	0
18...	1625	790	95	130	7.6	7.7	--	53	0
18...	1710	370	102	138	7.8	7.8	--	55	0
20...	0550	310	100	117	7.9	7.6	--	45	0
21...	0230	560	86	110	7.9	7.5	--	47	2
22...	1100	<5.0	710	--	9.0	--	25.5	--	--

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)
AUG									
24...	35	2.4	5.8	.3	2.9	14	4.8	.2	4.1
SEP									
11...	28	2.9	9.5	.5	2.8	20	7.8	.3	4.2
18...	20	1.3	3.0	.2	1.9	10	2.5	.2	11
18...	17	1.3	4.0	.3	2.0	10	3.7	.2	2.5
18...	19	1.3	3.3	.2	2.4	10	2.8	.2	4.0
18...	20	1.2	3.7	.2	2.5	10	3.4	.2	4.5
20...	16	1.2	3.9	.3	1.8	10	3.1	.2	5.1
21...	17	1.0	3.9	.3	1.5	10	3.1	.1	3.8
22...	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- 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)
AUG									
24...	134	.10	.13	.210	12	12	2.30	.060	83
SEP									
11...	126	<.10	<.10	.360	13	--	1.50	.090	63
18...	84	.30	.28	.160	.94	1.4	1.20	.090	48
18...	71	.30	.26	.300	5.3	5.9	1.10	.130	42
18...	77	.30	.26	.120	4.8	5.2	1.00	.130	40
18...	81	.40	.36	.140	4.6	5.1	1.30	.130	37
20...	71	.50	.47	.120	2.7	3.3	.620	.090	25
21...	69	.30	.33	.140	2.3	2.7	.570	.060	22
22...	--	<.10	<.10	.070	.93	--	.120	.080	--



RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
MAR										
24...	1000	--	--	130	--	--	--	<10	--	--
MAY										
22...	1725	18	7	110	1	<3	60	<10	260	5
22...	1735	10	--	--	--	--	--	--	--	--
22...	1740	12	4	80	<1	<3	60	<10	190	2
22...	1755	9	--	--	--	--	--	--	--	--
22...	1810	9	--	--	--	--	--	--	--	--
22...	1840	7	--	--	--	--	--	--	--	--
22...	1910	7	2	40	1	<3	40	<10	95	7
22...	1925	7	--	--	--	--	--	--	--	--
22...	2010	6	--	--	--	--	--	--	--	--
JUL										
22...	1725	9	3	50	<1	<1	130	<10	310	8
22...	1740	10	3	120	1	<1	130	<10	360	8
22...	1750	7	--	--	--	--	--	--	--	--
22...	1825	5	--	--	--	--	--	--	--	--
22...	1840	8	3	110	1	<1	50	<10	140	4
22...	1925	7	--	--	--	--	--	--	--	--
22...	1940	8	3	100	1	<1	50	<10	180	4
26...	2010	--	4	270	2	<1	40	<10	130	6
26...	2040	--	--	--	--	--	--	--	--	--
26...	2110	--	--	--	--	--	30	1	60	7
26...	2140	--	--	--	--	--	30	<1	60	7
26...	2210	--	--	--	--	--	32	1	50	9
30...	0555	--	--	100	--	--	33	--	100	--
30...	0915	--	--	80	--	--	19	--	90	--
30...	0930	--	--	50	--	--	--	--	--	--
30...	1030	--	--	40	--	--	--	--	--	--
30...	1120	--	--	40	--	--	--	--	--	--
31...	1310	--	--	30	--	--	13	--	400	--
AUG										
01...	1745	--	--	30	--	--	26	--	560	--
01...	1805	--	--	70	--	--	--	--	--	--
01...	1900	--	--	30	--	--	--	--	--	--
01...	2000	--	--	30	--	--	--	--	--	--
12...	1835	--	--	--	--	--	<1	2	480	6
12...	1845	--	--	--	--	--	--	--	--	--
12...	1905	--	--	--	--	--	--	--	--	--
12...	1950	--	--	--	--	--	--	--	--	--
12...	2050	--	--	--	--	--	--	--	--	--
24...	1835	--	--	60	--	--	4	<1	310	14
SEP										
11...	1540	--	--	90	--	--	4	<1	350	13

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL 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)
MAR										
24...	7	--	--	--	--	--	--	--	--	--
MAY										
22...	200	1300	14	--	.4	.1	1	<1	870	16
22...	--	1200	--	--	.4	--	--	--	--	--
22...	260	1200	4	--	.4	.2	1	<1	760	52
22...	--	1000	--	--	.4	--	--	--	--	--
22...	--	660	--	--	.2	--	--	--	--	--
22...	--	410	--	--	.2	--	--	--	--	--
22...	120	360	<1	--	.2	.1	1	<1	450	80
22...	--	80	--	--	.2	--	--	--	--	--
22...	--	270	--	--	.2	--	--	--	--	--
JUL										
22...	180	400	2	--	.4	.2	<1	<1	1100	7
22...	82	1300	4	--	.4	.2	<1	<1	1300	28
22...	--	700	--	--	.4	--	--	--	--	--
22...	--	470	--	--	.3	--	--	--	--	--
22...	74	920	10	--	.4	.2	<1	<1	700	100
22...	--	980	--	--	.2	--	--	--	--	--
22...	64	790	7	--	.3	.3	<1	<1	760	15
26...	35	620	6	--	--	.2	--	<1	550	7
26...	--	520	9	--	--	--	--	--	--	--
26...	--	420	9	--	--	--	--	--	--	--
26...	--	280	7	--	--	--	--	--	--	--
26...	--	180	9	--	--	--	--	--	--	--
30...	22	490	--	--	--	--	--	--	--	--
30...	23	470	--	--	--	--	--	--	--	--
30...	30	--	--	--	--	--	--	--	--	--
30...	38	--	--	--	--	--	--	--	--	--
30...	46	--	--	--	--	--	--	--	--	--
31...	13	650	--	--	--	--	--	--	--	--
AUG										
01...	5	1000	--	--	--	--	--	--	--	--
01...	10	--	--	--	--	--	--	--	--	--
01...	5	--	--	--	--	--	--	--	--	--
01...	11	--	--	--	--	--	--	--	--	--
12...	4	1300	1	84	--	--	--	--	--	--
12...	--	440	--	--	--	--	--	--	--	--
12...	--	350	--	--	--	--	--	--	--	--
12...	--	290	--	--	--	--	--	--	--	--
12...	--	240	--	--	--	--	--	--	--	--
24...	27	900	1	--	--	--	--	--	--	--
SEP										
11...	25	730	1	--	--	--	--	--	--	--

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
SEP									
18...	1540	30	31	<1	220	11	32	690	<1
18...	1555	30	23	<1	160	8	21	730	<1
18...	1625	40	27	<1	150	9	13	470	<1
18...	1710	40	9	<1	200	12	10	390	<1
20...	0550	30	19	<1	130	8	9	160	<1
21...	0230	30	19	<1	130	17	25	220	<1

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI-FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUL		
22...	90000	110000
22...	170000	440000
22...	550000	270000
22...	720000	420000
26...	160000	46000
26...	260000	84000
26...	460000	130000
26...	200000	130000
26...	270000	140000
30...	11000	33000
30...	49000	88000
30...	25000	85000
30...	8200	59000
31...	20000	140000
AUG		
01...	20000	59000
01...	2700	62000
01...	5500	10000
01...	3600	200000
24...	7700	28000
SEP		
11...	9200	46000
18...	31000	190000
18...	90000	1500000
18...	120000	1600000
21...	16000	30000

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
MAY												
22...	1725	217	16.5	5730	12	15	26	62	91	99	100	--
22...	1735	608	17.5	3910	--	--	--	--	--	--	--	41
22...	1740	1430	17.5	3150	7	12	18	48	84	98	100	--
22...	1755	1450	18.0	3130	--	--	--	--	--	--	--	58
22...	1810	1370	18.0	2990	--	--	--	--	--	--	--	70
22...	1840	1040	17.5	3190	--	--	--	--	--	--	--	67
22...	1910	680	17.5	2700	24	34	41	80	98	100	--	--
22...	1925	483	17.0	2600	--	--	--	--	--	--	--	76
22...	2010	182	17.0	1740	--	--	--	--	--	--	--	83
JUL												
22...	1725	1100	26.5	9430	--	--	--	--	--	--	--	84
22...	1740	1720	22.5	10200	--	--	--	--	--	--	--	60
22...	1825	1250	25.0	2300	--	--	--	--	--	--	--	70
22...	1840	1110	25.5	2040	--	--	--	--	--	--	--	70
22...	1925	530	27.0	2200	--	--	--	--	--	--	--	83
22...	1940	400	27.5	2420	--	--	--	--	--	--	--	86
26...	2010	410	--	1800	--	--	--	--	--	--	--	68
26...	2040	890	--	1160	--	--	--	--	--	--	--	60
26...	2110	680	--	886	--	--	--	--	--	--	--	75
26...	2140	460	--	819	--	--	--	--	--	--	--	81
26...	2210	330	--	670	--	--	--	--	--	--	--	84
30...	0555	420	--	1420	--	--	--	--	--	--	--	77
30...	0915	560	--	11500	--	--	--	--	--	--	--	12
30...	0930	1560	--	1350	--	--	--	--	--	--	--	39
30...	1030	640	--	367	--	--	--	--	--	--	--	71
30...	1040	500	22.0	423	--	--	--	--	--	--	--	72
30...	1120	400	--	284	--	--	--	--	--	--	--	76
31...	1310	1390	--	11500	--	--	--	--	--	--	--	73
AUG												
01...	1745	1370	--	13100	--	--	--	--	--	--	--	65
01...	1805	6410	--	3560	--	--	--	--	--	--	--	95
01...	1900	2780	--	2130	--	--	--	--	--	--	--	73
01...	2000	1060	--	2040	--	--	--	--	--	--	--	87
12...	1835	920	--	12500	--	--	--	--	--	--	--	53
12...	1840	2290	--	10800	--	--	--	--	--	--	--	--
12...	1845	2840	--	8340	--	--	--	--	--	--	--	67
12...	1850	3710	--	10300	--	--	--	--	--	--	--	--
12...	1905	3970	--	6430	--	--	--	--	--	--	--	76
12...	1920	3000	--	4740	--	--	--	--	--	--	--	--
12...	1935	2060	--	4930	--	--	--	--	--	--	--	--

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
AUG					
12...	1950	1530	--	4370	77
12...	2005	1170	--	4780	--
12...	2020	860	--	4880	--
12...	2035	630	--	4620	--
12...	2050	505	--	3190	90
12...	2105	390	--	3580	--
12...	2120	310	--	4120	--
13...	1115	2.0	30.0	67	82
24...	1835	320	--	7040	56
24...	1850	330	--	2030	59
SEP					
11...	1540	470	--	1930	60
11...	1555	420	--	1430	63
18...	1540	740	--	2120	56
18...	1555	1170	--	2050	64
18...	1610	1000	--	1940	--
18...	1625	790	--	1400	78
18...	1640	620	--	1840	--
18...	1655	470	--	1630	--
18...	1710	370	--	1170	87
20...	0550	310	--	1270	88
20...	0605	450	--	1430	85
20...	0620	420	--	2350	--
20...	0635	320	--	1910	--
21...	0215	505	--	1190	74
21...	0230	560	--	1040	63
21...	0245	520	--	875	--
21...	0300	380	--	854	--
21...	0315	320	--	487	69
22...	1100	<5.0	25.5	14	55

## RIO GRANDE BASIN

08330000 RIO GRANDE AT ALBUQUERQUE, NM

LOCATION.--Lat 35°05'21", long 106°40'48", Bernalillo County, Hydrologic Unit 13020203, in Atrisco Grant, at downstream side of Old Town Bridge on old U.S. Highway 66 at Albuquerque, and at mile 1,540.0 (2,477.9 km).

DRAINAGE AREA.--17,440 mi<sup>2</sup> (45,170 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 gages is 4,946.16 ft (1,507.590 m) National Geodetic Vertical Datum of prior to Sept. 18, 1947, at various sites at datum about 2.00 ft (0.610 m) higher; Sept. 18, 1947, to Apr. 12, 1959, at site 550 ft (170 m) to the left of present site; Apr. 13, 1959, to June 29, 1960, at site 150 ft (46 m) to right of present site. Supplemental water-stage recorders at sites 75 ft (23 m) and 150 ft (46 m) to right of present site used at various times since 1964.

REMARKS.--Water-discharge records good. Flow completely regulated since November 1973 by Cochiti Dam (station 08317300) 50 mi (80 km) 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 above station for irrigation of about 718,000 acres (2,900 km<sup>2</sup>), several hundred of which are below station. National Weather Service gage height telemeter at station.

COOPERATION.--Records for Albuquerque Riverside drain and Arenal, Armijo, and Atrisco canals furnished by Middle Rio Grande Conservancy District.

AVERAGE DISCHARGE.--32 years (water years 1942-73), 1,068 ft<sup>3</sup>/s (30.25 m<sup>3</sup>/s), 773,800 acre-ft/yr (0.95 km<sup>3</sup>/yr) prior to closure of Cochiti Dam.  
9 years (water years 1974-82), 1,155 ft<sup>3</sup>/s (32.71 m<sup>3</sup>/s), 836,800 acre-ft/yr (1.03 km<sup>3</sup>/yr) since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft<sup>3</sup>/s (708 m<sup>3</sup>/s) Apr. 24, 1942, from rating curve extended above 13,900 ft<sup>3</sup>/s (394 m<sup>3</sup>/s); maximum gage height, 7.82 ft (2.384 m) Aug. 10, 1967; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,460 ft<sup>3</sup>/s (155 m<sup>3</sup>/s) at 0930 hours June 2, gage height, 6.43 ft (1.960 m); minimum daily, 19 ft<sup>3</sup>/s (0.54 m<sup>3</sup>/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	663	650	530	686	781	1650	3360	2840	2200	1800	2700
2	44	596	607	558	642	808	1360	3660	4620	2350	1900	2600
3	324	566	630	634	696	886	981	3430	4140	2490	1700	2500
4	380	620	597	697	706	928	883	4410	2610	1650	1500	1600
5	230	644	501	631	680	915	1030	4080	4500	1510	450	350
6	162	645	484	513	631	886	1110	4050	4520	1050	400	240
7	123	656	552	540	596	884	1550	4230	4530	1040	500	250
8	239	741	713	603	580	872	2000	4410	4520	1090	430	300
9	238	799	736	648	604	780	2470	4290	4630	1210	410	700
10	121	820	691	548	823	751	1560	4260	4610	1300	350	800
11	87	819	738	521	1000	667	1310	3750	3660	1280	330	900
12	97	908	791	674	965	633	1120	3820	3620	1000	270	1000
13	81	816	779	656	824	689	1140	3780	3560	783	400	1100
14	76	800	772	648	793	840	2510	4080	3570	809	600	1200
15	80	881	799	715	815	944	3570	4140	3840	1110	550	1340
16	84	819	789	702	841	1090	3050	4170	3430	1050	400	1500
17	132	790	767	644	834	1150	3010	3850	3400	849	350	2420
18	233	814	861	648	817	1280	3620	3150	3690	721	300	2060
19	406	872	980	665	905	1030	3090	2840	3470	649	350	2390
20	377	811	786	683	949	824	3660	2770	3620	496	400	2070
21	329	728	640	703	798	710	1580	3150	3500	361	500	2220
22	363	760	839	698	719	579	2880	3330	3590	350	600	2550
23	360	764	923	672	824	553	3750	3430	3820	300	480	2390
24	363	733	867	669	814	478	3600	4240	3510	240	450	2140
25	412	692	789	677	750	426	2080	4020	3050	190	700	2200
26	392	665	735	611	737	379	1590	3760	2700	160	1500	1340
27	293	653	667	629	784	290	1580	3750	2690	140	2300	820
28	303	897	553	692	954	434	1430	3720	2250	120	2800	865
29	320	871	493	791	---	832	1280	3780	2230	100	2900	1100
30	436	778	549	754	---	1160	2140	3800	4040	400	2700	1190
31	484	---	534	747	---	1440	---	3890	---	1500	2700	---
TOTAL	7588	22621	21812	20103	21667	24919	62584	117400	108760	28498	31020	44835
MEAN	245	754	704	648	774	804	2086	3787	3625	919	1001	1495
MAX	484	908	980	791	1000	1440	3750	4410	4630	2490	2900	2700
MIN	19	566	484	513	580	290	383	2770	2230	100	270	240
AC-FT	15050	44870	43260	39870	42980	49430	124100	232900	215700	56530	61530	88930
(+)	17720	1370	1170	1110	1010	5170	8120	9940	10960	11220	12410	10040

CAL YR 1981 TOTAL 174673.6 MEAN 479 MAX 2170 MIN 3.6 AC-FT 346500  
WTR YR 1982 TOTAL 511807.0 MEAN 1402 MAX 4630 MIN 19 AC-FT 1015000

(+) COMBINED FLOW, IN ACRE-FT, OF ALBUQUERQUE RIVERSIDE DRAIN AND ARENAL, ARMIJO AND ATRISCO CANALS. THIS FLOW, WHICH BY-PASSES RIVER GAGE, CAN BE ADDED TO RIVER RECORDS TO GET ENTIRE FLOW IN VALLEY CROSS-SECTION.

RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to current year.

WATER TEMPERATURES: October 1969 to current year.

SUSPENDED SEDIMENT DISCHARGE: May 1969 to September 1969 (partial-record station), October 1969 to current year.

REMARKS.--Additional sediment total discharge determination were made bi-weekly when needed.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,840 micromhos Oct. 12, 1974; minimum daily 115 microhomas Aug. 14, 1980.

WATER TEMPERATURES: Maximum, 34.0°C July 12, 1970; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 45,500 mg/L July 21, 1971; minimum daily, no flow on many days in 1971, 1972, and 1977

SEDIMENT LOADS: Maximum daily, 275,000 tons (249,000 tonnes) July 27, 1971; minimum daily; 0 tons (0 tonnes) on many days in 1971, 1972, and 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1410 micromhos Oct. 9; minimum daily, 219 micromhos June 16, 18.

WATER TEMPERATURES: Maximum, 27.0°C Aug. 19; minimum, 0.0°C Jan 4.

SEDIMENT CONCENTRATIONS: Maximum daily, 9,260 mg/L Aug. 22; minimum daily, 45 mg/L July 20-21.

SEDIMENT LOADS: Maximum daily, 35,500 tons (32,200 tonnes) Aug. 31; minimum daily, 11 tons (10 tonnes) Oct. 1.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
NOV 16...	1100	753	460	440	8.2	8.6	20.0	9.0	51	144	34
DEC 01...	1020	628	400	411	8.3	8.1	--	1.0	--	--	--
JAN 04...	1130	670	430	446	8.1	8.1	4.0	.0	--	--	--
FEB 16...	1100	680	520	456	8.1	8.1	11.0	6.5	--	--	--
MAR 02...	0915	759	425	420	8.2	7.6	13.0	9.5	--	149	19
MAY 03...	1115	3350	290	306	8.3	7.9	22.0	15.0	36	120	30
JUL 07...	1000	1100	250	--	8.4	--	27.0	21.0	--	--	--
AUG 30...	1015	2750	550	539	8.1	8.4	23.5	22.5	--	184	92

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 16...	45	7.7	32	1.2	4.1	81	15	.3	21	273
DEC 01...	--	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--	--
FEB 16...	--	--	--	--	--	--	--	--	--	--
MAR 02...	46	8.3	32	1.2	3.3	65	20	.6	23	276
MAY 03...	37	6.7	16	.7	2.9	68	5.6	.4	17	208
JUL 07...	--	--	--	--	--	--	--	--	--	--
AUG 30...	61	7.8	39	1.3	4.0	140	18	.4	20	346

RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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 16...	.020	.12	.14	.180	.200	1.3	1.6	.050	.030	6.7
DEC 01...	--	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--	--
FEB 16...	--	--	--	--	--	--	--	--	--	--
MAR 02...	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	<.10	<.10	.260	--	.84	--	.280	.010	6.6
JUL 07...	--	--	--	--	--	--	--	--	--	--
AUG 30...	--	--	--	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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...	1100	--	--	60	--	--	--	--	--	--
MAR 02...	0915	--	--	90	--	--	--	--	--	--
MAY 03...	1115	4	2	40	<1	<3	10	<10	15	2
AUG 30...	1015	--	--	210	--	--	--	--	--	--

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 (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...		<10	--	--	--	--	--	--	--	--
MAR 02...		14	--	--	--	--	--	--	--	--
MAY 03...		<9	10	1	.1	.1	1	<1	40	<12
AUG 30...		5	--	--	--	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 03...	1115	<5.0	20	3.0	16	2.9	15	.08	1.9



RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

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PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)
MAY 03...	1115	--	--	--	--	--	--	--	--	--
AUG 30...	1015	<.10	<.01	<.10	<.01	<.01	<.01	<.01	<.01	<.01

DATE	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)
MAY 03...	--	--	--	--	--	--	--	--	--
AUG 30...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

DATE	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION TOTAL (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
MAY 03...	--	--	--	<.01	<.01	<.01	--	--	--
AUG 30...	<.01	<.1	<.01	--	--	--	<.10	<.10	<.01

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT 05...	0800	230	13.0	2690	1670	53	64	76	88
19...	1419	354	17.0	897	857	48	63	88	--
20...	1100	377	14.0	799	813	46	64	92	--
NOV 16...	1100	753	9.0	561	1140	13	20	50	77
DEC 14...	0930	770	3.5	447	929	--	--	--	--
JAN 18...	0930	648	3.0	201	352	--	--	--	--
MAR 02...	0915	759	9.5	250	512	--	--	--	--
03...	1200	886	5.0	219	524	--	--	--	--
15...	0930	1070	7.5	1420	4100	4	8	15	35
APR 15...	1200	3570	10.0	2020	19500	13	19	27	71
26...	1030	1740	12.0	1660	7800	3	4	5	13
MAY 03...	1115	3350	15.0	1130	10200	9	13	17	48
24...	1330	4280	17.5	898	10400	6	8	11	35
JUN 07...	1000	4570	13.5	678	8370	5	7	9	27
21...	0930	3480	18.0	492	4620	4	6	8	22
JUL 07...	1000	1100	21.0	167	496	--	--	--	--
26...	1005	159	24.0	69	30	--	--	--	--
AUG 15...	1200	550	24.0	1830	2720	62	79	97	100
22...	1300	600	26.0	9260	15000	69	80	98	100
SEP 10...	1900	800	24.0	3120	6740	56	70	95	100
19...	0700	2390	15.0	3020	19500	--	--	--	--

RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT									
05...	88	89	99	100	--	--	--	--	--
19...	--	--	--	--	96	98	100	--	--
20...	--	--	--	--	93	96	98	100	--
NOV									
16...	81	93	100	--	--	--	--	--	--
DEC									
14...	--	--	--	--	28	--	--	--	--
JAN									
18...	--	--	--	--	49	--	--	--	--
MAR									
02...	--	--	--	--	66	--	--	--	--
03...	--	--	--	--	97	--	--	--	--
15...	38	53	89	100	--	--	--	--	--
APR									
15...	78	87	99	100	--	--	--	--	--
26...	15	33	87	100	--	--	--	--	--
MAY									
03...	61	81	97	100	--	--	--	--	--
24...	48	81	99	100	--	--	--	--	--
JUN									
07...	43	79	98	100	--	--	--	--	--
21...	39	81	100	--	--	--	--	--	--
JUL									
07...	--	--	--	--	38	41	88	98	100
26...	--	--	--	--	76	85	94	100	--
AUG									
15...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
SEP									
10...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	100	--	--	--	--

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	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)
OCT							
19...	1419	354	897	857	1	2	24
NOV							
16...	1100	753	561	1140	2	2	21
DEC							
14...	0930	770	447	929	0	0	19
JAN							
18...	0930	648	201	352	0	0	28
MAR							
02...	0915	759	250	512	0	1	28
15...	0930	1070	1420	4100	0	2	55
APR							
26...	1030	1740	1660	7800	0	0	33
MAY							
03...	1115	3350	1130	10200	2	5	46
24...	1330	4280	898	10400	0	0	15
JUN							
07...	1000	4570	678	8370	0	0	27
21...	0930	3480	492	4620	0	0	10
JUL							
07...	1000	1100	167	496	1	1	21
26...	1005	159	69	30	0	0	18

RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

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PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
OCT							
19...	81	90	93	96	98	100	--
NOV							
16...	73	86	91	94	96	100	--
DEC							
14...	84	97	99	100	--	--	--
JAN							
18...	80	94	98	99	100	--	--
MAR							
02...	79	92	98	99	100	--	--
15...	93	99	100	--	--	--	--
APR							
26...	86	97	99	99	100	--	--
MAY							
03...	97	99	100	--	--	--	--
24...	68	89	97	99	100	--	--
JUN							
07...	79	86	91	94	96	99	100
21...	63	86	94	96	96	96	100
JUL							
07...	77	87	93	97	99	100	--
26...	67	82	93	97	100	--	--

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (FPS) (00055)
OCT									
19...	1419	354	17.0	897	857	947	227	.96	1.60
NOV									
16...	1100	753	9.0	561	1140	1510	257	1.4	2.10
MAR									
15...	0930	1070	7.5	1420	4100	5710	308	1.5	2.30
APR									
26...	1030	1740	12.0	1660	7800	10600	280	2.4	2.60
MAY									
03...	1115	3350	15.0	1130	10200	13300	300	3.5	3.20
24...	1330	4280	17.5	898	10400	16100	350	3.6	3.40
JUN									
07...	1000	4570	13.5	678	8370	11700	340	3.6	3.70
21...	0930	3480	18.0	492	4620	7800	335	3.3	3.10
JUL									
07...	1000	1100	21.0	167	496	987	185	2.5	2.30
26...	1005	159	24.0	69	30	38	64.0	1.6	1.50

RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

ONCE-DAILY												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	531	513	462	442	483	457	---	360	240	248	---	558
2	545	505	490	444	488	461	---	356	240	257	---	664
3	253	524	501	447	492	439	---	357	231	255	340	673
4	556	503	490	432	461	449	---	345	282	256	404	516
5	564	516	466	434	459	436	---	345	233	259	407	488
6	493	544	500	450	465	428	---	332	224	262	449	493
7	496	547	507	447	468	437	---	358	221	275	361	490
8	508	503	486	423	454	438	---	328	222	276	350	486
9	1410	502	469	428	460	448	476	310	225	278	---	491
10	1010	497	485	427	502	451	448	309	224	275	345	450
11	652	493	486	464	487	452	460	300	234	277	346	449
12	582	490	477	398	482	427	457	294	227	282	345	430
13	571	485	478	402	509	456	480	283	224	304	308	426
14	568	490	483	399	509	455	480	282	222	303	363	548
15	570	482	477	420	501	520	475	273	222	293	395	599
16	568	475	469	418	500	515	459	274	219	288	373	436
17	558	447	477	428	479	510	460	283	220	298	352	450
18	561	460	469	428	472	494	449	284	219	296	344	435
19	494	465	452	449	455	456	450	---	221	310	349	429
20	496	474	481	495	457	460	439	---	221	309	339	475
21	513	475	484	490	465	452	442	273	221	---	343	489
22	503	470	475	464	476	470	440	270	222	---	431	535
23	647	477	458	485	468	462	---	263	225	---	424	509
24	528	470	457	498	462	460	---	262	226	---	399	426
25	517	473	462	471	462	477	---	270	229	---	633	418
26	508	469	467	472	457	493	462	270	234	342	633	399
27	541	464	471	493	457	491	412	265	236	---	416	398
28	530	443	480	493	455	---	403	256	236	---	492	368
29	519	442	415	487	---	463	397	250	277	---	539	366
30	500	448	418	484	---	459	384	253	245	---	550	353
31	562	---	438	483	---	450	---	246	---	---	565	---
MEAN	576	485	472	451	474	462	446	295	231	283	414	475
WTR YR 1982	MEAN	426	MAX	1410	MIN	219						

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

ONCE-DAILY												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	14.0	10.0	6.0	4.0	5.0	---	10.0	13.0	17.0	---	19.0
2	13.0	11.0	11.0	6.0	4.0	5.0	---	8.0	14.0	17.0	---	25.0
3	13.0	12.0	11.0	5.0	4.0	5.0	---	9.0	14.0	16.0	24.0	22.0
4	17.0	12.0	12.0	5.0	4.0	6.0	---	10.0	14.0	17.0	23.0	23.0
5	13.0	12.0	10.0	5.0	2.0	4.0	---	10.0	14.0	16.0	23.0	21.0
6	13.0	12.0	11.0	5.0	2.0	4.0	---	9.0	15.0	17.0	24.0	22.0
7	13.0	12.0	10.0	5.0	4.0	5.0	---	9.0	14.0	18.0	23.0	19.0
8	13.0	13.0	10.0	4.0	2.0	5.0	---	9.0	13.0	18.0	24.0	25.0
9	13.0	12.0	10.0	4.0	4.0	6.0	9.0	10.0	14.0	17.0	---	18.0
10	14.0	11.0	10.0	6.0	4.0	8.0	10.0	9.0	14.0	20.0	25.0	24.0
11	12.0	12.0	10.0	4.0	5.0	7.0	9.0	10.0	14.0	20.0	21.0	19.0
12	14.0	11.0	9.0	4.0	5.0	7.0	10.0	9.0	14.0	19.0	20.0	17.0
13	15.0	12.0	10.0	4.0	5.0	8.0	10.0	8.0	15.0	20.0	24.0	16.0
14	13.0	12.0	9.0	5.0	4.0	6.0	9.0	10.0	13.0	21.0	25.0	21.0
15	14.0	11.0	9.0	5.0	5.0	7.0	10.0	10.0	15.0	21.0	24.0	16.0
16	13.0	11.0	9.0	5.0	5.0	6.0	11.0	10.0	15.0	21.0	20.0	20.0
17	13.0	12.0	9.0	4.0	5.0	7.0	10.0	9.0	13.0	22.0	24.0	16.0
18	14.0	12.0	9.0	4.0	4.0	7.0	11.0	10.0	14.0	22.0	23.0	17.0
19	13.0	13.0	8.0	5.0	5.0	6.0	12.0	---	15.0	21.0	27.0	15.0
20	14.0	12.0	8.0	5.0	6.0	6.0	10.0	---	14.0	23.0	24.0	20.0
21	13.0	15.0	7.0	4.0	5.0	5.0	7.0	9.0	13.0	---	26.0	16.0
22	13.0	11.0	7.0	4.0	6.0	7.0	6.0	10.0	15.0	---	26.0	19.0
23	12.0	11.0	6.0	5.0	6.0	6.0	---	10.0	15.0	---	20.0	19.0
24	12.0	14.0	7.0	6.0	5.0	7.0	---	9.0	15.0	---	23.0	15.0
25	12.0	13.0	6.0	5.0	3.0	7.0	---	11.0	16.0	---	26.0	18.0
26	12.0	13.0	7.0	4.0	4.0	8.0	10.0	12.0	15.0	24.0	19.0	19.0
27	12.0	12.0	6.0	5.0	3.0	7.0	9.0	12.0	16.0	---	25.0	17.0
28	13.0	13.0	7.0	5.0	3.0	---	10.0	13.0	17.0	---	23.0	16.0
29	12.0	11.0	7.0	5.0	---	7.0	10.0	14.0	16.0	---	22.0	15.0
30	13.0	11.0	7.0	6.0	---	7.0	10.0	12.0	16.0	---	24.0	15.0
31	13.0	---	6.0	5.0	---	8.0	---	13.0	---	---	25.0	---
MEAN	13.0	12.0	8.5	5.0	4.0	6.5	9.5	10.0	14.5	19.5	23.5	19.0
WTR YR 1982	MEAN	12.0	MAX	27.0	MIN	2.0						

DAY	MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION	
	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	206	11	1840	3290	203	356	105	150	166	307	156	329
2	409	69	1090	1750	170	279	304	458	272	471	233	508
3	3450	2660	725	1110	198	337	270	462	240	451	250	598
4	2700	2770	900	1510	183	295	205	386	130	248	290	727
5	2500	1550	925	1610	135	183	125	213	145	266	391	966
6	1310	573	898	1560	125	163	65	90	100	170	234	560
7	1250	415	790	1400	205	306	128	187	139	224	183	437
8	6710	4330	1190	2380	260	501	141	230	95	149	154	363
9	1980	1270	1150	2480	247	491	105	184	119	194	151	318
10	369	121	1000	2210	175	326	103	152	245	544	144	292
11	219	51	760	1680	195	389	185	260	200	540	123	222
12	164	43	1070	2620	194	414	215	391	199	518	202	345
13	159	35	1120	2470	195	410	135	240	144	320	250	465
14	159	33	853	1840	305	636	127	222	160	343	200	454
15	169	37	830	1970	163	352	177	342	119	262	730	1860
16	235	53	618	1370	160	341	122	231	117	266	401	1180
17	270	96	675	1440	185	383	136	236	141	318	320	994
18	323	203	849	1870	229	532	166	290	115	254	451	1560
19	1260	1380	635	1500	296	783	137	246	244	596	309	859
20	740	753	500	1090	91	193	135	249	237	607	230	512
21	419	372	400	786	80	138	149	283	124	267	282	541
22	572	561	400	821	309	700	230	433	110	214	372	582
23	561	545	345	712	222	553	195	354	190	423	190	284
24	372	365	275	544	181	424	230	415	113	248	124	160
25	419	466	251	469	150	320	108	197	108	219	130	150
26	397	420	251	451	112	222	102	168	125	249	86	88
27	194	153	245	432	115	207	180	306	235	497	92	72
28	241	197	848	2050	97	145	175	327	218	503	505	592
29	338	292	490	1150	120	160	189	404	---	---	745	1670
30	1350	1590	301	632	146	216	175	356	---	---	625	1960
31	1600	2090	---	---	86	124	139	280	---	---	800	3110
TOTAL	---	23504	---	45197	---	10879	---	8742	---	9668	---	22758

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)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	910	4050	647	5870	273	2110	251	1540	350	1700	3230	23500
2	749	2750	797	7880	676	9050	357	2680	400	2050	243	1710
3	425	1130	1070	9910	576	6230	251	1690	353	1620	391	2640
4	302	720	1120	13300	619	4320	230	1020	511	2070	1500	6480
5	450	1250	1180	13000	354	4300	243	991	238	289	184	174
6	475	1420	1080	11800	444	5420	194	550	121	131	100	65
7	852	3570	1000	11400	500	6120	136	382	369	498	119	80
8	1180	6370	978	11600	278	3390	110	324	367	426	142	115
9	1540	10300	745	8630	307	3840	123	402	300	332	635	1200
10	697	2940	925	10600	300	3730	151	530	75	71	3120	6740
11	250	884	1150	11600	281	2780	153	529	77	69	3500	8500
12	250	756	600	6190	165	1610	94	254	1030	751	887	2390
13	250	769	500	5100	160	1540	85	180	704	760	829	2460
14	1040	7050	675	7440	330	3180	69	151	202	327	2330	7550
15	1850	17800	740	8270	317	3290	85	255	1830	2720	1470	5320
16	1100	9060	650	7320	330	3060	68	193	291	314	1300	5260
17	500	4060	240	2490	230	2110	53	121	215	203	2820	20700
18	799	7810	183	1560	365	3640	52	101	186	151	3490	19200
19	555	4630	185	1420	358	3350	49	86	160	151	2210	15700
20	830	8200	160	1200	285	2790	45	60	1470	1590	995	5560
21	901	3840	197	1680	399	3770	45	44	540	729	850	5090
22	1060	8490	410	3690	412	3990	50	47	9260	15000	825	5680
23	1050	10600	840	7780	255	2630	50	40	3420	4430	775	5000
24	675	6560	848	9710	301	2850	55	36	1850	2250	403	2330
25	510	2860	490	5320	225	1850	60	31	3290	6220	405	2410
26	780	3350	790	8020	190	1390	69	30	1280	5180	450	1630
27	285	1220	675	6830	151	1100	65	25	707	4390	435	963
28	225	869	550	5520	159	820	60	19	885	6690	385	899
29	190	657	338	3450	374	2520	55	15	477	3730	315	936
30	465	2690	242	2480	400	4360	100	108	302	2200	234	752
31	---	---	323	3390	---	---	200	810	4870	35500	---	---
TOTAL	---	136655	---	214450	---	101140	---	13244	---	102542	---	161034
TOTAL LOAD FOR YEAR:												
			849813		TONS.							

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 (267 m) downstream from highway bridge on Broadway Boulevard SE, 1,760 ft (536 m) upstream from South Diversion Channel, 0.5 mi (0.8 km) downstream from highway bridge on Interstate Highway 25, and 3 mi (5 km) south of Albuquerque.

DRAINAGE AREA.--133 mi<sup>2</sup> (344 km<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. Altitude of gage is 4,961 ft (1,512 m), from Corps of Engineers plan and profile map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,530 ft<sup>3</sup>/s (71.6 m<sup>3</sup>/s) June 24, 1967, (gage height not determined); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 740 ft<sup>3</sup>/s (21.0 m<sup>3</sup>/s) Aug. 1, gage height, 2.70 ft (0.823 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00					---	.00	.00	.00	60	.00
2	.00	.00					---	.00	.00	.00	4.9	.00
3	.00	.00					---	.00	.00	.00	.00	.00
4	.00	.00					---	.00	.00	.00	.00	.00
5	.00	.00					---	.00	.00	.00	.00	.00
6	.00	.00					---	.00	.00	.00	17	.00
7	.00	.00					---	.00	.00	.00	8.7	.00
8	.00	14					---	.00	.00	.00	5.4	.00
9	.00	3.2					---	.00	.00	.00	.00	.00
10	.00	.00					---	.00	.00	.00	2.1	.00
11	.00	.00					---	.00	.00	.00	.00	.00
12	.00	.00					---	.00	.00	.00	37	.00
13	.00	.00					---	.00	.00	.00	3.5	.00
14	.00	.00					---	.00	.00	.00	4.6	.00
15	.00	.00					---	.00	.00	.00	.00	.00
16	.00	.00					---	.00	.00	.00	.00	.00
17	.00	.00					---	.00	.00	.00	.00	.00
18	.00	.00					---	.00	.00	.00	.00	.00
19	.00	.00					.00	.00	.00	.00	.00	14
20	.00	.00					.00	.00	.00	.00	.00	18
21	.00	.00					.00	.00	.00	.00	.00	15
22	.00	.00					.00	1.2	.00	.00	.00	.00
23	.00	.00					.00	.00	.00	.00	.00	.00
24	.00	.00					.00	.00	.00	.00	.00	.00
25	.00	.00					.00	.00	.00	.00	22	.00
26	.00	.00					.00	.00	.00	.00	3.6	.00
27	.00	.00					.00	.00	.00	.00	.00	.00
28	.00	.00					.00	.00	.00	.00	.00	.00
29	.00	.00					.00	.00	.00	.00	.00	.00
30	.00	.00					.00	.00	.00	.00	.00	.00
31	.00	---					---	.00	---	14	.00	.00
										28	.00	---
TOTAL	.00	17.20					---	1.20	.00	42.00	168.80	58.00
MEAN	.000	.57					---	.039	.000	1.35	5.45	1.93
MAX	.00	14					---	1.2	.00	28	60	18
MIN	.00	.00					---	.00	.00	.00	.00	.00
AC-FT	.00	34					---	2.4	.00	83	335	115

## 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 (79 m) upstream from highway bridge on State Highway 47, 500 ft (152 m) downstream from South Diversion Channel inlet, 1.0 mi (1.6 km) downstream from highway bridge on Interstate Highway 27 and 2.5 mi (4.0 km) south of Albuquerque.

PERIOD OF RECORD.--July 1974 to current year.

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 4,933 ft (1,504 m), from Corps of Engineers plan and profile map.

REMARKS.--Records fair. South Diversion Channel intercepts flow of numerous arroyos in northeast and southeast Albuquerque and discharges into Tijeras Arroyo at a point 0.8 mi (1.3 km) upstream from the Rio Grande.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft<sup>3</sup>/s (41.1 m<sup>3</sup>/s) Aug. 19, 1976, gage height, (not determined); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 860 ft<sup>3</sup>/s (24.4 m<sup>3</sup>/s) Aug. 1, gage height, 3.00 ft (0.914 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00					---	.00	.00	.00	62	.00
2	.00	.00					---	.00	.00	2.0	24	.00
3	.00	.00					---	.00	.00	.00	1.6	.00
4	.00	.00					---	.00	.00	1.0	.00	.00
5	.00	.00					---	.00	.00	.00	.00	.00
6	.00	.00					---	.00	.00	.00	19	.00
7	.00	.00					---	.00	.00	.00	14	.00
8	.00	15					---	.00	.00	.00	8.3	.00
9	.00	5.0					---	.00	.00	.00	.00	.00
10	.00	.00					---	.00	.00	.00	5.2	6.8
11	.00	.00					---	.00	.00	.00	32	8.1
12	.00	.00					---	.00	.00	.00	37	.00
13	.00	.00					---	.00	.00	.00	63	.00
14	.00	.00					---	.00	.00	.00	19	.00
15	.00	.00					---	.00	.00	.00	.00	20
16	.00	.00					---	.00	.00	.00	.00	52
17	.00	.00					---	.00	.00	.00	.00	52
18	.00	.00					---	.00	.00	.00	.00	107
19	.00	.00					.00	.00	.00	.00	.00	15
20	.00	.00					.00	45	21	.00	.00	20
21	.00	.00					.00	.00	.00	.00	2.1	19
22	.00	.00					.00	5.0	.00	3.0	.00	5.0
23	.00	.00					4.0	.00	.00	2.1	.00	.00
24	.00	.00					13	.00	.00	.00	38	.00
25	.00	.00					.00	.00	.00	.00	5.0	.00
26	.00	.00					.00	.00	.00	.00	.00	.00
27	.00	.00					.00	.00	.00	18	.00	.00
28	.00	.00					.00	.00	.00	.00	.00	.00
29	.00	.00					.00	.00	.00	.00	.00	.00
30	.00	.00					.00	.00	.00	25	.00	.00
31	.00	---					---	.00	---	33	.00	---
TOTAL	.00	20.00					---	50.00	21.00	84.10	330.20	304.90
MEAN	.000	.67					---	1.61	.70	2.71	10.7	10.2
MAX	.00	15					---	45	21	33	63	107
MIN	.00	.00					---	.00	.00	.00	.00	.00
AC-FT	.00	40					---	99	42	167	655	605



RIO GRANDE BASIN  
08331000 RIO GRANDE AT ISLETA, NM  
(Surveillance station)

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 (15 m) upstream from diversion dam, 50 feet (15 m) downstream from bridge on State Highway 147, at Isleta.

DRAINAGE AREA.--18,100 mi<sup>2</sup> (46,900 km<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 ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT 21...	1310	400	510	--	7.9	--	10.0	14.0	7.0	--	--
NOV 17...	1500	886	520	463	7.8	8.4	20.0	13.5	8.6	58	166
DEC 03...	1000	669	502	--	7.5	--	9.0	6.0	9.0	--	--
JAN 11...	1045	388	500	537	8.0	7.7	1.0	5.0	10.5	15	159
MAR 01...	1400	760	450	--	8.0	--	19.5	12.5	8.3	14	--
MAY 03...	1345	3320	325	325	8.2	7.8	24.0	17.0	7.4	36	123
JUL 07...	1200	1010	290	--	8.2	--	27.0	24.0	6.1	30	--
AUG 30...	1200	2700	500	514	8.1	8.1	25.0	23.0	6.4	32	174

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 CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
OCT 21...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	46	53	8.1	34	1.2	4.5	86	15	.4	24	299
DEC 03...	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	9	50	8.2	41	1.5	4.8	81	24	.5	27	328
MAR 01...	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	30	38	6.8	18	.7	3.2	71	6.8	.4	18	219
JUL 07...	--	--	--	--	--	--	--	--	--	--	--
AUG 30...	70	57	7.8	37	1.3	4.2	120	17	.4	21	329

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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)
OCT 21...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	.33	.170	.50	.50	.780	.800	.72	2.0	.440	.430	7.8
DEC 03...	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	.28	.28	2.80	--	.10	3.2	.880	.900	5.0
MAR 01...	--	--	.47	.36	.990	--	.41	1.9	.360	.310	4.1
MAY 03...	--	--	.22	.22	.320	--	.78	1.3	.430	.100	8.0
JUL 07...	--	--	.30	.30	.470	--	.73	1.5	.350	.330	6.2
AUG 30...	--	--	.40	.40	.300	--	1.1	1.8	.930	.220	9.8

RIO GRANDE BASIN  
08331000 RIO GRANDE AT ISLETA, NM -- Continued  
(Surveillance station)

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 17...	1500	9	6	90	<1	<1	10	<10	15	4
JAN 11...	1045	--	--	110	--	--	--	--	--	--
MAY 03...	1345	4	3	40	<1	<3	10	<10	20	2
AUG 30...	1200	--	--	210	--	--	--	--	--	--

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, 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 17...	10	10	10	<1	<.1	.2	<1	1	40	5
JAN 11...	<10	--	--	--	--	--	--	--	--	--
MAY 03...	<9	14	<1	.1	<.1	1	<1	40	<12	
AUG 30...	5	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	NITRO- GEN, NITRITE TOT IN BOT MAT (MG/KG AS N) (00616)	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, TOTAL FM BOT- TOM MA- TERIAL (UG/G AS CU) (01029)
MAY 03...	1345	<2.0	<2.0	2.7	200	3	<1	<1

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) (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)
MAY 03...		<10	1	10	<10	40	.06	2

RIO GRANDE BASIN  
08331000 RIO GRANDE AT ISLETA, NM -- Continued  
(Surveillance station)

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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, RADON METHOD (PCI/L) (09511)	URANIUM DIS- SOLVED (UG/L AS U) (22703)
MAY 03...	1345	<5.4	30	5.0	20	4.9	19	.09	1.8

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN, TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)
MAY 03...	1345	--	--	--	--	--	--	--	--	--
AUG 30...	1200	<.10	<.01	<.10	<.01	<.01	<.01	.01	<.01	<.01

DATE	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)
MAY 03...	--	--	--	--	--	--	--	--	--
AUG 30...	<.01	<.01	<.01	<.01	<.01	<.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)
MAY 03...	--	--	--	<.01	<.01	<.01	--	--	--
AUG 30...	<.01	<1	<.01	--	--	--	<.10	<.10	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 21...	600	700
NOV 17...	190	280
DEC 03...	K7	K20
JAN 11...	K3	K30
MAR 01...	K3	K35
MAY 03...	120	400
JUL 07...	90	100
AUG 30...	610	350

RIO GRANDE BASIN  
08331000 RIO GRANDE AT ISLETA, NM -- Continued  
(Surveillance station)

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 17...	1500	886	13.5	1930	4620	26
JAN 11...	1045	388	5.0	109	114	95
MAR 01...	1400	760	12.5	193	396	95
MAY 03...	1345	3320	17.0	1150	10300	46
JUL 07...	1200	1010	24.0	83	226	89
AUG 30...	1200	2700	23.0	916	6680	53

## 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 (0.3 km) south of U.S. Highway 60, 1.8 mi (2.9 km) east of Bernardo, about 3 mi (5 km) upstream from floodway, and 4 mi (6 km) 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 with concrete control. Datum of gage is 4,720.00 ft (1,438.656 m) National Geodetic Vertical Datum of 1929. Prior to October 1964, 0.2 mi (0.3 km) upstream at various datums.

REMARKS.--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 (57 m<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 (62.9 m<sup>3</sup>/s) Apr. 22, 1958; no flow many days most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.8	4.1	3.6	3.3	4.2	5.0	6.9	11	5.5	.70	3.9
2	.06	2.0	3.8	3.7	3.6	4.5	7.9	12	8.6	5.3	.99	4.4
3	3.5	2.1	3.9	3.6	3.4	4.5	6.5	15	7.9	4.5	1.8	3.5
4	.55	2.2	3.4	3.5	3.4	4.3	13	16	7.8	4.0	2.5	5.4
5	.40	2.2	3.7	3.7	3.4	4.7	8.2	16	6.2	3.4	2.6	2.5
6	.43	2.3	3.8	3.7	3.3	4.7	6.4	16	7.7	2.8	2.4	2.1
7	.54	2.5	3.7	3.6	3.0	4.9	5.2	14	7.3	2.6	1.8	2.0
8	.90	2.5	3.7	2.6	3.0	4.6	5.6	14	7.0	2.6	1.6	2.9
9	8.4	2.5	3.7	2.1	3.0	7.1	9.6	14	7.0	2.6	1.4	2.3
10	1.1	2.7	3.4	2.2	3.0	15	8.0	13	6.9	2.1	1.3	1.9
11	.86	2.8	3.6	2.3	3.2	5.1	6.7	12	6.4	2.4	.97	1.9
12	.86	3.2	3.7	2.5	3.2	3.7	6.0	9.6	5.5	2.7	.95	2.0
13	.80	3.1	3.7	2.4	3.2	4.2	5.5	10	5.4	2.1	.97	1.8
14	.85	3.3	3.6	2.3	3.0	4.2	12	9.6	5.4	1.7	1.0	1.8
15	1.1	3.5	3.7	2.4	3.9	4.1	11	10	6.5	1.6	1.0	1.9
16	1.4	3.4	3.8	2.7	3.4	3.6	23	9.6	5.3	1.6	1.1	1.9
17	1.0	3.7	3.3	2.8	3.3	3.9	20	10	5.2	2.2	1.1	2.9
18	1.3	3.5	3.3	2.9	3.4	4.2	17	8.6	6.2	1.6	1.1	5.4
19	1.8	3.4	3.4	3.0	3.3	4.7	19	7.6	8.7	1.5	.99	5.8
20	1.2	3.7	3.6	3.0	3.4	10	16	6.6	8.6	1.5	1.1	5.7
21	1.3	3.7	3.6	3.0	3.8	5.2	20	7.6	7.2	1.3	.54	5.3
22	1.4	3.8	3.7	2.9	3.9	3.8	13	12	5.7	1.5	1.1	5.2
23	1.4	3.7	3.2	3.0	3.7	3.5	14	12	5.2	1.5	1.5	5.0
24	1.7	3.7	3.2	3.0	3.7	3.0	16	12	5.2	1.4	1.6	5.2
25	1.6	3.8	3.4	2.9	3.7	2.7	15	13	4.8	1.2	2.0	4.8
26	1.6	3.7	3.6	3.0	3.7	2.7	11	12	4.7	.83	2.3	4.9
27	1.6	4.2	3.8	3.0	4.0	5.4	9.6	12	4.6	.93	4.3	4.8
28	1.6	4.0	3.7	3.0	4.1	9.5	8.9	12	4.3	.90	3.4	4.5
29	1.6	4.2	3.7	3.0	---	5.9	8.1	11	3.5	.85	3.7	4.2
30	1.7	4.3	3.5	3.3	---	4.5	7.5	10	5.7	2.4	4.2	4.2
31	1.8	---	4.1	3.4	---	4.0	---	12	---	.96	4.3	---
TOTAL	44.35	95.5	112.4	92.1	96.3	156.4	334.7	356.1	191.5	68.07	56.31	110.1
MEAN	1.43	3.18	3.63	2.97	3.44	5.05	11.2	11.5	6.38	2.20	1.82	3.67
MAX	8.4	4.3	4.1	3.7	4.1	15	23	16	11	5.5	4.3	5.8
MIN	.00	1.8	3.2	2.1	3.0	2.7	5.0	6.6	3.5	.83	.54	1.8
AC-FT	88	189	223	183	191	310	664	706	380	135	112	218

CAL YR 1981 TOTAL 1234.68 MEAN 3.52 MAX 18 MIN .00 AC-FT 2550  
WTR YR 1982 TCTAL 1713.83 MEAN 4.70 MAX 23 MIN .00 AC-FT 3400

## 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 (8 km) downstream from heading of conveyance channel, 2 mi (3 km) east of Bernardo, and at mile 1,487.2 (2,392.9 km).

DRAINAGE AREA.--19,230 mi<sup>2</sup> (49,810 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 (1,439.433 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor. Since November 1973 flow completely regulated by Cochiti Dam (station 08317300) 100 mi (161 km) 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 (3,000 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--19 years (water years 1937-38, 1942-58), 1,125 ft<sup>3</sup>/s (31.86 m<sup>3</sup>/s), 815,100 acre-ft/yr (1,000 hm<sup>3</sup>/yr). Includes flow of floodway, conveyance channel, and Bernardo interior drain.  
15 years (water years 1959-73) 898 ft<sup>3</sup>/s (25.43 m<sup>3</sup>/s), 605,600 acre-ft/yr (747 hm<sup>3</sup>/yr), includes flow of floodway, conveyance channel, Bernardo interior drain, and lower San Juan Riverside drain prior to closure of Cochiti Dam.

9 years (water years 1974-82) 1,117 ft<sup>3</sup>/s (31.63 m<sup>3</sup>/s), 809,300 acre-ft/yr (998 hm<sup>3</sup>/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 (595 m<sup>3</sup>/s) Apr. 25, 1942, gage height, 6.90 ft (2.103 m); no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 5,250 ft<sup>3</sup>/s (149 m<sup>3</sup>/s) June 3; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP			
1	.00	409	807	508	601	784	983	1970	4100	2820	.00	1620			
2	.00	569	647	476	675	673	1170	3580	2640	1390	664	1340			
3	129	617	588	492	586	620	1070	3720	5250	1940	1410	747			
4	71	579	569	496	591	700	744	3950	2720	1840	1480	812			
5	77	598	617	600	573	617	617	4350	3520	1410	1320	426			
6	141	637	492	622	555	678	816	4330	3850	1320	637	124			
7	96	657	423	478	535	647	854	4330	3530	1040	262	100			
8	86	668	416	438	484	627	997	4220	3720	780	268	50			
9	86	689	569	494	478	579	1570	4110	3930	627	310	50			
10	155	780	711	590	434	492	1750	4030	4570	700	257	30			
11	121	880	617	632	529	409	1310	3840	3600	756	236	50			
12	91	918	612	486	656	387	982	4040	3490	854	181	75			
13	79	930	637	598	712	316	881	3850	3480	617	216	177			
14	84	1040	647	620	612	445	840	3860	3590	468	568	212			
15	54	905	579	618	546	627	1540	4050	3680	236	551	415			
16	33	970	627	653	577	607	2730	3840	3390	279	460	970			
17	26	997	627	696	566	647	2250	3260	2930	380	310	1280			
18	27	905	627	631	578	722	2430	3050	2810	297	207	2900			
19	13	854	647	620	602	854	2800	2660	2790	231	96	2480			
20	17	841	792	612	620	816	2380	2980	2880	183	49	2330			
21	111	905	304	610	734	534	2680	3240	2960	141	47	2090			
22	138	768	598	629	721	617	1540	3340	2500	94	135	1950			
23	138	744	569	640	604	387	2290	3390	2880	75	407	2130			
24	152	722	792	657	624	310	2380	3890	2760	20	380	2320			
25	131	700	756	649	735	310	2220	3640	2350	10	262	1860			
26	114	637	780	650	632	262	1680	3540	2300	5.0	621	2020			
27	138	627	711	640	675	365	1450	3560	2130	.00	1160	1900			
28	114	617	678	573	697	246	1400	3550	2110	.00	1640	1800			
29	65	700	579	620	---	262	1440	3560	1570	.00	1680	1600			
30	54	922	468	640	---	627	1340	3660	1680	.00	1660	1500			
31	166	---	492	672	---	930	---	3760	---	.00	1440	---			
TOTAL	2707.00	22785	19478	18340	16952	17097	47134	113150	93710	18513.00	18914.00	35358			
MEAN	87.3	760	628	592	605	552	1571	3650	3124	597	610	1179			
MAX	166	1040	807	696	735	930	2800	4350	5250	2820	1680	2900			
MIN	.00	409	416	438	434	246	617	1970	1570	.00	.00	30			
AC-FT	5370	45190	38630	36380	33620	33910	93490	224400	185900	36720	37520	70130			
(+)	19210	50270	42360	40020	36960	42100	102200	235400	194000	43780	50720	82960			
CAL YR 1981	TOTAL	110630.60	MEAN	303	MAX	1800	MIN	.00	AC-FT	219400	(+)	MEAN	450	AC-FT	326100
WTR YR 1982	TOTAL	424138.00	MEAN	1162	MAX	5250	MIN	.00	AC-FT	841300	(+)	MEAN	1300	AC-FT	941300

(+) COMBINED FLOW, IN ACRE-FT, AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY, CONVEYANCE CHANNEL, BERNARDO INTERIOR DRAIN AND LOWER SAN JUAN RIVERSIDE DRAIN.

RIO GRANDE BASIN  
08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1956 to current year.

WATER TEMPERATURES: October 1964 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1964 to current year.

REMARKS.--Additional sediment total discharge determinations were made bi-weekly when needed. Records prior to 1965 water year were published as 08332000 Rio Grande near Bernardo, N. Mex., a composite of 08331990 Rio Grande Conveyance Channel near Bernardo, 08332010 Rio Grande Floodway near Bernardo, and 08332050 Bernardo Interior Drain at Bernardo.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (Water Years 1964 to 1982): Maximum daily, 1,410 micromhos July 23, 1976; minimum daily, 224 micromhos June 5, 1980.

WATER TEMPERATURES: Maximum, 34.5°C Aug. 9, 1975; minimum, 0.0°C on several days during 1971, 1972, 1976, 1977 and 1979.

SEDIMENT CONCENTRATIONS (Water Years 1975-1982): Maximum daily, 21,400 mg/L Aug. 11, 1979; minimum daily, no flow on many days each year

SEDIMENT LOADS: Maximum daily, 356,000 tons (323,000 tonnes) Aug. 11, 1967; minimum daily, 0 tons (0 tonnes) on many days each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,200 micromhos Aug. 26; minimum daily, 289 micromhos June 11.

WATER TEMPERATURES: Maximum, 32.0°C July 20; minimum, 1.0°C, Dec. 25.

SEDIMENT CONCENTRATIONS: Maximum daily, 16,200 mg/L Oct. 6; minimum daily, no flow on several days during October, July and August.

SEDIMENT LOADS: Maximum daily, 68,300 tons (62,000 tonnes) Sept. 19; minimum daily, 0 tons (0 tonnes) on several days during October, July and August.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
NOV 18...	0950	880	500	541	8.2	8.5	16.5	9.5	59	177	37
DEC 17...	1230	613	500	--	8.2	--	9.5	6.5	--	--	--
JAN 07...	0945	476	525	--	8.2	--	1.0	5.0	--	--	--
MAR 02...	1230	689	500	480	8.1	7.9	16.0	11.5	--	159	9
MAR 02...	1235	689	514	--	8.0	--	--	11.5	--	--	--
MAY 10...	1030	4540	320	311	8.2	7.8	20.0	14.0	53	113	24
SEP 03...	0930	768	575	578	8.0	7.2	23.0	21.0	--	198	87

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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, NITRATE DIS- SOLVED (MG/L AS N) (00618)
NOV 18...	56	9.1	43	1.5	4.7	100	18	.4	25	344	.75
DEC 17...	--	--	--	--	--	--	--	--	--	--	--
JAN 07...	--	--	--	--	--	--	--	--	--	--	--
MAR 02...	50	8.4	42	1.5	4.4	83	18	.8	25	322	--
MAR 02...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	35	6.1	23	1.0	3.5	62	10	.4	18	213	--
SEP 03...	66	8.1	40	1.3	4.1	140	21	.4	21	368	--



RIO GRANDE BASIN  
08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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 TOTAL (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 18...	.080	.83	.83	.190	.200	1.2	2.2	.470	.450	9.3
DEC 17...	--	--	--	--	--	--	--	--	--	--
JAN 07...	--	--	--	--	--	--	--	--	--	--
MAR 02...	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	.35	.36	.280	--	1.3	2.0	.650	.100	13
SEP 03...	--	--	--	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 18...	0950	--	--	110	--	--	--	--	--	--
MAR 02...	1230	--	--	110	--	--	--	--	--	--
MAY 10...	1030	8	3	60	<1	<3	20	<10	29	2
SEP 03...	0930	--	--	230	--	--	--	--	--	--

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)
NOV 18...	<10	--	--	--	--	--	--	--	--
MAR 02...	4	--	--	--	--	--	--	--	--
MAY 10...	30	23	1	<.1	<.1	1	<1	80	<12
SEP 03...	12	--	--	--	--	--	--	--	--

RIO GRANDE BASIN  
08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
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MAY 10...	1030	--	--	--	--	--	--	--	--	--
SEP 03...	0930	<.10	<.01	<.10	<.01	<.01	<.01	.02	<.01	<.01

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)
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MAY 10...	--	--	--	--	--	--	--	--	--
SEP 03...	<.01	<.01	<.01	<.01	<.01	<.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)
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MAY 10...	--	--	--	<.01	<.01	<.01	--	--	--
SEP 03...	<.01	<.1	<.01	--	--	--	<.10	<.10	<.01

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT 03...	1100	316	18.0	13200	11300	44	56	88	99
13...	1800	79	19.0	600	128	66	82	97	--
22...	1800	138	16.0	793	295	67	92	93	--
28...	1030	114	12.0	645	199	76	91	99	100
NOV 01...	1000	400	8.0	1580	1710	50	68	93	100
14...	1400	1040	14.0	1160	3260	55	71	94	100
DEC 17...	1230	613	6.5	553	915	32	45	56	67
JAN 07...	0945	476	5.0	306	393	--	--	--	--
FEB 12...	1800	660	11.0	579	1030	43	54	80	--
19...	1100	600	7.0	275	445	--	--	--	--
MAR 18...	1445	710	14.0	407	780	42	49	77	--
31...	1730	930	16.0	452	1130	48	59	83	--
APR 02...	1730	1170	14.0	777	2450	40	53	80	--
09...	1130	1500	14.0	740	3000	35	47	75	--
MAY 21...	1245	3800	18.0	455	4670	19	36	--	68
JUL 08...	1150	812	23.0	255	559	--	--	--	--
26...	1430	2300	31.0	5640	35000	54	81	97	100
AUG 06...	1100	640	25.5	372	643	52	60	83	--
31...	1300	1390	22.0	1040	3900	27	35	51	72
SEP 19...	1030	2480	14.0	9560	64000	--	--	--	--

RIO GRANDE BASIN  
08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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. 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								
03...	100	--	--	--	--	--	--	--
13...	--	--	--	99	100	--	--	--
22...	--	--	--	99	100	--	--	--
28...	--	--	--	--	--	--	--	--
NOV								
01...	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--
DEC								
17...	73	94	100	--	--	--	--	--
JAN								
07...	--	--	--	88	--	--	--	--
FEB								
12...	--	--	--	96	99	100	--	--
19...	--	--	--	91	--	--	--	--
MAR								
18...	--	--	--	95	99	100	--	--
31...	--	--	--	98	100	--	--	--
APR								
02...	--	--	--	98	100	--	--	--
09...	--	--	--	93	97	99	100	--
MAY								
21...	85	99	100	--	--	--	--	--
JUL								
08...	--	--	--	44	67	98	99	100
26...	--	--	--	--	--	--	--	--
AUG								
06...	--	--	--	97	99	100	--	--
31...	79	98	100	--	--	--	--	--
SEP								
19...	--	--	--	100	--	--	--	--

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	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)
DEC							
17...	1230	613	553	915	0	0	28
JAN							
07...	0945	476	306	393	0	1	43
FEB							
19...	1100	600	275	445	29	79	100
MAR							
18...	1445	710	407	780	13	73	99
APR							
09...	1130	1500	740	3000	0	1	26
MAY							
21...	1245	3800	455	4670	19	63	99
JUL							
08...	1150	812	255	559	1	4	51
AUG							
06...	1100	640	372	643	3	25	87
31...	1300	1390	1040	3900	1	2	56

RIO GRANDE BASIN  
08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	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. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)
DEC 17...	87	100	--	--	--	--	--
JAN 07...	93	100	--	--	--	--	--
FEB 19...	--	--	--	--	--	--	--
MAR 18...	100	--	--	--	--	--	--
APR 09...	80	97	100	--	--	--	--
MAY 21...	100	--	--	--	--	--	--
JUL 08...	95	--	--	95	95	96	100
AUG 06...	99	100	--	--	--	--	--
31...	99	100	--	--	--	--	--

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (FPS) (00055)
DEC 17...	1230	613	6.5	553	915	1340	195	1.5	2.10
MAR 18...	1445	710	14.0	407	780	1040	255	1.4	2.00
APR 09...	1130	1500	14.0	740	3000	3790	435	1.5	2.30
MAY 21...	1245	3800	18.0	455	4670	7640	295	2.6	5.00
JUL 08...	1150	812	23.0	255	559	855	211	2.0	1.90
AUG 06...	1100	640	25.5	372	643	749	245	1.6	1.70
31...	1300	1390	22.0	1040	3900	4970	260	2.3	2.30

RIO GRANDE BASIN  
08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	756	575	665	593	563	560	469	304	361	---	612
2	---	654	595	679	585	560	537	450	323	361	508	628
3	651	644	556	679	591	570	543	454	309	352	402	711
4	717	670	600	681	588	554	494	423	351	348	398	713
5	669	650	622	659	578	554	558	428	304	368	405	642
6	715	649	626	655	576	546	548	435	299	325	452	661
7	704	660	658	690	582	550	552	407	301	380	510	670
8	695	656	634	694	585	670	572	408	293	412	523	709
9	720	647	637	667	587	639	564	393	294	459	538	727
10	714	625	635	661	600	578	538	379	296	461	511	660
11	935	619	606	570	575	581	535	374	289	462	507	802
12	803	612	630	603	571	595	549	372	300	452	513	698
13	793	604	628	588	578	602	580	361	298	500	536	647
14	774	589	614	586	573	585	579	362	313	505	505	611
15	806	598	624	591	589	550	566	347	299	592	434	574
16	774	588	617	588	586	549	529	347	294	564	494	622
17	728	580	612	586	598	546	530	361	305	532	516	631
18	787	591	610	593	585	587	515	350	305	584	530	521
19	785	591	616	599	574	572	539	363	298	608	562	683
20	775	591	596	606	537	570	518	355	309	627	562	599
21	668	580	589	612	551	566	510	368	302	640	551	568
22	700	577	585	622	555	557	524	349	301	729	585	548
23	724	586	592	626	584	594	503	343	302	797	503	626
24	700	584	585	622	582	632	490	301	304	816	546	561
25	758	596	591	600	561	624	482	316	310	823	547	555
26	736	603	607	593	571	645	491	330	318	816	1200	480
27	717	606	604	601	571	630	507	323	324	---	932	454
28	698	597	627	591	577	656	513	320	328	---	534	463
29	795	562	631	596	---	672	513	322	350	---	463	445
30	790	553	597	578	---	605	506	313	350	---	612	440
31	761	---	651	582	---	566	---	322	---	---	620	---
MEAN	745	614	611	621	578	589	532	369	309	534	550	609
WTR YR 1982		MEAN	555	MAX	1200	MIN	289					

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	8.0	7.0	4.5	7.0	14.0	17.0	20.5	22.0	24.0	---	25.0
2	---	15.0	8.0	6.0	7.0	15.0	14.0	17.0	23.0	26.0	22.0	26.0
3	18.0	10.0	8.5	5.0	8.0	14.0	7.0	23.0	25.0	25.0	28.0	26.0
4	14.0	14.0	8.5	7.0	8.0	12.0	17.0	17.0	24.0	26.0	22.0	26.0
5	24.0	13.0	8.0	6.0	8.0	8.0	17.0	24.0	23.0	23.0	26.0	21.0
6	18.0	14.0	6.0	7.0	7.0	7.0	16.0	20.0	25.0	26.0	22.0	27.0
7	22.0	15.0	7.0	4.0	8.0	4.0	17.0	21.0	24.0	26.0	29.0	27.0
8	22.0	17.0	10.0	5.0	8.0	7.0	13.0	16.0	23.0	26.0	23.0	25.0
9	21.0	15.0	11.0	5.0	9.0	19.0	15.0	18.0	24.0	28.0	28.0	25.0
10	19.0	12.0	10.0	4.0	11.0	17.0	17.0	19.0	23.0	25.0	23.0	23.0
11	15.0	15.0	8.0	6.0	10.0	16.0	19.5	18.0	25.0	24.0	25.0	17.0
12	19.0	12.0	9.0	5.0	11.0	15.0	19.0	16.0	23.0	29.0	24.0	20.0
13	19.0	13.0	8.0	4.0	12.0	15.0	19.0	15.0	23.0	28.0	31.0	20.0
14	20.0	14.0	9.0	5.0	9.0	8.0	20.0	19.0	24.0	29.0	27.0	22.0
15	19.0	7.0	10.0	5.0	11.0	7.0	19.0	19.0	25.0	26.0	28.0	21.0
16	20.0	14.0	9.0	6.0	13.0	14.0	18.0	14.0	25.0	26.0	24.0	21.0
17	11.0	12.0	6.0	6.0	13.0	14.0	10.0	23.0	24.0	23.0	23.0	22.0
18	18.0	14.0	7.0	6.0	8.0	15.0	19.0	21.0	24.0	30.0	24.0	21.0
19	19.0	11.0	7.0	7.0	12.0	13.0	18.0	21.0	24.5	29.0	24.0	14.0
20	20.0	10.0	5.0	7.0	13.5	15.0	14.0	23.0	22.0	32.0	28.0	20.0
21	18.0	11.0	8.0	8.0	14.0	14.5	12.0	23.0	21.0	31.0	21.0	20.0
22	16.0	14.0	7.0	4.0	14.0	14.0	9.0	19.0	25.0	28.0	25.0	23.0
23	14.0	14.0	6.0	5.5	12.0	15.0	13.0	20.0	25.0	28.0	25.0	26.0
24	13.0	13.0	7.0	9.0	7.0	16.0	14.5	21.0	26.0	27.0	25.0	22.0
25	14.5	10.0	1.0	10.0	8.0	14.0	17.5	23.0	26.0	25.0	24.0	14.0
26	17.0	13.0	2.0	11.0	10.0	12.0	19.0	23.0	27.0	31.0	22.0	25.0
27	12.0	3.0	6.0	10.0	9.0	17.0	22.0	21.0	28.0	---	25.0	22.0
28	12.0	9.0	6.0	8.0	15.0	16.0	23.0	24.0	29.0	---	24.0	19.0
29	13.0	7.0	8.0	9.0	---	11.0	22.0	23.5	28.0	---	25.0	20.0
30	12.0	8.0	8.0	8.0	---	14.0	18.0	22.0	25.0	---	25.0	21.0
31	11.0	---	9.0	6.0	---	16.0	---	23.5	---	---	27.0	---
MEAN	17.0	12.0	7.5	6.5	10.0	13.0	16.5	20.0	24.5	27.0	25.0	22.0
WTR YR 1982		MEAN	16.5	MAX	32.0	MIN	1.0					

	MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION	
DAY	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	0	.00	1610	1780	620	1350	275	377	335	544	395	836
2	0	.00	1860	2860	500	873	258	332	305	556	485	881
3	7590	3390	1650	2750	490	778	274	364	317	502	435	728
4	1800	345	1150	1800	525	807	273	366	350	558	447	845
5	3550	1140	1000	1610	455	758	352	570	395	611	423	705
6	16200	6170	1040	1790	425	565	360	605	334	500	504	923
7	5290	1370	1000	1770	390	445	319	412	311	449	397	694
8	2500	580	950	1710	400	449	293	347	311	406	371	628
9	1750	406	905	1680	440	676	342	456	318	410	378	591
10	3100	1300	1000	2110	450	864	343	546	317	371	373	495
11	2120	693	1050	2490	425	708	296	505	391	558	408	451
12	1000	246	975	2420	400	661	293	384	559	990	368	385
13	595	127	950	2390	400	688	330	533	413	794	317	270
14	490	111	1100	3090	410	716	320	536	365	603	375	451
15	510	74	910	2220	391	611	308	514	317	467	410	694
16	425	38	825	2160	368	623	308	543	291	453	440	721
17	425	30	800	2150	446	755	350	658	325	497	421	735
18	325	24	727	1780	386	653	329	561	356	556	395	770
19	252	8.8	700	1610	379	662	322	539	340	553	655	1510
20	438	68	710	1610	530	1130	372	615	317	531	626	1380
21	1800	539	770	1880	525	1140	349	575	385	763	500	721
22	950	354	642	1330	411	664	390	662	380	740	466	776
23	600	224	598	1200	441	678	345	596	457	745	330	345
24	690	283	600	1170	484	1030	371	658	443	746	310	259
25	630	223	575	1090	405	827	310	543	469	931	293	245
26	535	165	553	951	367	773	303	532	400	704	247	175
27	525	196	551	933	357	685	350	605	375	683	290	286
28	640	197	550	916	340	622	315	487	405	762	315	209
29	600	105	675	1280	317	496	297	497	---	---	518	366
30	700	102	700	1740	295	373	392	677	---	---	681	1150
31	1690	757	---	---	294	391	450	816	---	---	491	1230
TOTAL	---	19265.80	---	54270	---	22451	---	16411	---	16983	---	20455
	MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION		MEAN CONCEN- TRATION	
DAY	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)	(MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY					

## 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 (34 m) upstream from bridge on U.S. Highway 60, and 1.0 mi (1.6 km) 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. Altitude of gage is 4,714 ft (1,437 m) from topographic map. June 4, 1936 to May 17, 1937, nonrecording gage 300 ft (91 m) downstream and Oct. 1, 1943 to Jan. 12, 1978, water-stage recorder at site 150 ft (46 m) downstream at different datum.

REMARKS.--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, 187 ft<sup>3</sup>/s (5.30 m<sup>3</sup>/s) Aug. 7, 1970; no flow at times. Prior to 1952, drain was subject to overflow from floodway.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	34	27	24	24	24	42	37	123	35	90	135
2	108	33	26	24	24	24	35	37	129	51	118	134
3	133	31	25	23	24	24	35	40	103	42	127	136
4	126	30	25	23	23	31	36	34	57	46	136	104
5	117	30	26	23	23	38	40	40	40	43	145	94
6	126	30	26	23	23	33	22	38	42	43	135	86
7	134	29	25	23	23	32	21	34	54	46	148	76
8	118	29	24	22	23	32	23	49	39	38	163	106
9	116	29	24	23	23	34	31	48	39	36	143	77
10	116	29	25	23	23	32	32	50	38	35	116	74
11	115	29	25	23	23	42	40	42	36	41	110	84
12	115	30	25	23	24	50	38	54	33	37	139	121
13	138	29	25	23	24	51	41	56	34	34	140	144
14	129	29	25	23	24	38	33	62	27	27	112	149
15	123	29	25	23	24	44	32	45	32	33	100	145
16	111	28	25	23	23	49	36	49	35	32	85	145
17	91	28	24	24	23	40	44	50	36	31	73	166
18	95	27	24	24	24	53	40	46	35	36	74	183
19	105	28	24	24	24	58	46	48	34	28	68	160
20	109	28	24	23	23	58	47	53	43	35	65	115
21	110	28	24	24	23	75	49	43	50	38	79	131
22	129	27	24	24	24	67	49	42	35	43	134	167
23	132	27	24	24	23	42	51	59	42	34	134	174
24	128	27	25	24	23	39	50	62	41	33	121	154
25	124	27	25	23	24	43	43	130	47	29	120	128
26	135	26	25	23	24	44	52	128	40	33	166	155
27	136	27	24	23	24	44	41	136	43	47	142	141
28	136	27	24	23	24	44	40	132	39	51	136	122
29	141	27	24	23	---	47	36	118	31	52	143	120
30	86	27	23	23	---	29	37	129	33	62	137	139
31	43	---	23	24	---	36	---	132	---	75	140	---
TOTAL	3619	859	764	722	658	1297	1162	2023	1410	1246	3739	3865
MEAN	117	28.6	24.6	23.3	23.5	41.8	38.7	65.3	47.0	40.2	121	129
MAX	141	34	27	24	24	75	52	136	129	75	166	183
MIN	43	26	23	22	23	24	21	34	27	27	65	74
AC-FT	7180	1700	1520	1430	1310	2570	2300	4010	2800	2470	7420	7670

CAL YR 1981	TOTAL	22279	MEAN 61.0	MAX 141	MIN 18	AC-FT	44190
WTR YR 1982	TOTAL	21364	MEAN 58.5	MAX 183	MIN 21	AC-FT	42380



08332700 SAN PABLO CREEK NEAR CUBA, NM

LOCATION.--Lat 35°56'55", long 106°56'44", in NE¼SW¼ sec.21, T.20 N., R.1 W., Sandoval County, Hydrologic Unit 13020204, on right bank 50 ft (15 m) upstream from bridge on section of old State Highway 44, 5.6 mi (9.0 km) south of Cuba, and 8.7 mi (14.0 km) north of La Ventana.

DRAINAGE AREA.--12.8 mi<sup>2</sup> (33.2 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1970-78 (annual maximum only), April 1979 to September 1982 (discontinued).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,800 ft (2,073 m), from topographic map.

REMARKS.--Water-discharge records poor. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 2,360 ft<sup>3</sup>/s (66.8 m<sup>3</sup>/s) July 20, 1971, gage-height, 9.07 ft (2.765 m) datum then in use, from slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 462 ft<sup>3</sup>/s (13.1 m<sup>3</sup>/s) July 30, gage-height, 5.40 ft (1.646 m); from rating curve extended above 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) on basis of slope-area measurement at gage height 3.40 ft (1.036 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.21	.24	.25	.40	.25	.20	.20	.30	.23	.48	.12
2	1.2	.21	.20	.30	.42	.20	.20	.20	.34	.21	.65	.11
3	6.2	.21	.19	.25	.35	.25	.25	.25	.30	.15	.60	.11
4	.40	.20	.15	.25	.40	.25	.25	.25	.29	.09	.56	.11
5	.40	.21	.20	.30	.35	.30	.25	.20	.29	.16	.48	.11
6	.40	.21	.15	.20	.40	.48	.25	.18	.29	.02	.48	.11
7	.35	.24	.20	.25	.30	.30	.15	.88	.29	.14	.40	.11
8	.35	.23	.20	.25	.35	.30	.16	.80	.28	.21	.40	.12
9	.35	.20	.19	.30	.30	.25	.15	.76	.27	.20	.48	.11
10	.35	.20	.20	.30	.25	.25	.17	.70	.27	.20	.40	.13
11	.35	.21	.20	.30	.25	.25	.17	.70	.25	.21	.19	.37
12	.56	.21	.18	.35	.30	.25	.16	.72	.23	.21	.19	.66
13	.35	.20	.15	.40	.30	.30	.16	.56	.24	.20	.19	.15
14	.30	.20	.18	.35	.35	.25	.48	.48	.22	.19	.17	.13
15	.30	.21	.20	.35	.35	.25	.94	.40	.26	.03	.16	.13
16	.29	.20	.22	.40	.35	.25	1.8	.35	.25	.07	.16	1.1
17	.20	.20	.25	.40	.56	.25	.62	.30	.20	.06	.18	.15
18	.20	.20	.30	.45	.62	.25	.48	.35	.11	.19	.15	.16
19	.20	.24	.25	.40	.56	.25	.40	.40	.11	.18	.15	.14
20	.20	.31	.20	.48	.56	.25	.35	.45	.31	.16	.20	.18
21	.20	.41	.15	.40	.62	.25	.30	.40	.28	.13	.18	.14
22	.20	.31	.15	.35	.56	.25	.25	.35	.23	.27	.25	.14
23	.20	.26	.20	.30	.30	.20	.25	.30	.16	.22	.18	.12
24	.20	.26	.20	.35	.35	.20	.30	.35	.12	.21	.47	.13
25	.20	.23	.15	.35	.34	.25	.25	.40	.12	.21	19	.13
26	.20	.24	.20	.35	.30	.30	.20	.48	.19	.16	.75	.13
27	.20	.53	.15	.36	.25	.30	.20	.40	.19	.05	.14	.13
28	.20	.35	.15	.40	.20	.25	.20	.37	.19	.11	.14	.13
29	.20	.27	.20	.48	---	.25	.15	.30	.20	.18	.14	.12
30	.20	.26	.25	.40	---	.35	.25	.29	.22	4.5	.15	.13
31	.22	---	.20	.40	---	.25	---	.28	---	.60	.13	---
TOTAL	16.37	7.42	6.05	10.67	10.64	8.23	9.94	13.05	7.00	9.75	28.20	5.61
MEAN	.53	.25	.20	.34	.38	.27	.33	.42	.23	.31	.91	.19
MAX	6.2	.53	.30	.48	.62	.48	1.8	.88	.34	4.5	.19	1.1
MIN	.20	.20	.15	.20	.20	.20	.15	.18	.11	.02	.13	.11
AC-FT	32	15	12	21	21	16	20	26	14	19	56	11
(+)	1.22	0.20	0.00	0.79	0.97	1.54	0.19	0.68	0.38	2.66	4.80	0.84

CAL YR 1981 TOTAL 146.62 MEAN .40 MAX 10 MIN .02 AC-FT 291  
WTR YR 1982 TOTAL 132.93 MEAN .36 MAX 19 MIN .02 AC-FT 264

(+) MONTHLY RAINFALL, IN INCHES

RIO GRANDE BASIN  
08332700 SAN PABLO CREEK NEAR CUBA, NM -- Continued  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--October 1981 to July 1982.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	BICAR- BONATE (MG/L) AS HCO3) (99440)	BICAR- BONATE (MG/L) AS HCO3) (00440)	CAR- BONATE FETFLD (MG/L) AS CO3) (00445)	ALKA- LITY FIELD (MG/L) AS CACO3) (00410)	SAMPLE SOURCE (72005)
OCT 16...	1230	.14	1920	8.4	10.5	14.0	8.5	--	328	16	296	--
NOV 12...	1345	.18	1900	8.4	17.0	8.5	9.2	--	245	4	208	--
MAR 04...	1130	.18	1950	7.8	10.5	5.0	11.0	--	365	--	299	--
JUL 30...	2030	68	1600	7.8	--	--	--	320	--	--	--	40

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SAMPLE SOURCE (72005)
JUL 30...	2030	280000	10	32000	660	40

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SAMPLE SOURCE (72005)
OCT 16...	1230	.14	14.0	68	.03	--	--
NOV 12...	1345	.18	8.5	52	.03	--	--
JAN 27...	1100	.36	1.0	85	.08	79	--
MAR 04...	1130	.18	5.0	368	.18	--	--
JUL 07...	1410	.14	--	118	.04	91	--
JUL 30...	2030	68	--	268000	49200	75	40

## 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 (2.6 km) upstream from Arroyo Chico, 5.5 mi (8.8 km) northeast of village of Guadalupe, and at mile 106.8 (171.8 km).

DRAINAGE AREA.--420 mi<sup>2</sup> (1,090 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,949 ft (1,813.3 m) National Geodetic Vertical Datum of 1929. Prior to July 14, 1966 at datum 1.01 ft (0.308 m) higher.

REMARKS.--Records poor. Diversions for irrigation of about 3,700 acres (15 km<sup>2</sup>) above station in past years, but present diversion negligible. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 12.9 ft<sup>3</sup>/s (0.365 m<sup>3</sup>/s), 9,350 acre-ft/yr (11.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,940 ft<sup>3</sup>/s (197 m<sup>3</sup>/s) July 29, 1967, gage height, 13.53 ft (4.124 m), from rating curve extended above 1,300 ft<sup>3</sup>/s (37 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 7.75 ft (2.362 m) and 10.60 ft (3.231 m); 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 (140 m<sup>3</sup>/s) based on records for stations above and below.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft<sup>3</sup>/s (28 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Aug. 22	0745	1100 31.2	5.37 1.637	Aug. 26	0630	*1800 51.0	6.90 2.103

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	5.0	.00	.00	.00	.00	14	8.8	28	13	.00	2.5	6.0
2	1.2	.00	.00	.00	.00	10	6.0	47	14	.00	1.2	5.3
3	75	.00	.00	.00	.05	9.0	2.5	30	14	.00	.00	5.3
4	10	.00	.00	.40	.00	8.4	1.0	30	14	.00	.80	3.9
5	8.0	.00	.00	1.0	.00	8.8	.40	39	10	.00	1.2	3.7
6	3.6	.00	.00	.05	.05	3.2	.40	41	9.6	.00	.00	6.8
7	.05	.00	.00	.20	.20	2.2	.00	41	8.8	1.7	22	5.0
8	.00	.00	.00	.10	1.0	5.0	.00	40	8.8	.00	4.6	.00
9	.00	.00	.00	.40	.80	4.2	.00	38	8.0	.00	1.0	.00
10	.00	.00	.00	.40	.00	4.2	.00	41	6.8	.00	.20	.00
11	.00	.00	.00	.40	.05	4.0	.00	39	8.0	.00	.00	69
12	.00	.00	.00	.40	.10	5.0	.00	37	8.8	.00	15	28
13	.00	.00	.00	.40	.00	14	.00	36	8.0	.00	42	8.0
14	.00	.00	.00	.40	.00	77	.00	33	4.2	.00	6.0	7.0
15	.00	.00	.00	.20	.05	12	.00	31	2.2	.00	3.2	1.0
16	.00	.00	.00	.05	.05	12	.00	30	.40	18	.00	1.0
17	.00	.00	.00	.10	.05	12	.00	28	.00	12	.00	5.0
18	.00	.00	.00	.80	3.2	12	.00	25	.00	12	.00	48
19	.00	.00	.00	.60	15	9.6	.00	26	.00	2.6	.00	.40
20	.00	.00	.00	1.2	25	7.6	.00	25	.00	.00	.00	15
21	.00	.00	.00	1.6	27	6.4	.80	20	.00	.00	43	2.5
22	.00	.00	.00	2.5	23	6.0	8.8	25	.00	.00	292	1.0
23	.00	.00	.00	2.0	20	5.0	10	25	.00	.00	34	1.6
24	.00	.00	.00	2.0	18	2.5	11	22	.00	.00	33	.20
25	.00	.00	.00	1.6	16	1.4	10	24	.00	.00	28	.00
26	.00	.00	.00	1.0	12	1.8	8.8	22	.00	.00	410	.00
27	.00	.00	.00	.40	10	6.8	7.6	20	.00	.00	44	.00
28	.00	.00	.00	.20	10	14	2.5	14	.00	.00	39	.00
29	.00	.00	.00	.10	---	12	1.3	14	.00	.00	41	.00
30	.00	.00	.00	.00	---	12	1.6	12	.00	13	45	.00
31	.00	---	.00	.00	---	11	---	13	---	47	64	---
TOTAL	102.85	.00	.00	18.50	181.60	313.1	82.20	896	138.60	106.30	1172.70	223.70
MEAN	3.32	.0000	.0000	.60	6.49	10.1	2.74	28.9	4.62	3.43	37.8	7.46
MAX	75	.00	.00	2.5	27	77	11	47	14	47	410	69
MIN	.00	.00	.00	.00	.00	1.4	.00	12	.00	.00	.00	.00
AC-FT	204	.00	.00	37	360	621	163	1780	275	211	2330	444

CAL YR 1981	TOTAL	1801.80	MEAN 4.94	MAX 174	MIN .00	AC-FT 3570
WTR YR 1982	TOTAL	3235.55	MEAN 8.86	MAX 410	MIN .00	AC-FT 6420

RIO GRANDE BASIN  
08334000 RIO PUERCO ABOVE ARROYO CHICO NEAR GUADALUPE, NM -- Continued  
(FORMERLY PUBLISHED AS RIO PUERCO BELOW CABEZON, N. MEX.)  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--Water years 1948-56, 1981 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: July 1948 to June 1956, October 1981 to September 1982.

INSTRUMENTATION.--Automatic pumping sediment sampler since August 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 186,000 mg/L July 31, 1953; minimum daily, no flow on many days each year.

SEDIMENT LOADS: Maximum daily, 730,000 tons (662,000) tonnes July 27, 1955; minimum daily, 0 ton (0 tonne) on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 130,000 mg/L July 31; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 144,000 tons (131,000 tonnes) Aug. 26; minimum daily, 0 ton (0 tonne) on many days.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	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)
OCT								
05...	1535	5.0	1620	19.0	73700	995	--	--
05...	1540	5.0	1320	19.0	55500	749	--	--
05...	1545	5.0	1320	19.0	52900	714	--	--
05...	1550	5.0	1320	19.0	54200	732	--	--
05...	1630	5.0	1230	19.0	117000	1580	82	88
MAR								
04...	1345	7.5	1980	7.0	2620	53	68	78
MAY								
06...	1000	40	835	6.0	41900	4530	36	41
JUN								
02...	1230	14	907	20.0	21200	801	43	46
02...	1231	14	926	20.0	21000	794	40	45
JUL								
30...	0730	120	3320	--	136000	44100	34	41
30...	2000	8.8	3080	--	57600	1370	47	56
31...	1100	420	3880	--	495000	561000	17	20
AUG								
10...	1100	1.0	583	23.0	2140	5.8	28	31
12...	2400	357	2560	--	261000	252000	25	30
21...	2300	265	2100	--	194000	139000	32	38
22...	0930	1200	2250	--	133000	431000	28	31
23...	0840	525	2330	--	42100	59700	38	42
27...	1100	37	1470	20.0	43700	4370	53	63
SEP								
23...	1300	2.5	1600	20.0	4330	29	80	91
23...	1301	2.5	--	20.0	5030	34	81	90

RIO GRANDE BASIN  
08334000 RIO PUERCO ABOVE ARROYO CHICO NEAR GUADALUPE, NM -- Continued  
(FORMERLY PUBLISHED AS RIO PUERCO BELOW CABEZON, N. MEX.)  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (703340)	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. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
OCT								
05...	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--
05...	99	--	--	--	99	99	100	--
MAR								
04...	86	92	95	100	--	--	--	--
MAY								
06...	57	--	--	--	81	93	98	100
JUN								
02...	61	--	--	--	86	95	99	100
02...	63	--	--	--	86	96	99	100
JUL								
30...	57	--	--	--	78	95	99	100
30...	80	--	--	--	93	98	100	--
31...	31	--	--	--	55	83	99	100
AUG								
10...	34	--	--	--	46	57	96	100
12...	41	--	--	--	72	94	100	--
21...	48	--	--	--	71	89	99	100
22...	45	--	--	--	74	95	100	--
23...	56	--	--	--	75	92	99	100
27...	82	--	--	--	91	95	99	100
SEP								
23...	94	--	--	--	96	99	100	--
23...	93	--	--	--	97	99	100	--

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	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)
JUN						
23...	1300	38	69	97	100	--
23...	1305	14	29	73	96	100
23...	1310	53	87	99	100	--



## RIO GRANDE BASIN

08334300 PAPERS WASH NEAR STAR LAKE TRADING POST, NM

LOCATION.--Lat 35°53'36", long 107°24'58" in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ , sec.12, T.19 N., R.6 W., McKinley County, Hydrologic Unit 13020205, on right bank 2.2 mi (3.5 km) east of Star Lake Trading Post, and 14.6 mi (23.5 km) southeast of Pueblo Pintado.

DRAINAGE AREA.--20.3 mi<sup>2</sup> (52.6 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,630 ft (2,021 m).

REMARKS.--Water-discharge records poor.

AVERAGE DISCHARGE.--5 years, 0.21 ft<sup>3</sup>/s (0.006 m<sup>3</sup>/s), 152 acre-ft/yr (187,400 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100 ft<sup>3</sup>/s (2.83 m<sup>3</sup>/s) Aug. 26, 1982, gage height, 5.00 ft (1.524 m), from rating curve extended above 2.0 ft<sup>3</sup>/s (0.06 m<sup>3</sup>/s) by step-backwater analysis; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 100 ft<sup>3</sup>/s (2.83 m<sup>3</sup>/s) at 0215 hours Aug. 26, gage height, 5.00 ft (1.524 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.41	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	21
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.67
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.65
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.7
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.0
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	14
13	.00	.00	.00	.00	.00	4.2	.00	.00	.00	.00	.00	6.9
14	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00	2.4
15	.00	.00	.00	.00	.00	.41	.00	.00	.00	.00	.00	2.0
16	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	1.9
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.1
18	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	8.4
19	.00	.00	.00	.00	1.4	.00	.00	.00	.00	.00	.00	7.0
20	.00	.00	.00	.00	1.2	.00	.00	.00	.00	.00	.00	2.3
21	.00	.00	.00	.00	.31	.00	.00	.00	.00	.00	.00	1.8
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.26	1.4
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.55
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.7	.03
25	.00	.00	.00	.00	.00	.50	.00	.00	.00	.00	12	.00
26	.00	.00	.00	.00	.10	.22	.00	.00	.00	.00	27	.00
27	.00	.00	.00	.00	.50	.04	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.26	.00	.00	.00	.00	.00	.05	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.52	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.23	.08
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.01	---
TOTAL	15.59	.00	.00	.00	3.79	6.87	.00	.00	.00	.00	42.79	86.88
MEAN	.50	.000	.000	.000	.14	.22	.000	.000	.000	.000	1.38	2.90
MAX	15	.00	.00	.00	1.4	4.2	.00	.00	.00	.00	27	21
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	31	.00	.00	.00	7.5	14	.00	.00	.00	.00	85	172

CAL YR 1981 TOTAL 36.10 MEAN .099 MAX 15 MIN .00 AC-FT 72  
WTR YR 1982 TOTAL 155.92 MEAN .43 MAX 27 MIN .00 AC-FT 309

RIO GRANDE BASIN  
08334300 PAPERS WASH NEAR STAR LAKE TRADING POST, NM -- Continued  
WATER-QUALITY RECORDS

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

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate method of sampling; 40 indicates single-stage sampler.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)
FEB 19...	1800	4.3	150	210	8.0	8.1	--	--	18
AUG 26...	1300	1.9	260	260	7.3	8.0	26.0	21.0	45

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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)
FEB 19...	0	6.5	.4	27	2.9	2.8	88	.00	92
AUG 26...	--	16	1.2	36	2.5	4.7	120	--	--

DATE	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)	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)	SAMPLE SOURCE (72005)
FEB 19...	75	6.0	14	.4	5.7	102	108	--
AUG 26...	--	31	3.5	.4	9.6	198	--	29



RIO GRANDE BASIN  
08334300 PAPERS WASH NEAR STAR LAKE TRADING POST, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
FEB 19...	1800	--	--	20	--	--	--	28000	94
AUG 26...	1300	1	<1	170	<1	<10	5	46000	55

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
FEB 19...	--	370	4	--	--	--	--	--
AUG 26...	<1	530	2	.1	1	1	5	29

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70332)	SAMPLE SOURCE (72005)
AUG 26...	1300	1.9	21.0	2340	12	88	92	97	99	100	29

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 (0.3 km) upstream from mouth, 4.1 mi (6.6 km) northwest of Guadalupe, and 5.5 mi (8.8 km) southwest of Cabezón.

DRAINAGE AREA.--1,390 mi<sup>2</sup> (3,600 km<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 5,921 ft (1,804.7 m) National Geodetic Vertical Datum of 1929. Prior to June 21, 1968 at site 500 ft (150 m) upstream at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records poor. Diversions for irrigation of about 100 acres (40 hm<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years, 21.3 ft<sup>3</sup>/s (0.603 m<sup>3</sup>/s), 15,290 acre-ft/yr (18.9 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft<sup>3</sup>/s (430 m<sup>3</sup>/s) Sept. 12, 1972, gage height, 17.5 ft (5.33 m) from floodmarks, from rating curve extended above 2,900 ft<sup>3</sup>/s (82 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 11.6 ft (3.536 m) and 14.8 ft (4.511 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft<sup>3</sup>/s (44.7 m<sup>3</sup>/s) at 0515 hours Aug. 31, gage height, 5.88 ft (1.792 m), no other peak above base of 2,500 ft<sup>3</sup>/s (71 m<sup>3</sup>/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	4.4	1.3	5.7	6.4	6.0	3.0	69	3.0	.00	7.0	59
2	56	5.0	.80	8.7	5.0	6.0	3.0	8.7	1.3	.00	21	10
3	623	6.8	3.6	6.0	4.4	6.0	3.0	4.0	1.6	.00	108	5.0
4	73	5.7	4.3	5.0	8.2	6.4	3.0	4.0	1.7	.00	18	64
5	2.8	6.8	4.2	5.0	8.7	6.4	3.0	4.0	1.6	.00	10	5.0
6	4.7	6.0	4.1	4.0	8.0	7.7	3.0	4.1	1.7	.00	10	5.0
7	4.7	7.2	5.7	6.8	9.0	7.2	2.8	5.7	.70	.05	9.0	24
8	3.3	8.7	5.7	6.0	10	7.2	1.6	5.0	.70	.15	9.0	23
9	3.6	6.4	4.7	6.0	10	6.4	2.8	4.4	.75	.08	7.0	15
10	3.3	5.4	7.7	5.0	37	5.7	2.6	4.7	.53	.03	6.8	40
11	4.4	5.7	7.2	5.0	37	6.4	3.0	4.1	.65	.00	5.0	20
12	5.0	5.4	7.2	5.0	30	6.8	1.7	4.7	.57	.00	5.0	14
13	4.4	4.4	5.0	5.0	20	26	1.6	5.7	.50	.00	25	16
14	4.1	4.7	6.0	5.0	15	54	1.7	5.4	.40	.00	6.0	9.0
15	3.3	4.7	7.7	5.0	15	23	1.6	5.7	.40	.00	5.0	5.0
16	2.4	3.8	5.7	4.0	10	20	1.6	6.0	.40	.70	6.0	2.0
17	2.4	4.4	5.0	5.0	10	18	1.7	5.4	.30	.86	63	74
18	2.4	3.8	4.0	6.0	10	18	2.6	4.7	.30	10	5.0	94
19	3.3	1.9	4.0	9.8	7.0	15	1.6	4.4	15	51	3.0	112
20	7.2	2.5	15	12	56	10	1.6	3.8	6.5	10	2.0	84
21	7.2	5.1	9.8	12	73	9.0	1.9	4.4	1.0	9.0	6.0	24
22	8.7	4.4	5.7	6.0	40	8.0	3.0	4.7	.50	7.0	50	43
23	6.0	4.7	2.2	14	21	7.0	4.7	6.0	.40	5.0	25	11
24	5.4	3.8	1.7	8.7	21	6.0	5.4	5.7	.30	3.0	60	4.1
25	4.4	3.6	.57	12	10	5.0	2.6	6.0	.15	13	60	3.3
26	4.7	1.9	.65	26	9.0	5.0	1.6	6.0	.05	40	50	2.8
27	5.0	1.9	2.4	18	8.0	4.0	1.9	5.7	.00	40	90	3.0
28	5.7	9.8	1.4	7.2	7.0	4.0	2.8	5.0	.00	10	53	3.0
29	6.8	8.7	1.6	6.0	---	4.0	2.4	6.4	.00	51	73	3.0
30	5.4	3.6	9.1	8.7	---	3.0	1.9	5.7	.00	184	39	3.0
31	4.4	---	24	8.2	---	3.0	---	5.0	---	18	352	---
TOTAL	907.0	151.2	168.02	246.8	505.7	320.2	74.7	224.1	41.00	452.87	1188.8	780.2
MEAN	29.3	5.04	5.42	7.96	18.1	10.3	2.49	7.23	1.37	14.6	38.3	26.0
MAX	623	9.8	24	26	73	54	5.4	69	15	184	352	112
MIN	2.4	1.9	.57	4.0	4.4	3.0	1.6	3.8	.00	.00	2.0	2.0
AC-FT	1800	300	333	490	1000	635	148	445	81	596	2360	1550

CAL YR 1981	TOTAL	7245.79	MEAN 19.9	MAX 764	MIN .00	AC-FT 14370
WTR YR 1982	TOTAL	5060.59	MEAN 13.9	MAX 623	MIN .00	AC-FT 10040

RIO GRANDE BASIN  
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 DISCHARGE: July 1948 to June 1956, October 1978 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since July 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 201,000 mg/l Sept. 18, 1981; minimum daily, no flow on many days each year.

SEDIMENT LOADS: Maximum daily, 1,220,000 tons (1,110,000 tonnes) July 17, 1953; minimum daily, 0 ton (0 tonne) on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily 105,000 mg/l Aug. 31; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 109,000 tons (98,900 tonnes) Aug. 31; minimum daily, 0 ton (0 tonne) on many days.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
NOV										
05...	1155	6.8	2100	11.0	2330	43	73	84	93	95
12...	1046	6.8	1920	8.0	2510	46	--	--	--	96
MAR										
04...	1401	6.5	1430	10.0	39300	690	64	73	90	--
APR										
07...	1200	3.2	2640	--	3160	27	70	80	91	95
07...	1400	3.2	2980	--	2850	25	71	81	91	93
MAY										
06...	1145	5.9	--	15.0	3190	51	70	80	89	95
06...	1202	5.9	1990	15.0	4270	68	55	64	73	--
JUN										
02...	1100	2.8	2950	19.0	2610	20	82	90	93	96
02...	1101	2.8	2830	18.0	2380	18	82	92	95	97
24...	1230	.30	3190	28.5	987	.80	70	82	94	99
JUL										
19...	1315	18	2040	24.5	34800	1690	72	88	95	--
19...	1316	18	1470	24.5	34600	1680	79	86	92	--
19...	1510	18	1600	--	46900	2280	54	69	80	--
19...	1600	18	2630	--	46600	2260	--	--	--	99
29...	1210	16	1010	26.0	33100	1430	75	83	95	--
30...	0730	1110	1230	--	35500	106000	--	--	--	86
AUG										
03...	1000	176	1060	20.0	44100	21000	56	65	81	--
03...	1004	176	904	20.0	98900	47000	--	--	--	82
03...	1830	65	1260	--	37000	6490	58	68	79	--
10...	1230	4.5	1460	26.0	9660	117	30	66	76	99
13...	0130	75	793	--	87400	17700	36	42	61	--
13...	2350	40	1640	--	16500	1780	--	--	--	93
19...	1400	1.0	1440	19.0	21200	57	75	89	95	--
21...	0400	6.0	1500	--	30500	494	--	--	--	95
21...	1600	6.0	1120	--	7590	123	--	--	--	96
27...	1400	120	618	22.0	32500	10500	53	68	84	--
SEP										
23...	1100	8.7	1150	18.0	10900	256	--	--	--	92
23...	1105	8.7	1200	18.0	10400	244	--	--	--	87
23...	1110	8.7	1240	18.0	11800	277	71	85	90	91
23...	1115	8.7	1260	18.0	11400	268	78	84	94	--
27...	1400	3.0	982	8.0	6920	56	65	79	95	99
30...	1030	3.0	2070	13.5	3310	27	--	--	--	86

RIO GRANDE BASIN  
08340500 ARROYO CHICO NEAR GUADALUPE, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN (70335)	SED. SUSP. SIEVE DIAM. % FINER THAN (70336)	SED. SUSP. FALL DIAM. % FINER THAN (70342)	SED. SUSP. FALL DIAM. % FINER THAN (70343)	SED. SUSP. FALL DIAM. % FINER THAN (70344)	SED. SUSP. FALL DIAM. % FINER THAN (70345)
NOV									
05...	98	100	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
MAR									
04...	--	--	--	--	--	95	97	100	--
APR									
07...	97	99	100	--	--	--	--	--	--
07...	95	99	100	--	--	--	--	--	--
MAY									
06...	99	100	--	--	--	--	--	--	--
06...	--	--	--	--	--	77	84	97	100
JUN									
02...	98	100	--	--	--	--	--	--	--
02...	99	100	--	--	--	--	--	--	--
24...	100	--	--	--	--	--	--	--	--
JUL									
19...	--	--	--	--	--	97	99	100	--
19...	--	--	--	--	--	98	99	100	--
19...	--	--	--	--	--	88	95	100	--
19...	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	99	100	--	--
30...	--	--	--	--	--	--	--	--	--
AUG									
03...	--	--	--	--	--	93	98	100	--
03...	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	84	90	99	100
10...	100	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	84	95	99	100
13...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	96	98	100	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	92	98	100	--
SEP									
23...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
23...	91	92	93	94	97	--	--	--	--
23...	--	--	--	--	--	97	99	100	--
27...	100	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	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. FALL DIAM. % FINER THAN (80162)	BED MAT. FALL DIAM. % FINER THAN (80163)	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)
JUN												
23...	1100	39	66	93	98	99	100	--	--	--	--	--
23...	1105	18	27	72	87	--	--	89	91	94	96	100
23...	1110	53	73	94	99	99	100	--	--	--	--	--

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												
1	2800	227	2410	29	3530	12	6050	93	3080	53	16900	274
2	6970	2020	2500	34	3190	6.9	4980	117	2870	39	17000	275
3	21800	41200	2500	46	3100	30	4040	65	3210	38	16400	266
4	44000	8670	2460	38	5740	119	3320	45	3350	74	32500	562
5	16000	121	2470	45	5360	104	2730	37	3150	74	24800	429
NOVEMBER												
6	12500	159	2600	42	4050	45	2980	32	3780	82	17800	370
7	9100	115	2440	47	3440	53	4250	78	3740	91	15500	301
8	6440	57	2400	56	3380	52	3610	58	3530	95	18000	350
9	4710	46	2430	42	3400	43	3240	52	3250	88	15200	263
10	3660	33	2480	36	3500	73	2880	39	4870	499	15600	240
DECEMBER												
11	3050	36	2560	39	4030	78	2560	35	5660	565	15400	266
12	2520	34	2550	37	4010	78	2150	29	4700	381	14500	266
13	2200	26	2580	31	3850	52	1950	26	4380	237	15000	1050
14	1930	21	2480	31	3990	54	1850	25	3940	160	24300	3540
15	1670	15	2400	30	3810	79	1720	23	3710	150	26700	1660
JANUARY												
16	1450	9.4	2470	25	5860	90	1650	18	3650	99	21000	1130
17	1310	8.5	2490	30	5050	68	1570	21	3500	94	18500	899
18	1230	8.0	2440	25	5180	56	1670	27	3320	90	15000	729
19	1270	11	2400	12	4990	54	2620	69	3360	64	11300	458
20	2590	50	3310	42	4500	182	1930	63	17800	2570	8200	221
FEBRUARY												
21	2520	49	4850	96	4800	127	2610	85	25900	5800	5980	145
22	2530	59	4280	51	5350	82	2940	48	20300	2190	4780	103
23	2500	40	3450	44	5000	30	3380	128	18500	1050	4380	83
24	2460	36	3190	33	5200	24	3000	70	18500	1050	4110	67
25	2450	29	3100	30	4960	7.6	3240	105	17900	483	3900	53
MARCH												
26	2440	31	2970	15	4560	8.0	4220	296	18000	437	3650	49
27	2460	33	2950	15	5130	33	4220	205	17300	374	3600	39
28	2460	38	3340	88	4820	18	3500	68	17500	331	4280	46
29	2500	46	4340	102	5680	25	3150	51	---	---	3500	38
30	2500	36	3740	36	6270	154	3130	74	---	---	3070	25
31	2480	29	---	---	6750	437	3130	69	---	---	2950	24
TOTAL	---	53292.9	---	1227	---	2274.5	---	2151	---	17258	---	14221

DAY	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS
	CONCEN- TRATION (MG/L)		CONCEN- TRATION (MG/L)		CONCEN- TRATION (MG/L)		CONCEN- TRATION (MG/L)		CONCEN- TRATION (MG/L)		CONCEN- TRATION (MG/L)	
APRIL												
1	2800											

## 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 (15.2 km) west of Bluewater.

DRAINAGE AREA.--201 mi<sup>2</sup> (521 km<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 (2,238.930 m) 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 (47.5 hm<sup>3</sup>) survey of 1945 at elevation 7,402.6 ft (2,256.31 m) crest of uncontrolled siphon spillway which is vented to avoid drawdown below crest, and 44,200 acre-ft (54.5 hm<sup>3</sup>) at elevation 7,405.6 ft (2,257.23 m) crest of ungated spillway over dam. Capacity table used through 1944 showed a capacity of 50,300 acre-ft (62.0 hm<sup>3</sup>) at crest of ungated spillway over dam, and that used from 1945-50, 43,500 acre-ft (53.6 hm<sup>3</sup>). Tables used prior to 1958 are not available and no adjustments are made for changes in tables. Dead storage, 3.4 acre-ft (4,190 m<sup>3</sup>) at elevation 7,345.4 ft (2,238.88 m) sill of lower outlet tube. Lake not usually drawn below conservation pool level elevation, 7,365.36 ft (2,244.962 m), 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 (58.1 hm<sup>3</sup>) Apr. 30, 1941. Contents may have been greater on Apr. 28, 1941 when peak discharge of 800 ft<sup>3</sup>/s (22.7 m<sup>3</sup>/s) occurred at station 8 mi (13 km) downstream; no storage at times prior to 1947.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 27,320 acre-ft (33.7 hm<sup>3</sup>) Apr. 25-May 2, elevation, 7,395.4 ft (2,254.12 m); minimum, 14,550 acre-ft (17.9 hm<sup>3</sup>) Feb. 2, elevation, 7,384.4 ft (2,250.77 m).

## MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 .....	7386.2	16,240	----
Oct. 31 .....	7385.5	15,560	- 680
Nov. 30 .....	7384.8	14,910	- 650
Dec. 31 .....	7384.6	14,730	- 180
CAL YR 1981 .....			-12730
Jan. 31 .....	7384.5	14,640	- 90
Feb. 28 .....	7384.7	14,820	+ 180
Mar. 31 .....	7392.8	23,920	+9100
Apr. 30 .....	7395.4	27,320	+3400
May 31 .....	7393.9	25,330	-1990
June 30 .....	7391.4	22,170	-3160
July 31 .....	7389.3	19,610	-2560
Aug. 31 .....	7388.1	18,230	-1380
Sept. 30 .....	7387.3	17,370	- 860
WTR YR 1982 .....			+1130

## 08342600 SAN MATEO CREEK NEAR SAN MATEO, NM

LOCATION.--Lat 35°20'46", long 107°46'31", in NW¼NE¼ sec.22, T.13 N., R.9 W., McKinley County, Hydrologic Unit 13020207, on right bank, 0.3 mi (0.5 km) southeast of intersections of State Highways 53 and 509, 1.4 mi (2.3 km) upstream from Arroyo del Puerto, 8.2 mi (13.2 km) west of San Mateo and 15 mi (24 km) north of Grants.

DRAINAGE AREA.--75.6 mi<sup>2</sup> (195.8 km<sup>2</sup>).

PERIOD OF RECORD.--May 1977 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,800 ft (2,073 m) from topographic map.

REMARKS.--Records fair except those for winter periods, which are poor.

AVERAGE DISCHARGE.--5 years, 0.764 ft<sup>3</sup>/s (0.022 m<sup>3</sup>/s), 554 acre-ft/yr (683,100 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 628 ft<sup>3</sup>/s (17.8 m<sup>3</sup>/s) Aug. 12, 1977, gage height, 5.80 ft (1.768 m), from rating curve extended above 170 ft<sup>3</sup>/s (4.8 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 62 ft<sup>3</sup>/s (1.76 m<sup>3</sup>/s) Aug. 3, gage height, 3.30 ft (1.006 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.48	.60	.60	1.0	.00	.00	.00	.00	.00	.10
2	.00	.00	.68	.62	.58	1.2	.00	.00	.00	.00	.20	.00
3	.71	.00	.83	.64	.55	1.2	.00	.00	.00	.00	11	.00
4	.00	.23	1.8	.64	.54	1.2	.00	.00	.00	.00	1.1	.00
5	.00	.53	1.1	.60	.60	1.2	.00	.00	.00	.00	.76	.00
6	.00	.62	1.1	.60	.54	1.0	.00	.00	.00	.00	.20	.00
7	.00	.80	1.0	.60	.40	1.0	.00	.00	.00	.00	.00	.00
8	.00	.85	.93	.60	.45	1.0	.00	.00	.00	.00	.00	.00
9	.00	.85	.72	.60	.62	1.0	.00	.00	.00	.00	.00	.00
10	.00	1.0	.84	.60	.66	.73	.00	.00	.00	.00	.00	.00
11	.00	.85	1.1	.65	1.7	.48	.00	.00	.00	.00	.00	.00
12	.00	.90	1.1	.65	1.1	.35	.00	.00	.00	.00	.00	.00
13	.00	1.2	1.3	.65	1.0	.28	.00	.00	.00	.00	.00	.00
14	.00	1.3	.92	.65	1.1	1.0	.00	.00	.00	.00	.00	.00
15	.00	1.5	.85	.65	1.0	.20	.00	.00	.00	.00	.00	.00
16	.00	1.5	1.4	.60	1.0	.00	.00	.00	.00	.00	.00	.00
17	.00	1.6	.58	.60	1.0	.00	.00	.00	.00	.00	.00	.00
18	.00	.66	.83	.60	1.4	.00	.00	.00	.00	.00	.00	.00
19	.00	.56	.90	.60	1.3	.00	.00	.00	.00	.00	.00	.00
20	.00	.02	.85	.60	1.2	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.80	.58	1.2	.00	.00	.00	.00	.00	1.6	.00
22	.00	.00	.85	.56	.76	.00	.00	.00	.00	.00	.06	.00
23	.00	.00	.81	.58	.66	.00	.00	.00	.00	.00	.01	.00
24	.00	.00	.75	.62	.80	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.70	.68	.85	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.60	.64	1.1	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.50	.62	1.0	.00	.00	.00	.00	.00	.00	.00
28	.27	.66	.40	.62	1.1	.00	.00	.00	.00	.35	.42	.00
29	.00	1.2	.45	.60	---	.00	.00	.00	.00	.44	.15	.00
30	.00	.92	.50	.60	---	.00	.00	.00	.00	.00	.20	.00
31	.00	---	.60	.60	---	.00	---	.00	---	.59	.69	---
TOTAL	.98	17.75	26.27	19.05	24.81	12.84	.00	.00	.00	1.38	16.39	.10
MEAN	.032	.59	.85	.61	.89	.41	.000	.000	.000	.045	.53	.003
MAX	.71	1.6	1.8	.68	1.7	1.2	.00	.00	.00	.59	11	.10
MIN	.00	.00	.40	.56	.40	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.9	35	52	38	49	25	.00	.00	.00	2.7	33	.2

CAL YR 1981 TOTAL 115.55 MEAN .32 MAX 23 MIN .00 AC-FT 229  
WTR YR 1982 TOTAL 119.57 MEAN .33 MAX 11 MIN .00 AC-FT 237

## 08342700 ARROYO DEL PUERTO NEAR SAN MATEO, NM

LOCATION.--Lat 35°20'21", long 107°47'37", in NW¼SE¼ sec. 21, T.13 N., R.9 W., McKinley County, Hydrologic Unit 13020207, on downstream side of bridge on State Highway 53, 1 mi (1.6 km) southwest of intersections of State Highways 53 and 509, 9.3 mi (15.0 km) west of San Mateo and 14 mi (23 km) north of Grants.

DRAINAGE AREA.--96.8 mi<sup>2</sup> (251 km<sup>2</sup>).

PERIOD OF RECORD.--October 1979 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,780 ft (2,067 m) from topographic map.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--1980 water year: Maximum discharge, 0.88 ft<sup>3</sup>/s (0.025 m<sup>3</sup>/s) at 0615 hours Nov. 21, gage height, 1.55 ft (0.472 m); no flow most of time.

1981 water year: Maximum discharge, 4.4 ft<sup>3</sup>/s (0.125 m<sup>3</sup>/s) at 1500 hours July 11, gage height, 2.54 ft (0.774 m); no flow most of time.

1982 water year: Maximum discharge, 6.8 ft<sup>3</sup>/s (0.193 m<sup>3</sup>/s) at 1215 hours Sept. 10, gage height, 3.02 ft (0.920 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.21	.28	.00	.00	.00	.24	.02	.00	.00	.00	.00
2	.00	.23	.14	.00	.00	.00	.06	.00	.00	.00	.00	.00
3	.00	.21	.00	.00	.00	.00	.08	.11	.00	.00	.00	.00
4	.00	.20	.00	.00	.00	.00	.20	.12	.00	.00	.00	.00
5	.00	.21	.00	.00	.00	.00	.20	.06	.00	.00	.00	.00
6	.00	.17	.00	.00	.00	.04	.07	.02	.00	.00	.00	.00
7	.00	.20	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
8	.00	.29	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00
9	.00	.28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.26	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00
11	.00	.28	.00	.00	.00	.00	.18	.00	.00	.00	.00	.00
12	.00	.28	.00	.09	.00	.00	.18	.00	.00	.00	.00	.00
13	.00	.29	.00	.10	.00	.00	.12	.00	.00	.00	.00	.00
14	.00	.31	.00	.00	.00	.00	.23	.00	.00	.00	.00	.00
15	.00	.29	.00	.04	.01	.00	.23	.11	.00	.00	.00	.00
16	.00	.26	.00	.00	.04	.00	.18	.12	.00	.00	.00	.00
17	.00	.21	.00	.00	.01	.00	.17	.17	.00	.00	.00	.00
18	.00	.17	.00	.00	.00	.07	.17	.02	.00	.00	.00	.00
19	.00	.16	.00	.00	.00	.05	.14	.00	.00	.00	.00	.00
20	.00	.14	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00
21	.20	.54	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00
22	.23	.26	.00	.00	.00	.09	.06	.00	.00	.00	.00	.00
23	.23	.24	.00	.00	.00	.21	.00	.00	.00	.00	.00	.00
24	.17	.26	.00	.00	.00	.17	.02	.00	.00	.00	.00	.00
25	.02	.26	.00	.00	.00	.06	.14	.00	.00	.00	.00	.00
26	.08	.21	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00
27	.00	.24	.00	.00	.00	.07	.03	.00	.00	.00	.00	.00
28	.16	.48	.00	.00	.00	.20	.04	.00	.00	.00	.00	.00
29	.21	.31	.00	.00	.00	.23	.04	.00	.00	.00	.00	.00
30	.23	.31	.00	.00	---	.26	.14	.00	.00	.00	.00	.00
31	.23	---	.00	.00	---	.24	---	.00	---	.00	.00	---
TOTAL	1.76	7.76	.42	.29	.06	1.69	3.39	.75	.00	.00	.00	.00
MEAN	.057	.26	.014	.009	.002	.055	.11	.024	.000	.000	.000	.000
MAX	.23	.54	.29	.10	.04	.26	.24	.17	.00	.00	.00	.00
MIN	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	3.5	15	.8	.6	.1	3.4	6.7	1.5	.00	.00	.00	.00

WTR YR 1980 TOTAL 16.12 MEAN .044 MAX .54 MIN .00 AC-FT 32



## RIC GRANDE BASIN

08342700 ARROYO DEL PUERTO NEAR SAN MATEO, NM -- Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
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	.20	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.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	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.06	.00	.00	.00	.00	.00	.00	.00	.27	.00	.00
12	.00	.05	.00	.00	.00	.00	.00	.00	.00	.61	.00	.00
13	.00	.05	.00	.00	.00	.00	.00	.00	.00	.17	.00	.00
14	.00	.05	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00
15	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.01	.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	.21
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.08
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	.14	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	.00	.76	.00	.00	.00	.00	.00	.00	.14	1.36	.00	.29
MEAN	.000	.025	.000	.000	.000	.000	.000	.000	.005	.044	.000	.010
MAX	.00	.10	.00	.00	.00	.00	.00	.00	.14	.61	.00	.21
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	1.5	.00	.00	.00	.00	.00	.00	.3	2.7	.00	.6

CAL YR 1980 TOTAL 6.94 MEAN .019 MAX .26 MIN .00 AC-FT 14  
WTR YR 1981 TOTAL 2.55 MEAN .007 MAX .61 MIN .00 AC-FT 5.1

08342700 ARROYO DEL PUERTO NEAR SAN MATEO, NM -- Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	.56	.56
2	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.23
3	.29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00
4	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.6	.65
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	2.4
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.38	1.1
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.94
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.81
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.81
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5
11	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.96	1.2
12	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.29	.96
13	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.74
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.28
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	.30	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.34	.00	.00	.00	.00	.00	.31	.00
19	.00	.00	.00	.00	.29	.00	.00	.00	.00	.00	.98	.00
20	.00	.00	.00	.00	.26	.00	.00	.00	.00	.01	.74	1.7
21	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.74	1.8
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.86	1.4
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.76	1.1
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.94	1.2
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.54	.81
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.46	.54
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.69	.02
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.69	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	1.7	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.94	.54
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.78	---
TOTAL	.34	.00	.00	.00	1.34	.14	.00	.00	.00	.01	15.94	21.29
MEAN	.011	.000	.000	.000	.048	.005	.000	.000	.000	.000	.51	.71
MAX	.29	.00	.00	.00	.34	.10	.00	.00	.00	.01	1.7	2.4
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.7	.00	.00	.00	2.7	.3	.00	.00	.00	.02	32	42

CAL YR 1981	TOTAL	2.13	MEAN	.006	MAX	.61	MIN	.00	AC-FT	4.2
WTR YR 1982	TOTAL	39.06	MEAN	.11	MAX	2.4	MIN	.00	AC-FT	77

## RIO GRANDE BASIN

08343000 RIO SAN JOSE AT GRANTS, NM

LOCATION.--Lat 35°09'16", long 107°52'11", in SW¼NW¼ sec.26, T.11 N., R.10 W., Cibola County, Hydrologic Unit 13020207, on right bank at bridge on old State Highway 53 in Grants, 0.2 mi (0.3 km) south of old U.S. Highway 66, and at mile 67.8 (109.1 km).

DRAINAGE AREA.--1,020 mi<sup>2</sup> (2,640 km<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 (1,971.550 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). See WSP 1732 or 1923 for history of changes prior to Jan. 1, 1926.

REMARKS.--Records good. Flow slightly regulated by Bluewater Lake (station 08341400) 24 mi (39 km) upstream. Diversions and groundwater withdrawals for irrigation of about 4,500 acres (18 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--41 years (water years 1913, 1915-20, 1922, 1924-25, 1950-66, 1968-82), 3.14 ft<sup>3</sup>/s (0.089 m<sup>3</sup>/s), 2,270 acre-ft/yr (2.80 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (1950-66 AND SINCE 1968).--Maximum discharge recorded, 1,760 ft<sup>3</sup>/s (49.8 m<sup>3</sup>/s) Aug. 28, 1952, gage height, 5.35 ft (1.631 m), from rating curve extended above 300 ft<sup>3</sup>/s (8.50 m<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.--Maximum discharge, 176 ft<sup>3</sup>/s (4.98 m<sup>3</sup>/s) at 1900 hours Sept. 3, gage height, 3.52 ft (1.073 m), no other peak above base of 200 ft<sup>3</sup>/s (5.7 m<sup>3</sup>/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	.55	11
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47	4.0
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3
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	.24
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.62
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	.03	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.06	.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	1.5	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.7	2.2	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	1.1	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.19	.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	.24	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.40	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.66	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.0	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	.00	.00	.00	.00	.00	.09	.00	.00	.00	10.75	6.46	17.16
MEAN	.000	.000	.000	.000	.000	.003	.000	.000	.000	.35	.21	.57
MAX	.00	.00	.00	.00	.00	.06	.00	.00	.00	3.7	2.2	11
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.2	.00	.00	.00	21	13	34

CAL YR 1981 TOTAL 38.37 MEAN .11 MAX 14 MIN .00 AC-FT 77  
WTR YR 1982 TOTAL 34.46 MEAN .094 MAX 11 MIN .00 AC-FT 68

## 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 (0.3 km) east of intersection of Roosevelt and First Avenue, and 1.1 mi (1.8 km) upstream from confluence with Rio San Jose (formerly Bluewater Creek).

DRAINAGE AREA.--13.0 mi<sup>2</sup> (33.7 km<sup>2</sup>).

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

GAGE.--Water-stage recorder and culvert control. Altitude of gage is 6,450 ft (1,966 m), from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--21 years, 0.145 ft<sup>3</sup>/s (0.004 m<sup>3</sup>/s), 105 acre-ft/yr (129,500 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft<sup>3</sup>/s (43.9 m<sup>3</sup>/s) Aug. 26, 1963, gage height, 5.10 ft (1.554 m), from rating curve extended above 220 ft<sup>3</sup>/s (6.23 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 3.17 ft (0.966 m), 5.10 ft (1.554 m), and 5.38 ft (1.640 m); maximum gage height, 5.38 ft (1.640 m) Sept. 8, 1967; no flow for most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 240 ft<sup>3</sup>/s (6.80 m<sup>3</sup>/s) at 1800 hours Sept. 3, gage height, 1.88 ft (0.573 m) no other peak above base of 175 ft<sup>3</sup>/s (5.0 m<sup>3</sup>/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	.04	.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	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.04	.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	.08	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1981 TOTAL 61.35 MEAN .17 MAX 44 MIN .00 AC-FT 122  
WTR YR 1982 TOTAL 11.22 MEAN .031 MAX 11 MIN .00 AC-FT 22

## RIO GRANDE BASIN

08343500 RIO SAN JOSE NEAR GRANTS, NM

LOCATION.--Lat 35°04'27", long 107°45'01", in SE¼SE¼ sec.23, T.10 N., R.9 W., Cibola County, Hydrologic Unit 13020207, on right bank at west boundary of Acoma Pueblo Grant, 8.5 mi (13.7 km) southeast of Grants, and at mile 57.4 (92.4 km).

DRAINAGE AREA.--2,300 mi<sup>2</sup> (5,960 km<sup>2</sup>), approximately, of which 1,130 mi<sup>2</sup> (2,930 km<sup>2</sup>) does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1936 to current year. Prior to October 1955, published as "San Jose River 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 (1,910.934 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow slightly regulated by Bluewater Lake (station 08341400), 34 mi (55 km) upstream. Diversions and ground-water withdrawal for irrigation of about 5,100 acres (21 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years, 6.66 ft<sup>3</sup>/s (0.189 m<sup>3</sup>/s), 4,830 acre-ft/yr (5.96 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft<sup>3</sup>/s (39.6 m<sup>3</sup>/s) Sept. 20, 1963, gage height, 4.87 ft (1.484 m), from rating curve extended above 450 ft<sup>3</sup>/s (12.7 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 3.19 ft (0.972 m) and 4.87 ft (1.484 m); minimum, 1.9 ft<sup>3</sup>/s (0.054 m<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.--Maximum discharge, 38 ft<sup>3</sup>/s (1.08 m<sup>3</sup>/s) at 1630 hours Aug. 25, gage height, 1.91 ft (0.582 m), no peak above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s); minimum, 3.3 ft<sup>3</sup>/s (0.09 m<sup>3</sup>/s) Jan. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	4.9	4.9	4.6	4.2	4.6	5.3	5.2	6.4	5.1	7.4	6.9
2	7.4	4.9	4.8	4.2	4.2	5.0	5.3	5.3	6.5	5.2	8.0	6.0
3	9.6	5.0	4.9	4.1	4.1	5.0	5.4	5.8	6.5	5.8	7.3	5.4
4	10	4.9	4.7	4.0	4.1	5.0	5.4	5.5	6.7	5.5	7.7	6.0
5	8.0	4.9	4.6	4.1	4.0	4.9	5.4	5.7	6.6	5.4	7.9	14
6	6.0	4.9	4.7	4.2	3.7	4.9	5.5	5.3	6.2	5.1	7.8	9.0
7	5.6	5.1	4.4	3.9	4.0	4.9	5.5	5.4	6.1	5.3	7.8	6.7
8	5.4	5.1	4.3	3.7	4.3	4.9	5.5	5.5	6.2	5.3	7.3	5.3
9	5.4	5.0	4.3	3.7	4.2	4.9	5.2	5.7	6.0	5.2	7.5	4.7
10	5.4	4.7	4.4	3.9	4.3	4.8	5.2	5.6	6.1	5.2	7.3	4.0
11	5.6	4.6	4.5	4.1	4.5	4.9	5.2	5.5	6.1	5.1	7.3	4.1
12	5.7	4.6	4.4	4.3	5.1	4.8	5.1	5.6	6.1	5.0	7.6	3.9
13	5.5	4.6	4.6	3.8	4.5	5.0	5.2	5.9	5.8	5.3	6.8	4.0
14	5.4	4.6	4.4	3.8	4.4	8.5	5.0	6.0	5.9	5.3	6.0	4.0
15	5.7	4.6	4.5	4.0	4.3	6.1	5.0	6.2	6.0	5.5	6.1	3.8
16	5.6	4.6	4.5	3.9	4.4	4.9	5.0	6.3	6.5	5.7	5.0	3.8
17	5.5	4.6	4.3	4.2	4.4	4.8	5.0	6.1	6.6	5.6	5.5	3.8
18	5.5	4.9	4.2	4.1	4.7	4.8	5.1	6.4	6.4	6.1	5.6	3.7
19	5.5	4.8	4.4	4.0	6.3	4.8	5.4	6.5	6.3	6.6	5.6	4.6
20	5.5	4.8	4.4	4.0	5.8	4.8	5.2	6.6	6.2	6.2	5.8	4.4
21	5.5	4.9	4.4	4.0	4.8	4.8	5.1	6.6	6.2	7.2	6.3	5.3
22	5.5	4.9	4.3	3.9	4.6	4.8	5.4	6.7	6.2	5.6	6.6	5.4
23	5.4	4.9	4.2	3.7	4.5	4.3	5.5	7.1	6.3	5.6	6.2	5.2
24	5.5	4.9	4.0	4.0	4.6	4.9	5.6	6.6	6.3	5.9	6.2	4.1
25	5.3	5.0	4.2	4.0	5.3	4.8	5.3	6.7	6.1	6.0	9.3	3.6
26	5.3	4.8	4.2	4.1	5.3	5.2	5.2	6.5	5.9	6.3	7.3	3.6
27	5.2	4.9	4.3	4.1	4.7	5.4	5.0	6.6	5.5	6.2	19	3.6
28	5.2	4.9	4.2	4.1	4.7	5.5	5.1	6.9	5.5	6.0	17	3.6
29	5.1	5.0	4.4	4.2	---	5.3	5.3	6.9	5.4	6.3	9.3	3.6
30	4.9	5.0	4.5	4.1	---	5.1	5.2	6.8	5.2	7.1	7.4	3.6
31	4.9	---	4.6	4.2	---	5.2	---	6.4	---	7.4	11	---
TOTAL	182.1	145.3	137.5	125.0	128.0	158.1	157.6	189.9	183.8	179.1	242.9	149.7
MEAN	5.87	4.84	4.44	4.03	4.57	5.10	5.25	6.13	6.13	5.78	7.84	4.99
MAX	10	5.1	4.9	4.0	6.3	8.5	5.6	7.1	6.7	7.4	19	14
MIN	4.9	4.6	4.0	3.7	3.7	4.6	5.0	5.2	5.2	5.0	5.0	3.6
AC-FT	361	288	273	248	254	314	313	377	365	355	482	297

CAL YR 1981 TOTAL 2264.2 MEAN 6.20 MAX 37 MIN 4.0 AC-FT 4490  
WTR YR 1982 TOTAL 1979.0 MEAN 5.42 MAX 19 MIN 3.6 AC-FT 3930

08343500 RIO SAN JOSE NEAR GRANTS, NM -- Continued

## WATER QUALITY RECORDS

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

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
APR 26...	1045	5.2	1380	1410	8.1	8.4	22.0	14.0	14.6	33
DATE		HARD- NESS (MG/L AS CACO3) (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)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 26...	393	163	88	42	170	3.8	7.5	280	340	150
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 AS N) (70301)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
APR 26...		.8	25	969	1.3	.140	.78	1.20	3.9	.3

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		ARSENIC	ARSENIC	BARIUM,	BARIUM,	BORON,	CADMIUM	CADMIUM	CHRO-	CHRO-	COBALT,	COPPER,	
		TOTAL	DIS-	TOTAL	DIS-	DIS-	TOTAL	DIS-	M- MIUM,	M- MIUM,	TOTAL	TOTAL	
		UG/L	SOLVED	RECOV-	SOLVED	SOLVED	RECOV-	SOLVED	RECOV-	DIS-	RECOV-	RECOV-	
DATE	TIME	AS AS	AS AS	AS BA	AS BA	AS B	AS CD	AS CD	AS CR	AS CR	AS CO	AS CU	
		(01002)	(01000)	(01007)	(01005)	(01020)	(01027)	(01025)	(01034)	(01030)	(01037)	(01042)	
APR 26...	1045	7	6	<100	45	400	<30	<3	10	<10	1	<50	
		COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
APR 26...	2	<9	<100	<1	.1	.1	4	4	4	<1	30	<12	

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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, RADON METHOD (PCI/L AS U) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
APR 26...	1045	<29	<.4	14	1.0	14	1.0	.06	4.7

RIO GRANDE BASIN  
08343500 RIO SAN JOSE NEAR GRANTS, NM -- Continued  
WATER QUALITY RECORDS

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML) (60050)
APR 26...	7	44	2500

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
IDENTIFICATION OF PHYTOPLANKTON

DATE	APR 26,82
TIME	1045
TOTAL CELLS/ML	2500
DIVERSITY: DIVISION	1.2
..CLASS	1.2
..ORDER	2.7
...FAMILY	2.8
....GENUS	3.2

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...ACHNANTHALES		
...ACHNANTHACEAE		
....COCCONEIS	380#	15
....RHOICOSPHENIA	110	5
..BACILLARIALES		
...NITZSCHIAEAE		
....NITZSCHIA	220	9
..EUPODISCALES		
...COSCINODISCACEAE		
....CYCLOTELLA	90	4
....MELOSIRA	250	10
..FRAGILARIALES		
...FRAGILARIACEAE		
....DIATOMA	160	6
....SYNEDRA	180	7
..NAVICULALES		
...GOMPHONEMACEAE		
....GOMPHONEMA	180	7
...NAVICULACEAE		
....NAVICULA	67	3
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
...CHLOROCOCCACEAE		
....SCHROEDERIA	90	4
...VOLVOCALES		
..CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	67	3
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
...EUGLENACEAE		
....EUGLENA	670#	27

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%  
\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 26...	1045	5.2	14.0	19	.27	69

## 08349800 RIO PAGUATE BELOW JACKPILE MINE NEAR LAGUNA, NM

LOCATION.--Lat 35°07'09", long 107°19'58", in SW 1/4 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 (2.3 km) downstream from Rio Moquino, 4.2 mi (6.8 km) upstream from Pagate Reservoir, 5.0 mi (8.0 km) southeast of Pagate and 26 mi (42 km) east of Grants.

DRAINAGE AREA.--107 mi<sup>2</sup> (277 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 5,820 ft (1,774 m), from topographic map.

REMARKS.--Records fair except those for winter months and August and September, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years, 1.51 ft<sup>3</sup>/s (0.043 m<sup>3</sup>/s), 1,090 acre-ft/yr (1.34 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,520 ft<sup>3</sup>/s (99.7 m<sup>3</sup>/s) Aug. 16, 1982, gage height, 11.8 ft (3.597 m), from floodmarks, from rating curve extended above 20 ft<sup>3</sup>/s (0.6 m<sup>3</sup>/s) on basis of slope-area measurement at gage height 8.60 ft (2.621 m) and contracted-opening measurement at gage height 10.19 ft (3.106 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 3	0015	416 11.8	4.91 1.497	Aug. 14	1415	445 12.6	5.25 1.600
May 5	1330	330 9.35	4.64 1.414	Aug. 16	unknown	*3520 99.7	11.8 3.597
July 16	1530	518 14.7	5.19 1.582	Aug. 21	2230	464 13.1	5.51 1.679
July 28	1545	140 3.96	4.16 1.268	Aug. 28	1745	171 4.84	4.82 1.469
July 30	1545	1140 32.3	7.04 2.146	Sept. 7	1815	130 3.68	4.62 1.408
Aug. 3	1430	764 21.6	6.25 1.905	Sept. 20	unknown	2600 73.6	9.80 2.987

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.68	1.5	.66	1.5	1.2	1.5	10	.82	.14	5.0	1.0
2	3.0	.73	1.8	.68	4.0	1.2	1.7	1.5	.82	.11	2.0	1.0
3	4.0	.73	1.0	.98	3.1	1.2	1.7	1.4	.72	.08	50	.48
4	.45	.55	.81	2.0	1.6	1.2	1.6	1.2	.64	.10	5.0	.16
5	.45	.73	.74	1.1	1.6	1.2	1.5	20	.60	.07	.50	3.5
6	.40	.62	.68	.75	5.0	1.3	1.5	4.0	.62	.07	.37	.49
7	.37	.58	.71	.94	1.5	1.3	1.5	1.5	.52	.35	.31	6.0
8	.30	.66	.59	2.3	1.3	1.3	1.4	1.5	.52	.22	.28	1.0
9	.27	.67	.62	2.9	1.5	1.2	1.4	1.4	.49	.09	.25	2.0
10	.24	.76	.60	.88	1.0	1.1	1.4	1.5	.61	.05	.22	1.0
11	.19	.85	.56	2.2	1.3	1.1	1.4	1.4	.61	.06	.19	.80
12	.18	.77	.52	1.5	1.1	1.1	1.3	1.6	.51	.07	.17	.60
13	.20	.73	.54	1.8	.98	1.5	1.3	1.4	.46	.07	.27	.50
14	.19	.78	.52	2.7	.97	1.7	1.4	1.3	.36	.04	21	.40
15	.20	.78	.59	2.1	.97	1.5	1.4	1.4	.41	.02	5.0	.40
16	.18	.78	.50	3.6	.86	1.4	1.3	1.3	.48	45	250	.40
17	.22	.81	.54	1.9	.89	1.3	1.4	1.4	.46	5.0	50	.30
18	.23	.85	.84	1.3	1.1	1.3	1.2	1.5	.34	2.0	5.0	5.0
19	.28	.80	1.2	1.1	1.1	1.3	1.2	1.6	.32	1.5	1.0	10
20	.31	1.0	.93	1.1	1.1	1.4	1.1	1.6	.41	1.4	.59	100
21	.38	.70	.53	1.4	1.0	1.3	1.2	1.6	.33	1.3	22	10
22	.36	.75	.48	1.5	1.0	1.4	1.4	1.2	.26	1.2	26	4.0
23	.34	.75	.87	3.7	1.0	1.3	1.6	1.3	.20	1.1	2.0	2.0
24	.37	.72	1.5	2.8	1.0	1.3	1.4	1.3	.21	1.0	5.0	.80
25	.36	.74	.30	1.3	1.2	1.3	1.2	1.1	.17	1.0	6.0	.60
26	.36	1.0	.55	1.0	1.3	1.5	1.2	.87	.15	1.1	2.0	.50
27	.39	.91	.60	1.0	1.2	1.6	1.1	1.1	.07	1.2	1.0	.50
28	.39	1.0	1.0	.95	1.2	1.5	1.1	1.1	.11	10	8.0	.40
29	.42	1.1	1.7	1.0	---	1.3	1.2	1.0	.07	10	1.0	.50
30	.51	.93	1.7	1.0	---	1.5	25	1.0	.03	40	1.0	.50
31	.65	---	.65	1.1	---	1.6	---	1.0	---	10	10	---
TOTAL	16.79	23.46	25.67	49.24	41.37	41.4	64.6	71.07	12.32	134.34	481.15	154.83
MEAN	.54	.78	.83	1.59	1.48	1.34	2.15	2.29	.41	4.33	15.5	5.16
MAX	4.0	1.1	1.8	3.7	5.0	1.7	25	20	.82	45	250	100
MIN	.18	.55	.30	.66	.86	1.1	1.1	.87	.03	.02	.17	.16
AC-FT	33	47	51	96	82	82	128	141	24	266	954	307

CAL YR 1981 TOTAL 499.72 MEAN 1.37 MAX 100 MIN .01 AC-FT 991  
WTR YR 1982 TOTAL 1116.24 MEAN 3.06 MAX 250 MIN .02 AC-FT 2210



## RIO GRANDE BASIN

08351500 RIO SAN JOSE AT CORREO, NM

LOCATION.--Lat 34°58'03", long 107°10'10", in NE¼ sec.32, T.9 N., R.3 W., Cibola County, Hydrologic Unit 13020207, on left bank 0.3 mi (0.5 km) downstream from State Highway 6, 1.2 mi (1.9 km) northeast of Correo, and 13 mi (21 km) upstream from mouth.

DRAINAGE AREA.--3,660 mi<sup>2</sup> (9,480 km<sup>2</sup>), approximately, of which about 1,130 mi<sup>2</sup> (2,930 km<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 (1,668.743 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1958 to Sept. 30, 1975, water-stage recorder at site 1 mi (1.6 km) upstream at datum 17.55 ft (5.349 m) higher.

REMARKS.--Records good except those for January, which are fair. Flow regulated to some extent since 1927 by Bluewater Lake (station 08341400) 79 mi (127 km) upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years, 11.2 ft<sup>3</sup>/s (0.317 m<sup>3</sup>/s), 8,110 acre-ft/yr (10.0 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,150 ft<sup>3</sup>/s (202 m<sup>3</sup>/s) Aug. 11, 1955; maximum gage height, 20.7 ft (6.31 m), 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 (4.69 m), from floodmarks, (discharge, about 11,000 ft<sup>3</sup>/s or 312 m<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.--Peak discharges above base of 800 ft<sup>3</sup>/s (23 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 3	1115	1490 42.2	5.92 1.804	Sept. 20	1245	*1580 44.7	6.08 1.853
July 31	0230	890 25.2	4.92 1.500				

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	3.8	5.0	2.7	4.6	6.3	4.4	.00	.00	.00	3.2	98
2	7.3	4.0	4.7	1.0	4.1	5.8	4.1	1.1	.00	.00	.64	34
3	410	4.2	5.1	1.2	4.9	5.5	3.4	11	.00	.00	.85	13
4	97	4.4	5.9	2.3	4.8	5.2	3.5	5.4	.00	.00	71	15
5	64	4.5	6.5	2.0	4.8	5.3	3.6	3.3	.00	.00	.88	11
6	23	4.6	6.4	2.0	4.8	5.3	3.5	3.4	.00	.00	.02	14
7	10	4.7	6.4	5.6	5.2	5.1	3.5	4.1	.00	.00	.00	5.0
8	5.8	4.7	6.2	4.5	5.6	5.1	3.5	2.7	.00	.00	14	7.2
9	3.2	4.6	5.3	3.3	6.7	5.1	2.7	.81	.00	.00	1.0	8.6
10	1.7	4.6	4.2	2.2	6.3	5.1	3.5	.00	.00	.00	.64	4.3
11	1.2	4.5	4.1	1.0	6.8	4.9	2.9	.00	.00	.00	.46	6.1
12	.68	4.7	4.3	1.9	6.9	5.1	1.6	.00	.00	.00	.32	6.3
13	.48	5.4	3.9	2.9	6.7	5.4	1.2	.00	.00	.00	1.3	5.0
14	.32	5.8	3.1	4.5	6.3	6.9	.44	.00	.00	.00	29	4.6
15	.26	6.1	3.2	5.2	6.2	7.4	.91	.00	.00	.00	5.9	4.3
16	.00	6.1	2.4	4.5	5.9	7.3	.00	.00	.00	.00	8.3	4.1
17	.00	6.2	2.5	5.2	5.6	7.3	.39	.00	.00	3.0	227	3.9
18	.03	5.2	1.1	7.6	5.8	6.5	.67	.00	.00	.00	30	47
19	.30	3.6	.98	7.0	6.6	5.8	.89	.00	.00	1.4	16	32
20	.25	3.0	.00	6.2	6.8	5.3	.96	.00	.00	.00	15	541
21	.21	2.8	.00	5.6	6.7	5.1	1.5	.00	.00	.00	18	152
22	.54	2.4	.00	4.2	6.5	5.0	1.6	.00	.00	.00	177	119
23	.93	2.9	.00	4.4	6.4	5.2	1.5	.00	.00	.00	143	95
24	1.6	3.5	.00	4.8	6.0	4.9	1.4	.00	.00	.00	107	20
25	2.6	3.1	.20	5.0	6.5	4.7	.42	.00	.00	.00	44	8.2
26	3.1	2.5	1.0	5.5	6.5	4.9	.42	.00	.00	.00	117	5.8
27	3.5	2.3	1.9	5.7	6.5	5.4	.34	.00	.00	.00	166	4.3
28	3.6	2.7	1.5	5.3	6.4	5.4	.09	.00	.00	.00	77	3.4
29	3.8	3.9	2.0	5.1	---	5.3	.00	.00	.00	.00	74	3.2
30	3.8	5.7	3.0	4.9	---	5.0	.00	.00	.00	3.8	53	3.2
31	3.7	---	4.6	4.6	---	4.7	---	.00	---	111	93	---
TOTAL	667.90	126.5	95.48	127.9	166.9	171.3	52.93	31.81	.00	119.20	1494.51	1278.5
MEAN	21.5	4.22	3.08	4.13	5.96	5.53	1.76	1.03	.0000	3.85	48.2	42.6
MAX	410	6.2	6.5	7.6	6.9	7.4	4.4	11	.00	111	227	541
MIN	.00	2.3	.00	1.0	4.1	4.7	.00	.00	.00	.00	.00	3.2
AC-FT	1320	251	189	254	331	340	105	63	.00	236	2960	2540

CAL YR 1981 TOTAL 3470.46 MEAN 9.51 MAX 438 MIN .00 AC-FT 6880  
WTR YR 1982 TOTAL 4332.93 MEAN 11.9 MAX 541 MIN .00 AC-FT 8590

08353000 RIO PUERCO NEAR BERNARDO, NM

LOCATION.--Lat 34°24'33", long 106°51'09", in SE¼ sec.8, T.2 N., R.1 E., Socorro County, Hydrologic Unit 13020204, on bridge on former U.S. Highway 85 and 0.2 mi (0.3 km) upstream from Interstate Highway 25, 1.2 mi (1.9 km) southwest of Bernardo, 3 mi (4.8 km) upstream from mouth, and 18 mi (29 km) south of Belen.

DRAINAGE AREA.--7,350 mi<sup>2</sup> (19,040 km<sup>2</sup>), approximately, of which at least 1,130 mi<sup>2</sup> (2,930 km<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 (1,439.369 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 24, 1969, at datum 3.10 ft (0.945 m) higher.

REMARKS.--Water-discharge records fair. Diversions for irrigation of about 11,500 acres (47 km<sup>2</sup>) above station (includes 3,700 acres or 15.0 km<sup>2</sup> irrigated wholly or partly from wells).

AVERAGE DISCHARGE.--42 years (water years 1941-82), 46.0 ft<sup>3</sup>/s (1.303 m<sup>3</sup>/s), 33,300 acre-ft/yr (41.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft<sup>3</sup>/s (532 m<sup>3</sup>/s) Sept. 23, 1941, from rating curve extended above 7,800 ft<sup>3</sup>/s (221 m<sup>3</sup>/s); maximum gage height, 16.9 ft (5.15 m) 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 or 991 m<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 or 867 m<sup>3</sup>/s, by slope-area method, from reports of State Engineer).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft<sup>3</sup>/s (57 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Aug. 28	1600	2270 64.3	10.70 3.261	Sept. 19	Unknown	*3460 98.0	11.64 3.548

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.00	.00	.00	.00	9.6	.00	.00	5.0	.00	234	370
2	.63	.00	.00	.00	.00	6.3	.90	59	3.0	.00	80	336
3	152	.00	.00	.00	.00	6.2	.98	23	1.0	.00	3.0	10
4	1150	.00	.00	.00	.00	6.0	.08	18	.40	.00	104	5.0
5	631	.00	.00	.00	.00	6.0	.00	20	.17	.00	159	2.0
6	167	.00	.00	.00	.00	5.8	.00	42	.00	.00	41	43
7	52	.00	.00	.00	.00	5.4	.00	40	.00	.00	19	5.0
8	10	.00	.00	.00	.00	5.4	.00	22	.00	.00	10	2.0
9	5.0	.00	.00	.00	.00	5.4	.00	15	.00	.00	66	1.0
10	.00	.00	.00	.00	.00	2.0	.00	12	.00	.00	72	79
11	.00	.00	.00	.00	.00	2.0	.00	8.5	.00	.00	2.0	269
12	.00	.00	.00	.00	.00	1.0	.00	4.0	.00	.00	1.0	248
13	.00	.00	.00	.00	.00	.50	.00	2.0	.00	.00	50	8.0
14	.00	.00	.00	.00	.00	.50	.00	.00	.00	.00	67	20
15	.00	.00	.00	.00	.00	6.5	.00	5.3	.00	.00	386	6.0
16	.00	.00	.00	.00	.00	71	.00	7.9	.00	.00	18	11
17	.00	.00	.00	.00	.22	26	.00	7.9	.00	.00	1.0	6.6
18	.00	.00	.00	.00	.74	18	.00	6.0	.00	.00	102	390
19	.00	.00	.00	.00	.86	16	.00	4.3	.00	.00	50	1540
20	.00	.00	.00	.00	.16	8.0	.00	3.2	.00	4.2	1.0	450
21	.00	.00	.00	.00	.00	5.0	.00	.00	.00	.17	5.0	1050
22	.00	.00	.00	.00	.00	3.0	.00	18	.00	4.4	214	798
23	.00	.00	.00	.00	23	1.0	.00	16	.00	1.6	660	150
24	.00	.00	.00	.00	35	.80	.00	3.0	.00	.00	600	10
25	.00	.00	.00	.00	26	.50	.00	8.5	.00	.00	480	8.0
26	.00	.00	.00	.00	19	.40	.00	13	.00	.00	660	5.0
27	.00	.00	.00	.00	16	.20	.00	10	.00	.00	925	3.0
28	.00	.00	.00	.00	13	.10	.00	9.0	.00	.89	1370	2.0
29	.00	.00	.00	.00	---	.08	.00	8.0	.00	13	410	.00
30	.00	.00	.00	.00	---	.05	.00	7.0	.00	121	250	.00
31	.00	---	.00	.00	---	.00	---	6.0	---	207	129	---
TOTAL	2168.63	.00	.00	.00	138.98	218.73	1.96	398.60	9.57	352.26	7169.0	5827.60
MEAN	70.0	.0000	.0000	.0000	4.96	7.06	.065	12.9	.32	11.4	231	194
MAX	1150	.00	.00	.00	35	71	.98	59	5.0	207	1370	1540
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.00
AC-FT	4300	.00	.00	.00	276	434	3.9	791	19	699	14220	11560

CAL YR 1981	TOTAL	10174.75	MEAN 27.9	MAX 1150	MIN .00	AC-FT 20180
WTR YR 1982	TOTAL	16285.33	MEAN 44.6	MAX 1540	MIN .00	AC-FT 32300

RIO GRANDE BASIN  
08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1956 to current year.

WATER TEMPERATURES: October 1964 to current year.

SUSPENDED SEDIMENT DISCHARGE: 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 micromhos June 10, 1968; minimum daily, 238 micromhos July 30, 1969.

WATER TEMPERATURES: Maximum, 32.0°C July 29, 1977; minimum, 0.0°C Dec. 30, 1971.

SEDIMENT CONCENTRATIONS: Maximum daily, 267,000 mg/L July 26, 1957; minimum daily, no flow on many days of each year.

SEDIMENT LOADS: Maximum daily, 2,240,000 tons (2,030,000 tonnes) Aug. 7, 1957; minimum daily, 0 tons (0 tonnes) on many days of each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,530 micromhos Mar. 29; minimum daily, 969 micromhos Aug. 17.

WATER TEMPERATURES: Maximum, 31.0°C July 20; minimum, 2.0°C, Mar. 7.

SEDIMENT CONCENTRATIONS: Maximum daily, 176,000 mg/L Aug. 15; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 577,000 tons (523,000 tonnes) Sept. 19; minimum daily, 0 tons (0 tonnes) on many days.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT 05...	1300	477	1490	1550	8.3	7.9	26.5	17.0	--	309	169
MAY 03...	1015	22	2700		8.0	7.6	21.0	16.0	21.0	605	501
JUL 30...	1330	360	2150	2440	7.2	7.1	27.0	28.0	--	--	--
AUG 26...	1230	304	2200	2300	7.3	8.1	28.5	22.0	--	930	783

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 CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)
OCT 05...	94	18	190	4.9	5.9	530	27	.7	7.5	957
MAY 03...	173	42	390	7.2	9.7	1300	66	1.0	15	2060
JUL 30...	--	--	--	--	--	--	--	--	--	--
AUG 26...	280	56	220	3.3	9.8	1200	28	.7	9.4	1890

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 05...	1300	110	18
MAY 03...	1015	210	1800
AUG 26...	1230	280	510

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 03...	1015	<57	6900	<25	3100	<25	3000	.11	17

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 04...	0930	476	13.0	82800	106000	52	60	74	97	100	--	--
09...	1430	5.0	20.0	36600	494	78	91	99	100	--	--	--
FEB 18...	1105	.74	3.0	30200	60	94	98	100	--	--	--	--
23...	1730	44	11.0	78300	9300	66	77	96	99	100	--	--
MAR 19...	1450	16	14.0	92200	3980	73	84	100	--	--	--	--
29...	1215	.08	17.0	3980	.86	97	97	100	--	--	--	--
MAY 02...	1600	134	21.0	155000	56100	--	--	--	--	--	--	97
03...	1015	22	16.0	94700	5630	70	84	99	100	--	--	--
09...	1600	15	17.0	67100	2720	--	--	--	--	--	--	100
17...	1730	8.0	24.0	76600	1650	--	--	--	--	--	--	100
JUN 01...	1730	5.0	21.0	69000	931	78	89	100	--	--	--	--
03...	1800	1.0	24.0	78500	212	--	--	--	--	--	--	100
JUL 23...	1000	1.7	23.0	155000	711	--	--	--	--	--	--	100
30...	1330	360	28.0	127000	123000	55	64	88	97	99	100	--
AUG 06...	0900	40	21.0	99000	10700	59	77	90	99	100	--	--
06...	1445	38	27.0	99000	10200	69	78	97	100	--	--	--
18...	1000	100	23.0	112000	30200	--	--	--	--	--	--	97
26...	1230	304	22.0	140000	115000	35	39	56	84	99	100	--
28...	1400	2000	23.0	55300	299000	--	--	--	--	--	--	98
31...	1500	156	25.0	41200	17400	--	--	--	--	--	--	98
SEP 16...	1245	11	22.0	64300	1910	--	--	--	--	--	--	100
19...	1000	3350	13.0	34900	316000	58	71	92	99	100	--	--
23...	0945	178	18.5	43700	21000	--	--	--	--	--	--	97

RIO GRANDE BASIN  
08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---				---	2480	---	---	2240	---	1980	1860
2	---				---	2620	---	3830	2370	---	2350	1700
3	1660				---	2590	4380	2850	2370	---	2290	1700
4	1560				---	2740	---	2660	---	---	2280	1680
5	1490				---	2910	---	2530	---	---	2470	---
6	1480				---	2890	---	3540	---	---	1960	2100
7	1390				---	3030	---	2660	---	---	2060	3440
8	1420				---	3100	---	2130	---	---	---	1920
9	1500				---	3170	---	2420	---	---	---	1970
10	---				---	3050	---	2600	---	---	1980	1890
11	---				---	3060	---	2850	---	---	1820	1160
12	---				---	3310	---	---	---	---	1810	1850
13	---				---	2720	---	---	---	---	2060	2010
14	---				---	2770	---	---	---	---	2370	2220
15	---				---	2230	---	---	---	---	2540	2020
16	---				---	2440	---	---	---	---	2200	2520
17	---				---	2560	---	---	---	---	969	---
18	---				2490	2770	---	---	---	---	1970	1700
19	---				2920	2520	---	---	---	---	1970	1580
20	---				2960	2500	---	---	---	2970	2020	2210
21	---				---	2580	---	---	---	---	2010	1580
22	---				---	2720	---	---	---	---	1870	1580
23	---				3210	2890	---	---	---	1680	2260	1550
24	---				2780	3100	---	---	---	---	1730	1220
25	---				2320	---	---	2760	---	---	1500	1150
26	---				2250	---	---	2560	---	---	2100	1270
27	---				2240	---	---	2260	---	---	1780	1370
28	---				2210	---	---	2250	---	---	1910	---
29	---				---	4530	---	2390	---	---	1630	---
30	---				---	---	---	2130	---	2240	1610	---
31	---				---	---	---	2100	---	1570	1620	---
MEAN	1500				2600	2850	4380	2630	2330	2120	1970	1810
WTR YR 1982	MEAN	2270		MAX	4530		MIN	969				

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---				---	13.0	---	---	21.0	---	23.5	24.0
2	---				---	14.0	---	21.0	22.0	---	21.0	25.0
3	17.0				---	13.0	6.0	22.0	24.0	---	27.0	25.0
4	13.0				---	11.0	---	16.0	---	---	21.0	25.0
5	23.0				---	7.0	---	25.0	---	---	25.0	---
6	17.0				---	6.0	---	19.0	---	---	21.0	25.0
7	21.0				---	2.0	---	20.0	---	---	23.0	26.0
8	21.0				---	6.0	---	15.0	---	---	---	24.0
9	20.0				---	18.0	---	17.0	---	---	---	24.0
10	---				---	16.0	---	18.0	---	---	22.0	22.0
11	---				---	15.0	---	17.0	---	---	26.0	16.0
12	---				---	14.0	---	---	---	---	23.0	19.0
13	---				---	14.0	---	---	---	---	30.0	19.0
14	---				---	7.0	---	---	---	---	26.0	21.0
15	---				---	6.0	---	---	---	---	27.0	20.0
16	---				---	13.0	---	---	---	---	23.0	22.0
17	---				---	13.0	---	24.0	---	---	22.0	---
18	---				14.0	14.0	---	---	---	---	23.0	20.0
19	---				15.0	12.0	---	---	---	---	23.0	13.0
20	---				17.0	14.0	---	---	---	31.0	27.0	19.0
21	---				---	14.0	---	---	---	---	20.0	19.0
22	---				---	13.0	---	---	---	---	24.0	22.0
23	---				11.0	14.0	---	---	---	23.0	24.0	25.0
24	---				8.0	15.0	---	---	---	---	24.0	21.0
25	---				7.0	---	---	22.0	---	---	23.0	13.0
26	---				9.0	---	---	22.0	---	---	21.0	24.0
27	---				8.0	---	---	20.0	---	---	24.0	21.0
28	---				13.5	---	---	23.0	---	---	23.0	---
29	---				---	17.0	---	21.0	---	---	24.0	---
30	---				---	---	---	21.0	---	19.5	24.0	---
31	---				---	---	---	24.0	---	19.0	26.0	---
MEAN	19.0				11.5	12.0	6.0	20.5	22.5	23.0	24.0	21.5
WTR YR 1982	MEAN	19.0		MAX	31.0		MIN	2.0				

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

RIO GRANDE BASIN  
08353000 RIO PUERCO BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

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SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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	3980	11	0	.00	0	.00	0	.00	0	.00	47800	1240
2	25200	99	0	.00	0	.00	0	.00	0	.00	44700	760
3	92200	40900	0	.00	0	.00	0	.00	0	.00	42000	703
4	88400	264000	0	.00	0	.00	0	.00	0	.00	41000	664
5	92100	163000	0	.00	0	.00	0	.00	0	.00	32100	520
6	66000	29800	0	.00	0	.00	0	.00	0	.00	33500	525
7	45200	6350	0	.00	0	.00	0	.00	0	.00	34000	496
8	38000	1030	0	.00	0	.00	0	.00	0	.00	31000	452
9	36900	498	0	.00	0	.00	0	.00	0	.00	36000	525
10	0	.0	0	.00	0	.00	0	.00	0	.00	44100	238
11	0	.0	0	.00	0	.00	0	.00	0	.00	39500	213
12	0	.0	0	.00	0	.00	0	.00	0	.00	35800	97
13	0	.0	0	.00	0	.00	0	.00	0	.00	23300	31
14	0	.0	0	.00	0	.00	0	.00	0	.00	24300	33
15	0	.0	0	.00	0	.00	0	.00	0	.00	14200	1190
16	0	.0	0	.00	0	.00	0	.00	0	.00	95700	20200
17	0	.0	0	.00	0	.00	0	.00	6500	15	97100	6820
18	0	.0	0	.00	0	.00	0	.00	30100	60	94000	4570
19	0	.0	0	.00	0	.00	0	.00	21800	51	88900	3840
20	0	.0	0	.00	0	.00	0	.00	592	.26	80500	1740
21	0	.0	0	.00	0	.00	0	.00	0	.00	71000	958
22	0	.0	0	.00	0	.00	0	.00	0	.00	66000	535
23	0	.0	0	.00	0	.00	0	.00	51500	6150	57000	154
24	0	.0	0	.00	0	.00	0	.00	80100	7570	47000	102
25	0	.0	0	.00	0	.00	0	.00	82000	5760	38800	52
26	0	.0	0	.00	0	.00	0	.00	65200	3340	25500	28
27	0	.0	0	.00	0	.00	0	.00	61000	2640	13800	7.5
28	0	.0	0	.00	0	.00	0	.00	56300	1980	5000	1.4
29	0	.0	0	.00	0	.00	0	.00	---	---	3370	.73
30	0	.0	0	.00	0	.00	0	.00	---	---	350	.05
31	0	.0	---	---	0	.00	0	.00	---	---	0	.00
TOTAL	---	505688.0	---	0.00	---	0.00	---	0.00	---	27566.26	---	46695.68

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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	0	.00	0	.0	69000	931	0	.0	130000	97200	76600	106000
2	3170	8.4	66900	23100	73500	595	0	.0	117000	31400	104000	102000
3	1470	3.9	95900	5960	77600	210	0	.0	84000	680	55800	1510
4	800	.17	88900	4320	72100	78	0	.0	134000	47800	48100	649
5	0	.00	70000	3780	17900	12	0	.0	161000	70600	42100	227
6	0	.00	79100	8970	0	.00	0	.0	95500	10600	28400	7260
7	0	.00	97500	10500	0	.00	0	.0	92500	4750	47000	634
8	0	.00	63200	3750	0	.00	0	.0	68500	1850	42000	227
9	0	.00	64800	2620	0	.00	0	.0	119000	34400	34700	94
10	0	.00	71000	2300	0	.00	0	.0	127000	24700	29500	25200
11	0	.00	63200	1450	0	.00	0	.0	97400	526	75400	78000
12	0	.00	57200	618	0	.00	0	.0	83000	224	102000	73100
13	0	.00	51700	279	0	.00	0	.0	101000	24900	83900	1810
14	0	.00	0	.0	0	.00	0	.0	106000	21100	73000	3940
15	0	.00	42800	938	0	.00	0	.0	176000	224000	66000	1070
16	0	.00	75200	1600	0	.00	0	.0	71000	3450	63200	1880
17	0	.00	77600	1660	0	.00	0	.0	37400	101	50300	896
18	0	.00	54000	875	0	.00	0	.0	74500	28400	108000	127000
19	0	.00	38000	441	0	.00	0	.0	77600	10500	139000	577000
20	0	.00	26100	226	0	.00	147000	1970	77500	209	130000	158000
21	0	.00	0	.0	0	.00	34500	57	75000	1010	56000	159000
22	0	.00	13500	7850	0	.00	155000	1550	128000	95800	85500	184000
23	0	.00	115000	6550	0	.00	152000	668	115000	216000	40000	16200
24	0	.00	68900	558	0	.00	0	.0	115000	186000	20300	548
25	0	.00	82300	1890	0	.00	0	.0	84000	109000	14000	302
26	0	.00	87200	3060	0	.00	0	.0	118000	210000	12800	173
27	0	.00	74700	2020	0	.00	0	.0	79700	199000	6750	55
28	0	.00	75000	1820	0	.00	18100	240	58400	216000	2020	11
29	0	.00	72800	1570	0	.00	87100	4340	63000	69700	0	0
30	0	.00	71400	1350	0	.00	85100	47500	50900	34400	0	0
31	---	---	70300	1140	---	---	85100	51700	45800	16000	---	---
TOTAL	---	12.47	---	101195.0	---	1826.00	---	108025.0	---	1990300	---	1626786
TOTAL LOAD FOR YEAR:		4408094.41			TONS.							

## RIO GRANDE BASIN

08354000 RIO SALADO NEAR SAN ACACIA, NM

LOCATION.--Lat 34°17'50", long 106°53'59", in NW¼ sec.24, T.1 N., R.1 W., Socorro County, Hydrologic Unit 13020209, at former bridge site 0.3 mi (0.5 km) upstream from bridge on Interstate Highway 25, 3.1 mi (5.0 km) upstream from mouth, 2.9 mi (4.7 km) north of San Acacia, and 15 mi (24 km) north of Socorro.

DRAINAGE AREA.--1,380 mi<sup>2</sup> (3,570 km<sup>2</sup>), approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1512: 1948-49, 1955. WSP 1632: 1953.

GAGE.--Water-stage recorder. Altitude of gage is 4,765 ft (1,452 m), from topographic map. Prior to Sept. 14, 1966, at site 1.7 mi (2.7 km) downstream at different datum.

REMARKS.--Water-discharge records poor. Diversions for irrigation of about 100 acres (40 hm<sup>2</sup>) above station.

AVERAGE DISCHARGE.--35 years, 14.8 ft<sup>3</sup>/s (0.419 m<sup>3</sup>/s), 10,720 acre-ft/yr (13.2 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,200 ft<sup>3</sup>/s (1,030 m<sup>3</sup>/s) July 31, 1965, gage height, 5.54 ft (1.689 m), from floodmarks, present site and datum, from rating curve extended above 900 ft<sup>3</sup>/s (26 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Another flood occurred Aug. 12, 1929 (discharge, 27,400 ft<sup>3</sup>/s or 776 m<sup>3</sup>/s, by slope-area method), from reports of State Engineer.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft<sup>3</sup>/s (85 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Aug. 26	0400	*15100 428	4.48 1.366	Sept. 18	2345	7780 220	3.82 1.164
Aug. 30	0130	3500 99.1	3.14 .957	Sept. 21	1200	13500 382	4.42 1.347

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.00	.00	.00	.00	.00	.00	.00	.00	.00	50	25
2	.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	15
3	4.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0
4	.50	.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	304
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	726
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	20	5.0
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.50	96	2900
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	19	100
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	193	26
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	605	1.0
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	919	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	2120	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	100	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	30	150	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	260	30	.00
TOTAL	5.30	.00	.00	.00	.00	.00	.00	.00	.00	294.60	4327.00	4105.00
MEAN	.17	.000	.000	.000	.000	.000	.000	.000	.000	9.50	140	137
MAX	4.0	.00	.00	.00	.00	.00	.00	.00	.00	260	2120	2900
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	11	.00	.00	.00	.00	.00	.00	.00	.00	584	8580	8140

CAL YR 1981	TOTAL	1040.95	MEAN 2.85	MAX 154	MIN .00	AC-FT 2060
WTR YR 1982	TOTAL	8731.90	MEAN 23.9	MAX 2900	MIN .00	AC-FT 17320



RIO GRANDE BASIN  
08354000 RIO SALADO NEAR SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

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

REMARKS.--Samples are collected when flow is observed on this ephemeral stream.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
JUL 21...	1345	.34	2450	3200	7.8	7.1	36.0	33.5	--	--
AUG 26...	0930	2040	700	707	7.4	7.2	23.0	19.0	193	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)
JUL 21...	--	--	--	--	--	--	--	--	--	--
AUG 26...	59	11	73	2.4	4.5	210	24	.6	14	513

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
AUG 26...	0930	250	<3



RIO GRANDE BASIN  
08354000 RIO SALADO NEAR SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
JUL							
21...	1345	.34	33.5	191000	175	--	--
30...	1015	260	23.0	91100	64000	52	58
AUG							
20...	1430	18	31.0	65900	3200	--	--
26...	0930	2040	19.0	58100	320000	--	--
SEP							
21...	1030	3170	15.0	94300	807000	32	42
23...	1250	26	29.5	7680	539	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
JUL						
21...	--	--	--	--	--	100
30...	75	88	95	99	100	--
AUG						
20...	--	--	--	--	--	99
26...	--	--	--	--	--	89
SEP						
21...	60	86	98	100	--	--
23...	--	--	--	--	--	92

## 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 (0.8 km) 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 (1,420.417 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 8, 1958, at site 300 ft (90 m) upstream (in old channel) at datum 0.42 ft (0.128 m) lower.

REMARKS.--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 (32 km<sup>2</sup>). Alamillo Acequia and 3 other smaller ditches divert water from canal above station for irrigation of about 400 acres (2 km<sup>2</sup>). Discharge records collected at the canal heading from October 1964 to September 1965 indicate that 7,770 acre-ft (9.58 hm<sup>3</sup>) 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 (7.76 m<sup>3</sup>/s) June 22, 1980; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	.00	.00	.00	.00	.00	145	132	126	163	77	105
2	88	.00	.00	.00	.00	.00	150	125	131	124	77	137
3	25	.00	.00	.00	.00	.00	143	100	156	119	82	125
4	30	.00	.00	.00	.00	25	143	80	136	107	102	126
5	32	.00	.00	.00	.00	34	143	66	134	121	107	126
6	20	.00	.00	.00	.00	15	143	67	127	147	95	134
7	4.3	.00	.00	.00	.00	15	143	93	155	162	76	175
8	.00	.00	.00	.00	.00	14	143	97	179	170	75	165
9	11	.00	.00	.00	.00	20	146	105	184	164	75	151
10	19	.00	.00	.00	.00	27	152	114	189	162	78	125
11	18	.00	.00	.00	.00	40	112	124	182	133	80	111
12	38	.00	.00	.00	.00	42	102	129	167	160	83	103
13	66	.00	.00	.00	.00	39	127	132	162	178	86	123
14	72	.00	.00	.00	.00	48	135	136	169	179	116	155
15	49	.00	.00	.00	.00	45	158	129	178	174	141	182
16	67	.00	.00	.00	.00	54	151	117	180	182	114	183
17	82	.00	.00	.00	.00	64	145	123	165	187	78	190
18	73	.00	.00	.00	.00	62	143	131	153	187	91	180
19	84	.00	.00	.00	.00	65	146	126	158	191	97	185
20	92	.00	.00	.00	.00	69	145	132	122	187	98	137
21	103	.00	.00	.00	.00	69	155	138	92	188	116	54
22	106	.00	.00	.00	.00	81	137	78	146	176	134	49
23	116	.00	.00	.00	.00	96	131	46	160	166	125	70
24	124	.00	.00	.00	.00	96	131	112	155	125	105	114
25	123	.00	.00	.00	.00	93	127	96	142	119	122	126
26	126	.00	.00	.00	.00	95	128	110	142	78	91	123
27	114	.00	.00	.00	.00	105	130	128	113	88	92	111
28	75	.00	.00	.00	.00	113	132	120	160	85	90	104
29	73	.00	.00	.00	---	112	129	116	166	98	85	122
30	73	.00	.00	.00	---	130	130	106	176	99	89	122
31	59	---	.00	.00	---	137	---	119	---	83	111	---
TOTAL	2045.30	.00	.00	.00	.00	1805.00	4145	3427	4605	4502	2992	3913
MEAN	66.0	.000	.000	.000	.000	58.2	138	111	154	145	96.5	130
MAX	126	.00	.00	.00	.00	137	158	138	189	191	141	190
MIN	.00	.00	.00	.00	.00	.00	102	46	92	78	75	49
AC-FT	4060	.00	.00	.00	.00	3580	8220	6800	9130	8930	5930	7760

CAL YR 1981 TOTAL 26337.40 MEAN 72.2 MAX 204 MIN .00 AC-FT 52240  
WTR YR 1982 TOTAL 27434.30 MEAN 75.2 MAX 191 MIN .00 AC-FT 54420

## RIO GRANDE BASIN

08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM  
(Surveillance network)

LOCATION.--Lat 34°14'54", long 106°54'04", in SW¼ sec.1, T.1 S., R.1 W., Socorro County, Hydrologic Unit 13020203, on right bank 75 ft (23 m) upstream from railway crossing, 0.5 mi (0.8 km) south of San Acacia, and 1.2 mi (1.9 km) 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 4,652.5 ft (1,418.08 m) National Geodetic Vertical Datum of 1929, (levels by Bureau of Reclamation).

REMARKS.--Water-discharge records fair. 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 (57 m<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 (55.2 m<sup>3</sup>/s) May 12, 13, 1966; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	.69	.31	1.6	.27	.30	7.4	9.2	4.8	5.4	.48	5.9
2	3.7	.67	.30	1.8	.25	.30	7.4	9.5	4.6	4.6	.61	6.2
3	4.2	.45	.30	1.8	.25	.26	6.5	8.2	4.7	3.9	1.4	6.2
4	3.0	.30	.30	1.8	.19	.53	6.5	7.8	4.6	4.3	1.7	5.3
5	1.9	.30	.30	2.2	.19	2.7	6.5	7.2	3.8	4.0	2.0	5.5
6	1.9	.37	.30	2.2	.18	3.5	6.5	6.2	4.2	3.9	2.0	5.0
7	1.7	.44	.30	2.3	.17	3.8	6.8	5.6	4.4	4.2	2.2	4.9
8	1.7	.44	.30	2.0	.19	3.8	7.0	5.3	4.3	3.7	2.0	4.6
9	1.7	.45	.30	1.8	.25	4.3	7.3	5.4	4.2	3.6	1.9	4.2
10	1.5	.45	.48	1.7	.27	4.2	7.5	5.2	4.2	3.6	1.8	4.0
11	1.5	.30	.30	1.6	.26	4.4	7.6	5.0	4.2	3.5	1.8	3.6
12	5.4	.30	.30	1.4	.27	5.0	7.4	4.6	4.0	3.2	1.9	3.1
13	4.8	.30	.30	1.2	.30	5.0	7.3	4.5	3.8	3.1	1.8	2.9
14	2.6	.30	.30	1.0	.30	5.3	7.2	4.5	3.9	3.0	2.0	2.9
15	2.1	.30	.30	1.0	.30	5.6	8.2	4.8	3.8	2.8	2.1	2.8
16	8.0	.30	.45	.90	.30	6.7	8.8	5.1	3.9	2.8	2.1	2.5
17	11	.30	.45	.80	.29	7.0	8.4	5.1	3.9	3.0	2.0	2.8
18	2.9	.31	.60	.50	.31	6.3	8.6	4.8	3.9	3.4	2.2	3.9
19	6.1	.31	.60	.45	.30	6.2	8.3	4.3	3.8	3.4	2.7	6.1
20	9.3	.30	.74	.30	.30	6.0	8.3	4.2	4.1	3.6	2.7	3.1
21	8.7	.39	.73	.36	.28	6.0	8.4	4.4	3.2	3.8	2.4	4.1
22	7.1	.45	.95	.36	.27	6.0	7.6	6.9	3.4	3.8	2.7	3.1
23	7.2	.45	.93	.30	.28	6.3	7.1	4.3	3.4	3.8	2.5	3.2
24	4.5	.42	1.1	.33	.28	6.5	6.9	2.2	3.4	3.5	3.1	3.7
25	4.2	.42	1.1	.32	.30	6.5	7.2	4.8	3.5	4.4	3.2	3.8
26	3.8	.35	1.2	.31	.28	6.5	7.5	4.5	4.2	4.0	4.7	4.0
27	3.2	.32	1.3	.27	.25	6.7	7.9	4.2	4.5	3.6	4.2	4.0
28	1.6	.31	1.4	.20	.28	6.9	7.7	4.1	5.1	3.1	4.7	3.6
29	.76	.31	1.5	.22	---	6.7	8.0	4.6	5.4	3.2	5.1	3.7
30	.73	.30	1.5	.23	---	6.8	8.5	4.6	5.0	1.4	5.6	3.2
31	.51	---	1.7	.25	---	7.1	---	4.9	---	.53	5.6	---
TOTAL	152.30	11.30	20.94	31.50	7.36	153.19	226.3	166.0	124.2	108.13	81.19	122.2
MEAN	4.91	.38	.68	1.02	.26	4.94	7.54	5.35	4.14	3.49	2.62	4.07
MAX	35	.69	1.7	2.3	.31	7.1	8.8	9.5	5.4	5.4	5.6	6.2
MIN	.51	.30	.30	.20	.17	.26	6.5	2.2	3.2	.53	.48	2.5
AC-FT	302	22	42	62	15	304	449	329	246	214	161	242

CAL YR 1981 TCTAL 63027.56 MEAN 173 MAX 1750 MIN .04 AC-FT 125000  
WTR YR 1982 TOTAL 1204.61 MEAN 3.30 MAX 35 MIN .17 AC-FT 2390

LOCATION.--Samples collected about 100 ft (30 m) downstream from discharge station.

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to current year.

WATER TEMPERATURES: May 1959 to current year.

SUSPENDED SEDIMENT DISCHARGE: January 1959 to current year.

REMARKS.--When there is insufficient flow to sample 08354800 Rio Grande Conveyance Channel at San Acacia NM or 08354900 Rio Grande Floodway at San Acacia NM, samples are taken from 08354500 Socorro Main Canal North at San Acacia, NM.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,840 micromhos Oct. 8, 1964; minimum daily, 136 micromhos June 19, 1967.  
WATER TEMPERATURES: Maximum, 36.0°C July 13, 1970 Aug. 13, 1978; minimum, 0.0°C on several days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 141,000 mg/L Aug. 10, 1959; minimum daily, no flow on many days during most years.

SEDIMENT LOADS: Maximum daily, 528,000 tons (479,000 tonnes) Aug. 28, 1972; minimum daily, 0 tons (0 tonnes) on many days during most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,890 micromhos Nov. 8; minimum daily, 630 micromhos July 6.

WATER TEMPERATURES: Maximum, 29.0°C July 20, 25; minimum, 3.0°C Jan 11-12.

SEDIMENT CONCENTRATIONS: Maximum daily, 1810 mg/L Oct. 3; minimum daily, 12 mg/L Jan. 14, Sept. 11-12.

SEDIMENT LOADS: Maximum daily, 36 tons (33 tonnes) Oct. 1; minimum daily, 0 ton (0 tonnes) Feb. 4-5.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
OCT 22...	1130	9.1	825	8.2	13.0	13.0
NOV 18...	1300	.33	950	8.4	19.0	17.5
DEC 17...	1000	.45	850	8.0	3.5	7.0
JAN 07...	1230	2.1	825	8.0	4.0	9.0
MAR 03...	1225	.33	800	8.2	15.5	14.5
MAY 05...	1530	7.3	750	8.6	16.0	17.5
JUL 06...	1425	3.5	600	--	30.0	26.5
SEP 03...	1330	5.6	750	8.5	32.0	24.0

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 (70331)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70332)
OCT 03...	0830	4.5	14.0	1810	22	59	70	96	99	100
MAR 31...	0830	7.1	12.0	130	2.5	--	--	--	97	--
APR 10...	0830	7.5	14.0	163	3.3	--	--	--	99	--
29...	0830	8.0	15.0	82	1.8	--	--	--	90	--
MAY 11...	0830	5.0	14.0	102	1.4	--	--	--	98	--
AUG 05...	0830	2.0	24.0	217	1.2	--	--	--	92	--
SEP 21...	1930	4.0	26.0	81	.87	--	--	--	54	--

RIO GRANDE BASIN  
08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	904	1030	1610	1200	822	960	819	769	859	657	857	892
2	1060	1010	1310	1210	878	947	816	763	862	740	861	900
3	1090	1690	1480	1220	919	952	826	827	837	760	866	908
4	1060	1670	1480	1250	937	947	851	794	849	755	792	904
5	1070	1770	1450	1240	951	1130	868	888	878	766	823	910
6	1200	1790	1440	1190	795	1140	866	941	846	630	822	913
7	1270	1880	1500	1300	898	1150	850	853	815	654	813	873
8	1100	1890	1480	1310	918	1030	850	876	788	669	796	880
9	1530	1820	1480	1290	939	1080	856	844	768	681	819	896
10	1510	1790	1390	1220	941	1060	837	842	770	683	814	917
11	1750	1820	1400	1220	946	1040	817	800	777	707	813	925
12	1170	1750	1440	1210	948	1040	911	827	671	704	813	903
13	1150	1760	1470	860	954	1050	834	866	745	680	822	907
14	1090	1750	1520	850	949	1050	830	787	749	680	823	891
15	1150	1770	1480	860	955	1040	809	774	752	698	825	894
16	1110	1710	1580	860	954	1040	793	802	731	726	828	890
17	863	1770	1550	870	959	986	800	826	745	722	828	903
18	776	1710	1500	850	949	1000	800	788	750	641	823	900
19	1060	1750	1360	780	950	1030	725	798	747	682	833	904
20	748	1600	1440	922	958	973	766	830	738	714	919	874
21	798	1620	1380	953	948	992	770	795	864	782	874	986
22	1070	1450	1510	962	942	943	786	973	769	764	849	1000
23	816	1520	1510	964	949	907	818	993	767	802	855	1010
24	783	1620	1530	963	950	911	813	801	757	799	839	1010
25	787	1600	1480	965	959	993	814	792	778	830	816	1020
26	812	1590	1160	951	952	984	902	860	744	848	869	1010
27	799	1590	1080	949	961	943	804	853	731	891	884	1000
28	1610	1600	1140	950	956	885	772	874	680	967	884	999
29	1660	1620	1150	950	---	904	793	863	666	916	893	995
30	1070	1580	1210	950	---	882	771	886	663	974	890	990
31	1040	---	1220	950	---	838	---	874	---	848	900	---
MEAN	1090	1650	1410	1040	933	994	819	841	770	754	843	933
WTR YR 1982		MEAN	1010	MAX	1890		MIN	630				

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	12.0	5.0	5.0	6.0	6.0	12.0	14.0	17.0	25.0	24.0	24.0
2	17.0	7.0	6.0	5.0	6.0	6.0	12.0	15.0	16.0	20.0	24.0	24.0
3	14.0	8.0	5.0	4.0	5.0	6.0	13.0	16.0	18.0	22.0	24.0	24.0
4	14.0	8.0	5.0	4.0	6.0	6.0	13.0	15.0	16.0	22.0	24.0	24.0
5	19.0	8.0	6.0	4.0	6.0	6.0	14.0	15.0	16.0	22.0	24.0	24.0
6	14.0	10.0	6.0	5.0	4.0	6.0	14.0	12.0	17.0	22.0	24.0	24.0
7	14.0	9.0	6.0	4.0	5.0	6.0	14.0	13.0	17.0	22.0	24.0	26.0
8	20.0	8.0	6.0	4.0	4.0	6.0	14.0	14.0	18.0	22.0	24.0	26.0
9	14.0	9.0	6.0	4.0	5.0	7.0	15.0	20.0	17.0	24.0	24.0	26.0
10	14.0	9.0	5.0	4.0	5.0	15.0	14.0	14.0	17.0	22.0	24.0	24.0
11	15.0	8.0	7.0	3.0	5.0	9.0	14.0	14.0	17.0	24.0	26.0	24.0
12	17.0	8.0	6.0	3.0	6.0	10.0	16.0	14.0	17.0	24.0	26.0	26.0
13	14.0	7.0	5.0	4.0	6.0	10.0	15.0	13.0	18.0	24.0	26.0	26.0
14	14.0	7.0	5.0	4.0	5.0	11.0	15.0	12.0	18.0	24.0	26.0	25.0
15	14.0	8.0	4.0	5.0	6.0	9.0	16.0	14.0	18.0	24.0	24.0	25.0
16	14.0	8.0	6.0	4.0	6.0	10.0	18.0	15.0	20.0	24.0	24.0	25.0
17	14.0	8.0	5.0	4.0	6.0	9.0	17.0	15.0	20.0	24.0	24.0	26.0
18	14.0	9.0	5.0	4.0	6.0	9.0	17.0	17.0	20.0	24.0	24.0	24.0
19	11.0	6.0	5.0	5.0	7.0	10.0	18.0	15.0	20.0	24.0	24.0	24.0
20	11.0	5.0	6.0	6.0	6.0	10.0	17.0	15.0	22.0	29.0	24.0	26.0
21	12.0	5.0	6.0	5.0	6.0	12.0	16.0	15.0	20.0	24.0	24.0	26.0
22	10.0	6.0	5.0	5.0	5.0	11.0	16.0	15.0	20.0	24.0	24.0	24.0
23	10.0	7.0	5.0	5.0	6.0	11.0	15.0	15.0	19.0	24.0	24.0	25.0
24	10.0	8.0	5.0	5.0	6.0	11.0	16.0	15.0	20.0	24.0	24.0	25.0
25	10.0	7.0	5.0	4.0	7.0	10.0	18.0	16.0	20.0	29.0	24.0	25.0
26	9.0	7.0	6.0	5.0	7.0	12.0	12.0	17.0	20.0	24.0	24.0	24.0
27	9.0	7.0	6.0	5.0	6.0	10.0	15.0	17.0	20.0	24.0	24.0	24.0
28	9.0	6.0	6.0	4.0	6.0	12.0	15.0	16.0	22.0	24.0	24.0	24.0
29	12.0	5.0	5.0	5.0	---	12.0	15.0	16.0	21.0	24.0	24.0	24.0
30	12.0	5.0	5.0	5.0	---	11.0	17.0	16.0	20.0	24.0	24.0	24.0
31	11.0	---	5.0	5.0	---	12.0	---	17.0	---	24.0	24.0	---
MEAN	13.0	7.5	5.5	4.5	5.5	9.5	15.0	15.0	18.5	24.0	24.5	24.5
WTR YR 1982		MEAN	14.0	MAX	29.0		MIN	3.0				

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	385	36	55	.10	66	.06	25	.11	17	.01	24	.02
2	184	1.8	53	.10	49	.04	22	.11	17	.01	30	.02
3	1810	21	64	.08	71	.06	26	.13	22	.01	29	.02
4	208	1.7	62	.05	55	.04	26	.13	18	.00	38	.05
5	161	.83	33	.03	48	.04	34	.20	16	.00	61	.44
6	163	.84	35	.03	46	.04	44	.26	24	.01	65	.61
7	215	.99	36	.04	43	.03	23	.14	22	.01	58	.60
8	313	1.4	32	.04	38	.03	33	.18	23	.01	36	.37
9	86	.39	32	.04	36	.03	28	.14	24	.02	40	.46
10	75	.30	45	.05	56	.07	26	.12	21	.02	43	.49
11	76	.31	53	.04	45	.04	27	.12	21	.01	48	.57
12	210	3.1	42	.03	62	.05	24	.09	27	.02	47	.63
13	132	1.7	52	.04	78	.06	13	.04	24	.02	52	.70
14	151	1.1	50	.04	44	.04	12	.03	30	.02	51	.73
15	108	.61	31	.03	48	.04	13	.04	26	.02	49	.74
16	112	2.4	33	.03	52	.06	26	.06	21	.02	55	.99
17	179	5.3	41	.03	35	.04	21	.05	30	.02	170	3.2
18	179	1.4	53	.04	34	.06	19	.03	45	.04	146	2.5
19	71	1.2	45	.04	38	.06	38	.05	173	.14	86	1.4
20	98	2.5	43	.03	26	.05	40	.03	51	.04	62	1.0
21	99	2.3	35	.04	44	.09	44	.04	26	.02	75	1.2
22	106	2.0	38	.05	45	.12	34	.03	24	.02	75	1.2
23	200	3.9	52	.06	43	.11	29	.02	29	.02	111	1.9
24	253	3.1	39	.04	26	.08	24	.02	24	.02	145	2.5
25	239	2.7	40	.05	29	.09	25	.02	27	.02	120	2.1
26	164	1.7	41	.04	25	.08	19	.02	24	.02	108	1.9
27	154	1.3	46	.04	31	.11	26	.02	27	.02	98	1.8
28	77	.33	41	.03	22	.08	19	.01	30	.02	96	1.8
29	100	.21	45	.04	24	.10	25	.01	---	---	94	1.7
30	53	.10	48	.04	42	.17	24	.01	---	---	96	1.8
31	55	.08	---	---	39	.18	26	.02	---	---	137	2.6
TOTAL	---	102.59	---	1.34	---	2.15	---	2.28	---	0.61	---	36.04

	MEAN CONCEN- TRATION	LOADS	MEAN CONCEN- TRATION	LOADS	MEAN CONCEN- TRATION	LOADS	MEAN CONCEN- TRATION	LOADS	MEAN CONCEN- TRATION	LOADS	MEAN CONCEN- TRATION	LOADS
DAY	(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	164	3.3	82	2.0	28	.36	28	.41	317	.41	19	.30
2	180	3.6	129	3.3	27	.34	28	.35	289	.48	17	.28
3	175	3.1	497	11	30	.38	29	.31	237	.90	39	.65
4	116	2.0	182	3.8	26	.32	50	.58	210	.96	28	.40
5	87	1.5	100	1.9	24	.25	22	.24	209	1.1	18	.28
6	80	1.4	73	1.2	26	.29	22	.23	141	.76	20	.27
7	80	1.5	67	1.0	34	.40	29	.33	89	.53	23	.30
8	90	1.7	130	1.9	29	.34	19	.19	115	.62	28	.35
9	117	2.3	97	1.4	27	.31	16	.16	180	.92	40	.45
10	169	3.4	120	1.7	27	.31	20	.19	125	.61	35	.38
11	147	3.0	101	1.4	24	.27	22	.21	71	.35	12	.12
12	79	1.6	95	1.2	22	.24	24	.21	113	.58	12	.10
13	96	1.9	76	.92	21	.22	25	.21	114	.55	26	.20
14	69	1.3	74	.90	28	.29	26	.21	135	.73	18	.14
15	91	2.0	73	.95	24	.25	26	.20	124	.70	16	.12
16	204	4.8	74	1.0	19	.20	56	.42	88	.50	25	.17
17	200	4.5	61	.84	20	.21	111	.90	78	.42	22	.17
18	158	3.7	64	.83	22	.23	23	.21	91	.54	20	.21
19	145	3.2	51	.59	22	.23	23	.21	75	.55	27	.44
20	158	3.5	42	.48	23	.25	18	.17	106	.77	25	.21
21	157	3.6	45	.53	37	.32	39	.40	119	.77	60	.66
22	135	2.8	40	.75	26	.24	38	.39	88	.64	31	.26
23	93	1.8	56	.65	27	.25	60	.62	131	.88	28	.24
24	121	2.3	52	.31	22	.20	51	.48	136	1.1	26	.26
25	100	1.9	60	.78	23	.22	45	.53	143	1.2	23	.24
26	77	1.6	65	.79	26	.29	39	.42	158	2.0	31	.33
27	86	1.8	47	.53	20	.24	52	.51	52	.59	38	.41
28	89	1.9	32	.35	22	.30	87	.73	50	.63	30	.29
29	82	1.8	28	.35	28	.41	75	.65	42	.58	28	.28
30	79	1.8	21	.26	29	.39	211	.80	39	.59	44	.38
31	---	---	31	.41	---	---	432	.62	26	.39	---	---
TOTAL	---	74.6	---	44.02	---	8.55	---	12.09	---	22.35	---	8.89
TOTAL LOAD FOR YEAR:			315.51	TONS.								



## 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 Sevilleita Grant, on right bank 0.2 mi (0.3 km) below San Acacia diversion dam, 0.3 mi (0.5 km) east of San Acacia, 2 mi (3 km) downstream from Rio Salado, and at mile 1,472.6 (2,369.4 km).

DRAINAGE AREA.--26,770 mi<sup>2</sup> (69,330 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 (1,418.692 m) National Geodetic Vertical Datum of 1929. Aug. 19, 1965 to Aug. 15, 1967 at same site at datum 1.89 ft (0.576 m) higher. Prior to Mar. 19, 1953, at several sites 0.1 mi (0.2 km) upstream at different datums. Mar. 19, 1953 to Aug. 19, 1965, at site 0.4 mi (0.6 km) downstream at datum 3.60 ft (1.097 m) higher. Floodway is bypassed by Socorro main canal north and since Oct. 1958, by conveyance channel.

REMARKS.--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 or 57 m<sup>3</sup>/s) and Socorro main canal north (about 200 ft<sup>3</sup>/s or 6 m<sup>3</sup>/s) is exceeded, during periods of silt sluicing, and when river silt load is excessive. Diversions above station for irrigation of about 760,000 acres (3,100 km<sup>2</sup>); this includes Socorro main canal north which bypasses station and irrigates about 8,000 acres (32 km<sup>2</sup>).

AVERAGE DISCHARGE.--22 years (water years 1937-58), 1,192 ft<sup>3</sup>/s (33.76 m<sup>3</sup>/s), 863,000 acre-ft/yr (1,060 hm<sup>3</sup>/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 (25.80 m<sup>3</sup>/s), 660,000 acre-ft/yr (814 hm<sup>3</sup>/yr), combined flow of floodway, conveyance channel and Socorro main canal north prior to closure of Cochiti Dam. 9 years (water years 1974-82), 1,117 ft<sup>3</sup>/s (31.63 m<sup>3</sup>/s), 809,300 acre-ft/yr (998 hm<sup>3</sup>/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 (776 m<sup>3</sup>/s) Aug. 5, 1936, gage height, 10.75 ft (3.277 m), site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,220 ft<sup>3</sup>/s (233 m<sup>3</sup>/s) Sept. 21, gage height, 11.75 ft (3.581 m); minimum, 4.2 ft<sup>3</sup>/s (0.12 m<sup>3</sup>/s) July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221	312	884	676	751	774	1050	1090	3510	3810	116	2100
2	347	485	770	659	778	715	1230	2780	2270	3200	431	2160
3	926	706	926	612	716	718	983	3080	4240	3000	1100	1420
4	926	762	786	581	634	779	710	3210	2570	2500	1500	1310
5	901	810	826	727	736	719	493	4310	2370	2000	1560	1460
6	646	867	810	847	779	794	569	4680	4060	1880	1100	1190
7	508	740	740	757	824	762	636	3530	3320	1770	920	1130
8	401	850	674	722	686	767	656	3070	3480	1500	799	1110
9	335	786	778	773	662	708	1230	3470	2890	994	754	944
10	329	810	842	751	718	615	1070	3660	3200	1120	774	1400
11	303	892	810	716	724	546	735	3230	3180	1180	625	1060
12	270	918	755	747	924	542	340	2980	2230	1330	503	1380
13	173	842	708	826	938	515	275	3730	2360	976	623	1450
14	217	926	724	706	903	590	142	4190	2380	633	617	1430
15	183	962	739	752	864	743	531	4390	2090	329	965	1560
16	92	1060	800	864	838	756	2390	4440	2290	184	613	1970
17	198	962	726	823	830	913	1730	4340	2170	354	651	2110
18	191	971	738	682	831	948	1900	3420	2510	238	502	3430
19	145	901	767	744	836	838	2400	2700	2620	202	432	4370
20	139	858	906	837	810	1040	1860	2460	2730	123	323	2910
21	148	918	853	804	857	709	2400	2370	3110	66	417	5040
22	103	834	680	748	824	635	766	2620	2840	33	547	3500
23	133	884	614	817	780	619	1190	3700	3030	22	1070	3180
24	151	876	716	784	794	639	1390	3490	3020	16	1240	3010
25	120	918	839	797	899	673	1280	4150	2550	15	1530	2710
26	75	748	925	795	795	522	650	3570	2410	15	2160	2560
27	71	910	791	764	707	560	367	3350	2270	12	1820	2430
28	102	901	768	696	705	559	643	3570	2360	4.2	2170	1880
29	104	953	720	649	---	406	824	3660	1970	46	2030	1510
30	98	1040	760	652	---	667	789	3770	1440	163	2300	1150
31	185	---	677	675	---	1220	---	3780	---	140	1740	---
TOTAL	8741	25402	24052	22983	22143	21991	31249	106790	81470	27905.2	31932	62864
MEAN	282	847	776	741	791	709	1042	3445	2716	900	1030	2095
MAX	926	1060	926	864	938	1220	2400	4680	4240	3810	2300	5040
MIN	71	312	614	581	634	406	142	1090	1440	4.2	116	944
AC-FT	17340	50380	47710	45590	43920	43620	61980	211800	161600	55350	63340	124700
(+)	21700	50400	47750	45650	43940	47500	70650	218900	171000	64490	69430	132700

CAL YR 1981 TOTAL 78449.76 MEAN 215 MAX 1840 MIN 4.2 AC-FT 155600 (+) MEAN 460 AC-FT 332900  
WTR YR 1982 TOTAL 467522.20 MEAN 1281 MAX 5040 MIN 4.2 AC-FT 927300 (+) MEAN 1359 AC-FT 984100

(+) 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 DISCHARGE: July 1946 to June 1956, January 1959 to current year.

REMARKS.--Additional sediment total discharge determinations were made bi-weekly when needed. When there is insufficient flow to sample 08354800 Rio Grande Conveyance Channel at San Acacia NM or 08354900 Rio Grande Floodway at San Acacia NM, samples are taken from 08354500 Socorro Main Canal North at San Acacia, NM.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,700 micromhos July 14, 1940; minimum daily, 236 micromhos May 17, 1942.

WATER TEMPERATURES: Maximum, 34.5°C July 13, 1971; minimum (1947-56, 1959-62, 1964-78), 0.0°C on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 223,000 mg/L Aug. 11 1946; minimum daily, no flow on many days of most years.

SEDIMENT LOADS: Maximum daily, 1,760,000 tons (1,600,000 tonnes) Aug. 12, 1955, minimum daily, 0 tons (0 tonnes) on many days of most years.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,310 micromhos July 27; minimum daily, 289 micromhos June 12.

WATER TEMPERATURES: Maximum, 29.0°C Aug. 25; minimum 3.0°C on Jan. 11-12.

SEDIMENT CONCENTRATIONS: Maximum daily, 79,500 mg/L Oct. 3; minimum daily, 65 mg/L July 19.

SEDIMENT LOADS: Maximum daily, 359,000 tons (326,000 tonnes) Sept. 21; minimum daily, 6.5 ton (5.9 tonnes) July 25.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 18...	1420	977	875	920	8.1	8.7	18.5	11.0	8.8	88	213
DEC 17...	1020	769	710	755	8.2	7.9	4.0	5.5	10.4	--	--
JAN 07...	1330	678	803	803	8.2	7.9	4.0	7.0	10.6	26	202
MAR 03...	1100	777	550	581	8.1	7.8	14.0	11.0	9.3	38	--
MAY 05...	1100	4630	400	385	8.4	7.9	12.5	15.0	8.2	68	145
JUL 06...	1040	1880	340	--	8.4	--	25.5	21.5	7.1	23	--
SEP 03...	1115	1520	630	652	8.0	8.1	27.0	22.0	7.0	300	223

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)
NOV 18...	53	64	13	100	3.1	5.5	180	86	.5	24	572
DEC 17...	--	--	--	--	--	--	--	--	--	--	--
JAN 07...	32	61	12	86	2.7	5.3	140	59	.6	27	496
MAR 03...	--	--	--	--	--	--	--	--	--	--	--
MAY 05...	45	45	7.8	27	1.0	4.0	87	12	.5	20	266
JUL 06...	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	102	71	11	50	1.5	4.2	190	17	.5	17	442



RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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 18...	.49	.050	.53	.54	.250	.220	1.3	2.0	.240	.250	14
DEC 17...	--	--	--	--	--	--	--	--	--	--	--
JAN 07...	--	--	.49	.52	.290	--	.47	1.3	.310	.340	6.1
MAR 03...	--	--	.67	.64	.420	--	.53	1.6	.390	.220	13
MAY 05...	--	--	.41	.42	.130	--	2.9	3.4	.970	.100	27
JUL 06...	--	--	.37	.38	.160	.100	.34	.87	.270	.150	6.7
SEP 03...	--	--	1.9	1.9	.140	--	11	13	.520	.060	140

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 18...	1420	12	9	190	<1	<1	90	<10	35	2
JAN 07...	1330	--	--	160	--	--	--	--	--	--
MAY 05...	1100	9	4	60	<1	<3	50	<10	70	2
SEP 03...	1115	--	--	210	--	--	--	--	--	--

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 18...	12	13	<1	<.1	.1	<1	<1	120	8
JAN 07...	10	--	--	--	--	--	--	--	--
MAY 05...	320	19	3	.2	<.1	3	<1	190	19
SEP 03...	7	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	NITRO- GEN, NITRITE TOT IN BOT MAT (MG/KG AS N) (00616)	NITRO- GEN, NO2+NO3 TOT IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG AS N) (00603)	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)
MAY 05...	1100	<2.0	17	2.9	777	170	4	<1

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	CHROMIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS CO (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS CU (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS FE (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS PB (01052)	MANGANESE, 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)
MAY 05...	<1	<10	2	650	<10	65	.09	4

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L) AS UNAT (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L) AS UNAT (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 (PCI/L) AS SR/ YT-90 (09511)	URANIUM NATURAL, DIS- SOLVED (UG/L) AS U (22703)
MAY 05...	1100	<7.1	150	4.0	87	3.8	84	.07	2.1

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLORDANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI-AZINON, TOTAL (UG/L) (39570)	DI-ELDRIN, TOTAL (UG/L) (39380)	ENDO-SULFAN, TOTAL (UG/L) (39388)
MAY 05...	1100	--	--	--	--	--	--	--	--	--
SEP 03...	1115	<.10	<.01	<.10	<.01	<.01	<.01	.01	<.01	<.01

DATE	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTACHLOR, TOTAL (UG/L) (39410)	HEPTACHLOR EPOXIDE, TOTAL (UG/L) (39420)	LINDANE, TOTAL (UG/L) (39340)	MALATHION, TOTAL (UG/L) (39530)	METHOXYCHLOR, TOTAL (UG/L) (39480)	METHYL PARA-THION, TOTAL (UG/L) (39600)	METHYL TRI-THION, TOTAL (UG/L) (39790)
MAY 05...	--	--	--	--	--	--	--	--	--
SEP 03...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

DATE	PARATHION, TOTAL (UG/L) (39540)	TOXAPHENE, 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)	NAPHTHALENES, POLY-CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
MAY 05...	--	--	--	.05	<.01	<.01	--	--	--
SEP 03...	<.01	<1	<.01	--	--	--	<.10	<.10	<.01

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 18...	340	2900
DEC 17...	220	610
JAN 07...	260	1300
MAR 03...	300	1500
MAY 05...	560	2000
JUL 06...	320	340
SEP 03...	13000	9600

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT							
03...	0800	930	14.0	80500	202000	37	50
22...	1345	32	15.5	1660	143	41	50
NOV							
18...	1420	977	11.0	5490	14500	19	22
DEC							
14...	1200	805	8.0	1560	3390	17	21
17...	1020	769	5.5	2750	5710	--	--
JAN							
07...	1330	678	7.0	1290	2360	16	19
FEB							
17...	1115	758	10.0	763	1560	28	31
MAR							
03...	1100	777	11.0	2560	5370	26	34
06...	0800	790	6.0	1980	4220	33	40
APR							
16...	0800	2400	18.0	2500	16200	29	37
MAY							
05...	1100	4630	15.0	5210	65100	20	24
JUN							
02...	0800	2270	16.0	1550	9500	29	35
JUL							
06...	1040	1880	21.5	752	3820	--	--
31...	0800	140	24.0	81200	30700	56	63
AUG							
25...	0800	1530	29.0	87800	363000	--	--
SEP							
03...	1115	1520	22.0	16700	68500	41	59
17...	1900	2110	26.0	20200	115000	--	--
20...	1900	2910	26.0	20400	160000	--	--

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
OCT							
03...	0800	930	14.0	80500	202000	37	50
22...	1345	32	15.5	1660	143	41	50
NOV							
18...	1420	977	11.0	5490	14500	19	22
DEC							
14...	1200	805	8.0	1560	3390	17	21
17...	1020	769	5.5	2750	5710	--	--
JAN							
07...	1330	678	7.0	1290	2360	16	19
FEB							
17...	1115	758	10.0	763	1560	28	31
MAR							
03...	1100	777	11.0	2560	5370	26	34
06...	0800	790	6.0	1980	4220	33	40
APR							
16...	0800	2400	18.0	2500	16200	29	37
MAY							
05...	1100	4630	15.0	5210	65100	20	24
JUN							
02...	0800	2270	16.0	1550	9500	29	35
JUL							
06...	1040	1880	21.5	752	3820	--	--
31...	0800	140	24.0	81200	30700	56	63
AUG							
25...	0800	1530	29.0	87800	363000	--	--
SEP							
03...	1115	1520	22.0	16700	68500	41	59
17...	1900	2110	26.0	20200	115000	--	--
20...	1900	2910	26.0	20400	160000	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
OCT							
03...	63	95	100	--	--	--	--
22...	66	80	96	100	--	--	--
NOV							
18...	28	55	85	99	100	--	--
DEC							
14...	32	60	86	100	--	--	--
17...	--	--	--	--	--	--	42
JAN							
07...	30	54	79	99	99	100	--
FEB							
17...	48	81	93	100	--	--	--
MAR							
03...	46	65	77	95	100	--	--
06...	50	72	87	99	100	--	--
APR							
16...	65	92	94	100	--	--	--
MAY							
05...	37	72	84	91	97	100	--
JUN							
02...	42	65	81	99	100	--	--
JUL							
06...	--	37	59	88	100	--	--
31...	88	99	100	--	--	--	--
AUG							
25...	--	--	--	--	--	--	89
SEP							
03...	78	91	97	100	--	--	--
17...	--	--	--	--	--	--	82
20...	--	--	--	--	--	--	82

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	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)
DEC 14...	1200	805	1560	3390	23	80	100	--	--	--
JAN 07...	1330	678	1290	2360	0	4	62	97	99	100
FEB 17...	1115	758	763	1560	1	6	85	100	--	--
MAR 03...	1100	777	2560	5370	1	6	82	100	--	--
MAY 05...	1100	4630	5210	65100	1	5	38	87	96	100
JUL 06...	1040	1880	752	3820	1	3	68	99	100	--
SEP 03...	1115	1520	16700	68500	3	20	85	100	--	--

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (FPS) (00055)
OCT 22...	1345	32	15.5	1660	143	192	44.0	.44	1.60
NOV 18...	1420	977	11.0	5490	14500	22100	144	1.4	4.80
DEC 14...	1200	805	8.0	1560	3390	5220	155	1.4	3.70
JAN 07...	1330	678	7.0	1290	2360	4730	175	1.1	3.50
FEB 17...	1115	758	10.0	763	1560	2380	144	1.6	3.40
MAR 03...	1100	777	11.0	2560	5370	6970	130	1.6	3.60
MAY 05...	1100	4630	15.0	5210	65100	68800	206	5.6	4.00
JUL 06...	1040	1880	21.5	752	3820	5830	89.0	4.2	5.00
SEP 03...	1115	1520	22.0	16700	68500	74200	190	1.5	5.20

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	902	1680	1510	830	910	749	586	561	316	330	1260	764
2	947	1070	1450	830	904	638	576	505	316	335	1280	796
3	1020	1110	1520	820	906	635	555	530	320	417	567	802
4	1360	1310	980	830	902	623	573	473	304	352	446	796
5	1280	1180	950	830	908	622	594	460	394	374	751	751
6	1060	1350	929	830	866	622	607	448	308	358	667	753
7	1050	1320	934	1250	866	626	596	421	301	377	732	1060
8	974	1210	953	790	862	646	579	440	295	421	795	1020
9	992	1130	982	800	869	651	595	416	295	476	727	1070
10	990	1670	1010	790	868	655	555	403	298	484	833	1180
11	994	1340	1030	790	869	655	575	396	295	489	776	1200
12	1060	1590	1040	810	753	659	571	384	289	484	728	1120
13	952	957	1050	880	789	666	583	378	307	483	1020	1120
14	851	920	1000	880	801	633	602	368	314	517	1220	748
15	852	897	1010	870	815	621	616	355	314	555	1530	703
16	834	1730	1120	890	811	849	565	359	306	620	1010	692
17	825	1580	1040	880	818	721	547	355	315	617	881	850
18	731	1560	921	890	829	646	535	360	321	552	694	854
19	809	1230	933	1040	862	663	489	371	314	612	1290	861
20	759	1270	932	1140	835	626	519	376	307	654	1020	915
21	807	1250	940	1180	836	629	527	372	309	713	1030	1080
22	735	1120	930	1180	831	623	532	396	308	703	836	968
23	761	1390	930	1170	841	606	575	402	311	757	1030	832
24	760	1350	928	1200	1100	650	531	340	302	765	1100	660
25	768	1340	933	1000	1130	684	522	331	315	800	1000	656
26	795	1360	750	977	1110	665	523	352	323	798	907	654
27	788	1360	780	971	802	684	545	356	338	2310	1140	603
28	878	1460	770	961	759	656	546	341	339	1150	1310	600
29	902	1480	780	966	---	725	556	343	417	847	1040	578
30	1610	1440	780	958	---	681	558	345	415	1660	804	576
31	1660	---	790	920	---	603	---	331	---	1280	744	---
MEAN	958	1320	987	940	873	658	561	396	320	687	941	842
WTR YR 1982	MEAN	790	MAX	2310	MIN	289						

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	12.0	5.0	5.0	6.0	6.0	12.0	14.0	17.0	25.0	24.0	24.0
2	17.0	7.0	6.0	5.0	6.0	6.0	12.0	15.0	16.0	20.0	24.0	24.0
3	14.0	8.0	5.0	4.0	5.0	6.0	13.0	16.0	18.0	22.0	24.0	24.0
4	14.0	8.0	5.0	4.0	6.0	6.0	13.0	15.0	16.0	22.0	24.0	24.0
5	19.0	8.0	6.0	4.0	6.0	6.0	14.0	15.0	16.0	22.0	25.0	24.0
6	14.0	10.0	6.0	5.0	4.0	6.0	14.0	12.0	17.0	22.0	24.0	24.0
7	14.0	9.0	6.0	4.0	5.0	6.0	14.0	13.0	17.0	22.0	24.0	26.0
8	20.0	8.0	6.0	4.0	4.0	6.0	14.0	14.0	18.0	22.0	24.0	26.0
9	14.0	9.0	6.0	4.0	5.0	7.0	13.0	20.0	17.0	24.0	24.0	26.0
10	14.0	9.0	5.0	4.0	5.0	15.0	14.0	14.0	17.0	22.0	24.0	24.0
11	15.0	8.0	7.0	3.0	5.0	9.0	14.0	14.0	17.0	24.0	26.0	24.0
12	17.0	8.0	6.0	3.0	6.0	10.0	16.0	14.0	17.0	24.0	26.0	26.0
13	14.0	7.0	5.0	4.0	6.0	12.0	15.0	13.0	18.0	24.0	26.0	26.0
14	13.0	7.0	5.0	4.0	5.0	11.0	15.0	12.0	18.0	24.0	26.0	25.0
15	13.0	8.0	4.0	5.0	6.0	9.0	16.0	14.0	18.0	24.0	24.0	25.0
16	14.0	8.0	6.0	4.0	6.0	10.0	18.0	15.0	20.0	24.0	24.0	25.0
17	14.0	8.0	5.0	4.0	6.0	9.0	17.0	15.0	20.0	24.0	24.0	26.0
18	14.0	9.0	5.0	4.0	6.0	9.0	17.0	17.0	20.0	24.0	24.0	24.0
19	11.0	6.0	5.0	5.0	7.0	10.0	18.0	15.0	20.0	24.0	24.0	25.0
20	11.0	5.0	6.0	6.0	6.0	10.0	17.0	15.0	22.0	24.0	24.0	26.0
21	12.0	5.0	6.0	5.0	6.0	12.0	16.0	15.0	20.0	24.0	24.0	26.0
22	10.0	6.0	5.0	5.0	5.0	11.0	16.0	15.0	20.0	24.0	24.0	24.0
23	10.0	7.0	5.0	5.0	6.0	11.0	15.0	15.0	19.0	24.0	24.0	25.0
24	10.0	8.0	5.0	5.0	6.0	11.0	16.0	15.0	20.0	24.0	24.0	25.0
25	10.0	7.0	5.0	4.0	7.0	10.0	18.0	16.0	20.0	24.0	29.0	25.0
26	9.0	7.0	6.0	5.0	7.0	12.0	12.0	17.0	20.0	24.0	24.0	24.0
27	9.0	7.0	6.0	4.0	6.0	10.0	15.0	17.0	20.0	24.0	24.0	24.0
28	9.0	6.0	6.0	5.0	6.0	12.0	15.0	16.0	22.0	24.0	24.0	24.0
29	12.0	5.0	5.0	5.0	---	12.0	15.0	16.0	21.0	24.0	24.0	24.0
30	12.0	5.0	5.0	5.0	---	11.0	17.0	16.0	20.0	24.0	24.0	24.0
31	11.0	---	5.0	5.0	---	12.0	---	17.0	---	24.0	24.0	---
MEAN	13.0	7.5	5.5	4.5	5.5	9.5	15.0	15.0	18.5	23.5	24.5	25.0
WTR YR 1982	MEAN	14.0	MAX	29.0	MIN	3.0						

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	3140	1870	645	543	370	883	720	1310	1210	2450	1780	3720
2	7800	7310	3550	4650	154	320	660	1170	978	2050	1880	3630
3	79500	199000	4670	8900	265	663	700	1160	1100	2130	2160	4190
4	45100	113000	5740	11800	1260	2670	760	1190	1000	1710	1850	3890
5	32100	78100	4430	9690	1300	2900	753	1480	1070	2130	1710	3320
6	8500	14800	4100	9600	1230	2690	740	1690	1400	2940	1950	4180
7	7100	9740	5340	10700	1490	2980	1340	2740	1230	2740	1690	3480
8	1510	1630	4800	11000	2550	4640	1120	2180	1600	2960	1390	2880
9	465	421	3280	6960	2300	4830	825	1720	1420	2540	1450	2770
10	473	420	550	1200	1950	4430	1150	2330	1300	2520	1250	2080
11	405	331	2400	5780	1850	4050	1300	2510	1200	2350	1420	2090
12	324	236	1600	3970	1800	3670	1010	2040	1450	3620	1370	2000
13	1800	841	6360	14500	1770	3380	1750	3900	1450	3670	1470	2040
14	1590	932	6210	15500	1200	2350	1040	1980	1690	4120	1950	3110
15	2810	1390	4950	12900	870	1740	1100	2230	1450	3380	2430	4870
16	3250	807	543	1550	1190	2570	1010	2360	1490	3370	8700	17800
17	7140	3820	344	894	1860	3650	1000	2220	1180	2640	5600	13800
18	5690	2930	2230	5850	1150	2290	975	1800	1180	2650	3700	9470
19	800	313	1210	2940	1320	2730	835	1680	1170	2640	3900	8820
20	4200	1580	1070	2480	1100	2690	875	1980	1120	2450	3530	9910
21	4200	1680	1300	3220	1370	3160	827	1800	953	2210	2340	4480
22	2440	679	1250	2810	1240	2280	870	1760	1230	2740	1790	3070
23	262	94	480	1150	1170	1940	1100	2430	995	2100	945	1580
24	321	131	1120	2650	1180	2280	1000	2120	500	1070	750	1290
25	293	95	1020	2530	1090	2470	975	2100	458	1110	898	1630
26	210	43	901	1820	1400	3500	978	2100	640	1370	640	902
27	242	46	944	2320	1100	2350	1030	2120	1740	3320	279	422
28	3420	942	402	978	1420	2940	998	1880	1800	3430	250	377
29	3170	890	535	1380	1390	2700	972	1700	---	---	300	329
30	425	112	415	1170	1250	2570	1000	1760	---	---	557	1000
31	550	275	---	---	1110	2030	1070	1950	---	---	620	2040
TOTAL	---	444458	---	161435	---	84346	---	61390	---	72410	---	125170

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)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	679	1920	677	2280	1400	13300	691	7110	54000	16900	9720	55100
2	1160	3850	2850	22100	1450	8890	943	8150	48400	56300	6550	38200
3	1090	2890	3900	32400	1440	16500	510	4130	13200	39200	9120	35000
4	515	987	2440	21100	1290	9930	590	3980	21000	85100	7230	25600
5	347	462	4090	47600	1360	11500	450	2430	16500	69500	9400	37100
6	400	615	4570	57700	1350	14800	625	3170	10900	32400	8210	26400
7	385	661	4970	47400	1010	9050	655	3130	7250	18000	5500	16800
8	380	673	4890	40500	735	6910	311	1260	14200	30600	16100	50500
9	1000	3320	2780	26000	580	4530	810	2170	4680	9530	20100	51200
10	1150	3320	3530	34900	792	6840	1870	5650	9400	19600	32200	126000
11	725	1440	3550	31000	730	6270	298	949	3310	5590	36000	103000
12	607	557	2560	20600	511	3080	252	905	4180	5680	28800	107000
13	480	356	2100	21100	482	3070	214	564	30300	61600	25100	98300
14	451	173	1800	20400	580	3730	166	284	22600	37600	11200	43200
15	620	1420	1920	22800	570	3220	130	115	47400	135000	9240	38900
16	2250	14500	2410	28900	653	4040	106	53	17600	29100	9500	50500
17	1590	7430	1740	20400	638	3740	98	94	13300	23400	15800	90000
18	1240	6360	2230	20600	735	4980	81	63	20000	27100	25900	253000
19	1470	9530	1920	14000	828	5860	65	35	21700	25300	24400	294000
20	1420	7130	1450	9630	475	3500	91	30	22800	26800	25000	196000
21	1600	10400	1260	8060	508	4270	1270	226	46800	52700	26500	359000
22	1350	2790	3800	26900	476	3650	703	63	27200	52900	30900	292000
23	1830	6950	3550	35500	460	3760	1230	73	62400	190000	7200	61800
24	7360	26700	2650	25000	392	3200	349	15	73300	243000	2900	23600
25	5500	19000	2810	31500	529	3640	161	6.5	75500	312000	2400	17600
26	3500	6140	3500	33700	512	3330	162	6.6	54100	316000	2270	15700
27	985	1030	2450	22200	455	2790	15300	496	39400	194000	2230	14600
28	760	1320	2110	20300	370	2360	1810	21	46600	273000	2010	10200
29	660	1470	2030	20100	310	1650	892	111	43500	238000	1970	8030
30	550	1170	1860	18900	413	2200	75000	33000	33200	206000	2030	6300
31	---	---	1560	15900	---	---	74200	28000	8600	40400	---	---
TOTAL	---	144564	---	799470								

## 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" (revised), Socorro County, Hydrologic Unit 13020203, in Pedro Armendaris Grant No. 34, on right bank 0.4 mi (0.6 km) northwest of Atchison, Topeka and Santa Fe Railway Co. bridge over floodway channel, 1.0 mi (1.6 km) southwest of former site of San Marcial, 3.5 mi (5.6 km) downstream from railroad bridge near Tiffany siding, and 51 mi (82 km) 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 (1,357.579 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 29, 1958, at datum 4.19 ft (1.277 m) higher.

REMARKS.--Water-discharge records good. Original design and plan was for conveyance channel to carry all flows up to about 2,000 ft<sup>3</sup>/s (57 m<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 (62.3 m<sup>3</sup>/s) May 14, 1966; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	82	94	122	131	148	173	184	244	194	145	179
2	26	81	97	121	131	147	173	190	241	198	151	175
3	35	81	102	119	131	149	171	199	239	200	160	170
4	64	79	108	118	133	152	174	209	237	206	169	170
5	63	77	103	118	134	155	180	220	237	204	169	176
6	58	75	132	117	133	155	180	230	237	198	170	178
7	44	74	189	118	133	152	181	236	237	195	171	182
8	45	73	292	117	135	150	182	242	234	191	182	184
9	45	72	242	119	137	149	184	244	236	194	186	184
10	45	73	184	119	137	150	184	246	234	193	187	178
11	45	77	172	118	136	150	181	249	233	183	182	172
12	45	81	164	114	140	150	186	243	234	176	177	170
13	46	80	159	115	146	152	189	243	233	176	171	172
14	45	79	157	110	148	158	181	245	233	180	168	171
15	48	81	159	111	148	157	173	252	232	183	163	170
16	50	130	159	125	147	162	172	253	233	181	169	167
17	48	85	159	110	146	168	177	257	232	178	169	160
18	47	84	153	112	147	171	180	259	229	183	152	156
19	46	82	147	125	153	172	188	259	221	186	140	195
20	48	81	155	128	150	173	192	256	221	186	129	204
21	52	80	153	127	151	169	191	252	229	184	129	209
22	56	80	141	120	157	172	191	253	234	183	127	220
23	59	294	134	120	162	170	194	258	231	181	130	227
24	62	129	130	124	160	163	201	263	227	175	138	226
25	68	82	126	127	158	156	211	260	214	161	148	222
26	72	82	124	140	150	160	217	259	203	153	156	218
27	77	84	123	141	146	172	213	255	199	151	167	215
28	80	86	139	138	146	176	200	254	201	142	168	218
29	82	90	141	135	---	175	187	255	200	138	172	219
30	83	92	126	133	---	172	182	251	197	135	175	219
31	82	---	119	133	---	172	---	248	---	140	177	---
TOTAL	1696	2726	4583	3794	4026	4977	5588	7524	6812	5528	4997	5706
MEAN	54.7	90.9	148	122	144	161	186	243	227	178	161	190
MAX	83	294	292	141	162	176	217	263	244	206	187	227
MIN	26	72	94	110	131	147	171	184	197	135	127	156
AC-FT	3360	5410	9090	7530	7990	9870	11080	14920	13510	10960	9910	11320

CAL YR 1981 TCTAL 16216.8 MEAN 44.4 MAX 294 MIN 2.0 AC-FT 32170  
WTR YR 1982 TOTAL 57957.0 MEAN 159 MAX 294 MIN 26 AC-FT 115000



RIO GRANDE BASIN  
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 DISCHARGE: March 1954 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,860 micromhos Oct. 25, 1956; minimum daily, 305 micromhos June 14, 1980.

WATER TEMPERATURES: Maximum, 36.0°C on July 17, Aug. 3, 1982; minimum, 0.0°C on many days

during December and January of most years.

SEDIMENT CONCENTRATIONS: Maximum daily, 144,000 mg/L Sept. 19, 1971; minimum daily, no flow on many days during most years.

SEDIMENT LOADS: Maximum daily, 638,000 tons (579,000 tonnes) Aug. 28 1972; minimum daily, 0 tons (0 tonnes) on many days during most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,540 micromhos Nov. 18; minimum daily, 474 micromhos July 2.

WATER TEMPERATURES: Maximum, 36.0° July 17, Aug. 3, minimum, 3.0°C Dec. 10, 12; Jan. 2-3, 6, 13.

SEDIMENT CONCENTRATIONS: Maximum daily, 704 mg/L Aug. 24; minimum daily, 40 mg/L Oct. 20.

SEDIMENT LOADS: Maximum daily, 358 tons (325 tonnes) June 20; minimum daily, 5.2 tons (4.7 tonne) Oct. 20.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
JAN 05...	1340	116	1200	8.4	11.5	5.0
MAR 04...	1420	152	1400	8.3	18.0	13.0
MAY 06...	1540	230	1000	8.1	20.0	18.0
JUL 01...	1445	193	1000	8.1	27.0	23.5
SEP 01...	1445	180	1100	8.1	34.0	25.0

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PEN- DED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PEN- DED (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 (70331)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70333)
OCT 04...	1500	64	20.0	160	28	--	--	--	95	--	--
MAY 31...	1845	248	24.0	221	148	--	--	--	98	--	--
JUN 06...	1430	237	23.0	198	127	--	--	--	93	--	--
JUN 20...	1940	221	24.0	713	425	25	32	52	81	96	100
JUL 13...	1750	176	30.0	360	171	--	--	--	88	--	--
AUG 08...	1810	182	27.0	204	100	--	--	--	89	--	--

RIO GRANDE BASIN  
08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1320	882	---	1160	1440	---	1160	1190	512	1120	1260
2	---	1360	1050	1240	1200	1440	---	1270	1060	474	1160	1250
3	1160	1390	1080	1280	1260	---	---	1300	1060	532	1170	1260
4	1080	1390	1080	1270	1270	1400	---	1280	1130	1020	947	1260
5	970	1150	1330	1280	1300	---	1220	1280	1160	1060	1180	1260
6	962	1280	1100	1210	1290	---	1260	1280	1170	1080	1200	1260
7	1160	1360	1100	1100	1300	1120	1290	1280	983	1100	1210	1330
8	1190	1310	1140	1080	1320	1160	1290	1280	1050	1090	1160	1350
9	1190	1340	1180	1090	1320	1240	1300	1300	501	1100	1210	1350
10	1190	1250	1180	1070	1300	1200	1300	1280	1040	1090	1210	1350
11	1220	1280	1200	1170	1360	1220	1260	---	1070	1160	1220	1340
12	1150	1270	1190	1080	1480	1220	1250	---	728	1160	---	1340
13	1180	1280	---	1280	1510	1490	1240	---	1020	1140	---	---
14	1180	---	1360	1280	1500	1290	1250	---	1070	1180	---	---
15	1280	---	1370	1280	1520	1290	1250	1040	1090	1200	---	---
16	1280	---	1230	1270	1510	1290	1250	1100	1070	1100	---	---
17	1300	1480	1340	1290	1350	1280	1250	1120	1080	1120	---	---
18	1240	1540	1350	1280	1340	1280	1150	1130	1070	1060	1210	---
19	1220	1510	1360	1290	1430	1380	1140	1150	1070	1130	1220	---
20	1250	1490	1360	1270	1420	1380	1230	1160	484	1190	1160	---
21	1360	1520	1360	1290	1430	1390	1240	1150	978	1200	1160	---
22	1360	1500	1360	1300	1430	1380	1240	1160	1100	1190	1160	---
23	1320	1430	1330	1290	1430	1390	1250	1160	1080	1190	1150	---
24	1310	1420	1320	1280	1430	1300	1240	1180	1070	1200	1140	---
25	1310	1420	1330	1290	1440	1260	1250	1180	663	1200	1140	---
26	1300	1400	1320	1270	1430	1240	1150	1180	566	1190	1140	---
27	1220	1410	1320	1290	1440	1250	1270	1200	1040	1200	1140	---
28	1270	1400	1320	1280	1430	1240	1270	1180	1030	1170	1140	---
29	1250	1400	1330	1290	---	1130	1280	1190	626	1170	1140	---
30	1280	1410	1330	1270	---	1210	605	1170	575	1170	1110	---
31	1310	---	1340	1280	---	---	---	1190	---	1020	1230	---
MEAN	1220	1380	1250	1240	1380	1290	1220	1200	961	1080	1160	1300
WTR YR 1982		MEAN	1220	MAX	1540	MIN	474					

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	10.0	6.0	---	11.0	11.5	---	12.0	23.0	28.0	34.0	27.0
2	---	8.0	4.0	3.0	9.5	12.0	---	16.0	22.0	25.0	34.0	27.0
3	21.0	8.5	5.0	3.0	9.0	---	---	12.0	20.0	30.0	36.0	29.0
4	20.0	8.0	4.0	6.0	7.0	13.0	---	12.0	23.0	31.0	34.0	27.0
5	16.0	6.0	8.5	7.5	7.5	---	12.5	14.0	22.0	34.0	28.0	28.0
6	17.0	6.0	5.0	3.0	10.0	---	11.0	16.0	23.0	34.0	26.0	29.0
7	16.5	6.0	10.0	3.5	11.0	12.0	11.0	10.0	24.0	29.0	25.0	27.0
8	18.0	11.0	4.0	4.0	9.0	11.0	9.0	12.0	24.0	30.0	27.0	27.0
9	16.5	10.0	5.0	4.0	9.0	10.0	8.0	14.0	22.0	29.0	25.0	27.0
10	19.0	7.0	3.0	7.0	8.5	10.0	12.0	13.0	26.0	35.0	30.0	26.0
11	19.0	6.0	3.5	6.5	8.5	9.0	12.0	---	25.0	34.0	26.0	25.0
12	15.0	10.0	3.0	6.0	9.0	12.0	14.0	---	26.0	29.0	---	26.0
13	15.0	9.0	---	3.0	11.0	12.0	14.0	---	26.0	30.0	---	---
14	15.0	---	6.0	3.5	11.0	13.0	12.0	---	24.0	31.0	---	---
15	13.0	---	5.0	3.5	9.5	14.5	8.0	24.0	22.0	29.0	---	---
16	13.5	---	7.0	4.0	9.0	13.0	8.0	21.0	23.0	33.0	---	---
17	13.0	8.0	7.0	4.0	9.0	12.0	10.0	25.0	24.0	36.0	---	---
18	14.0	8.0	5.0	6.0	13.0	11.0	10.0	24.0	28.0	35.0	26.0	---
19	12.5	8.0	8.0	4.5	11.0	13.0	12.0	22.0	30.0	30.0	25.0	---
20	14.0	9.0	7.0	5.0	10.0	12.0	6.0	20.0	24.0	30.0	26.0	---
21	13.0	8.0	4.5	4.0	11.5	11.0	6.0	21.0	28.0	29.0	28.0	---
22	13.5	9.0	5.0	4.5	10.0	14.0	7.0	24.0	26.0	31.0	26.0	---
23	13.0	6.5	4.0	9.0	9.0	12.0	9.0	23.0	30.0	35.0	26.0	---
24	14.5	6.0	9.5	8.5	8.0	10.0	14.5	24.0	28.0	30.0	28.0	---
25	14.0	5.0	9.0	6.0	10.0	12.0	19.0	24.0	29.0	31.0	25.0	---
26	12.5	6.0	6.5	5.0	10.0	12.0	13.0	19.0	29.0	35.0	26.0	---
27	11.0	5.0	5.0	4.0	10.0	12.0	8.0	23.0	30.0	33.0	26.0	---
28	12.0	10.0	4.0	4.0	10.0	13.0	8.0	25.0	31.0	30.0	26.0	---
29	10.0	11.0	4.0	5.0	---	12.0	9.0	23.0	30.0	31.0	25.0	---
30	9.0	5.0	7.0	9.0	---	12.0	9.0	22.0	30.0	34.0	27.0	---
31	9.0	---	5.0	7.0	---	---	---	24.0	---	35.0	26.0	---
MEAN	14.5	8.0	5.5	5.0	9.5	12.0	10.5	19.0	25.5	31.5	27.5	27.0
WTR YR 1982		MEAN	16.0	MAX	36.0	MIN	3.0					

RIO GRANDE BASIN  
08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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	125	10	41	9.1	333	85	74	24	103	36	115	46
2	121	8.5	71	16	432	113	77	25	108	38	79	32
3	157	15	89	19	282	78	75	24	88	31	68	28
4	168	29	79	17	270	79	68	22	110	40	72	30
5	131	22	68	14	145	40	70	22	98	35	69	29
6	121	19	57	12	401	148	57	18	124	45	75	31
7	77	9.1	57	11	354	168	65	21	109	39	79	32
8	64	7.8	65	13	64	50	91	29	125	46	82	33
9	90	11	74	14	89	58	87	28	99	37	73	29
10	69	8.4	65	13	313	155	88	28	116	43	89	36
11	88	11	68	14	98	46	92	29	102	37	80	32
12	117	14	61	13	115	51	88	27	120	45	93	38
13	72	8.9	65	14	115	49	106	33	133	52	107	44
14	75	9.1	60	13	99	42	83	25	94	38	78	33
15	160	21	61	13	93	40	70	21	100	40	94	40
16	300	40	128	50	55	24	95	32	120	48	82	36
17	101	13	87	20	86	37	70	21	92	36	72	33
18	225	29	63	14	144	59	76	23	78	31	89	41
19	53	6.6	67	15	103	41	64	22	105	43	96	45
20	40	5.2	124	27	112	47	68	24	91	37	110	51
21	200	28	49	11	143	59	64	22	84	34	89	41
22	96	15	61	13	142	54	68	22	94	40	89	41
23	93	15	68	54	73	26	73	24	98	43	84	39
24	108	18	48	17	78	27	80	27	147	64	102	45
25	65	12	52	12	80	27	89	31	127	54	86	36
26	57	11	49	11	73	24	70	26	103	42	78	34
27	65	14	60	14	64	21	67	26	94	37	72	33
28	46	9.9	50	12	73	27	77	29	102	40	81	38
29	50	11	83	20	85	32	68	25	---	---	81	38
30	50	11	69	17	96	33	73	26	---	---	71	33
31	53	12	---	---	80	26	76	27	---	---	70	33
TOTAL	---	454.5	---	512.1	---	1766	---	783	---	1151	---	1130

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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	78	36	208	103	191	126	146	76	147	58	176	85
2	80	37	216	111	191	124	228	122	131	53	189	89
3	75	35	170	91	233	150	221	119	124	54	149	68
4	80	38	200	113	330	211	208	116	160	73	155	71
5	86	42	155	92	461	295	165	91	259	118	178	85
6	130	63	129	80	232	148	225	120	239	110	172	83
7	190	93	142	90	144	92	178	94	220	102	146	72
8	148	73	150	98	176	111	167	86	210	103	131	65
9	143	71	174	115	545	347	199	104	220	110	128	64
10	118	59	290	193	181	114	174	91	253	128	168	81
11	132	65	311	209	137	86	268	132	356	175	151	70
12	188	94	287	188	320	202	381	181	285	136	149	68
13	133	68	262	172	210	132	370	176	231	107	150	70
14	259	127	245	162	186	117	180	87	227	103	141	65
15	479	224	232	158	224	140	105	52	233	103	152	70
16	361	168	234	160	180	113	214	105	220	100	138	62
17	255	122	207	144	368	231	143	69	220	100	161	70
18	167	81	274	192	262	162	238	118	216	89	164	69
19	131	66	228	159	169	101	122	61	195	74	200	105
20	137	71	232	160	600	358	112	56	255	89	160	88
21	100	52	212	144	380	235	99	49	166	58	161	91
22	105	54	188	128	123	78	110	54	192	66	158	94
23	115	60	192	134	204	127	115	56	381	134	156	96
24	98	53	240	170	191	117	118	56	704	262	155	95
25	94	54	201	141	119	69	134	58	525	210	156	94
26	117	69	218	152	118	65	129	53	267	112	151	89
27	223	128	277	191	140	75	122	50	180	81	141	82
28	186	100	201	138	140	76	117	45	171	78	137	81
29	190	96	217	149	156	84	109	41	148	69	135	80
30	196	96	239	162	238	127	111	40	195	92	137	81
31	---	---	223	149	---	---	110	42	260	124	---	---
TOTAL	---	2395	---	4448	---	4413	---	2600	---	3271	---	2383
TOTAL LOAD FOR YEAR:	25306.6		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 (1.8 km) downstream from former site of San Marcial, 18.5 mi (29.8 km) southwest of San Antonio, and at mile 1,425.2 (2,293.1 km).

DRAINAGE AREA.--27,700 mi<sup>2</sup> (71,740 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 (1,357.942 m) National Geodetic Vertical Datum of 1929.

REMARKS.--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 or 57 m<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 (3,100 km<sup>2</sup>) above station (includes about 13,800 acre-ft or 17.0 hm<sup>3</sup> diverted from conveyance channel, as based on weekly measurements, data furnished by Bureau of Reclamation).

AVERAGE DISCHARGE.--18 years (water years 1965-82), 516 ft<sup>3</sup>/s (14.62 m<sup>3</sup>/s), 373,800 acre-ft/yr (461 hm<sup>3</sup>/yr).  
Total flow of river.--87 years (water years 1895-1982), 1,230 ft<sup>3</sup>/s (34.83 m<sup>3</sup>/s), 891,100 acre-ft/yr (1,099 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, since January 1895 about 50,000 ft<sup>3</sup>/s (1,420 m<sup>3</sup>/s)  
Oct. 11, 1904; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,120 ft<sup>3</sup>/s (145 m<sup>3</sup>/s) Sept. 21, gage height, 16.36 ft (4.987 m);  
no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	78	651	214	546	587	724	1220	3220	2250	208	1300
2	200	219	561	280	495	710	839	2020	2750	2680	182	1850
3	524	474	363	255	533	581	1120	3130	2510	842	540	1180
4	568	598	295	262	527	543	680	3300	3680	2530	794	392
5	1080	543	281	377	503	570	537	3610	1320	1640	923	492
6	513	600	336	496	423	498	384	3610	3330	1480	951	235
7	234	641	223	423	378	625	531	4330	3060	1430	520	96
8	172	607	178	299	397	597	552	4520	2970	818	317	33
9	140	573	158	294	435	587	811	4280	2900	544	248	22
10	120	572	250	381	404	500	1230	4140	3110	313	209	23
11	146	571	399	513	340	370	1440	3870	3140	393	259	149
12	110	571	365	519	358	303	988	3340	2530	465	160	99
13	58	604	395	453	478	298	650	3050	2330	502	150	117
14	7.5	608	423	512	665	290	563	2980	2400	311	200	133
15	.19	692	425	518	582	368	493	2870	2320	185	250	109
16	.04	580	414	475	457	572	1440	2710	2340	109	300	184
17	.00	689	400	530	428	709	1860	2680	2270	20	440	502
18	.00	673	380	629	415	764	1730	2700	2240	.00	224	770
19	.00	590	491	531	444	792	2050	2410	2470	30	232	2200
20	.00	595	574	588	454	873	2100	2240	2560	16	142	3400
21	.00	611	739	518	494	757	2120	2240	3110	.00	138	3550
22	10	675	556	494	596	434	2210	2540	2770	.00	125	3790
23	18	577	327	594	529	467	1440	3070	2680	.00	159	2440
24	35	580	313	671	457	333	2400	3170	2850	.00	1200	2390
25	39	552	405	580	635	291	2250	3660	2670	.00	717	2310
26	36	558	460	514	664	234	2200	3650	2360	.00	1600	1940
27	35	466	428	457	644	180	1530	3430	2230	.00	1050	2000
28	42	380	396	409	647	195	1480	3630	2120	.00	1080	1440
29	52	357	400	365	---	161	1340	3480	2080	.00	1350	834
30	14	405	346	372	---	90	1410	3140	906	.00	1000	571
31	1.9	---	225	401	---	376	---	3280	---	102	700	---
TOTAL	4305.63	16239	12157	13924	13928	14655	39302	98300	77226	16660.00	16368	34551
MEAN	139	541	392	449	497	473	1310	3171	2574	537	528	1152
MAX	1080	692	739	671	665	873	2400	4520	3680	2680	1600	3790
MIN	.00	78	158	214	340	90	384	1220	906	.00	125	22
AC-FT	5540	32210	24110	27620	27630	29070	77960	195000	153200	33050	32470	68530
(+)	11900	37620	33200	35150	35620	38940	89040	209900	166700	44010	42380	79850
CAL YR 1981 TOTAL	116196.85											
WTR YR 1982 TOTAL	357615.63											
MEAN 318												
MAX 1630												
MIN .00												
AC-FT 230500												
(+) MEAN 363												
AC-FT 262600												
MEAN 1139												
AC-FT 824300												

(+) COMBINED FLOW, IN ACRE-FT, AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY AND CONVEYANCE CHANNEL.

RIO GRANDE BASIN  
08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1905-07, 1946 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1905 to April 1907, July 1946 to current year.

WATER TEMPERATURES: January 1949 to current year.

SUSPENDED SEDIMENT DISCHARGE: 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 load determination were made bi-weekly when needed.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,730 micromhos Apr. 8, 1953; minimum daily, 293 micromhos June 20, 1967.

WATER TEMPERATURES: Maximum, 36.0°C Aug. 11, 1951; Aug. 1, 4, 1982; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 135,000 mg/L July 23, 1977; minimum daily, no flow on many days each year.

SEDIMENT LOADS: Maximum daily, 1,200,000 tons (1,090,000 tonnes) Sept. 21, 1982; minimum daily, 0 tons (0 tonnes) many days each year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,620 micromhos Aug. 1; minimum daily, 325 micromhos June 7.

WATER TEMPERATURES: Maximum, 36.0°C Aug. 1, 4; minimum, 2.0°C on Nov. 19, Jan 5.

SEDIMENT CONCENTRATIONS: Maximum daily, 125,000 mg/L Sept. 21; minimum daily, no flow on several days during October and July.

SEDIMENT LOADS: Maximum daily, 1,200,000 tons (1,090,000 tonnes) Sept. 21; minimum daily, 0 tons (0 tonnes) on several days during October and July.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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...	1200	600	570	590	8.2	8.6	13.0	6.0	4000	10.2
19...	1305	579	1320	--	8.1	--	13.5	10.0	--	--
JAN										
05...	1130	394	650	660	8.4	7.8	9.0	2.0	850	12.1
MAR										
04...	1135	550	600	600	8.3	8.2	15.0	9.0	1300	10.1
MAY										
06...	1200	4310	405	394	8.3	7.8	20.0	15.0	1400	8.3
JUL										
01...	1230	2580	370	347	8.3	8.2	29.0	20.0	660	7.8
SEP										
01...	1230	1390	600	636	8.1	8.2	29.0	24.0	16000	6.8

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)	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										
19...	189	49	59	10	53	1.7	4.6	110	30	.5
19...	--	--	--	--	--	--	--	--	--	--
JAN										
05...	203	33	63	11	65	2.1	4.7	130	39	.5
MAR										
04...	186	26	58	10	55	1.8	4.9	110	39	.9
MAY										
06...	139	29	43	7.6	28	1.1	4.1	89	13	.5
JUL										
01...	130	18	41	6.6	28	1.1	3.7	63	11	.3
SEP										
01...	189	50	59	10	58	1.9	4.6	160	24	.6

RIO GRANDE BASIN  
08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, DIS- SOLVED TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CYANIDE TOTAL (MG/L AS CN) (00720)
NOV 19...	23	391	374	.73	.060	.79	.190	.490	.510	<.01
NOV 19...	--	--	--	--	--	--	--	--	--	--
JAN 05...	26	437	441	--	--	.60	.230	.300	.290	--
MAR 04...	24	409	398	--	--	--	--	--	--	<.01
MAY 06...	18	266	269	--	--	.40	.270	1.80	.070	<.01
JUL 01...	21	234	242	--	--	--	--	--	--	--
SEP 01...	19	447	419	--	--	.68	.110	2.60	.070	<.01

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
NOV 19...	1200	16	7	200	62	<1	<1	20	<10	46
MAR 04...	1135	16	6	1000	63	<1	<1	40	<10	20
MAY 06...	1200	14	3	2200	57	<1	<3	70	<10	13
SEP 01...	1230	7	3	3000	65	1	<1	150	<10	58

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
NOV 19...	<3	120	2	93000	<10	83	1	2900	2	.2
MAR 04...	<1	90	1	47000	<10	31	<1	1400	<1	.1
MAY 06...	1	130	2	83000	<9	<1	2	3100	<3	.2
SEP 01...	1	220	2	190000	12	40	<1	4900	<1	.6

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 19...	.1	6	90	2	1	<1	<1	<1	440	4
MAR 04...	.1	3	38	<1	1	<1	<1	<1	200	<3
MAY 06...	<.1	5	21	2	3	<1	3	<1	360	<12
SEP 01...	.1	4	140	4	20	1	1	<1	790	5



RIO GRANDE BASIN  
08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	NITRO- GEN, NITRITE TOT IN BOT MAT (MG/KG AS N) (00616)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITRO- GEN, TOT IN BOT- TOM MA- TERIAL (MG/KG AS N) (00603)	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)
------	------	--	---	--	--	--	--	---

MAY 06... 1200 <2.0 3.4 3.0 563 180 4 <1

DATE	TIME	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
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MAY 06... <1 <10 <1 390 <10 50 .01 3

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
------	------	--	--	--	--	---	---	--	---

NOV 19... 1200 <9.4 800 4.9 470 4.7 450 .08 3.8

MAY 06... 1200 <7.7 <400 6.0 280 5.8 270 .08 2.5

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
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MAY 06... 1200 -- -- -- -- -- -- -- -- -- --

SEP 01... 1230 <.10 <.01 <.10 <.01 <.01 <.01 .01 <.01 <.01

DATE	TIME	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)
------	------	---------------------------------------	---------------------------------------	--	--	---------------------------------------	---	---	---	--

MAY 06... -- -- -- -- -- -- -- -- -- --

SEP 01... <.01 <.01 <.01 <.01 <.01 <.01 <.01 <.01 <.01

DATE	TIME	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)
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MAY 06... -- -- -- <.01 <.01 <.01 -- -- -- --

SEP 01... <.01 <1 <.01 -- -- -- <.10 <.10 <.01

RIO GRANDE BASIN  
08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

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MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 19...	1000	4600
JAN 05...	K830	1400
MAR 04...	K40	2500
MAY 06...	480	3000
JUL 01...	700	800
SEP 01...	2100	6900

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
OCT 05...	0635	1080	14.5	52800	154000	64	73
NOV 03...	0635	470	8.0	13600	17300	31	45
NOV 19...	1200	600	6.0	9050	14700	26	30
DEC 16...	1010	419	4.0	4000	4530	27	33
JAN 05...	1015	394	2.0	3130	3330	22	27
JAN 05...	1130	394	2.0	3280	3490	--	--
JAN 13...	0700	453	3.0	5560	6800	--	--
JAN 29...	0645	365	4.0	4390	4330	14	19
FEB 16...	0945	478	6.5	2640	3410	22	28
MAR 04...	1135	550	9.0	3930	5840	30	36
MAR 12...	1840	300	12.0	3760	3050	--	--
MAR 21...	0645	760	10.0	9420	19300	21	25
APR 11...	1810	1440	12.0	2730	10600	27	36
APR 25...	1420	2250	20.0	2710	16500	--	--
APR 30...	1850	1410	9.0	3120	11900	23	28
MAY 03...	1810	3130	10.0	3080	26000	--	--
MAY 06...	1200	4310	15.0	11000	128000	17	19
MAY 10...	1825	4140	14.0	3220	36000	--	--
JUN 01...	1910	3220	24.0	5830	50700	12	14
JUN 05...	1840	1320	22.0	3570	12700	--	--
JUN 16...	0650	2340	24.0	1080	6820	--	--
JUL 01...	1230	2580	20.0	4380	30500	7	8
AUG 01...	1425	208	36.0	98200	55100	--	--
AUG 17...	0930	329	21.0	24800	22000	56	69
AUG 24...	1425	1200	30.0	14200	46000	--	--
SEP 01...	1230	1390	24.0	40800	153000	51	59
SEP 07...	1340	96	26.0	42800	11100	--	--



RIO GRANDE BASIN  
08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	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)
OCT							
05...	96	--	--	--	--	100	--
NOV							
03...	65	97	99	100	--	--	--
19...	43	83	96	100	--	--	--
DEC							
16...	48	93	98	100	--	--	--
JAN							
05...	40	69	90	99	100	--	--
05...	--	--	--	--	--	65	--
13...	--	--	--	--	--	64	--
29...	34	70	89	100	--	--	--
FEB							
16...	46	88	96	99	100	--	--
MAR							
04...	49	77	94	100	--	--	--
12...	--	--	--	--	--	84	--
21...	35	84	99	100	--	--	--
APR							
11...	56	--	--	--	--	95	100
25...	--	--	--	--	--	94	--
30...	57	--	--	--	--	99	100
MAY							
03...	--	--	--	--	--	99	--
06...	31	59	87	100	--	--	--
10...	--	--	--	--	--	91	--
JUN							
01...	24	67	95	100	--	--	--
05...	--	--	--	--	--	77	--
16...	--	--	--	--	--	97	--
JUL							
01...	15	41	88	100	--	--	--
AUG							
01...	--	--	--	--	--	100	--
17...	93	99	100	--	--	--	--
24...	--	--	--	--	--	99	--
SEP							
01...	80	97	99	100	--	--	--
07...	--	--	--	--	--	96	--

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	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)
DEC 16...	1010	419	4000	4530	6	34	89	100	--
JAN 05...	1015	394	3130	3330	4	33	92	100	--
FEB 16...	0945	478	2640	3410	4	31	98	100	--
MAR 04...	1135	550	3930	5840	1	3	90	100	--
MAY 06...	1200	4310	11000	128000	2	11	83	99	100
JUL 01...	1230	2580	4380	30500	3	27	93	100	--
AUG 17...	0930	329	24800	22000	4	34	97	100	--
SEP 01...	1230	1390	40800	153000	4	22	94	100	--

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (FPS) (00055)
NOV 19...	1200	600	6.0	9050	14700	16900	124	1.5	3.20
DEC 16...	1010	419	4.0	4000	4530	5140	104	1.4	2.80
JAN 05...	1015	394	2.0	3130	3330	4190	117	1.2	2.90
FEB 16...	0945	478	6.5	2640	3410	4320	155	1.0	3.00
MAR 04...	1135	550	9.0	3930	5840	7970	157	1.1	3.10
MAY 06...	1200	4310	15.0	11000	128000	165000	210	2.9	7.00
JUL 01...	1230	2580	20.0	4380	30500	37600	210	2.6	4.60
AUG 17...	0930	329	21.0	24800	22000	22100	159	.91	2.30
SEP 01...	1230	1390	24.0	40800	153000	154000	208	1.7	4.00

RIO GRANDE BASIN  
08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	878	620	---	672	669	---	---	359	349	1620	797
2	---	821	670	630	694	655	---	577	351	369	759	798
3	832	817	678	650	700	---	---	580	354	384	692	792
4	980	800	686	640	701	600	---	491	354	---	675	798
5	1380	688	651	700	707	---	505	464	361	---	988	799
6	1210	713	690	690	706	---	528	462	351	---	822	801
7	948	724	702	630	710	599	547	470	325	---	831	1330
8	884	727	696	640	707	602	553	466	336	---	1000	1360
9	907	732	706	660	713	621	555	467	940	---	1020	1370
10	874	692	700	650	712	562	555	471	480	---	1020	1360
11	875	701	706	630	691	562	533	---	376	---	1030	1370
12	875	684	700	620	686	557	527	---	364	---	---	1360
13	932	691	---	620	690	1180	530	---	359	---	---	---
14	927	---	755	640	688	1330	526	---	351	---	---	---
15	902	---	771	650	690	887	530	383	353	---	---	---
16	888	---	689	640	688	681	536	389	350	---	---	---
17	902	676	745	620	714	1000	534	389	349	---	911	---
18	930	666	757	620	712	670	648	395	353	---	826	---
19	871	671	760	630	671	641	609	392	388	---	828	---
20	853	670	762	620	659	631	548	396	981	---	821	---
21	821	672	767	620	664	638	544	397	486	---	827	---
22	810	668	765	610	659	666	530	393	418	---	817	---
23	781	677	772	630	661	649	532	398	404	---	827	---
24	775	668	762	620	657	666	533	363	397	---	693	---
25	779	672	763	630	660	674	533	378	389	---	674	---
26	771	667	761	620	660	670	542	360	389	---	668	---
27	835	674	766	630	682	671	567	374	398	---	887	---
28	810	670	762	620	707	667	570	377	391	---	902	---
29	841	672	769	620	---	746	574	373	395	1450	916	---
30	814	669	766	630	---	719	---	376	394	1560	690	---
31	874	---	770	630	---	---	---	370	---	1550	789	---
MEAN	892	706	729	635	688	712	548	421	417	944	867	1080
WTR YR 1982		MEAN	684	MAX	1620	MIN	325					

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	9.0	5.0	---	12.0	12.0	---	---	24.0	30.0	36.0	27.0
2	---	8.0	3.0	3.0	8.0	14.0	---	14.0	23.0	30.0	34.0	27.0
3	20.0	8.0	4.5	4.0	8.0	---	---	10.0	19.0	31.0	34.0	29.0
4	20.0	9.0	4.0	6.0	8.0	9.0	---	11.0	24.0	---	36.0	26.0
5	14.5	7.0	4.0	6.0	8.0	---	12.0	13.0	22.0	---	30.0	27.0
6	17.5	7.0	6.0	4.5	11.0	---	11.0	14.0	24.0	---	29.0	27.0
7	17.0	6.0	9.0	3.0	12.0	12.0	12.0	11.0	25.0	---	26.0	26.0
8	17.0	10.0	3.5	3.0	9.5	11.0	9.0	12.0	23.0	---	28.0	26.0
9	15.0	9.0	7.0	3.0	8.0	12.0	9.0	15.0	21.0	---	27.0	27.0
10	20.0	8.0	4.0	6.0	8.0	10.0	14.0	14.0	25.0	---	29.0	27.0
11	18.0	8.0	4.0	5.0	8.0	10.0	12.0	---	25.0	---	27.0	24.0
12	14.5	10.0	3.0	4.5	8.0	12.0	14.0	---	25.0	---	---	25.0
13	14.5	8.0	---	3.0	11.0	11.0	13.0	---	25.0	---	---	---
14	14.0	---	5.0	3.0	12.0	12.0	10.0	---	25.0	---	---	---
15	14.0	---	6.5	3.0	9.0	11.0	8.0	25.0	24.0	---	---	---
16	15.0	---	4.0	3.0	10.0	14.0	7.5	22.0	24.0	---	---	---
17	14.0	6.0	4.0	4.5	8.0	12.0	9.0	23.0	25.0	---	21.0	---
18	13.0	6.5	4.0	8.0	12.0	12.0	10.0	24.0	29.0	---	25.0	---
19	14.0	2.0	6.0	3.0	10.0	14.0	11.0	23.0	30.0	---	26.0	---
20	15.0	8.0	9.0	3.0	10.0	10.0	6.0	20.0	30.0	---	27.0	---
21	14.0	8.0	5.0	3.5	10.0	10.0	6.5	22.0	29.0	---	29.0	---
22	15.0	10.0	6.0	4.0	10.0	13.0	9.0	22.0	28.0	---	27.0	---
23	12.0	5.5	5.0	8.0	11.0	11.0	10.0	22.0	32.0	---	28.0	---
24	14.0	5.5	10.0	9.0	7.5	10.0	14.0	24.0	28.0	---	30.0	---
25	13.5	6.0	11.0	5.0	10.0	14.0	20.0	24.5	29.0	---	26.0	---
26	12.5	6.0	5.0	4.0	11.5	14.0	11.0	22.0	28.0	---	28.0	---
27	11.0	6.0	3.5	3.5	12.0	12.0	9.0	24.0	32.0	---	27.0	---
28	11.5	8.0	4.0	4.0	10.0	16.0	7.5	24.0	32.0	---	27.0	---
29	8.5	11.0	4.5	4.0	---	14.0	9.0	25.0	30.0	22.0	27.0	---
30	10.0	5.5	5.5	8.0	---	11.0	---	24.0	32.0	33.0	26.0	---
31	10.0	---	4.0	8.0	---	---	---	26.0	---	34.0	27.0	---
MEAN	14.5	7.5	5.5	4.5	9.5	12.0	10.5	19.5	26.5	30.0	28.5	26.5
WTR YR 1982		MEAN	14.5	MAX	36.0	MIN	2.0					

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)	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9200	3730	13700	2890	5530	9720	6200	3580	2430	3580	3490	5530
2	23000	22800	13700	8100	6200	9390	3520	2660	1750	2340	3760	7210
3	51500	72900	14100	18000	7910	7750	5290	3640	1740	2500	3590	5630
4	45700	70100	16000	25800	4900	3900	6050	4280	1880	2680	3900	5720
5	56700	165000	12100	17700	4570	3470	4300	4380	2610	3540	3870	5960
6	46800	64800	11500	18600	4630	4200	7100	9510	2800	3200	4050	5450
7	9920	6270	10600	18300	3810	2290	5600	6400	2560	2610	4400	7420
8	9360	4350	10900	17900	4100	1970	4400	3550	2850	3050	4980	8030
9	9500	3590	12000	18600	4020	1710	4310	3420	3050	3580	3770	5980
10	9580	3100	9830	15200	3660	2470	4670	4800	3050	3330	4050	5470
11	9400	3710	11700	18000	4310	4640	5200	7200	2760	2530	3250	3250
12	10200	3030	8870	13700	3800	3740	5600	7850	2900	2800	3520	2880
13	6030	944	10200	16600	4600	4910	5590	6840	3250	4190	4510	3630
14	4890	99	10700	17600	4200	4800	6000	8290	3360	6030	3550	2780
15	7090	3.6	10800	20200	2950	3390	5380	7520	3610	5670	2940	2920
16	7200	.8	9600	15000	3550	3970	5620	7210	2560	3160	3510	5420
17	0	.0	9310	17300	2400	2590	5640	8070	1690	1950	3600	6890
18	0	.0	7220	13100	2790	2860	3900	6620	1780	1990	3960	8170
19	0	.0	8340	13300	3000	3980	7810	11200	3240	3880	8600	18400
20	0	.0	7400	11900	5890	9130	8910	14100	4000	4900	6100	14400
21	0	.0	7900	13000	2760	5510	6100	8530	2560	3410	7100	14500
22	6760	183	7900	14400	3820	5730	3990	5320	4880	7850	2610	3060
23	3860	301	6600	10300	9690	8560	5040	8080	3380	4830	2770	3490
24	4950	468	7000	11000	6730	5690	3000	5440	3160	3900	1990	1790
25	4390	462	5920	8820	2810	3070	6040	9460	2050	3510	1600	1260
26	4240	412	5100	7680	3600	4470	4750	6590	2960	5310	3300	2080
27	6090	576	5320	6690	4870	5630	3900	4810	3080	5360	1850	899
28	7860	891	4660	4780	2000	2140	4760	5260	2900	5070	1130	595
29	4520	635	6210	5990	2350	2540	4010	3950	---	---	1200	522
30	5680	215	7050	7710	2190	2050	3600	3620	---	---	1200	292
31	6110	31	---	---	8800	5350	4000	4330	---	---	4470	4540
TOTAL	---	428601.4	---	408160	---	141620	---	196510	---	106750	---	164168

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)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9700	19000	3120	10300	5820	50600	3750	22800	89500	44600	20800	73000
2	8670	19600	3310	18100	10000	74300	5670	41000	26200	12900	11100	55400
3	12200	36900	3300	27900	6420	48900	4980	11300	24300	35400	10100	32200
4	11100	26400	3360	29900	4700	46700	6960	45900	23500	50400	12600	13300
5	9280	13500	3650	35600	3580	12800	5410	24000	35200	87700	11500	15300
6	7850	8140	6410	62500	6200	55700	4560	18200	54000	139000	18000	11400
7	6150	8820	3950	46200	1230	10200	4290	16600	58000	81400	50900	13200
8	4790	7140	4350	53100	892	7150	3470	7660	34000	29100	47100	4200
9	6660	14600	5100	58900	355	2780	2850	4190	41900	28100	45000	2670
10	6900	22900	3700	41400	561	4710	2570	2170	30000	16900	48100	2990
11	2880	11200	2830	29600	2000	17000	2320	2460	26000	18200	55500	22300
12	2870	7660	7140	64400	3450	23600	2070	2600	13900	6000	56500	15100
13	2900	5090	7920	65200	6530	41100	2130	2890	11800	4780	50500	16000
14	2750	4180	7160	57600	2340	15200	1790	1500	9900	5350	42400	15200
15	2820	3750	6460	50100	1140	7140	1350	674	8500	5740	28300	8330
16	2990	12400	3780	27700	1150	7270	1100	324	45800	37100	27800	13800
17	2950	14800	4450	32200	1270	7780	699	38	72000	85500	51100	69300
18	2900	13500	4930	35900	1180	7140	0	.0	72000	43500	57500	120000
19	3220	17800	2970	19300	799	5330	2060	236	67800	42500	70700	420000
20	2730	15500	4370	26400	282	1950	1660	72	56000	21500	94700	869000
21	2750	15700	3920	23700	900	7560	0	.0	52100	19400	125000	1200000
22	3240	19300	3460	23700	1200	8970	0	.0	53200	18000	91000	931000
23	2990	11600	4820	40000	1430	10300	0	.0	40300	17300	62100	409000
24	3550	23000	3050	26100	712	5480	0	.0	15700	50900	49900	322000
25	2740	16600	4670	46100	825	5950	0	.0	10800	24600	40700	254000
26	3950	23500	3900	38400	5470	34900	0	.0	18000	77800	36000	189000
27	4150	17100	3680	34100	1110	6680	0	.0	32800	93000	32200	174000
28	5550	22200	5090	49900	748	4280	0	.0	44200	129000	33000	128000
29	3690	13400	4510	42400	2060	11600	0	.0	42100	153000	25300	57000
30	3050	11600	3150	26700	3500	8560	0	.0	8400	22700	11600	17900
31	---	---	4420	39100	---	---	61100	27200	8600	16300	---	---
TOTAL	---	456880	---	1182500	---	551630	---	231814.0	---	1417670	---	5474590
TOTAL LOAD FOR YEAR: 10760893.4 TONS.												

## RIO GRANDE BASIN

## 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 (1.6 km) west of Elephant Butte, 4 mi (6 km) northeast of Truth or Consequences (Hot Springs) and at mile 1,383.2 (2,225.6 km).

DRAINAGE AREA.--29,445 mi<sup>2</sup> (76,260 km<sup>2</sup>), approximately including 2,940 mi<sup>2</sup> (7,610 km<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 (13.20 m) 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, 2,110,000 acre-ft (2.60 km<sup>3</sup>) survey of 1980 at gage height 4,407.0 ft (1,343.25 m) crest of spillway. Capacity by original survey was 2,638,900 acre-ft (3.25 km<sup>3</sup>). No adjustment made for decrease in capacity due to sedimentation between effective dates of capacity tables. No dead storage. No storage allocated to flood control. Water is used for power development and irrigation on Rio Grande Project of Bureau of Reclamation. A 50,000 acre-ft (62 km<sup>3</sup>) permanent pool is authorized for recreational purposes.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 2,303,000 acre-ft (2.84 km<sup>3</sup>) June 16-18, 1942, gage height, 4,409.19 ft (1,343.921 m); minimum daily contents after initial filling, 9,900 acre-ft (12.2 hm<sup>3</sup>) Aug. 6, 1954, gage height, 4,258.03 ft (1,297.848 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 838,300 acre-ft (1.03 km<sup>3</sup>) July 6, gage height, 4,360.65 ft (1,329.126 m); minimum daily contents, 725,200 acre-ft (0.89 km<sup>3</sup>) Jan. 1, gage height, 4,354.30 ft (1,327.191 m).

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

4,350	655.0	4,370	1,027.6
4,360	826.2	4,380	1,264.3

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	753800	756600	743900	725200	758300	784000	773700	755000	809600	833700	780200	752800
2	753800	755400	743100	725800	759900	784200	772200	754200	811500	835500	778100	754000
3	753800	754200	742600	726800	761300	784500	770600	751200	812600	837400	775800	754900
4	753800	753100	742000	728200	763100	784300	769400	750700	813100	837000	774400	754000
5	754700	752600	742000	729400	764500	784300	768300	750700	813500	837800	774000	752400
6	756100	752100	742200	730400	765400	784200	767100	751200	814400	838300	773300	751700
7	756900	751600	741500	731800	766600	784200	765400	752800	815700	837400	772600	750200
8	758000	751400	740500	732600	767800	784300	763600	756200	817500	837200	770500	747700
9	758500	750900	739300	733500	768900	784300	761800	759900	819200	836100	768300	746000
10	759000	750300	739000	734500	770100	784700	760600	763200	821000	834600	766800	743400
11	759000	749500	737800	735400	771500	784900	759600	767100	822500	832700	764700	741400
12	759600	749000	737600	736900	772100	784500	760300	770600	824400	830300	761800	739300
13	759200	748800	737100	737500	773500	784300	758200	773700	824700	828100	759600	737200
14	759700	748600	735900	739300	774700	784000	757100	776300	825300	826200	757100	735500
15	759700	748400	735400	740700	776100	783100	755700	778600	826000	823300	755200	735400
16	759600	748300	734200	741900	776500	782700	754000	781100	826600	822000	753800	736000
17	759400	748100	733100	742900	777900	782500	752200	783800	827300	818600	752100	738100
18	758900	747900	731900	743600	779700	782400	750200	786300	827500	815700	750200	740300
19	759000	747200	731800	744300	780800	782400	752100	788100	827900	813500	748600	744600
20	759400	746700	731600	745300	782200	782200	752100	789400	829600	811300	747000	751400
21	758500	746500	730900	746000	783600	782200	752600	789700	829900	807800	745500	761500
22	758300	746400	729900	747700	783800	782500	753600	790100	831200	805800	743100	768500
23	758200	746500	729100	748400	783800	782700	754700	790800	831600	803500	740800	776100
24	758000	746000	728200	750000	784000	782700	755700	793000	832900	800500	740200	782700
25	758000	745800	728200	751400	784200	782200	756600	794600	833700	796900	739600	786500
26	758000	745700	728000	752600	784000	781100	758000	796700	835500	794400	740700	788600
27	758200	745300	727700	753800	784000	780400	759600	799800	835700	791700	742600	791700
28	758300	745700	727200	754900	783900	779500	759700	802500	835500	789500	744500	795300
29	758300	745700	726800	756200	---	778600	759200	804900	835500	786500	747000	797300
30	758300	745700	726200	757500	---	777400	758700	807300	834600	784900	749600	799800
31	758000	---	725300	758300	---	776700	---	809300	---	782400	751700	---
MAX	759700	756600	743900	758300	784200	784900	773700	809300	835700	838300	780200	799800
MIN	753800	745300	725300	725200	758300	776700	750200	750700	809600	782400	739600	735400
(+)	4356.21	4355.50	4354.31	4356.23	4357.67	4357.27	4356.25	4359.08	4360.45	4357.59	4355.65	4358.56
(++)	+4000	-12300	-20400	+33000	+25500	-7100	-18000	+50600	+25300	-52200	-30700	+48100

CAL YR 1981 MAX 1217000 MIN 725300 (++) -480700  
WTR YR 1982 MAX 838300 MIN 725200 (++) +45800

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

08361000 RIO GRANDE BELOW ELEPHANT BUTTE DAM, NM  
(National stream-quality accounting network station)

LOCATION.--Lat 33°08'54", long 107°12'22", Sierra County, Hydrologic Unit 13030101, in Pedro Armendaris Grant, on left bank 1.0 mi (1.6 km) downstream from dam, 1.5 mi (2.4 km) upstream from Cuchillo Negro River, and at mile 1,382.2 (2,224.0 km).

DRAINAGE AREA.--29,450 mi<sup>2</sup> (76,280 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 and crest-stage gage. Datum of gage is 4,241.09 ft (1,292.684 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 24, 1980 at datum 1.0 ft (0.305 m) higher. See WSP 1732 for history of changes prior to Apr. 24, 1942.

REMARKS.--Water-discharge records good. Flow regulated by Elephant Butte Reservoir (station 08360500). Diversion for irrigation of about 800,000 acres (3,200 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--67 years, 968 ft<sup>3</sup>/s (27.41 m<sup>3</sup>/s), 701,300 acre-ft/yr (865 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8,220 ft<sup>3</sup>/s (233 m<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, 2,160 ft<sup>3</sup>/s (61.2 m<sup>3</sup>/s) May 1, June 5; minimum daily, 4.8 ft<sup>3</sup>/s (0.14 m<sup>3</sup>/s) Jan. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	595	941	57	18	677	1610	2160	2110	1360	1320	1220
2	19	646	951	15	17	676	1520	2140	2130	1330	1320	1210
3	20	642	955	14	19	675	1470	2120	2130	1340	1310	1210
4	20	642	960	14	19	678	1440	2060	2100	1340	1310	1210
5	20	642	676	15	17	673	1430	2100	2160	1340	1320	1200
6	20	642	676	15	17	672	1420	2100	2100	1340	1310	1200
7	19	646	969	15	17	673	1420	2080	2130	1340	1310	1200
8	19	646	978	14	19	675	1420	2070	2100	1340	1310	1200
9	20	649	983	15	17	675	1420	2050	2130	1340	1330	1190
10	19	652	992	14	18	677	1420	2060	2090	1340	1320	1170
11	19	653	1000	14	19	684	1420	2050	2100	1340	1320	1170
12	18	656	712	16	17	686	1430	2050	2090	1340	1340	1160
13	16	659	724	17	18	687	1430	2040	2090	1340	1360	1140
14	13	656	1040	17	19	693	1430	2040	2070	1340	1360	1120
15	12	663	1040	18	18	707	1460	2050	2060	1340	1360	414
16	12	669	1050	19	19	707	1440	2050	2090	1340	1370	13
17	12	669	1070	19	20	703	1440	2070	2100	1350	1380	13
18	12	669	1080	20	23	702	1440	2080	2090	1340	1380	19
19	12	669	780	19	20	697	1440	2080	2090	1330	1390	17
20	11	663	792	20	22	702	1440	2080	2070	1330	1390	14
21	11	666	1130	10	23	707	1440	2060	2070	1330	1400	62
22	11	669	1140	4.8	731	709	1440	2060	2060	1320	1400	23
23	12	669	1150	17	729	719	1430	2060	2040	1330	1410	20
24	11	673	1170	18	714	725	1430	2080	2030	1330	845	19
25	11	673	848	18	699	731	1430	2080	2030	1330	942	702
26	11	673	856	19	692	727	1420	2080	2030	1320	1200	865
27	11	673	868	19	688	727	1410	2080	2030	1320	1200	18
28	11	680	1240	19	683	734	1400	2100	2020	1310	1220	14
29	12	680	1270	19	---	735	1410	2130	2020	1310	1230	13
30	19	680	1290	19	---	733	1410	2120	2010	1320	1220	15
31	13	---	1300	19	---	734	---	2120	---	1310	1220	---
TOTAL	465	19764	30631	548.8	5332	21700	43160	64500	62370	41330	40097	18841
MEAN	15.0	659	988	17.7	190	700	1439	2081	2079	1333	1293	628
MAX	20	680	1300	57	731	735	1610	2160	2160	1360	1410	1220
MIN	11	595	676	4.8	17	672	1400	2040	2010	1310	845	13
AC-FT	922	39200	60760	1090	10560	43040	85610	127900	13700	81980	79530	37370

CAL YR 1981 TOTAL 339520.6 MEAN 930 MAX 2290 MIN 6.0 AC-FT 673400  
WTR YR 1982 TOTAL 348738.8 MEAN 955 MAX 2160 MIN 4.8 AC-FT 691700



RIO GRANDE BASIN  
08361000 RIO GRANDE BELOW ELEPHANT BUTTE DAM, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 20...	1010	690	550	534	8.3	8.3	7.5	15.0	3.5
JAN 06...	0840	13	575	680	8.4	8.1	10.0	7.5	2.0
MAR 04...	1730	676	550	540	8.4	8.7	17.0	8.0	1.4
MAY 06...	1800	2110	600	631	8.5	8.0	21.0	13.0	4.1
JUL 01...	1730	1390	600	648	8.1	8.4	33.0	17.0	7.2
SEP 02...	1015	1220	600	592	8.0	8.0	27.0	19.0	2.8

DATE	TIME	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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 20...	6.5	166	46	50	10	50	1.8	4.8	110	
JAN 06...	9.8	180	30	54	11	59	2.0	4.8	110	
MAR 04...	9.7	166	26	50	10	52	1.8	5.0	110	
MAY 06...	7.0	180	30	54	11	55	1.9	5.2	120	
JUL 01...	3.4	178	31	53	11	60	2.0	5.1	120	
SEP 02...	2.2	175	29	52	11	57	1.9	4.7	110	

DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF 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)
NOV 20...	27	.4	15	308	339	.13	.220	.060	.090	
JAN 06...	39	.5	13	387	381	<.09	.140	.040	.020	
MAR 04...	34	.6	15	369	361	<.09	.080	.040	<.020	
MAY 06...	30	.6	15	394	381	<.10	.210	.080	.020	
JUL 01...	31	.5	17	403	386	.15	.130	.090	.070	
SEP 02...	30	.4	18	392	371	<.10	.260	.340	.110	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
NOV 20...	1010	5	4	100	88	<1	<1	10	<10	<1
MAR 04...	1730	4	4	100	88	<1	<1	<10	<10	1
MAY 06...	1800	4	4	<100	93	<1	<3	10	<10	<1
SEP 02...	1015	5	4	<100	94	<1	<1	<10	<10	<1

RIO GRANDE BASIN  
08361000 RIO GRANDE BELOW ELEPHANT BUTTE DAM, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
NOV 20...	<3	7	7	170	<10	2	2	50	12	<.1
MAR 04...	<1	5	2	60	<3	3	<1	20	<1	<.1
MAY 06...	<1	11	3	190	<9	37	3	30	9	.1
SEP 02...	2	6	<2	130	13	2	<2	130	130	<.1

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 20...	<.1	1	3	<1	<1	<1	<1	20	<3
MAR 04...	<.1	<1	1	<1	<1	<1	<1	10	<4
MAY 06...	<.1	3	2	<1	<1	11	<1	10	<12
SEP 02...	<.1	10	<2	<1	1	<1	<2	10	15

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 20...	K3	K10
JAN 06...	K1	K7
MAR 04...	K0	K1
MAY 06...	K1	50
JUL 01...	K4	K11
SEP 02...	K9	27

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 20...	1010	690	15.0	9	17	96
JAN 06...	0840	13	7.5	5	.18	99
MAR 04...	1730	676	8.0	6	11	78
MAY 06...	1800	2110	13.0	25	142	57
JUL 01...	1730	1390	17.0	12	45	89
SEP 02...	1015	1220	19.0	5	16	65



## RIO GRANDE BASIN

## 08362000 CABALLO RESERVOIR NEAR ARREY, NM

LOCATION.--Lat 32°53'47", long 107°17'30", in SE¼SW¼ sec.19, T.16 S., R.4 W., Sierra County, Hydrologic Unit 13030101, in control tower of Caballo Dam on Rio Grande, 0.5 mi (0.8 km) downstream from mouth of Apache Canyon, 0.9 mi (1.4 km) upstream from Bojarsquez Bridge, 2 mi (3 km) upstream from Percha diversion dam, 3.5 mi (5.6 km) northeast of Arrey, 5.2 mi (8.4 km) south of Caballo, and at mile 1,356.6 (2,182.8 km).

DRAINAGE AREA.--30,700 mi<sup>2</sup> (79,510 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 (13.20 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam, completed Sept. 19, 1938. Storage began Feb. 8, 1938. Capacity by 1958 survey, 344,000 acre-ft (424 hm<sup>3</sup>) between gage heights 4,104 ft (1,250.9 m) bottom of tunnel entrance of gates and 4,182 ft (1,274.7 m) gage height above which spillway gates operate automatically. No dead storage. Storage held for flood control, 100,000 acre-ft (123 hm<sup>3</sup>). Water released from Elephant Butte Reservoir for power development is stored in Caballo Reservoir and released for irrigation on Rio Grande project for Bureau of Reclamation.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 347,000 acre-ft (428 hm<sup>3</sup>) Mar. 4, 1942, gage height, 4,182.06 ft (1,274.692 m); minimum daily contents, 118 acre-ft (0.145 hm<sup>3</sup>), Oct. 14, 1938, gage height, 4,108.1 ft (1,252.15 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 109,600 acre-ft (135 hm<sup>3</sup>) Jan. 7, gage height, 4,155.22 ft (1,266.511 m); minimum daily contents, 13,130 acre-ft (16.2 hm<sup>3</sup>) Oct. 1, gage height, 4,129.17 ft (1,258.571 m).

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

4,120	1,800	4,150	80,760
4,130	14,700	4,160	141,700
4,140	40,310	4,170	220,800

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13130	16980	60230	109100	103700	93050	37240	42840	79120	88930	58450	36970
2	13240	18540	62010	109200	103000	92620	37180	44560	79460	88000	58700	36850
3	13370	19970	64010	109300	102100	91190	37000	46340	79940	87310	58370	36670
4	13510	21460	65690	109000	101800	88830	37060	48290	80380	86620	58170	36160
5	13620	22950	67120	108700	101500	87780	37210	50170	81360	86200	58130	35600
6	13730	24420	68460	108900	101000	86100	37310	52040	81870	85380	58580	35510
7	13810	25810	70250	109600	100400	85740	37500	54000	84430	84430	59240	34820
8	13960	27230	71890	109200	100100	84930	37590	56200	83120	83370	59480	34190
9	14090	28690	73700	109200	99770	83730	38030	58210	83580	82670	59940	33730
10	14190	30140	75420	109000	99370	81370	38310	60350	84030	81770	59650	34850
11	14260	31680	77240	109000	99480	78730	38750	61680	84680	80660	57930	34910
12	14400	33160	78590	108900	99420	76900	39000	62630	85480	80130	56790	33120
13	14490	34610	79990	108800	99190	74680	38810	63490	86260	79410	55760	35600
14	14640	36160	81360	108900	98850	72680	38370	64350	87040	78880	54930	35420
15	14700	37620	83420	108800	98620	70660	37680	65220	87250	78300	54110	34080
16	14720	39180	85130	108800	98390	68690	37430	66080	87100	77620	53320	31560
17	15000	40670	86830	108700	97990	66940	37280	66900	87250	76900	52040	29020
18	15250	42380	88560	108600	97650	65390	37210	67300	87410	75520	50280	29560
19	15390	43460	89930	108700	97190	63750	37120	67440	87880	74630	48730	30050
20	15470	44860	91140	108700	96680	61590	36670	67700	88530	72820	47460	30490
21	15510	46210	92890	108600	96230	59400	36220	68020	89610	70920	46650	31890
22	15570	47610	94640	108700	96180	57180	35750	68870	90140	69220	45970	32420
23	15670	49020	96390	108700	97420	54770	36640	69270	90290	67930	45280	32680
24	15710	50200	98110	108700	98280	52410	37900	70360	90500	66900	43490	32790
25	15880	51660	99420	108500	99140	49920	39690	71420	90660	65990	41260	33480
26	15960	52980	100400	108400	97880	48010	40670	71840	90870	65170	39620	36050
27	16060	54190	101600	108200	96280	46240	41390	72450	91030	63540	38720	36550
28	16140	55840	103400	107200	94860	44560	41590	73610	91080	61550	37870	36790
29	16180	57220	105200	106400	---	43000	41720	75100	91140	60230	37000	36850
30	16320	59030	107000	105600	---	41110	42050	76560	90500	59610	36880	36970
31	16380	---	108600	104600	---	38940	---	73240	---	58950	37030	---
MAX	16380	59030	108600	109600	103700	93050	42050	76560	96660	88930	59940	36970
MIN	13130	16980	60230	104600	94860	38940	35750	42840	79120	58950	36880	29020
(+)	4130.83	4145.16	4155.06	4154.39	4152.70	4139.56	4140.53	4149.42	4151.90	4145.14	4138.55	4138.93
(++)	+3440	+42650	+49570	-4000	-9740	-55920	+3110	+31190	+17260	-31550	-21920	-60

CAL YR 1981 MAX 157000 MIN 5160 (++) +25430

WTR YR 1982 MAX 109600 MIN 13130 (++) +24030

(+) 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 (600 m) upstream from Interstate Highway 25, 4,200 ft (1,300 m) downstream from Caballo Dam, 1.2 mi (1.9 km) downstream from Apache Canyon, 1.3 mi (2.1 km) upstream from Percha diversion dam, 3 mi (5 km) northeast of Arrey, 5 mi (8 km) south of Caballo, and at mile 1,355.6 (2,181.2 km).

DRAINAGE AREA.--30,700 mi<sup>2</sup> (79,510 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<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 (1,262.15 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1938, at datum 7.0 ft (2.13 m) higher, Oct. 7-12, 1938, at datum 6.0 ft (1.83 m) higher, and Oct. 13, 1938, to Dec. 31, 1945, at datum 5.0 ft (1.52 m) higher than present datum.

REMARKS.--Flow regulated by Caballo Reservoir (station 08362000) capacity, 344,000 acre-ft (424 hm<sup>3</sup>), 1958 survey and Elephant Butte Reservoir (station 08360500) capacity, 2,109,000 acre-ft (2.60 km<sup>3</sup>), 1974 survey. Diversions for irrigation of about 800,000 acres (3,200 km<sup>2</sup>) above 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 furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--44 years, 848 ft<sup>3</sup>/s (24.02 m<sup>3</sup>/s), 614,400 acre-ft/yr (758 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,650 ft<sup>3</sup>/s (217 m<sup>3</sup>/s) May 20, 1942; minimum daily, 0.1 ft<sup>3</sup>/s (0.003 m<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, 2,240 ft<sup>3</sup>/s (63.4 m<sup>3</sup>/s) July 21; minimum daily, 0.70 ft<sup>3</sup>/s (0.020 m<sup>3</sup>/s) Nov. 29, 30, Dec. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.1	.7C	1.4	4C5	134C	169C	13C0	1530	213C	17CC	1260
2	1.4	1.1	.8C	1.4	373	134C	155C	13C0	1720	180C	126C	1240
3	.90	1.1	1.0	1.4	258	134C	144C	10C0	1720	155C	15CC	130C
4	.9C	1.1	1.2	1.4	197	135C	136C	115C	1630	151C	141C	14C0
5	.9C	1.1	1.3	1.3	129	124C	132C	117C	154C	146C	139C	1390
6	.90	1.1	1.5	1.3	183	114C	132C	118C	154C	164C	11CC	127C
7	1.0	1.0	1.6	1.2	178	114C	130C	11CC	154C	165C	114C	132C
8	1.0	1.0	1.8	1.2	173	114C	130C	102C	161C	168C	107C	15C0
9	1.0	1.0	1.7	1.1	174	140C	127C	102C	167C	171C	108C	15C0
10	1.0	1.0	1.6	1.1	174	162C	124C	103C	167C	167C	156C	144C
11	1.0	1.0	1.5	1.1	61	162C	124C	129C	158C	171C	205C	128C
12	1.0	1.0	1.4	1.1	2.0	168C	124C	155C	150C	165C	192C	114C
13	1.0	1.0	1.3	1.1	9C	173C	144C	157C	151C	163C	176C	109C
14	1.1	1.0	1.2	1.2	113	174C	162C	157C	151C	162C	175C	133C
15	1.1	1.0	1.0	1.2	138	174C	162C	157C	173C	162C	178C	151C
16	1.1	1.0	1.1	1.2	169	163C	152C	156C	193C	167C	177C	146C
17	1.2	1.0	1.1	1.2	189	158C	143C	157C	192C	174C	198C	124C
18	1.2	1.0	1.2	1.2	2C8	178C	143C	178C	177C	185C	218C	31
19	1.2	1.0	1.2	1.2	2C3	179C	143C	19CC	166C	184C	219C	3.3
20	1.2	1.0	1.3	1.2	2C4	180C	151C	189C	168C	215C	21CC	3.3
21	1.2	1.0	1.3	1.2	2C7	180C	157C	176C	145C	224C	202C	3.3
22	1.2	1.0	1.4	1.2	2C9	180C	156C	164C	166C	222C	182C	3.3
23	1.0	1.0	1.4	1.2	64	182C	115C	164C	183C	194C	173C	3.3
24	1.0	.90	1.4	1.2	154	183C	84C	151C	173C	180C	189C	3.3
25	1.0	.90	1.4	1.2	334	183C	83C	145C	178C	181C	193C	3.3
26	1.0	.90	1.4	1.2	117C	168C	925	171C	162C	181C	182C	3.3
27	1.0	.8C	1.4	1.63	134C	155C	119C	171C	161C	203C	178C	3.3
28	1.1	.8C	1.4	412	133C	150C	130C	137C	181C	221C	172C	3.3
29	1.1	.70	1.4	412	---	148C	130C	126C	2C3C	208C	164C	3.3
30	1.1	.70	1.4	408	---	162C	130C	126C	223C	157C	128C	3.3
31	1.1	---	1.4	4C8	---	168C	---	126C	---	173C	123C	---
TOTAL	33.8C	29.3C	4C.8C	1834.7	8489.0	4873C	40235	4409C	5111C	5572C	5155C	22740.6
MEAN	1.09	.98	1.32	59.2	303	1572	1341	1422	1704	1797	1663	758
MAX	1.9	1.1	1.8	412	134C	183C	169C	19CC	223C	224C	219C	151C
MIN	.9C	.7C	.7C	1.1	2.0	114C	83C	10C0	145C	146C	107C	3.3
AC-FT	67	58	81	364C	1684C	9666C	7951C	8745C	1014C0	1105C0	1022C0	4511C
(+)	0	0	C	C	0	9	11	74	228	403	24C	69

CAL YR 1981 TOTAL 306534.3C MEAN 84C MAX 226C MIN .7C AC-FT 6C80CC  
WTR YR 1982 TOTAL 324603.2C MEAN 889 MAX 224C MIN .7C AC-FT 6439CC

(+) 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)

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 (2.7 km) upstream from American Dam, 5.6 mi (9.0 km) upstream from Santa Fe Street-Juarez Avenue Bridge between El Paso and Cd. Juarez, Chihuahua, and at mile 1,249.9 (2,011.1 km).

DRAINAGE AREA.--32,207 mi<sup>2</sup> (83,415 km<sup>2</sup>), approximately, including 2,940 mi<sup>2</sup> (7,610 km<sup>2</sup>) in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1889 to current year. October 1960 to September 1965 in bulletins of International Boundary and Water Commission. Monthly discharges only for some periods published in WSP 1312 or 1732.

GAGE.--Water-stage recorder. Datum of gage is 3,722.30 ft (1,134.557 m) National Geodetic Vertical Datum of 1929. See WSP 1312 or 1732 for history of changes prior to Aug. 4, 1938.

REMARKS.--Daily discharges were computed by adding discharges of American Canal at El Paso and Rio Grande below American Dam at El Paso. Reservoirs, diversions, and drainage returns modify the river flow at this station.

COOPERATION.--Records furnished by International Boundary and Water Commission, United States and Mexico.

AVERAGE DISCHARGE.--45 years (water years 1938-82), 501 ft<sup>3</sup>/s (14.19 m<sup>3</sup>/s), 363,000 acre-ft/yr (448 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft<sup>3</sup>/s (680 m<sup>3</sup>/s) June 12, 1905; no flow at times. Maximum discharge since construction of Elephant Butte Dam in 1915, 13,500 ft<sup>3</sup>/s (382 m<sup>3</sup>/s) Sept. 3, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,740 ft<sup>3</sup>/s (49.3 m<sup>3</sup>/s) Sept. 20, gage height, 5.20 ft (1.585 m); minimum, 7.4 ft<sup>3</sup>/s (0.21 m<sup>3</sup>/s) Feb. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	232	129	93.5	65.8	294	952	682	582	631	805	926	933
2	222	133	97.1	66.4	301	981	667	591	630	915	1100	743
3	263	130	90.3	67.1	313	848	647	597	630	890	1140	648
4	278	128	86.3	67.7	335	684	696	713	727	923	862	669
5	261	127	81.0	68.4	316	500	695	697	724	1140	925	610
6	234	123	81.1	69.0	242	497	676	599	740	1160	875	681
7	216	123	84.3	69.7	215	470	576	591	756	877	891	674
8	227	116	79.5	70.3	209	424	590	557	767	779	920	614
9	223	116	79.8	71.0	206	425	532	567	773	663	849	501
10	207	115	83.5	71.6	208	423	531	584	713	668	696	779
11	202	113	83.3	72.3	192	440	574	583	655	887	584	965
12	191	115	82.0	72.9	90.3	455	661	568	719	999	638	1240
13	185	112	80.4	71.6	79.1	456	656	572	720	996	1120	1000
14	177	113	76.3	70.8	67.1	455	642	689	724	993	996	766
15	173	107	76.1	76.7	76.4	584	632	686	729	995	795	649
16	167	105	74.8	78.0	79.1	646	597	706	746	991	882	613
17	169	98.9	73.1	78.2	82.1	625	716	761	731	996	920	626
18	161	101	72.6	76.5	65.5	595	787	781	761	996	882	588
19	150	93.5	72.6	75.7	52.2	494	866	779	807	792	949	1010
20	150	97.8	82.6	78.0	48.9	645	865	754	819	823	1000	1480
21	153	94.6	78.5	89.8	46.4	740	870	709	732	881	1040	711
22	146	93.9	75.0	52.0	56.7	723	872	730	845	1010	1100	490
23	143	94.6	68.5	58.0	64.7	758	793	834	709	960	1020	430
24	143	94.5	67.5	58.1	61.7	732	794	872	675	1020	989	404
25	147	96.6	69.1	57.4	62.6	705	707	871	723	892	899	351
26	141	91.9	72.2	56.6	59.7	713	488	788	665	869	954	364
27	138	92.5	72.6	55.9	65.9	707	433	629	636	877	969	362
28	138	98.9	71.5	51.3	366	730	429	836	796	883	891	318
29	138	103	72.7	49.6	---	754	495	851	777	1120	966	270
30	138	98.9	73.7	46.6	---	723	530	754	734	1340	1060	671
31	132	---	74.8	130	---	652	---	662	---	1290	1180	---
TOTAL	5645	3255.6	2426.3	2143.0	4255.4	19536	19699	21493	21844	29503	29036	20160
MEAN	182	109	78.3	69.1	152	630	657	693	728	952	937	672
MAX	278	133	97.1	130	366	981	872	872	845	1340	1180	1480
MIN	132	91.9	67.5	46.6	46.4	423	429	557	630	663	564	270
AC-FT	11197	6457	4812	4251	8440	38749	39072	42631	43327	58518	57596	39987
CAL YR 1981	TOTAL	168053.3	MEAN	460	MAX	1440	MIN	47.0	AC-FT	333329		
WTR YR 1982	TOTAL	178998.3	MEAN	490	MAX	1480	MIN	46.4	AC-FT	355037		

RIO GRANDE BASIN  
08364000 RIO GRANDE AT EL PASO, TX -- Continued  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--Water years 1930 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1978 to 1981 (Discontinued)

WATER TEMPERATURES: January 1978 to 1981. (Discontinued)

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,200 micromhos May 16, 1978; minimum daily, 642 micromhos March 31, 1980.

WATER TEMPERATURES: Maximum daily, 28.5°C June 6, 1981; minimum daily, 2.0°C Jan. 19, 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT										
22...	1240	152	2100	2120	8.1	8.2	--	19.0	--	--
NOV										
03...	0900	130	2100	2220	8.2	8.2	13.5	10.0	15	9.5
17...	0745	135	2250	2070	8.2	8.3	--	11.0	--	--
DEC										
16...	1000	110	2330	2340	8.1	8.3	--	6.5	--	--
JAN										
07...	1400	70	2420	2420	8.2	8.4	14.0	11.0	13	10.8
20...	1230	103	2340	2220	8.0		--	14.5	--	--
FEB										
18...	0846	75	2070	2240	8.3	8.6	--	11.0	--	--
MAR										
11...	1000	500	1200	1250	7.9	8.0	25.0	13.5	88	8.9
17...	1100	679	982	970	7.9	8.0	--	12.0	--	--
APR										
19...	1640	545	988	997	8.0	8.2	--	21.0	--	--
MAY										
13...	0930	572	1300	1360	8.1	8.1	18.0	15.0	33	8.1
19...	1115	626	1020	1040	7.9	8.1	--	22.0	--	--
JUN										
15...	0730	606	1030	1030	8.0	8.2	--	20.5	--	--
JUL										
02...	0800	208	1000	1100	8.1	8.4	24.5	23.0	120	6.4
21...	1130	725	1050	1040	7.9	8.2	--	28.0	--	--
AUG										
18...	0805	714	1090	1070	7.9	8.2	--	--	--	--
SEP										
08...	0900	681	1100	1210	8.2	8.5	25.0	20.0	60	7.3
17...	0725	611	1350	1360	8.1	8.0	--	21.0	--	--

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)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT									
22...	481	211	140	32	280	5.8	13	270	490
NOV									
03...	511	241	150	33	280	5.6	12	--	500
17...	490	210	140	34	320	6.5	12	280	530
DEC									
16...	481	221	140	32	340	7.0	11	260	520
JAN									
07...	490	240	140	34	360	7.3	10	--	550
20...	461	211	130	33	360	7.6	12	250	610
FEB									
18...	444	184	130	29	290	6.2	12	260	450
MAR									
11...	293	93	86	19	170	4.5	6.8	--	270
17...	247	77	74	15	110	3.2	6.2	170	190
APR									
19...	249	69	75	15	110	3.2	7.0	180	210
MAY									
13...	313	103	94	19	160	4.1	7.3	--	280
19...	252	72	76	15	120	3.4	7.4	180	210
JUN									
15...	261	81	78	16	120	3.4	7.4	180	220
JUL									
02...	266	91	80	16	130	3.6	8.0	--	230
21...	253	73	75	16	120	3.4	7.6	180	220
AUG									
18...	266	76	80	16	130	3.6	7.3	190	220
SEP									
08...	289	86	86	18	150	4.0	7.4	--	250
17...	332	122	100	20	170	4.2	8.5	210	280

RIO GRANDE BASIN  
08364000 RIO GRANDE AT EL PASO, TX -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 22...	240	--	27	--	1380	--	--	--	--
NOV 03...	240	.8	27	1340	1410	--	--	.140	--
17...	270	--	28	--	1500	--	--	--	--
DEC 16...	280	--	27	--	1510	--	--	--	--
JAN 07...	290	.8	29	1620	1560	.28	.220	.060	.090
20...	280	--	25	--	1600	--	--	--	--
FEB 18...	260	--	21	--	1350	--	--	--	--
MAR 11...	140	.8	19	824	851	.14	.340	.120	.090
17...	96	--	17	--	610	--	--	--	--
APR 19...	84	--	17	--	626	--	--	--	--
MAY 13...	130	.6	19	841	836	.10	.080	.230	.070
19...	86	--	18	--	641	--	--	--	--
JUN 15...	89	--	18	--	657	--	--	--	--
JUL 02...	94	.6	19	651	683	.18	<.060	.360	.040
21...	92	--	19	--	658	--	--	--	--
AUG 18...	96	--	21	--	685	--	--	--	--
SEP 08...	110	.6	22	824	766	.25	.060	.350	.060
17...	130	--	24	--	859	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOVERABLE (UG/L AS CO) (01037)
NOV 03...	0900	6	5	100	100	<1	1	<10	<10	2
MAR 11...	1000	6	5	100	67	<1	<1	10	<10	3
MAY 13...	0930	5	5	100	76	<1	<3	10	<10	1
SEP 08...	0900	5	5	100	84	<1	<1	<10	<10	2

DATE	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)
NOV 03...	<1	5	2	1200	50	7	3	150	20	.3
MAR 11...	1	9	2	3800	<3	7	2	350	9	.1
MAY 13...	1	8	2	2000	<9	4	1	220	10	.1
SEP 08...	2	12	2	3000	10	3	1	330	5	.1

RIO GRANDE BASIN  
08364000 RIO GRANDE AT EL PASO, TX -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	.1	3	2	<1	<1	<1	<1	40	30
MAR 11...	<.1	3	3	<1	<1	<1	<1	30	<4
MAY 13...	.4	3	5	<1	<1	<1	<1	30	28
SEP 08...	.2	17	2	<1	<1	<1	<1	30	18

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 03...	750	880
JAN 07...	18000	880
MAR 11...	480	2700
MAY 13...	680	1600
JUL 02...	450	1100
SEP 08...	750	1300

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 03...	0900	130	10.0	64	22	51
JAN 07...	1400	70	11.0	88	17	41
MAR 11...	1000	500	13.5	321	433	53
MAY 13...	0930	572	15.0	178	275	72
JUL 02...	0800	208	23.0	245	138	96
SEP 08...	0900	681	20.0	216	397	74

RIO GRANDE BASIN  
08364000 RIO GRANDE AT EL PASO, TX -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2110	2340										
2	2160	2230										
3	2180	2260										
4	2180	2250										
5	2090	2240										
6	2050	2240										
7	2080	2260										
8	2110	2330										
9	2080	2250										
10	2090	2250										
11	2160	2260										
12	2080	2190										
13	1750	2330										
14	2150	2290										
15	1990	2320										
16	2230	2260										
17	2150	2230										
18	2050	2340										
19	2160	2340										
20	2070	2220										
21	2120	2240										
22	1990	2250										
23	2110	2190										
24	2120	2220										
25	2040	2240										
26	2150	2280										
27	2150	2250										
28	2110	2220										
29	2090	2170										
30	2090	2040										
31	2140	---										
MEAN	2100	2250										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.5	16.5										
2	17.0	15.0										
3	15.5	14.0										
4	19.0	13.5										
5	20.0	12.0										
6	21.5	11.5										
7	15.5	10.5										
8	10.5	10.0										
9	9.0	10.0										
10	9.5	10.0										
11	13.0	11.5										
12	14.0	10.5										
13	16.5	9.0										
14	16.0	8.5										
15	15.5	9.5										
16	18.0	9.0										
17	18.5	10.5										
18	19.0	10.0										
19	13.5	9.0										
20	14.5	9.0										
21	16.0	9.0										
22	11.0	12.5										
23	9.5	12.0										
24	9.0	8.0										
25	12.5	8.5										
26	15.5	8.0										
27	16.0	9.0										
28	16.5	9.0										
29	16.5	10.5										
30	17.0	11.5										
31	15.5	---										
MEAN	15.0	10.5										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR



RIO GRANDE BASIN  
08370500 RIO GRANDE BELOW OLD FORT QUITMAN, TX  
(National stream-quality accounting network)

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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 (2.4 km) downstream from Old Fort Quitman, and 81.7 mi (131.5 km) downstream from the American Dam at El Paso.

DRAINAGE AREA.--31,944 mi<sup>2</sup> (82,735 km<sup>2</sup>), United States and Mexico; from International Boundary and Water Commission Water Bulletin No. 46.

PERIOD OF RECORD.--Water years 1930 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to 1981. (Discontinued)

WATER TEMPERATURES: October 1974 to 1981. (Discontinued)

REMARKS.--Records of discharge for water year 1980 are given in International Boundary and Water Commission Water Bulletins Nos. 49 and 50.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 13,000 micromhos May 18, 1977; minimum daily, 368 micromhos Aug. 9, 1978.

WATER TEMPERATURES: Maximum 39.5°C Sept. 5, 1979; minimum daily, 0.5°C Jan. 25, 1978.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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...	1000	143	4400	4110	8.3	7.8	19.5	13.0	50
JAN 08...	0900	82	5000	4250	8.1	8.1	3.0	5.0	7.0
MAR 12...	1000	40	8000	8040	8.2	8.0	24.0	14.5	8.5
MAY 14...	0930	E49	6200	6520	8.4	8.0	18.5	15.0	34
JUL 03...	0900	20	8000	8670	8.2	7.8	30.0	23.0	240
SEP 10...	0900	25	8000	8230	8.2	8.0	23.5	22.0	96

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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 06...	9.0	780	520	220	56	600	9.7	13	660
JAN 08...	9.5	821	551	230	60	680	11	12	740
MAR 12...	10.2	1584	1314	420	130	1400	16	14	1400
MAY 14...	10.0	1245	965	350	90	990	13	13	1100
JUL 03...	9.4	1559	1297	410	130	1300	15	16	1400
SEP 10...	10.4	2034	1748	600	130	1400	14	15	1400

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 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)
NOV 06...	850	.8	26	2790	2580	1.6	.850	1.50	.660
JAN 08...	1000	.8	27	3060	2910	1.7	1.70	1.00	.850
MAR 12...	2200	1.0	23	5590	5750	<.09	.150	.080	<.020
MAY 14...	1500	.8	25	4300	4240	<.10	.110	.270	.040
JUL 03...	2100	.9	34	5760	5550	<.10	.080	.350	.010
SEP 10...	2000	.8	31	589	5750	.24	.100	.240	.030

DATE	TIME	ARSENIC	ARSENIC	BARIUM,	BARIUM,	CADMIUM	CADMIUM	CHRO-	CHRO-	COBALT,
		TOTAL (UG/L AS AS) (01002)	DIS- SOLVED (UG/L AS AS) (01000)	TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	DIS- SOLVED (UG/L AS BA) (01005)	TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	DIS- SOLVED (UG/L AS CD) (01025)	M-IUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	M-IUM, DIS- SOLVED (UG/L AS CR) (01030)	TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
NOV 06...	1000	8	7	100	100	<1	<1	10	<10	3
MAR 12...	1000	5	5	100	200	<1	1	20	10	2
MAY 14...	0930	7	6	100	100	<1	<1	20	10	<1
SEP 10...	0900	8	6	<100	<100	<1	<1	10	10	1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
NOV 06...	<1	11	2	2400	40	6	2	300	50	.2
MAR 12...	<1	3	2	470	50	5	2	1300	1200	.1
MAY 14...	1	6	2	1400	40	2	3	390	130	<.1
SEP 10...	1	7	1	2000	30	<1	<1	430	40	.2

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 06...	.1	9	3	1	<1	<1	<1	20	30
MAR 12...	.5	1	2	<1	<1	<1	<1	20	30
MAY 14...	<.1	3	6	<1	<1	<1	<1	30	50
SEP 10...	.1	20	8	<1	<1	<1	<1	30	40

[illegible]

RIO GRANDE BASIN  
08370500 RIO GRANDE BELOW OLD FORT QUITMAN, TX  
(National stream-quality accounting network)

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PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	DDT, TOTAL (UG/L) (39370)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)
NOV 06...	--	.0	--	--	.0	--	--	.0	--	--
MAR 12...	<.01	--	.00	<.01	--	<.01	<.01	--	.00	<.01
MAY 14...	--	--	<.01	--	--	--	--	--	<.01	--

DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN EPOXIDE BOTTOM MATL. TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOT. IN EPOXIDE BOTTOM MATL. TOTAL (UG/KG) (39423)	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)
NOV 06...	.0	--	.0	--	.0	--	--	.0	--	--
MAR 12...	--	<.01	--	<.01	--	.00	<.01	--	.00	.00
MAY 14...	--	--	--	--	--	<.01	--	--	<.01	<.01

DATE	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
NOV 06...	--	--	.0	--	--	--	--	--	--	--
MAR 12...	.00	<1	--	.00	<.01	<.01	<.01	<.10	<.10	<.01
MAY 14...	<.01	--	--	<.01	<.01	<.01	<.01	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 06...	3700	90
JAN 08...	40	290
MAR 12...	70	80
MAY 14...	90	180
JUL 03...	2000	2200
SEP 10...	240	510

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 06...	1000	143	13.0	125	48	71
JAN 08...	0900	82	5.0	57	13	45
MAR 12...	1000	40	14.5	23	2.5	72
MAY 14...	0930	49	15.0	106	14	87
JUL 03...	0900	20	23.0	305	16	95
SEP 10...	0900	25	22.0	99	6.7	74

RIO GRANDE BASIN  
08370500 RIO GRANDE BELOW OLD FORT QUITMAN, TX  
(National stream-quality accounting network)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4660	4500										
2	5060	4330										
3	5040	3990										
4	3540	3920										
5	3520	4020										
6	3930	4240										
7	3950	4240										
8	3780	4250										
9	3780	4230										
10	3710	4420										
11	3710	4320										
12	4820	4260										
13	4600	4310										
14	4600	4320										
15	4620	4310										
16	4640	4280										
17	4680	4280										
18	4680	4250										
19	4670	4290										
20	4640	4400										
21	4700	4380										
22	4700	4370										
23	4900	4410										
24	4470	4210										
25	4890	4220										
26	4490	4180										
27	4580	4160										
28	4350	4190										
29	4390	4160										
30	4430	4150										
31	4460	---										
MEAN	4420	4250										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.5	10.0										
2	19.5	9.0										
3	19.0	7.5										
4	18.5	8.0										
5	15.0	9.5										
6	14.5	8.0										
7	15.5	8.5										
8	16.5	8.5										
9	16.5	8.0										
10	15.5	8.5										
11	15.0	8.0										
12	15.0	8.5										
13	11.5	7.5										
14	12.0	8.0										
15	12.5	9.5										
16	12.0	9.0										
17	12.5	9.5										
18	12.5	7.5										
19	13.5	6.5										
20	13.0	9.5										
21	9.0	3.5										
22	9.5	4.5										
23	11.0	6.0										
24	9.5	4.5										
25	11.0	4.0										
26	10.0	3.5										
27	15.5	4.5										
28	10.5	5.0										
29	---	7.5										
30	---	7.0										
31	---	---										
MEAN	14.0	7.5										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

08377900 RIO MORA NEAR TERRERO, NM  
(Hydrologic bench-mark station)

LOCATION.--Lat 35°46'38", long 105°39'27", in E1NE4 sec.22, T.18 N., R.12 E., San Miguel County, Hydrologic Unit 13060001, in Santa Fe National Forest, on left bank 450 ft (140 m) upstream from bridge on State Highway 63, 600 ft (180 m) upstream from mouth, and 2.6 mi (4.2 km) north of Terrero.

DRAINAGE AREA.--53.2 mi<sup>2</sup> (137.8 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,890 ft (2,450 m), from topographic map.

REMARKS.--Water-discharge records good except those for winter period, 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.--19 years, 28.6 ft<sup>3</sup>/s (0.810 m<sup>3</sup>/s), 20,720 acre-ft/yr (25.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft<sup>3</sup>/s (23.2 m<sup>3</sup>/s) June 8, 1979, gage height, 4.15 ft (1.265 m); minimum determined, 0.90 ft<sup>3</sup>/s (0.025 m<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 above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 28	2300	*195 5.52	2.48 0.756	Aug. 21	2345	146 4.13	2.23 0.680
Aug. 4	2100	117 3.31	2.14 .652	Sept. 20	1945	170 4.81	2.36 .719
Aug. 8	0430	117 3.31	2.12 .646				

Minimum discharge, 2.8 ft<sup>3</sup>/s (0.079 m<sup>3</sup>/s) Nov. 19, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	9.2	6.0	8.0	6.3	8.3	13	55	147	28	24	70
2	22	9.8	5.0	7.3	6.2	8.5	15	66	138	23	22	70
3	40	10	6.0	7.3	6.2	8.5	14	75	128	21	22	69
4	28	9.2	6.5	6.3	6.2	7.8	16	89	118	19	52	62
5	25	8.9	7.0	6.6	6.2	6.9	19	86	109	18	70	57
6	23	9.3	7.0	6.6	6.2	6.0	20	74	97	17	62	54
7	22	9.5	6.8	6.6	6.0	6.0	18	63	89	17	74	61
8	21	9.1	6.5	6.4	6.0	6.5	16	61	84	17	102	61
9	20	8.4	6.5	6.4	6.0	6.5	15	69	79	16	82	54
10	19	7.3	6.3	6.4	6.0	6.9	15	81	74	15	80	51
11	18	8.8	6.6	6.4	5.9	8.8	19	91	70	16	74	49
12	17	9.1	6.3	6.7	5.9	13	32	96	66	16	64	49
13	17	8.5	6.2	6.6	6.2	12	37	85	62	15	80	46
14	16	8.6	6.2	6.4	6.2	11	43	75	59	15	67	40
15	16	8.2	5.8	6.4	6.1	11	46	69	55	13	64	37
16	16	8.1	6.4	6.4	6.7	10	46	66	51	12	72	36
17	15	7.1	5.5	6.6	8.0	11	39	66	47	11	79	64
18	14	7.8	5.0	6.7	8.1	11	39	72	45	10	80	90
19	14	4.2	5.5	6.6	7.4	9.8	41	88	42	12	78	133
20	14	4.8	6.0	6.5	7.6	9.0	39	107	39	14	81	147
21	13	7.0	6.5	6.4	9.0	9.5	33	126	35	11	112	153
22	13	8.0	6.1	6.3	10	10	29	145	34	9.6	121	130
23	13	3.3	6.0	6.6	9.0	9.5	25	151	32	8.7	119	111
24	12	8.0	5.5	6.6	9.3	9.3	24	143	30	8.4	114	96
25	12	7.0	5.0	6.7	8.6	9.9	22	140	28	9.0	120	86
26	11	5.7	5.0	6.7	7.6	9.6	23	145	27	8.8	105	76
27	12	5.0	5.5	7.0	7.6	11	22	160	25	9.1	96	69
28	11	5.5	5.5	6.9	8.1	12	25	162	24	12	87	62
29	11	6.0	5.8	6.7	---	13	35	172	25	24	81	56
30	10	6.4	6.5	6.5	---	12	47	164	25	32	81	52
31	9.6	---	7.0	6.3	---	12	---	151	---	34	81	---
TOTAL	525.6	232.8	187.5	206.4	198.6	296.3	827	3193	1884	491.6	2446	2191
MEAN	17.0	7.76	6.05	6.66	7.09	9.56	27.6	103	62.8	15.9	78.9	73.0
MAX	40	10	7.0	8.0	10	13	47	172	147	34	121	153
MIN	9.6	4.2	5.0	6.3	5.9	6.0	13	55	24	8.4	22	36
AC-FT	1040	462	372	409	394	588	1640	6330	3740	975	4850	4350

CAL YR 1981 TOTAL 6340.7 MEAN 17.4 MAX 128 MIN 3.5 AC-FT 12580  
WTR YR 1982 TOTAL 12679.8 MEAN 34.7 MAX 172 MIN 4.2 AC-FT 25150

RIO GRANDE BASIN  
08377900 RIO MORA NEAR TERRERO, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 24...	1240	8.1	80	80	7.9	6.9	10.5	.5	10.6	47	12	16
JAN 25...	1405	6.5	105	94	8.2	8.4	5.5	.5	12.2	55	9	19
MAR 29...	0945	13	109	108	7.7	8.3	5.5	1.5	--	54	6	18
JUN 04...	1110	117	58	61	7.6	7.2	18.5	6.0	9.3	26	2	8.9
JUL 27...	1040	8.7	100	98	7.4	8.4	20.5	14.0	7.4	44	0	15
SEP 27...	1000	68	80	83	8.2	8.0	14.5	8.0	8.8	41	3	14

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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
NOV 24...	1.7	1.5	.1	.5	6.0	.8	.1	5.9	58	54	.10
JAN 25...	1.9	1.5	.1	.4	7.0	.8	.2	5.8	58	64	.10
MAR 29...	2.3	1.8	.1	.6	5.0	.9	.3	6.7	72	64	<.10
JUN 04...	1.0	.8	.1	.6	<5.0	.6	.1	5.0	45	--	<.10
JUL 27...	1.6	1.3	.1	.8	8.0	.4	.2	6.2	60	61	<.10
SEP 27...	1.4	1.1	.1	.7	7.0	.6	.1	6.5	44	54	<.10

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	CYANIDE TOTAL (MG/L AS CN) (00720)
NOV 24...	.11	.150	.150	1.3	.80	1.5	.050	1.2	--	--	--
JAN 25...	<.09	.080	<.060	.23	.12	.41	.010	.6	--	--	--
MAR 29...	.11	.100	.080	.24	.31	--	.010	2.3	--	--	--
JUN 04...	<.10	.120	.100	.98	.30	--	<.010	--	4.2	.1	<.01
JUL 27...	<.10	.090	.250	1.0	.45	--	.040	2.2	--	--	--
SEP 27...	<.10	.060	.130	.44	.37	--	.840	--	3.4	.4	<.01

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
JUN 04...	1110	<1	<1	100	19	<3	<1	<3	<10	<1	<9
SEP 27...	1000	<1	<1	<100	25	1	<1	<1	<10	<1	<3

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
JUN 04...	3	<30	180	36	1	<30	<12	10	<3	<.1
SEP 27...	<1	<10	80	62	<1	<10	4	10	4	<.1

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	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)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	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, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
JUN 04...	<.1	<30	<1	<1	<1	1	20	<10	10	<12
SEP 27...	<.1	<10	<1	<1	<1	<1	29	<6.0	10	10

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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)
SEP 27...	1000	<1.1	<.4	1.0	<.4	.9	<.4	.04	.13

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39516)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39330)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39350)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39360)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39365)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)
SEP 27...	1000	<.10	<1	<.01	<.1	<.10	<1.0	<.01	<.1	<.01	.1



RIO GRANDE BASIN  
08377900 RIO MORA NEAR TERRERO, NM -- Continued  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	DDT, TOTAL (UG/L) (39370)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)
SEP 27...	<.01	.1	<.01	<.01	<.1	<.01	<.01	<.1	<.01	<.01
DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THION, TOTAL (UG/L) (39530)	METH- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)
SEP 27...	<.1	<.01	<.1	<.01	<.1	<.01	<.01	<.1	<.01	<.01
DATE	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	TRI- THION TOTAL (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)	POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
SEP 27...	<.01	<.1	<10	<.01	<.01	<.01	<.01	<.10	<.10	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 24...	K0	--
JAN 25...	K0	25
MAR 29...	K19	K6
JUN 04...	K0	K10
JUL 27...	K2	K260
SEP 27...	K1	24

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 24...	1240	8.1	.5	2	.04	--
DEC 25...	1200	5.0	.5	2	.03	--
JAN 25...	1405	6.5	.5	1	.02	--
FEB 23...	1115	8.6	.0	1	.02	--
MAR 29...	0945	13	1.5	2	.07	--
JUN 04...	1110	117	6.0	3	.95	--
JUL 27...	1040	8.7	14.0	3	.07	79
AUG 26...	1000	112	9.5	13	3.9	79
SEP 27...	1000	68	8.0	3	.55	71

## 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 (9.1 m) downstream from bridge on private road, 270 ft (82 m) upstream from Indian Creek, 2.4 mi (3.9 km) downstream from Holy Ghost Creek, 9.0 mi (14.5 km) north of Pecos, and at mile 896.6 (1,422.6 km).

DRAINAGE AREA.--189 mi<sup>2</sup> (490 km<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 (2,286.896 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1977, at site 30 ft (9.1 m) upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 75 acres (30 hm<sup>2</sup>), 1959 determination, above station. Several observations of water temperature were made during the year. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--63 years, 96.9 ft<sup>3</sup>/s (2.744 m<sup>3</sup>/s), 70,200 acre-ft/yr (86.6 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 4,500 ft<sup>3</sup>/s (130 m<sup>3</sup>/s) Sept. 21 or 22, 1929, gage height, 6.2 ft (1.89 m), from floodmark, from rating curve extended above 1,600 ft<sup>3</sup>/s (45 m<sup>3</sup>/s); minimum, 2.0 ft<sup>3</sup>/s (0.057 m<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 above base of 310 ft<sup>3</sup>/s (8.8 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 28	2230	*521 14.8	3.18 0.969	Sept. 20	1715	481 13.6	3.11 0.948
Aug. 22	1800	340 9.63	2.82 .860				

Minimum discharge, 5.8 ft<sup>3</sup>/s (0.16 m<sup>3</sup>/s) Dec. 18, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	28	23	35	22	29	40	166	422	127	117	172
2	54	30	20	30	21	30	47	193	409	110	97	166
3	115	31	23	25	20	30	45	221	389	101	91	168
4	74	29	25	22	20	28	50	253	366	97	141	151
5	61	28	27	20	20	26	57	239	348	93	173	139
6	56	30	24	21	19	24	62	202	310	88	161	131
7	54	31	25	20	18	24	58	174	291	82	194	142
8	51	30	25	20	20	25	52	170	287	83	227	149
9	50	29	22	20	20	26	49	191	278	76	181	131
10	48	25	23	21	20	27	47	220	272	71	179	128
11	47	27	24	21	22	33	53	241	264	75	174	121
12	46	28	24	23	21	47	90	252	255	75	150	121
13	46	28	22	22	21	42	105	221	248	70	164	121
14	44	28	21	20	22	39	119	199	251	67	152	109
15	44	27	21	21	22	39	127	186	239	61	161	101
16	42	27	25	21	23	35	129	177	225	57	188	102
17	41	24	20	22	24	36	114	181	213	55	197	179
18	40	26	19	23	24	37	116	195	205	53	198	250
19	40	17	29	24	25	34	123	230	195	59	194	365
20	39	18	26	23	27	31	119	280	187	72	197	396
21	39	29	22	23	28	33	101	325	177	58	256	390
22	38	27	20	22	30	33	87	370	170	51	274	324
23	37	26	19	20	30	32	77	386	161	49	303	273
24	37	26	17	20	30	31	73	370	152	47	285	237
25	37	24	30	20	29	33	67	371	146	50	291	211
26	34	18	32	22	28	36	70	380	139	52	253	191
27	35	20	34	25	27	37	67	420	132	51	233	177
28	34	25	29	24	28	40	74	438	128	62	214	166
29	33	27	30	23	---	43	100	459	126	111	191	154
30	31	23	34	23	---	38	140	453	123	160	191	146
31	29	---	32	22	---	36	---	426	---	166	201	---
TOTAL	1424	786	767	698	661	1034	2458	8589	7108	2429	6028	5611
MEAN	45.9	26.2	24.7	22.5	23.6	33.4	81.9	277	237	78.4	194	187
MAX	115	31	34	35	30	47	140	459	422	166	303	396
MIN	29	17	17	20	18	24	40	166	123	47	91	101
AC-FT	2820	1560	1520	1380	1310	2050	4880	17040	14100	4820	11960	11130

CAL YR 1981	TOTAL	17421	MEAN	47.7	MAX	293	MIN	15	AC-FT	34550
WTR YR 1982	TOTAL	37593	MEAN	103	MAX	459	MIN	17	AC-FT	74570

RIO GRANDE BASIN  
08379500 PECOS RIVER NEAR ANTON CHICO, NM

LOCATION.--Lat 35°10'44", long 105°06'30", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 2.1 mi (3.4 km) upstream from Canon Blanco, 2.3 mi (3.7 km) southeast of Anton Chico, 9.7 mi (15.6 km) downstream from Tecolote Creek, and at mile 808.0 (1,300.1 km).  
DRAINAGE AREA.--1,050 mi<sup>2</sup> (2,720 km<sup>2</sup>), approximately (contributing area).

WATER-DISCHARGE RECORDS

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, 1941-42(P), 1945(M), 1946(P), 1949(P). WSP 1712: 1942(P).

GAGE.--Water-stage recorder. Altitude of gage is 5,130 ft (1,560 m) from river-profile map. See WSP 1732 for history of changes prior to June 21, 1951.

REMARKS.--Records good except those for periods of no gage-height record, Nov. 18 to Dec. 29 and June 26 to July 21, which are poor. Diversions above station for irrigation of about 4,900 acres (2.0 km<sup>2</sup>), 1959 determination, above and below station. Acequia del Bodo Juan Paiz (see table below) diverts water about 8 mi (13 km) above gage and bypasses this station on left bank; ditch flow not included in record. Discharge measurements made at point opposite regular gage. A portion of this flow may be returned to the river about 5.0 mi (8.0 km) downstream.

AVERAGE DISCHARGE.--69 years (1910-15, 1916-24, 1926-82), 128 ft<sup>3</sup>/s (3.625 m<sup>3</sup>/s), 92,740 acre-ft/yr (114 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,300 ft<sup>3</sup>/s (1,140 m<sup>3</sup>/s) June 1, 1937, gage height, 20.34 ft (6.200 m), 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 (2,100 m<sup>3</sup>/s), from information by a local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base 3,000 ft<sup>3</sup>/s (85 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
July 29	0330	3490 98.8	7.89 2.405	July 30	0130	*5300 150	9.00 2.74

Minimum discharge, 0.10 ft<sup>3</sup>/s (0.003 m<sup>3</sup>/s) Feb. 1, 3.

Discharge measurements, in cubic feet per second, of Acequia del Bodo Juan Paiz,  
Water Year October 1980 to September 1981

Oct. 14	13	Aug. 27	55
June 15	36	Sept. 22	51

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	26	13	2.8	1.5	2.4	68	118	346	50	231	176
2	170	22	7.9	2.8	2.4	2.7	65	131	342	40	181	142
3	307	22	13	5.6	2.5	3.6	70	160	325	30	160	130
4	211	21	13	3.8	1.3	5.2	76	187	307	20	155	123
5	148	22	14	2.8	6.7	8.9	77	237	291	15	160	112
6	119	23	15	2.6	6.0	8.8	73	256	272	15	160	128
7	113	22	13	3.3	6.0	13	74	214	237	15	315	289
8	106	22	12	2.8	6.0	39	86	226	213	15	314	191
9	104	20	12	1.6	6.3	42	82	188	203	12	251	178
10	103	22	11	1.5	8.7	40	77	174	203	10	251	175
11	103	22	10	1.8	18	42	73	151	211	10	184	173
12	101	22	10	4.7	18	43	68	226	202	145	150	173
13	101	21	8.8	16	15	54	82	238	188	70	133	173
14	59	22	8.8	9.2	15	78	128	197	184	22	128	173
15	37	22	8.8	8.8	17	76	151	169	179	18	133	171
16	40	22	6.0	7.9	18	73	160	151	169	15	546	173
17	37	20	5.3	10	17	72	160	144	159	10	376	407
18	35	18	4.7	14	18	69	147	136	163	7.0	404	277
19	35	19	4.7	8.4	18	65	143	139	162	5.0	347	391
20	33	20	4.7	8.4	17	64	141	155	206	4.0	311	471
21	30	18	5.0	8.4	17	60	144	196	151	3.0	235	580
22	28	16	5.0	11	17	56	135	243	141	2.9	258	530
23	28	15	5.0	9.2	15	55	127	370	124	2.8	271	422
24	30	17	4.7	8.4	3.0	52	121	390	117	4.1	477	344
25	30	18	4.7	5.6	5.1	54	112	338	97	3.3	485	291
26	29	14	4.7	5.3	6.6	55	92	330	90	2.6	345	254
27	27	16	4.7	4.8	5.8	58	90	327	80	43	244	215
28	24	17	4.7	4.7	3.0	64	82	355	70	272	212	188
29	22	17	4.6	4.5	---	61	81	362	60	758	210	162
30	27	17	3.0	4.4	---	63	93	371	55	805	155	153
31	27	---	2.8	3.4	---	69	---	366	---	231	164	---
TOTAL	2359	595	244.6	188.5	291.1	1448.6	3078	7285	5547	2655.9	8006	7365
MEAN	76.1	19.8	7.89	6.08	10.4	46.7	103	235	185	85.7	258	246
MAX	307	26	15	16	18	78	160	390	346	805	546	580
MIN	22	14	2.8	1.5	1.3	2.4	65	118	55	2.8	128	112
AC-FT	4680	1180	465	374	577	2870	6110	14450	11000	5270	15880	14610

CAL YR 1981 TOTAL 22254.39 MEAN 61.0 MAX 1870 MIN .09 AC-FT 44140  
WTR YR 1982 TOTAL 39063.70 MEAN 107 MAX 805 MIN 1.3 AC-FT 77480

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 (3.9 km) west of Montezuma, 6.9 mi (11.1 km) northwest of Las Vegas, and at mile 74.4 (119.7 km).

PERIOD OF RECORD.--March to September 1915, June 1916 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1964, published as Gallinas River near Montezuma.

GAGE.--Water-stage recorder. Altitude of gage is 6,875 ft (2,096 m), from topographic map. Prior to Sept. 21, 1934, at different datum.

AVERAGE DISCHARGE.--66 years, 19.1 ft<sup>3</sup>/s (0.541 m<sup>3</sup>/s), 13,840 acre-ft/yr (17.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,120 ft<sup>3</sup>/s (202 m<sup>3</sup>/s) Aug. 2, 1966, gage height, 9.7 ft (2.96 m), from floodmarks, from rating curve extended above 500 ft<sup>3</sup>/s (14 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 5.25 ft (1.600 m), 8.25 ft (2.515 m), and 9.7 ft (2.96 m); minimum, 0.20 ft<sup>3</sup>/s (0.006 m<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.--Maximum discharge, 145 ft<sup>3</sup>/s (4.11 m<sup>3</sup>/s) Aug. 20, gage height, 2.26 ft (0.689 m), no peak above base of 200 ft<sup>3</sup>/s (5.7 m<sup>3</sup>/s); minimum, 0.96 m<sup>3</sup>/s (0.027 m<sup>3</sup>/s) Dec. 18, result of freezeup.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	6.6	5.4	4.6	3.3	7.1	9.3	23	26	3.9	17	14
2	9.4	6.4	5.8	4.8	3.2	7.3	10	31	25	2.8	10	17
3	39	6.4	5.4	3.9	3.1	8.4	10	34	22	2.9	7.9	15
4	24	6.4	5.0	3.5	3.0	7.8	10	42	21	2.4	12	19
5	19	6.1	5.2	4.0	3.0	7.4	11	44	19	2.3	15	19
6	16	6.1	5.0	3.5	3.0	6.4	12	42	17	2.0	20	15
7	14	6.4	5.0	3.5	3.0	7.1	12	34	15	1.8	20	22
8	14	6.6	4.7	3.5	3.2	7.4	12	30	14	2.3	25	41
9	13	6.4	4.7	3.5	3.2	6.9	11	30	13	2.1	18	26
10	12	6.1	4.8	3.5	3.2	7.0	11	29	13	1.8	14	22
11	11	5.8	4.8	3.5	3.5	8.0	11	31	12	2.9	13	18
12	11	5.8	4.8	4.0	3.5	13	16	30	11	2.6	10	15
13	10	5.8	4.6	3.5	4.0	15	19	29	11	2.8	9.0	14
14	9.9	5.9	4.0	3.5	4.5	13	21	26	12	3.3	7.8	13
15	9.6	5.8	3.9	4.0	4.5	13	22	24	9.7	2.4	7.1	11
16	9.6	5.6	4.7	4.0	4.6	12	21	22	9.2	1.9	9.3	12
17	9.3	5.4	3.9	4.5	5.4	12	20	22	8.7	1.7	9.3	22
18	9.0	5.4	5.0	4.5	5.4	12	19	21	8.2	1.6	22	32
19	8.7	5.2	5.6	4.0	5.2	11	20	22	8.5	1.6	18	67
20	8.4	4.6	5.2	3.7	5.4	10	18	25	8.0	1.7	29	76
21	7.8	6.1	4.6	3.0	5.8	9.8	17	27	7.8	1.8	26	86
22	7.8	5.0	4.1	3.0	7.1	9.5	17	29	7.5	2.0	35	69
23	7.8	5.0	3.7	3.2	7.9	9.3	15	36	7.3	1.4	51	54
24	7.8	4.8	3.5	3.4	8.3	8.9	15	40	6.5	1.2	44	43
25	7.6	4.5	3.5	3.5	7.5	8.7	14	40	6.1	1.3	48	35
26	7.6	4.6	3.5	3.5	6.7	9.2	13	38	5.5	1.5	36	30
27	7.4	4.5	4.0	3.7	7.1	9.9	13	37	5.1	3.4	29	26
28	7.1	5.4	4.0	3.5	7.0	9.3	13	36	4.8	2.6	23	22
29	6.8	6.6	4.5	3.9	---	9.8	15	34	4.4	5.5	18	19
30	6.4	5.6	5.0	3.7	---	9.5	19	31	3.6	37	17	22
31	6.6	---	5.0	3.4	---	8.9	---	29	---	34	18	---
TOTAL	346.3	170.9	142.9	115.3	134.6	294.6	446.3	968	341.9	138.5	633.4	876
MEAN	11.2	5.70	4.61	3.72	4.81	9.50	14.9	31.2	11.4	4.47	20.6	29.9
MAX	39	6.6	5.8	4.8	8.3	15	22	44	26	37	51	86
MIN	6.4	4.5	3.5	3.0	3.0	6.4	9.3	21	3.6	1.2	7.1	11
AC-FT	687	339	283	229	267	584	835	1920	678	275	1270	1780
CAL YR 1981	TOTAL	4349.38	MEAN	11.9	MAX	341	MIN	9.90	AC-FT	8630		
WTR YR 1982	TOTAL	4633.70	MEAN	12.7	MAX	86	MIN	1.2	AC-FT	9190		

## 08382500 GALLINAS RIVER NEAR COLONIAS, NM

LOCATION.--Lat 35°10'55", long 104°53'59", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico and Preston Beck Grants, on right bank 2.3 mi (3.7 km) south of San Miguel-Guadalupe County line, 2.4 mi (3.9 km) upstream from mouth, 5.8 mi (9.3 km) northwest of Colonias, and 9.0 mi (14.5 km) east of Dilia. Mouth at Pecos River mile 789.2 (1,269.8 km).

DRAINAGE AREA.--610 mi<sup>2</sup> (1,580 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,944 ft (1,507 m) from topographic map.

REMARKS.--Records fair. Diversions for irrigation of about 7,000 acres (28 km<sup>2</sup>) 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 16.3 ft<sup>3</sup>/s (0.462 m<sup>3</sup>/s), 11,810 acre-ft/yr (14.6 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft<sup>3</sup>/s (388 m<sup>3</sup>/s) July 11, 1982, gage height, 19.67 ft (5.995 m), from rating curve extended above 1,900 ft<sup>3</sup>/s (54 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 8.64 ft (2.633 m), 12.74 ft (3.883 m), 16.65 ft (5.075 m), and 27.2 ft (8.29 m); no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about June 1, 1937, reached a stage of about 27.2 ft (8.29 m); discharge determined as 26,700 ft<sup>3</sup>/s (756 m<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 above base of 1,700 ft<sup>3</sup>/s (48 m<sup>3</sup>/s) and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
June 19	2330	3350 94.9	10.18 3.103	July 11	0600	*13700 388	19.67 5.995
June 20	1930	12800 362	19.06 5.809	July 30	0530	2480 70.2	8.94 2.725

No flow many day.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.5	5.4	.68	.09	.20	.00	.00	.00	8.9	36	4.5
2	.00	1.5	3.7	1.1	.09	.09	.00	.00	.00	5.2	21	3.2
3	180	1.6	4.5	1.1	.26	.04	.00	.00	.00	2.7	13	4.5
4	39	1.2	3.8	.50	.10	.00	.00	.00	.00	.91	9.2	4.3
5	15	.61	3.3	1.0	.09	.00	.00	.00	.00	.16	9.2	3.7
6	7.6	.50	2.9	.38	.14	.00	.00	.00	.00	.00	29	51
7	6.1	.55	2.9	.83	.46	.02	.00	.00	.00	.00	16	371
8	4.7	.50	2.7	1.2	.91	.01	.00	.00	.00	.00	15	138
9	3.7	.38	2.7	1.3	.91	.00	.00	.00	.00	24	39	74
10	3.2	.35	2.6	.55	.75	.00	.00	.00	.00	11	20	44
11	2.1	.68	2.6	.50	.46	.00	.00	.00	.00	1550	20	30
12	1.3	.91	2.5	.46	1.0	.00	.00	.00	.00	162	6.8	26
13	.61	.91	2.5	.26	1.4	.00	.00	.00	.00	61	4.0	21
14	.18	.91	2.5	.91	.55	.00	.00	.00	120	39	2.9	18
15	.02	.61	2.5	.35	.61	.00	.00	.00	72	27	.63	17
16	.42	.29	2.3	.42	.61	.00	.00	.00	21	24	100	15
17	.46	.09	2.3	.50	.35	.00	.00	.00	.00	7.8	72	15
18	.23	.00	2.1	.35	.23	.00	.00	.00	.00	3.8	51	21
19	.10	.51	1.6	.10	.10	.00	.00	.00	141	3.8	304	31
20	.00	.91	1.3	.29	.05	.00	.00	.00	1270	38	122	33
21	.00	1.0	1.4	.18	.02	.00	.00	.00	156	8.1	110	32
22	.00	1.4	1.4	.10	.00	.00	.00	.00	29	2.9	39	46
23	.00	1.3	1.4	.00	.00	.00	.00	.00	22	.91	91	34
24	.68	1.5	1.3	.00	.00	.00	.00	.00	14	.18	110	24
25	1.4	1.4	1.0	.00	.00	.00	.00	.00	29	.01	16	19
26	1.3	1.1	.61	.00	.00	.00	.00	1.9	12	1.4	12	16
27	1.4	1.1	1.1	.00	.10	.00	.00	.04	8.7	3.2	7.3	12
28	1.5	1.1	.61	.00	.23	.00	.00	.62	5.6	185	3.8	10
29	1.3	1.9	1.2	.00	---	.00	.00	.37	3.5	62	5.7	8.4
30	.61	3.7	1.3	.04	---	.00	.00	.00	12	598	9.6	12
31	.91	---	.61	.09	---	.00	---	.00	---	94	6.8	---
TOTAL	273.32	30.01	68.63	13.19	9.51	.36	.00	33.83	1914.40	2931.37	1302.33	1138.6
MEAN	8.83	1.00	2.21	.43	.34	.012	.000	1.09	63.8	94.6	42.0	38.0
MAX	180	3.7	5.4	1.3	1.4	.20	.00	.29	1270	1550	304	371
MIN	.00	.00	.61	.00	.00	.00	.00	.00	.00	.00	.63	3.2
AC-FT	543	60	136	26	19	.7	.00	67	3800	5810	2580	2260

CAL YR	TOTAL	MEAN	MAX	MIN	AC-FT
1981	9261.85	25.4	2640	.00	18370
1982	7716.05	21.1	1550	.00	15300

## 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 (0.6 km) upstream from Canon del Uta, 2.9 mi (4.7 km) southeast of Colonias, and at mile 775.8 (1,248.3 km).

DRAINAGE AREA.--2,330 mi<sup>2</sup> (6,030 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,800 ft (1,463 m), from U.S. Corps of Engineers plans.

REMARKS.--Records poor. Diversions and ground-water withdrawals for irrigation for about 11,800 acres (48 km<sup>2</sup>), 1959 determination, above station; this includes the off channel Storrie Lake project on the Gallinas River above Las Vegas. Several observations of water temperature were made during the period.

AVERAGE DISCHARGE.--6 years, 62.4 ft<sup>3</sup>/s (1.767 m<sup>3</sup>/s), 45.210 acre ft/yr (55.7 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 12,400 ft<sup>3</sup>/s (351 m<sup>3</sup>/s) June 20, 1982, gage height 10.36 ft (3.158 m), from rating curve extended above 1,200 ft<sup>3</sup>/s (34 m<sup>3</sup>/s) on basis of discharges transferred from station 5 miles (8 km) downstream using the relation between peak gage heights at the two stations; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft<sup>3</sup>/s (85 m<sup>3</sup>/s) and maximum (\*) from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
June 20	2300	*12400 351	10.36 3.158	July 11	0930	9990 283	10.09 3.075

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	200	.00	58	53
2	.00	.00	.00	.00	.00	.00	.00	8.9	191	.00	31	33
3	86	.00	.00	.00	.00	.00	.00	28	178	.00	11	30
4	165	.00	.00	.00	.00	.00	.00	31	169	.00	4.1	29
5	44	.00	.00	.00	.00	.00	.00	73	158	.00	.68	24
6	21	.00	.00	.00	.00	.00	.00	151	147	.00	35	41
7	13	.00	.00	.00	.00	.00	.00	158	118	.00	68	440
8	4.7	.00	.00	.00	.00	.00	.00	130	95	.00	121	703
9	2.3	.00	.00	.00	.00	.00	.00	110	77	.00	84	91
10	2.1	.00	.00	.00	.00	.00	.00	66	76	.00	58	29
11	.97	.00	.00	.00	.00	.00	.00	72	97	1060	33	10
12	.00	.00	.00	.00	.00	.00	.00	86	97	55	29	7.8
13	.00	.00	.00	.00	.00	.00	.00	130	77	5.5	19	8.7
14	.00	.00	.00	.00	.00	.00	.00	113	124	.00	7.8	6.1
15	.00	.00	.00	.00	.00	.00	4.3	90	173	.00	7.4	3.5
16	.00	.00	.00	.00	.00	.00	10	68	90	.00	251	2.4
17	.00	.00	.00	.00	.00	1.1	15	52	70	.00	475	14
18	.00	.00	.00	.00	.00	2.8	15	44	249	.00	195	187
19	.00	.00	.00	.00	.00	1.4	12	32	117	.00	903	127
20	.00	.00	.00	.00	.00	.97	15	40	1020	6.2	218	329
21	.00	.00	.00	.00	.00	.36	17	61	489	6.2	498	403
22	.00	.00	.00	.00	.00	.00	22	84	11	.00	376	463
23	.00	.00	.00	.00	.00	.00	22	133	3.4	.00	341	351
24	.00	.00	.00	.00	.00	.00	15	282	.00	.00	448	240
25	.00	.00	.00	.00	.00	.00	13	224	.00	.00	555	182
26	.00	.00	.00	.00	.00	.00	6.1	195	.00	.00	144	133
27	.00	.00	.00	.00	.00	.00	.00	178	.00	.00	110	99
28	.00	.00	.00	.00	.00	.00	.00	209	.00	72	76	90
29	.00	.00	.00	.00	.00	.00	.00	213	7.8	394	64	81
30	.00	.00	.00	.00	.00	.00	.00	229	.24	736	50	104
31	.00	.00	.00	.00	.00	.00	.00	213	.00	180	30	.00
TOTAL	339.07	.00	.00	.00	.00	6.63	166.40	3503.90	4034.44	2514.90	5300.98	4314.5
MEAN	10.9	.000	.000	.000	.000	.21	5.55	113	134	81.1	171	144
MAX	165	.00	.00	.00	.00	2.8	22	282	1020	1060	903	703
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.68	2.4
AC-FT	673	.00	.00	.00	.00	13	330	6950	8000	4990	10510	8560
CAL YR 1981	TOTAL	17410.39	MEAN	47.7	MAX	2960	MIN	.00	AC-FT	34530		
WTR YR 1982	TOTAL	20180.82	MEAN	55.3	MAX	1060	MIN	.00	AC-FT	40030		



## 08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°03'35", long 104°45'41", in NE¼SE¼SE¼ sec. 25, T.10, R.20 E., Guadalupe County, Hydrologic Unit 13060001, at south boundary Preston Beck Grant, on left bank, 1.6 mi (2.6 km) upstream from River Ranch, 5.8 miles (9.3 km) southeast of Colonias, 9.1 miles (14.6 km) northwest of Santa Rosa, and at mile 770.8 (1,240.2 km).

DRAINAGE AREA.--2,340 mi<sup>2</sup> (6,060 km<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. Altitude of gage is 4,760 ft (1,451 m), from surveys by U.S. Corps of Engineers.

REMARKS.--Records fair. Diversions and ground-water withdrawals for irrigation of about 11,800 acres (48 km<sup>2</sup>), 1959 determination, above station; this includes the off channel Storrie Lake project on the Gallinas River above Las Vegas. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--6 years, 80.7 ft<sup>3</sup>/s (2.285 m<sup>3</sup>/s), 58,470 acre-ft/yr (72.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft<sup>3</sup>/s (337 m<sup>3</sup>/s) June 21, 1982, gage height 14.50 ft (4.420 m) from monometer gage, 15.33 ft (4.673 m) from floodmarks, from rating curve extended above 1,500 ft<sup>3</sup>/s (42 m<sup>3</sup>/s), on basis of slope-area measurement of peak flow; minimum 3.0 ft<sup>3</sup>/s (0.085 m<sup>3</sup>/s) Jan. 30, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft<sup>3</sup>/s (85 m<sup>3</sup>/s) and maximum (\*) from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
June 21	0100	*11900 337	14.50 4.420	Aug. 19	0300	3390 96.0	9.04 2.755
July 11	1100	11200 317	14.16 4.316	Aug. 23	1830	4310 122	9.95 3.033
July 30	0800	3600 102	9.26 2.822	Sept. 8	0330	3340 94.6	8.98 2.737

a 15.33 ft (4.673 m) from floodmarks

Minimum discharge, 4.2 ft<sup>3</sup>/s (0.12 m<sup>3</sup>/s) Apr. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.2	9.6	9.2	8.2	7.4	6.9	7.8	251	14	215	118
2	12	7.9	9.6	9.2	8.2	6.9	6.2	14	251	13	144	90
3	218	8.7	9.6	9.2	8.2	6.9	6.2	44	246	14	67	67
4	353	9.2	9.6	8.7	8.2	6.9	6.2	56	228	14	34	60
5	165	9.2	9.6	8.7	8.2	7.8	6.5	105	211	14	19	44
6	104	9.6	9.6	8.2	8.2	7.4	6.9	500	203	13	99	40
7	91	9.6	9.2	8.2	8.2	6.9	6.5	600	165	14	195	643
8	44	9.6	9.2	8.7	8.2	7.4	6.9	300	130	15	289	1170
9	29	9.6	8.7	8.7	8.2	7.4	6.9	150	97	14	214	254
10	21	9.6	8.7	8.7	8.2	6.9	6.9	80	81	14	191	125
11	16	9.6	8.7	9.2	8.2	6.9	6.5	70	100	1510	116	69
12	13	9.6	8.7	8.7	8.2	6.9	5.8	100	105	392	96	45
13	11	9.6	8.3	9.2	8.2	7.8	6.9	300	90	190	80	38
14	11	9.6	8.3	8.7	7.8	7.8	6.9	139	105	42	42	28
15	9.6	9.6	8.3	8.7	7.8	6.9	12	110	145	16	37	16
16	10	9.6	8.3	8.7	7.8	6.9	54	77	95	13	468	16
17	10	9.6	8.3	8.7	7.4	6.9	77	51	69	12	719	14
18	10	9.2	8.3	8.7	7.4	7.4	86	42	377	11	249	243
19	10	10	8.3	8.7	7.8	7.4	65	35	171	11	1350	239
20	10	10	8.3	8.7	7.8	7.4	61	36	691	12	235	482
21	9.6	10	7.9	8.7	7.8	7.4	65	58	1570	92	556	520
22	10	9.6	7.9	8.7	7.8	7.4	73	93	155	12	835	551
23	10	9.6	7.9	8.5	7.8	7.4	67	176	102	11	642	461
24	9.6	9.6	7.9	8.5	7.4	7.8	51	328	60	11	556	381
25	9.6	9.6	7.9	8.5	7.8	7.8	38	270	36	11	671	306
26	9.6	9.6	7.9	8.5	7.8	7.8	29	233	26	12	372	246
27	9.6	9.6	7.9	8.5	7.8	7.8	10	233	17	14	238	184
28	9.6	9.6	7.9	8.5	7.4	7.4	8.7	251	24	300	191	152
29	9.6	10	8.7	8.5	---	7.4	8.2	246	65	819	162	127
30	9.6	10	9.2	8.5	---	7.4	7.8	280	15	1260	151	121
31	10	---	9.2	8.5	---	7.4	---	265	---	428	92	---
TOTAL	1265.4	285.8	267.5	269.4	222.0	227.2	804.9	5249.8	5881	5318	9325	6850
MEAN	40.8	9.53	8.63	8.69	7.93	7.33	26.8	169	196	172	301	228
MAX	353	10	9.6	9.2	8.2	7.8	36	600	1570	1510	1350	1170
MIN	9.6	7.9	7.9	8.2	7.4	6.9	5.8	7.8	15	11	15	14
AC-FT	2510	567	531	534	440	451	1600	10410	11660	10550	18500	13590
CAL YR 1981	TOTAL	22815.5	MEAN	62.5	MAX	3000	MIN	5.4	AC-FT	45250		
WTR YR 1982	TOTAL	35966.0	MEAN	96.5	MAX	1570	MIN	5.8	AC-FT	71340		



CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

RIO GRANDE BASIN  
08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM -- Continued  
WATER QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 18...	1620	--	--	60	--	--	--	--	--	--
FEB 09...	1645	--	--	50	--	--	--	--	--	--
MAY 13...	1100	3	1	20	<1	<3	20	<10	18	5
SEP 23...	0945	--	--	10	--	--	--	--	--	--

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, DIS- SOLVED (UG/L AS SE) (01147)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 18...	130	--	--	--	--	--	--	--	--	--
FEB 09...	50	--	--	--	--	--	--	--	--	--
MAY 13...	68	16	1	.1	<.1	<1	<1	90	<12	
SEP 23...	40	--	--	--	--	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 (UG/L AS U) (22703)
MAY 13...	1100	<3.9	30	1.9	24	1.8	23	.24	.7

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
MAY 13...	420	450

RIO GRANDE BASIN  
08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM -- Continued  
WATER QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 18...	1620	8.6	12.0	17	.39	--	--
FEB 09...	1645	8.0	7.5	14	.30	--	--
MAY 13...	1100	148	11.5	903	361	--	--
SEP 23...	0945	470	18.0	1950	2470	17	23

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
NOV 18...	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--
MAY 13...	--	--	--	--	--	71
SEP 23...	35	66	81	91	100	--

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 (6.0 km) upstream from mouth, 4.9 mi (7.9 km) north-northeast of Santa Rosa Dam, and 10.4 mi (16.7 km) north-northeast of Santa Rosa. Mouth at Pecos River mile 763.0 (1,227.7 km).

DRAINAGE AREA.--65.6 mi<sup>2</sup> (169.9 km<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. Altitude of gage is 4,767 ft (1,453 m), from topographic map.

REMARKS.--Records fair. No known diversions or groundwater withdrawals for irrigation above station. Several observations of water temperature were made during the period.

AVERAGE DISCHARGE.--9 years, 1.49 ft<sup>3</sup>/s (0.042 m<sup>3</sup>/s), 1,080 acre-ft/yr (1.33 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft<sup>3</sup>/s (110 m<sup>3</sup>/s) July 24, 1976, gage height 9.3 ft (2.83 m) from rating curve extended above 70 ft<sup>3</sup>/s (2.0 m<sup>3</sup>/s) on basis of velocity-area studies, and slope-area measurements at gage heights 6.5 ft (1.98 m) and 9.3 ft (2.83 m); 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 (193 m<sup>3</sup>/s), gage height 11.6 ft (3.54 m), from floodmarks, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s) and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
July 11	0730	*586 16.6	4.89 1.490	Aug. 17	1900	148 4.19	3.35 1.021
July 13	2200	105 2.97	3.10 0.945	Aug. 17	2130	371 10.5	4.26 1.298
Aug. 16	2330	288 8.16	3.97 1.210	Aug. 19	0430	299 8.47	4.01 1.222
Aug. 17	0130	243 6.88	3.79 1.155				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	.01	.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	.82
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.94	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.6	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.3	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.7	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	10	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	83	2.9
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	2.5
19	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	37	.89
20	.00	.00	.00	.00	.00	.00	.00	.00	.24	.00	1.2	.21
21	.00	.00	.00	.00	.00	.00	.00	.00	.07	.00	6.0	.12
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.2	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.3	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	21	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.4	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.18	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.42	.05	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.6	.01	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.9	.00	.17
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11	.00	.00
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	14.31	120.09	183.35	34.51
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.48	3.87	5.91	1.15
MAX	.00	.00	.00	.00	.00	.00	.00	.00	14	94	83	17
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	28	238	364	68

CAL YR 1981 TOTAL 133.03 MEAN .50 MAX 49 MIN .00 AC-FT 363  
WTR YR 1982 TOTAL 352.26 MEAN .97 MAX 94 MIN .00 AC-FT 699

## 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 (0.8 km) mile west-southwest of Los Esteros Creek gage, 0.8 mi (1.3 km) above confluence with Los Esteros Creek, 4.6 mi (7.4 km) north-northeast of Santa Rosa Dam, and 10.2 mi (16.4 km) north-northeast of Santa Rosa.

DRAINAGE AREA.--13.7 mi<sup>2</sup> (22.0 km<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. Altitude of gage is 4,758 ft (1,450 m), from topographic map.

REMARKS.--Records poor. No known diversions or groundwater withdrawals for irrigation above station. Several observation of water temperature were made during the period.

AVERAGE DISCHARGE.--9 years, 0.41 ft<sup>3</sup>/s (0.012 m<sup>3</sup>/s), 297 acre-ft/yr (366,000 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft<sup>3</sup>/s (210 m<sup>3</sup>/s) Aug. 29, 1977, gage height, 7.80 ft (2.377 m) from rating curve extended above 0.5 ft<sup>3</sup>/s (0.014 m<sup>3</sup>/s) on basis of velocity-area studies, and slope-area measurement at gage height 7.80 ft (2.377 m); no flow most of the time.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 80 ft<sup>3</sup>/s (2.3 m<sup>3</sup>/s) and maximum (\*) from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Aug. 16	2030	*2230 63.2	5.22 1.591	Aug. 17	1830	208 5.89	2.48 0.756

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	.11	.38	114.50	1.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.004	.012	3.69	.033
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.07	.32	97	1.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.2	.8	227	2.0

CAL YR 1981 TOTAL 88.69 MEAN .24 MAX 51 MIN .00 AC-FT 176  
WTR YR 1982 TOTAL 115.99 MEAN .32 MAX 97 MIN .00 AC-FT 230

## RIO GRANDE BASIN

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 mi (11.3 km) north of Santa Rosa, and at mile 757.2 (1,218.3 km).

DRAINAGE AREA.--2,430 mi<sup>2</sup> (6,290 km<sup>2</sup>), approximately.

PERIOD OF RECORDS.--April 1980 to current year.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake is formed by earth and rockfill dam on Pecos River. Storage began on Apr. 22, 1980. Capacity 447,100 acre-ft (551 hm<sup>3</sup>) between elevations 4,630.0 ft (1,411.22 m), invert of outlet structure, and 4,797.0 ft (1,462.13 m), crest of spillway. No dead storage. Lake was created primarily for flood, irrigation, and sediment control.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES (AT 0800) FOR PERIOD OF RECORD.--Maximum contents, 54,540 acre-ft (67.2 hm<sup>3</sup>) June 24, 1982, elevation 4,729.48 ft (1,441.546 m); no storage for many days July-Sept., 1980 and June-Aug. 1981.

EXTREMES (AT 0800) FOR CURRENT YEAR.--Maximum contents, 54,540 acre-ft (67.2 hm<sup>3</sup>) June 24, elevation 4,729.48 ft (1,441.546 m); minimum 16,400 acre-ft (20.2 hm<sup>3</sup>) July 11, elevation 4705.97 ft (1,434.380 m).

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36520	37880	37570	37460	37380	37320	37400	37720	44770	38810	23840	44300
2	36500	37880	37550	37460	37380	37320	37400	37700	45210	36400	24900	42320
3	36830	37880	37550	37460	37360	37320	37400	37680	45530	34200	25090	40310
4	37160	37880	37550	37430	37360	37310	37380	37770	45960	32010	25180	38280
5	37510	37900	37550	37400	37360	37310	37360	37830	46240	29400	25240	36260
6	37550	37880	37550	37400	37360	37310	37320	38170	46520	27480	25290	34240
7	37980	37880	37550	37360	37340	37310	37310	38450	46820	25340	25610	32220
8	38070	37880	37550	37360	37320	37310	37290	38680	47080	23190	25950	32210
9	38090	37870	37550	37360	37320	37310	37270	38910	47220	21060	26290	30970
10	38090	37870	37550	37360	37320	37310	37250	39160	47320	18810	26640	29810
11	38110	37870	37550	37360	37310	37310	37230	39240	47460	16400	26690	27810
12	38110	37850	37550	37360	37310	37310	37210	39410	47590	17820	27050	25790
13	38130	37850	37550	37360	37310	37310	37200	39450	47740	17500	27200	23770
14	38090	37850	37550	37360	37310	37310	37180	39740	47900	18150	27290	21750
15	38150	37830	37550	37360	37310	37310	37160	39910	48120	19080	27380	21780
16	38170	37810	37550	37380	37310	37490	37120	40090	48360	19150	27450	21780
17	38150	37810	37550	37400	37310	37590	37120	40290	48520	19150	28690	21780
18	38110	37790	37550	37420	37310	37600	37120	40340	48590	19160	33140	21980
19	38090	37770	37550	37380	37310	37620	37100	40420	49690	19170	36390	22180
20	38050	37750	37550	37460	37310	37620	37140	40420	50460	19200	37810	22380
21	38020	37740	37550	37460	37310	37600	37250	40460	52210	19280	38720	22800
22	38020	37720	37510	37460	37310	37590	37340	40660	54210	19380	39640	23970
23	38000	37700	37490	37460	37310	37570	37460	40860	54400	19410	40580	25870
24	37980	37680	37490	37440	37320	37550	37530	41080	54540	19410	42020	26390
25	37960	37660	37490	37420	37320	37530	37600	41720	52210	19410	43160	27080
26	37940	37640	37490	37420	37320	37510	37680	42240	50010	19410	44490	27780
27	37920	37620	37470	37400	37320	37490	37700	42610	47760	19430	45190	28500
28	37880	37600	37460	37400	37320	37470	37720	42940	45380	19500	45440	28780
29	37870	37590	37460	37400	---	37460	37720	43390	43220	20030	45720	29050
30	37880	37570	37460	37400	---	37440	37720	43840	41000	21840	46000	29310
31	37880	---	37460	37400	---	37420	---	44300	---	22820	46110	---
MAX	38170	37900	37570	37460	37380	37620	37720	44300	54540	38810	46110	44300
MIN	36500	37570	37460	37360	37310	37310	37100	37680	41000	16400	23840	21750
(++)	+1330	-310	-110	-60	-80	+100	+300	+6880	-3300	-18180	+23290	-16800
CAL YR 1981	MAX	38170	MIN	.00	(++)	+34430						
WTR YR 1982	MAX	54540	MIN	16400	(++)	-7240						

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

08382810 SANTA ROSA LAKE NEAR SANTA ROSA, NM -- Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4720.97	4721.71	4721.54	4721.48	4721.44	4721.41	4721.45	4721.62	4725.16	4722.20	4712.73	4724.94
2	4720.96	4721.71	4721.53	4721.48	4721.44	4721.41	4721.45	4721.61	4725.37	4720.91	4713.55	4723.98
3	4721.14	4721.71	4721.53	4721.48	4721.43	4721.41	4721.45	4721.60	4725.52	4719.67	4713.79	4722.97
4	4721.32	4721.71	4721.53	4721.47	4721.43	4721.40	4721.44	4721.65	4725.72	4718.37	4713.76	4721.92
5	4721.51	4721.72	4721.53	4721.45	4721.43	4721.40	4721.43	4721.68	4725.85	4716.72	4713.80	4720.83
6	4721.53	4721.71	4721.53	4721.45	4721.43	4721.40	4721.41	4721.86	4725.98	4715.42	4713.84	4719.69
7	4721.76	4721.71	4721.53	4721.43	4721.42	4721.40	4721.40	4722.01	4726.12	4713.88	4714.08	4718.50
8	4721.81	4721.71	4721.53	4721.43	4721.41	4721.40	4721.39	4722.13	4726.24	4712.21	4714.33	4718.49
9	4721.82	4721.70	4721.53	4721.43	4721.41	4721.40	4721.38	4722.25	4726.30	4710.42	4714.58	4717.73
10	4721.82	4721.70	4721.53	4721.43	4721.41	4721.40	4721.37	4722.38	4726.35	4708.38	4714.83	4716.99
11	4721.83	4721.70	4721.53	4721.43	4721.40	4721.40	4721.36	4722.42	4726.41	4705.97	4715.01	4715.65
12	4721.83	4721.69	4721.53	4721.43	4721.40	4721.40	4721.35	4722.51	4726.47	4707.42	4715.12	4714.21
13	4721.84	4721.69	4721.53	4721.43	4721.40	4721.40	4721.34	4722.53	4726.54	4707.10	4715.23	4712.67
14	4721.82	4721.69	4721.53	4721.43	4721.40	4721.40	4721.33	4722.68	4726.61	4707.74	4715.29	4711.02
15	4721.85	4721.68	4721.53	4721.43	4721.40	4721.40	4721.32	4722.77	4726.71	4708.63	4715.35	4711.04
16	4721.86	4721.67	4721.53	4721.44	4721.40	4721.50	4721.30	4722.86	4726.82	4708.70	4715.40	4711.04
17	4721.85	4721.67	4721.53	4721.45	4721.40	4721.55	4721.30	4722.96	4726.89	4708.70	4716.25	4711.04
18	4721.83	4721.66	4721.53	4721.46	4721.40	4721.56	4721.30	4722.99	4726.92	4708.71	4719.05	4711.21
19	4721.82	4721.65	4721.53	4721.44	4721.40	4721.57	4721.29	4723.03	4727.41	4708.72	4720.90	4711.38
20	4721.80	4721.64	4721.53	4721.48	4721.40	4721.57	4721.31	4723.03	4727.75	4708.74	4721.67	4711.55
21	4721.78	4721.63	4721.52	4721.48	4721.40	4721.56	4721.37	4723.05	4728.50	4708.82	4722.15	4711.89
22	4721.78	4721.62	4721.51	4721.48	4721.40	4721.55	4721.42	4723.15	4729.34	4708.91	4722.63	4712.83
23	4721.77	4721.61	4721.50	4721.48	4721.40	4721.54	4721.48	4723.25	4729.42	4708.94	4723.11	4714.27
24	4721.76	4721.60	4721.50	4721.47	4721.41	4721.53	4721.52	4723.36	4729.48	4708.94	4723.83	4714.65
25	4721.75	4721.59	4721.50	4721.46	4721.41	4721.52	4721.56	4723.68	4728.50	4708.94	4724.39	4715.14
26	4721.74	4721.58	4721.50	4721.46	4721.41	4721.51	4721.60	4723.94	4727.55	4708.94	4725.03	4715.63
27	4721.73	4721.57	4721.49	4721.45	4721.41	4721.50	4721.61	4724.12	4726.55	4708.96	4725.36	4716.12
28	4721.71	4721.56	4721.48	4721.45	4721.41	4721.49	4721.62	4724.28	4725.45	4709.02	4725.48	4716.31
29	4721.70	4721.55	4721.48	4721.45	---	4721.48	4721.62	4724.50	4724.42	4709.51	4725.48	4716.49
30	4721.71	4721.54	4721.48	4721.45	---	4721.47	4721.62	4724.72	4723.32	4711.09	4725.74	4716.66
31	4721.71	---	4721.48	4721.45	---	4721.46	---	4724.94	---	4711.91	4725.79	---
MEAN	4721.68	4721.66	4721.52	4721.45	4721.41	4721.46	4721.43	4722.89	4726.66	4711.05	4718.63	4715.89
MAX	4721.86	4721.72	4721.54	4721.48	4721.44	4721.57	4721.62	4724.94	4729.48	4722.20	4725.79	4724.94
MIN	4720.96	4721.54	4721.48	4721.43	4721.40	4721.40	4721.29	4721.60	4723.32	4705.97	4712.73	4711.02
WTR YR 1982	MEAN	4720.46	MAX	4729.48	MIN	4705.97						



## 08382830 PECOS RIVER BELOW SANTA ROSA DAM, NM

LOCATION (REVISED).--Lat 35°01'27", long 104°41'20", Guadalupe County, Hydrologic Unit 13060001, in Jose Perea Grant, on right bank, 0.2 mi (0.3 km) downstream from Santa Rosa Dam, 5.7 mi (9.2 km) north of Santa Rosa, and at mile 757.0 (1,218.0 km).

DRAINAGE AREA.--2,430 mi<sup>2</sup> (6,290 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Altitude 4,640 ft (1,414 m) from topographic map. Prior to Oct. 31, 1980, at datum about 1.2 ft. (0.37 m) higher. Prior to Mar. 26, 1982, 195 ft. (59.4 m) upstream at datum 2.36 ft (0.719 m) higher.

REMARKS.--Records fair. Flow completely regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions and groundwater withdrawals for irrigation of about 12,000 acres (49 km<sup>2</sup>) 1959 determination, above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft<sup>3</sup>/s (59.2 m<sup>3</sup>/s) June 26, 1980, gage height about 5.77 ft (1.759 m), present datum; no flow July 31-Aug. 1, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,640 ft<sup>3</sup>/s (46.4 m<sup>3</sup>/s) June 24, gage height, 6.81 ft (2.076 m); no flow July 31-Aug. 1.

DISCHARGE, IN CUSIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.2	3.6	1.9	1.8	.60	.97	.97	1.1	1190	.00	1050
2	2.2	2.0	3.6	2.2	1.7	.60	1.0	.97	1.1	1180	.07	1030
3	2.2	2.0	3.6	2.3	1.7	.60	1.1	.89	1.1	1170	.00	1020
4	2.0	2.0	3.6	2.3	1.6	.55	1.0	.89	1.1	1170	1.4	1020
5	1.9	2.7	3.6	2.3	1.6	.55	1.0	.95	1.1	1160	3.4	1020
6	1.9	2.7	3.6	2.4	1.5	.55	.89	.89	1.1	1140	5.0	1020
7	2.0	2.9	3.6	2.4	1.4	.55	.92	.92	1.1	1130	1.8	1000
8	1.9	3.0	3.6	2.6	1.4	.55	.87	.89	1.1	1150	.85	1000
9	1.8	3.0	3.6	2.6	1.2	.71	.84	.97	1.2	1170	2.8	1000
10	1.8	3.0	3.4	2.6	1.1	1.2	.74	.89	1.2	1160	3.0	990
11	1.8	3.0	3.2	2.7	1.1	1.2	.63	.89	1.3	1180	2.4	985
12	1.8	3.0	3.2	2.7	.97	1.2	.82	.85	1.2	778	2.1	975
13	1.9	3.2	3.0	2.7	.90	1.2	.78	.88	1.2	1.3	2.0	965
14	1.9	3.4	2.9	2.7	.90	1.2	1.6	.85	1.2	1.6	1.6	320
15	2.2	3.4	2.9	2.9	.90	1.2	1.7	.97	1.2	1.5	1.1	2.8
16	2.2	3.4	2.9	2.7	.90	1.2	1.7	.97	1.2	1.5	1.1	2.5
17	2.2	2.1	2.6	2.7	.90	1.3	1.6	.97	1.2	1.5	1.6	3.3
18	2.2	3.3	2.4	2.7	.83	1.3	1.6	.97	1.4	1.5	1.2	2.5
19	2.0	4.1	2.3	2.7	.77	1.3	1.5	.97	1.2	1.3	1.2	2.4
20	2.0	3.9	2.4	2.7	.77	1.3	1.2	.98	1.3	1.3	.89	2.6
21	1.9	3.6	2.3	2.7	.77	1.3	1.2	.97	.89	1.3	1.1	2.7
22	1.9	3.7	2.2	2.6	.77	1.3	1.1	.97	.26	1.2	.65	1.7
23	2.0	3.7	2.0	2.6	.77	1.3	1.1	1.1	.03	1.3	2.0	.97
24	2.2	3.7	2.0	2.7	.77	1.2	1.1	1.1	792	1.3	3.3	.99
25	2.2	3.7	1.9	2.7	.71	1.2	1.1	1.1	1260	1.3	7.2	.71
26	2.0	3.7	1.7	2.3	.71	1.1	1.2	1.1	1210	1.2	4.2	.57
27	2.0	3.6	1.6	2.2	.65	1.1	1.1	1.1	1210	1.2	1.8	.43
28	2.0	3.6	1.5	2.0	.60	.97	1.1	1.1	1200	1.1	1.9	.37
29	2.2	3.6	1.7	1.9	---	.95	1.1	1.1	1200	1.2	2.7	.36
30	2.2	3.6	1.8	1.8	---	.94	1.1	1.1	1190	.46	1.7	1.5
31	2.3	---	1.9	1.8	---	.94	---	1.1	---	.00	366	---
TOTAL	63.0	94.8	84.2	76.1	29.69	31.16	33.86	30.37	8086.78	13601.06	426.10	13421.40
MEAN	2.03	3.16	2.72	2.45	1.06	1.01	1.13	.98	270	439	13.7	447
MAX	2.3	4.1	3.6	2.9	1.8	1.3	1.7	1.1	1260	1190	366	1050
MIN	1.8	2.0	1.5	1.8	.60	.55	.74	.85	.03	.00	.00	.36
AC-FT	125	188	167	151	59	62	67	60	16040	26980	845	26620
CAL YR 1981	TOTAL	12268.77	MEAN	33.6	MAX	1140	MIN	.80	AC-FT	24340		
WTR YR 1982	TOTAL	35978.52	MEAN	98.6	MAX	1260	MIN	.00	AC-FT	71360		

## 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 (0.6 km) downstream from bridge on U.S. Highway I-40, 0.6 mi (1.0 km) upstream from bridge on U.S. Highway I-40 (Business) in Santa Rosa, 1.9 mi (3.1 km) upstream from El Rito Creek, and at mile 748.4 (1,204.2 km). Water-quality sampling site 0.7 mi (1.1 km) downstream.

DRAINAGE AREA.--2,650 mi<sup>2</sup> (6,860 km<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. Datum of gage is 4,537.56 ft (1,383.048 m) National Geodetic Vertical Datum of 1929. For history of changes prior to Sept. 13, 1967, see WSP 2123.

REMARKS.--Water-discharge records good except for period of no gage-height record July 25-Aug. 16, which are poor. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions for irrigation of about 12,000 acres (49 km<sup>2</sup>), 1959 determination, above station.

AVERAGE DISCHARGE.--63 years (1906, 1913-24, 1928-79), 135 ft<sup>3</sup>/s (3.823 m<sup>3</sup>/s), 97,810 acre-ft/yr (121 hm<sup>3</sup>/yr), prior to completion of Santa Rosa Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft<sup>3</sup>/s (1,560 m<sup>3</sup>/s) June 2, 1937, gage height, 25.7 ft (7.83 m), site and datum then in use, from rating curve extended above 32,000 ft<sup>3</sup>/s (910 m<sup>3</sup>/s); minimum 0.28 ft<sup>3</sup>/s (0.008 m<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 (7.53 m), site and datum then in use, discharge, 45,000 ft<sup>3</sup>/s (1,300 m<sup>3</sup>/s), by Kutter's formula. Flood of June 9, 1903, reached a stage of 21.1 ft (6.43 m), same site and datum as in 1904, discharge, 34,000 ft<sup>3</sup>/s (960 m<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 (200 m<sup>3</sup>/s) Aug. 11, 1981, gage height, 6.56 ft (1.999 m); minimum daily, 3.3 ft<sup>3</sup>/s (0.093 m<sup>3</sup>/s) Feb. 28, 1980 and Feb. 11-20, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,650 ft<sup>3</sup>/s (46.7 m<sup>3</sup>/s) July 29, gage height, 2.98 ft (0.908 m) from recorded range in stage; maximum gage height, 3.00 ft (0.914 m) June 24; minimum daily discharge, 3.3 ft<sup>3</sup>/s (0.093 m<sup>3</sup>/s) Feb. 11-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	9.0	7.3	5.9	6.6	3.7	5.9	6.6	5.3	1110	20	1120
2	5.9	8.1	7.3	5.9	6.6	3.7	5.3	6.6	5.3	1100	10	1070
3	5.9	8.1	7.3	5.3	5.9	3.7	5.3	6.6	5.3	1100	7.0	1040
4	5.9	7.3	7.3	5.9	5.9	4.2	4.7	5.9	5.3	1090	6.0	1060
5	5.9	7.3	7.3	6.6	5.9	4.2	4.7	4.7	5.3	1070	9.0	1080
6	5.9	7.3	7.3	5.9	5.9	4.2	5.3	6.6	5.3	1070	11	1060
7	5.9	7.3	7.3	6.6	5.9	4.2	5.9	6.6	5.3	1060	6.8	1070
8	5.3	8.1	7.3	6.6	6.6	4.2	5.9	5.9	5.3	1070	5.0	1030
9	5.3	8.1	7.3	5.9	6.6	4.2	5.9	5.3	5.3	1080	6.2	1030
10	5.9	8.1	7.3	5.9	5.3	4.2	5.9	5.3	5.3	1080	7.0	1030
11	6.6	8.1	7.3	5.9	3.3	4.2	5.9	5.3	5.3	1100	5.9	1030
12	6.6	8.1	7.3	5.9	3.3	5.3	5.9	4.7	5.3	915	5.2	1020
13	6.6	8.1	7.3	6.6	3.3	5.9	5.9	4.7	5.3	24	5.0	1010
14	6.6	8.1	7.3	6.6	3.3	5.9	5.9	4.7	5.3	10	5.2	505
15	6.6	8.1	6.6	5.9	3.3	5.9	5.9	4.7	5.3	6.6	5.4	24
16	6.6	8.1	5.9	4.7	3.3	5.9	5.9	4.7	5.3	5.3	5.6	14
17	6.6	8.1	5.9	5.9	3.3	5.3	6.6	6.6	4.7	4.7	5.9	22
18	6.6	7.3	5.9	5.3	3.3	5.3	6.6	6.6	4.7	4.7	5.3	19
19	6.6	5.9	5.9	5.9	3.3	5.3	5.9	5.9	6.6	4.7	5.9	11
20	6.6	8.1	5.9	5.9	3.3	5.9	5.9	5.3	9.0	4.7	30	14
21	6.6	8.1	5.9	5.9	3.7	5.9	5.9	5.3	8.1	4.2	24	12
22	8.1	8.1	5.9	5.9	3.7	5.9	5.9	5.3	8.1	4.2	3.0	9.0
23	8.1	8.1	5.9	5.9	4.2	5.9	5.9	4.7	8.1	9.8	4.7	7.3
24	8.1	8.1	5.9	5.9	4.2	5.9	6.6	8.1	622	4.2	9.3	5.9
25	8.1	8.1	5.9	5.9	4.2	5.9	5.9	8.1	1240	4.2	4.2	5.3
26	8.1	8.1	5.3	6.6	3.7	5.9	5.9	8.1	1180	4.2	4.2	5.3
27	8.1	8.1	5.9	5.9	4.2	5.9	6.6	8.1	1130	4.2	4.2	4.7
28	8.1	8.1	5.3	5.3	4.2	5.9	6.6	8.1	1130	4.2	4.2	4.7
29	8.1	8.1	5.3	5.9	---	5.9	6.6	6.6	1120	260	29	4.7
30	7.3	8.1	5.3	5.9	---	5.9	6.6	5.3	1110	100	8.1	31
31	9.0	---	5.3	5.9	---	5.9	---	5.3	---	40	384	---
TOTAL	211.5	237.7	200.2	184.1	126.3	160.3	177.7	186.3	7666.1	13348.9	646.3	14348.9
MEAN	6.82	7.92	6.46	5.94	4.51	5.17	5.92	6.01	256	431	20.8	478
MAX	9.0	9.0	7.3	6.6	6.6	5.9	6.6	8.1	1240	1110	384	1120
MIN	5.3	5.9	5.3	4.7	3.3	3.7	4.7	4.7	4.7	4.2	3.0	4.7
AC-FT	420	471	397	365	251	318	352	370	15210	26480	1280	28460
CAL YR 1981	TOTAL	14527.3	MEAN	39.8	MAX	1380	MIN	5.3	AC-FT	28810		
WTR YR 1982	TOTAL	37494.3	MEAN	103	MAX	1240	MIN	3.0	AC-FT	74370		

RIO GRANDE BASIN  
08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued  
WATER-QUALITY RECORDS

LOCATION.--Samples collected 0.6 mi (1.0 km) downstream from discharge station.

PERIOD OF RECORD.--Water years 1905-07, 1959 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to current year.

WATER TEMPERATURES: October 1958 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1958 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,980 micromhos Sept. 13, 1981; minimum daily, 173 micromhos May 22, 1973.

WATER TEMPERATURES: Maximum, 38.0°C May 11, 1970; minimum, 0.0°C on several days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 31,400 mg/L Aug. 18, 1961; minimum daily, 0 mg/L June 17, 1982.

SEDIMENT LOADS: Maximum daily, 344,000 tons (312,000 tonnes) July 30, 1971; minimum daily, 0 ton (0 tonne) June 17, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,970 micromhos June 17; minimum daily, 404 micromhos Sept. 2.

WATER TEMPERATURES: Maximum, 32.0°C Aug 28;; minimum, 1.0°C Jan. 4, 23.

SEDIMENT CONCENTRATIONS: Maximum daily, 7,790 mg/L June 24; minimum daily, 0 mg/L June 17.

SEDIMENT LOADS: Maximum daily, 27,400 tons (24,900 tonnes) June 24; minimum daily, 0 ton (0 tonne) June 17.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
NOV 19...	1300	5.8	--	2300	--	7.9	--	13.5	--	1525	1385
DEC 28...	1555	5.8	2280	--	7.7	--	--	10.0	--	--	--
FEB 10...	1400	6.4	--	2340	--	7.8	--	6.0	--	1554	1414
MAR 24...	1435	5.8	2460	--	8.0	--	--	19.5	--	--	--
MAY 13...	1300	5.3	2500	2500	8.3	8.4	25.0	23.0	--	1758	1618
JUN 17...	0840	5.3	2300	2580	7.6	--	--	18.5	--	--	--
JUL 13...	1130	22	900	1070	--	7.8	30.0	24.0	--	--	--
AUG 17...	1630	5.9	2200	2170	8.0	7.9	34.0	31.0	5.8	1446	1381

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 19...	500	67	47	.5	2.2	1400	22	.6	13	2140
DEC 28...	--	--	--	--	--	--	--	--	--	--
FEB 10...	520	62	48	.6	2.6	1400	59	.6	13	2190
MAR 24...	--	--	--	--	--	--	--	--	--	--
MAY 13...	590	69	54	.6	2.4	1500	69	.6	13	2380
JUN 17...	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--
AUG 17...	480	60	48	.6	2.7	1300	54	.5	14	2000

RIO GRANDE BASIN  
08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 19...	1300	90	60
FEB 10...	1400	90	60
MAY 13...	1300	100	50
AUG 17...	1630	100	4

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
JUN 24...	1330	1210	20.0	48800	159000	48	65	98
25...	0720	1310	14.0	598	2120	22	30	48
JUL 03...	0730	1100	20.0	125	371	--	--	--
12...	0730	1080	18.0	674	1970	24	30	59
30...	0735	22	18.0	247	15	--	--	--
AUG 21...	0800	14	21.0	104	3.9	--	--	--
31...	1440	494	24.0	6310	8420	49	61	89
SEP 02...	0725	1210	19.0	165	539	--	--	--

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)
JUN 24...	99	100	--	--	--	--	--	
25...	70	79	97	100	--	--	--	
JUL 03...	--	--	--	--	52	--	--	
12...	--	--	--	--	94	95	98	
30...	--	--	--	--	91	--	--	
AUG 21...	--	--	--	--	97	--	--	
31...	98	99	100	--	--	--	--	
SEP 02...	--	--	--	--	71	--	--	

RIO GRANDE BASIN  
08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2540	2480	2450	2620	2480	2780	2880	2760	2950	479	2400	462
2	2530	2550	2440	2620	2520	2830	2910	2720	2710	497	2590	404
3	2460	2590	2240	2620	2590	2840	2560	2750	2760	502	2730	425
4	2440	2580	2280	2330	2610	---	2740	2770	2840	493	2210	434
5	2550	2640	2370	2200	2720	2840	2830	2800	2850	495	2430	451
6	2640	2490	2390	2190	2560	2820	2820	2750	2900	518	2360	476
7	2340	2490	2430	2240	2630	2850	2830	2740	2920	524	2500	478
8	2510	2480	2430	2230	2560	2920	2810	2760	2900	525	2520	488
9	2590	2550	2440	2210	2620	2880	2860	2840	2950	528	2540	433
10	2640	2490	2420	2190	2620	2950	2840	2840	2950	526	2560	429
11	2660	2500	2440	2300	2660	2920	2850	2870	2940	531	2590	485
12	2660	2500	2440	2140	2610	2840	2870	2870	2900	490	2580	492
13	2670	2150	2440	2130	2640	2810	2910	2870	2880	1050	2510	510
14	2660	2270	2460	2140	2740	2830	2930	2870	2900	1550	2340	516
15	2650	2320	2530	2160	2750	2740	2540	2890	2940	1980	2330	1450
16	2580	2330	2570	2170	2740	2840	2740	2890	2940	2020	2310	1790
17	2630	2380	2590	2280	2770	2850	2840	2690	2970	2160	2280	1720
18	2630	2380	2570	2190	2770	2770	2820	2770	2680	2210	2220	1540
19	2650	2560	2610	2230	2770	2730	2560	2780	2760	2320	2120	1910
20	2660	2270	2630	2190	2750	2750	2730	2840	2650	2360	2180	2060
21	2710	2290	2660	2230	2810	2780	2740	2880	2700	2410	1140	1850
22	2610	2350	2660	2250	2810	2780	2720	2890	2670	2410	2040	2050
23	2600	2360	2670	2300	2830	2800	2740	2880	2780	2400	2330	2230
24	2640	2360	2650	2250	2820	2800	2730	2820	2830	2510	1210	2410
25	2640	2400	2660	2230	2580	2860	2740	2720	467	2530	1720	2570
26	2640	2430	2650	2210	2680	2840	2760	2780	440	2350	1890	2640
27	2650	2380	2630	2200	2750	2790	2770	2830	448	2470	1900	2730
28	2380	2360	2650	2290	2760	2780	2740	2840	466	2330	1870	2790
29	2520	2280	2640	2290	---	2820	2780	2860	481	2110	1780	2860
30	2570	2370	2630	2270	---	2840	2770	2920	489	1110	1760	2860
31	2460	---	2600	2300	---	2870	---	2950	---	2040	1840	---
MEAN	2580	2420	2520	2260	2680	2830	2780	2820	2370	1500	2190	1400
WTR YR 1982	MEAN	2360	MAX	2970	MIN	404						

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	10.0	3.0	7.0	4.0	6.0	9.0	12.0	14.0	19.0	19.0	18.0
2	14.0	9.0	3.0	5.0	2.0	9.0	8.0	13.0	14.0	19.0	20.0	19.0
3	15.0	10.0	5.0	3.0	3.0	10.0	8.0	14.0	15.0	20.0	19.0	20.0
4	14.0	8.0	4.0	1.0	2.0	---	10.0	13.0	15.0	23.0	18.5	20.0
5	13.0	8.0	7.0	6.0	3.0	5.0	10.0	12.0	16.0	19.0	22.0	22.0
6	14.0	11.0	9.0	5.0	4.5	10.0	7.0	10.0	26.0	20.0	20.0	21.0
7	13.0	12.0	5.0	3.0	8.5	5.0	11.0	8.0	15.0	21.0	20.0	21.0
8	14.0	11.0	8.0	2.5	5.5	17.0	8.0	11.0	15.5	21.0	22.0	21.0
9	13.0	6.0	5.0	3.0	2.0	7.0	10.0	17.0	14.0	20.0	18.0	19.0
10	13.0	6.0	7.0	2.0	3.0	17.0	8.0	12.0	16.0	21.0	19.0	19.0
11	13.0	7.0	7.0	2.0	4.0	20.0	8.0	12.0	17.0	21.0	29.0	22.0
12	22.0	7.0	7.0	5.0	4.0	16.0	12.0	12.0	16.0	18.0	19.0	22.0
13	22.0	8.0	8.0	3.0	8.0	17.0	12.0	10.0	19.0	18.0	19.0	22.0
14	23.0	8.0	5.0	3.0	14.0	14.0	13.0	11.0	18.0	18.0	18.0	16.0
15	12.0	8.0	5.0	5.0	7.0	15.0	12.0	12.0	15.0	26.0	22.0	16.0
16	13.0	10.0	6.0	2.0	6.0	15.0	12.0	13.0	25.0	18.0	20.0	16.0
17	10.0	8.0	4.0	6.0	7.5	16.0	10.5	13.0	17.0	19.0	19.0	17.0
18	18.0	9.0	2.0	5.5	8.0	10.0	16.0	14.0	17.0	18.0	20.0	15.0
19	8.0	7.0	7.0	7.0	6.0	6.0	10.0	14.0	17.0	20.0	19.0	19.0
20	10.0	5.0	8.0	7.0	6.0	6.0	7.0	14.5	23.0	20.0	19.5	15.0
21	11.0	6.0	7.0	5.5	11.0	6.0	8.5	14.0	15.0	19.0	21.0	15.0
22	9.0	8.0	5.0	3.0	7.0	6.0	15.0	16.0	17.0	20.0	27.5	13.0
23	10.0	8.0	2.0	1.0	8.0	7.0	8.0	18.0	18.0	19.0	19.0	15.5
24	9.0	8.0	3.0	5.0	7.0	7.0	9.0	14.0	17.0	18.0	19.0	15.5
25	9.0	8.0	6.0	5.0	7.0	7.0	14.0	14.0	14.0	20.0	18.0	15.0
26	7.0	5.0	3.0	5.0	5.0	8.0	11.0	14.0	15.0	26.0	18.0	15.0
27	10.0	6.0	7.5	5.5	4.0	9.0	12.0	16.0	17.0	19.0	18.0	15.0
28	11.0	8.0	9.0	4.0	11.0	9.0	13.0	14.5	18.0	18.0	32.0	14.0
29	11.0	10.0	2.5	5.0	---	9.0	13.0	15.0	18.0	20.0	22.0	11.0
30	9.0	4.0	6.0	5.0	---	7.0	12.0	20.0	18.0	18.0	19.0	17.0
31	8.0	---	5.0	4.5	---	7.0	---	14.0	---	18.0	18.0	---
MEAN	12.5	8.0	5.5	4.0	6.0	10.0	10.5	13.5	17.0	20.0	20.5	17.5
WTR YR 1982	MEAN	12.0	MAX	32.0	MIN	1.0						





## RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM  
(Surveillance network station)

LOCATION.--Lat 34°43'48", long 104°31'28", in NE¼SE¼NW¼ sec.20, T.6 N., R.23 E., Guadalupe County, Hydrologic Unit 13060001, on left bank 9 mi (14.5 km) southeast of Puerto de Luna, 17.5 mi (28.2 km) upstream from Sumner Dam, and at mile 719.5 (1,157.7 km).

DRAINAGE AREA.--3,970 mi<sup>2</sup> (10,280 km<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. Datum of gage is 4,311.34 ft (1,314.096 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 15, 1954, at datum 1 ft (0.30 m) higher.

REMARKS.--Water-discharge records good. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions for irrigation of about 12,500 acres (51 km<sup>2</sup>), 1959 determination, above station. Discharge represents inflow to Lake Sumner.

AVERAGE DISCHARGE.--41 years (1939-79), 209 ft<sup>3</sup>/s (5.919 m<sup>3</sup>/s), 151,400 acre-ft/yr (187 hm<sup>3</sup>/yr), prior to completion of Santa Rosa Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,600 ft<sup>3</sup>/s (1,380 m<sup>3</sup>/s) Sept. 1, 1942, gage height, 17.00 ft (5.182 m), from rating curve extended above 7,400 ft<sup>3</sup>/s (210 m<sup>3</sup>/s) on basis of flow at Santa Rosa; minimum, 11 ft<sup>3</sup>/s (0.31 m<sup>3</sup>/s) Jan. 31, 1951.  
Since completion of Santa Rosa Dam in 1980, maximum discharge 10,900 ft<sup>3</sup>/s (309 m<sup>3</sup>/s) June 10, 1982, gage height, 7.44 ft (2.268 m); minimum, 45 ft<sup>3</sup>/s (1.27 m<sup>3</sup>/s) June 9, 1982.

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 (1,560 m<sup>3</sup>/s) and peak inflow to Lake Sumner was about 75,000 ft<sup>3</sup>/s (2,120 m<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, 10,900 ft<sup>3</sup>/s (309 m<sup>3</sup>/s) June 10, gage height, 7.44 ft (2.268 m); minimum, 45 ft<sup>3</sup>/s (1.27 m<sup>3</sup>/s) June 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	74	85	83	81	82	79	84	68	60	1200	98	983
2	75	81	83	84	83	79	77	69	60	1190	87	1070
3	78	79	82	84	83	79	76	67	57	1170	80	1090
4	73	80	81	91	83	78	75	66	56	1170	74	1100
5	69	81	82	84	83	76	73	66	54	1170	72	1090
6	83	81	82	79	83	80	74	71	49	1150	74	1120
7	103	80	81	81	83	79	76	72	48	1140	180	1400
8	84	77	81	80	83	77	73	69	48	1140	81	1120
9	81	76	83	80	81	77	73	70	47	1150	69	1090
10	77	80	84	80	83	77	75	69	1510	1150	70	1070
11	75	84	84	80	84	77	77	61	643	1140	68	1060
12	73	84	85	88	85	78	75	60	105	1190	69	1030
13	76	84	84	85	83	78	75	58	83	404	70	1010
14	76	83	83	85	83	80	72	58	75	134	73	910
15	75	84	81	86	83	79	69	60	73	102	69	203
16	79	86	79	88	83	79	69	62	73	95	76	116
17	80	85	78	86	82	79	67	61	73	90	774	104
18	78	91	82	85	82	78	65	64	71	89	649	115
19	78	82	79	83	80	75	64	64	68	78	340	106
20	77	78	80	84	79	69	66	60	81	74	170	241
21	72	78	80	83	79	75	68	60	82	74	192	190
22	75	78	81	81	79	77	69	60	76	73	197	109
23	75	78	82	82	79	78	71	61	68	69	191	96
24	79	81	87	83	79	77	73	60	179	70	191	86
25	79	79	82	82	78	72	68	81	1300	70	339	80
26	77	78	86	82	80	72	67	64	1210	69	123	78
27	78	79	84	83	80	76	71	62	1210	76	96	75
28	77	81	82	80	79	77	71	64	1220	82	81	71
29	77	83	82	80	---	76	68	58	1200	151	86	70
30	77	84	82	79	---	81	66	59	1200	509	97	1290
31	80	---	81	80	---	83	---	60	---	141	72	---
TOTAL	2410	2440	2546	2569	2284	2397	2147	1984	11079	16410	4908	18173
MEAN	77.7	81.3	82.1	82.9	81.6	77.3	71.6	64.0	369	529	158	606
MAX	103	91	87	91	85	83	84	81	1510	1200	774	1400
MIN	69	76	78	79	78	69	64	58	47	69	68	70
AC-FT	4780	4640	5050	5100	4530	4750	4260	3540	21980	32550	9740	36050
CAL YR 1981	TCTAL	44308	MEAN 121	MAX 1800	MIN 49	AC-FT 57880						
WTR YR 1982	TCTAL	69347	MEAN 190	MAX 1510	MIN 47	AC-FT 137500						



RIO GRANDE BASIN  
08383500 PECOS RIVER PUERTO NEAR DE LUNA, NM -- Continued  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--Water years 1937-66, 1972 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3 (00900)
NOV 19...	1630	82	--	2660	--	7.8	9.5	10.0	--	10	1832
DEC 30...	1230	80	2890	--	7.6	--	--	8.0	--	--	--
FEB 11...	1230	85	3000	2840	7.6	7.5	.0	3.0	14.0	--	1758
MAR 26...	1200	71	2930	--	7.6	--	--	9.0	--	--	--
MAY 13...	1530	58	3100	3100	8.2	8.1	--	20.0	--	45	1782
JUN 17...	1145	73	2970	--	7.6	--	--	21.0	--	--	--
AUG 18...	1200	1030	1800	1930	8.2	7.7	28.0	19.0	6.2	840	1231

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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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 19...	1712	610	75	99	1.1	2.5	--	--	1700	150	.6
DEC 30...	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	1648	590	69	100	1.1	2.6	--	--	1500	150	.7
MAR 26...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	1672	590	75	110	1.2	2.6	140	.00	1600	150	.6
JUN 17...	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	1111	440	32	16	.2	4.9	--	--	1100	11	.3

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)
NOV 19...	14	2720	<.02	<.02	.120	.58	--	<.010	<.020	1.6
DEC 30...	--	--	--	--	--	--	--	--	--	--
FEB 11...	14	2490	.10	.14	.110	.40	.61	.080	.040	--
MAR 26...	--	--	--	--	--	--	--	--	--	--
MAY 13...	14	2610	<.10	<.10	.130	.36	--	.040	.020	--
JUN 17...	--	--	--	--	--	--	--	--	--	--
AUG 18...	10	1690	1.4	1.6	.570	8.1	10	4.50	.040	--

RIO GRANDE BASIN  
08383500 PECOS RIVER PUERTO NEAR DE LUNA, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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...	1630	2	1	100	1	<1	10	10	6	3
FEB 11...	1230	--	--	110	--	--	--	--	--	--
MAY 13...	1530	1	1	110	<1	<1	20	10	4	1
AUG 18...	1200	--	--	180	--	--	--	--	--	--

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 19...	90	2	2	.2	.1	1	<1	30	30	
FEB 11...	140	--	--	--	--	--	--	--	--	--
MAY 13...	40	1	1	.1	<.1	<1	<1	30	20	
AUG 18...	82	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		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)	
MAY 13...	1530	<2.0	1.8	1700	3	2	1	
		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)
MAY 13...	<10	2	530	<10	52	.20	3	

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 13...	1530	<83	4.0	<42	2.7	<41	2.6	.06	2.5

RIO GRANDE BASIN  
08383500 PECOS RIVER PUERTO NEAR DE LUNA, NM -- Continued  
WATER-QUALITY RECORDS

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PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 23...	1500	<.10	<.01	<.10	<.01	<.01	<.01	<.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 23...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.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)	THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
SEP 23...	<.01	<.01	<.01	<1	<.01	<.10	<.10	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 19...	K6	K7
FEB 11...	55	67
MAY 13...	30	65
AUG 18...	K1300	2100

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 19...	1630	82	10.0	303	67	30
FEB 09...	1600	83	7.5	333	75	39
MAY 13...	1530	58	20.0	225	35	55
AUG 18...	1200	1030	19.0	35500	98700	96

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 (8.0 km) northeast of Guadalupe, 12.2 mi (19.6 km) northwest of Fort Sumner, and at mile 702.0 (1,129.5 km).

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".

GAGE.--Nonrecording gage. Datum of gage is at Bureau of Reclamation datum. April 1, 1946, to Sept. 30, 1957, water-stage recorder above elevation 4,234.25 ft (1,290.599 m), nonrecording gage below.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 138,300 acre-ft (171 hm<sup>3</sup>) 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 (1,303.020 m); maximum elevation 4,276.10 ft (1,303.355 m) June 3, Sept. 8, 1958; no storage July 28 to Aug. 2, 1951, elevation 4,200.70 ft (1,280.373 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 48,360 acre-ft (59.6 hm<sup>3</sup>) Feb. 27 to Mar. 1 and Mar 6-8, gage height, 4,259.90 ft (1,298.418 m); minimum, 2,840 acre-ft (3.50 hm<sup>3</sup>) June 10, gage height, 4,226.10 ft (1,288.115 m).

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33260	32410	36800	40590	44890	48360	46470	4510	3540	16950	11250	13620
2	33040	32620	36800	40840	44890	48080	46470	4570	3500	17190	11250	13620
3	33040	32830	36300	40840	45150	48080	46470	4570	3450	17320	11250	13620
4	33040	33040	36800	40840	45150	48080	46200	4570	3400	17320	11160	13100
5	32830	33040	37030	41080	45410	48080	45940	4570	3360	17320	11060	12900
6	32830	33260	37260	41330	45410	48360	45940	4510	3220	17190	10970	12900
7	32830	33470	37500	41330	45670	48360	45670	4510	3090	17320	11160	12900
8	33040	33470	37730	41580	45940	48360	45670	4510	3010	17190	11620	13200
9	33260	33690	37730	41580	45940	48080	45670	4460	2920	17320	11710	13000
10	33260	33690	37960	41830	46200	48080	45670	4400	2840	17440	11620	12900
11	33470	33900	37960	41830	46470	48080	45410	4350	5030	17700	11520	12690
12	33690	34120	37960	41830	46470	47810	45410	4300	6630	17950	11430	12490
13	33900	34120	38200	42080	46470	47810	43340	4240	6770	17950	11340	12200
14	33900	34340	38200	42330	46470	47810	41330	4190	6840	16340	11250	11900
15	33690	34340	38430	42580	46470	47810	39140	4140	6840	14380	11250	11060
16	33690	34560	38430	42830	47000	47540	36800	4090	6840	12290	11160	10790
17	33690	34780	38670	42830	47000	47540	34780	4030	6840	10100	10970	10790
18	33690	34780	38900	43090	47270	47540	32620	3980	6770	10020	13410	10790
19	33470	35000	38900	43340	47270	47540	30350	3930	6700	10020	14490	10880
20	33470	35220	38900	43340	47540	47270	28200	3880	6700	10020	15050	10880
21	33260	35220	39140	43340	47540	47270	25980	3830	6840	9930	15400	11340
22	33260	35440	39380	43340	47810	47270	23900	3780	6770	9930	15510	11620
23	33260	35440	39380	43600	47810	47270	21810	3730	6770	9930	15400	11620
24	33040	35670	39620	43850	48080	47000	19730	3680	6700	9850	15510	11620
25	33040	35670	39620	44110	48080	47000	17570	3590	7060	9850	14490	11710
26	32830	35670	39860	44110	48080	47000	15630	3500	10180	9770	16100	11810
27	32830	35890	39860	44110	48360	46740	13410	3450	12300	9680	16100	11810
28	32830	36120	40110	44370	48360	46740	11520	3400	14490	9680	15980	11810
29	32620	36570	40350	44370	---	46470	9280	3450	16580	9850	15980	11710
30	32620	36800	40350	44630	---	46470	7060	3540	16580	10100	15860	11710
31	32620	---	40350	44630	---	46470	---	3590	---	11160	15860	---
MAX	339											

08384000 LAKE SUMNER NEAR FORT SUMNER, NM -- Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4253.70	4253.30	4255.30	4256.90	4258.60	4259.90	4259.20	4229.60	4227.70	4244.10	4238.80	4241.20
2	4253.60	4253.40	4255.30	4257.00	4258.60	4259.80	4259.20	4229.70	4227.60	4244.30	4238.80	4241.20
3	4253.60	4253.50	4255.30	4257.00	4258.70	4259.80	4259.20	4229.70	4227.50	4244.40	4238.80	4241.20
4	4253.60	4253.60	4255.30	4257.00	4258.70	4259.80	4259.10	4229.70	4227.40	4244.40	4238.70	4240.70
5	4253.50	4253.60	4255.40	4257.10	4258.80	4259.80	4259.00	4229.70	4227.30	4244.40	4238.60	4240.50
6	4253.50	4253.70	4255.50	4257.20	4258.80	4259.90	4259.00	4229.60	4227.00	4244.30	4238.50	4240.50
7	4253.50	4253.80	4255.60	4257.20	4258.90	4259.90	4258.90	4229.60	4226.70	4244.40	4238.70	4240.50
8	4253.60	4253.90	4255.70	4257.30	4259.00	4259.90	4258.90	4229.60	4226.50	4244.30	4239.20	4240.80
9	4253.70	4253.90	4255.70	4257.30	4259.00	4259.80	4258.90	4229.50	4226.30	4244.40	4239.30	4240.60
10	4253.70	4253.90	4255.80	4257.40	4259.10	4259.80	4258.90	4229.40	4226.10	4244.50	4239.20	4240.50
11	4253.80	4254.00	4255.80	4257.40	4259.20	4259.80	4258.80	4229.30	4230.50	4244.70	4239.10	4240.30
12	4253.90	4254.10	4255.80	4257.40	4259.20	4259.70	4258.80	4229.20	4233.00	4244.90	4239.00	4240.10
13	4254.00	4254.10	4255.90	4257.50	4259.20	4259.70	4258.00	4229.10	4233.20	4244.90	4238.90	4239.80
14	4254.00	4254.20	4255.90	4257.60	4259.30	4259.70	4257.20	4229.00	4233.30	4243.60	4238.80	4239.50
15	4253.90	4254.20	4256.00	4257.70	4259.30	4259.70	4256.30	4228.90	4233.30	4241.90	4238.80	4238.60
16	4253.90	4254.30	4256.00	4257.80	4259.40	4259.60	4255.30	4228.80	4233.30	4239.90	4238.70	4238.30
17	4253.90	4254.40	4256.10	4257.80	4259.40	4259.60	4254.40	4228.70	4233.30	4237.50	4238.50	4238.30
18	4253.90	4254.40	4256.20	4257.90	4259.50	4259.60	4253.40	4228.60	4233.20	4237.40	4241.00	4238.30
19	4253.80	4254.50	4256.20	4258.00	4259.50	4259.60	4252.30	4228.50	4233.10	4237.40	4242.00	4238.40
20	4253.80	4254.60	4256.20	4258.00	4259.60	4259.50	4251.20	4228.40	4233.10	4237.40	4242.50	4238.40
21	4253.70	4254.60	4256.30	4258.00	4259.60	4259.50	4250.00	4228.30	4233.30	4237.30	4242.80	4238.90
22	4253.70	4254.70	4256.40	4258.00	4259.70	4259.50	4248.80	4228.20	4233.20	4237.30	4242.90	4239.20
23	4253.70	4254.70	4256.40	4258.10	4259.70	4259.50	4247.50	4228.10	4233.20	4237.30	4242.80	4239.20
24	4253.60	4254.80	4256.50	4258.20	4259.80	4259.40	4246.10	4228.00	4233.10	4237.20	4242.90	4239.20
25	4253.60	4254.80	4256.50	4258.30	4259.80	4259.40	4244.60	4227.80	4233.60	4237.20	4242.00	4239.30
26	4253.50	4254.80	4256.60	4258.30	4259.80	4259.40	4243.00	4227.60	4237.60	4237.10	4243.40	4239.40
27	4253.50	4254.90	4256.60	4258.30	4259.90	4259.30	4241.00	4227.50	4239.90	4237.00	4243.40	4239.40
28	4253.50	4255.00	4256.70	4258.40	4259.90	4259.30	4239.10	4227.40	4242.00	4237.00	4243.30	4239.40
29	4253.40	4255.20	4256.80	4258.40	---	4259.20	4236.50	4227.50	4243.80	4237.20	4243.30	4239.30
30	4253.40	4255.30	4256.80	4258.50	---	4259.20	4233.60	4227.70	4243.80	4237.50	4243.20	4239.30
31	4253.40	---	4256.80	4258.50	---	4259.20	---	4227.80	---	4238.70	4243.20	---
MEAN	4253.67	4254.27	4256.05	4257.73	4259.29	4259.61	4252.54	4228.73	4232.43	4240.77	4240.62	4239.68
MAX	4254.00	4255.30	4256.80	4258.50	4259.90	4259.90	4259.20	4229.70	4243.80	4244.90	4243.40	4241.20
MIN	4253.40	4253.30	4255.30	4256.90	4258.60	4259.20	4233.60	4227.40	4226.10	4237.00	4238.50	4238.30
CAL YR 1981	MEAN	4249.16	MAX	4256.80	MIN	4224.20						
WTR YR 1982	MEAN	4247.89	MAX	4259.90	MIN	4226.10						

## RIO GRANDE BASIN

08384500 PECOS RIVER BELOW SUMNER DAM, NM  
(National stream-quality accounting network station)

LOCATION.--Lat 34°36'15", long 104°23'14", in lot 1, sec.2, T.4 N., R.24 E., DeBaca County, Hydrologic Unit 13060003, on left bank 1,200 ft (366 m) downstream from Sumner Dam, 2.9 mi (4.7 km) upstream from Salado Creek, 4.6 mi (7.4 km) northeast of Guadalupe, 12.2 mi (19.6 km) northwest of Fort Sumner, and at mile 701.7 (1,129.0 km).

## WATER-DISCHARGE RECORDS

DRAINAGE AREA.--4,390 mi<sup>2</sup> (11,370 km<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. Datum of gage is 4,142.67 ft (1,262.686 m) Bureau of Reclamation datum. Prior to Sept. 10, 1936, at site 1.5 mi (2.4 km) upstream at different datum. Sept. 14, 1936, to Mar. 8, 1941, and June 11, to Sept. 21, 1941, at site 0.2 mi (0.3 km) downstream at different datums.

REMARKS.--Water-discharge records good. Flow completely regulated by Santa Rosa Lake (station 08382810) beginning April 1980 and Lake Sumner (station 08484000) 0.3 mi (0.5 km) upstream beginning August 1937. Diversion for irrigation of about 12,500 acres (51 km<sup>2</sup>), 1959 determination, above station.

AVERAGE DISCHARGE.--23 years (1913-25, 1927-36), 236 ft<sup>3</sup>/s (6.684 m<sup>3</sup>/s), 171,000 acre-ft/yr (211 hm<sup>3</sup>/yr), prior to completion of Sumner Dam; 46 years (1937-82), 202 ft<sup>3</sup>/s (5.721 m<sup>3</sup>/s) 146,300 acre-ft/yr (180 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft<sup>3</sup>/s (1,210 m<sup>3</sup>/s) Sept. 1, 1942, by computation of flow over spillway and through outlet gates of Sumner Dam by Bureau of Reclamation; maximum gage height, 13.58 ft (4.139 m) Sept. 22, 1941, no flow at times.

Flood of June 2, 1937, about 75,000 ft<sup>3</sup>/s (2,120 m<sup>3</sup>/s) at site 1.5 mi (2.4 km) upstream, from peak inflow to Lake Sumner.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,210 ft<sup>3</sup>/s (34.3 m<sup>3</sup>/s) Sept. 13; minimum daily, 0.49 ft<sup>3</sup>/s (0.014 m<sup>3</sup>/s) Nov. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	Aug	SEP
1	105	2.7	.65	1.5	1.3	56	95	401	80	1020	87	1120
2	105	1.5	.68	1.5	1.3	85	95	68	80	1030	87	1130
3	105	1.3	.80	1.5	1.5	85	94	82	81	1030	87	1140
4	105	1.1	.87	1.4	1.5	84	93	88	81	1040	87	1150
5	104	1.1	1.1	1.5	1.5	83	90	88	81	1050	87	1140
6	104	1.1	1.1	1.5	1.5	83	88	88	81	1040	87	1140
7	39	1.1	.96	1.5	1.5	84	88	88	82	1050	86	1170
8	1.7	.94	1.1	1.5	1.3	89	88	88	82	1050	87	1170
9	1.5	.84	1.2	1.5	1.1	92	90	89	81	1050	93	1170
10	1.5	.84	1.3	1.3	1.1	92	90	89	83	1050	95	1180
11	1.3	.87	1.2	1.2	1.0	92	88	88	83	1060	95	1200
12	1.0	.84	1.3	1.1	1.0	93	751	88	83	1060	95	1200
13	.84	.86	1.4	1.2	1.1	92	1110	88	86	1060	95	1210
14	71	.70	1.5	1.2	.96	92	1180	88	85	1060	95	1170
15	104	.64	1.5	1.2	.83	92	1170	90	85	1070	94	677
16	104	.67	1.4	1.1	.84	92	1180	89	86	1060	95	103
17	103	.64	1.2	1.1	.84	92	1190	85	86	401	95	103
18	104	.59	1.3	1.1	.84	92	1190	85	86	75	95	103
19	104	.64	1.3	1.0	.97	92	1190	85	86	75	95	103
20	104	.64	1.3	1.1	1.0	92	1180	85	86	75	95	104
21	104	.49	1.3	1.3	1.1	92	1150	85	85	74	95	104
22	104	.51	1.3	1.1	1.0	92	1150	85	85	75	95	95
23	104	.52	1.3	1.1	1.0	92	1150	84	85	75	99	72
24	104	.62	1.3	1.1	1.1	92	1140	85	85	75	100	73
25	104	.55	1.3	3.2	1.2	92	1140	87	85	75	100	73
26	104	.51	1.3	1.1	1.0	92	1150	87	86	83	100	74
27	104	.54	1.4	1.1	1.1	92	1140	87	85	86	100	74
28	104	.72	1.3	1.2	1.3	94	1130	87	95	86	100	74
29	104	.86	1.3	2.2	---	94	1120	87	715	86	98	73
30	104	.85	1.5	1.2	---	94	1090	87	1030	86	99	71
31	104	---	1.5	1.3	---	95	---	83	---	87	764	---
TOTAL	2512.84	25.78	37.96	41.9	31.78	2775	22500	2984	4101	18294	3582	18266
MEAN	81.1	.86	1.22	1.35	1.14	89.5	750	96.3	137	590	116	609
MAX	105	2.7	1.5	3.2	1.5	95	1190	401	1030	1070	764	1210
MIN	.84	.49	.65	1.0	.83	56	88	68	80	74	86	71
AC-FT	4980	51	75	83	63	5500	44630	5920	8130	36290	7100	36230
CAL YR 1981	TOTAL	34615.18	MEAN	94.8	MAX	1150	MIN	.49	AC-FT	68660		
WTR YR 1982	TOTAL	75152.26	MEAN	206	MAX	1210	MIN	.49	AC-FT	149100		

RIO GRANDE BASIN  
08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--Water years 1937-66, 1972 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 20...	1330	.54	--	1910	--	8.0	--	14.0	.70	--
FEB 11...	1600	1.1		2140	7.4	7.9	4.5	2.5	2.4	13.4
MAY 13...	1600	88	2880	2820	8.1	8.2	24.0	15.0	81	--
JUN 14...	1130	85	2140	2050	7.9	7.4	31.5	16.0	120	9.3
AUG 17...	1300	95	1560	1560	8.4		28.5	24.0	46	6.8
SEP 24...	0930	74	1270	1120	--	8.2	22.0	19.0	8.7	--

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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 20...	1134	1048	370	51	60	.8	3.4	--	--	930
FEB 11...	1196	1076	390	54	73	1.0	3.6	--	--	1100
MAY 13...	1687	1577	560	70	100	1.1	3.3	--	--	1500
JUN 14...	1068	988	350	47	66	.9	3.3	100	.0	980
AUG 17...	760	683	250	33	50	.8	3.4	--	--	710
SEP 24...	594	486	200	23	32	.6	2.6	--	--	490

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)
NOV 20...	78	.5	9.1	1670	1550	.12	.080	.020	.010
FEB 11...	97	.5	11	1990	1800	<.10	<.060	<.010	<.010
MAY 13...	140	.6	11	2620	2450	<.10	.300	.080	.020
JUN 14...	89	.5	8.5	1750	1590	.29	.320	.110	.010
AUG 17...	71	.4	9.0	1240	1170	.13	.100	.140	.030
SEP 24...	36	.4	9.3	884	858	.16	.140	.050	.050



RIO GRANDE BASIN  
08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
NOV 20...	1330	2	1	100	100	1	1	10	<10	<1
MAY 13...	1600	2	1	200	100	<1	<1	20	10	2
JUN 14...	1130	2	2	100	200	<1	1	30	<10	3
SEP 24...	0930	2	1	100	120	<1	<1	10	<10	<1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
NOV 20...	<1	6	8	80	70	4	2	60	80	.7
MAY 13...	1	6	2	1700	90	6	1	540	320	.1
JUN 14...	<1	7	2	2700	90	6	2	650	470	.2
SEP 24...	<1	7	2	1100	<3	8	1	100	17	<.1

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 20...	<.1	3	5	1	1	1	<1	20	20
MAY 13...	<.1	9	6	<1	1	<1	<1	50	10
JUN 14...	.1	12	4	<1	<1	<1	<1	40	20
SEP 24...	<.1	1	5	1	1	<1	<1	40	11

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 20...	K0	K1
FEB 11...	57	79
MAY 13...	2	8
JUN 14...	120	120
AUG 17...	K30	K20
SEP 24...	K79	K0

RIO GRANDE BASIN  
08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (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							
01...	0815	104	1560	20.5	11	3.1	--
02...	1340	104	1550	20.0	28	7.9	--
02...	1605	104	1550	20.0	26	7.3	--
04...	0815	106	1560	19.0	21	6.0	--
04...	1215	104	1560	21.0	32	9.0	--
05...	0805	104	1560	19.0	27	7.6	--
14...	0900	102	1740	19.0	223	61	100
14...	1100	103	1850	19.0	128	36	--
14...	1710	103	1880	19.0	36	10	--
15...	0900	103	1850	18.5	30	8.3	--
15...	1630	103	1810	18.0	14	3.9	--
19...	0830	103	1840	17.0	17	4.7	--
26...	0830	103	1910	14.0	14	3.9	--
26...	1730	103	1920	14.0	13	3.6	--
27...	1200	103	2110	14.5	29	8.1	--
27...	1630	103	2130	14.0	19	5.3	--
28...	0800	104	2210	13.5	42	12	--
28...	1100	103	2220	14.0	40	11	--
29...	1320	104	1940	14.0	25	7.0	--
29...	1700	103	2110	14.0	25	7.0	--
30...	0730	103	2170	13.0	24	6.7	--
30...	0945	103	2160	13.5	22	6.1	--
31...	1430	102	2050	14.0	10	2.8	--
31...	1645	103	2030	14.0	12	3.3	--
FEB							
11...	1400	1.1	2260	2.5	32	.10	78
MAR							
01...	0915	77	2410	8.0	101	21	--
01...	1045	84	2480	8.0	124	28	100
01...	1630	82	2570	8.0	77	17	--
02...	0800	84	2690	8.0	36	8.2	--
02...	1800	84	2660	8.0	33	7.5	--
03...	1620	84	2600	8.0	31	7.0	--
09...	0800	92	2450	9.0	22	5.5	--
15...	1530	92	2550	9.5	22	5.5	--
24...	0900	92	2690	9.0	12	3.0	--
29...	1115	94	2720	10.5	11	2.8	--
30...	1600	94	2710	10.5	19	4.8	--
APR							
03...	0620	94	2540	10.0	14	3.6	--
05...	0855	90	2590	11.0	82	20	--
12...	0640	88	2650	13.0	14	3.3	--
12...	0945	1110	2710	13.0	81	243	--
12...	1500	1110	2730	13.0	27	81	--
16...	1745	1200	2760	14.0	9	29	--
19...	1640	1200	2710	14.0	9	29	--
23...	0700	1160	2830	13.0	26	81	--
25...	0630	1130	2870	13.0	27	82	--
26...	1515	1160	2920	13.0	21	66	--
27...	1440	1160	2900	14.0	27	85	--
28...	1230	1100	2920	14.0	19	56	--
30...	1100	1090	2950	14.0	51	150	--
30...	1430	1090	2940	14.0	41	121	--
MAY							
01...	0715	1090	2970	14.0	32	94	--
01...	1000	77	2960	14.0	38	7.9	--
03...	0800	78	2980	14.5	84	18	--
03...	1200	91	2980	15.5	88	22	100
11...	1745	88	2910	17.5	64	15	--
12...	0730	88	3010	17.0	73	17	--
12...	1600	88	3040	17.0	105	25	--
13...	0920	88	3110	17.0	66	16	--
13...	1230	88	3120	17.0	97	23	100
13...	1600	88	2880	15.0	106	25	100
13...	1700	88	3120	17.0	96	23	--
14...	1330	88	3170	17.0	80	19	--
14...	1900	88	3180	16.0	71	17	--
17...	0800	88	3190	18.0	45	11	--
17...	1000	84	3190	18.0	51	12	--
17...	1530	84	3190	18.0	69	16	--
19...	1245	84	3200	18.0	56	13	--
20...	0900	84	3230	18.0	51	12	--
20...	1900	84	3230	18.0	87	20	--
21...	0800	84	3230	18.0	46	10	--
21...	1800	84	3240	18.0	75	17	--
24...	1415	86	3280	19.5	41	9.5	--
24...	1520	86	3280	18.5	40	9.3	--
29...	0800	88	3030	18.0	52	12	--

RIO GRANDE BASIN  
08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN							
10...	0915	82	2190	12.5	49500	11000	100
10...	1130	82	1820	12.5	66300	14700	100
12...	1900	88	2250	14.0	294	70	--
14...	0900	86	2260	15.0	159	37	--
14...	1130	85	2140	16.0	192	44	95
14...	1700	84	2260	14.0	147	33	--
15...	0845	84	2220	14.0	112	25	--
15...	2000	86	2220	15.0	99	23	--
16...	1530	86	2160	16.0	120	28	--
21...	0910	86	2100	19.5	110	26	--
21...	1820	86	2170	20.0	114	26	--
22...	0700	86	2370	19.0	93	22	--
23...	0830	86	2290	19.0	81	19	--
23...	1720	86	2290	20.0	140	33	--
24...	1600	86	2300	20.5	104	24	--
29...	0630	100	2180	18.0	30	8.1	--
29...	0820	95	2190	18.0	230	59	87
29...	1100	1030	1930	18.0	63	175	--
30...	1100	1030	1650	18.0	68	189	--
JUL							
02...	1930	1030	1180	18.0	60	167	--
04...	1200	1050	898	19.0	51	145	--
06...	1330	1050	844	21.0	50	142	--
07...	1430	1050	799	21.0	52	147	--
08...	0800	1050	804	21.0	43	122	--
09...	1900	1050	802	21.0	39	111	--
12...	1430	1070	770	22.0	48	139	--
14...	0930	1070	778	22.0	46	133	--
15...	1700	1070	697	22.0	46	133	--
16...	0710	1070	728	22.0	47	136	--
17...	0745	659	795	22.0	50	89	--
18...	1245	73	1060	23.0	172	34	--
19...	1030	75	961	23.0	128	26	--
19...	1400	76	985	23.0	152	31	--
21...	1500	71	949	23.0	136	26	--
22...	0945	75	1090	23.0	159	32	--
23...	0900	75	1140	23.0	124	25	100
23...	1400	75	1170	23.0	177	36	--
25...	0800	75	1160	23.0	143	29	--
26...	0900	86	1180	23.0	126	29	--
27...	1500	86	1240	24.0	157	36	--
JUL							
28...	1530	86	1250	24.0	92	21	--
29...	1000	118	1570	24.0	136	43	--
30...	1415	86	1300	23.0	62	14	--
30...	1640	86	1600	24.0	134	31	--
31...	0800	88	1460	22.0	81	19	--
AUG							
06...	1700	88	1410	23.0	101	24	--
07...	0830	86	1410	22.0	83	19	--
09...	0900	98	1430	22.0	97	26	--
11...	1115	95	1460	23.0	91	23	--
12...	0800	95	1560	23.0	118	30	--
12...	1600	95	1520	23.0	137	35	--
16...	1900	95	1550	24.0	117	30	--
17...	1155	95	1730	24.0	100	26	100
17...	1500	95	1570	24.0	110	28	--
18...	1845	95	1590	24.0	89	23	--
19...	0800	95	1510	23.0	47	12	--
20...	0900	95	1600	23.0	87	22	--
20...	1645	95	1580	23.0	83	21	99
30...	1200	99	2000	23.0	227	61	--
30...	1900	100	1990	23.5	127	34	--
31...	0630	100	1960	22.5	242	65	--
31...	0830	103	1960	22.5	254	71	94

RIO GRANDE BASIN  
08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (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)
SEP							
02...	1445	1130	2010	23.0	40	122	--
03...	1100	1160	1900	24.0	47	147	--
04...	0900	1160	1600	23.0	45	141	--
05...	1700	1160	1360	23.0	37	116	--
06...	0815	1160	1350	22.0	41	128	--
08...	1500	1200	920	23.0	39	126	--
09...	0730	1160	962	22.0	31	97	--
09...	1220	1200	964	23.0	43	139	--
10...	0730	1200	893	22.0	26	84	--
11...	1000	1200	830	22.5	37	120	--
14...	1030	1160	798	20.0	74	232	--
14...	1715	1200	798	20.0	41	133	--
15...	0700	1160	797	20.0	31	97	--
15...	1000	1160	795	20.0	32	100	--
16...	1030	103	726	19.0	67	19	--
17...	1620	103	775	19.0	116	32	--
18...	0715	103	769	19.0	29	8.1	--
19...	1815	103	1360	23.0	105	29	--
21...	1020	104	1360	18.0	80	22	--
22...	1030	104	1360	18.0	64	18	--
24...	0930	74	1270	19.0	89	18	--
27...	1620	75	1440	18.0	97	20	--
28...	1400	75	1360	18.0	123	25	--
29...	1530	73	1380	18.0	106	21	--
30...	0730	73	1440	18.0	93	18	--

## 08385000 FORT SUMNER MAIN CANAL NEAR FORT SUMNER, NM

LOCATION.--Lat 34°30'30", long 104°16'40", in SE¼SW¼SW¼ sec.1, T.3 N., R.25 E., DeBaca County, Hydrologic Unit 13060003, on right bank of concrete canal, 200 ft (60 m) downstream from diversion dam on Pecos River, 3.0 mi (4.8 km) northwest of Fort Sumner, and at Pecos River mile 684.8 (1,101.8 km).

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. Datum of gage is 4,034.7 ft (1,229.78 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to March 1954 at site 2.4 mi (3.9 km) downstream at different datum. April 1954 to March 1965 at site 1.1 mi (1.8 km) downstream at datum 1.7 ft (0.52 m) lower.

REMARKS.--Records fair. Canal diverts water from Pecos River for irrigation of about 6,600 acres (27 km<sup>2</sup>), 1961 determination, by the Fort Sumner Irrigation District. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years (1940-42, 1955-82), 49.4 ft<sup>3</sup>/s (1.399 m<sup>3</sup>/s), 35,790 acre-ft/yr (44.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 174 ft<sup>3</sup>/s (4.93 m<sup>3</sup>/s) July 22, 1941; no flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	34	.00	.00	.00	.00	70	84	77	90	92	106
2	81	.00	.00	.00	.00	45	90	85	80	125	91	115
3	78	.00	.00	.00	.00	70	100	82	82	125	90	113
4	78	.00	.00	.00	.00	76	99	83	82	119	89	111
5	77	.00	.00	.00	.00	75	92	83	83	116	89	109
6	80	.00	.00	.00	.00	74	78	89	85	112	90	108
7	79	.00	.00	.00	.00	74	76	86	86	112	92	108
8	25	.00	.00	.00	.00	75	76	84	78	114	84	103
9	9.9	.00	.00	.00	.00	78	73	84	76	112	83	98
10	6.8	.00	.00	.00	.00	82	72	86	81	109	92	99
11	5.6	.00	.00	.00	.00	82	74	85	88	90	89	99
12	4.6	.00	.00	.00	.00	82	34	85	73	.16	88	99
13	3.9	.00	.00	.00	.00	82	29	86	74	.04	87	102
14	3.6	.00	.00	.00	.00	82	83	86	85	.00	85	103
15	66	.00	.00	.00	.00	82	82	88	80	.00	84	102
16	81	.00	.00	.00	.00	82	83	89	84	90	90	93
17	81	.00	.00	.00	.00	82	82	88	85	90	99	104
18	81	.00	.00	.00	.00	82	82	84	86	89	113	104
19	82	.00	.00	.00	.00	82	82	84	88	88	105	103
20	82	.00	.00	.00	.00	82	83	80	86	87	102	105
21	82	.00	.00	.00	.00	82	82	80	85	80	104	98
22	82	.00	.00	.00	.00	82	82	81	84	81	105	95
23	82	.00	.00	.00	.00	82	82	83	84	76	101	88
24	80	.00	.00	.00	.00	82	82	88	83	75	104	81
25	78	.00	.00	.00	.00	82	82	93	82	80	106	81
26	78	.00	.00	.00	.00	82	82	92	81	78	103	82
27	78	.00	.00	.00	.00	80	82	93	80	91	103	79
28	76	.00	.00	.00	.00	79	84	92	77	94	102	76
29	76	.00	.00	.00	---	83	86	89	80	96	100	75
30	75	.00	.00	.00	---	85	81	86	76	96	99	77
31	76	---	.00	.00	---	75	---	86	---	94	108	---
TOTAL	1949.4	34.00	.00	.00	.00	2363.00	2365	2664	2451	2569.20	2969	2916
MEAN	62.9	1.13	.000	.000	.000	76.2	78.8	85.9	81.7	82.9	95.8	97.2
MAX	82	34	.00	.00	.00	85	100	93	88	125	113	115
MIN	3.6	.00	.00	.00	.00	.00	29	80	73	.00	83	75
AC-FT	3870	67	.00	.00	.00	4690	4690	5280	4860	5100	5890	5780
CAL YR 1981	TOTAL	16394.05	MEAN	44.9	MAX	108	MIN	.00	AC-FT	32520		
WTR YR 1982	TOTAL	20280.60	MEAN	55.6	MAX	125	MIN	.00	AC-FT	40230		

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 (4.8 km) downstream from U.S. Highway 70, 3.7 mi (6.0 km) downstream from Salt Creek, 4.7 mi (7.6 km) southwest of Acme, 14 mi (22.5 km) northeast of Roswell, and at mile 585.3 (941.7 km).

DRAINAGE AREA.--11,380 mi<sup>2</sup> (29,470 km<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. Altitude of gage is 3,507 ft (1,069 m), from topographic map. Prior to Nov. 1, 1938, at site on highway bridge 3 mi (4.8 km) upstream at various datums. Since Oct. 25, 1963, supplemental water-stage recorder at site opposite base gage at same datum.

REMARKS.--Water-discharge records fair except those below 10 ft<sup>3</sup>/s (0.28 m<sup>3</sup>/s), which are poor. 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 (81 km<sup>2</sup>), 1959 determination, above station.

AVERAGE DISCHARGE.--45 years (1938-81), 182 ft<sup>3</sup>/s (5.154 m<sup>3</sup>/s), 131,900 acre-ft/yr (163 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft<sup>3</sup>/s (1,270 m<sup>3</sup>/s) Sept. 23, 1941, gage height, 13.71 ft (4.179 m), from rating curve extended above 27,000 ft<sup>3</sup>/s (765 m<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 (1,500 m<sup>3</sup>/s), gage height, 14.82 ft (4.517 m), 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.--Maximum discharge, 2,340 ft<sup>3</sup>/s (66.3 m<sup>3</sup>/s) July 12, gage height, 6.43 ft (1.960 m), no peak above base of 2,500 ft<sup>3</sup>/s (71 m<sup>3</sup>/s); no flow June 8-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	18	39	18	7.7	7.0	4.7	9.0	851	9.0	1.0	48	1.3
2	19	40	14	8.2	7.3	4.4	5.1	741	6.0	490	81	.10
3	126	51	13	7.3	9.0	3.7	6.2	406	4.0	578	48	499
4	71	65	10	5.1	6.6	2.7	9.0	233	3.0	605	32	671
5	46	50	10	5.5	7.7	2.2	8.2	153	2.0	772	31	702
6	100	37	9.0	7.3	7.3	2.4	6.2	110	1.0	816	21	788
7	199	34	9.5	5.5	7.0	1.6	8.6	88	1.0	799	18	887
8	127	29	9.0	4.7	7.3	3.2	8.6	71	.00	823	12	876
9	133	27	9.0	5.1	9.5	7.0	8.6	56	.00	1080	3.0	840
10	105	24	9.0	5.8	9.5	5.1	8.6	48	.00	922	1.8	839
11	75	23	9.0	7.7	12	2.9	8.6	39	.00	790	5.3	825
12	51	22	9.0	6.6	13	2.7	8.6	30	7.0	1370	18	835
13	40	21	10	6.2	11	2.7	7.3	28	49	903	6.7	854
14	34	20	10	5.8	10	3.2	389	25	32	1000	1.5	883
15	30	19	10	5.8	7.3	4.4	840	21	14	944	.73	937
16	29	13	9.5	5.5	6.6	4.7	906	21	7.0	872	.45	928
17	26	18	9.0	5.5	5.8	6.2	917	19	3.5	891	.15	614
18	23	17	8.2	5.8	4.4	6.2	974	21	2.4	750	.10	301
19	25	16	8.6	15	4.0	5.5	974	19	24	424	18	302
20	31	16	7.7	30	3.7	3.5	1050	16	12	249	6.2	250
21	40	15	8.2	20	3.5	3.7	1050	16	9.0	184	5.4	168
22	40	14	7.7	16	3.5	3.7	1060	17	7.3	179	26	112
23	55	13	7.0	13	3.2	5.1	1050	21	6.0	119	18	118
24	55	13	6.2	10	3.2	5.5	962	22	5.0	65	28	114
25	55	12	7.0	9.0	3.2	5.8	917	21	4.0	51	67	97
26	69	11	7.0	7.7	3.5	4.0	895	18	3.0	41	56	79
27	71	11	7.7	7.3	3.7	3.7	906	17	2.0	34	29	64
28	56	12	7.7	7.0	4.7	4.4	873	14	1.0	31	22	55
29	55	16	7.0	6.6	---	5.8	862	13	1.0	28	25	56
30	53	20	7.7	6.6	---	7.0	928	11	1.0	26	12	63
31	43	---	8.2	6.2	---	9.0	---	10	---	40	3.7	---
TOTAL	1900	723	282.9	265.5	184.5	136.7	15655.6	3181	216.20	15877.0	645.03	13758.40
MEAN	61.3	24.1	9.13	8.56	6.59	4.41	522	103	7.21	512	20.8	459
MAX	199	65	18	30	13	9.0	1060	851	49	1370	81	937
MIN	18	11	6.2	4.7	3.2	1.6	5.1	10	.00	1.0	.10	.10
AC-FT	3770	1430	561	527	366	271	31050	6310	429	31490	1280	27290
CAL YR 1981	TCTAL	24434.99	MEAN	66.9	MAX	1110	MIN	.00	AC-FT	48470		
WTR YR 1982	TCTAL	52825.83	MEAN	145	MAX	1370	MIN	.00	AC-FT	104800		

RIO GRANDE BASIN  
08386000 PECOS RIVER NEAR ACME, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
OCT 23...	1115	57	2630	--	7.8	--	--	10.0	--	--	--
DEC 07...	1340	9.5	4080	--	7.8	--	--	12.0	--	--	--
21...	1200	8.2	4500	4500	7.9	8.0	17.0	11.0	23	1768	1658
JAN 06...	1330	7.2	4350	--	7.9	--	--	11.5	--	--	--
FEB 18...	1330	4.3	5200	5550	8.4	8.3	17.0	13.0	200	1900	1811
MAR 16...	1100	5.5	5320	--	8.0	--	--	14.5	--	--	--
APR 23...	1420	1010	2550	--	8.1	--	--	10.0	--	--	--
JUL 22...	1130	135	1220	1280	8.1	8.4	38.0	27.0	24	594	524
AUG 03...	1050	44	1670	--	7.7	--	--	24.5	--	--	--
31...	1025	4.6	2910	--	7.5	--	--	26.0	--	--	--
SEP 20...	1200	248	990	1040	--	8.4	19.0	19.0	36	461	372

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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 23...	--	--	--	--	--	--	--	--	--	--
DEC 07...	--	--	--	--	--	--	--	--	--	--
21...	510	120	430	4.6	4.6	--	--	1600	680	.6
JAN 06...	--	--	--	--	--	--	--	--	--	--
FEB 18...	530	140	540	5.6	6.6	--	--	1900	850	.6
MAR 16...	--	--	--	--	--	--	--	--	--	--
APR 23...	--	--	--	--	--	--	--	--	--	--
JUL 22...	190	29	56	1.0	3.5	110	.00	540	68	.4
AUG 03...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
SEP 20...	150	21	43	.9	2.7	--	--	400	50	.3



WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- 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)
OCT 23...	--	--	--	--	--	--	--	--	--	--
DEC 07...	--	--	--	--	--	--	--	--	--	--
21...	9.6	3420	.15	.16	<.070	--	.85	.050	.020	2.8
JAN 06...	--	--	--	--	--	--	--	--	--	--
FEB 18...	5.4	4030	<.10	.43	<.060	--	--	<.010	<.010	2.8
MAR 16...	--	--	--	--	--	--	--	--	--	--
APR 23...	--	--	--	--	--	--	--	--	--	--
JUL 22...	8.7	938	<.10	<.10	.200	1.9	--	.100	<.010	5.4
AUG 03...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
SEP 20...	8.3	730	.20	.21	.140	1.6	1.9	.660	.010	15

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
DEC 21...	1200	1	2	310	<1	<1	10	<10	8	1
FEB 18...	1330	--	--	370	--	--	--	--	--	--
JUL 22...	1130	3	2	100	<1	<1	<10	<10	4	2
SEP 20...	1200	--	--	70	--	--	--	--	--	--

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)
DEC 21...	140	<1	<1	.1	<.1	1	1	30	30
FEB 18...	70	--	--	--	--	--	--	--	--
JUL 22...	22	<1	<1	.2	.2	1	1	20	14
SEP 20...	28	--	--	--	--	--	--	--	--



RIO GRANDE BASIN  
08386000 PECOS RIVER NEAR ACME, NM -- Continued  
WATER-QUALITY RECORDS

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PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
JUL 22...	--	--	--	--	--	--	--	--	--
SEP 20...	<.01	<.01	<.01	<.01	<.01	<.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)
JUL 22...	--	--	--	<.01	<.01	<.01	--	--	--
SEP 20...	<.01	<1	<.01	--	--	--	<.10	<.10	<.01

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	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)
DEC 21...	1200	8.2	11.0	53	1.2	--	--	--	93	--	--
FEB 18...	1330	4.3	13.0	100	1.2	--	--	--	3	--	--
JUL 22...	1130	135	27.0	367	134	--	--	--	69	--	--
SEP 20...	1200	248	19.0	970	650	40	53	77	92	97	100

## RIO GRANDE BASIN

08386900 F. HERRERA DITCH-S. AT HOLLYWOOD, NM

LOCATION.--Lat 33°19'35", long 105°36'50", in NE¼NE¼SW¼ sec.30, T.11 S., R.14 E., Lincoln County, Hydrologic Unit 13060008, on left bank, at upstream end of flume over Grapevine Canyon, 1.0 mi (1.6 km) below point of diversion, 0.7 mi (1.1 km) east of Hollywood and junction of U.S. Highway 70 and State Highway 37, point of diversion at Rio Ruidoso mile 24.5 (39.4 km).

PERIOD OF RECORD.--May 1960 to current year. (Monthly diversion in acre-ft prior to January 1973, published as a supplement to Rio Ruidoso at Hollywood (station 08387000).

GAGE.--Water stage recorder and concrete control. Altitude of gage is 6,430 ft (1,960 m), from Topographic Division. Prior to Mar. 20, 1962, at site 315 ft (96 m) downstream at datum 12.79 ft (3.898 m) lower.

REMARKS.--Records fair. Ditch is for diversion of water from Rio Ruidoso 1.0 mi (1.6 km) upstream for irrigation below station 08387000.

AVERAGE DISCHARGE.--22 years, 0.40 ft<sup>3</sup>/s (0.011 m<sup>3</sup>/s), 290 acre-ft/yr (358,000 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6.6 ft<sup>3</sup>/s (0.19 m<sup>3</sup>/s) June 15, 1961; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2.0 ft<sup>3</sup>/s (0.057 m<sup>3</sup>/s) Aug. 25; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	.19	.00	.00	.00	.00	1.1	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.29	.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	1.0	.88
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.22	.00	1.1
20	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.55
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.8
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	.22	2.0	.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	1.6
31	.00	---	.00	.00	---	.00	---	.00	---	.29	.00	---
TOTAL	.00	.00	.00	.14	.19	.00	.00	.00	.00	2.12	3.08	5.93
MEAN	.000	.000	.000	.005	.007	.000	.000	.000	.000	.068	.099	.20
MAX	.00	.00	.00	.14	.19	.00	.00	.00	.00	1.1	2.0	1.8
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.3	.4	.00	.00	.00	.00	4.2	6.1	12
CAL YR 1981	TCTAL	2.39	MEAN	.007	MAX	.72	MIN	.00	AC-FT	4.7		
WTR YR 1982	TCTAL	11.46	MEAN	.031	MAX	2.0	MIN	.00	AC-FT	23		

## 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 (0.3 km) north of U.S. Highway 70, 1.1 mi (1.8 km) east of the Hollywood Post Office, 1.2 mi (1.9 km) downstream from the Ruidoso sewage disposal plant, 1.8 mi (2.9 km) downstream from Gavilan Canyon, 2.8 mi (4.5 km) downstream from Carrizo Creek, and at mile 23.4 (37.7 km).

DRAINAGE AREA.--120 mi<sup>2</sup> (310 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--March 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,365.42 ft (1,940.180 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1961, at datum 0.30 ft (0.091 m) higher. Oct. 14, 1961, to Mar. 8, 1962, at datum 0.60 ft (0.183 m) higher. Mar 9, 1962, to June 18, 1965, at datum 1.0 ft (0.305 m) higher.

REMARKS.--Records good. Figures of discharge do not include F. Herrera ditch-S. (station 08386900), which diverts from right bank 1.5 mi (2.4 km) upstream and bypasses station for irrigation of 75 acres (30.4 hm<sup>2</sup>), 1959 determination. Village of Ruidoso diverts from right bank 7.0 mi (11.3 km) upstream for municipal use and up to June 7, 1982 returned a portion of this water as effluent from sewage disposal plant 1.2 mi (1.9 km) upstream. Starting June 8, 1982, the sewage effluent is discharged downstream from the gage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years (1954-1981), 14.9 ft<sup>3</sup>/s (0.422 m<sup>3</sup>/s), 10,800 acre-ft/yr (13.3 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,340 ft<sup>3</sup>/s (37.9 m<sup>3</sup>/s) June 17, 1965, gage height, 10.05 ft (3.063 m) present datum, from rating curve extended above 110 ft<sup>3</sup>/s (3.12 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum, 0.30 ft<sup>3</sup>/s (0.008 m<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 discharge above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
July 10	1645	100 2.83	1.95 0.594	Aug. 25	0800	372 10.5	3.66 1.116
July 11	2015	649* 18.4	5.01 1.527	Sept. 18	2145	269 7.62	3.12 0.951
July 18	1345	113 3.20	2.21 0.674	Sept. 20	1700	116 3.28	2.26 0.689
July 25	1300	222 6.29	2.83 0.863	Sept. 30	1700	154 4.36	2.45 0.747
July 31	1030	108 3.06	2.18 0.664				
Aug. 18	1400	485 13.7	4.18 1.274				

Minimum discharge, 1.96 ft<sup>3</sup>/s (0.056 m<sup>3</sup>/s) June 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	8.2	6.6	6.5	7.9	19	18	22	12	4.7	39	13
2	13	8.4	6.7	7.2	7.1	20	19	21	11	3.8	31	12
3	12	8.1	6.8	6.9	7.8	20	19	21	9.8	3.2	25	11
4	9.8	7.6	6.8	6.7	7.4	19	19	23	9.3	2.9	23	10
5	8.9	8.1	6.9	6.8	8.1	17	20	25	9.1	2.9	19	10
6	10	8.2	6.9	6.5	7.3	16	20	23	9.1	2.9	16	13
7	12	7.7	6.6	6.5	7.2	15	20	21	9.4	3.0	15	12
8	9.9	8.1	6.8	6.1	8.3	14	19	20	8.8	3.2	17	10
9	10	7.6	6.8	6.1	7.2	14	18	18	7.7	3.7	13	10
10	9.6	7.9	6.4	6.1	7.5	15	17	18	6.6	8.0	11	24
11	9.7	7.9	6.4	6.5	16	17	17	18	6.2	4.1	11	36
12	9.4	7.9	6.6	9.1	11	20	20	18	5.9	13	11	37
13	9.2	7.6	7.1	6.7	9.2	20	26	17	5.8	5.5	11	34
14	9.3	7.6	7.0	9.3	9.0	19	27	16	5.0	6.6	8.9	30
15	9.6	7.2	7.0	8.4	8.9	18	28	15	4.6	5.3	7.8	28
16	9.1	7.0	7.0	7.8	9.0	16	26	15	4.4	4.5	9.1	25
17	8.8	6.8	6.8	7.7	10	16	25	15	4.6	4.1	9.5	23
18	8.8	6.8	6.0	7.7	12	16	24	15	5.1	6.8	69	33
19	9.0	6.5	7.0	8.6	12	17	23	15	4.6	5.5	49	42
20	8.4	6.0	6.6	17	12	17	22	16	4.9	7.0	36	48
21	9.1	6.6	6.6	8.6	12	17	22	16	4.6	4.9	28	74
22	9.9	6.3	6.2	7.8	15	17	20	18	3.5	4.2	24	83
23	9.5	6.4	5.8	7.0	18	16	19	18	3.6	3.8	20	67
24	8.8	6.1	5.8	7.4	22	17	18	17	3.3	3.6	18	52
25	8.4	6.1	6.1	7.1	21	17	16	17	2.6	12	46	41
26	8.4	6.3	6.6	7.2	19	18	15	16	2.3	7.1	19	34
27	8.4	6.5	6.5	7.7	17	17	15	16	3.0	5.1	17	29
28	8.2	6.2	6.5	8.1	17	16	15	16	3.4	5.8	16	26
29	8.1	10	6.4	8.7	---	17	18	15	3.1	5.7	16	23
30	8.2	8.3	6.6	8.4	---	17	21	14	5.1	5.3	14	50
31	8.1	---	6.4	7.7	---	17	---	13	---	51	15	---
TOTAL	291.5	223.0	204.3	239.9	325.9	531	606	548	178.8	246.1	664.3	940
MEAN	9.40	7.43	6.59	7.74	11.6	17.1	20.2	17.7	5.96	7.94	21.4	31.3
MAX	13	10	7.1	17	22	20	28	25	12	51	69	83
MIN	8.1	6.1	5.8	6.1	7.1	14	15	13	2.3	2.9	7.8	10
AC-FT	578	442	405	476	646	1050	1200	1090	355	488	1320	1860

CAL YR 1981 TCTAL 4392.0 MEAN 12.0 MAX 82 MIN 5.5 AC-FT 8710  
WTR YR 1982 TCTAL 4998.8 MEAN 13.7 MAX 83 MIN 2.3 AC-FT 9920

## 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 (5 m) downstream from county road bridge at Diamond A Ranch, 1.3 mi (2.1 km) south of U.S. Highway 70-380, 13 mi (21 km) upstream from Two Rivers Reservoir, 21 mi (34 km) upstream from mouth of Rocky Arroyo, 18 mi (29 km) west of Roswell, and at mile 44.7 (71.9 km).

DRAINAGE AREA.--947 mi<sup>2</sup> (2,450 km<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. Altitude of gage is 4,190 ft (1,277 m), from topographic map. Prior to Nov. 11, 1965 at site on left bank at same datum. Supplemental water-stage recorder on left bank Nov. 11, 1965, to December 1972, at same datum.

REMARKS.--Records fair. Diversions and ground-water withdrawals above station for irrigation above and below station of about 6,500 acres (26 km<sup>2</sup>), 1959 determination. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years (1939-82) 21.2 ft<sup>3</sup>/s (0.600 m<sup>3</sup>/s), 15,360 acre-ft/yr (18.9 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,800 ft<sup>3</sup>/s (1,550 m<sup>3</sup>/s) June 18, 1965, gage height, 26.40 ft (8.047 m), from rating curve extended above 3,100 ft<sup>3</sup>/s (88 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; maximum gage height, 28.78 ft (8.772 m), 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 (705 m<sup>3</sup>/s) at Riverside about 13 mi (21 km) upstream. Other major floods occurred Oct. 31, 1901, Sept. 29, 30, 1904, and July 25, 1905.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,630 ft<sup>3</sup>/s (46.2 m<sup>3</sup>/s) at 0500 hours Sept. 3, gage height, 17.40 ft (5.304 m), no other peak above base of 1,000 ft<sup>3</sup>/s (28 m<sup>3</sup>/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	25	.55
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	37	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.9	354
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	41
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	83	15
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	23	7.9
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.3	3.9
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.6	2.5
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.4	.07
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.57	.00
11	.00	.00	.00	.69	10	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	3.6	7.7	.00	.00	.00	.00	5.4	.00	.00
13	.00	.00	.00	3.6	.10	.00	.00	.00	.00	9.1	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	.00	1.9
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.36
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.89	.00	.00	.00	.00	.00	.00	.00	.20
18	.00	.00	.00	.97	.00	.00	.00	.00	.00	.00	.00	109
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	92
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	11	80
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.5	99
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	114
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	118
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	105
25	.00	.00	1.7	.00	.00	.00	.00	.00	.00	.00	.00	88
26	.00	.00	1.2	.00	.00	.00	.00	.00	.00	.00	7.1	73
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.2	61
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.7	45
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	39
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	1.4	41
31	.00	---	.00	.00	---	.00	---	.00	---	.00	5.1	---
TOTAL	.00	.00	2.90	9.75	17.80	.00	.00	.00	.00	14.57	250.64	1511.18
MEAN	.000	.000	.094	.31	.64	.000	.000	.000	.000	.47	8.09	50.4
MAX	.00	.00	1.7	3.6	10	.00	.00	.00	.00	9.1	83	354
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	5.8	19	35	.00	.00	.00	.00	29	498	3000
CAL YR 1981	TOTAL	3647.24	MEAN	9.99	MAX	804	MIN	.00	AC-FT	7230		
WTR YR 1982	TOTAL	1807.04	MEAN	4.95	MAX	354	MIN	.00	AC-FT	3580		

## 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 (20.9 km) southwest of Roswell at mile 33.4 (53.7 km); 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 (22.5 km) southwest of Roswell.

DRAINAGE AREA.--1,027 mi<sup>2</sup> (2,660 km<sup>2</sup>); Rio Hondo, 963 mi<sup>2</sup> (2,494 km<sup>2</sup>); Rocky Arroyo, 64 mi<sup>2</sup> (166 km<sup>2</sup>).

PERIOD OF RECORD.--July 1963 to current year (prior to October 1965 monthend contents only). Prior to October 1966 contents at 0800 hours.

GAGE.--Water-stage recorders. Datum of gages is National Geodetic Vertical Datum of 1929.

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 (1,213.10 m) the pools of the two reservoirs combine to form Two Rivers Reservoir with a total capacity of 166,200 acre-ft (205 hm<sup>3</sup>) at elevation 4,032.0 ft (1,228.95 m), crest of ungated spillway. Capacity of Rio Hondo Reservoir, 181 acre-ft (223,000 m<sup>3</sup>) between elevations 3,957.0 ft (1,206.09 m), sill of outlet gate, and 3,980.0 ft (1,213.10 m). Capacity of Rocky Arroyo Reservoir, 13,410 acre-ft (16.5 hm<sup>3</sup>) between elevations 3,945.0 ft (1,202.44 m), sill of outlet gate, and 3,980.0 ft (1,213.10 m). No dead storage in Rio Hondo Reservoir or Rocky Arroyo Reservoir. Primary objective of project is flood control. Outlet conduits in Rocky Dam have fixed openings. Figures given herein represent total contents at 2400 hours.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Rio Hondo Reservoir: maximum contents at 0800 hours, 1,260 acre-ft (1.55 hm<sup>3</sup>) July 29, 1965, elevation, 3,985.7 ft (1,214.84 m); no storage most of time.

Rocky Arroyo Reservoir: maximum contents at 0800 hours, 6,090 acre-ft (7.51 hm<sup>3</sup>) June 18, 1965, elevation 3,970.7 ft (1,210.27 m); no storage most of time.

EXTREMES FOR CURRENT YEAR.--No contents at 2400 hours all year.

NOTE: No contents at 2400 hours either reservoir, each day, all year.



## 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 (152 m) downstream from outlet conduit of Diamond A dam (Two Rivers Reservoir), 13 mi (20.9 km) southwest of Roswell, and at mile 33.3 (53.6 km). Mouth at Pecos River mile 566.0 (910.7 km).

DRAINAGE AREA.--963 mi<sup>2</sup> (2,490 km<sup>2</sup>), contributing area.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,949.68 ft (1,203.862 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records fair. Diversions and ground-water withdrawals for irrigation of about 6,500 acres (26 km<sup>2</sup>), 1959 determination, above 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 temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 8.65 ft<sup>3</sup>/s (0.245 m<sup>3</sup>/s), 6,270 acre-ft/yr (7.73 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 659 ft<sup>3</sup>/s (18.7 m<sup>3</sup>/s) July 29, 1965, gage height, 4.91 ft (1.497 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 196 ft<sup>3</sup>/s (5.55 m<sup>3</sup>/s) Sept. 3, gage height, 3.11 ft (0.948 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	20	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.8	133
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.6	54
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	46	18
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	26	6.0
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.1	.83
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
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	78
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	47
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	79
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	70
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	85
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	83
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	77
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	65
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	59
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.59	44
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	29
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	24
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	22
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	100.09	975.85
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	3.23	32.5
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	46	133
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	199	1940
CAL YR 1981	TCTAL	1755.01	MEAN 4.81	MAX 111	MIN .00	AC-FT 3480						
WTR YR 1982	TCTAL	1075.94	MEAN 2.95	MAX 133	MIN .00	AC-FT 2130						

## 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 (0.5 km) upstream from Sunset Ave. bridge in Roswell, 6.3 mi (10.1 km) downstream from Rocky Arroyo and 11.7 mi (18.8 km) upstream from mouth.

DRAINAGE AREA.--1,070 mi<sup>2</sup> (2,770 km<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. Altitude of gage is 3,615 ft (1,101 m), from topographic map.

REMARKS.--Records poor. Flow regulated by Two Rivers Reservoir (station 08390600). Diversions and ground-water withdrawals for irrigation above station. Several observations of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 194 ft<sup>3</sup>/s (5.49 m<sup>3</sup>/s), Sept. 18, gage height 5.60 ft (1.707 m), from floodmarks, from rating curve extended above 110 ft<sup>3</sup>/s (3.1 m<sup>3</sup>/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.CC	.00	.00	.00	.CC	.CC	.00	.00	.CC	.00
2	.00	.00	.CC	.00	.00	.00	.00	.CC	.00	.00	1.9	.00
3	.00	.00	.CC	.00	.00	.00	.CC	.CC	.00	.00	2.3	74
4	.00	.00	.CC	.00	.00	.CC	.CC	.CC	.00	.CC	.CC	63
5	.00	.00	.CC	.00	.00	.00	.CC	.CC	.00	.00	9.3	11
6	.00	.00	.CC	.00	.00	.00	.CC	.00	.00	.00	3.6	6.6
7	.00	.00	.CC	.00	.00	.00	.CC	.00	.00	.00	.99	1.3
8	.00	.00	.CC	.00	.CC	.CC	.CC	.CC	.00	.CC	.CC	.05
9	.00	.00	.CC	.00	.00	.00	.CC	.00	.00	.00	.CC	.00
10	.00	.00	.CC	.00	.00	.00	.00	.00	.00	.00	.CC	.00
11	.00	.00	.CC	.00	.00	.00	.00	.00	.00	.00	.CC	.00
12	.CC	.00	.CC	.CC	.00	.00	.CC	.CC	.00	.CC	.CC	.00
13	.00	.00	.CC	.00	.00	.00	.00	.00	.00	.00	.CC	.00
14	.00	.00	.CC	.00	.00	.00	.00	.00	.00	.00	.CC	.00
15	.00	.00	.CC	.00	.00	.00	.00	.00	.00	.00	.CC	.00
16	.00	.00	.CC	.00	.00	.CC	.CC	.CC	.00	.00	.CC	.00
17	.00	.00	.CC	.00	.00	.00	.CC	.00	.00	.00	.CC	.00
18	.00	.00	.CC	.00	.00	.00	.CC	.00	.00	.00	.CC	56
19	.00	.00	.CC	.00	.00	.00	.00	.00	.00	.00	.CC	34
20	.00	.00	.CC	.00	.CC	.00	.00	.CC	.00	.CC	.CC	90
21	.00	.00	.CC	.00	.00	.00	.CC	.CC	.00	.00	.CC	55
22	.00	.00	.CC	.00	.00	.00	.CC	.CC	.00	.00	.CC	97
23	.00	.00	.CC	.00	.00	.00	.00	.CC	.00	.00	.CC	87
24	.00	.00	.CC	.00	.00	.00	.00	.CC	.00	.00	.CC	79
25	.00	.00	.CC	.00	.00	.00	.00	.00	.00	.00	.CC	63
26	.00	.00	.CC	.00	.00	.00	.CC	.CC	.00	.00	.CC	59
27	.00	.00	.CC	.00	.00	.00	.CC	.CC	.00	.00	.CC	46
28	.00	.00	.CC	.00	.00	.00	.CC	.CC	.00	.00	.CC	26
29	.00	.00	.CC	.00	---	.00	.CC	.CC	.00	.00	.CC	18
30	.00	.00	.00	.00	---	.00	.CC	.CC	.00	.00	.CC	14
31	.00	---	.CC	.00	---	.00	---	.CC	---	.00	.CC	---
TOTAL	.00	.00	.CC	.CC	.00	.00	.CC	.00	.00	.00	18.13	879.95
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.58	29.3
MAX	.00	.00	.CC	.00	.00	.00	.00	.00	.00	.00	9.3	97
MIN	.00	.00	.CC	.00	.00	.00	.CC	.00	.00	.00	.CC	.00
AC-FT	.00	.00	.CC	.CC	.00	.00	.CC	.00	.00	.00	36	1750

WTR YR 1982 TOTAL 898.08 MEAN 2.46 MAX 97 MIN .00 AC-FT 1780

## 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 (5.5 km) upstream from Rio Felix, 4.9 mi (7.9 km) north of Hagerman, and at mile 544.6 (876.3 km).

DRAINAGE AREA.--13,630 mi<sup>2</sup> (35,300 km<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. Altitude of gage is 3,390 ft (1,033 m), from topographic map.

REMARKS.--Records fair except those above 1,000 ft<sup>3</sup>/s (28 m<sup>3</sup>/s), 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 80,000 acres (320 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined 3,700 ft<sup>3</sup>/s (10.5 m<sup>3</sup>/s) Sept. 11, 1969; no flow at times in 1971, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge determined, 1,670 ft<sup>3</sup>/s (47.3 m<sup>3</sup>/s) July 13; minimum, 0.27 ft<sup>3</sup>/s (0.008 m<sup>3</sup>/s) June 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	38	75	54	42	43	37	19	1040	17	9.9	40	13
2	40	67	56	42	44	36	21	954	14	51	60	7.0
3	43	66	50	42	46	37	19	661	14	508	90	44
4	113	74	45	42	44	35	16	258	13	605	60	604
5	94	88	42	42	44	33	17	191	9.6	667	44	696
6	84	81	41	42	43	33	21	151	5.7	738	37	760
7	237	71	42	39	40	32	18	124	4.6	753	30	800
8	175	64	41	42	46	32	15	110	4.1	767	24	872
9	158	58	42	40	40	31	26	92	5.5	1000	18	887
10	169	54	42	40	42	30	22	82	10	1230	14	895
11	129	52	42	40	42	34	22	72	11	899	12	890
12	100	51	44	40	44	32	21	62	10	943	8.7	901
13	81	48	47	45	46	29	22	53	9.4	1670	6.0	900
14	68	49	48	75	47	30	19	46	11	1070	8.2	922
15	59	48	46	70	46	33	549	43	37	1020	5.5	933
16	54	48	48	50	45	29	780	39	27	1000	3.4	994
17	50	47	45	51	42	27	877	36	19	992	2.0	883
18	46	46	43	52	38	26	916	34	14	876	1.8	333
19	43	44	43	59	35	23	964	32	11	696	2.5	335
20	43	43	44	71	34	23	1000	33	11	185	1.7	196
21	47	42	44	83	35	23	1080	28	20	151	2.5	230
22	56	42	42	76	35	23	1060	24	12	141	4.9	160
23	66	41	42	64	35	23	1070	24	8.1	190	4.8	130
24	71	41	42	58	34	23	1120	28	7.2	100	13	121
25	77	40	42	52	35	23	1050	33	6.8	60	6.4	119
26	77	41	43	49	35	22	1010	31	6.2	40	56	106
27	81	39	43	47	36	20	989	31	5.2	25	64	96
28	87	40	43	45	37	15	1020	29	3.6	18	38	83
29	83	43	42	44	---	17	959	23	2.4	19	22	72
30	76	48	43	43	---	17	960	20	5.5	20	17	67
31	77	---	42	42	---	18	---	21	---	30	22	---
TOTAL	2622	1591	1375	1569	1133	846	15682	4405	334.9	16493.9	719.4	14049.0
MEAN	84.6	53.0	44.4	50.6	40.5	27.3	523	142	11.2	532	23.2	468
MAX	237	88	56	83	47	37	1120	1040	37	1670	90	994
MIN	38	39	41	39	34	15	15	20	2.4	9.9	1.7	7.0
AC-FT	5200	3160	2730	3110	2250	1680	31110	8740	664	32720	1430	27870
CAL YR 1981	TOTAL	33563.7	MEAN	92.0	MAX	1430	MIN	8.7	AC-FT	66570		
WTR YR 1982	TOTAL	60820.2	MEAN	167	MAX	1670	MIN	1.7	AC-FT	120600		

LOCATION.--Lat 33°07'30", long 104°20'40", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.4, T.14 S., R.26 E., Chaves County, Hydrologic Unit 13060009, near left bank on downstream side of abandoned bridge pier, 0.6 mi (1.0 km) upstream from alternate U.S. Highway 285, 1.3 mi (2.1 km) northwest of Hagerman, and 2.7 mi (4.3 km) upstream from mouth. Mouth at Pecos River mile 541.4 (871.1 km).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 183 ft<sup>3</sup>/s (5.18 m<sup>3</sup>/s) Sept. 23, gage height, 5.98 ft (1.823 m), no peak above base of 500 ft<sup>3</sup>/s (14 m<sup>3</sup>/s); no flow most of time.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	.00	.03	.00	.00	.00	.00	.00	.00	.00	37	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	22	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00	.00
4	.92	.00	.00	.00	.00	.00	.00	.00	.00	.12	.00	.00
5	5.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.6
6												33
7	8.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.42
8	12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	6.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	6.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12												
13	7.9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	6.6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	6.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	6.6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	6.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18												
19	6.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	5.4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	6.4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	6.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	5.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24												
25	7.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	3.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	5.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	6.4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	7.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30												
31	7.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
32	6.6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
33	7.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
34	7.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
35	6.9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
36	2.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	187.12	.03	.00	.00	.00	.00	.00	.00	.00	59.12	.00	616.32
MEAN	6.04	.001	.000	.000	.000	.000	.000	.000	.000	1.91	.000	20.5
MAX	15	.03	.00	.00	.00	.00	.00	.00	.00	37	.00	105
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	371	.06	.00	.00	.00	.00	.00	.00	.00	117	.00	1220
CAL YR 1981	TCTAL	988.84	MEAN 2.71	MAX 227	MIN .00	AC-FT 1960						
WTR YR 1982	TCTAL	862.59	MEAN 2.36	MAX 105	MIN .00	AC-FT 1710						

## RIO GRANDE BASIN

08395500 PECOS RIVER NEAR LAKE ARTHUR, NM

LOCATION.--Lat 32°59'18", long 104°19'20", in SW¼NE¼ sec.27, T.15 S., R.26 E., Chaves County, Hydrologic Unit 1306007, on left bank 400 ft (120 m) upstream from county bridge, 2.5 mi (4.0 km) east of Lake Arthur, 7 mi (11.3 km) upstream from Cottonwood Creek, 11 mi (17.7 km) northeast of Artesia, and at mile 522.0 (839.9 km).

DRAINAGE AREA.--14,760 mi<sup>2</sup> (38,230 km<sup>2</sup>), approximately (contributing area).

PERIOD OF RECORD.--August 1938 to current year.

GAGE.--Water-stage recorder and rock control. Datum of gage is 3,327.07 ft (1,014.091 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. 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 (500 km<sup>2</sup>), 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years, 229 ft<sup>3</sup>/s (6.485 m<sup>3</sup>/s), 165,900 acre-ft/yr (205 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft<sup>3</sup>/s (1,410 m<sup>3</sup>/s) Sept. 24, 1941, gage height, 21.90 ft (6.675 m), from rating curve extended above 16,100 ft<sup>3</sup>/s (456 m<sup>3</sup>/s) on basis of slope-area measurement at gage height 21.77 ft (6.635 m); 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 (6.635 m), discharge, 51,500 ft<sup>3</sup>/s (1,460 m<sup>3</sup>/s), on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,480 ft<sup>3</sup>/s (41.9 m<sup>3</sup>/s) July 13, gage height, 5.53 ft (1.686 m); minimum, 1.9 ft<sup>3</sup>/s (0.05 m<sup>3</sup>/s) June 13 and Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	98	58	51	56	45	18	803	20	39	27	8.4
2	56	95	60	51	56	45	23	814	10	24	35	7.3
3	58	90	63	51	57	41	19	757	11	323	43	4.3
4	59	86	65	49	57	37	20	330	9.6	535	80	355
5	99	89	64	48	57	37	20	218	11	661	70	654
6	112	98	63	48	56	36	18	183	11	700	36	718
7	178	100	62	48	51	39	22	136	7.8	707	29	731
8	237	96	61	44	52	41	24	111	6.9	687	27	759
9	181	89	59	48	56	39	24	99	7.4	693	18	790
10	166	81	59	46	59	36	30	87	3.9	974	17	782
11	170	76	58	47	56	34	30	60	12	894	8.2	794
12	143	73	59	47	55	38	34	55	6.2	788	5.9	780
13	118	72	59	47	54	37	30	47	3.8	1180	5.8	783
14	101	69	60	112	56	34	29	47	5.9	967	4.2	793
15	93	68	60	123	58	33	262	42	5.6	907	5.5	795
16	84	67	60	134	55	32	700	42	15	884	6.6	784
17	77	66	59	135	49	34	745	39	7.4	860	5.1	780
18	73	65	56	74	46	33	800	33	11	841	6.2	468
19	71	64	55	67	43	33	838	32	7.1	793	3.6	293
20	70	62	55	73	41	31	817	26	6.9	421	4.4	252
21	67	61	56	80	40	30	841	24	7.9	233	3.5	224
22	74	60	56	98	41	31	862	18	14	174	3.3	200
23	76	59	52	84	43	26	843	19	10	93	4.1	180
24	87	58	51	73	44	23	859	27	8.3	131	3.4	159
25	98	57	52	68	45	23	864	24	6.9	60	6.6	167
26	101	56	52	64	47	24	841	25	7.3	44	3.9	145
27	101	56	52	62	46	25	803	28	6.1	41	38	131
28	107	56	52	59	45	22	793	35	8.6	28	31	101
29	113	56	52	58	---	21	797	31	7.6	18	14	79
30	106	57	51	58	---	19	790	25	11	18	8.2	50
31	100	---	50	56	---	19	---	24	---	19	6.7	---
TOTAL	3235	2180	1771	2103	1421	998	12796	4241	267.2	14737	560.4	12767.0
MEAN	104	72.7	57.1	67.8	50.8	32.2	427	137	8.91	475	18.1	426
MAX	237	100	65	135	59	45	864	814	20	1180	80	795
MIN	56	56	50	44	40	19	18	18	3.8	18	3.3	4.3
AC-FT	6420	4320	3510	4170	2820	1980	25380	8410	530	29230	1110	25320
CAL YR 1981	TOTAL	35048.0	MEAN	96.0	MAX	995	MIN	5.9	AC-FT	69520		
WTR YR 1982	TOTAL	57076.6	MEAN	156	MAX	1180	MIN	3.3	AC-FT	113200		

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 (76 m) upstream from bridge on State Highway 83, 4.3 mi (6.9 km) east of Artesia, 7.0 mi (11.3 km) upstream from Rio Penasco, 17 mi (27.4 km) upstream from McMillan Dam, and at mile 503.9 (810.8 km). Prior to Apr. 3, 1981, at site 250 ft (76 m) downstream.

DRAINAGE AREA.--15,300 mi<sup>2</sup> (39,630 km<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. Datum of gage is 3,291.92 ft (1,003.376 m) National Geodetic Vertical Datum of 1929. 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 (76 m) downstream at same datum.

REMARKS.--Water-discharge records fair. 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 (620 km<sup>2</sup>), 1959 determination, above station.

AVERAGE DISCHARGE.--46 years, 244 ft<sup>3</sup>/s (6.910 m<sup>3</sup>/s), 176,800 acre-ft/yr (218 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge probably occurred May 30, 1937, when a discharge of 51,500 ft<sup>3</sup>/s (1,460 m<sup>3</sup>/s) was measured by slope-area method at a point 15 mi (24.1 km) upstream, gage height, 14.7 ft (4.48 m), 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 (2,320 m<sup>3</sup>/s). The second highest flood occurred July 25, 1905, discharge below Rio Penasco, 50,300 ft<sup>3</sup>/s (1,420 m<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.--Maximum discharge, 2,070 ft<sup>3</sup>/s (58.6 m<sup>3</sup>/s) at 2230 hours Sept. 15, gage height, 10.15 ft (3.094 m) from floodmarks, no other peak above base of 2,000 ft<sup>3</sup>/s (57 m<sup>3</sup>/s); minimum, 1.3 ft<sup>3</sup>/s (0.037 m<sup>3</sup>/s) Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	96	59	53	58	49	23	885	24	70	25	2.1
2	53	95	62	53	57	49	24	845	19	55	30	1.3
3	87	88	62	53	56	48	24	754	16	154	37	4.9
4	57	63	62	53	56	42	25	517	13	483	57	129
5	95	77	62	52	56	40	25	246	11	537	87	564
6	117	92	62	51	56	39	24	177	10	620	56	654
7	109	104	62	51	56	39	23	143	11	760	34	684
8	269	93	62	51	56	40	24	117	8.6	740	32	713
9	182	83	61	51	55	41	24	106	7.3	800	22	744
10	164	71	60	50	56	40	22	98	7.7	930	18	750
11	168	67	60	50	59	38	26	81	6.4	920	15	758
12	153	64	60	50	59	36	27	66	11	880	8.0	755
13	127	64	60	50	59	39	29	58	7.5	1100	6.0	769
14	107	64	60	50	58	41	28	50	5.5	900	6.0	842
15	95	65	60	115	58	39	26	51	5.3	911	5.0	973
16	88	65	60	120	59	35	550	50	5.7	900	6.0	1240
17	78	64	59	120	59	35	662	48	13	878	6.5	966
18	73	60	58	110	55	36	715	38	8.6	849	5.5	710
19	71	55	58	62	51	35	752	35	9.2	798	6.0	324
20	69	58	58	64	49	34	805	32	8.1	549	4.0	454
21	67	58	57	69	49	32	832	26	8.3	190	4.5	307
22	67	59	56	77	49	31	350	22	8.1	146	3.5	256
23	72	56	55	89	48	32	875	19	14	106	3.5	203
24	80	54	55	86	48	29	965	20	11	87	4.0	181
25	86	53	54	76	49	26	888	27	8.6	92	4.0	166
26	97	53	54	74	49	25	362	25	6.9	55	7.0	165
27	101	50	54	69	49	25	818	27	8.0	38	30	148
28	94	52	54	65	49	26	812	32	6.9	39	35	128
29	102	54	53	61	---	24	815	36	7.8	31	20	99
30	103	56	53	60	---	21	770	29	18	25	10	82
31	93	---	53	58	---	20	---	25	---	22	7.0	---
TOTAL	3180	2053	1805	2095	1518	1086	12345	4685	305.5	14665	594.5	13772.3
MEAN	103	68.4	58.2	67.6	54.2	35.0	412	151	10.2	473	19.2	459
MAX	269	104	62	120	59	49	965	885	24	1100	87	1240
MIN	53	50	53	50	48	20	22	19	5.3	22	3.5	1.3
AC-FT	6310	4070	3580	4160	3010	2150	24490	9250	606	29090	1180	27320
CAL YR 1981	TOTAL	33069.8	MEAN	90.6	MAX	788	MIN	3.0	AC-FT	65590		
WTR YR 1982	TOTAL	58104.3	MEAN	159	MAX	1240	MIN	1.3	AC-FT	115200		



RIO GRANDE BASIN  
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 DISCHARGE: January 1949 to current year.

REMARKS.--Continuous water-temperature and specific conductance recorder since July 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 28,800 micromhos June 24, 1977; minimum daily, 111 micromhos Aug. 31, 1982.

WATER TEMPERATURES: Maximum, 36.0°C July 27, 1966, July 25, 1969; minimum, 0.0°C on many days during winter months of most years.

SEDIMENT CONCENTRATIONS: Maximum daily, 21,300 mg/L Aug. 1, 1962; minimum daily, 0 mg/L on several days in December, 1982

SEDIMENT LOADS: Maximum daily, 183,000 tons (166,000 tonnes) Sept. 26, 1955; minimum daily, 0 tons (0 tonnes) on many days during July 1953, July and August 1954, July 1957, July to October 1964, December, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 25,200 micromhos Aug. 29; minimum daily, 111 micromhos Aug. 31.

WATER TEMPERATURES: Maximum, 35.5°C Sept. 1; minimum, 2.0°C Jan. 15.

SEDIMENT CONCENTRATIONS: Maximum daily, 6,350 mg/L Apr. 17; minimum daily, 0 mg/L on several days in December.

SEDIMENT LOADS: Maximum daily, 11,300 tons (10,300 tonnes) Apr. 17; minimum daily, 0 ton (0 tonne) on several days in December.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
DEC 02...	1300	60	10000	10300	8.2	7.7	13.0	8.5	--	<94	2653
APR 01...	1100	22	14500	13400	8.0	7.1	21.0	14.0	8.3	250	3255
16...	1600	--	10400	--	--	--	--	--	--	--	--
26...	1600	866	2870	2870	8.0	7.5	33.0	16.0	8.2	53	1599
AUG 31...	1215	7.3	--	7500	8.2	8.3	28.0	28.0	--	32	1957
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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
DEC 02...	2483	650	250	1300	11	10	--	--	2100	2500	.8
APR 01...	3105	710	360	2200	17	18	180	.00	2600	4000	.9
16...	--	--	--	--	--	--	--	--	--	--	--
26...	1499	520	73	150	1.7	4.2	200	.00	1500	190	.7
AUG 31...	1869	520	160	1100	11	12	--	--	1800	1800	.7
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- 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)	
DEC 02...	9.8	6930	1.1	1.1	.320	.98	2.4	.130	.060	3.9	
APR 01...	8.0	9990	<.10	.15	.300	.21	--	.280	.090	8.8	
16...	--	--	--	--	--	--	--	--	--	--	
26...	9.9	2510	.13	.16	.120	2.6	2.8	--	.030	13	
AUG 31...	10	5460	.20	.12	.130	1.1	1.4	.090	.050	5.3	



RIO GRANDE BASIN  
08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
DEC 02...	1300	2	1	560	1	<1	20	20	5	3
APR 01...	1100	--	--	830	--	--	--	--	--	--
26...	1600	8	2	120	<1	<1	40	10	40	3
AUG 31...	1215	--	--	580	--	--	--	--	--	--

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)
DEC 02...	130	3	2	.1	.2	3	2	30	20	
APR 01...	80	--	--	--	--	--	--	--	--	--
26...	540	19	10	.1	.1	3	1	110	40	
AUG 31...	50	--	--	--	--	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
APR 26...	1600	53	110	<25	80	<24	77	.07	4.7

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
AUG 31...	1215	<.10	<.01	<.10	<.01	<.01	<.01	.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)
AUG 31...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.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)	THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
AUG 31...	<.01	<.01	<.01	<1	<.01	<.10	<.10	<.01

RIO GRANDE BASIN  
08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued  
WATER-QUALITY RECORDS

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI-FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
DEC 02...	130	280
APR 01...	73	390
16...	--	500
26...	340	--
AUG 31...	K35	K110

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		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)	
OCT								
10...	1049	163	18.0	1120	493	--	--	
12...	1007	157	19.5	1950	827	57	75	
APR								
01...	1200	22	15.5	17	1.0	--	--	
16...	1022	648	18.0	6690	11700	46	65	
18...	1720	728	17.0	3860	7590	48	60	
22...	0836	860	12.0	2720	6320	40	53	
24...	1105	980	12.5	2090	5530	--	--	
26...	1600	866	16.0	2520	5890	31	39	
30...	1738	775	18.0	1880	3930	--	--	
MAY								
02...	1543	830	17.0	2090	4680	30	38	
04...	1737	600	20.0	1170	1900	36	56	
08...	1737	117	24.5	245	77	--	--	
JUL								
04...	0930	13	25.5	5370	188	44	58	
13...	1033	7.5	25.0	2220	45	38	51	
18...	1104	8.6	26.0	2520	59	22	32	
AUG								
08...	0915	31	25.0	294	25	--	--	
SEP								
07...	1045	695	24.0	2760	5180	--	--	
08...	1700	735	25.0	2990	5930	29	38	
22...	1831	225	21.0	1730	1050	--	--	
25...	0950	169	21.0	854	390	--	--	
		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. 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)
OCT								
10...	--	--	--	--	99	--	--	
12...	95	--	--	--	99	100	--	
APR								
01...	--	--	--	--	70	--	--	
16...	87	--	--	--	97	100	--	
18...	89	--	--	--	99	100	--	
22...	80	--	--	--	98	100	--	
24...	--	--	--	--	96	--	--	
26...	62	88	98	100	--	--	--	
30...	--	--	--	--	94	--	--	
MAY								
02...	60	88	99	100	--	--	--	
04...	77	--	--	--	96	100	--	
08...	--	--	--	--	98	--	--	
JUL								
04...	85	--	--	--	95	99	100	
13...	80	--	--	--	99	100	--	
18...	50	86	100	--	--	--	--	
AUG								
08...	--	--	--	--	47	--	--	
SEP								
07...	--	--	--	--	95	--	--	
08...	59	91	100	--	--	--	--	
22...	--	--	--	--	100	--	--	
25...	--	--	--	--	100	--	--	

RIO GRANDE BASIN  
08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued  
WATER-QUALITY RECORDS

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8650	6130	9810	9900	10200	11000	13700	2780	10600	11200	8220	7430
2	8580	6400	10100	10000	10300	11100	14200	2830	11200	11100	8510	8100
3	8890	6610	10100	9960	10200	11200	14300	2820	11900	9080	7980	9270
4	5750	6580	9350	10100	10300	11300	14000	3070	12800	3720	6550	9690
5	5780	7030	9270	10000	10200	11300	13800	3190	15600	3010	3940	3080
6	9220	6350	8840	10100	10200	11300	-----	3510	15200	2410	4390	2020
7	9200	6320	9180	10200	10200	11100	-----	3710	15400	1720	4650	1690
8	5300	6190	9170	10100	10100	11200	-----	4090	16900	1600	5780	1550
9	5260	6720	9440	10100	10100	11100	-----	4370	16400	1370	6930	1520
10	5230	7150	9870	10200	9920	11100	-----	4600	15800	1380	7030	1350
11	5210	7550	9850	10400	9870	11500	-----	4790	16700	1310	7950	1270
12	4070	8000	9890	10100	10600	11700	-----	5190	17300	1230	9500	1120
13	4060	8350	9900	10100	10200	11800	-----	5340	18700	1180	9810	1090
14	5360	8390	9940	9820	10100	11500	-----	5930	21100	1400	9880	1030
15	6070	8700	9700	9830	10200	11600	-----	6370	20600	1170	10500	350
16	6690	8880	9750	9850	9940	11500	-----	6870	18700	1120	12400	920
17	7090	8980	9620	11200	9690	12100	-----	7760	20600	1100	12700	970
18	7080	8250	10000	11200	10000	12100	-----	7630	22200	1100	15600	930
19	7720	9080	10000	9240	10100	11800	-----	8140	17600	1110	15900	1260
20	8030	9070	10100	9310	10100	12000	-----	8910	16400	1230	16700	1380
21	8290	9280	10100	10900	10300	12200	-----	10700	17900	1560	16400	1430
22	8320	9220	10100	10500	10300	12100	-----	10700	17200	1570	16000	2000
23	8330	9510	10200	9750	10800	12000	-----	10200	17400	1770	17000	1820
24	8400	9480	10200	8340	10700	12700	-----	10200	17600	1770	16400	1940
25	7680	9700	10100	8310	10800	12800	-----	13000	15000	2080	16700	2230
26	7140	9670	10100	8730	10800	12900	-----	10400	14000	2760	18200	2150
27	6430	9910	10400	9120	11000	12900	-----	10300	14100	3430	19300	2730
28	6440	9900	10400	9150	10900	13100	-----	2820	10100	14800	4170	18700
29	5820	9850	10300	9620	---	12900	-----	2800	9930	18300	4480	25200
30	5800	9670	10400	10000	---	13400	-----	2830	9680	7430	5210	7460
31	6090	---	10100	10200	---	13800	-----	10700	---	7980	7180	---
MEAN	6840	8230	9880	9880	10300	11900	7780	7030	16200	3070	11700	2660
WTR YR 1982		MEAN	8790	MAX	25200	MIN	350					

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1							14800	13000	14000			
2							14800	12700	13400			
3							14400	12200	13300			
4							14400	12500	13400			
5							14300	12200	13200			
6							13100	12100	12500			
7							13400	12100	12700			
8							14000	11800	12700			
9							13500	11700	12400			
10							12700	10800	11700			
11							12100	10400	11200			
12							11400	10000	10800			
13							10700	2600	9710			
14							10100	2100	9400			
15							10700	2500	8920			
16							9000	4370	5870			
17							4310	3790	4020			
18							3820	2850	3560			
19							2940	2700	2810			
20							2780	2690	2730			
21							2720	2580	2660			
22							2640	2560	2590			
23							2580	2550	2560			
24							2710	2540	2610			
25							2790	2570	2680			
26							2700	2580	2620			
27							---	---	---			
28							---	---	---			
29							---	---	---			
30							---	---	---			
31							---	---	---			
MONTH							14800	2100	8230			

RIO GRANDE BASIN  
08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1							---	---	---	7480	6880	7210
2							---	---	---	8530	7230	7930
3							---	---	---	9630	7430	8920
4							---	---	---	---	---	---
5							---	---	---	---	---	---
6							---	---	---	---	---	---
7							---	---	---	---	---	---
8							---	---	---	---	---	---
9							---	---	---	---	---	---
10							---	---	---	---	---	---
11							---	---	---	---	---	---
12							---	---	---	---	---	---
13							---	---	---	---	---	---
14							---	---	---	---	---	---
15							---	---	---	---	---	---
16							---	---	---	---	---	---
17							---	---	---	---	---	---
18							---	---	---	---	---	---
19							---	---	---	---	---	---
20							---	---	---	---	---	---
21							---	---	---	---	---	---
22							---	---	---	---	---	---
23							---	---	---	---	---	---
24							---	---	---	---	---	---
25							---	---	---	---	---	---
26							---	---	---	---	---	---
27							---	---	---	---	---	---
28							---	---	---	---	---	---
29							---	---	---	---	---	---
30							---	---	---	---	---	---
31							7180	6980	7120	---	---	---
MONTH							7180	6980	7120	9630	6880	8020

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	11.5	11.0	10.5	5.5	9.0	17.0	17.0	27.5	29.0	29.0	33.0
2	20.5	15.5	10.5	10.0	6.0	12.0	18.5	17.0	27.0	24.5	25.0	25.0
3	23.0	15.0	11.0	11.0	5.0	15.5	17.0	17.5	24.0	31.0	31.0	29.5
4	23.0	14.0	9.0	8.5	5.5	18.0	19.5	20.0	25.5	25.5	27.0	28.0
5	23.5	12.0	10.0	6.0	4.0	10.0	20.0	18.0	24.0	26.0	30.5	30.5
6	21.5	13.0	8.0	11.0	3.0	9.0	13.0	22.0	25.0	25.0	32.0	25.0
7	22.0	14.0	7.5	7.5	6.0	7.0	---	19.0	28.0	29.0	29.5	24.0
8	20.0	13.5	8.0	5.0	7.0	16.0	---	24.5	29.0	25.0	25.0	25.0
9	19.0	15.0	11.5	5.5	7.5	14.0	---	24.5	22.0	25.5	30.0	24.0
10	18.0	11.5	9.0	7.0	6.0	15.0	---	20.0	28.0	27.0	25.0	24.0
11	19.0	10.5	9.5	3.0	6.0	21.0	---	20.0	31.0	27.5	29.0	23.0
12	19.5	10.0	10.5	5.0	8.0	17.0	---	21.0	24.0	26.0	31.0	23.5
13	18.0	12.5	12.0	3.0	10.0	16.0	---	21.5	22.0	25.0	29.0	23.0
14	24.0	12.0	9.5	3.0	11.0	18.0	---	22.5	29.0	26.5	29.0	23.5
15	20.5	12.0	10.5	2.0	15.5	17.0	---	24.5	30.0	26.0	27.5	22.5
16	25.0	15.0	11.0	3.0	12.0	20.0	---	20.5	25.0	27.5	31.5	22.5
17	24.0	14.5	12.0	5.0	14.0	17.0	---	27.0	26.5	26.0	29.0	21.5
18	23.5	15.0	9.5	4.0	15.5	17.5	---	24.0	27.0	26.0	23.5	21.5
19	16.0	13.0	9.0	5.0	15.0	21.0	---	27.0	26.0	28.0	26.5	21.0
20	20.0	14.0	9.0	7.0	14.5	19.0	---	27.5	23.0	30.0	28.0	23.0
21	17.0	11.0	8.0	9.0	11.5	12.0	---	26.5	28.0	30.5	28.5	20.0
22	18.0	9.5	9.0	9.0	11.0	18.0	---	25.0	30.0	28.0	27.0	21.0
23	16.0	15.0	11.5	7.0	18.0	20.0	---	21.0	29.0	27.0	30.0	22.5
24	14.5	11.0	11.0	7.0	14.0	15.0	---	24.0	27.0	27.0	28.5	24.0
25	16.0	11.0	10.0	7.5	11.0	14.0	---	26.0	27.5	25.0	30.0	21.0
26	17.0	11.5	9.5	7.5	11.5	12.0	---	27.0	28.0	31.5	24.0	25.0
27	17.0	14.0	9.0	12.0	9.0	13.5	18.0	27.5	24.5	31.5	24.0	22.5
28	18.5	12.0	8.0	8.5	9.5	13.0	20.0	28.0	33.5	30.5	32.0	24.5
29	19.0	12.0	9.0	12.0	---	18.0	19.5	27.0	25.0	27.0	28.5	21.0
30	20.0	10.0	10.0	9.0	---	17.0	18.0	23.5	28.0	31.0	32.0	22.0
31	14.0	---	10.0	6.0	---	19.5	---	28.0	---	28.0	31.0	---
MEAN	19.5	12.5	10.0	7.0	9.5	15.5	18.0	23.0	27.0	27.5	28.5	24.0
WTR YR 1982		MEAN	18.5	MAX	33.5	MIN	2.0					

RIO GRANDE BASIN  
08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued  
WATER-QUALITY RECORDS

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TEMPERATURE WATER (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1							17.5	14.5	16.5			
2							20.5	11.5	16.0			
3							17.5	10.0	14.0			
4							22.5	11.5	16.5			
5							22.0	11.0	16.5			
6							18.5	11.5	15.0			
7							18.5	12.5	15.5			
8							21.5	11.5	16.5			
9							20.0	13.5	17.0			
10							22.0	13.5	18.0			
11							23.5	13.0	18.5			
12							24.5	16.0	20.5			
13							26.0	16.5	21.5			
14							22.5	17.0	20.0			
15							24.0	13.5	18.5			
16							20.0	15.5	18.0			
17							17.5	15.5	16.5			
18							17.5	10.0	15.5			
19							16.5	15.0	16.0			
20							16.5	15.5	16.0			
21							15.5	14.0	14.5			
22							14.0	12.5	13.5			
23							12.5	11.5	12.0			
24							12.0	11.5	11.5			
25							14.0	12.0	12.5			
26							14.5	14.0	14.0			
27							---	---	---			
28							---	---	---			
29							---	---	---			
30							---	---	---			
31							---	---	---			
MONTH							26.0	10.0	16.0			
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1							---	---	---	35.5	24.0	29.0
2							---	---	---	32.0	24.5	27.0
3							---	---	---	31.5	22.0	24.5
4							---	---	---	---	---	---
5							---	---	---	---	---	---
6							---	---	---	---	---	---
7							---	---	---	---	---	---
8							---	---	---	---	---	---
9							---	---	---	---	---	---
10							---	---	---	---	---	---
11							---	---	---	---	---	---
12							---	---	---	---	---	---
13							---	---	---	---	---	---
14							---	---	---	---	---	---
15							---	---	---	---	---	---
16							---	---	---	---	---	---
17							---	---	---	---	---	---
18							---	---	---	---	---	---
19							---	---	---	---	---	---
20							---	---	---	---	---	---
21							---	---	---	---	---	---
22							---	---	---	---	---	---
23							---	---	---	---	---	---
24							---	---	---	---	---	---
25							---	---	---	---	---	---
26							---	---	---	---	---	---
27							---	---	---	---	---	---
28							---	---	---	---	---	---
29							---	---	---	---	---	---
30							---	---	---	---	---	---
31							33.5	28.0	31.0	---	---	---
MONTH							33.5	28.0	31.0	35.5	22.0	27.0

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR



LOCATION.--Lat 32°44'36", long 104°24'49", in NE¼SE¼SE¼ sec.18, T.18 S., R.26 E., Eddy County, Hydrologic Unit 13060010, on left bank 1.2 mi (1.9 km) upstream from U.S. Highway 285, 1.9 mi (3.1 km) northwest of old Dayton railway station, 5.6 mi (9.0 km) upstream from mouth, and 7.0 mi (11.3 km) south of Artesia. Mouth at Pecos River mile 496.4 (798.7 km).

PERIOD OF RECORD.--April 1951 to current year. Prior to October 1953, published as "near Dayton."

GAGE.--Water-stage recorder and rock and concrete control. Datum of gage is 3,385.19 ft (1,031.806 m) National Geodetic Vertical Datum of 1929. Prior to May 9, 1968, at site 2.4 mi (3.9 km) downstream, at datum 44.30 ft (13.503 m) lower. May 9, 1968, to June 12, 1975, at present site at datum 1.98 ft (0.604 m) higher.

AVERAGE DISCHARGE.--31 years, 5.12 ft<sup>3</sup>/s (0.145 m<sup>3</sup>/s), 3,710 acre-ft/yr (4.57 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft<sup>3</sup>/s (844 m<sup>3</sup>/s) Aug. 23, 1966, gage height, 16.4 ft (5.00 m), from floodmarks, present site and datum, from rating curve extended above 6,000 ft<sup>3</sup>/s (170 m<sup>3</sup>/s), on basis of slope-area measurements at gage heights 6.82 ft (2.079 m) and 7.90 ft (2.408 m) 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 (2.7 m) from floodmark, previous site and datum, discharge not determined. Peak discharge at discontinued station "near Dunken" (station 08397600), about 60 mi (100 km) upstream, was 70,000 ft<sup>3</sup>/s (2,000 m<sup>3</sup>/s), determined in 1956 from rating curve extended above a slope-area measurement of 36,300 ft<sup>3</sup>/s (1,030 m<sup>3</sup>/s) for peak of Oct. 6 or 7, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 26 ft<sup>3</sup>/s (0.74 m<sup>3</sup>/s) Sept. 15, gage height, 1.52 ft (0.463 m), no peak above base of 750 ft<sup>3</sup>/s (21 m<sup>3</sup>/s); no flow most of time.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	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	.08	.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	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.01	.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	1.2
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
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	.06
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.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	.17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.41
MEAN	.005	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.047
MAX	.08	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.8
CAL YR 1981	TOTAL	357.18	MEAN .98	MAX	216	MIN .00	AC-FT	708				
WTR YR 1982	TOTAL	1.58	MEAN .004	MAX	1.2	MIN .00	AC-FT	3.1				



## 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 (4.8 km) upstream from high-water line of Lake McMillan, 6.0 mi (9.7 km) northeast of Lakewood, 7.0 mi (11.3 km) northeast of gates in McMillan Dam, 12 mi (19.3 km) southeast of Artesia, and at mile 492.1 (791.8 km).

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1954, published as Kaiser Lake-McMillan Channel near Lakewood.

GAGE.--Water-stage recorder. Datum of gage is 3,268.53 ft (996.248 m) National Geodetic Vertical Survey of 1929 (Bureau of Reclamation bench mark). Prior to Mar. 23, 1955, at site 3.0 mi (4.8 km) downstream at datum 7.83 ft (2.387 m) lower. Mar. 23, 1955, to Sept. 30, 1963, at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records 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 (690 km<sup>2</sup>), 1959 determination, above station. Above about 1,500 ft<sup>3</sup>/s (42 m<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 temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 149 ft<sup>3</sup>/s (4.220 m<sup>3</sup>/s), 108,000 acre-ft/yr (133 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,920 ft<sup>3</sup>/s (82.7 m<sup>3</sup>/s) July 12, 1960; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,130 ft<sup>3</sup>/s (32.0 m<sup>3</sup>/s) Sept. 16; minimum daily, 0.71 ft<sup>3</sup>/s (0.02 m<sup>3</sup>/s) June 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	88	59	50	54	48	24	886	20	18	18	1.9
2	52	88	60	50	54	48	23	908	17	22	23	.00
3	70	84	63	50	53	48	22	812	13	29	24	.00
4	55	79	66	50	53	45	23	444	9.7	285	30	9.7
5	80	74	63	50	53	42	22	235	10	455	50	235
6	105	81	60	50	53	41	21	165	8.5	567	41	600
7	105	93	57	50	53	41	21	131	9.5	701	26	660
8	250	89	57	50	53	42	21	108	7.9	660	22	720
9	180	78	55	50	51	43	23	92	6.2	660	21	800
10	160	70	55	50	54	42	23	84	5.8	885	16	700
11	160	64	55	50	56	42	25	70	5.6	824	14	700
12	140	61	55	50	56	41	26	50	4.3	699	11	700
13	120	61	55	50	56	40	27	46	7.7	877	7.2	700
14	100	61	54	50	55	41	27	38	4.6	995	5.0	735
15	90	63	54	107	55	39	25	38	2.5	782	5.0	859
16	80	63	55	110	56	37	502	34	2.7	816	5.0	1130
17	74	63	55	110	56	36	790	36	2.9	775	5.0	661
18	72	62	54	102	52	36	892	32	7.3	785	5.0	549
19	70	57	53	52	49	36	828	28	3.9	727	5.0	325
20	68	58	53	59	48	35	789	28	5.0	604	4.0	579
21	66	60	53	59	42	33	810	23	4.0	100	3.0	574
22	66	60	53	64	48	33	848	23	3.3	100	2.5	293
23	68	59	53	79	47	34	826	19	3.8	66	2.5	186
24	74	58	53	77	47	32	845	18	6.6	48	2.0	153
25	50	57	53	68	48	28	848	22	3.6	40	2.0	129
26	86	56	52	62	48	28	810	23	2.4	34	2.0	132
27	93	55	52	60	48	27	765	22	1.3	29	5.0	119
28	82	56	52	57	48	28	763	24	1.3	30	20	108
29	89	58	51	56	---	27	800	28	.71	26	15	93
30	94	60	51	54	---	25	794	27	3.1	22	5.0	83
31	86	---	51	54	---	23	---	21	---	20	2.0	---
TOTAL	2970	2016	1712	1930	1452	1141	12263	4515	184.21	12681	398.2	12534.60
MEAN	95.8	67.2	55.2	62.3	51.9	36.8	409	146	6.14	409	12.8	418
MAX	250	93	66	110	56	48	892	908	20	995	50	1130
MIN	52	55	51	50	47	23	21	18	.71	18	2.0	.00
AC-FT	5890	4000	3400	3830	2880	2260	24320	8960	365	25150	790	24860
CAL YR 1981	TOTAL	31182.00	MEAN	85.4	MAX	765	MIN	5.0	AC-FT	61860		
WTR YR 1982	TOTAL	53797.01	MEAN	147	MAX	1130	MIN	.00	AC-FT	106700		

## 08400000 FOURMILE DRAW NEAR LAKEWOOD, NM

LOCATION.--Lat 32°40'20", long 104°22'07", in SW¼ sec.10, T.19 S., R.26 E., Eddy County, Hydrologic Unit 13060011, in left side of channel 360 ft (110 m) downstream from ford on Lakewood-Dayton road, 1.9 mi (3.1 km) downstream from U.S. Highway 285, 2.8 mi (4.5 km) north of Lakewood, 3.8 mi (6.1 km) upstream from mouth, and 11.5 mi (18.5 km) south of Artesia. Mouth at Pecos River mile 490.6 (789.4 km).

DRAINAGE AREA.--265 mi<sup>2</sup> (686 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WRD 1968: 1967.

GAGE.--Water-stage recorder. Datum of gage is 3,299.14 ft (1,005.578 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1951, to June 19, 1962, at site 1.8 mi (2.9 km) upstream at datum 30.61 ft (9.330 m) higher. June 19, 1962, to Oct. 12, 1966, at site 410 ft (125 m) upstream at datum 6.08 ft (1.853 m) higher.

REMARKS.--Records good. No surface diversions above station.

AVERAGE DISCHARGE.--31 years, 3.54 ft<sup>3</sup>/s (0.100 m<sup>3</sup>/s), 2,560 acre-ft/yr (3.16 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD:--Maximum discharge, 29,300 ft<sup>3</sup>/s (830 m<sup>3</sup>/s) Aug. 23, 1966, gage height, 19.9 ft (6.07 m), from floodmarks present datum, from rating curve extended above 5,000 ft<sup>3</sup>/s (17.0 m<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.--Maximum discharge, 8.4 ft<sup>3</sup>/s (0.24 m<sup>3</sup>/s) Apr. 30, gage height, 0.90 ft (0.274 m), no peak above base of 200 ft<sup>3</sup>/s (5.7 m<sup>3</sup>/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	.00	.00	.CC	.CO	.00	.00	.00	.C2	.00	1.1	.CC	.00
2	.37	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.00
3	.12	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.00
4	.00	.00	.CC	.CO	.00	.00	.00	.77	.00	.00	.CC	.00
5	.24	.00	.CC	.CO	.00	.00	.00	.20	.00	.00	.CC	.00
6	.21	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.00
7	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.00
8	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.00
9	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.00
10	.00	.00	.CC	.CC	.00	.00	.00	.00	.00	.00	.CC	.00
11	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.45	.CC	.00
12	.00	.00	.CC	.CO	.00	.CC	.CC	.00	.00	.46	.CC	.00
13	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.00
14	.00	.00	.CC	.CO	.00	.00	.00	.CC	.00	.00	.CC	.00
15	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.55
16	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.17
17	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.33	.00
18	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
19	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.86
20	.00	.00	.CC	.CO	.00	.CC	.CC	.00	.00	.00	.CC	.00
21	.00	.00	.CC	.CC	.00	.00	.00	.00	.00	.00	.CC	.00
22	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.00
23	.00	.00	.CC	.CO	.00	.CC	.CC	.00	.00	.00	.CC	.00
24	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.00
25	.00	.00	.CC	.CO	.00	.00	.00	.00	.00	.00	.CC	.00
26	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
27	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
28	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
29	.00	.00	.CC	.CO	---	.00	.00	.00	.00	.00	.CC	.00
30	.00	.00	.CC	.CO	---	.00	1.4	.00	.00	.00	.CC	.00
31	.00	---	.CC	.CO	---	.00	---	.00	---	.00	.CC	---
TOTAL	.94	.00	.CC	.CO	.00	.00	1.40	.99	.00	2.01	.35	1.58
MEAN	.030	.000	.000	.000	.000	.000	.047	.032	.000	.065	.011	.053
MAX	.37	.00	.CC	.CO	.00	.00	1.4	.77	.00	1.1	.33	.86
MIN	.00	.00	.CC	.CC	.00	.00	.00	.00	.00	.00	.CC	.00
AC-FT	1.9	.00	.CC	.CO	.00	.CC	2.8	2.0	.00	4.0	.7	3.1
CAL YR 1981	TOTAL 4.86		MEAN .013	MAX 1.0	MIN .00	AC-FT 9.6						
WTR YR 1982	TOTAL 7.27		MEAN .020	MAX 1.4	MIN .CC	AC-FT 14						

## 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 (5.5 km) southeast of Lakewood, and at mile 484.3 (779.2 km).

DRAINAGE AREA.--16,990 mi<sup>2</sup> (44,000 km<sup>2</sup>), approximately (contributing area).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1939 to September 1965 (monthend gage heights and contents), October 1965 to current year. Monthend gage heights January 1918 to December 1938 in files of Pecos River Commission.

GAGE.--Nonrecording gage. Datum of gage is 3,241.6 ft (988.04 m) Bureau of Reclamation datum.

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 (33.7 hm<sup>3</sup>) between gage heights 0.0 ft (sill of outlet gate) and 24.9 ft (7.59 m), 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 (41.5 hm<sup>3</sup>) at gage height 26.1 ft (7.96 m) 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) furnished by Carlsbad Irrigation District.

EXTREMES FOR PERIOD OF RECORD (SINCE 1938).--Maximum contents observed, 68,500 acre-ft (84.5 hm<sup>3</sup>) Sept. 26, 1941, gage height, 29.95 ft (9.129 m); no storage for periods in 1944-54, 1957, 1964, 1965, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 23,440 acre-ft (28.9 hm<sup>3</sup>) May 8, gage height, 24.10 ft (7.346 m); minimum, 543 acre-ft (670,000 m<sup>3</sup>) Sept. 5, gage height 15.65 ft (4.770 m).

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11460	10320	12660	14450	16380	17310	12660	19080	16020	2230	14280	2930
2	11020	10460	12660	14450	16380	17310	13300	19650	15840	1980	13780	2400
3	11020	10600	12820	14620	16380	17310	11610	20960	15480	1980	13460	1820
4	10880	10740	12820	14620	16560	17310	11020	22290	15130	2060	12980	1160
5	10600	10880	12980	14620	16560	17310	10460	22980	14620	2750	12660	543
6	10320	11020	12980	14620	16560	17310	9760	23210	14110	3910	12360	1160
7	10180	11020	13140	14790	16560	17120	9110	23210	13620	4970	12060	2060
8	10180	11160	13140	14790	16560	17120	8540	23440	12820	6080	11910	2930
9	10320	11310	13300	14790	16740	17120	8080	23210	12210	7000	11760	3810
10	10600	11310	13300	14790	16740	17120	7720	23210	11460	7840	11610	4750
11	10740	11310	13300	14960	16740	17120	7360	23210	10860	8850	11460	5410
12	10880	11460	13460	14960	16740	17120	7000	23210	10600	10040	11160	6540
13	11020	11610	13460	14960	16740	17120	7960	22980	10180	11310	11020	7360
14	11020	11610	13620	14960	16930	17120	5960	22980	10040	12660	10740	8330
15	11020	11610	13620	15130	16930	17120	5410	22750	9900	14280	10460	9240
16	10880	11760	13620	15130	16930	17120	4860	22520	9630	16020	10180	10600
17	10740	11910	13780	15130	16930	17120	5190	22520	9240	17690	9760	12510
18	10600	11910	13780	15300	17120	17120	5740	22520	8850	18880	9370	14110
19	10320	12060	13940	15300	17120	17120	6310	22290	8590	20110	8980	15660
20	10180	12060	13940	15480	17120	16930	6880	22060	8080	20530	8460	16380
21	9900	12210	13940	15660	17120	16930	7360	22060	7720	20530	8330	17880
22	9630	12210	13940	15660	17120	16930	8080	21620	7240	20110	8080	18880
23	9240	12360	14110	15660	17120	16930	8980	21400	6770	20110	7840	19480
24	9240	12360	14110	15840	17120	16930	10040	20740	6200	20110	7480	19900
25	9370	12360	14110	15840	17120	16740	11460	19900	5630	19280	7120	19900
26	9500	12510	14280	16020	17310	16380	12980	19280	5080	18680	6540	20110
27	9630	12510	14280	16020	17310	16020	14620	18880	4540	17500	5850	20320
28	9760	12510	14280	16200	17310	15300	16020	18480	3910	16740	5410	20320
29	9900	12510	14280	16200	---	14620	16930	17500	3310	15660	4970	20110
30	10040	12660	14280	16200	---	13780	18080	16930	2660	14960	4440	19690
31	10180	---	14450	16380	---	13140	---	16380	---	14620	3710	---
MAX	11460	12660	14450	16380	17310	17310	18080	23440	16020	20530	14280	20320
MIN	9240	10320	12660	14450	16380	13140	4860	16380	2660	1980	3710	543
(++)	-1280	+2480	+1790	+1930	+930	-4170	+4940	-1700	-13720	+11960	-10910	+15980
CAL YR 1981	MAX	24380	MIN	4020	(++)	-9690						
WTR YR 1982	MAX	23440	MIN	543	(++)	+8230						

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

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	20.90	20.50	21.30	21.85	22.40	22.65	21.30	23.10	22.30	16.90	21.80	17.30
2	20.75	20.55	21.30	21.85	22.40	22.65	21.50	23.25	22.25	16.75	21.65	17.00
3	20.75	20.60	21.35	21.90	22.40	22.65	20.95	23.55	22.15	16.75	21.55	16.65
4	20.70	20.65	21.35	21.90	22.45	22.65	20.75	23.85	22.05	16.80	21.40	16.20
5	20.60	20.70	21.40	21.90	22.45	22.65	20.55	24.00	21.90	17.20	21.30	15.65
6	20.50	20.75	21.40	21.90	22.45	22.65	20.30	24.05	21.75	17.80	21.20	16.20
7	20.45	20.75	21.45	21.95	22.45	22.60	20.05	24.05	21.60	18.30	21.10	16.80
8	20.45	20.80	21.45	21.95	22.45	22.60	19.85	24.10	21.35	18.80	21.05	17.30
9	20.50	20.85	21.50	21.95	22.50	22.60	19.65	24.05	21.15	19.20	21.00	17.75
10	20.60	20.85	21.50	21.95	22.50	22.60	19.50	24.05	20.90	19.55	20.95	18.20
11	20.65	20.85	21.50	22.00	22.50	22.60	19.35	24.05	20.70	19.95	20.90	18.50
12	20.70	20.90	21.55	22.00	22.50	22.60	19.20	24.05	20.60	20.40	20.80	19.00
13	20.75	20.95	21.55	22.00	22.50	22.60	19.60	24.00	20.45	20.85	20.75	19.35
14	20.75	20.95	21.60	22.00	22.55	22.60	18.75	24.00	20.40	21.30	20.65	19.75
15	20.75	20.95	21.60	22.05	22.55	22.60	18.50	23.95	20.35	21.80	20.55	20.10
16	20.70	21.00	21.60	22.05	22.55	22.60	18.25	23.90	20.25	22.30	20.45	20.60
17	20.65	21.05	21.65	22.05	22.55	22.60	18.40	23.90	20.10	22.75	20.30	21.25
18	20.60	21.05	21.65	22.10	22.60	22.60	18.65	23.90	19.95	23.05	20.15	21.75
19	20.50	21.10	21.70	22.10	22.60	22.60	18.90	23.85	19.85	23.35	20.00	22.20
20	20.45	21.10	21.70	22.15	22.60	22.55	19.15	23.80	19.65	23.45	19.80	22.40
21	20.35	21.15	21.70	22.20	22.60	22.55	19.35	23.80	19.50	23.45	19.75	22.80
22	20.25	21.15	21.70	22.20	22.60	22.55	19.65	23.70	19.30	23.35	19.65	23.05
23	20.10	21.20	21.75	22.20	22.60	22.55	20.00	23.65	19.10	23.35	19.55	23.20
24	20.10	21.20	21.75	22.25	22.60	22.55	20.40	23.50	18.85	23.35	19.40	23.30
25	20.15	21.20	21.75	22.25	22.60	22.50	20.90	23.30	18.60	23.15	19.25	23.30
26	20.20	21.25	21.80	22.30	22.65	22.40	21.40	23.15	18.35	23.00	19.00	23.35
27	20.25	21.25	21.80	22.30	22.65	22.30	21.90	23.05	18.10	22.70	18.70	23.40
28	20.30	21.25	21.80	22.35	22.65	22.10	22.30	22.95	17.80	22.50	18.50	23.40
29	20.35	21.25	21.80	22.35	---	21.90	22.55	22.70	17.50	22.20	18.30	23.35
30	20.40	21.30	21.80	22.35	---	21.65	22.85	22.55	17.15	22.00	18.05	23.25
31	20.45	---	21.85	22.40	---	21.45	---	22.40	---	21.90	17.70	---
MEAN	20.50	20.97	21.60	22.09	22.53	22.48	20.15	23.62	20.13	20.91	20.17	20.21
MAX	20.90	21.30	21.85	22.40	22.65	22.65	22.85	24.10	22.30	23.45	21.80	23.40
MIN	20.10	20.50	21.30	21.85	22.40	21.45	18.25	22.40	17.15	16.75	17.70	15.65
CAL YR 1981 MEAN 21.65 MAX 24.30 MIN 17.85												
WTR YR 1982 MEAN 21.28 MAX 24.10 MIN 15.65												

## RIO GRANDE BASIN

08401000 PECOS RIVER BELOW MCMILLAN DAM, NM

LOCATION.--Lat 32°35'40", long 104°20'59", in NW¼NE¼ sec.11, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on left bank 700 ft (210 m) downstream from gates in McMillan Dam, 3.4 mi (5.5 km) southeast of Lakewood, and at mile 484.1 (778.9 km).

DRAINAGE AREA.--16,990 mi<sup>2</sup> (44,000 km<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. Datum of gage is 3,238.21 ft (987.006 m) National Geodetic Vertical Datum of 1929. 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.--Records good. Flow completely regulated by Lake McMillan (station 08400500) since 1893. Flow also regulated by several other reservoirs. Diversions and ground-water withdrawals for irrigation of about 171,000 acres (690 km<sup>2</sup>), 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years (1907, 1940, 1948-82), 96.1 ft<sup>3</sup>/s (2.722 m<sup>3</sup>/s), 69,620 acre-ft/yr (85.8 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft<sup>3</sup>/s (467 m<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 (1,700 m<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 discharge, 418 ft<sup>3</sup>/s (11.8 m<sup>3</sup>/s) July 26, gage height, 3.87 ft (1.180 m);; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	.56	.00	.00	.00	.00	115	366	62	174	162	250
2	95	.34	.00	.00	.00	.00	190	238	88	17	162	245
3	122	.31	.00	.00	.00	.00	230	17	100	17	161	228
4	122	.31	.00	.00	.00	.00	250	36	138	18	127	222
5	122	.31	.00	.00	.00	.00	257	9.3	203	17	158	200
6	121	.31	.00	.00	.00	.00	256	6.6	164	19	159	134
7	99	.31	.00	.00	.00	.00	252	3.7	234	19	142	137
8	87	.29	.00	.00	.00	.00	250	3.7	246	83	80	137
9	62	.22	.00	.00	.00	.00	185	4.0	245	174	80	161
10	50	.22	.00	.00	.00	.00	148	4.0	218	206	81	176
11	50	.22	.00	.00	.00	.00	169	4.0	143	206	83	177
12	51	.22	.00	.00	.00	.00	243	4.0	102	82	83	179
13	60	.22	.00	.00	.00	.00	239	4.0	72	76	83	180
14	88	.22	.00	.00	.00	.00	238	31	72	36	96	183
15	117	.22	.00	.00	.00	.00	235	5.1	79	17	97	162
16	115	.21	.00	.00	.00	.00	232	5.0	109	37	98	53
17	85	.17	.00	.00	.00	.00	241	4.9	121	126	114	6.5
18	85	.15	.00	.00	.00	.00	272	5.0	161	139	190	6.3
19	85	.10	.00	.00	.00	.00	271	4.7	162	299	185	5.4
20	134	.07	.00	.00	.00	.00	276	4.7	161	392	94	5.4
21	182	.06	.00	.00	.00	.00	274	46	161	342	63	5.4
22	125	.00	.00	.00	.00	.00	225	183	188	69	63	5.0
23	35	.00	.00	.00	.00	.00	201	182	198	114	82	7.1
24	.75	.00	.00	.00	.00	.00	150	221	223	233	195	7.3
25	.63	.00	.00	.00	.00	35	7.9	239	241	246	210	6.8
26	.52	.00	.00	.00	.00	115	5.3	184	242	371	260	6.5
27	.53	.00	.00	.00	.00	210	29	71	240	348	260	6.5
28	.57	.00	.00	.00	.00	220	205	235	238	353	180	103
29	.67	.00	.00	.00	---	250	275	257	254	293	140	206
30	.71	.00	.00	.00	---	260	328	143	302	194	270	167
31	.70	---	.00	.00	---	200	---	95	---	161	370	---
TOTAL	2183.08	5.04	.00	.00	.00	1290.00	6249.2	2666.7	5167	4898	4528	3368.2
MEAN	70.4	.17	.000	.000	.000	41.6	208	86.0	172	158	146	112
MAX	182	.56	.00	.00	.00	260	328	366	302	392	370	250
MIN	.52	.00	.00	.00	.00	.00	5.3	3.7	62	17	63	5.0
AC-FT	4330	10.0	.00	.00	.00	2560	12400	5290	10250	9720	8980	6680
CAL YR 1981	TOTAL	17693.96	MEAN	48.5	MAX	290	MIN	.00	AC-FT	35100		
WTR YR 1982	TOTAL	30355.22	MEAN	83.2	MAX	392	MIN	.00	AC-FT	60210		

## 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 (0.80 km) upstream from mouth of Seven Rivers, 2.6 mi (4.2 km) downstream from Lake McMillan, and 3.6 mi (5.8 km) south of Lakewood, and at mile 481.4 (774.6 km).

DRAINAGE AREA.--17,000 mi<sup>2</sup> (44,030 km<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. Datum of gage is 3,213.52 ft (979.481 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Records good. Flow regulated by Lake McMillan (station 08400500) since 1893, and by several other reservoirs. Diversions and ground-water withdrawals for irrigation of about 171,000 acres (690 km<sup>2</sup>), 1959 determination, above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined, 2,080 ft<sup>3</sup>/s (58.9 m<sup>3</sup>/s) Oct. 26, 1974; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 385 ft<sup>3</sup>/s (10.9 m<sup>3</sup>/s) July 20; no flow many days

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	.00	.00	.00	.00	.00	125	382	61	194	131	241
2	104	.00	.00	.00	.00	.00	240	262	84	7.1	130	239
3	140	.00	.00	.00	.00	.00	255	11	101	6.6	130	232
4	140	.00	.00	.00	.00	.00	253	32	138	6.8	100	230
5	140	.00	.00	.00	.00	.00	252	5.1	214	6.5	127	210
6	140	.00	.00	.00	.00	.00	250	3.8	170	6.5	129	131
7	111	.00	.00	.00	.00	.00	249	.98	246	6.3	118	134
8	95	.00	.00	.00	.00	.00	247	.76	260	56	57	136
9	70	.00	.00	.00	.00	.00	184	.57	257	160	56	166
10	53	.00	.00	.00	.00	.00	144	.39	232	200	58	184
11	54	.00	.00	.00	.00	.00	162	.46	152	205	58	187
12	54	.00	.00	.00	.00	.00	243	.28	102	105	57	190
13	62	.00	.00	.00	.00	.00	242	.49	67	75	61	192
14	95	.00	.00	.00	.00	.00	236	25	67	33	96	193
15	130	.00	.00	.00	.00	.00	233	1.8	71	11	96	175
16	133	.00	.00	.00	.00	.00	233	1.1	109	33	96	67
17	95	.00	.00	.00	.00	.00	244	1.0	118	100	112	3.6
18	95	.00	.00	.00	.00	.00	277	.74	167	120	191	3.5
19	95	.00	.00	.00	.00	.00	279	.68	166	190	181	4.3
20	151	.00	.00	.00	.00	.00	280	.68	166	385	92	8.5
21	214	.00	.00	.00	.00	.00	276	31	166	320	59	8.0
22	144	.00	.00	.00	.00	.00	228	193	193	82	59	2.6
23	47	.00	.00	.00	.00	.00	200	191	206	105	80	3.6
24	.36	.00	.00	.00	.00	.00	156	231	229	220	192	4.1
25	.62	.00	.00	.00	.00	20	4.7	253	250	230	202	3.7
26	.00	.00	.00	.00	.00	174	1.4	210	249	330	266	3.8
27	.00	.00	.00	.00	.00	258	18	55	246	330	265	3.8
28	.00	.00	.00	.00	.00	257	199	306	244	327	180	68
29	.00	.00	.00	.00	---	318	278	286	259	268	126	184
30	.00	.00	.00	.00	---	335	337	153	323	168	272	191
31	.00	---	.00	.00	---	229	---	104	---	128	371	---
TOTAL	2455.38	.00	.00	.00	.00	1591.00	6326.1	2743.83	5312	4414.8	4148	3399.5
MEAN	79.2	.000	.000	.000	.000	51.3	211	88.5	177	142	134	113
MAX	214	.00	.00	.00	.00	335	337	382	323	385	371	241
MIN	.00	.00	.00	.00	.00	.00	1.4	.28	61	6.3	56	2.6
AC-FT	4870	.00	.00	.00	.00	3160	12550	5440	10540	8760	8230	6740
CAL YR 1981	TOTAL	17759.54	MEAN 48.7	MAX 303	MIN .00	AC-FT 35230						
WTR YR 1982	TOTAL	30390.61	MEAN 83.3	MAX 385	MIN .00	AC-FT 60280						



## 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 (0.6 km) south of Seven Rivers, 2.6 mi (4.2 km) upstream from mouth, and 4.0 mi (6.4 km) southwest of Lakewood. Mouth at Pecos River mile 480.9 (773.8 km).

DRAINAGE AREA.--220 mi<sup>2</sup> (570 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,276 ft (999 m), from topographic map. Prior to July 8, 1965, at site 400 ft (120 m) upstream at datum 0.52 ft (0.158 m), higher.

REMARKS.--Records poor. No surface diversions above station, ground-water withdrawals for 240 acres (97.1 hm<sup>2</sup>), above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 4.19 ft<sup>3</sup>/s (0.119 m<sup>3</sup>/s), 3,040 acre-ft/yr (3.75 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft<sup>3</sup>/s (722 m<sup>3</sup>/s) May 30, 1965, gage height, 20.0 ft (6.10 m), from floodmarks, present site and datum, from rating curve extended above 5,700 ft<sup>3</sup>/s (161 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 18.15 ft (5.532 m) and 20.0 ft (6.10 m); no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1941, about 30,000 ft<sup>3</sup>/s (850 m<sup>3</sup>/s), gage height, 22.8 ft (6.95 m), from old debris on left bank, former site and datum, from rating curve extended above 5,700 ft<sup>3</sup>/s (161 m<sup>3</sup>/s) on basis of slope-area measurement at gage height 21.8 ft (6.64 m). Probable date of flood, Oct. 7, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,020 ft<sup>3</sup>/s (57.2 m<sup>3</sup>/s) at 2230 hours, Sept. 20, gage height, 9.53 ft (2.905 m), no other peak above base of 450 ft<sup>3</sup>/s (13 m<sup>3</sup>/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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 1981	TOTAL	90.24	MEAN	.25	MAX	60	MIN	.00	AC-FT	179		
WTR YR 1982	TOTAL	208.00	MEAN	.57	MAX	155	MIN	.00	AC-FT	413		



## 08401500 PECOS RIVER BELOW MAJOR JOHNSON SPRINGS NEAR CARLSBAD, NM

LOCATION.--Lat 32°31'54", long 104°22'40", in SW¼NW¼NW¼ sec. 27, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on left bank, at mouth of Willow Draw 2.4 mi (3.9 km) downstream from South Seven Rivers, 4.2 mi (6.8 km) southeast of Seven Rivers, 6.0 mi (9.7 km) south of Lakewood, 11.5 mi (18.5 km) northwest of Carlsbad, and at mile 478.6 (770.1 km).

DRAINAGE AREA.--17,650 mi<sup>2</sup> (45,710 km<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. Datum of gage is 3,198.44 ft (974.885 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to October 1971 at site 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Water-discharge records good. Flow regulated by Lake McMillan (station 08400500) since 1893, and by several other reservoirs. Diversions and ground-water withdrawal for irrigation of about 173,000 acres (700 km<sup>2</sup>), 1959 determination, above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,160 ft<sup>3</sup>/s (118 m<sup>3</sup>/s) Sept 15, 1949, July 24, 1950, from rating curve extended above 780 ft<sup>3</sup>/s (22 m<sup>3</sup>/s); maximum gage height 5.38 ft (1.640 m) Sept 15, 1949, site and datum then in use; minimum discharge, 7.0 ft<sup>3</sup>/s (0.198 m<sup>3</sup>/s) July 20, 1977, Aug. 12, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 429 ft<sup>3</sup>/s (12.1 m<sup>3</sup>/s) May 1; minimum, 20 ft<sup>3</sup>/s (0.566 m<sup>3</sup>/s) Mar. 20-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	28	24	25	26	26	132	429	91	242	163	269
2	136	28	24	25	26	26	239	336	106	35	166	265
3	177	28	24	25	25	25	257	44	121	32	165	261
4	174	28	24	24	26	25	258	63	148	30	134	256
5	176	28	24	25	26	24	258	39	225	30	159	245
6	175	27	24	25	26	24	258	36	187	29	162	162
7	152	27	24	26	25	24	257	34	255	28	156	161
8	132	26	24	25	25	24	256	33	278	65	90	163
9	108	26	24	25	25	24	205	33	275	157	89	183
10	85	26	24	25	24	24	159	35	251	203	87	203
11	85	25	25	25	24	24	167	34	181	210	87	207
12	86	26	25	25	25	23	242	34	133	112	86	209
13	90	26	24	26	25	23	242	34	93	74	84	212
14	127	26	24	25	25	23	246	54	90	57	120	214
15	159	26	24	25	25	23	243	42	91	28	120	200
16	174	26	24	25	25	22	245	38	123	26	121	110
17	130	25	24	25	25	22	249	37	127	114	127	32
18	129	25	24	25	25	22	283	37	174	126	212	32
19	129	25	24	25	25	21	282	37	178	278	212	32
20	173	25	25	25	26	21	287	38	180	408	121	30
21	254	25	25	25	26	20	288	44	180	389	82	163
22	186	25	25	25	26	20	251	210	200	99	82	32
23	99	25	25	24	25	20	219	219	214	102	91	32
24	32	25	25	26	25	20	198	251	235	227	209	33
25	31	25	25	26	25	42	38	276	258	234	217	33
26	30	25	25	26	25	153	30	253	258	367	280	34
27	30	25	25	26	26	238	30	68	256	372	284	35
28	30	24	25	26	26	243	199	325	256	372	213	84
29	29	24	25	26	---	295	298	313	263	318	137	203
30	29	24	24	26	---	328	364	183	337	219	275	238
31	28	---	24	25	---	252	---	140	---	165	412	---
TOTAL	3504	775	756	782	708	2101	6680	3749	5764	5148	4943	4333
MEAN	113	25.8	24.4	25.2	25.3	67.8	223	121	192	166	159	144
MAX	254	28	25	26	26	328	364	429	337	408	412	269
MIN	28	24	24	24	24	20	30	33	90	26	82	30
AC-FT	6950	1540	1500	1550	1400	4170	13250	7440	11430	10210	9800	8590

CAL YR 1981 TCTAL 28620.2 MEAN 78.4 MAX 331 MIN 8.0 AC-FT 56770  
WTR YR 1982 TCTAL 39243.0 MEAN 108 MAX 429 MIN 20 AC-FT 77840

RIO GRANDE BASIN  
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 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
DEC 08...	1400	23	--	5550	--	8.0	--	14.5	1850	1710
MAR 02...	1120	26	6220	5000	7.3	7.9	17.0	14.5	2141	1991
APR 06...	1315	255	9960	--	8.1	--	--	16.0	--	--
MAY 05...	1100	37	--	4350	--	7.7	--	19.0	1843	1723
JUN 02...	1330	121	4120	--	7.5	--	--	24.5	--	--

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 CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)
DEC 08...	510	140	510	5.3	8.3	1600	900	1.0	15	3770
MAR 02...	610	150	480	4.7	6.0	1600	880	1.0	16	3830
APR 06...	--	--	--	--	--	--	--	--	--	--
MAY 05...	540	120	440	4.6	6.1	1700	700	.9	13	3590
JUN 02...	--	--	--	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC 08...	1400	280	140
MAR 02...	1120	280	80
MAY 05...	1100	250	50

## 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 (3.4 km) upstream from mouth and 10 mi (16.1 km) northwest of Carlsbad. Mouth at Pecos River mile 475.2 (764.6 km).

DRAINAGE AREA.--285 mi (738 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,250 ft (991 m), from topographic map.

REMARKS.--Records good. Diversions for irrigation of 220 acres (89.0 hm<sup>2</sup>), above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 8.12 ft<sup>3</sup>/s (0.230 m<sup>3</sup>/s), 5,880 acre-ft/yr (7.25 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft<sup>3</sup>/s (895 m<sup>3</sup>/s) Aug. 23, 1966, gage height, 15.35 ft, (4.679 m), from rating curve extended above 8,500 ft<sup>3</sup>/s (156 m<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 (1,800 m<sup>3</sup>/s), gage height, 19.2 ft (5.85 m), from highwater marks on downstream end of bridge pier, by slope-area measurement at site 5 mi (8.0 km) upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,270 ft<sup>3</sup>/s (36.0 m<sup>3</sup>/s) at 2400 hours June 30, gage height 7.25 ft (2.210 m), no other peak above base of 1,000 ft<sup>3</sup>/s (28 m<sup>3</sup>/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.CC	.CO	.00	.CC	.CC	.CO	.00	208	.CC	.00
2	.00	.00	.CC	.CO	.00	.CC	.CC	.CO	.00	4.0	.CC	.CO
3	.00	.00	.CC	.CO	.00	.CC	.CC	.CO	.00	.00	.CC	.00
4	.00	.00	.CO	.CO	.00	.00	.CC	.00	.00	.00	.CC	.CO
5	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.CO
6	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.CO
7	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.CO
8	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.CO
9	.CC	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.CO
10	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
11	.00	.00	.CC	.CO	.00	.00	.CC	.00	.CO	.00	.CC	.00
12	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.CO	.00	.CC	.CO
13	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.CC
14	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.CC
15	.00	.00	.CO	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
16	.00	.00	.CC	.CO	.00	.00	.CC	.00	.CO	.00	.CC	.00
17	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
18	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.CO	.00	.CC	.CO
19	.CO	.00	.00	.CO	.00	.CC	.CC	.CO	.00	.00	.CC	.00
20	.00	.00	.CC	.CO	.00	.CC	.CC	.CO	.CO	.00	.CC	.CO
21	.CO	.00	.CC	.CO	.00	.CC	.CC	.CO	.00	.00	.CC	22
22	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.CC
23	.00	.00	.CO	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
24	.00	.00	.CC	.CC	.00	.CC	.CC	.CO	.CO	.00	.CC	.CO
25	.00	.00	.CC	.CC	.00	.00	.CC	.00	.CO	.00	.CC	.00
26	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
27	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
28	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.CO	.00	.CC	.00
29	.00	.00	.CC	.CO	---	.00	.CC	.CO	.00	.00	.CC	.00
30	.00	.00	.CC	.CO	---	.00	.CC	.CO	4.1	.00	.CC	.00
31	.00	---	.CO	.CO	---	.00	---	.00	---	.00	.CC	---
TOTAL	.00	.00	.CC	.CC	.00	.00	.CC	.CO	4.10	212.00	.CC	22.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.14	6.84	.000	.73
MAX	.00	.00	.CC	.CO	.00	.00	.CC	.CO	4.1	208	.CC	22
MIN	.00	.00	.CO	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
AC-FT	.00	.00	.CC	.CC	.00	.CC	.CC	.CO	8.1	421	.CC	44

CAL YR 1981 TOTAL 383.30 MEAN 1.05 MAX 366 MIN .00 AC-FT 760  
WTR YR 1982 TOTAL 238.10 MEAN .65 MAX 208 MIN .00 AC-FT 472

## 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 (1.6 km) upstream from flow line of Lake Avalon, 1.3 mi (2.1 km) downstream from Rocky Arroyo, 8.0 mi (12.9 km) northwest of Carlsbad, and at mile 473.8 (762.3 km).

DRAINAGE AREA.--17,980 mi<sup>2</sup> (46,570 km<sup>2</sup>), approximately (contributing area).

PERIOD OF RECORD.--August 1939 to December 1940, August 1944 to current year.

REVISED RECORDS.--WSP 1512: 1946-47(M), 1948(p), 1949, 1950(P). WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,171.31 ft (966.615 m) Bureau of Reclamation datum. Prior to Aug. 10, 1944, at site 1,000 ft (305 m) downstream, at datum 1.00 ft (0.305 m) higher. Aug. 10, 1944, to Dec. 31, 1966, at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. 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 (700 km<sup>2</sup>), 1959 determination, above station. Discharge represents inflow to Lake Avalon. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years (1940, 1945-82), 155 ft<sup>3</sup>/s (4.390 m<sup>3</sup>/s), 112,300 acre-ft/yr (138 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,000 ft<sup>3</sup>/s (1,950 m<sup>3</sup>/s) Aug. 23, 1966, gage height, 21.32 ft (6.194 m), present datum, from floodmark, from rating curve extended above 25,000 ft<sup>3</sup>/s (708 m<sup>3</sup>/s) on basis of slope-area measurement at gage height 19.53 ft (5.953 m); minimum, 4.3 ft<sup>3</sup>/s (0.12 m<sup>3</sup>/s) Aug. 5, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 40,000 ft<sup>3</sup>/s (1,100 m<sup>3</sup>/s) occurred in August 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 (1,700 m<sup>3</sup>/s). Floods of 1893 and 1904 originated above McMillan Dam and contributed to the two failures of Avalon Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft<sup>3</sup>/s (37.9 m<sup>3</sup>/s) July 1, gage height, 4.47 ft (1.362 m); minimum, 14 ft<sup>3</sup>/s (0.40 m<sup>3</sup>/s) Dec. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	27	28	25	26	28	140	437	96	487	177	263
2	120	27	27	21	26	26	245	398	106	46	170	251
3	170	27	28	25	26	25	255	58	128	33	169	250
4	166	26	28	25	26	26	257	57	138	32	147	250
5	167	26	28	25	27	26	258	53	224	31	151	246
6	168	26	27	24	26	27	258	39	207	30	161	157
7	149	26	27	25	26	26	262	39	235	30	163	149
8	121	26	27	25	24	26	262	39	278	47	104	149
9	107	26	27	25	25	26	220	40	278	135	52	163
10	77	27	27	25	26	25	159	38	260	193	91	184
11	83	27	26	25	26	23	158	38	198	208	89	189
12	76	27	26	25	27	22	252	37	128	146	86	191
13	77	27	26	27	27	22	254	37	93	58	86	195
14	117	27	26	25	26	21	252	55	86	64	113	198
15	143	27	26	25	27	20	251	51	84	33	117	192
16	171	27	25	25	26	20	254	43	115	31	114	133
17	123	27	26	25	27	21	256	42	121	92	115	36
18	119	27	26	24	27	20	298	42	168	142	208	33
19	119	27	26	24	27	18	304	41	177	246	216	37
20	146	27	26	24	27	20	305	40	177	409	130	33
21	252	27	24	24	27	20	308	42	177	413	85	150
22	191	27	27	24	27	20	279	224	191	126	79	36
23	106	28	27	24	27	20	231	238	213	98	76	33
24	32	28	27	25	28	19	222	271	222	216	195	33
25	30	27	26	25	28	20	58	303	253	237	208	33
26	29	28	27	25	28	141	32	290	250	368	234	34
27	29	28	23	24	28	242	31	69	250	398	277	33
28	28	29	26	25	28	247	168	343	250	380	231	59
29	28	30	26	26	---	295	318	347	249	346	119	179
30	28	26	26	26	---	355	364	190	330	244	238	249
31	28	---	27	26	---	265	---	154	---	177	408	---
TOTAL	3319	812	819	768	746	2112	6911	4055	5682	5496	4849	4138
MEAN	107	27.1	26.4	24.8	26.6	68.1	230	132	189	177	156	138
MAX	252	30	28	27	28	355	364	437	330	487	408	263
MIN	28	26	23	21	24	18	31	37	84	30	76	33
AC-FT	6580	1610	1620	1520	1480	4190	13710	8120	11270	10900	9620	8210
CAL YR 1981	TOTAL	29192	MEAN	80.0	MAX	732	MIN	21	AC-FT	57900		
WTR YR 1982	TOTAL	39747	MEAN	109	MAX	487	MIN	18	AC-FT	78840		

## 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 (67 m) downstream from headgates in Avalon Dam, and 3.3 mi (5.3 km), north of Carlsbad. Pecos River mile 467.2 (751.7 km).

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. Datum of gage is 3,156.50 ft (962.101 m) Bureau of Reclamation datum. Prior to March 1951 at site 20 ft (6.1 m) upstream at datum 0.9 ft (0.274 m) higher.

REMARKS.--Records good. Carlsbad main canal diverts water from Lake Avalon (station 08403800) for irrigation of about 25,000 acres (100 km<sup>2</sup>) in the Carlsbad Irrigation District. About 1,600 acres (6.5 km<sup>2</sup>) are irrigated on the left bank, most of it upstream from gaging station 08405200. The remaining acreage (most of which is downstream from station 08405200) is on the right bank. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--43 years, 103 ft<sup>3</sup>/s (2.917 m<sup>3</sup>/s), 74,620 acre-ft/yr (92.0 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 526 ft<sup>3</sup>/s (14.9 m<sup>3</sup>/s) Sept. 15, 16, 1946; no flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	.00	.00	.00	.00	.00	238	33	135	184	159	261
2	134	.00	.00	.00	.00	.00	226	37	141	122	129	264
3	150	.00	.00	.00	.00	.00	192	47	179	84	126	269
4	129	.00	.00	.00	.00	.00	173	46	203	29	126	204
5	175	.00	.00	.00	.00	.00	248	41	213	51	181	150
6	185	.00	.00	.00	.00	.00	264	34	187	113	170	169
7	152	.00	.00	.00	.00	.00	256	31	201	135	117	173
8	109	.00	.00	.00	.00	.00	226	11	163	149	44	198
9	87	.00	.00	.00	.00	.00	178	.00	151	150	61	143
10	91	.00	.00	.00	.00	.00	157	.00	146	137	83	174
11	73	.00	.00	.00	.00	.00	153	.00	122	113	76	165
12	60	.00	.00	.00	.00	.00	236	18	97	91	78	140
13	99	.00	.00	.00	.00	.00	266	75	92	64	112	160
14	110	.00	.00	.00	.00	.00	282	75	113	44	114	119
15	131	.00	.00	.00	.00	.00	245	81	182	51	105	147
16	135	.00	.00	.00	.00	.00	286	66	244	105	130	85
17	110	.00	.00	.00	.00	.00	293	118	216	136	185	85
18	106	.00	.00	.00	.00	.00	243	128	207	122	187	64
19	181	.00	.00	.00	.00	.00	207	170	154	189	154	51
20	276	.00	.00	.00	.00	.00	235	225	139	247	58	78
21	246	.00	.00	.00	.00	.00	249	218	188	264	80	65
22	202	.00	.00	.00	.00	51	156	242	205	274	88	52
23	129	.00	.00	.00	.00	189	119	237	230	277	168	75
24	.20	.00	.00	.00	.00	244	97	263	257	276	245	47
25	.20	.00	.00	.00	.00	294	72	288	230	260	254	47
26	.00	.00	.00	.00	.00	294	103	297	203	334	242	47
27	.00	.00	.00	.00	.00	297	137	259	154	326	235	107
28	.00	.00	.00	.00	.00	261	168	175	175	332	190	177
29	.00	.00	.00	.00	---	268	143	114	252	305	162	199
30	.00	.00	.00	.00	---	249	81	92	295	258	252	177
31	.00	---	.00	.00	---	237	---	122	---	203	287	---
TOTAL	3203.40	.00	.00	.00	.00	2384.00	5931	3543.00	5474	5425	4638	4092
MEAN	103	.000	.000	.000	.000	76.9	198	114	182	175	150	136
MAX	276	.00	.00	.00	.00	297	293	297	295	334	287	269
MIN	.00	.00	.00	.00	.00	.00	72	.00	92	29	44	47
AC-FT	6350	.00	.00	.00	.00	4730	11760	7030	10860	10760	9200	8120
CAL YR 1981	TOTAL	23830.21	MEAN 65.3	MAX 284	MIN .00	AC-FT 47270						
WTR YR 1982	TOTAL	34690.40	MEAN 95.0	MAX 334	MIN .00	AC-FT 68810						

## 08403800 LAKE AVALON NEAR CARLSBAD, NM

LOCATION.--Lat 32°29'27", long 104°15'05", in NW¼SW¼ sec.12, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on headwall at outlet gate of dam on Pecos River, 3.3 mi (5.3 km) north of Carlsbad, and at mile 467.2 (751.7 km).

DRAINAGE AREA.--18,070 mi<sup>2</sup> (46,800 km<sup>2</sup>), approximately (contributing area).

PERIOD OF RECORD.--January 1939 to September 1965 (monthend gage heights and contents). October 1965 to current year. Monthend gage heights January 1919 to December 1938 in files of Pecos River Commission.

REVISED RECORDS.--WSP 898: 1939.

GAGE.--Nonrecording gage. Datum of gage is 3,157.0 ft (962.25 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Lake is formed by Avalon Dam, an earthfill structure. The original Eddy (Avalon) Dam was completed and storage began in 1891. The dam was destroyed by 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 resurvey, new capacity table put into use January 1, 1982), 4,330 acre-ft (5.3 hm<sup>3</sup>) between gage heights 0.0 (sill of outlet gates) and 20.4 ft (6.22 m), 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 furnished by Carlsbad Irrigation District. Capacity table based on 1979 resurvey furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD (SINCE 1938).--Maximum contents, 11,000 acre-ft (13.6 hm<sup>3</sup>) May 22, 1941, gage height, 25.0 ft (7.62 m); no storage at times when natural flow was passing through reservoir.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,160 acre-ft (3.90 hm<sup>3</sup>) May 5, gage height, 19.05 ft (5.806 m); minimum, 457 acre-ft (563,000 m<sup>3</sup>) May 28, gage height, 14.90 ft (4.542 m); minimum gage height, 14.65 ft (4.465 m) Oct. 21.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	1010	1880	1710	2220	2440	811	2330	1180	1610	811	1000
2	1070	1130	1880	1710	2220	2440	573	2750	1090	1820	837	975
3	1070	1160	1910	1750	2220	2480	662	3120	1030	1610	891	919
4	1100	1190	1910	1750	2250	2480	735	3120	864	1470	1030	864
5	1100	1250	1940	1750	2250	2480	919	3160	811	1470	975	975
6	1100	1320	1940	1780	2250	2440	891	3120	864	1340	919	1090
7	1130	1350	1980	1780	2250	2440	891	3030	837	1120	975	1000
8	1100	1380	1980	1820	2250	2440	919	2950	975	891	1030	919
9	1130	1380	1960	1820	2250	2440	975	2950	1180	760	1120	864
10	1130	1380	2020	1820	2290	2480	975	2950	1370	785	1150	919
11	1100	1410	2020	1850	2290	2480	975	2990	1470	975	1120	919
12	1100	1440	2020	1850	2290	2480	975	2990	1610	1150	1120	975
13	1100	1480	2050	1890	2290	2480	975	2910	1680	1150	1090	1060
14	1070	1510	2050	1920	2330	2480	919	2790	1610	1150	1030	1150
15	1070	1540	2050	1920	2330	2400	837	2710	1540	1150	1030	1280
16	1070	1580	2080	1960	2330	2440	760	2600	1280	1030	1000	1340
17	1130	1580	2080	2000	2360	2440	616	2400	1030	864	975	1340
18	1190	1610	2080	2030	2360	2440	616	2180	864	864	864	1210
19	1130	1610	2120	2030	2360	2440	710	1960	837	811	975	1150
20	962	1640	2120	2030	2360	2440	837	1680	919	1000	1090	1090
21	712	1670	2120	2070	2400	2400	891	1310	975	1280	1030	1470
22	791	1670	2120	2070	2400	2400	1030	919	919	1440	1000	1470
23	738	1700	2160	2100	2400	2220	1210	919	919	1030	975	1410
24	738	1740	2160	2100	2400	1820	1370	864	811	760	811	1280
25	764	1740	2190	2140	2400	1280	1610	864	811	662	760	1210
26	818	1770	2190	2140	2440	811	1470	811	864	662	710	1150
27	900	1800	2260	2140	2440	616	1280	710	975	760	811	1090
28	900	1800	2260	2180	2440	573	1030	457	1150	811	919	864
29	955	1840	2260	2180	---	532	1120	760	1280	864	919	710
30	1010	1880	2260	2180	---	662	1470	1150	1180	864	837	710
31	1070	---	2300	2220	---	864	---	1280	---	811	891	---
MAX	1190	1880	2300	2220	2440	2480	1610	3160	1680	1820	1150	1470
MIN	712	1010	1880	1710	2220	532	573	457	811	662	710	710
(++)	-120	+810	+420	+510	+220	-1576	+606	-190	-100	-369	+80	-181

CAL YR 1981 MAX 4340 MIN 712 (++) -1720  
WTR YR 1982 MAX 3160 MIN 457 (++) \* C

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

\* COMPUTED ON BASIS OF REVISED CAPACITY TABLE PUT INTO USE JANUARY 1, 1982.



GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 0800

CAL YR 1981	MEAN 16.81	MAX 19.73	MIN 14.65
WTR YR 1982	MEAN 16.58	MAX 19.05	MIN 14.65



## 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 (1,460 m) below Avalon Dam, 4.5 mi (7.2 km) northwest of Carlsbad, and at mile 466.3 (750.3 km).

DRAINAGE AREA.--18,080 mi<sup>2</sup> (46,830 km<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. Altitude of gage is 3,130 ft (954 m), from topographic map. January 1906 to March 1907 nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Records good. Flow completely regulated by Lake Avalon (station 08403800) since 1891. Flow also regulated by several other reservoirs. Diversions and ground-water withdrawals above station for irrigation of about 198,000 acres (800 km<sup>2</sup>), 1959 determination. Station bypassed by Carlsbad main canal (station 08403500).

AVERAGE DISCHARGE.--31 years 30.8 ft<sup>3</sup>/s (0.872 m<sup>3</sup>/s), 22,310 acre-ft/yr (27.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,500 ft<sup>3</sup>/s (1,570 m<sup>3</sup>/s) Aug. 23, 1966, gage height, 26.4 ft (8.05 m), from floodmarks, from rating curve extended above 33,000 ft<sup>3</sup>/s (935 m<sup>3</sup>/s) on basis of computation of peak flow over Tansill Dam 5.8 mi (1.3 km) 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 (2,550 m<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 (1,980 m<sup>3</sup>/s) at site 6.5 mi (10.5 km) downs and washed out the original Avalon Dam. Another major flood occurred Aug. 7, 1916, discharge 70,000 ft<sup>3</sup>/s (1,980 m<sup>3</sup>/s) at site 6.5 mi (10.5 km) downstream.

EXTREMES FOR CURRENT YEAR.--No flow during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
2	.00	.00	.CO	.CC	.00	.00	.CC	.CO	.00	.00	.CC	.00
3	.00	.00	.CC	.CO	.00	.00	.CC	.00	.CC	.00	.CC	.00
4	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
5	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
6	.00	.00	.CO	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
7	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
8	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
9	.00	.00	.CC	.CO	.00	.00	.CC	.00	.CO	.00	.CC	.00
10	.00	.00	.CC	.CO	.00	.00	.CC	.00	.CO	.00	.CC	.00
11	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.CO
12	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
13	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
14	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
15	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
16	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
17	.00	.00	.CO	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
18	.00	.00	.CO	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
19	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
20	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
21	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
22	.00	.00	.CO	.CO	.00	.00	.CC	.00	.00	.00	.CC	.CO
23	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
24	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
25	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
26	.00	.00	.CC	.CO	.00	.00	.CC	.00	.00	.00	.CC	.CO
27	.00	.00	.CC	.CC	.00	.00	.CC	.CO	.CO	.00	.CC	.00
28	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
29	.00	.00	.CO	.CO	---	.00	.CC	.CO	.00	.00	.CC	.00
30	.00	.00	.CO	.CO	---	.00	.CC	.CO	.00	.00	.CC	.00
31	.00	---	.CC	.CO	---	.CC	---	.CO	---	.00	.CC	---
TOTAL	.00	.00	.CC	.00	.00	.00	.CC	.00	.00	.00	.CC	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
MIN	.00	.00	.CC	.CO	.00	.00	.CC	.CO	.00	.00	.CC	.00
AC-FT	.00	.00	.00	.CO	.00	.00	.CC	.00	.00	.00	.CC	.00
CAL YR 1981	TOTAL 0.00	MEAN .000	MAX .CO	MIN .00	AC-FT .00							
WTR YR 1982	TOTAL 0.00	MEAN .000	MAX .CO	MIN .CC	AC-FT .CC							

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 (0.3 km) upstream from Dark Canyon, and 0.5 mi (0.8 km) downstream from the Greene Street Bridge on U.S. Highway 62-180 in Carlsbad.

DRAINAGE AREA.--18,100 mi<sup>2</sup> (46,900 km<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 micromhos Aug. 3, 1974; minimum daily, 401 micromhos Sept. 23, 1974.

WATER TEMPERATURES: Maximum, 38.0°C May 28, 1969; minimum, 0.0°C Dec. 18, 1965.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,650 micromhos Apr. 9; minimum daily, 2,410 micromhos Mar. 25.

WATER TEMPERATURES: Maximum, 31.0°C on several days July to September; minimum, 5.0°C Jan. 11, 13, Feb. 5-6.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
27...	1330	14	3290	3000	8.1	7.8	32.0	18.0	1252	1112	320
DEC											
21...	1600	18	3000	3000	8.0	7.9	18.0	10.0	1177	1017	290
JAN											
07...	1400	16	2860	2850	7.9	7.9	.5	7.0	1152	992	280
FEB											
01...	1100	23	2820	2900	7.9	8.2	14.0	10.0	1070	920	270
MAR											
02...	1300	16	2800	2800	8.2	8.0	15.0	13.0	1111	961	280
31...	1400	.40	3500	3650	8.1	7.8	21.0	17.0	1475	1335	360
MAY											
03...	1000	11	3220	3190	8.2	7.7	20.0	17.0	1111	971	280
JUN											
01...	1100	8.6	2960	3210	8.2	7.8	25.0	21.0	1318	1183	330
28...	1430	6.5	3320	3490	8.1	7.6	32.0	30.0	1177	1072	290
SEP											
01...	1200	4.9	3820	3930	7.8	8.3	32.0	26.0	1451	1371	350

RIO GRANDE BASIN  
08405000 PECOS RIVER AT CARLSBAD, NM -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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 27...	110	310	3.9	4.4	--	--	1100	490	.7	14	2430
DEC 21...	110	270	3.5	4.4	--	--	920	460	.7	13	2160
JAN 07...	110	270	3.6	4.4	--	--	940	430	.7	13	2140
FEB 01...	96	250	3.4	4.4	--	--	860	440	.6	13	2020
MAR 02...	100	250	3.4	4.0	--	--	900	420	.7	12	2060
31...	140	370	4.3	5.4	--	--	1200	600	.5	17	2780
MAY 03...	100	300	4.0	4.9	--	--	970	500	.7	12	2250
JUN 01...	120	300	3.7	5.7	180	.00	980	500	.7	12	2330
28...	110	320	4.2	5.1	--	--	1000	550	.7	12	2350
SEP 01...	140	390	4.6	5.8	--	--	1300	630	.7	13	2880

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 27...	1330	190	90
DEC 21...	1600	180	80
JAN 07...	1400	180	70
FEB 01...	1100	160	90
MAR 02...	1300	180	80
31...	1400	260	70
MAY 03...	1000	200	40
JUN 01...	1100	200	40
28...	1430	230	70
SEP 01...	1200	280	40

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3260	3370	3120	2970	2720	2830	4260	2880	3100	3420	3630	3910
2	3300	3380	3100	2970	2750	2790	4120	3140	3140	3230	3630	3920
3	3270	3360	3120	3070	2860	2900	4160	3250	3160	3290	3620	3920
4	3290	3390	3070	2920	2860	2820	4270	3250	3160	3290	3650	3910
5	3290	3430	3080	2920	2860	2870	4290	3200	3160	3350	3680	3930
6	3270	3430	3070	2960	2860	2710	4310	3150	3160	3420	3690	3940
7	3240	3390	3070	2950	2820	2780	4350	3170	3160	3420	3720	3970
8	3260	3420	3040	2920	2760	2680	4400	3180	3160	3420	3690	3970
9	3230	3340	3070	2940	2790	2770	4650	3190	3220	3450	3680	3970
10	3250	3370	3070	2920	2770	2740	4520	3190	3230	3420	3690	3980
11	3250	3350	3050	2900	2770	2680	4540	3210	3230	3470	3710	3970
12	3280	3430	3010	2900	2770	2960	4340	3210	3260	3470	3720	4030
13	3260	3300	3030	2880	2820	3110	4070	3240	3260	3350	3680	4010
14	3290	3310	2990	2880	2790	3420	3880	3260	3230	3370	3710	4040
15	3260	3260	3000	2880	2760	3810	3870	3240	3230	3380	3700	4020
16	3200	3300	3000	2870	2810	3850	3900	3270	3250	3450	3710	4030
17	3220	3250	3000	2840	2780	4000	3880	3300	3240	3450	3760	4010
18	3250	3320	3000	2840	2760	4070	3800	3270	3270	3460	3650	4010
19	3140	3250	2980	2840	2760	4140	3820	3290	3270	3500	3730	3940
20	3240	3250	2960	2840	2790	3940	3810	3280	3280	3500	3730	3910
21	3250	3210	2980	2840	2790	3990	3800	3280	3310	3530	3750	3900
22	3230	3190	2990	2840	2750	4060	3750	3270	3300	3530	3760	3900
23	3300	3190	2980	2860	2780	4050	3740	3270	3330	3550	3780	3900
24	3260	3250	2980	2840	2780	4110	3710	3280	3330	3560	3790	3930
25	3300	3190	2990	2860	2810	2410	3680	3250	3360	3610	3790	3920
26	3300	3170	2990	2860	2710	4110	3640	3210	3360	3610	3610	3940
27	3320	3160	2980	2830	2730	4120	3610	3140	3390	3620	3800	3940
28	3310	3160	2980	2840	2720	4070	3610	3100	3390	3660	3820	3950
29	3350	3130	2980	2840	---	4060	3580	3140	3660	3680	3800	3940
30	3350	3100	2960	2850	---	4050	3580	3150	3660	3700	3830	3950
31	3340	---	2980	2840	---	4100	---	3150	---	3680	3830	---
MEAN	3270	3290	3020	2890	2780	3450	4000	3210	3280	3480	3720	3960
WTR YR 1982		MEAN	3360	MAX	4650	MIN	2410					

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	18.0	12.0	10.0	9.0	13.0	14.0	19.0	22.0	25.0	31.0	31.0
2	22.0	17.0	11.0	9.0	8.0	13.0	14.0	20.0	22.0	28.0	27.0	29.0
3	22.0	16.0	11.0	9.0	8.0	13.0	12.0	20.0	26.0	25.0	26.0	29.0
4	24.0	18.0	12.0	8.0	7.0	12.0	18.0	19.0	23.0	29.0	27.0	26.0
5	24.0	16.0	11.0	8.0	5.0	11.0	12.0	20.0	22.0	29.0	28.0	30.0
6	22.0	16.0	12.0	10.0	5.0	12.0	12.0	19.0	25.0	25.0	28.0	28.0
7	21.0	15.0	13.0	8.0	7.0	13.0	16.0	18.0	24.0	30.0	31.0	26.0
8	20.0	16.0	13.0	8.0	8.0	13.0	15.0	19.0	24.0	26.0	30.0	28.0
9	20.0	15.0	11.0	7.0	8.0	15.0	15.0	21.0	21.0	31.0	27.0	28.0
10	19.0	14.0	12.5	7.0	8.0	14.0	14.0	20.0	25.0	25.0	31.0	25.0
11	22.0	16.0	13.0	5.0	8.0	16.0	13.0	20.0	24.0	30.0	26.0	24.0
12	22.0	15.0	11.0	7.0	11.0	15.0	20.0	20.0	24.0	28.0	27.0	26.0
13	21.0	15.0	13.0	5.0	10.0	15.0	18.0	21.0	24.0	26.0	26.0	26.0
14	23.0	15.0	11.0	6.0	11.0	16.0	20.0	19.0	25.0	26.0	28.0	23.0
15	22.0	16.0	11.0	9.0	12.5	14.0	18.0	20.0	23.0	25.0	31.0	23.0
16	23.0	14.0	12.5	7.0	14.0	15.0	17.0	22.0	25.0	30.0	28.0	23.0
17	21.0	15.0	10.0	7.0	12.0	15.0	16.0	23.0	24.0	27.0	29.0	24.0
18	21.0	16.0	8.0	10.0	13.0	16.0	19.0	24.0	26.0	31.0	25.0	23.0
19	20.0	14.0	11.0	9.0	12.5	16.0	17.0	21.0	24.0	28.0	30.0	27.0
20	19.0	13.0	11.0	10.0	14.0	15.0	18.0	21.0	25.0	29.0	29.0	25.0
21	21.0	15.0	11.0	11.0	16.0	15.0	15.0	20.0	21.0	27.0	31.0	23.0
22	19.0	14.0	10.0	10.0	16.0	16.0	14.0	21.0	24.0	27.0	30.0	22.0
23	18.0	14.0	10.0	9.0	15.0	14.0	13.0	25.0	24.0	28.0	28.0	22.0
24	17.0	14.0	9.0	10.0	15.0	14.0	14.0	22.0	24.0	27.0	29.0	25.0
25	16.0	14.0	9.0	11.0	9.0	15.0	19.0	22.0	26.0	31.0	25.0	23.0
26	17.0	12.5	10.0	12.0	11.0	13.0	18.0	25.0	24.0	27.0	30.0	26.0
27	17.0	12.5	9.0	10.0	11.0	12.0	16.0	25.0	28.0	29.0	26.0	24.0
28	17.0	13.0	9.0	11.0	14.0	13.0	17.0	22.0	26.0	26.0	25.0	22.0
29	19.0	14.0	9.0	12.0	---	13.0	20.0	21.0	27.0	25.0	26.0	22.0
30	19.0	13.0	9.0	10.0	---	13.0	19.0	24.0	29.0	31.0	31.0	23.0
31	22.0	---	9.0	10.0	---	13.0	---	20.0	---	28.0	28.0	---
MEAN	20.5	15.0	11.0	9.0	10.5	14.0	16.0	21.0	24.5	27.5	28.0	25.0
WTR YR 1982		MEAN	18.5	MAX	31.0	MIN	5.0					

## RIO GRANDE BASIN

08405150 DARK CANYON DRAW AT CARLSBAD, NM

LOCATION.--Lat 32°24'24", long 104°13'34", in NE¼NW¼SE¼ sec.7, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on downstream side of U.S. Highway 62-285 (Canal Street) bridge in Carlsbad, and 0.6 mi (1.0 km) upstream from mouth. Mouth at Pecos River mile 459.2 (738.9 km).

DRAINAGE AREA.--450 mi<sup>2</sup> (1,170 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 3,088.21 ft (941.286 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. A Soil Conservation Service flood control project on Hackberry Draw, an upstream tributary, has some effect on flood peaks and flow duration. Ground-water withdrawals above station for irrigation of approximately 2,100 acres (8.5 km<sup>2</sup>), 1973 determination, and for municipal supply for Carlsbad.

AVERAGE DISCHARGE.--9 years, 8.17 ft<sup>3</sup>/s (0.231 m<sup>3</sup>/s), 5,920 acre-ft/yr (7.30 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft<sup>3</sup>/s (765 m<sup>3</sup>/s) Sept. 26, 1980, gage height, 12.10 ft (3.688 m) from rating curve extended above 7,100 ft<sup>3</sup>/s (200 m<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 (1,870 m<sup>3</sup>/s) as determined by slope-area measurement at site 1.2 mi (1.9 km) 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.--No flow during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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 1981	TOTAL	323.05	MEAN	1.05	MAX	367	MIN	.00	AC-FT	760		
WTR YR 1982	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 (210 m) downstream from mouth of Dark Canyon Draw, 0.3 mi (0.5 km) downstream from Lower Tansill Dam and Bataan recreational area, 0.8 mi (1.3 km) downstream from bridge on U.S. Highway 62-180 in Carlsbad, and at mile 459.1 (738.7 km).

DRAINAGE AREA.--18,550 mi<sup>2</sup> (48,040 km<sup>2</sup>), approximately, contributing area.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,075.19 ft (937.318 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow regulated by Lake Avalon (station 08403800) since 1891, and by several other reservoirs, and at low stages by power plant. Gage is bypassed on left bank by Carlsbad main canal east which irrigates several hundred acres adjacent to and below gage site, and on right bank by Carlsbad main canal south, which with supplemental ground-water withdrawals irrigates about 23,000 acres (93 km<sup>2</sup>) below. Diversions and ground-water withdrawals above station for irrigation of about 198,000 acres (800 km<sup>2</sup>), 1959 determination.

AVERAGE DISCHARGE.--12 years, 47.6 ft<sup>3</sup>/s (1.348 m<sup>3</sup>/s), 34,490 acre-ft/yr (42.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft<sup>3</sup>/s (799 m<sup>3</sup>/s) Sept. 26, 1980, gage height, 14.60 ft (4.450 m), from floodmarks; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a stage of about 22 ft (6.7 m), discharge not determined. (For dates of other historical floods see station 08404000.)

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 515 ft<sup>3</sup>/s (14.6 m<sup>3</sup>/s) Sept. 30, gage height, 2.12 ft (0.646 m); minimum, 0.08 ft<sup>3</sup>/s (0.002 m<sup>3</sup>/s) Apr. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	13	14	16	25	16	.36	6.2	8.8	21	8.4	4.8
2	15	16	17	17	23	16	.27	7.0	10	7.9	6.7	4.7
3	16	17	17	13	20	16	.13	8.5	7.5	6.2	7.6	6.8
4	15	17	15	12	21	16	.11	8.5	6.2	6.9	8.6	7.2
5	16	18	16	17	21	16	.18	9.5	8.4	7.6	6.2	5.7
6	17	17	16	16	21	17	.22	8.6	11	6.6	5.9	5.5
7	16	17	18	14	21	17	.21	8.9	11	6.2	5.0	7.3
8	15	18	16	13	21	49	.19	12	6.8	5.9	8.3	5.2
9	15	14	14	15	21	27	.19	11	4.6	6.7	6.2	4.6
10	14	16	16	15	19	55	.19	11	2.8	6.6	6.2	4.7
11	16	16	17	14	19	95	.19	9.4	3.7	6.9	6.2	8.0
12	15	17	17	16	19	92	.21	11	3.2	11	7.4	10
13	15	18	18	19	19	52	3.9	8.3	4.6	6.0	8.3	10
14	14	19	17	21	19	47	7.3	9.1	4.8	6.2	7.8	6.9
15	23	18	16	22	19	46	9.0	8.7	3.5	6.2	8.5	7.6
16	16	18	17	24	18	43	3.0	9.6	3.3	6.2	8.5	5.9
17	14	18	17	22	18	41	2.8	8.4	3.8	6.2	7.7	7.2
18	12	17	16	24	18	39	3.8	7.1	4.4	5.0	1.5	8.4
19	13	16	17	22	18	37	4.1	6.9	4.5	6.2	7.7	15
20	13	16	17	26	18	18	6.4	8.3	5.0	5.2	6.9	9.5
21	16	16	18	25	18	2.3	4.3	13	5.7	5.6	6.9	8.0
22	14	17	18	25	17	.48	4.3	12	9.5	5.2	6.9	7.1
23	17	16	13	22	17	.57	4.3	14	10	3.5	6.2	8.8
24	15	17	14	24	17	7.7	4.3	9.7	7.0	3.8	4.9	11
25	15	17	17	26	17	7.9	4.9	7.5	5.9	3.8	3.8	8.1
26	13	17	16	26	17	44	7.7	8.5	7.5	3.6	1.2	9.2
27	14	17	17	26	17	20	7.7	12	8.6	3.3	1.5	11
28	15	17	12	24	16	16	6.9	8.9	7.2	3.4	1.2	9.2
29	15	18	16	25	---	46	6.7	9.7	4.5	2.2	.65	9.4
30	17	19	16	25	---	.67	6.2	10	4.8	5.0	.65	59
31	15	---	16	18	---	.43	---	7.8	---	8.7	3.4	---
TOTAL	471	507	501	624	534	901.05	100.05	291.1	188.6	194.8	176.90	285.8
MEAN	15.2	16.9	16.2	20.1	19.1	29.1	3.34	9.39	6.29	6.28	5.71	9.53
MAX	23	19	18	26	25	95	9.0	14	11	21	8.6	59
MIN	12	13	12	12	16	.43	.11	6.2	2.8	2.2	.65	4.6
AC-FT	934	1010	954	1240	1060	1790	198	577	374	386	351	567
CAL YR 1981	TOTAL	9350.10	MEAN	25.6	MAX	770	MIN	1.0	AC-FT	18550		
WTR YR 1982	TOTAL	4775.30	MEAN	13.1	MAX	95	MIN	.11	AC-FT	9470		

RIO GRANDE BASIN  
08405200 PECOS RIVER BELOW DARK CANYON, 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, N. Mex.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)
DEC 08...	1430	15	2940	3150	7.9	7.7	13.0
MAR 31...	1500	.82	4000	4190	7.9	7.9	20.0



LOCATION.--Lat 32°13'44", long 104°09'02", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.12, T.24 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on right bank 0.6 mi (1.0 km) upstream from Black River diversion dam, 4.6 mi (7.4 km) west of Malaga, and 7.1 mi (11.4 km) upstream from mouth. Mouth at Pecos River mile 436.3 (702.0 km).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 489 ft<sup>3</sup>/s (13.85 m<sup>3</sup>/s) June 14 (0045 hrs), gage height, 2.92 ft (0.890 m), no other peak above base of 450 ft<sup>3</sup>/s (13 m<sup>3</sup>/s); minimum, .66 ft<sup>3</sup>/s (0.019 m<sup>3</sup>/s) May 31, June 1.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	2.7	6.8	13	12	5.9	8.3	9.2	15	4.8	11	34	6.7
2	2.6	7.1	14	12	5.6	8.0	9.7	12	8.2	17	14	7.2
3	2.6	7.6	14	12	4.1	7.6	9.5	12	8.2	18	5.0	7.6
4	2.6	8.3	15	12	4.9	7.3	10	11	8.5	12	4.5	7.6
5	2.6	8.3	14	12	5.5	5.4	10	12	9.0	10	4.1	7.6
6	2.7	8.7	14	12	5.8	4.4	9.7	11	8.8	9.9	4.3	7.6
7	2.8	8.7	15	12	5.9	4.3	9.3	11	7.9	9.5	4.3	7.6
8	2.8	8.7	15	12	5.9	4.3	9.1	11	7.9	9.2	4.9	7.8
9	2.9	9.1	14	12	5.8	4.3	9.2	10	7.9	9.0	4.3	8.0
10	2.8	9.1	14	12	6.6	4.3	9.2	9.9	8.3	8.9	4.0	11
11	3.4	9.1	13	12	10	4.2	9.3	9.7	8.7	8.5	3.9	12
12	3.2	9.5	13	12	11	4.3	9.3	9.6	8.5	11	3.7	9.3
13	2.9	9.5	13	13	11	4.1	8.8	9.5	8.6	11	3.5	8.7
14	2.9	9.9	13	13	12	4.0	8.3	9.5	127	8.5	3.5	9.1
15	2.9	10	13	12	12	4.0	8.5	9.5	29	5.7	3.5	11
16	3.1	10	13	11	12	4.0	8.7	9.5	15	4.9	4.1	19
17	2.8	10	12	11	12	4.4	8.7	9.5	12	4.9	3.6	21
18	2.6	11	12	10	12	4.2	9.0	9.5	11	8.0	20	13
19	2.8	11	12	11	12	3.9	9.1	9.5	11	9.8	7.2	13
20	2.9	11	13	10	12	3.8	8.9	9.5	11	10	4.3	12
21	4.3	11	13	7.7	12	3.8	9.1	9.3	11	10	3.9	11
22	4.6	11	13	6.5	11	3.8	9.9	7.8	10	10	3.8	11
23	4.9	11	12	6.3	11	4.3	10	4.4	9.9	9.1	3.4	11
24	5.2	12	12	6.3	12	4.1	11	3.9	9.9	5.2	3.3	11
25	5.5	12	12	6.3	9.5	3.9	10	2.5	9.9	4.2	3.3	11
26	5.3	12	12	6.3	9.1	3.9	9.7	2.1	9.8	3.8	5.5	11
27	5.6	13	13	5.7	9.1	4.1	9.7	2.0	9.5	3.4	7.0	11
28	5.9	13	12	5.6	8.7	4.3	10	2.0	9.6	3.3	7.2	11
29	6.1	13	12	5.8	---	4.6	9.9	1.6	9.2	3.3	7.0	10
30	6.3	13	12	5.9	---	4.3	22	1.4	8.7	3.2	5.5	12
31	6.6	---	12	5.9	---	4.8	---	1.3	---	10	5.2	---
TOTAL	116.9	304.6	404	303.3	254.4	145.0	294.8	248.5	418.8	262.3	195.8	316.8
MEAN	3.77	10.2	13.0	9.79	9.09	4.68	9.83	8.02	14.0	8.46	6.32	10.6
MAX	6.6	13	15	13	12	8.3	22	15	127	18	34	21
MIN	2.6	6.8	12	5.6	4.1	3.8	9.3	1.3	4.8	3.2	3.3	6.7
AC-FT	232	604	801	602	503	288	585	493	831	520	388	628
CAL YR 1981	TOTAL	3312.1	MEAN	9.07	MAX	43	MIN	2.0	AC-FT	6570		
WTR YR 1982	TOTAL	3265.2	MEAN	8.95	MAX	127	MIN	1.3	AC-FT	6480		

## RIO GRANDE BASIN

08406500 PECOS RIVER NEAR MALAGA, NM

LOCATION.--Lat 32°12'26", long 104°01'22", in SW¼NW¼NE¼ sec.19, T.24 S., R.29 E., Eddy County, Hydrologic Unit 13060011, on right bank 3.1 mi (5.0 km) southeast of Malaga, 4.3 mi (6.9 km) downstream from Black River, and at mile 432.2 (695.4 km). Water-quality sampling site 2.2 mi (3.5 km) upstream.

DRAINAGE AREA.--19,190 mi<sup>2</sup> (49,700 km<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. Datum of gage is 2,895.64 ft (882.591 m) National Geodetic Vertical Datum of 1929. May 1, 1920, to Mar. 24, 1949, at datum 3 ft (0.91 m) higher.

REMARKS.--Water-discharge records fair. Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals above station for irrigation of about 202,000 acres (820 km<sup>2</sup>), 1959 determination. Harroun canal bypasses gage on left bank and irrigates approximately 1,000 acres (4.0 km<sup>2</sup>) adjacent to and below gage. This bypass is not gaged.

AVERAGE DISCHARGE.--16 years (1921-36), 274 ft<sup>3</sup>/s (7.760 m<sup>3</sup>/s), 198,500 acre-ft/yr (245 hm<sup>3</sup>/yr), prior to completion of Lake Sumner; 46 years (1938-82) 173 ft<sup>3</sup>/s (4.899 m<sup>3</sup>/s), 125,300 acre-ft/yr (154 hm<sup>3</sup>/yr)

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft<sup>3</sup>/s (3,400 m<sup>3</sup>/s) Aug. 23, 1966, gage height, 42.1 ft (12.83 m), from floodmarks, from rating curve extended above 36,000 ft<sup>3</sup>/s (1,020 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum, 3.7 ft<sup>3</sup>/s (0.10 m<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 (1,980 m<sup>3</sup>/s) at Carlsbad, 27 mi (43.4 km) upstream. Flood in September 1919 reached a stage of 29.4 ft (8.96 m), present datum, discharge, 40,400 ft<sup>3</sup>/s (1,140 m<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 500 ft<sup>3</sup>/s (14 m<sup>3</sup>/s) Sept. 16, gage height unknown; minimum, 12 ft<sup>3</sup>/s (0.34 m<sup>3</sup>/s) June 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	40	54	42	32	31	33	70	21	19	40	22
2	33	39	54	42	31	33	30	52	18	18	32	26
3	33	38	52	44	31	35	30	49	16	34	25	28
4	33	38	50	45	32	32	23	51	15	26	20	34
5	35	41	51	42	33	34	21	58	14	21	17	34
6	43	42	51	40	36	30	23	53	14	19	16	26
7	43	43	57	42	35	29	22	50	15	17	15	22
8	41	44	58	42	40	63	19	51	16	15	20	19
9	40	44	58	40	37	78	26	49	21	14	18	21
10	38	44	58	40	36	62	27	41	15	13	23	25
11	40	43	57	40	34	45	18	38	14	13	25	40
12	40	43	57	41	37	77	19	36	17	18	23	30
13	39	45	57	44	36	103	30	30	20	18	24	35
14	39	46	58	48	36	74	21	23	58	19	20	32
15	38	48	58	49	35	58	17	27	33	19	20	50
16	36	49	57	47	36	55	17	30	16	20	19	250
17	32	51	56	45	37	49	17	23	19	18	25	100
18	47	53	55	44	35	48	16	22	21	18	73	50
19	46	53	55	44	33	46	24	25	15	18	59	49
20	45	52	54	45	32	47	27	23	16	16	29	87
21	43	54	55	42	31	42	20	20	18	18	21	57
22	40	55	56	36	32	37	29	19	16	18	22	57
23	43	56	55	33	32	28	34	19	14	18	23	46
24	45	56	54	34	31	23	22	16	14	19	32	43
25	45	52	45	31	31	23	25	16	14	20	33	42
26	42	50	40	29	31	22	22	19	17	20	28	38
27	41	50	41	30	32	21	18	17	14	18	27	39
28	39	51	42	30	32	21	18	17	13	17	25	37
29	40	52	42	32	---	22	18	27	13	16	24	34
30	41	53	40	35	---	29	24	24	13	16	20	33
31	41	---	40	33	---	34	---	22	---	50	20	---
TOTAL	1234	1425	1617	1231	946	1331	690	1017	540	603	818	1406
MEAN	39.8	47.5	52.2	39.7	33.8	42.9	23.0	32.8	18.0	19.5	26.4	46.9
MAX	47	56	58	49	40	103	34	70	58	50	73	250
MIN	32	38	40	29	31	21	16	16	13	13	15	19
AC-FT	2450	2830	3210	2440	1880	2640	1370	2020	1070	1200	1620	2790
CAL YR 1981	TOTAL	16652	MEAN	45.6	MAX	346	MIN	12	AC-FT	33030		
WTR YR 1982	TOTAL	12858	MEAN	35.2	MAX	250	MIN	13	AC-FT	25500		

RIO GRANDE BASIN  
08406500 PECOS RIVER NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

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LOCATION.--Samples collected 2.5 mi (4.0 km) 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 micromhos June 7, 1966; minimum daily, 409 micromhos Sept. 27, 1941.

WATER TEMPERATURES: Maximum, 34.0°C June 25, 1964; minimum, 3.0°C Jan. 13, 1963.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 10,200 micromhos June 15; minimum daily, 2,430 micromhos Sept. 20.

WATER TEMPERATURES: Maximum, 31.5°C Aug. 1; minimum, 4.5°C Jan 17.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
OCT										
27...	1000	42	6800	7530	8.0	7.8	14.0	15.0	2015	2015
DEC										
09...	1130	56	6000	5800	7.7	7.5	17.0	11.0	1924	1774
JAN										
06...	1030	40	6200	6600	8.3	7.8	23.0	8.0	2122	1942
FEB										
02...	1400	30	7600	7830	8.4	7.7	16.0	8.0	2122	1952
MAR										
03...	1000	35	7200	7780	8.1	7.5	21.0	14.0	2047	1907
APR										
06...	1030	24	7800	8070	8.3	7.6	18.0	14.0	2122	2022
MAY										
04...	1230	55	7000	7350	8.3	7.2	30.0	21.0	2181	2076
JUN										
02...	1100	18	8200	8450	8.2	7.4	30.0	26.0	2802	2665
25...	1000	13	8200	8290	--	7.3	30.0	21.0	2156	2017
AUG										
05...	1000	18	7000	7250	8.2	7.3	32.0	27.0	2090	1974
30...	1200	18	8000	7710	6.8	8.1	32.0	26.0	2222	2107

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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT										
27...	510	180	840	8.4	17	--	--	1600	1600	.3
DEC										
09...	490	170	690	7.1	13	--	--	1600	1300	.8
JAN										
06...	520	200	840	8.2	16	--	--	1700	1600	.8
FEB										
02...	520	200	950	9.3	19	--	--	1700	1800	.8
MAR										
03...	490	200	990	9.8	20	--	--	1700	1800	.8
APR										
06...	520	200	960	9.4	23	--	--	1500	1800	.9
MAY										
04...	560	190	850	8.2	15	--	--	1700	1600	.8
JUN										
02...	710	250	1100	9.3	23	180	.00	2000	2000	.8
25...	550	190	1100	11	27	--	--	1800	1900	.9
AUG										
05...	540	180	900	8.9	22	150	.00	1700	1600	.8
30...	560	200	1000	9.5	20	--	--	1900	1800	.8

RIO GRANDE BASIN  
08406500 PECOS RIVER NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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 27...	49	4800	1.3	1.3	.100	--	1.2	2.6	.060	<.010
DEC 09...	12	4370	1.8	1.8	.220	--	1.1	3.1	.070	.030
JAN 06...	14	5010	2.1	2.1	.150	--	1.3	3.5	<.010	<.010
FEB 02...	13	5320	2.5	2.5	.340	--	1.1	3.9	<.010	<.010
MAR 03...	11	5300	1.2	1.2	.840	--	.76	2.8	.090	.030
APR 06...	8.6	5080	.81	.80	.420	--	1.5	2.7	.060	.020
MAY 04...	6.6	4990	--	--	--	--	--	--	--	--
JUN 02...	14	6190	1.0	1.0	.350	--	1.6	2.9	.060	<.010
25...	17	5670	1.1	1.0	.370	--	1.5	3.0	.080	.060
AUG 05...	15	5030	1.1	1.1	.220	.110	1.8	3.1	.090	.100
30...	19	5570	.80	.81	.330	--	1.9	3.0	.030	<.010

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 27...	1000	530	80
DEC 09...	1130	360	60
JAN 06...	1030	400	80
FEB 02...	1400	450	70
MAR 03...	1000	470	90
APR 06...	1030	450	100
MAY 04...	1230	420	80
JUN 02...	1100	500	70
25...	1000	520	70
AUG 05...	1000	450	60
30...	1200	490	50

RIO GRANDE BASIN  
08406500 PECOS RIVER NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7350	7000	5970	6680	7220	7300	6350	7440	8130	9440	8210	7540
2	7350	7030	6060	6680	7320	7490	6740	7430	8460	9140	7480	6970
3	7300	7080	5880	6720	7280	7280	6850	7040	8230	7840	6390	6600
4	7410	6950	6010	6620	7260	7280	7280	6700	8440	7100	6970	6430
5	7350	6870	5820	6680	7340	7270	7770	6180	8700	7230	7710	5320
6	7350	6740	5890	6820	7170	7190	8070	6040	8890	7330	8490	6350
7	7290	6620	5850	6860	7200	7180	8220	6520	9160	7920	8630	6730
8	7160	6460	5920	6720	6830	7090	8310	6440	9200	8980	8630	7320
9	7030	6510	5860	6720	6790	6470	8360	6390	8470	9530	8210	8020
10	7100	6660	5820	6800	6940	6040	8150	6610	8030	9250	8020	7830
11	7140	6470	5880	6860	6910	6410	8500	6500	8770	9510	7320	7210
12	7220	6580	5950	6740	7010	6270	8710	6700	9160	9470	7010	6160
13	7190	6430	6040	6690	6960	5580	8080	6620	8410	9000	6600	6690
14	7130	6450	5720	6560	7020	5450	8420	6980	5240	8530	7320	7830
15	7130	6370	5860	6570	6990	5600	8590	7300	10200	8530	7270	8210
16	7300	6520	5860	6530	6940	5680	8840	6920	5480	8680	7710	6920
17	7380	6360	5820	6600	6880	5680	9010	6880	7720	8990	7270	5290
18	7270	6400	5930	6580	6830	5720	9310	7420	6410	8880	5320	5340
19	6680	6340	5780	6560	6910	5740	9300	7790	6540	8940	4720	5490
20	6470	6440	5880	6580	6970	5790	8420	7770	7620	8490	5180	2430
21	6830	6240	5850	6470	7060	5850	8980	7850	9510	8540	7270	4570
22	6770	6270	6030	6600	7080	5860	9060	7980	8140	8700	7950	4830
23	6710	6270	5860	6810	7140	6100	8870	7960	7270	8700	6780	4980
24	6670	6270	5850	6910	7120	6340	9190	7830	8230	8900	5870	5400
25	6540	6150	6180	7020	7180	6800	8910	8340	8960	9460	6640	5210
26	6990	6170	6520	7140	7200	7090	8660	8470	8770	9670	7270	5320
27	6980	6270	6730	7280	7190	7220	8860	8240	8820	9700	7160	5210
28	7140	6050	6730	7270	7120	7480	9160	8490	8390	9990	7480	5000
29	7160	6180	6690	7250	---	7430	9230	8500	8620	9810	7480	5260
30	7140	6010	6700	7190	---	6880	9340	7840	9300	9750	8020	5980
31	7050	---	6870	7240	---	5610	---	8300	---	9790	8080	---
MEAN	7080	6470	6060	6800	7070	6490	8450	7340	8240	8900	7240	6080
WTR YR 1982	MEAN	7180	MAX	10200	MIN	2430						

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	14.0	12.0	9.0	8.5	11.0	15.0	18.0	21.0	27.0	31.5	31.0
2	20.0	13.5	12.0	10.0	9.0	13.0	15.0	18.5	28.5	25.0	27.0	29.0
3	20.0	14.5	9.0	8.5	9.0	11.5	14.0	19.0	26.0	28.5	26.0	28.0
4	21.0	14.0	10.5	7.5	7.0	12.0	15.0	20.0	26.5	27.0	26.0	26.0
5	22.0	15.0	10.0	7.0	5.0	13.0	16.0	20.0	25.0	29.0	27.5	26.0
6	21.0	15.0	11.0	11.5	5.5	10.5	15.0	19.0	27.5	28.5	31.0	27.0
7	19.0	15.0	9.0	9.0	6.0	11.5	17.0	22.0	27.5	31.0	31.0	28.0
8	18.0	15.0	9.0	8.0	8.0	11.0	17.0	---	28.0	30.5	29.5	24.0
9	19.0	14.0	10.0	7.5	7.0	11.0	17.5	19.5	24.0	30.0	26.0	25.5
10	18.5	12.0	11.5	6.5	6.5	16.0	18.0	23.0	27.0	31.0	29.0	26.0
11	23.0	11.0	12.5	5.0	8.0	17.0	17.0	21.0	28.0	28.5	28.0	26.0
12	20.0	11.0	11.0	5.0	9.0	14.0	21.0	21.5	25.0	28.0	28.5	24.0
13	21.0	11.0	12.0	5.5	9.0	14.0	20.0	21.0	24.0	27.5	28.0	23.0
14	20.5	12.5	11.5	5.0	9.0	14.0	20.0	21.0	27.0	28.5	29.0	27.0
15	21.5	13.0	10.0	5.0	11.0	14.5	17.5	19.0	26.0	28.0	29.0	24.0
16	21.0	12.5	9.0	5.0	11.0	14.0	17.0	23.0	24.0	27.5	28.0	23.0
17	19.0	12.0	10.0	4.5	11.5	14.5	17.0	21.5	27.5	27.0	31.0	24.0
18	18.5	12.0	7.0	6.0	13.0	16.0	17.0	24.0	24.5	26.0	28.0	24.5
19	16.0	11.0	8.0	7.0	14.0	17.0	19.5	26.5	24.5	29.0	30.0	24.0
20	15.0	10.0	10.0	8.0	13.0	15.0	15.0	25.5	24.0	31.0	29.0	23.0
21	18.0	9.5	10.0	9.0	13.5	14.0	15.0	27.5	20.5	31.0	29.5	22.0
22	15.0	12.0	9.5	9.0	15.5	13.5	13.0	22.0	23.0	27.5	30.5	20.0
23	14.0	12.0	8.5	9.0	15.0	14.5	12.5	21.5	24.0	30.0	27.0	23.0
24	14.0	11.0	8.0	10.0	14.0	13.5	14.5	22.0	27.5	29.0	29.0	22.0
25	15.0	12.5	7.5	10.0	12.0	13.0	15.5	25.0	28.0	29.0	28.0	23.0
26	15.0	12.5	8.0	9.5	11.5	12.0	21.0	22.5	28.0	31.0	28.0	---
27	14.5	12.5	9.5	10.0	14.0	11.5	18.0	26.5	30.0	27.5	31.0	24.0
28	15.0	11.5	8.5	10.0	12.5	13.0	20.0	22.0	29.0	29.0	26.5	24.0
29	16.0	14.5	8.0	14.0	---	12.0	21.5	24.5	30.0	30.5	29.5	24.0
30	17.0	13.0	9.0	10.5	---	14.0	20.0	25.0	27.0	31.0	31.0	---
31	15.0	---	9.0	9.0	---	14.5	---	25.5	---	28.0	28.0	---
MEAN	18.0	12.5	9.5	8.0	10.5	13.5	17.0	22.0	26.0	29.0	28.5	25.0
WTR YR 1982	MEAN	18.5	MAX	31.5	MIN	4.5						

## RIO GRANDE BASIN

## 08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM

LOCATION.--Lat 32°11'19", long 103°58'43", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.27, T.24 S., R.29 E., Eddy County, Hydrologic Unit 13060011, on right bank 550 ft (170 m) upstream from Pierce Canyon Crossing, and 6.0 mi (9.7 km) southeast of Malaga, and at mile 425.7 (685.0 km).

DRAINAGE AREA.--19,260 mi<sup>2</sup> (49,880 km<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. Datum of gage is 2,889.18 ft (880.622 m) National Geodetic Vertical Datum of 1929. July 1938 to September 1941 at datum 1.19 ft (0.363 m) higher.

REMARKS.--Water-discharge records good except those above 200 ft<sup>3</sup>/s (5.7 m<sup>3</sup>/s), which are fair. Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals above station for irrigation of about 202,000 acres (820 km<sup>2</sup>), 1959 determination.

AVERAGE DISCHARGE.--34 years (1939-41, 1952-82), 134 ft<sup>3</sup>/s (3.795 m<sup>3</sup>/s), 97,080 acre-ft/yr (120 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined, 65,000 ft<sup>3</sup>/s (1,800 m<sup>3</sup>/s) Aug. 23, 1966; maximum gage height, 31.6 ft (9.63 m) Aug. 23, 1966, from floodmarks; minimum discharge, 0.54 ft<sup>3</sup>/s (0.015 m<sup>3</sup>/s) May 30, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 538 ft<sup>3</sup>/s (15.2 m<sup>3</sup>/s) Sept. 16, gage height, 3.26 ft (0.994 m); minimum, 9.2 ft<sup>3</sup>/s (0.26 m<sup>3</sup>/s) June 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	42	56	44	33	29	33	46	24	25	24	22
2	34	40	56	44	30	27	32	69	25	21	40	25
3	34	38	55	45	29	30	33	52	20	22	43	28
4	34	38	53	47	31	30	29	49	16	33	28	28
5	36	39	54	43	31	30	23	57	14	30	22	40
6	42	44	55	41	34	30	22	60	13	21	22	34
7	46	45	55	39	34	31	22	52	13	17	21	26
8	45	45	56	43	36	60	17	50	12	16	22	23
9	43	44	57	43	38	80	18	53	14	15	24	20
10	41	44	57	42	35	64	30	45	15	15	24	22
11	42	45	57	41	35	45	24	37	15	15	29	25
12	42	43	56	42	31	49	18	38	13	19	29	37
13	41	45	57	45	34	109	22	32	20	21	28	38
14	40	48	57	49	34	93	22	24	32	22	27	27
15	39	50	57	51	32	68	18	22	65	24	24	21
16	37	50	57	51	32	60	13	29	25	20	21	283
17	33	53	56	48	34	54	14	25	14	16	19	195
18	49	54	56	46	33	49	13	18	17	14	111	81
19	48	54	56	45	32	47	14	19	18	14	75	55
20	47	54	55	46	31	49	23	23	13	19	55	74
21	46	56	56	45	30	47	21	21	14	17	33	100
22	43	57	58	42	29	40	21	19	17	17	24	56
23	46	57	57	37	31	32	37	19	18	16	23	53
24	49	58	55	38	32	24	29	18	21	16	26	43
25	49	57	47	38	32	20	23	17	21	17	37	43
26	48	50	41	34	33	20	23	18	18	17	33	39
27	45	51	43	34	33	20	19	19	20	16	30	38
28	44	53	43	34	32	20	15	18	19	15	28	39
29	43	54	44	35	---	21	15	22	17	14	28	35
30	44	55	42	39	---	22	21	30	16	16	26	33
31	45	---	42	35	---	33	---	27	---	17	22	---
TOTAL	1311	1463	1646	1306	911	1333	664	1028	579	577	998	1583
MEAN	42.3	48.8	53.1	42.1	32.5	43.0	22.1	33.2	19.3	18.6	32.2	52.8
MAX	49	58	58	51	38	109	37	69	65	33	111	283
MIN	33	38	41	34	29	20	13	17	12	14	19	20
AC-FT	2600	2900	3260	2590	1810	2640	1320	2040	1150	1140	1980	3140
CAL YR 1981	TOTAL	17251	MEAN 47.3	MAX 390	MIN 11	AC-FT	34220					
WTR YR 1982	TOTAL	13399	MEAN 36.7	MAX 283	MIN 12	AC-FT	26580					

RIO GRANDE BASIN  
08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

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LOCATION.--Samples collected 0.2 mi (0.3 km) 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 micromhos Aug. 1, 2, 1966; minimum daily, 433 micromhos Sept. 21, 1941.  
WATER TEMPERATURES: Maximum 35.0°C July 6, 1968; minimum, 1.5°C Jan. 10, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 22,000 micromhos June 14; minimum daily, 6,540 micromhos Sept. 23.  
WATER TEMPERATURES: Maximum, 32.0°C Aug. 1; minimum 3.0°C Jan. 12, 14, 17.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
27...	1200	46	11300	10400	8.2	7.7	25.0	15.5	2296	2166	540
DEC											
09...	1330	55	10100	10400	7.9	7.8	21.0	12.0	2038	1898	470
JAN											
06...	1230	40	12000	11600	8.5	7.7	22.0	9.0	2378	2208	540
FEB											
02...	1500	31	13500	13800	8.5	8.0	10.0	9.0	2221	2081	510
MAR											
03...	1200	36	15600	14800	8.1	7.4	21.0	14.0	2485	2335	550
APR											
06...	1230	23	14800	14800	8.5	8.0	22.0	16.0	2204	2064	520
MAY											
04...	1400	45	12000	11700	8.6	7.3	28.0	20.0	2420	2310	590
JUN											
02...	1230	24	16200	16700	8.1	7.3	34.0	27.0	3066	2936	700
25...	1130	22	16200	16400	--	7.2	32.0	20.0	2321	2209	550
AUG											
05...	1030	22	14600	14900	8.2	7.3	31.0	28.0	2710	2609	640
30...	0930	28	13600	13900	7.8	8.0	31.0	26.0	2412	2315	570



RIO GRANDE BASIN  
08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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 27...	230	1800	17	47	--	--	1900	3200	.8	14	7810
DEC 09...	210	1500	15	43	--	--	1600	2600	.8	12	6520
JAN 06...	250	1800	17	49	--	--	1900	3000	.8	12	7650
FEB 02...	230	2300	22	68	--	--	1900	4000	.8	11	9100
MAR 03...	270	2500	22	76	--	--	1900	4300	.8	12	9700
APR 06...	220	2600	25	87	--	--	1900	4400	.9	10	9820
MAY 04...	230	2000	18	51	--	--	2000	3400	.8	8.8	8350
JUN 02...	320	3000	24	97	170	.00	2300	5000	.8	13	11500
JUN 25...	230	2900	27	97	--	--	2100	4800	.8	13	10800
AUG 05...	270	2500	22	72	130	.00	2300	4400	.8	16	10300
AUG 30...	240	2500	23	74	--	--	2000	4200	.8	17	9660

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 27...	1200	640	130
DEC 09...	1330	580	60
JAN 06...	1230	640	70
FEB 02...	1500	740	80
MAR 03...	1200	830	100
APR 06...	1230	860	90
MAY 04...	1400	660	30
JUN 02...	1230	950	70
JUN 25...	1130	960	90
AUG 05...	1030	920	90
AUG 30...	0930	830	60

RIO GRANDE BASIN  
08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ONCE-DAILY												
1	12500	14000	10400	11500	11800	13000	13300	18700	-----	-----	-----	14200
2	13200	12300	9660	11100	13200	14400	13600	13400	-----	-----	-----	14400
3	12900	12400	9840	11400	14500	14100	15100	13000	-----	-----	-----	14700
4	12300	11900	10100	12500	13100	16900	13000	12600	-----	-----	-----	14600
5	12500	12000	9840	10900	12500	12800	13600	12200	-----	-----	-----	14700
6	12800	12700	9730	11700	12100	16800	14800	11500	-----	-----	15200	12900
7	12600	11800	9930	11500	11800	13000	15200	10600	-----	-----	16000	13000
8	12400	11800	9600	11300	11900	13100	15100	-----	-----	-----	15700	12900
9	12100	13000	9640	10700	13300	12200	15700	11300	-----	-----	15600	13400
10	11900	11200	9730	11600	12100	11000	17500	10600	-----	-----	15800	13700
11	12300	11100	9740	12500	11700	10600	17500	10600	-----	-----	15100	14300
12	12200	11000	9580	10700	12800	11100	15300	11500	-----	-----	14900	14300
13	11800	11100	10200	11100	12400	11400	15800	11800	-----	-----	14900	-----
14	12200	11200	10300	10700	12400	9870	18300	12200	-----	-----	15100	12700
15	12100	11000	9790	10400	12600	8730	17200	12800	-----	-----	15000	13000
16	12900	10900	10100	10800	14500	10000	17100	14400	-----	-----	15200	15300
17	12700	10100	10500	10700	13100	8870	17400	14200	-----	-----	15700	10400
18	12900	11100	9730	11200	13300	9010	19500	13900	-----	-----	13200	8860
19	12000	11700	9730	10900	13600	9650	19900	-----	-----	-----	11500	8940
20	11600	10500	9670	11300	12300	10000	20200	-----	-----	-----	10700	9350
21	11500	10200	10100	11300	12600	9830	19500	-----	-----	-----	11200	8860
22	12100	10200	10800	11500	12800	10800	16600	-----	-----	20000	11000	7710
23	11700	10300	11300	14800	13300	10100	16600	-----	-----	19600	11600	6970
24	11200	10000	9330	12600	12900	10200	14500	-----	-----	19900	12700	-----
25	11100	10100	9500	12400	13300	11000	14200	-----	-----	20200	12600	8710
26	12400	10400	9880	11400	12500	13100	16900	-----	-----	20200	12300	8630
27	11300	10600	10000	12000	12400	13600	16700	-----	-----	20400	12500	8940
28	11300	10000	10900	12200	12300	13600	17700	-----	-----	20300	13000	9620
29	11400	12000	10400	11300	----	14500	17800	-----	-----	20000	13500	9900
30	12000	11500	10400	14400	----	15000	18700	-----	-----	19200	13800	10100
31	11800	----	10600	12400	----	15300	----	-----	----	19300	-----	----
MEAN	12100	11300	10000	11600	12800	12100	16500	12700	17100	16300	13800	11600

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1										---	---	---
2										---	---	---
3										---	---	---
4										---	---	---
5										---	---	---
6										---	---	---
7										---	---	---
8										---	---	---
9										---	---	---
10										---	---	---
11										---	---	---
12										---	---	---
13										---	---	---
14										---	---	---
15										---	---	---
16										---	---	---
17										---	---	---
18										---	---	---
19										15900	14800	15300
20										16800	15800	16300
21										16200	15400	15700
22										15400	15100	15200
23										15600	15000	15300
24										16100	15600	15900
25										16300	15800	16100
26										16700	15700	16100
27										17300	16700	17000
28										17700	17300	17400
29										17500	16300	17300
30										17100	16500	16800
31										16500	15800	16100
MONTH										17700	14800	16200

RIO GRANDE BASIN  
08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15900	15800	15900	16300	15900	16100	20200	15400	19500	14400	13900	14100
2	16800	15900	16400	16400	15700	16000	19700	19200	19400	14600	14300	14400
3	16600	16200	16400	16500	16200	16400	19100	17200	18000	15000	14000	14600
4	16300	16200	16200	16400	16100	16300	17200	15400	16400	15000	14400	14700
5	17300	16000	16600	16300	14800	15400	16500	16400	16400	14700	14100	14500
6	17800	12400	16700	14800	14500	14600	---	---	---	14000	12100	13000
7	18900	16800	18200	14700	13300	14400	---	---	---	13200	12600	12900
8	19500	15000	18200	16100	14600	15300	---	---	---	13400	12800	13100
9	20300	19500	19900	19100	18500	18800	---	---	---	14000	13100	13500
10	20700	20200	20500	19400	19000	19200	---	---	---	13800	13500	13700
11	20800	20200	20400	20000	15500	19300	---	---	---	14400	13700	14100
12	20400	19900	20200	20600	15400	19300	---	---	---	14700	13500	14200
13	20100	19800	19900	20700	15600	18800	---	---	---	13500	12600	13200
14	22000	20100	20900	20600	15400	19500	---	---	---	13000	12400	12800
15	20400	15100	16500	19900	15500	19300	---	---	---	13300	12700	13100
16	16900	14300	14800	19100	18700	18900	---	---	---	21900	11900	14400
17	14900	14200	14600	18900	18500	18800	---	---	---	12100	8910	10300
18	15100	14400	14600	19300	18800	19000	---	---	---	9200	8340	8790
19	15400	14900	15100	19900	15500	18200	---	---	---	8990	8310	8680
20	15500	15300	15400	20500	15400	19100	---	---	---	9380	8810	9150
21	15500	15200	15300	20700	15400	18100	---	---	---	8910	7830	8450
22	15900	15200	15400	20800	15500	18300	---	---	---	7880	7540	7690
23	16200	15900	16100	20400	19100	20100	---	---	---	7590	6540	7030
24	16300	15900	16100	20200	19000	19900	---	---	---	7950	6990	7380
25	16000	15900	15900	20300	19100	19800	---	---	---	8860	7970	8530
26	16800	16300	16600	20400	19200	20000	---	---	---	8680	8480	8580
27	16200	15500	16000	20400	15400	18500	---	---	---	9320	8930	9090
28	16400	16000	16200	20400	15400	17800	---	---	---	9670	9220	9470
29	16500	16300	16400	20500	15400	18400	---	---	---	10000	9590	9790
30	17100	13000	16100	20300	15400	19400	14100	13800	13900	10200	9970	10100
31	---	---	---	20200	19200	20000	14000	13900	14000	---	---	---
MONTH	22000	12400	16900	20800	13300	18200	20200	13800	16800	21900	6540	11400
NOTE:	NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR											

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.5	---	11.5	8.5	8.0	11.5	15.0	19.0	---	---	---	---
2	21.0	---	11.0	9.0	8.0	13.0	15.0	19.0	---	---	28.0	---
3	21.0	---	8.5	8.0	9.5	12.0	14.0	20.0	---	---	30.0	---
4	22.0	---	10.5	6.0	6.0	12.0	14.5	21.0	---	---	30.0	---
5	22.5	---	9.5	6.5	3.5	13.0	15.0	21.0	---	---	28.5	---
6	22.5	---	10.0	10.5	3.5	9.5	15.0	20.0	---	---	29.0	---
7	20.0	---	8.5	8.0	4.0	11.0	17.0	23.0	---	---	32.5	---
8	18.0	---	8.5	7.0	6.5	10.5	17.0	---	---	---	29.5	---
9	19.0	---	9.5	6.5	6.0	11.0	18.0	20.5	---	---	28.0	---
10	19.5	---	11.0	6.0	5.5	15.0	18.0	23.0	---	---	29.5	---
11	22.0	---	12.0	4.5	6.5	16.0	17.5	22.0	---	---	29.0	---
12	20.5	---	10.0	3.0	8.5	15.0	21.0	22.5	---	---	29.0	---
13	23.0	---	11.5	4.0	8.5	15.5	21.0	22.0	---	---	28.5	---
14	23.0	---	11.0	3.0	8.5	15.0	20.5	20.0	---	---	30.0	---
15	22.0	---	9.5	4.0	11.0	14.0	19.5	22.0	---	---	30.0	---
16	21.5	13.0	9.0	4.0	11.0	14.0	20.0	23.5	---	---	30.0	---
17	20.0	12.5	10.0	3.0	11.0	14.0	17.5	22.0	---	---	28.0	---
18	19.5	12.0	6.0	5.0	13.0	15.0	17.0	23.0	---	---	29.0	---
19	16.0	11.5	7.0	7.0	14.0	17.0	20.0	24.0	---	---	28.5	---
20	15.5	9.0	9.0	8.0	13.0	15.0	16.0	25.5	---	---	29.5	---
21	18.0	9.5	9.5	9.0	13.5	14.5	15.5	24.0	---	---	28.0	---
22	15.0	11.5	9.0	9.0	14.0	13.5	12.5	23.0	---	---	29.0	---
23	14.0	12.0	8.0	8.0	14.5	14.0	12.0	22.5	---	---	28.0	---
24	14.5	10.5	7.5	9.0	14.5	14.0	13.5	22.5	---	---	30.0	---
25	15.0	12.0	7.0	10.0	12.5	14.0	15.0	25.0	---	---	26.0	---
26	15.0	12.0	7.0	9.0	11.0	13.0	19.0	---	---	---	29.0	---
27	14.5	12.5	8.5	9.0	12.5	11.5	18.0	---	---	---	31.0	---
28	16.0	12.0	8.0	9.5	12.0	12.0	20.0	---	---	---	28.0	---
29	16.5	14.0	7.0	13.5	---	12.5	21.5	---	---	---	28.5	---
30	17.0	13.0	8.0	10.5	---	14.0	20.5	---	---	---	27.0	---
31	16.0	---	8.0	7.5	---	13.5	---	---	---	---	28.0	---
MEAN	19.0	12.0	9.0	7.5	9.5	13.5	17.0	---	---	---	29.0	---

[illegible][illegible]

## RIO GRANDE BASIN

08407500 PECOS RIVER AT RED BLUFF, NM  
(National stream-quality accounting network station)

LOCATION.--Lat 32°04'30", long 104°02'21", in SW¼NW¼NE¼ sec.1, T.26 S., R.28 E., Eddy County, Hydrologic Unit 13060011, on right bank at Red Bluff, 0.2 mi (0.3 km) downstream from Red Bluff Draw, 1.6 mi (2.6 km) northwest of the El Paso Natural Gas (Pecos River) compressor station, 5.2 mi (8.4 km) north of the New Mexico-Texas state line, 5.5 mi (8.8 km) upstream from Delaware River, and at mile 411.2 (661.6 km).

DRAINAGE AREA.--19,540 mi<sup>2</sup> (50,600 km<sup>2</sup>), approximately (contributing area).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,850.05 ft (868.695 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for the period of no gage-height record, Nov. 2 to Jan 7, which are poor. Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals above station for irrigation of about 202,000 acres (820 km<sup>2</sup>), 1959 determination.

AVERAGE DISCHARGE.--45 years, (1938-82), 167 ft<sup>3</sup>/s (4.729 m<sup>3</sup>/s), 121,000 acre-ft/yr (149 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 111,000 ft<sup>3</sup>/s (3,140 m<sup>3</sup>/s) Aug. 23, 1966, gage height, 33.32 ft (10.156 m), from rating curve extended above 32,000 ft<sup>3</sup>/s (906 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum, 0.19 ft<sup>3</sup>/s (0.005 m<sup>3</sup>/s) Aug. 1, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1904 reached a stage of 28.0 ft (8.53 m), 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, 3,860 ft<sup>3</sup>/s (109 m<sup>3</sup>/s) Sept. 16, gage height, 9.10 ft. (2.774 m); minimum, 6.5 ft<sup>3</sup>/s (0.18 m<sup>3</sup>/s) July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	42	58	45	40	36	42	49	27	121	17	22
2	35	41	58	46	39	34	41	93	25	33	76	23
3	35	42	58	47	38	33	39	80	24	23	52	25
4	35	41	57	50	37	36	38	71	18	31	52	26
5	35	41	55	49	37	35	31	76	13	41	30	30
6	38	45	58	46	37	34	23	80	11	32	24	40
7	46	46	60	46	38	34	25	75	9.7	22	26	30
8	47	48	60	46	39	34	22	67	9.2	17	28	26
9	45	47	60	47	41	71	16	68	8.7	16	28	23
10	43	47	60	49	42	96	22	67	11	14	30	22
11	44	47	59	50	42	78	34	52	13	13	31	23
12	44	46	60	51	39	58	22	46	11	23	36	23
13	42	47	62	53	37	103	17	46	17	19	36	37
14	42	50	62	55	40	132	27	35	239	21	36	34
15	41	51	62	56	39	98	22	26	73	22	32	165
16	39	53	61	56	36	79	16	28	55	24	30	1250
17	34	54	60	56	38	75	11	37	22	18	26	255
18	35	56	60	56	39	67	11	26	12	13	459	117
19	53	57	60	57	37	64	10	20	19	11	95	63
20	53	57	59	56	37	59	12	25	16	11	59	208
21	48	59	59	56	35	63	27	28	10	18	36	126
22	47	60	63	55	34	56	24	23	12	15	26	64
23	46	60	62	53	34	48	31	22	18	14	23	53
24	51	60	61	49	36	37	46	22	19	14	22	46
25	52	60	58	48	37	28	31	19	24	14	28	42
26	51	57	48	47	37	24	27	20	23	15	33	40
27	44	53	44	42	37	25	26	23	20	15	29	37
28	44	54	44	40	37	23	19	22	22	14	27	59
29	41	56	47	40	---	23	15	19	19	12	26	97
30	41	57	46	40	---	25	82	25	17	12	27	35
31	41	---	44	39	---	31	---	30	---	14	24	---
TOTAL	1328	1536	1765	1526	1059	1639	809	1320	817.6	682	1504	3041
MEAN	42.8	51.2	56.9	49.2	37.8	52.9	27.0	42.6	27.3	22.0	48.5	101
MAX	53	60	63	57	42	132	82	93	239	121	459	1250
MIN	34	41	44	39	34	23	10	19	8.7	11	17	22
AC-FT	2630	3050	3500	3030	2100	3250	1600	2620	1620	1350	2980	6030
CAL YR 1981	TOTAL	19703.0	MEAN 54.0	MAX 884	MIN 12	AC-FT 39080						
WTR YR 1982	TOTAL	17026.6	MEAN 46.6	MAX 1250	MIN 8.7	AC-FT 33770						

RIO GRANDE BASIN  
08407500 PECOS RIVER AT RED BLUFF, NM -- Continued  
WATER-QUALITY RECORDS

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LOCATION.--Samples collected 2 mi (3.2 km) downstream from discharge station.

PERIOD OF RECORD.--Water years 1937 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1937 to 1982 (Discontinued).

WATER TEMPERATURES: October 1952 to 1982 (Discontinued).

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, 51,400 micromhos June 20, 1972; minimum daily, 268 micromhos Sept. 19, 1946.

WATER TEMPERATURES: Maximum, 36.0°C July 31, 1966, July 13, 1970; minimum, 1.0°C Jan. 10, 11, 1962, Jan. 13, 1963, Dec. 19, 1980.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 22,000 micromhos July 26; minimum daily, 9,420 micromhos Mar. 16.

WATER TEMPERATURES: Maximum, 27.0°C Oct. 5; minimum, 3.0°C Feb. 6.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 03...	1230	39	12500	13700	8.3	7.3	23.0	14.0	2.4	12.1
DEC 08...	1100	60	10500	10500	7.9	7.7	11.0	7.0	2.5	10.6
FEB 02...	1030	38	14200	15000	8.4	8.1	6.0	7.0	2.8	--
MAR 29...	1230	24	13200	12800	8.4	7.2	26.0	15.0	6.6	9.4
JUN 03...	1300	24	20800	20800	8.1	7.2	36.0	24.0	6.3	10.2
JUL 26...	1000	18	22000	21900	8.3	7.2	31.0	26.0	1.4	8.1
AUG 27...	1400	28	13500	13300	8.1	8.6	39.0	29.0	2.6	11.0

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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 03...	2246	2136	520	230	2000	19	55	--	--	1900
DEC 08...	2097	1957	510	200	1600	16	45	--	--	1800
FEB 02...	2187	2057	480	240	2500	24	2.6	--	--	1900
MAR 29...	1980	1885	430	220	2200	22	65	--	--	1700
JUN 03...	3214	3096	710	350	3900	31	110	150	.00	2300
JUL 26...	2941	2866	650	320	4100	34	120	100	.00	2600
AUG 27...	2038	1968	470	210	2400	24	69	--	--	1800

RIO GRANDE BASIN  
08407500 PECOS RIVER AT RED BLUFF, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 03...	3600	.8	11	8650	8380	.79	.250	.050	.020
DEC 08...	2800	.8	11	7110	7050	1.4	.150	.050	.030
FEB 02...	4400	.8	8.5	10200	9610	1.0	.140	<.010	<.010
MAR 29...	3800	.5	2.2	8830	8480	<.10	.490	<.010	.010
JUN 03...	6400	.9	4.7	14200	13800	.18	.480	.040	.020
JUL 26...	7100	.8	12	13300	14900	<.10	.270	.100	.040
AUG 27...	4000	.7	10	8820	9000	<.10	.070	.100	.020

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
NOV 03...	1230	2	1	<100	100	<1	1	20	20	<1
FEB 02...	1030	2	1	100	100	1	1	20	20	1
MAR 29...	1230	2	1	100	<100	<1	1	20	<10	2
JUN 03...	1300	2	2	<100	200	<1	1	30	30	<1
AUG 27...	1400	3	3	100	100	<1	<1	20	20	<1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
NOV 03...	1	14	4	390	40	9	1	60	30	.2
FEB 02...	<1	5	1	170	100	2	1	100	60	.1
MAR 29...	1	14	1	600	220	2	<1	150	140	.2
JUN 03...	<1	4	1	450	110	1	<1	110	60	.2
AUG 27...	<1	1	2	320	40	<1	<1	180	50	.1



RIO GRANDE BASIN  
08407500 PECOS RIVER AT RED BLUFF, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	<.1	5	3	1	2	<1	<1	50	40
FEB 02...	<.1	2	1	3	2	<1	<1	30	30
MAR 29...	.1	2	1	2	2	<1	1	30	30
JUN 03...	<.1	5	<1	1	1	<1	<1	30	40
AUG 27...	.2	<1	1	2	1	<1	<1	30	20

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL (UG/L) (39516)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL (UG/L) (39330)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL (UG/L) (39360)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)
NOV 03...	1230	--	0	--	.0	--	.0	--	.0	--	.1
JUN 03...	1300	<.10	--	<.01	--	<.10	--	<.01	--	<.01	--

DATE	DDT, TOTAL (UG/L) (39370)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)
NOV 03...	--	.0	--	--	.0	--	--	.0	--	--
JUN 03...	<.01	--	<.01	<.01	--	<.01	<.01	--	<.01	<.01

DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)
NOV 03...	.0	--	.0	--	.0	--	--	.0	--	--
JUN 03...	--	<.01	--	<.01	--	<.01	<.01	--	<.01	<.01

RIO GRANDE BASIN  
08407500 PECOS RIVER AT RED BLUFF, NM -- Continued  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
NOV 03...	--	--	.0	--	--	--	--	--	--	--
JUN 03...	<.01	<1	--	<.01	<.01	<.01	<.01	<.10	<.10	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 03...	83	K0
DEC 08...	160	73
FEB 02...	K2	K1
MAR 29...	K10	120
JUN 03...	K0	1200
JUL 26...	190	1500
AUG 27...	170	2200

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
NOV 03...	1230	39	14.0	195	21	95
DEC 08...	1100	60	7.0	20	3.2	51
FEB 02...	1030	38	7.0	7540	774	98
MAR 29...	1230	24	15.0	106	6.9	86
JUN 03...	1300	24	24.0	285	18	56
JUL 26...	1000	18	26.0	20	.97	76
AUG 27...	1400	28	29.0	29	2.2	78

RIO GRANDE BASIN  
08407500 PECOS RIVER AT RED BLUFF, NM -- Continued  
WATER-QUALITY RECORDS

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ONCE-DAILY												
1	13700	12500	10900	11700	13600	14500						
2	13600	12600	11200	11500	13400	14300						
3	13600	11000	11200	11600	15100	13300						
4	13800	12600	11200	12200	15400	13200						
5	13700	13900	10300	12300	14300	13500						
6	13300	13300	10200	12300	13400	14400						
7	13500	13100	10600	12000	14500	14900						
8	13900	12600	10300	13300	14400	15400						
9	13300	13100	10600	11300	13100	17000						
10	13200	13500	10300	12200	13000	14000						
11	13200	12700	10300	12300	14600	13900						
12	13100	12900	10300	12200	14400	12100						
13	12700	13600	10200	11700	14100	11800						
14	12700	12300	10200	11700	13500	11600						
15	12500	12100	10200	12100	13000	12100						
16	13200	12000	10700	12500	13600	9420						
17	13100	11800	10700	11800	13900	10300						
18	12800	11700	10200	11200	13400	9550						
19	13100	11600	10300	11200	14200	11700						
20	13600	12600	10400	11500	15100	10100						
21	13600	11600	10400	11200	14800	10100						
22	13600	10700	10400	11300	14900	14300						
23	---	11600	10400	11700	15600	10800						
24	12400	13000	10800	11900	14900	11800						
25	12100	11000	11300	15400	14300	10800						
26	12600	11000	12900	13300	14400	10900						
27	12100	10700	11200	15400	14600	10800						
28	11700	10700	10400	13000	14300	11700						
29	11800	11200	10700	13100	---	10800						
30	12300	11000	10800	13200	---	12200						
31	12300	---	11100	13200	---	13000						
MEAN	13000	12100	10700	12300	14200	12400						

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ONCE-DAILY												
1	24.0	18.0	12.0	10.5	10.5	11.5						
2	24.0	15.0	10.5	12.0	10.0	12.0						
3	25.0	17.0	10.5	11.0	7.5	12.0						
4	24.5	16.5	10.0	9.5	4.5	12.0						
5	27.0	17.0	9.5	8.5	3.5	11.5						
6	24.0	16.0	10.5	10.5	3.0	12.0						
7	23.5	15.5	10.5	9.5	5.0	13.5						
8	23.0	15.5	11.0	9.0	6.5	10.0						
9	23.5	15.0	11.0	8.5	8.0	11.0						
10	24.0	15.0	12.0	7.5	9.0	13.0						
11	23.5	14.5	11.5	3.5	10.0	14.0						
12	23.5	14.0	13.0	6.0	10.5	15.5						
13	23.5	15.0	12.0	5.0	11.0	16.0						
14	24.0	15.5	11.0	4.5	12.0	15.0						
15	23.0	15.0	12.0	7.0	13.0	15.0						
16	24.0	16.0	7.5	6.0	13.5	20.5						
17	23.5	14.0	7.0	6.5	13.0	21.0						
18	21.5	15.0	8.5	7.5	15.0	22.0						
19	20.5	15.5	9.0	9.0	15.5	21.5						
20	20.0	14.5	10.0	11.0	16.0	21.5						
21	18.5	12.5	10.5	12.5	17.0	24.0						
22	18.0	13.0	10.5	12.0	16.0	15.5						
23	---	12.0	10.0	12.5	18.0	17.0						
24	17.5	13.0	8.5	12.0	15.5	17.5						
25	16.5	12.5	8.5	11.5	9.0	14.0						
26	17.5	13.0	9.5	12.0	11.0	15.0						
27	17.0	12.5	9.0	13.0	13.5	14.5						
28	18.0	12.0	9.5	12.5	14.0	14.0						
29	19.0	14.0	9.0	11.5	---	15.5						
30	18.0	13.0	9.0	11.0	---	13.0						
31	17.5	---	10.0	10.5	---	12.5						
MEAN	21.5	14.5	10.0	9.5	11.0	15.5						

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

## RIO GRANDE BASIN

08408500 DELAWARE RIVER NEAR RED BLUFF, NM

LOCATION.--Lat 32°01'23", long 104°03'15", in NE¼SW¼SE¼ sec.23, T.26 S., R.28 E., Eddy County, Hydrologic Unit 13070002, near center of channel on downstream side of pier of bridge on U.S. Highway 285, 2.1 mi (3.4 km) north of the New Mexico-Texas state line, 3.6 mi (5.8 km) southwest of Red Bluff, 3.7 mi (6.0 km) upstream from mouth and 14 mi (22.5 km) south of Malaga. Mouth at Pecos River mile 405.6 (652.6 km).

DRAINAGE AREA.--689 mi<sup>2</sup> (1,785 km<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. Datum of gage is 2,900.66 ft (884.121 m) National Geodetic Vertical Datum of 1929. Prior to May 1914, at site 3.0 mi (4.8 km) upstream at different datum. May 1914 to June 1915 at site 2.5 mi (4.0 km) downstream at different datum.

REMARKS.--Records good except those above 10 ft<sup>3</sup>/s which are fair. One small upstream diversion. Several observations of water temperature during year.

AVERAGE DISCHARGE.--45 years (1938-82), 13.2 ft<sup>3</sup>/s (0.374 m<sup>3</sup>/s), 9,560 acre-ft/yr (11.8 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,400 ft<sup>3</sup>/s (2,310 m<sup>3</sup>/s) Oct. 2, 1955, gage height, 27.0 ft (8.23 m), from floodmarks, from rating curve extended above 6,500 ft<sup>3</sup>/s (184 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights, 12.84 ft (3.914 m), 17.55 ft (5.349 m), and 27.0 ft (8.23 m); no flow many days most years.

Maximum discharge since at least 1911 is that of Oct. 2, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 932 ft<sup>3</sup>/s (26.4 m<sup>3</sup>/s) Aug. 18, gage height, 5.81 ft (1.771 m) no peak above base of 1,700 ft<sup>3</sup>/s (48 m<sup>3</sup>/s); minimum, 0.27 ft<sup>3</sup>/s (0.008 m<sup>3</sup>/s) July 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	4.0	4.7	5.3	5.0	4.6	3.6	6.6	1.5	146	.54	.46
2	3.8	4.0	4.7	5.3	5.1	4.5	3.4	4.8	1.5	19	46	.41
3	3.9	4.2	4.8	5.2	5.1	4.3	3.4	4.3	1.4	8.6	2.6	.40
4	3.8	4.3	4.9	5.2	5.1	4.2	3.3	4.0	1.4	5.9	2.1	.39
5	3.7	4.3	4.9	5.1	5.1	4.1	3.3	13	1.4	3.3	1.5	.38
6	4.1	4.4	5.0	5.3	5.1	4.1	3.3	4.6	1.3	2.5	.90	.40
7	5.0	4.5	5.1	5.3	5.1	4.1	3.2	3.5	1.3	2.0	.70	.36
8	5.5	4.5	5.1	5.3	5.2	4.1	3.0	3.1	1.2	15	.82	.36
9	5.2	4.4	5.1	5.3	5.1	4.1	2.9	2.9	1.1	32	3.0	.38
10	5.0	4.4	5.1	5.4	5.1	4.1	2.9	2.8	1.1	2.4	1.8	24
11	4.9	4.5	5.1	5.5	5.3	4.1	2.8	2.7	1.2	1.7	1.2	98
12	4.9	4.7	5.3	5.8	5.3	4.0	2.8	2.7	1.3	24	.95	9.6
13	4.8	4.8	5.0	6.3	5.2	4.0	2.7	2.5	18	4.0	.79	2.3
14	4.7	4.6	4.9	5.8	5.1	4.0	2.6	2.4	15	2.2	.69	1.6
15	4.7	4.7	4.9	5.8	5.1	4.2	2.7	2.3	49	1.7	.57	2.9
16	4.6	4.7	4.9	5.6	5.1	3.8	2.6	2.3	8.8	1.4	1.4	2.2
17	4.6	4.7	4.9	5.3	5.1	3.8	2.6	2.2	4.2	1.2	.78	1.4
18	4.5	4.7	4.9	5.4	5.1	3.8	2.6	2.3	3.2	1.1	96	1.3
19	4.5	4.5	5.0	5.4	4.9	3.8	2.7	3.1	2.8	.96	2.3	1.4
20	4.4	4.5	5.0	5.3	4.9	3.6	2.7	2.3	3.0	.94	1.1	1.5
21	4.4	4.7	5.0	5.3	4.9	3.6	2.7	2.0	2.9	.76	.81	4.4
22	4.3	4.9	5.0	5.2	4.9	3.6	3.4	1.9	2.7	.66	.67	18
23	4.2	4.9	5.1	5.2	4.8	3.7	4.0	2.1	3.1	.56	.57	3.6
24	4.2	4.9	5.1	5.1	4.7	3.7	4.1	2.1	2.4	.52	.52	2.0
25	4.1	4.7	5.1	5.2	4.8	3.6	4.1	2.2	2.1	.46	.49	1.8
26	4.1	4.5	5.2	5.3	4.7	3.6	3.7	2.9	1.9	.47	.50	1.6
27	4.1	4.6	5.2	5.4	4.6	3.7	3.5	4.3	1.8	.43	.55	1.5
28	4.1	4.7	5.2	5.5	4.7	3.8	3.3	2.3	1.7	.38	.54	10
29	4.2	4.9	5.3	5.4	---	3.7	4.2	1.8	1.5	.35	.49	76
30	4.2	4.8	5.1	5.2	---	3.6	50	1.6	1.7	.31	.46	3.4
31	4.0	---	5.2	5.2	---	3.6	---	1.5	---	.55	.48	---
TOTAL	136.3	137.2	155.8	166.9	140.2	121.5	142.1	99.1	141.5	281.35	171.82	272.04
MEAN	4.40	4.57	5.03	5.38	5.01	3.92	4.74	3.20	4.72	9.08	5.54	9.07
MAX	5.5	4.9	5.3	6.3	5.3	4.6	50	13	49	146	96	98
MIN	3.7	4.0	4.7	5.1	4.6	3.6	2.6	1.5	1.1	.31	.46	.36
AC-FT	270	272	309	331	278	241	282	197	281	558	341	540
CAL YR 1981	TOTAL	2821.96	MEAN	7.73	MAX	166	MIN	.00	AC-FT	5600		
WTR YR 1982	TOTAL	1965.81	MEAN	5.39	MAX	146	MIN	.31	AC-FT	3900		

## 08410000 RED BLUFF RESERVOIR NEAR ORLA, TX

LOCATION.--Lat 31°54'06", long 103°54'42", Reeves County, Hydrologic Unit 13070001, at right end of Red Bluff Dam on the Pecos River, 3 mi (5 km) upstream from Salt Creek, and 4.5 mi (7.2 km) north of Orla.

DRAINAGE AREA.--20,720 mi<sup>2</sup> (53,660 km<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 (0.131 m) below National Geodetic Vertical Datum.

REMARKS.--The reservoir is formed by a rock-faced earthfill dam 9,200 ft (2,800 m) 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 spillway is a cut through natural ground located to the right of right end of dam and is 790 ft (241 m) wide. The controlled spillway is equipped with 12 tainter gates that are 25 by 15 ft (8 by 5 m) 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 furnished by Red Bluff Water Power and Control District.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents observed, 352,000 acre-ft (434 hm<sup>3</sup>) Sept. 27, 1941, gage height, 2,846.2 ft (867.52 m), observed on nonrecording gage at service spillway (affected by variable drawdown due to flow through tainter gates); minimum observed, 11,080 acre-ft (13.7 hm<sup>3</sup>) May 13, 1948, gage height, 2,781.4 ft (847.77 m).

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents observed, 62,450 acre-ft (77.0 hm<sup>3</sup>) Mar. 20 to Apr. 2, gage height, 2,807.7 ft (855.79 m); minimum observed, 41,500 acre-ft (51.2 hm<sup>3</sup>) Aug. 2, gage height, 2,801.0 ft (853.74 m).

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

2,801.0	41,500
2,804.0	50,000
2,808.0	63,500

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51200	53000	55100	57900	60000	61100	62500	50600	51800	50900	41800	44900
2	51200	53000	55100	57900	60000	61400	62500	50600	51500	51200	41500	44600
3	51200	53000	55100	57900	60000	61400	61400	50600	51500	51200	44000	44600
4	51200	53000	55100	57900	60000	61400	61100	50600	51500	51200	44000	44600
5	51200	53000	55500	58300	60000	61400	60400	50900	51200	51200	44000	44600
6	51500	53400	55500	58300	60000	61400	59700	50900	51200	51200	44000	44600
7	51500	53400	55500	58300	60000	61400	59000	51200	51200	51200	44000	44600
8	51500	53400	55800	58300	60000	61400	57900	51200	50900	51200	44000	44600
9	51800	53400	55800	58600	60000	61400	57200	51500	50600	50900	44000	44600
10	51800	53400	55800	58600	60000	61400	56500	51500	50600	50900	44000	44300
11	51800	53700	56200	58600	60400	61800	55800	51800	50300	50900	44000	44600
12	52100	53700	56200	58600	60400	61800	55100	51800	50000	50900	44000	44600
13	52100	53700	56200	58600	60400	61800	54400	51800	49700	50900	44000	44600
14	52100	53700	56500	58600	60400	61800	53700	51800	50000	50900	44000	44600
15	52100	54100	56500	58600	60400	62100	52700	51800	50000	50600	44000	44600
16	52400	54100	56500	59000	60700	62100	52100	51800	50000	50600	43800	46700
17	52400	54100	56500	59000	60700	62100	51200	51800	50000	50300	43800	47000
18	52400	54100	56900	59000	60700	62100	50600	51800	50000	50000	43800	47600
19	52400	54100	56900	59000	60700	62100	50300	51800	50000	49700	44900	47600
20	52400	54400	56900	59300	60700	62500	50000	51800	50000	49400	45200	47600
21	52400	54400	56900	59300	60700	62500	49700	51800	50000	48800	45200	47600
22	52700	54400	57200	59300	61100	62500	49700	51800	49700	47900	45200	47300
23	52700	54400	57200	59300	61100	62500	49700	51800	49700	47000	45200	47300
24	52700	54400	57200	59300	61100	62500	49700	51800	49700	46400	45200	47300
25	53000	54800	57200	59300	61100	62500	49700	51800	49700	45800	45200	47300
26	53000	54800	57200	59700	61100	62500	49700	51800	49700	45200	44900	47300
27	53000	54800	57600	59700	61100	62500	49700	51800	49700	44300	44900	47300
28	53000	54800	57600	59700	61100	62500	49700	51800	49700	43800	44900	47000
29	53000	54800	57600	59700	---	62500	50000	51800	49400	43300	44900	47000
30	53000	54800	57600	60000	---	62500	50600	51300	49400	42800	44900	47300
31	53000	---	57600	60000	---	62500	---	51800	---	42300	44900	---
MAX	53000	54800	57600	60000	61100	62500	62500	51800	51800	51200	45200	47600
MIN	51200	53000	55100	57900	60000	61100	49700	50600	49400	42300	41500	44300
( )	+1500	+1800	+2800	+2400	+1100	+1400	-11900	+1200	-2400	-7100	+2600	+2400
CAL YR 1981	MAX	78700	MIN	51200	( )	-15100						
WTR YR 1982	MAX	62500	MIN	41500	( )	-4200						

( ) CHANGE IN CONTENTS IN ACRE-FEET

## RIO GRANDE BASIN

08412500 PECOS RIVER NEAR ORLA, TX

LOCATION.--Lat 31°52'21", long 103°49'52", Reeves County, Hydrologic Unit 13070001, on right bank at bridge on Farm Road 652, 5.5 mi (8.8 km) downstream from Salt Creek (Screw Bean Arroyo), 5.9 mi (9.5 km) northeast of Orla, and 8.5 mi (13.7 km) downstream from Red Bluff Reservoir.

DRAINAGE AREA.--21,210 mi<sup>2</sup> (54,930 km<sup>2</sup>), approximately (contributing area).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1937 to current year.

REVISED RECORDS.--WSP 928: 1937.

GAGE.--Water-stage recorder. Datum of gage is 2,730.86 ft (832.366 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 16, 1969, at site 6.9 mi (11.1 km) downstream at datum 12.81 ft (3.904 m) lower.

REMARKS.--Water-discharge records fair. Most of flow is released from storage in Red Bluff Reservoir (station 0841000). Occasional runoff from draws between dam and station. Many diversions above Red Bluff Reservoir for irrigation.

AVERAGE DISCHARGE.--45 years (water years 1938-82), 164 ft<sup>3</sup>/s (4.644 m<sup>3</sup>/s), 118,800 acre-ft/yr (146 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft<sup>3</sup>/s (671 m<sup>3</sup>/s) Sept. 29, 1941, gage height, 20.74 ft (6.322 m), site and datum then in use; no flow at times in 1946 and 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 419 ft<sup>3</sup>/s (11.9 m<sup>3</sup>/s) July 24 at 1330 hours, gage height, 4.75 ft (1.448 m); minimum daily, 5.3 ft<sup>3</sup>/s (0.15 m<sup>3</sup>/s) May 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	9.1	11	10	8.6	8.9	8.5	11	6.6	81	8.0	12
2	22	9.2	11	10	8.3	8.9	78	11	5.8	35	9.7	12
3	15	9.0	11	10	8.4	8.9	282	11	12	32	9.2	21
4	15	9.5	10	9.4	8.4	8.9	284	10	95	24	8.6	11
5	16	10	10	9.5	8.4	8.9	280	17	90	20	8.5	11
6	15	11	10	9.5	8.3	8.9	276	18	88	19	9.7	10
7	18	11	11	9.5	7.9	8.9	283	14	88	17	9.0	9.7
8	19	11	11	9.5	8.4	8.9	283	11	92	49	9.8	9.6
9	17	11	11	9.5	7.9	8.9	290	9.7	124	19	12	9.5
10	16	11	11	9.5	7.9	8.9	291	8.8	127	15	16	10
11	29	10	12	9.5	8.3	8.9	292	8.5	129	16	18	14
12	30	11	11	9.5	8.2	8.9	292	8.4	129	48	14	14
13	20	11	12	9.2	7.9	8.9	292	7.5	126	104	13	13
14	16	12	11	9.5	7.4	8.5	290	6.2	136	94	13	11
15	14	13	11	9.5	7.3	8.4	288	6.2	138	91	12	10
16	14	12	11	9.5	6.9	7.6	286	5.7	134	81	13	8.8
17	12	11	10	9.5	6.8	7.4	290	5.3	110	83	13	35
18	11	12	9.1	9.3	6.6	7.6	290	5.3	27	77	13	92
19	11	11	9.4	8.9	6.5	8.4	211	6.1	22	76	13	93
20	11	10	10	8.9	6.9	7.6	89	5.8	27	137	15	98
21	12	10	11	8.9	7.4	6.8	98	5.4	30	272	16	106
22	13	10	9.8	8.9	8.1	6.5	100	5.6	27	401	17	108
23	20	11	8.9	8.9	8.9	7.5	90	7.4	22	412	17	112
24	19	12	8.9	8.9	8.9	8.6	63	7.2	18	418	18	106
25	15	12	8.9	8.9	8.2	8.3	61	6.4	16	417	13	77
26	14	12	10	8.9	7.7	7.9	59	11	15	416	12	75
27	13	12	10	8.9	8.0	8.0	55	37	13	381	13	74
28	12	11	10	8.9	8.7	8.4	12	15	14	27	12	74
29	13	11	10	8.9	---	8.9	8.9	9.5	14	13	12	75
30	13	13	10	8.4	---	8.9	8.6	9.4	14	10	12	81
31	11	---	9.7	8.4	---	8.7	---	7.2	---	8.5	12	---
TOTAL	654	328.8	320.7	286.6	221.2	259.7	5531.0	307.6	1889.4	3893.5	391.5	1392.6
MEAN	21.1	11.0	10.3	9.25	7.90	8.38	184	9.92	63.0	126	12.6	46.4
MAX	178	13	12	10	8.9	8.9	292	37	138	418	18	112
MIN	11	9.0	8.9	8.4	6.5	6.5	8.5	5.3	5.8	8.5	8.0	8.8
AC-FT	1300	652	636	568	439	515	10970	610	3750	7720	777	2760
CAL YR 1981	TOTAL	28519.0	MEAN	78.1	MAX	465	MIN	6.9	AC-FT	56570		
WTR YR 1982	TOTAL	15476.6	MEAN	42.4	MAX	418	MIN	5.3	AC-FT	30700		

RIO GRANDE BASIN  
08412500 PECOS RIVER NEAR ORLA, TX -- Continued  
WATER-QUALITY RECORDS

417

PERIOD OF RECORD:--Water years 1937 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1937 to current year.

WATER TEMPERATURES: March 1953 to current year.

REMARKS.--Station is operated by the Texas District.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 29,400 micromhos May 16, 1978; minimum daily, 1,610 micromhos June 2, 1948.

WATER TEMPERATURES (Water 1953-61, 1968-80): Maximum, 31.0°C Aug. 13, 1978, Aug. 13, 1982; minimum, 0.0°C Jan. 11, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 27,200 micromhos May 31; minimum daily, 10,100 micromhos Oct. 1.

WATER TEMPERATURES: Maximum, 31.0°C Aug. 13; minimum 0.0°C Jan. 11.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	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)
OCT 21...	1545	12	21300	20600	7.8	18.0	3424	3314	860	310
DEC 03...	1235	9.9	23800	24500	8.0	9.0	3590	3470	910	320
APR 28...	1330	9.3	13700	14400	7.6	20.0	2653	2543	650	250
JUN 30...	1405	14	15900	16100	7.8	29.0	2769	2669	680	260
AUG 25...	1615	13	17100	17400	8.4	29.0	2951	2851	720	280

DATE	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)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
OCT 21...	4000	31	33	110	3100	7000	1.5	4.0	15400
DEC 03...	4500	34	36	120	3200	7800	1.5	3.5	16800
APR 28...	2400	21	52	110	2200	4000	1.0	1.6	9620
JUN 30...	2800	24	54	100	2500	4700	1.1	4.2	11100
AUG 25...	3100	26	73	100	2400	5200	.9	8.8	11800



RIO GRANDE BASIN  
08412500 PECOS RIVER NEAR ORLA, TX -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10100	23100	23600	23300	23500	24000	24600	21800	26900	13800	14000	15200
2	10500	23100	23700	23400	23600	24200	24700	22000	27000	14800	13700	15000
3	11600	23000	23500	23700	23600	24200	11700	23000	26400	15400	15300	14900
4	17500	22100	23600	23800	23600	24300	11700	23100	13500	16700	16300	14100
5	19700	22800	23500	23700	23700	24300	11800	22900	13000	17700	15300	14500
6	20800	23000	23400	23800	23600	24200	11700	24300	13100	17100	15000	14800
7	21300	23100	23300	23700	23600	24300	11800	24200	13200	16300	15800	14800
8	23100	23200	23400	23600	23700	24200	11900	24100	13100	14000	15300	14800
9	23500	23100	23300	23500	23800	24100	11800	23600	12800	13700	14800	14800
10	23200	23300	23200	23600	23700	24100	11700	23000	12900	15300	15600	14700
11	22000	23500	23100	23400	23800	24200	11700	23500	12900	15300	21700	14700
12	25000	23400	22900	23400	23600	24200	11800	23900	12800	15300	18200	17000
13	20500	23500	23000	23400	23300	24300	11700	24300	12800	15400	16800	19100
14	18400	23600	23000	23000	23500	24200	11600	24100	12900	14100	16300	17300
15	17600	23500	23100	23400	23600	23400	11700	24100	14000	13800	15900	17000
16	18800	23600	23000	23300	23400	22300	11800	23800	13400	13600	15600	16500
17	19900	23500	22900	23400	23500	21900	11700	23600	13300	13400	15400	16300
18	20500	23600	22800	23600	23400	22100	11800	23700	13700	13300	15300	14200
19	20600	23500	22900	23300	23300	22200	11800	23600	17100	13400	15000	14100
20	21200	23600	22800	23200	23300	22100	12800	23600	16400	13200	14900	14000
21	21300	23500	22900	23300	23200	22200	12700	23900	21300	12900	14900	14000
22	21600	23400	23000	23300	23400	21400	12600	24300	18800	13000	15300	14000
23	21900	23500	23100	23200	23400	22200	12900	24400	18200	12000	16600	13900
24	23400	23400	23000	23300	23400	22800	14000	24300	17700	11900	17200	14300
25	23600	23500	23100	23200	23500	22600	14100	24600	17200	12900	17000	14400
26	23500	23600	22900	23300	23600	22500	14000	25600	17000	13000	16800	14200
27	23300	23700	23000	23200	23400	22400	13800	15000	16700	12900	15500	14100
28	23200	23600	23100	23200	23600	22400	13800	14400	15900	13500	15800	14000
29	23000	23700	23000	23100	---	22500	15400	16100	15800	14200	15200	13900
30	23000	23600	23100	23300	---	22400	20600	19500	15900	14200	15100	13500
31	23100	---	23000	23500	---	23900	---	27200	---	13900	15100	---
MEAN	20500	23400	23100	23400	23500	23200	13500	22900	16200	14200	15800	14900
WTR YR 1982	MEAN	19600	MAX	27200	MIN	10100						

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	13.0	9.5	6.0	7.0	11.0	18.0	18.0	22.0	25.0	28.0	28.0
2	21.0	11.0	8.0	8.0	6.0	12.0	16.0	19.0	24.0	25.0	27.0	27.5
3	23.0	12.0	8.0	8.0	4.0	---	15.0	21.0	25.0	27.0	28.0	26.0
4	23.0	12.0	8.0	5.0	4.0	13.0	13.0	22.0	22.0	28.0	29.0	25.0
5	24.0	12.0	7.5	6.0	2.0	11.0	15.0	21.0	24.0	27.0	28.5	---
6	23.0	14.0	8.0	7.0	5.0	10.0	14.0	19.0	24.0	27.0	28.0	25.0
7	20.0	14.0	11.0	6.0	3.0	9.0	15.0	20.0	24.0	28.0	27.0	29.0
8	19.0	---	8.0	6.0	5.0	9.0	16.0	21.5	23.0	---	---	24.0
9	19.0	12.5	8.0	3.0	6.0	11.0	15.0	21.0	23.0	27.0	22.0	25.0
10	20.0	10.5	8.0	---	5.0	14.0	16.0	23.0	24.0	28.0	27.0	---
11	22.0	11.0	9.0	.0	8.0	15.0	---	25.0	25.0	28.0	27.0	25.0
12	22.0	12.0	10.0	3.0	8.0	16.0	17.0	23.0	23.0	26.5	28.0	24.0
13	22.0	11.0	11.0	3.0	9.0	16.0	20.0	24.0	23.0	26.0	31.0	23.0
14	21.0	11.0	11.0	2.0	9.0	17.0	---	20.0	24.5	28.0	28.0	24.0
15	22.0	13.0	9.0	3.0	13.0	16.0	18.0	20.0	23.0	25.0	27.0	26.0
16	22.0	12.0	9.0	2.0	11.0	15.0	17.0	22.0	23.0	26.0	28.0	24.0
17	21.0	13.0	8.0	2.0	---	14.0	17.0	22.0	24.0	25.0	28.0	24.0
18	18.0	12.0	5.0	8.0	13.0	17.0	18.0	23.0	25.0	26.0	30.0	23.0
19	17.0	11.0	4.0	6.0	16.0	18.0	18.0	25.0	26.0	26.0	---	23.0
20	16.0	10.0	6.0	9.0	14.0	16.0	17.0	24.0	---	25.0	28.0	23.0
21	18.0	10.0	8.0	10.0	13.0	15.0	13.5	23.0	22.0	26.0	27.0	21.5
22	16.0	9.0	---	10.0	18.0	15.0	13.0	23.0	28.0	26.0	27.0	21.5
23	14.0	10.0	6.0	6.0	18.0	16.0	13.0	24.0	27.0	---	26.0	21.0
24	13.0	11.0	---	7.0	14.0	15.0	---	23.0	26.0	25.0	26.0	21.5
25	15.0	11.0	6.0	8.0	12.0	13.0	17.0	23.0	27.0	26.0	27.0	22.0
26	13.0	---	5.0	7.0	10.5	13.0	18.0	24.0	---	26.0	26.0	20.0
27	13.0	10.0	7.0	6.0	8.0	13.0	17.0	---	27.0	26.0	27.0	21.0
28	13.0	10.5	6.0	8.0	10.5	14.0	17.0	27.0	29.5	26.0	27.0	22.5
29	14.0	13.0	8.0	9.5	---	---	24.0	22.0	28.0	26.0	27.0	22.5
30	17.0	12.0	8.0	9.0	---	16.0	21.0	---	27.0	27.0	27.0	---
31	15.0	---	7.0	6.0	---	14.0	---	24.0	---	28.0	28.0	---
MEAN	18.5	11.5	8.0	6.0	9.5	14.0	16.5	22.5	25.0	26.5	27.5	24.0
WTR YR 1982	MEAN	17.5	MAX	31.0	MIN	.0						

08477110 MIMBRES RIVER AT MIMBRES, NM  
(National stream-quality accounting network station)

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 (30 m) downstream from Willow Springs Canyon, 0.3 mi (0.5 km) east of Mimbres, 1.1 mi (1.8 km) downstream from Shepard Canyon, 2.5 mi (4.0 km) downstream from Bear Canyon and at mile 73.1 (117.6 km).

DRAINAGE AREA.--184 mi<sup>2</sup> (477 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,920 ft (1,804 m), from topographic map.

REMARKS.--Water-discharge records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft<sup>3</sup>/s (51.0 m<sup>3</sup>/s) Dec. 18, 1978, gage height, 9.00 ft (2.743 m) from floodmarks, from rating curve extended above 450 ft<sup>3</sup>/s (13 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum, 0.22 ft<sup>3</sup>/s (0.006 m<sup>3</sup>/s) Aug. 22, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 430 ft<sup>3</sup>/s (12.2 m<sup>3</sup>/s), Sept. 8, gage height, 458 ft (1.396 m) no other peak above base of 200 ft<sup>3</sup>/s (5.7 m<sup>3</sup>/s); minimum, 0.50 ft<sup>3</sup>/s (0.014 m<sup>3</sup>/s) June 28, July 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	7.3	7.1	4.2	4.7	10	4.2	14	8.5	.67	5.2	8.5
2	1.7	7.6	7.2	4.6	4.6	9.6	4.3	16	5.4	.71	5.6	8.5
3	8.7	7.7	6.5	4.5	4.5	11	4.4	14	3.1	.74	5.2	8.0
4	2.4	7.5	5.9	4.3	4.6	11	4.7	14	2.8	1.6	4.5	7.8
5	3.0	6.4	5.9	4.3	4.5	9.2	4.7	14	2.8	2.8	4.8	7.8
6	4.0	5.6	5.4	4.4	4.1	8.1	4.9	15	3.0	5.9	6.3	7.6
7	3.5	5.9	5.0	4.3	3.9	8.3	4.9	15	3.2	7.4	5.6	7.5
8	3.8	6.6	4.9	4.1	4.0	7.9	4.1	13	4.1	7.8	5.2	30
9	4.0	7.1	4.7	4.2	3.9	5.6	3.3	13	4.3	9.4	4.8	10
10	4.5	7.3	5.0	4.3	3.8	2.4	3.1	12	3.8	11	4.5	7.5
11	5.0	7.4	4.7	4.2	4.3	2.1	3.0	10	3.5	12	3.8	7.5
12	5.5	8.8	4.6	3.9	4.2	2.1	2.8	9.4	3.7	10	6.3	10
13	6.0	8.4	4.8	3.1	4.2	3.1	2.5	9.4	4.1	9.2	5.6	7.5
14	5.8	8.0	4.9	3.1	4.2	3.7	2.6	7.2	4.5	14	5.2	7.5
15	7.0	7.7	4.7	3.2	3.9	3.7	2.5	4.2	4.4	12	3.8	7.7
16	7.5	8.0	4.7	3.4	3.7	3.7	2.8	4.4	5.3	9.2	3.8	7.2
17	7.6	6.7	4.6	3.6	3.7	3.8	3.2	5.9	6.4	11	4.5	6.9
18	8.0	3.7	4.6	3.8	3.5	4.1	3.6	6.5	6.5	6.1	4.3	6.2
19	7.7	4.6	4.2	3.9	2.7	6.6	3.6	6.3	7.1	4.5	2.2	5.9
20	8.2	5.6	4.2	4.5	1.7	8.0	3.8	5.3	6.1	2.0	2.2	5.8
21	7.9	5.5	4.3	4.5	1.7	7.5	3.7	6.6	6.4	2.0	2.5	5.9
22	6.4	5.9	4.4	4.7	1.6	7.8	3.7	7.4	5.6	3.5	1.8	16
23	6.7	5.7	4.3	4.9	1.2	7.0	3.5	7.9	7.3	4.5	1.2	7.7
24	6.8	6.1	4.2	5.1	1.8	6.8	3.1	8.8	6.6	6.7	1.2	5.5
25	7.1	6.8	3.9	5.0	6.4	4.9	4.1	9.5	5.1	6.3	3.4	4.5
26	7.0	8.5	4.0	5.2	15	3.4	3.4	9.2	3.3	6.7	4.4	4.0
27	7.0	9.4	4.2	5.6	12	3.5	3.5	8.8	2.7	6.3	4.4	3.5
28	7.0	9.9	3.9	5.9	11	3.4	3.8	11	1.7	5.2	5.8	3.5
29	7.3	8.9	4.0	5.7	---	3.6	4.3	9.9	.89	5.9	8.9	3.2
30	7.6	7.5	4.2	5.2	---	3.9	5.3	9.4	.82	5.9	8.6	2.6
31	7.6	---	4.1	4.8	---	4.0	---	8.6	---	5.6	9.2	---
TOTAL	184.3	212.1	149.1	136.5	129.4	179.8	111.4	305.7	133.01	196.62	144.8	231.8
MEAN	5.95	7.07	4.81	4.40	4.62	5.80	3.71	9.86	4.43	6.34	4.67	7.73
MAX	8.7	9.9	7.2	5.9	15	11	5.3	16	8.5	14	9.2	30
MIN	1.7	3.7	3.9	3.1	1.2	2.1	2.5	4.2	.82	.67	1.2	2.6
AC-FT	366	421	296	271	257	357	221	606	264	390	287	460

CAL YR 1981 TOTAL 2126.13 MEAN 5.83 MAX 53 MIN .42 AC-FT 4220  
WTR YR 1982 TOTAL 2114.53 MEAN 5.79 MAX 30 MIN .67 AC-FT 4190

MIMBRES RIVER BASIN  
08477110 MIMBRES RIVER AT MIMBRES, NM--Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
DEC 08...	1530	5.0	240	251	8.4	8.6	19.5	15.5	1.3
FEB 16...	1430	3.7	303	303	8.3	8.7	20.5	18.0	4.1
APR 21...	1500	3.7	230	292	8.5	8.5	13.0	14.0	.50
JUN 10...	0900	4.3	300	298	8.1	8.4	18.0	12.0	.90
JUL 15...	1800	9.0	310	335	7.6	8.1	28.0	20.0	1.4
SEP 14...	1530	7.2	240	284	8.4	8.4	24.0	22.0	14

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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
DEC 08...	9.0	110	0	33	6.8	12	.5	3.0	7.8
FEB 16...	8.2	114	0	34	7.1	12	.5	4.0	7.0
APR 21...	9.3	132	0	40	7.7	12	.5	2.7	5.0
JUN 10...	10.6	130	0	39	7.8	12	.5	2.6	14
JUL 15...	6.8	137	0	40	9.0	13	.5	4.3	14
SEP 14...	6.2	132	0	40	7.7	13	.5	3.5	10

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 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)
DEC 08...	3.5	.2	51	191	189	.14	<.070	.030	.050
FEB 16...	10	.3	52	189	205	.14	.060	.060	.050
APR 21...	3.7	.2	48	220	204	<.10	.140	.050	.040
JUN 10...	3.0	.3	51	216	213	<.10	.120	.090	.030
JUL 15...	4.1	.3	51	223	225	<.10	.080	.070	.060
SEP 14...	3.5	<.1	54	203	216	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
DEC 08...	1530	2	2	<100	<100	<1	<1	10	<10	<1
APR 21...	1500	2	1	<100	44	1	<3	<10	<10	<1
JUN 10...	0900	1	1	<100	47	<1	<1	10	<10	5
SEP 14...	1530	1	1	<100	50	<1	<3	<10	<10	<1

MIMBRES RIVER BASIN  
08477110 MIMBRES RIVER AT MIMBRES, NM--Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
DEC 08...	<1	7	1	80	10	2	<1	<10	<10	<.1
APR 21...	<1	5	1	80	11	7	1	10	4	<.1
JUN 10...	2	2	<2	60	<3	<1	<2	20	<1	.1
SEP 14...	<1	1	<5	150	17	<1	<1	40	19	<.1

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
DEC 08...	<.1	<1	1	1	<1	<1	<1	10	<10
APR 21...	<.1	3	1	<1	<1	<1	<1	30	39
JUN 10...	<.1	6	8	<1	<1	<1	<2	10	4
SEP 14...	<.1	<1	2	<1	<1	<1	<1	10	13

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
DEC 08...	7	15
FEB 16...	64	410
APR 21...	310	180
JUN 10...	80	180
JUL 15...	74	610
SEP 14...	56	K280

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
DEC 08...	1530	5.0	15.5	7	.09	97
FEB 16...	1430	3.7	18.0	8	.08	95
APR 21...	1500	3.7	14.0	9	.09	66
JUN 10...	0900	4.3	12.0	21	.24	49
JUL 15...	1800	9.0	20.0	6	.15	98
SEP 14...	1530	7.2	22.0	8	.16	98

## TULAROSA VALLEY

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 (15 m) downstream from old U.S. Highway 70 bridge, 2.6 mi (4.2 km) west of Bent, and 8.5 mi (13.7 km) northeast of Tularosa, and at mile 19.4 (31.2 km).

DRAINAGE AREA.--120 mi<sup>2</sup> (310 km<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 and concrete control. Altitude of gage is 5,450 ft (1,660 m), from topographic map.

REMARKS.--Water-discharge records fair. Diversion for irrigation of about 1,000 acres (4.0 km<sup>2</sup>) 1959 determination, above station.

AVERAGE DISCHARGE.--34 years, (1949-82), 10.1 ft<sup>3</sup>/s (0.286 m<sup>3</sup>/s), 7,320 acre-ft/yr (9.03 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 4,280 ft<sup>3</sup>/s (121 m<sup>3</sup>/s) June 18, 1965, gage height, 5.02 ft (1.530 m), from rating curve extended above 160 ft<sup>3</sup>/s (4.53 m<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 (273 m<sup>3</sup>/s) was computed for station approximately 6 mi (10 km) downstream near Tularosa. Another flood may have occurred July 2, 1914.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 125 ft<sup>3</sup>/s (3.54 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 2	1600	152 4.30	2.78 .847	Sept. 10	1730	*211 5.98	2.87 .875

Minimum discharge, 3.0 ft<sup>3</sup>/s (0.085 m<sup>3</sup>/s) Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	13	15	14	16	14	9.5	11	14	8.4	13	12
2	12	13	15	14	16	14	9.2	10	18	15	13	10
3	8.6	13	15	12	16	14	8.9	11	16	16	13	13
4	9.5	15	14	12	16	14	7.2	12	16	14	13	12
5	10	14	14	13	16	13	7.2	14	14	9.2	13	9.4
6	10	14	13	13	16	12	8.1	14	14	12	13	9.4
7	10	14	13	13	16	12	8.7	13	12	12	13	9.9
8	10	14	14	13	16	12	9.3	13	12	12	13	10
9	10	14	14	13	16	13	9.2	12	10	13	13	9.9
10	11	15	14	13	16	13	9.5	12	9.7	12	13	17
11	11	15	14	13	17	12	9.4	12	18	8.7	13	16
12	11	15	15	15	16	12	8.7	11	19	9.1	14	14
13	11	15	16	16	16	13	9.4	10	12	8.4	12	14
14	11	15	15	16	16	12	9.3	10	6.9	15	11	14
15	11	15	15	16	16	12	9.0	11	7.7	15	8.9	13
16	11	15	15	15	16	11	9.2	9.8	17	15	8.3	12
17	11	14	15	15	17	11	9.7	10	18	15	7.2	9.9
18	11	14	15	15	17	11	8.9	10	17	15	10	9.2
19	12	14	15	15	16	10	9.5	12	16	16	8.0	17
20	12	14	16	17	16	10	10	12	13	15	9.5	15
21	12	14	15	16	16	9.9	11	12	12	16	8.9	15
22	12	14	15	16	16	9.5	11	15	12	16	5.7	15
23	12	14	15	16	15	10	11	14	11	15	8.7	14
24	12	14	16	16	15	10	12	11	10	14	12	14
25	12	14	16	16	15	10	12	11	10	9.3	13	14
26	13	14	16	16	14	10	10	11	9.5	9.7	12	13
27	13	14	15	16	14	11	11	12	9.2	12	10	13
28	13	15	15	16	14	10	11	12	8.6	10	11	13
29	13	15	14	16	---	9.5	11	12	5.7	13	10	13
30	13	15	14	16	---	8.9	11	9.6	5.4	13	11	15
31	13	---	13	16	---	9.2	---	10	---	15	14	---
TOTAL	351.1	428	456	459	442	353.0	290.9	359.4	373.7	398.8	348.2	385.7
MEAN	11.3	14.3	14.7	14.8	15.8	11.4	9.70	11.6	12.5	12.9	11.2	12.9
MAX	13	15	16	17	17	14	12	15	19	16	14	17
MIN	8.6	13	13	12	14	8.9	7.2	9.6	5.4	8.4	5.7	9.2
AC-FT	696	849	904	910	877	700	577	713	741	791	691	765
CAL YR 1981	TOTAL	4722.2	MEAN 12.9	MAX 30	MIN 6.3	AC-FT 9370						
WTR YR 1982	TOTAL	4645.8	MEAN 12.7	MAX 19	MIN 5.4	AC-FT 9210						

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
DEC 22...	1300	15	1180	1180	7.4	7.9	10.0	6.0	4.0
FEB 19...	1300	15	1550	1350	8.2	8.2	15.0	11.0	9.0
MAY 07...	1400	13	1250	1300	8.0	7.5	23.0	15.0	22
AUG 23...	1330	5.0	1400	1500	--	8.0	32.0	22.0	.50
SEP 29...	1130	13	1280	1380	8.2	8.0	21.0	14.0	.50

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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
DEC 22...	10.0	734	524	200	57	45	.7	1.4	490
FEB 19...	9.8	703	483	189	56	46	.8	1.9	480
MAY 07...	--	672	576	180	54	41	.7	1.1	490
AUG 23...	7.0	759	609	210	57	47	.8	1.3	590
SEP 29...	7.8	755	547	210	56	43	.7	1.5	500

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)
DEC 22...	63	.5	15	999	998	.42	<.070	.040	.020
FEB 19...	65	.4	14	1020	985	.39	.010	<.010	.000
MAY 07...	56	.4	14	920	894	<.10	.210	.050	.020
AUG 23...	69	.5	15	1140	1080	.60	<.060	.040	.010
SEP 29...	57	.5	15	1040	1010	.43	.110	.040	.020

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, 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)
DEC 22...	1300	4	2	<100	25	40	<1	<1	10	<10
FEB 19...	1300	--	--	--	--	50	--	--	--	--
MAY 07...	1400	1	1	<100	24	50	<1	<3	<10	<10
AUG 23...	1330	2	1	<100	32	--	<1	<1	10	10
SEP 29...	1130	1	1	100	32	50	1	<1	<10	10

TULAROSA VALLEY BASIN  
08481500 RIO TULAROSA NEAR BENT, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
DEC 22...	1	<3	5	1	570	17	1	<1	60	29
FEB 19...	--	--	--	--	--	62	--	--	--	--
MAY 07...	<1	<1	5	<1	150	29	<1	<1	30	16
AUG 23...	1	<1	2	2	240	11	1	<1	50	25
SEP 29...	1	<1	4	2	500	6	3	<1	80	41

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
DEC 22...	<.1	<.1	1	2	1	1	<1	<1	30	4
FEB 19...	--	--	--	--	--	--	--	--	--	--
MAY 07...	.2	<.1	3	<1	1	1	<1	<1	30	17
AUG 23...	.1	.1	4	1	1	2	<1	<1	30	16
SEP 29...	.1	.2	3	<1	1	1	<1	<1	20	11

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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, RADON METHOD (PCI/L AS U) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
DEC 22...	1300	<22	4.0	<8.7	6.1	<8.2	5.8	.07	2.6
AUG 23...	1330	<29	<.7	<14	1.1	<13	1.0	.05	3.5

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR UMMF (COLS./ 100 ML) (31673)
DEC 22...	K38	K100
FEB 19...	K5	56
MAY 07...	67	280
AUG 23...	K120	430
SEP 29...	K170	2000

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
DEC 22...	1300	15	6.0	103	4.2	52
FEB 19...	1300	15	11.0	287	12	49
AUG 23...	1330	5.0	22.0	32	.43	85
SEP 29...	1130	13	14.0	61	2.1	62



## 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 (5 km) northwest of Carracas, 7.2 mi (11.6 km) upstream from Piedra River, and at mile 332.8 (535.5 km).

DRAINAGE AREA.--1,230 mi<sup>2</sup> (3,190 km<sup>2</sup>), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,090 ft (1,856 m), from river-profile map.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, which are poor. Diversions for irrigation of about 11,000 acres (45 km<sup>2</sup>) above station. Highwater diversions above 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 (17.90 m<sup>3</sup>/s), 457,900 acre-ft/yr (565 hm<sup>3</sup>/yr) prior to completion of Azotea tunnel.

12 years (water years 1971-82), 566 ft<sup>3</sup>/s (16.03 m<sup>3</sup>/s), 410,100 acre-ft/yr (506 hm<sup>3</sup>/yr) since completion of Azotea tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft<sup>3</sup>/s (276 m<sup>3</sup>/s) Sept. 6, 1970, gage height, 8.34 ft (2.542 m), from rating curve extended above 6,000 ft<sup>3</sup>/s (170 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum, about 5 ft<sup>3</sup>/s (0.1 m<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 above base of 2,500 ft<sup>3</sup>/s (71 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Mar. 12	1400	*5070 144	6.10 1.859	May 3	0830	3930 111	5.79 1.765
Apr. 13	0330	2760 78.2	4.96 1.512	Aug. 25	1500	3550 101	5.28 1.609

Minimum daily discharge, 111 ft<sup>3</sup>/s (3.14 m<sup>3</sup>/s) Dec. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	300	145	160	140	230	898	2170	2140	1490	588	594
2	245	291	145	150	130	250	1250	2300	2050	1640	512	529
3	1170	291	142	140	130	250	802	3260	2050	1450	501	469
4	582	283	142	130	130	230	1300	2790	1820	1560	448	448
5	485	279	138	140	120	200	1630	2550	1900	1450	412	650
6	432	275	138	150	120	190	1470	2220	1700	1240	369	512
7	407	287	135	150	120	214	969	1670	1590	1060	360	474
8	379	329	132	140	130	218	802	1450	1670	845	360	564
9	407	296	132	140	130	260	734	1430	1720	898	356	422
10	360	279	132	140	130	296	802	1400	1790	913	325	398
11	342	264	130	150	130	438	994	1430	1790	860	347	485
12	490	260	130	160	130	3110	1830	1360	1810	754	379	1030
13	754	253	130	150	130	1380	2020	1300	1900	594	398	1470
14	838	242	130	140	130	1240	1830	1150	1900	600	524	1500
15	740	235	132	140	140	961	1780	961	1830	613	507	1260
16	1030	228	148	140	140	689	1620	890	1670	564	512	1470
17	838	224	153	140	140	663	1420	882	1740	607	469	1750
18	702	221	115	140	130	663	1390	890	1740	570	407	1370
19	657	207	111	140	140	553	1320	1040	1840	541	393	1240
20	619	156	140	150	150	427	1210	1160	1620	588	417	1410
21	532	159	176	140	160	398	1010	1460	1460	541	417	1540
22	529	156	170	140	180	388	875	1810	1420	507	469	1210
23	490	165	128	130	220	427	708	1590	1450	463	644	994
24	458	165	118	120	240	501	708	1520	1480	427	1850	852
25	427	165	120	120	220	619	631	1550	1550	417	2450	728
26	388	142	140	130	210	781	644	1680	1490	438	2200	663
27	379	145	160	140	210	781	669	2150	1430	422	1570	594
28	369	145	130	140	210	875	747	1900	1530	570	1350	594
29	356	142	150	140	---	1230	1070	2200	1530	607	921	570
30	342	142	150	130	---	650	1270	2270	1400	726	728	607
31	320	---	160	130	---	535	---	2000	---	781	760	---
TOTAL	16305	6726	4302	4350	4290	19647	34403	52433	51010	24738	21943	26397
MEAN	526	224	139	140	153	634	1147	1691	1700	798	708	880
MAX	1170	329	176	160	240	3110	2020	3260	2140	1640	2450	1750
MIN	188	142	111	120	120	190	631	882	1400	417	325	398
AC-FT	32340	13340	3530	8630	8510	38970	68240	104000	101200	49070	43520	52360

CAL YR 1981 TOTAL 125012 MEAN 342 MAX 1630 MIN 85 AC-FT 248000  
WTR YR 1982 TOTAL 266544 MEAN 730 MAX 3260 MIN 111 AC-FT 528700

NOTE.--No gage-height record Jan. 4 to Feb. 9.

## SAN JUAN RIVER BASIN

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 (5 km) downstream from Ignacio Creek, 5.2 mi (8.4 km) northeast of Arboles Post Office, and 8 mi (13 km) upstream from mouth.

DRAINAGE AREA.--629 mi<sup>2</sup> (1,629 km<sup>2</sup>).

PERIOD OF RECORD.--August 1962 to current year. Gage operated 1895-1899, 1910-1927 at a site 7.5 mi (12.1 km) downstream at altitude 6,000 ft (1,830 m). Low flow records probably not equivalent.

GAGE.--Water-stage recorder. Datum of gage is 6,147.52 ft (1,873.764 m) National Geodetic Vertical Datum of 1929, from Colorado State Highway Department bench mark.

REMARKS.--Records good except those for winter period and those for period of no-gage-height record, which are poor. Diversions for irrigation of about 2,800 acres (11 km<sup>2</sup>) above station. Several observations of specific conductance and water temperature were obtained and are published in Water Resources Data for Colorado.

AVERAGE DISCHARGE.--20 years, 372 ft<sup>3</sup>/s (10.54 m<sup>3</sup>/s), 269,500 acre-ft/yr (332 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,370 ft<sup>3</sup>/s (237 m<sup>3</sup>/s) Sept. 6, 1970, gage height, 6.38 ft (1.945 m) recorded, 7.55 ft (2.301 m) from floodmarks, from rating curve extended above 4,400 ft<sup>3</sup>/s (125 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum, 11 ft<sup>3</sup>/s (0.31 m<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 above base of 1,500 ft<sup>3</sup>/s (42 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Apr. 13	0200	*4060 115	4.88 1.487	Aug. 25	0130	3270 92.6	4.40 1.341
May 3	0800	2950 83.5	4.28 1.305				

Minimum daily discharge, 58 ft<sup>3</sup>/s (1.64 m<sup>3</sup>/s) Dec. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	202	92	80	75	110	470	1680	1420	836	194	400
2	97	184	56	75	65	120	552	1780	1400	748	170	340
3	304	177	92	70	70	120	516	2550	1380	628	252	290
4	298	174	86	65	65	110	705	2320	1300	540	217	290
5	245	167	90	70	60	95	916	2710	1320	486	188	326
6	245	161	88	75	60	90	980	2290	1220	430	164	303
7	217	164	82	75	60	95	748	1710	1070	395	184	313
8	205	177	84	75	65	100	726	1450	1100	370	188	265
9	253	167	84	70	70	110	684	1350	1120	345	177	270
10	225	158	86	70	70	130	756	1260	1160	312	164	260
11	217	152	92	75	70	180	1280	1230	1130	273	167	400
12	365	149	94	80	65	500	1900	1150	1110	261	188	750
13	540	143	88	75	65	480	2200	1080	1200	245	335	950
14	588	135	84	70	65	440	1900	956	1180	229	480	1000
15	528	132	76	65	70	410	1800	876	1110	209	410	850
16	684	130	80	70	70	380	1600	812	980	198	321	950
17	558	128	82	70	70	350	1400	796	1050	198	273	1100
18	470	122	67	70	70	321	1300	836	1020	188	257	950
19	430	108	86	75	70	277	1100	924	1140	191	257	850
20	410	99	90	75	75	229	1010	956	956	177	237	950
21	375	104	84	70	80	202	876	1160	868	164	225	1000
22	355	106	78	70	95	194	788	1340	812	161	237	850
23	326	104	61	65	110	198	719	1320	788	152	298	700
24	308	101	58	65	120	217	733	1240	780	143	767	550
25	290	101	60	65	100	261	705	1260	836	138	2210	500
26	265	97	65	65	100	350	684	1310	828	143	1310	450
27	253	86	80	70	100	355	677	1520	820	146	972	400
28	245	86	70	70	100	410	726	1390	844	177	820	390
29	233	106	65	70	---	570	1000	1540	836	249	990	380
30	221	97	75	65	---	420	1170	1500	748	241	650	400
31	205	---	80	70	---	380	---	1370	---	221	500	---
TOTAL	10052	4017	2485	2195	2155	8204	30621	43666	31526	9194	13802	17427
MEAN	324	134	80.2	70.8	77.0	265	1021	1409	1051	297	445	581
MAX	684	202	94	80	120	570	2200	2710	1420	836	2210	1100
MIN	97	86	58	65	60	90	470	796	748	138	164	260
AC-FT	19940	7970	4930	4350	4270	16270	60740	86610	62530	18240	27380	34570

CAL YR 1981 TOTAL 81073 MEAN 222 MAX 1280 MIN 46 AC-FT 160800  
WTR YR 1982 TOTAL 175344 MEAN 480 MAX 2710 MIN 58 AC-FT 347800

NOTE.--No gage-height record Feb. 12 to Mar. 16.

## 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 (0.2 km) upstream from Spring Creek, and 13 mi (21 km) upstream from mouth.

DRAINAGE AREA.--510 mi<sup>2</sup> (1,320 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733.

GAGE.--Water-stage recorder. Datum of gage is 6,143.58 ft (1,872.563 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by Vallecito Reservoir (station 09353000) 24 mi (39 km) upstream since April 1941. Diversions for irrigation of about 33,000 acres (130 km<sup>2</sup>) above station. Several observations of specific conductance and water temperature were obtained and are published in Water Resources Data for Colorado.

AVERAGE DISCHARGE.--32 years, 214 ft<sup>3</sup>/s (6.060 m<sup>3</sup>/s), 155,000 acre-ft/yr (191 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft<sup>3</sup>/s (181 m<sup>3</sup>/s) July 27, 1957, gage height, 8.95 ft (2.728 m), from rating curve extended above 5,100 ft<sup>3</sup>/s (140 m<sup>3</sup>/s); minimum determined, 5.6 ft<sup>3</sup>/s (0.16 m<sup>3</sup>/s) May 1, 3, 1977 (may have been lower during periods of freezeup).

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred Oct. 5, 1911 at this location.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,260 ft<sup>3</sup>/s (35.7 m<sup>3</sup>/s) at 1100 hours May 12, gage height, 5.75 ft (1.753 m); minimum daily, 55 ft<sup>3</sup>/s (1.56 m<sup>3</sup>/s) Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	151	163	74	90	154	133	270	214	466	187	222
2	266	151	154	74	90	256	139	302	202	604	187	178
3	571	151	151	70	82	406	122	355	194	664	198	151
4	230	148	151	65	85	310	142	322	154	640	184	154
5	181	148	151	70	80	178	166	604	206	460	172	190
6	145	148	151	75	80	130	163	940	214	302	172	187
7	120	163	92	80	85	133	139	916	214	218	194	210
8	118	160	78	75	85	151	130	1040	151	202	242	266
9	108	151	74	70	90	190	136	1150	346	202	230	278
10	100	151	74	75	90	234	136	1110	478	181	222	294
11	105	145	72	80	90	238	145	1130	664	178	250	598
12	125	133	72	80	98	916	214	1240	804	178	274	732
13	169	130	70	80	100	450	314	1220	812	166	342	616
14	125	136	68	75	105	424	294	1180	746	151	302	685
15	118	139	68	75	93	286	278	1160	466	139	266	294
16	151	139	68	75	95	258	258	1090	326	136	274	270
17	108	139	68	75	95	202	230	972	210	130	226	250
18	80	139	70	75	98	175	214	796	184	136	184	230
19	68	136	70	80	100	160	206	610	133	148	175	238
20	108	136	64	80	100	145	166	466	214	151	190	234
21	157	136	62	80	108	139	110	430	218	133	226	230
22	151	139	62	80	110	133	98	418	184	142	270	222
23	145	136	62	75	108	130	85	418	172	142	266	218
24	151	133	60	70	108	139	76	406	163	136	326	206
25	154	133	55	75	151	151	62	385	157	142	694	218
26	151	133	65	75	136	145	60	330	151	160	592	214
27	160	133	75	80	130	151	166	262	145	157	430	214
28	148	160	62	85	136	139	190	242	154	166	370	226
29	154	194	65	85	---	154	198	218	148	184	302	222
30	151	181	75	85	---	133	206	222	186	184	290	234
31	151	---	82	85	---	118	---	214	---	198	242	---
TOTAL	4805	4372	2654	2378	2823	6928	4976	20418	8650	7196	8479	8481
MEAN	155	146	85.6	76.7	101	223	166	659	288	232	274	283
MAX	571	194	163	85	151	916	314	1240	812	664	694	732
MIN	68	130	55	65	80	118	60	214	133	130	172	151
AC-FT	9530	8670	5260	4720	5600	13740	9870	40500	17160	14270	16820	16820

CAL YR 1981 TOTAL 42208 MEAN 116 MAX 571 MIN 35 AC-FT 83720  
WTR YR 1982 TOTAL 82160 MEAN 225 MAX 1240 MIN 55 AC-FT 163000

## SAN JUAN RIVER BASIN

09355000 SPRING CREEK AT LA BOCA, CO

LOCATION.--Lat 37°00'40", long 107°35'47", in SE¼SW¼ sec.15, T.32 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on right bank in an excavated channel, 0.2 mi (0.3 km) upstream from mouth, and 0.2 mi (0.3 km) east of La Boca.

DRAINAGE AREA.--58 mi<sup>2</sup> (150 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733.

GAGE.--Water-stage recorder. Altitude of gage is 6,160 ft (1,878 m), from topographic map.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, which are poor. Part of flow is return waste from irrigation. Several observations of specific conductance and water temperature were obtained and are published in Water Resources Data for Colorado.

AVERAGE DISCHARGE.--32 years, 30.6 ft<sup>3</sup>/s (0.867 m<sup>3</sup>/s), 22,170 acre-ft/yr (27.3 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft<sup>3</sup>/s (56.1 m<sup>3</sup>/s) Sept. 6, 1970, gage height, 4.62 ft (1.408 m), from rating curve extended above 160 ft<sup>3</sup>/s (4.53 m<sup>3</sup>/s) on basis of field estimate of peak flow; maximum gage height, 5.98 ft (1.823 m) Mar. 9, 1960 (backwater from ice); minimum discharge, 0.6 ft<sup>3</sup>/s (0.017 m<sup>3</sup>/s) Nov. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft<sup>3</sup>/s (5.1 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 3	0800	329 9.32	1.93 0.588	Sept. 12	1200	308 8.72	1.88 0.573
May 2	1830	271 7.67	1.63 0.497	Sept. 14	0200	*470 13.3	2.30 0.701
Aug. 25	0900	193 5.47	1.47 0.448				

Minimum daily discharge, 2.6 ft<sup>3</sup>/s (0.074 m<sup>3</sup>/s) Dec. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	4.8	4.0	3.4	3.4	69	7.8	33	57	67	80	55
2	114	4.8	3.8	3.2	3.2	170	7.8	25	57	62	84	55
3	213	4.8	3.6	3.0	3.2	176	5.6	26	54	57	84	54
4	67	5.2	3.6	3.0	3.2	108	6.1	27	52	57	82	50
5	59	5.2	4.2	3.0	3.0	64	7.4	32	60	55	80	60
6	55	5.2	4.0	3.2	3.0	40	6.1	27	62	59	72	55
7	55	6.5	4.2	3.2	3.0	37	5.6	27	62	60	76	59
8	54	6.5	4.2	3.0	3.2	40	5.2	24	57	62	86	78
9	52	5.2	4.2	3.0	3.4	39	4.8	34	60	64	92	72
10	50	5.2	4.2	3.2	3.4	40	4.4	27	60	64	82	66
11	55	5.2	4.6	3.2	3.4	34	4.4	26	69	66	90	143
12	57	4.8	4.4	3.2	3.4	96	6.1	37	67	67	94	179
13	60	4.8	4.2	3.4	3.2	34	11	43	69	60	110	144
14	57	4.8	3.6	3.6	3.4	57	9.2	39	69	59	102	181
15	45	4.8	3.6	3.2	3.6	22	7.4	36	66	60	94	47
16	39	4.8	3.8	3.2	4.0	17	6.9	37	62	62	108	45
17	27	4.8	3.4	3.2	4.4	11	6.5	37	60	69	92	50
18	25	4.4	3.0	3.2	4.8	8.5	6.1	34	57	74	80	34
19	24	4.0	3.2	3.4	6.0	7.8	6.1	40	52	71	84	34
20	23	5.2	3.8	3.6	7.0	7.4	6.5	43	54	69	94	37
21	17	4.8	4.0	3.6	9.0	6.5	34	52	62	67	94	37
22	6.5	4.4	3.6	3.4	11	6.1	6.9	59	57	67	100	37
23	6.1	4.4	3.2	3.2	18	5.6	6.9	60	59	82	88	39
24	5.6	4.4	2.6	3.2	14	5.6	6.5	60	62	66	104	39
25	5.2	4.0	2.8	3.2	30	5.6	6.5	60	60	71	140	39
26	5.2	4.0	3.0	3.2	50	6.9	6.5	57	59	88	74	37
27	5.2	3.6	3.6	3.4	69	10	6.9	59	59	88	62	32
28	5.2	4.2	3.0	3.6	71	8.5	12	62	62	98	59	32
29	5.2	4.0	3.2	3.6	---	9.2	11	60	60	82	57	32
30	4.8	4.0	3.6	3.4	---	7.8	26	60	60	80	59	34
31	4.8	---	3.6	3.4	---	6.9	---	60	---	82	59	---
TOTAL	1268.8	142.8	113.8	101.6	347.2	1156.4	254.2	1303	1806	2135	2662	1856
MEAN	40.9	4.76	3.67	3.28	12.4	37.3	8.47	42.0	60.2	68.9	85.9	61.9
MAX	213	6.5	4.6	3.6	71	176	34	62	69	98	140	181
MIN	4.8	3.6	2.6	3.0	3.0	5.6	4.4	24	52	55	57	32
AC-FT	2520	283	226	202	689	2290	504	2580	3580	4230	5280	3680

CAL YR 1981 TOTAL 12221.4 MEAN 33.5 MAX 213 MIN 2.0 AC-FT 24240  
WTR YR 1982 TOTAL 13146.8 MEAN 36.0 MAX 213 MIN 2.6 AC-FT 26080

NOTE.--No gage-height record Nov. 22 to Jan. 3.

## 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 (8.8 km) east of Archuleta, 33 mi (53 km) east of Farmington, and at mile 298.6 (480.4 km).

DRAINAGE AREA.--3,230 mi<sup>2</sup> (8,370 km<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 (2.11 km<sup>3</sup>) between elevation 5,720 ft (1,743 m) upstream toe of dam and 6,085 ft (1,855 m) crest of spillway. Usable capacity 1,696,000 acre-ft (2.09 km<sup>3</sup>) above elevation 5,774.9 ft (1,760.19 m) minimum operating level. Dead storage below elevation 5,774.9 ft (1,760.19 m) is 12,600 acre-ft (15.5 hm<sup>3</sup>). Figures given herein are usable contents. Reservoir is used for irrigation storage, river regulation, desilting, flood control, and recreation.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 1,731,000 acre-ft (2.13 km<sup>3</sup>) July 2-4, 1973, elevation, 6,087.25 ft (1,855.394 m); minimum daily contents after June 1964 (initial filling period), 234,300 acre-ft (289 hm<sup>3</sup>) Mar. 10, 11, 1965, elevation, 5,906.36 ft (1,800.259 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 1,507,000 acre-ft (1.86 km<sup>3</sup>) Sept. 27, elevation, 6,072.21 ft (1,850.810 m); minimum daily contents, 1,201,000 acre-ft (1.48 km<sup>3</sup>) Feb. 22-24, elevation, 6,048.22 ft (1,843.497 m).

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 1981 TO SEPTEMBER 1982  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1247000	1259000	1255000	1234000	1209000	1203000	1239000	1288000	1402000	1465000	1452000	1463000
2	1245000	1258000	1255000	1233000	1209000	1204000	1240000	1292000	1405000	1467000	1452000	1462000
3	1246000	1258000	1254000	1233000	1208000	1205000	1241000	1297000	1408000	1468000	1451000	1461000
4	1248000	1257000	1254000	1232000	1207000	1207000	1243000	1306000	1411000	1469000	1450000	1461000
5	1250000	1257000	1253000	1232000	1207000	1208000	1245000	1312000	1414000	1471000	1449000	1460000
6	1250000	1257000	1253000	1231000	1207000	1207000	1248000	1321000	1416000	1473000	1448000	1459000
7	1250000	1258000	1252000	1230000	1206000	1208000	1250000	1328000	1418000	1474000	1447000	1459000
8	1250000	1258000	1252000	1230000	1206000	1208000	1251000	1332000	1420000	1475000	1445000	1458000
9	1249000	1259000	1251000	1229000	1205000	1208000	1252000	1336000	1422000	1475000	1444000	1457000
10	1249000	1259000	1251000	1228000	1205000	1208000	1254000	1339000	1424000	1475000	1443000	1457000
11	1248000	1260000	1251000	1227000	1205000	1209000	1255000	1343000	1427000	1475000	1442000	1459000
12	1248000	1260000	1250000	1226000	1204000	1213000	1257000	1346000	1430000	1476000	1441000	1462000
13	1248000	1260000	1250000	1225000	1204000	1222000	1263000	1350000	1433000	1476000	1441000	1464000
14	1250000	1260000	1249000	1225000	1204000	1227000	1267000	1353000	1437000	1474000	1441000	1470000
15	1251000	1260000	1248000	1224000	1203000	1231000	1271000	1356000	1440000	1473000	1441000	1474000
16	1253000	1260000	1247000	1223000	1203000	1233000	1275000	1358000	1442000	1472000	1441000	1478000
17	1255000	1260000	1247000	1222000	1202000	1234000	1278000	1360000	1444000	1471000	1440000	1482000
18	1257000	1259000	1246000	1221000	1202000	1235000	1281000	1362000	1446000	1469000	1440000	1486000
19	1258000	1259000	1245000	1220000	1202000	1235000	1282000	1363000	1448000	1467000	1439000	1489000
20	1259000	1259000	1244000	1219000	1202000	1235000	1284000	1365000	1450000	1466000	1438000	1492000
21	1260000	1259000	1244000	1219000	1202000	1234000	1286000	1366000	1452000	1465000	1438000	1497000
22	1260000	1258000	1243000	1218000	1201000	1233000	1286000	1367000	1454000	1463000	1438000	1500000
23	1260000	1258000	1242000	1217000	1201000	1233000	1285000	1369000	1455000	1462000	1437000	1503000
24	1261000	1257000	1241000	1216000	1201000	1232000	1284000	1370000	1456000	1461000	1439000	1504000
25	1261000	1257000	1240000	1215000	1202000	1232000	1284000	1376000	1458000	1459000	1442000	1506000
26	1261000	1257000	1239000	1214000	1203000	1233000	1284000	1380000	1459000	1458000	1450000	1506000
27	1260000	1256000	1238000	1213000	1203000	1234000	1283000	1383000	1460000	1457000	1455000	1507000
28	1260000	1256000	1237000	1212000	1203000	1235000	1283000	1387000	1462000	1455000	1457000	1506000
29	1261000	1256000	1236000	1211000	---	1236000	1283000	1391000	1463000	1454000	1460000	1506000
30	1260000	1256000	1236000	1210000	---	1238000	1284000	1394000	1464000	1454000	1462000	1506000
31	1259000	---	1235000	1210000	---	1238000	---	1398000	---	1453000	1462000	---
MAX	1261000	1260000	1255000	1234000	1209000	1238000	1286000	1398000	1464000	1476000	1462000	1507000
MIN	1245000	1256000	1235000	1210000	1201000	1203000	1239000	1288000	1402000	1453000	1437000	1457000
(+)	6053.13	6052.85	6051.10	6048.95	6048.36	6051.38	6055.18	6064.18	6069.11	6068.30	6068.99	6072.14
(++)	+11000	-3000	-21000	-25000	-7000	+35000	+46000	+114000	+66000	-11000	+9000	+44000

CAL YR 1981 MAX 1380000 MIN 1228000 (++) - 147000  
WTR YR 1982 MAX 1507000 MIN 1201000 (++) + 258000

(+) 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 $\frac{1}{2}$  sec.20, T.30 N., R.8 W., San Juan County, Hydrologic Unit 14080101, on left bank 0.5 mi (0.8 km) upstream from Gobernador Canyon, 0.8 mi (1.3 km) northeast of Archuleta, 7.2 mi (11.6 km) downstream from Navajo Dam, and at mile 291.4 (468.9 km).

DRAINAGE AREA.--3,260 mi<sup>2</sup> (8,440 km<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 (561 hm<sup>3</sup>). The correct value is 1,455,000 acre-ft (1,790 hm<sup>3</sup>).

GAGE.--Water-stage recorder. Altitude of gage is 5,653 ft (1,723 m), from river-profile survey. Prior to Dec. 29, 1959, at site 5.0 mi (8.0 km) upstream at altitude 55 ft (17 m) higher. Dec. 29, 1959 to Nov. 15, 1964, at site 0.4 mi (0.6 km) upstream at altitude 5 ft (1.5 m) higher. Prior to Nov. 28, 1966, at altitude 2.0 ft (0.610 m) higher.

REMARKS.--Water-discharge records good. Flow completely regulated by Navajo Reservoir (station 09355100) 7 mi (11 km) upstream except for minor inflow from 30 mi<sup>2</sup> (80 km<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 (190 km<sup>2</sup>) above station. Releases from Navajo Reservoir, beginning in January 1976, for use on Navajo Indian Irrigation Project bypass gage in tunnel on left bank. See tabulation below for monthly and annual releases as furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--7 years (water years 1956-62), 1,304 ft<sup>3</sup>/s (36.93 m<sup>3</sup>/s), 944,700 acre-ft/yr (1,160 hm<sup>3</sup>/yr) prior to closure of Navajo Dam.  
20 years (water years 1963-82), 1,090 ft<sup>3</sup>/s (30.87 m<sup>3</sup>/s), 789,700 acre-ft/yr (974 hm<sup>3</sup>/yr) since closure of Navajo Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft<sup>3</sup>/s (535 m<sup>3</sup>/s) July 27, 1957, gage height, 11.00 ft (3.353 m), site and datum then in use; minimum determined, 8 ft<sup>3</sup>/s (0.23 m<sup>3</sup>/s) Feb. 28, 1963. Maximum discharge since construction of Navajo Dam in 1962, 6,500 ft<sup>3</sup>/s (184 m<sup>3</sup>/s) June 20, 1965, gage height, 4.57 ft (1.393 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,400 ft<sup>3</sup>/s (68.0 m<sup>3</sup>/s) Aug. 21, gage height, 5.11 ft (1.558 m); minimum daily, 468 ft<sup>3</sup>/s (13.3 m<sup>3</sup>/s) Feb. 5-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	934	900	564	642	625	483	934	1920	1820	1520	1030	1070
2	956	900	564	644	626	491	933	1910	1830	1530	1040	1080
3	951	900	564	648	573	498	932	1910	1830	1530	1030	1080
4	948	840	564	651	472	490	935	1920	1820	1530	1030	1090
5	962	740	560	656	468	483	940	1920	1830	1530	1040	1090
6	944	640	569	656	468	483	940	1910	1830	1540	1050	1100
7	988	560	572	657	468	484	940	1910	1840	1470	1050	1100
8	1010	530	573	662	472	483	973	1910	1840	1180	1060	1100
9	1010	530	578	663	470	485	1060	1920	1850	1080	1010	1090
10	1020	530	585	663	474	479	1060	1930	1850	1080	868	1100
11	1020	530	588	662	478	482	1060	1930	1860	1090	910	1100
12	1030	530	590	668	471	552	1110	1930	1860	1090	940	1100
13	971	530	596	670	474	611	1290	1930	1860	1090	950	1100
14	856	530	600	670	474	614	1480	1930	1860	1100	970	1110
15	790	530	600	671	474	683	1540	1930	1870	1100	980	1110
16	791	530	602	672	476	820	1540	1940	1860	1110	1000	1110
17	791	530	606	676	479	909	1540	1940	1850	1110	910	1110
18	803	530	606	679	478	941	1550	1940	1710	1110	1080	1110
19	801	530	606	681	479	940	1540	1940	1480	1120	1120	1110
20	812	530	609	684	481	930	1550	1940	1480	1120	1070	1110
21	809	530	611	689	479	934	1600	1860	1490	1120	1160	1110
22	809	530	616	692	479	934	1830	1800	1490	1120	1050	1120
23	819	530	618	694	480	933	1920	1790	1500	1110	1030	1120
24	820	530	618	692	482	938	1930	1790	1500	1110	1050	1110
25	830	530	620	694	492	932	1930	1800	1500	1120	1040	1120
26	822	530	624	702	485	936	1930	1810	1500	1120	1050	1120
27	825	530	622	704	483	936	1930	1810	1500	1120	1050	1120
28	825	530	630	704	484	935	1940	1820	1510	1130	1050	1110
29	825	530	630	675	---	937	1940	1810	1510	1120	1060	1110
30	825	530	630	621	---	926	1930	1810	1510	1100	1060	1120
31	825	---	633	622	---	931	---	1820	---	1030	1070	---
TOTAL	27422	17670	13548	20764	13744	22613	42727	58430	51040	37230	31808	33130
MEAN	885	589	598	670	491	729	1424	1885	1701	1201	1026	1104
MAX	1030	900	633	704	626	941	1940	1940	1870	1540	1160	1120
MIN	790	530	560	621	468	479	932	1790	1480	1030	868	1070
AC-FT	54390	35050	36790	41190	27260	44850	84750	115900	101200	73850	63090	65710

CAL YR 1981 TOTAL 290634 MEAN 796 MAX 1830 MIN 371 AC-FT 576500  
WTR YR 1982 TOTAL 375126 MEAN 1028 MAX 1940 MIN 468 AC-FT 744100

SAN JUAN RIVER BASIN  
09355500 SAN JUAN RIVER NEAR ARCHULETA, NM -- Continued  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--Water years 1955 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
APR 01...	1500	940	270	250	8.4	8.6	18.0	8.0	11	12.6	94
MAY 11...	1100	1930	230	266	8.1	8.2	12.0	6.5	32	12.6	95
JUL 02...	1030	1520	260	271	7.8	7.9	18.0	7.5	5.1	11.5	101
SEP 08...	1230	1090	260	276	8.5	7.4	28.0	9.0	7.0	--	105

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)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)
APR 01...	15	29	5.2	14	.7	1.8	98	2.0	96	79
MAY 11...	15	29	5.6	14	.6	2.2	100	.0	--	--
JUL 02...	9	31	5.8	14	.6	1.8	--	--	92	92
SEP 08...	22	32	6.1	14	.6	1.8	86	2.0	--	--

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C 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)
APR 01...	47	2.7	.3	9.4	167	159	<.10	.100	<.010	<.010
MAY 11...	47	2.5	.2	9.9	160	159	--	--	--	--
JUL 02...	50	2.7	.2	10	162	161	--	--	--	--
SEP 08...	51	2.4	.2	10	158	168	<.10	<.060	<.010	<.010

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
APR 01...	1500	2	2	100	78	<1	<1	<10	<10	1
SEP 08...	1230	2	1	100	75	<1	<1	<10	<10	<1



SAN JUAN RIVER BASIN  
09355500 SAN JUAN RIVER NEAR ARCHULETA, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
APR 01...	<1	15	3	590	26	3	<1	30	4	.4
SEP 08...	2	2	2	300	12	<1	<1	10	8	.7

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
APR 01...	.1	3	1	1	1	<1	<1	30	29
SEP 08...	.6	3	<1	1	1	<1	<1	10	6

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
IDENTIFICATION OF PHYTOPLANKTON

DATE TIME	APR 1,82 1500	SEP 8,82 1230
TOTAL CELLS/ML	2900	1600
DIVERSITY: DIVISION	0.0	1.5
..CLASS	0.0	1.5
..ORDER	1.7	2.0
...FAMILY	1.8	2.0
....GENUS	2.8	2.2
ORGANISM	CELLS /ML PER- CENT	CELLS /ML PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...ACHNANTHALES		
....ACHNANTHACEAE		
.....ACHNANTHES	100 4	-- --
.....COCCONEIS	170 6	140 9
.....RHOICOSPHENIA	62 2	28 2
..BACILLARIALES		
...NITZSCHIAEAE		
....NITZSCHIA	41 1	-- --
..EUPODISCALES		
...COSCINODISCAEAE		
....CYCLOTELLA	62 2	-- --
....MELOSIRA	390 13	55 4
..FRAGILARIALES		
...FRAGILARIAEAE		
....DIATOMA	1000# 35	430# 27
....FRAGILARIA	660# 23	14 1
....SYNEDRA	83 3	-- --
..NAVICULALES		
...CYMBELLACEAE		
....CYMBELLA	190 6	-- --
...GOMPHONEMACEAE		
....GOMPHONEMA	100 4	-- --
...NAVICULACEAE		
....NAVICULA	41 1	-- --
CYANOPHYTA (BLUEGREEN ALGAE)		
..CYANOPHYCEAE		
...OSCILLATORIALES		
....OSCILLATORIAEAE		
.....OSCILLATORIA	-- --	330# 21
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
....EUGLENACEAE		
.....TRACHELOMONAS	-- --	580# 37

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SAN JUAN RIVER BASIN  
09355500 SAN JUAN RIVER NEAR ARCHULETA, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 01...	1500	940	8.0	15	--
MAY 11...	1100	1930	6.5	14	--
JUL 02...	1030	1520	7.5	8	91
SEP 08...	1230	1090	9.0	17	90

## 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 (1.3 km) downstream from Florida River, 2.5 mi (4.0 km) upstream from Colorado-New Mexico State line, 8.5 mi (13.7 km) north of Cedar Hill, and at mile 32.9 (52.9 km).

DRAINAGE AREA.--1,090 mi<sup>2</sup> (2,820 km<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. Altitude of gage is 5,960 ft (1,817 m), from topographic map. Prior to Sept. 14, 1937, at datum between 1.52 ft (0.46 m) and 1.36 ft (0.41 m) higher. Sept. 15, 1937, to Sept. 30, 1946, at datum 1.36 ft (0.41 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 20,000 acres (81 km<sup>2</sup>) above station. During water years 1944-49, Twin Rocks Canal diverted above station for irrigation below. Slight regulation by Lemon Dam about 30 mi (48 km) upstream on Florida River since November 1963 (capacity, 40,100 acre-ft or 49.4 hm<sup>3</sup>). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--49 years, 895 ft<sup>3</sup>/s (25.35 m<sup>3</sup>/s), 648,400 acre-ft/yr (799 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft<sup>3</sup>/s (371 m<sup>3</sup>/s) June 19, 1949, gage height, 11.45 ft (3.490 m); minimum, 63 ft<sup>3</sup>/s (1.78 m<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.--Maximum discharge, 4,180 ft<sup>3</sup>/s (118 m<sup>3</sup>/s) at 1215 hours June 3, gage height, 7.48 ft (2.280 m), no other peak above base of 4,000 ft<sup>3</sup>/s (110 m<sup>3</sup>/s); minimum daily, 201 ft<sup>3</sup>/s (5.69 m<sup>3</sup>/s) Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	336	442	282	247	255	295	414	1550	3690	3330	1110	1150
2	395	449	275	238	252	320	395	1800	3880	3270	997	1060
3	670	447	257	220	254	395	390	2050	3850	2770	1090	972
4	622	443	258	208	251	356	380	2280	3690	2540	1070	879
5	573	440	259	208	260	334	390	2580	3790	2250	985	909
6	556	428	262	220	250	315	415	3080	3440	1920	881	945
7	552	459	253	231	237	302	450	2360	3130	1730	876	850
8	560	487	254	237	250	300	450	2180	3180	1580	919	851
9	563	470	245	242	260	300	430	2090	3240	1650	876	909
10	551	444	242	245	243	310	420	2030	3400	1620	877	945
11	538	429	246	245	250	340	494	1960	3350	1620	848	1210
12	608	430	246	242	241	390	630	1920	3330	1550	819	1440
13	688	432	238	239	234	520	970	1790	3620	1530	847	1530
14	676	401	234	238	238	470	1140	1530	3420	1460	992	1650
15	672	387	242	237	233	449	1350	1490	3120	1460	1080	1540
16	714	384	238	237	229	442	1420	1460	2930	1420	983	1660
17	701	381	234	238	226	405	1400	1400	3210	1350	948	1590
18	660	364	242	239	201	375	1380	1470	3240	1310	851	1520
19	644	341	258	239	213	345	1280	1620	3180	1240	809	1600
20	637	341	226	239	224	335	1200	1670	2780	1220	844	1550
21	625	354	234	238	235	325	1100	1820	2780	1200	1080	1610
22	612	362	223	237	250	315	1000	2200	2760	1180	1150	1620
23	562	340	238	237	268	312	900	2360	2580	1170	1200	1510
24	548	339	235	234	275	308	820	2380	2590	1150	1680	1410
25	542	328	231	232	318	303	778	2470	2900	1120	2770	1350
26	526	336	231	232	305	308	778	2660	3200	1090	2860	1290
27	500	303	232	235	293	330	815	3360	3410	1110	2210	1240
28	495	292	230	240	290	340	880	3350	3520	1260	1940	1250
29	494	302	228	243	---	350	1100	3680	3500	1360	1660	1210
30	489	304	232	250	---	360	1250	3750	3140	1300	1390	1090
31	482	---	233	253	---	385	---	3490	---	1220	1290	---
TOTAL	17811	11659	7538	7320	7035	10934	24819	69830	97850	49980	37932	38340
MEAN	575	389	243	236	251	353	827	2253	3262	1612	1224	1278
MAX	714	487	282	253	318	520	1420	3750	3880	3330	2860	1660
MIN	336	292	223	208	201	295	380	1400	2580	1090	809	850
AC-FT	35330	23130	14950	14520	13950	21690	49230	138500	194100	99140	75240	76050

CAL YR 1981 TOTAL 224033 MEAN 614 MAX 3640 MIN 150 AC-FT 444400  
WTR YR 1982 TOTAL 381048 MEAN 1044 MAX 3880 MIN 201 AC-FT 755800

09364500 ANIMAS RIVER AT FARMINGTON, NM  
(National stream-quality accounting network station)

LOCATION (REVISED).--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 (274 m) upstream from bridge on Miller Ave., 0.4 mi (0.6 km) downstream from bridge on U.S. Highway 64 in Farmington, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--1,360 mi<sup>2</sup> (3,520 km<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. Altitude of gage is 5,280 ft (1,609 m), from topographic map. Prior to Nov. 1, 1905, non-recording gage at old bridge 0.1 mi (0.2 km) upstream at different datum. Sept. 17, 1912, to Oct. 4, 1938, water-stage recorder at site 0.8 mi (1.3 km) downstream at lower datums (datum lowered 2.0 ft or 0.61 m Aug. 15, 1927, and raised 0.2 ft or 0.06 m Dec. 16, 1929). Oct. 5, 1938 to Nov. 1, 1973 at site 900 ft (274 m) downstream at datum 1.74 ft (0.53 m) lower.

REMARKS.--Water-discharge records good except those for winter period, which are fair. Diversions for irrigation of about 30,000 acres (120 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--71 years, 913 ft<sup>3</sup>/s (25.86 m<sup>3</sup>/s), 661,500 acre-ft/yr (816 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 25,000 ft<sup>3</sup>/s (710 m<sup>3</sup>/s) June 29, 1927, gage height, 8.5 ft (2.59 m), site and datum then in use, from rating curve extended above 10,000 ft<sup>3</sup>/s (283 m<sup>3</sup>/s); minimum, 1.0 ft<sup>3</sup>/s (0.028 m<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 (5.0 m) was reached (datum in use Oct. 1938 to Nov. 1973). Flood of Sept. 6, 1909, reached a stage of 11.1 ft (3.38 m), 1904-5 site and datum (discharge, about 19,000 ft<sup>3</sup>/s or 540 m<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,840 ft<sup>3</sup>/s (109 m<sup>3</sup>/s) at 1700 hours June 3, gage height, 7.35 ft (2.24 m), no peak above base of 4,000 ft<sup>3</sup>/s (110 m<sup>3</sup>/s); minimum daily, 177 ft<sup>3</sup>/s (5.01 m<sup>3</sup>/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177	418	304	261	285	347	379	1440	3390	3100	931	1010
2	257	406	288	260	273	402	410	1740	3580	3380	827	893
3	749	412	287	227	289	593	413	2210	3650	2840	832	805
4	685	429	287	209	271	506	388	2680	3560	2600	842	710
5	606	411	293	209	278	423	400	2940	3550	2320	732	665
6	550	398	292	239	255	388	458	3060	3400	1960	604	763
7	536	427	293	245	237	360	493	2560	3050	1660	674	713
8	529	471	291	254	326	360	464	2190	2980	1500	772	682
9	524	451	288	271	283	363	433	2030	3060	1450	660	697
10	526	436	282	284	311	387	432	1950	3180	1500	644	795
11	507	422	281	286	294	401	439	1890	3230	1460	596	1180
12	527	406	292	301	279	760	544	1650	3180	1410	572	1550
13	669	421	281	299	277	814	949	1740	3400	1300	580	1510
14	686	401	275	295	277	552	1140	1530	3390	1240	668	1780
15	663	374	272	267	260	484	1330	1350	3070	1170	836	1520
16	686	368	284	269	262	509	1450	1360	2870	1160	756	1560
17	736	365	265	284	265	433	1400	1280	2980	1110	732	1520
18	696	367	259	272	289	420	1370	1290	3150	1040	628	1420
19	669	361	256	258	275	428	1290	1360	3090	987	564	1470
20	637	347	270	251	295	407	1200	1550	2770	928	528	1450
21	628	356	267	259	311	381	1120	1540	2630	907	668	1490
22	607	368	254	245	317	361	1010	1870	2700	885	1060	1460
23	594	349	247	246	329	351	919	2190	2550	853	940	1380
24	549	333	240	249	344	354	858	2290	2510	834	1080	1250
25	540	326	252	234	431	340	799	2310	2620	828	2530	1140
26	520	338	238	251	393	350	770	2460	2910	802	2220	1070
27	482	334	252	273	359	395	797	2970	3140	807	2260	1000
28	453	300	229	277	353	388	838	3280	3290	931	1910	982
29	441	332	227	290	---	376	944	3370	3340	1060	1710	966
30	438	328	236	285	---	380	1210	3660	3100	1180	1350	880
31	445	---	265	293	---	394	---	3460	---	1050	1130	---
TOTAL	17312	11455	8347	8143	8418	13407	24647	67200	93320	44252	30836	34311
MEAN	558	382	269	263	301	432	822	2168	3111	1427	995	1144
MAX	749	471	304	301	431	814	1450	3660	3650	3380	2530	1780
MIN	177	300	227	209	237	340	379	1280	2510	802	528	665
AC-FT	34340	22720	16560	16150	16700	26590	48890	133300	185100	87770	61160	68060

CAL YR 1981 TOTAL 175866 MEAN 482 MAX 3400 MIN 138 AC-FT 348800  
WTR YR 1982 TOTAL 361648 MEAN 991 MAX 3660 MIN 177 AC-FT 717300

SAN JUAN RIVER BASIN  
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 DISCHARGE: December 1950 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,980 micromhos Aug. 19, 1944; minimum daily, 146 micromhos July 11, 1975.  
WATER TEMPERATURES: Maximum, 32.0°C Aug. 26, 1966 and July 16, 1977; minimum, 0.0°C on many days during winter months (each year).

SEDIMENT CONCENTRATIONS: Maximum daily, 36,800 mg/L July 23, 1954; minimum daily, 1 mg/L on several days during September 1956, September 1958, and September 1974.

SEDIMENT LOADS: Maximum daily, 337,000 tons (306,000 tonnes) July 23, 1954; minimum daily, less than .50 ton (.45 tonne) on many days during 1955-57, 1959, 1960, 1963, 1972, 1974, and 1978

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,030 micromhos Sept. 11; minimum daily, 222 micromhos July 2.

WATER TEMPERATURES: Maximum, 26.0°C July 27; minimum, 0.0°C, Jan. 5, 7, Feb. 7.

SEDIMENT CONCENTRATIONS: Maximum daily, 13,400 mg/L Oct. 3; minimum daily, 25 mg/L July 16.

SEDIMENT LOADS: Maximum daily, 39,400 tons (35,700 tonnes) Sept. 12; minimum daily, 20 tons (18 tonnes) Jan. 4.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT											
27...	1215	515	475	589	8.3	8.2	16.0	8.0	14	14.0	233
JAN											
05...	1050	189	860	922	8.0	7.8	.5	.0	5.0	14.6	347
MAR											
29...	1500	357	670	610	8.1	8.1	10.0	8.0	150	9.0	262
MAY											
06...	0830	3120	235	269	7.7	8.0	7.5	8.0	180	9.7	123
JUL											
01...	0920	2670	240	232	7.3	7.8	19.0	14.0	22	8.7	91
SEP											
07...	1030	860	450	451	8.3	8.4	25.0	18.0	14	9.5	191

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)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)	CAR- BONATE FETFLD (MG/L AS CO3) (00445)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)
OCT											
27...	102	75	11	22	.7	2.2	--	--	160	0	131
JAN											
05...	150	111	17	43	1.0	3.1	240	--	240	0	197
MAR											
29...	114	80	15	28	.8	2.5	--	--	180	--	148
MAY											
06...	38	39	6.3	6.6	.3	1.2	110	.0	--	--	--
JUL											
01...	32	30	3.9	6.8	.3	.9	68	.0	--	--	--
SEP											
07...	87	62	8.7	18	.6	1.9	120	.0	--	--	--

SAN JUAN RIVER BASIN  
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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, 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 27...	130	17	.3	6.8	351	337	<.09	.050	.030	.020
JAN 05...	220	25	.4	8.0	556	524	.30	.080	.030	.010
MAR 29...	170	15	.4	7.1	436	408	.22	.130	.020	.020
MAY 06...	46	3.1	.1	5.7	161	159	.11	.210	.540	.110
JUL 01...	44	4.0	.2	4.8	134	130	.14	.060	.180	<.010
SEP 07...	100	10	.3	7.9	356	271	<.10	.120	.070	.010

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
OCT 27...	1215	2	1	200	77	<1	<1	<10	<10	2
MAR 29...	1500	2	2	200	95	1	<1	<10	<10	4
MAY 06...	0830	6	1	400	71	1	<3	20	<10	9
SEP 07...	1030	1	1	300	80	<1	<1	<10	<10	1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
OCT 27...	<3	10	3	2400	<10	10	<1	130	20	.1
MAR 29...	<1	26	3	6900	22	28	<1	270	27	.3
MAY 06...	<1	70	4	17000	14	130	3	1300	14	.2
SEP 07...	<1	10	2	1700	11	12	2	110	11	.1

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 27...	.1	3	<1	<1	<1	<1	<1	60	9
MAR 29...	.1	13	2	1	2	1	<1	130	32
MAY 06...	.1	14	2	1	<1	1	<1	580	30
SEP 07...	.2	3	<1	1	<1	<1	<1	50	7

SAN JUAN RIVER BASIN  
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MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI-FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 27...	* 20	65
JAN 05...	--	88
MAR 29...	1500	260
MAY 06...	300	510
JUL 01...	2300	250
SEP 07...	670	380

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	TEMPERATURE (DEG C) (00010)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (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)
DEC 02...	1500	296	1.5	44	35	--	--	--	--
JAN 05...	1050	189	.0	39	20	--	--	--	--
JAN 27...	1530	260	5.5	51	36	--	--	--	--
FEB 20...	1110	296	6.5	1340	1070	58	72	90	--
FEB 25...	0845	474	4.0	1280	1640	47	59	76	--
MAR 13...	1230	836	9.5	7660	17300	24	31	46	55
MAR 29...	1500	357	8.0	347	334	--	--	--	--
APR 13...	0850	924	11.0	1370	3420	19	26	51	--
MAY 04...	1645	2860	13.0	722	5580	--	--	--	--
MAY 06...	0830	3120	8.0	1370	11500	--	--	--	--
JUN 04...	1425	3610	13.0	377	3670	--	--	--	--
JUL 01...	0920	2670	14.0	108	779	--	--	--	--
AUG 05...	1000	732	18.5	89	176	--	--	--	--
AUG 26...	0720	2590	15.0	2150	15000	20	27	41	63
SEP 07...	1030	860	18.0	108	251	--	--	--	--
SEP 11...	2000	1710	15.5	23500	108000	41	49	77	97

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)
DEC 02...	--	--	--	--	75	--	--	--
JAN 05...	--	--	--	--	80	--	--	--
JAN 27...	--	--	--	--	68	--	--	--
FEB 20...	--	--	--	--	97	98	100	--
FEB 25...	--	--	--	--	97	100	--	--
MAR 13...	58	65	83	100	--	--	--	--
MAR 29...	--	--	--	--	79	86	97	100
APR 13...	--	--	--	--	95	99	100	--
MAY 04...	--	--	--	--	97	--	--	--
MAY 06...	--	--	--	--	39	--	--	--
JUN 04...	--	--	--	--	35	--	--	--
JUL 01...	--	--	--	--	56	--	--	--
AUG 05...	--	--	--	--	86	--	--	--
AUG 26...	80	95	100	--	--	--	--	--
SEP 07...	--	--	--	--	41	--	--	--
SEP 11...	99	99	100	--	--	--	--	--



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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ONCE-DAILY												
1	821	---	---	---	701	708	692	371	260	244	444	460
2	789	---	680	---	713	786	668	364	245	222	449	410
3	957	635	---	---	725	764	653	335	243	244	469	516
4	771	636	---	---	740	703	629	323	246	255	455	484
5	671	---	---	710	703	724	650	295	246	255	465	529
6	657	630	---	680	770	740	664	292	242	280	471	507
7	657	635	---	730	829	757	621	---	254	315	508	514
8	654	621	---	---	776	751	610	321	266	333	587	533
9	648	658	---	770	761	767	610	340	257	358	537	541
10	645	654	---	750	752	756	593	304	252	340	532	527
11	606	613	---	730	736	735	597	342	247	345	507	1030
12	650	580	---	700	761	733	587	350	---	337	518	782
13	631	550	---	700	774	580	542	369	241	350	543	421
14	587	---	---	710	770	637	428	378	226	351	526	417
15	570	---	---	710	774	684	388	403	245	365	476	385
16	568	---	---	740	770	690	381	405	251	361	451	366
17	557	---	---	720	825	686	359	411	254	374	550	361
18	548	---	---	710	817	630	365	422	239	392	576	369
19	520	---	---	700	847	706	352	408	244	394	596	368
20	566	---	---	710	806	702	370	380	259	348	625	363
21	588	---	---	700	795	695	379	380	250	394	643	357
22	594	---	---	700	818	705	396	352	247	413	606	354
23	588	---	---	700	815	717	416	317	256	417	531	359
24	604	---	---	700	805	738	453	313	265	424	501	369
25	---	---	---	670	813	730	460	312	260	430	384	362
26	630	---	---	680	823	718	474	282	247	428	315	395
27	576	---	---	700	790	759	474	304	237	452	325	416
28	618	---	---	706	---	740	456	278	233	463	349	420
29	639	---	---	715	---	712	466	261	225	---	364	420
30	604	---	---	707	---	688	416	244	226	406	391	431
31	627	---	---	727	---	668	---	242	---	422	442	---
MEAN	638	621	680	711	778	713	505	337	247	357	488	459
WTR YR 1982	MEAN	523	MAX	1030	MIN	222						

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ONCE-DAILY												
1	15.0	---	---	---	4.5	11.0	8.0	14.0	13.0	14.5	24.5	17.0
2	17.0	---	1.5	---	3.5	12.5	11.0	14.0	12.0	16.0	20.0	---
3	13.0	10.0	---	---	3.5	8.0	13.5	15.5	12.0	16.5	19.0	17.5
4	13.5	10.0	---	---	2.5	8.0	14.5	13.0	16.0	14.5	20.5	20.0
5	17.5	---	---	.0	.5	6.5	12.0	9.0	9.5	13.5	24.5	19.0
6	18.0	10.0	---	3.0	1.0	6.5	9.5	12.0	10.0	13.0	19.0	20.0
7	17.0	9.0	---	.0	.0	7.5	14.0	---	10.0	15.5	22.5	18.0
8	15.5	9.0	---	---	2.0	9.5	6.0	10.0	16.0	16.0	24.5	22.0
9	15.5	10.5	---	1.0	3.0	7.0	10.0	14.0	10.5	18.0	18.0	22.5
10	11.5	10.0	---	1.0	4.0	11.5	11.5	13.0	13.0	16.5	23.0	18.0
11	12.5	9.5	---	.5	4.0	10.0	12.0	10.5	11.5	19.5	21.5	16.0
12	11.5	10.5	---	2.0	2.0	9.0	18.0	9.5	---	17.0	20.0	14.0
13	11.5	9.5	---	1.0	3.0	9.5	11.0	13.0	16.0	18.0	24.0	13.0
14	14.5	---	---	2.0	1.5	9.5	10.0	8.5	11.5	17.0	25.0	13.5
15	12.0	---	---	2.0	3.0	7.5	10.0	13.0	14.0	19.0	25.0	14.0
16	12.5	---	---	1.0	4.0	9.0	14.0	11.0	10.5	20.0	21.0	13.5
17	11.0	---	---	2.5	5.5	5.5	13.0	10.0	18.5	17.0	21.0	17.5
18	12.5	---	---	3.5	4.5	8.0	14.0	12.0	12.0	22.0	25.5	18.0
19	13.0	---	---	5.0	8.5	5.0	14.0	12.5	16.5	22.0	21.5	18.0
20	13.0	---	---	7.0	6.5	8.0	8.0	17.0	17.0	23.0	22.5	17.5
21	12.0	---	---	4.0	11.0	11.0	7.5	11.0	14.0	22.0	20.0	17.5
22	12.0	---	---	.5	5.5	11.5	8.5	16.0	14.5	23.5	20.5	16.5
23	12.0	---	---	1.5	5.0	5.0	8.0	16.0	14.0	20.0	20.0	19.0
24	9.5	---	---	1.0	5.5	12.0	13.0	10.5	15.0	23.5	18.5	17.5
25	---	---	---	6.5	4.0	13.5	10.5	11.0	18.0	23.5	17.5	18.0
26	10.0	---	---	7.0	4.0	8.0	10.0	12.5	16.0	20.0	15.0	20.0
27	8.0	---	---	5.0	6.0	13.0	10.5	14.0	19.0	26.0	15.0	15.0
28	10.5	---	---	4.0	---	12.0	18.0	12.0	17.5	21.0	19.0	18.0
29	11.0	---	---	6.0	---	8.0	15.0	11.5	15.0	---	21.5	11.0
30	8.5	---	---	6.5	---	5.0	11.0	11.0	14.5	23.5	18.0	13.0
31	5.5	---	---	4.5	---	13.5	---	12.0	---	23.0	18.0	---
MEAN	12.5	10.0	1.5	3.0	4.0	9.0	11.5	12.5	14.0	19.0	21.0	17.0
WTR YR 1982	MEAN	12.5	MAX	26.0	MIN	.0						

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	43	21	115	130	46	39	38	25	46	36	309	288
2	152	110	99	109	45	36	38	24	42	31	810	890
3	13400	27300	82	91	45	36	39	22	69	55	2680	4290
4	5750	9520	65	75	45	36	39	20	50	38	1500	2050
5	805	1200	62	69	43	35	62	37	53	41	488	557
6	507	691	83	89	43	35	100	69	93	67	257	269
7	393	531	190	225	42	34	64	46	209	149	150	146
8	316	425	264	336	41	32	110	80	198	179	192	189
9	272	358	116	141	40	32	121	94	180	143	129	126
10	229	307	81	95	40	31	102	84	338	290	180	188
11	242	316	59	66	40	30	77	64	255	202	458	502
12	221	299	57	62	39	30	87	75	67	50	4430	12500
13	705	1240	59	67	39	30	128	112	90	67	7450	16900
14	871	1580	58	62	38	28	174	149	113	83	2180	3520
15	555	970	56	57	38	27	179	139	40	28	1150	1640
16	777	1420	55	55	40	30	106	83	42	29	1160	1700
17	694	1360	53	52	47	32	239	197	70	50	571	698
18	431	819	52	52	47	32	244	193	310	242	434	492
19	299	547	50	48	48	32	116	87	383	281	382	441
20	314	540	49	46	41	29	110	81	1160	924	259	285
21	288	501	49	47	39	27	120	90	337	279	129	133
22	215	362	47	46	38	25	93	66	320	270	491	472
23	176	294	47	44	37	23	64	46	404	359	163	154
24	175	274	45	40	36	22	780	571	312	286	440	421
25	222	337	47	41	36	23	342	234	1440	1680	173	159
26	266	397	46	42	36	22	31	23	1450	1520	340	321
27	169	226	46	41	36	23	70	55	572	547	582	621
28	130	159	44	36	37	21	84	63	350	330	885	915
29	107	127	48	40	37	21	75	59	---	---	418	427
30	128	151	48	39	41	24	69	54	---	---	332	350
31	130	156	---	---	41	27	92	73	---	---	125	135
TOTAL	---	52538	---	2343	---	904	---	3015	---	8256	---	51779
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	69	72	920	3430	310	2920	111	923	294	726	414	1100
2	1080	1210	1410	6430	500	4970	137	1240	184	403	408	974
3	163	184	1120	6590								

## 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 (110 m) downstream from highway bridge on State Highway 371 in Farmington, 4,000 ft (1,200 m) downstream from Animas River, 2.3 mi (3.7 km) upstream from La Plata River, and at mile 251.4 (404.5 km).

DRAINAGE AREA.--7,240 mi<sup>2</sup> (18,750 km<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 (1,594.217 m) National Geodetic Vertical Datum of 1929. See WSP 1313 or 1733 for history of changes prior to Nov. 19, 1933.

REMARKS.--Water-discharge records good. Since June 1962 flow is partly controlled by operation of Navajo Reservoir (station 09355100) 50 mi (80 km) upstream. Diversions above station for irrigation of about 86,000 acres (350 km<sup>2</sup>), 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 below this station. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--70 years (water years 1913-82), 2,352 ft<sup>3</sup>/s (66.61 m<sup>3</sup>/s), 1,704,000 acre-ft/yr (2.10 km<sup>3</sup>/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 68,000 ft<sup>3</sup>/s (1,930 m<sup>3</sup>/s) June 29, 1927, gage height, 10.2 ft (3.109 m), site and datum then in use, from rating curve extended above 37,000 ft<sup>3</sup>/s (1,050 m<sup>3</sup>/s); minimum, 14 ft<sup>3</sup>/s (0.40 m<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 (3.8 m), site and datum in use May to September 1906.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,060 ft<sup>3</sup>/s (172 m<sup>3</sup>/s) Aug. 26, gage height, 4.52 ft (1.378 m); minimum daily, 646 ft<sup>3</sup>/s (18.3 m<sup>3</sup>/s) Nov. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	958	1190	710	975	949	871	1270	3120	5130	4340	1970	2120
2	1590	1130	670	1010	941	923	1300	3370	5540	4740	1820	1920
3	3500	1160	670	941	948	1240	1310	3790	5310	4030	1840	1770
4	2090	1130	650	861	863	1100	1260	4200	5080	3740	1830	1690
5	1810	956	677	853	773	915	1290	4500	5090	3470	1650	1770
6	1750	734	680	896	732	909	1360	4560	4930	3110	1670	1720
7	1690	646	680	932	691	839	1380	4090	4600	2810	1690	1630
8	1710	666	686	915	723	838	1340	3740	4480	2520	1820	1600
9	1720	685	733	881	761	842	1430	3520	4580	2410	1730	1620
10	1730	696	734	914	749	876	1440	3440	4740	2370	1430	1690
11	1730	700	690	904	795	882	1450	3350	4820	2360	1370	2470
12	1750	688	680	914	788	1290	1560	3400	4780	2360	1360	2900
13	1920	735	670	932	782	1910	2130	3330	5040	2290	1360	2880
14	1820	815	660	929	775	1650	2630	3100	5020	2250	1550	3170
15	1660	796	658	908	764	1290	2840	2920	4730	2150	1660	2800
16	1810	772	681	899	735	1340	2950	2920	4420	2170	1590	2840
17	1640	764	783	916	750	1350	2960	2850	4470	2120	1570	2850
18	1540	753	849	907	792	1370	2920	2860	4760	2040	1370	2770
19	1490	753	858	921	802	1360	2820	2920	4370	2000	1400	2740
20	1440	744	909	924	800	1310	2740	3080	4020	1930	1430	2730
21	1430	731	907	936	804	1270	2640	3080	3800	1910	1740	2770
22	1390	753	923	926	882	1260	2680	3290	3920	1890	2570	2730
23	1370	753	914	918	922	1230	2700	3600	3730	1860	2250	2590
24	1320	731	881	922	956	1210	2600	3710	3660	1870	3010	2450
25	1300	731	890	910	1220	1120	2500	3760	3900	1870	3970	2340
26	1290	764	915	924	1050	1160	2480	3930	4260	1880	5070	2240
27	1250	764	911	956	924	1380	2520	4420	4540	1840	4220	2140
28	1210	786	892	969	884	1230	2570	4850	4710	2090	3420	2130
29	1210	841	893	987	---	1240	2640	4980	4750	2160	3000	2110
30	1230	764	906	955	---	1280	2930	5270	4440	2380	2610	2000
31	1230	---	958	928	---	1280	---	5110	---	2990	2400	---
TOTAL	49578	24131	24318	28663	23555	36765	64640	115060	137620	77950	66370	69180
MEAN	1599	804	784	925	841	1186	2155	3712	4587	2515	2141	2306
MAX	3500	1190	958	1010	1220	1910	2960	5270	5540	4740	5070	3170
MIN	958	646	650	853	691	838	1260	2850	3660	1840	1360	1600
AC-FT	98340	47860	48230	56850	46720	72920	128200	228200	273000	154600	131600	137200

CAL YR 1981	TOTAL	427449	MEAN	1171	MAX	3880	MIN	442	AC-FT	847800
WTR YR 1982	TOTAL	717830	MEAN	1967	MAX	5540	MIN	646	AC-FT	1424000

SAN JUAN RIVER BASIN  
09365000 SAN JUAN RIVER AT FARMINGTON, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1962 to 1982. (Discontinued).  
WATER TEMPERATURES: June 1962 to 1982. (Discontinued).  
HARDNESS: May 1962 to current year.  
DISSOLVED SOLIDS: 1962 to current year.

REMARKS.--Daily chemical samples are collected by transversing the stream cross section.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,290 micromhos Aug. 8, 1970; minimum daily, 154 micromhos May 13, 1962.  
WATER TEMPERATURES: Maximum, 33.0°C July 6, 1967; minimum, 0.0°C on several days during December and January of most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 710 micromhos Oct. 16; minimum daily, 108 micromhos Oct. 3.  
WATER TEMPERATURES: Maximum, 16.0°C Oct. 5, Nov. 5; minimum, 0.0°C Jan. 11.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT										
05...	1430	1810	430	393	7.6	7.5	25.0	16.0	--	--
29...	1230	1200	430	442	8.2	7.8	16.0	9.5	9.8	--
DEC										
04...	1145	680	455	455	8.1	8.2	4.5	2.0	13.6	76
JAN										
06...	1200	873	550	605	7.8	7.8	1.5	4.0	11.2	23
FEB										
22...	1100	918	600	645	8.2	8.3	12.0	4.5	10.2	66

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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)
OCT									
05...	169	69	55	7.7	30	1.0	2.7	--	--
29...	163	65	52	8.1	28	1.0	2.2	--	--
DEC									
04...	167	60	53	8.5	32	1.1	2.2	--	--
JAN									
06...	192	77	61	9.7	34	1.1	2.4	--	--
FEB									
22...	204	89	65	10	56	1.8	3.1	180	.0

DATE	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)	CAR- BONATE FETFLD (MG/L AS CO3) (00445)	ALKA- LILITY 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, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT									
05...	--	--	--	110	8.7	.4	11	287	.23
29...	120	0	98	100	7.5	.5	10	266	.17
DEC									
04...	130	0	107	130	9.5	.3	9.3	305	<.09
JAN									
06...	140	0	115	130	12	.3	9.6	332	.18
FEB									
22...	140	0	115	200	11	.4	11	430	.22

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- 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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
OCT									
05...	.26	.240	1.1	1.5	.120	<.010	--	4.4	2.0
29...	.18	.260	.46	.89	.080	.080	--	--	.3
DEC									
04...	<.10	.290	.55	--	.110	.080	--	3.9	.3
JAN									
06...	.19	.390	.55	1.1	.110	.070	3.9	--	1.1
FEB									
22...	.27	<.060	--	1.3	.300	.040	--	16	15

DATE	TIME	ARSENIC	ARSENIC	BARIUM,	BARIUM,	BORON,	CADMIUM	CADMIUM	CHRO-	CHRO-
		TOTAL (UG/L AS AS) (01002)	DIS- SOLVED (UG/L AS AS) (01000)	TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	DIS- SOLVED (UG/L AS BA) (01005)	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)	DIS- SOLVED (UG/L AS CR) (01030)
OCT										
05...	1430	--	--	--	--	40	--	--	--	--
29...	1230	2	2	400	76	30	<1	<1	<10	<10
DEC										
04...	1145	--	--	--	--	40	--	--	--	--
JAN										
06...	1200	--	--	--	--	40	--	--	--	--
FEB										
22...	1100	--	--	--	--	50	--	--	--	--

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
OCT 05...	--	--	--	--	--	17	--	--	--
29...	7	< 3	29	4	11000	15	14	2	580
DEC 04...	--	--	--	--	--	18	--	--	--
JAN 06...	--	--	--	--	--	16	--	--	--
FEB 22...	--	--	--	--	--	560	--	--	--

[illegible]

SAN JUAN RIVER BASIN  
09365000 SAN JUAN RIVER AT FARMINGTON, NM -- Continued  
WATER-QUALITY RECORDS

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 29...	1230	<9.4	3.1	<4.3	3.0	<4.1	2.9	.08	1.7

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 05...	1430	1810	16.0	3310	46
29...	1230	1200	9.5	1530	11
DEC 04...	1145	680	2.0	1590	5
JAN 06...	1200	873	4.0	1040	--
FEB 22...	1100	918	4.5	3070	81

SAN JUAN RIVER BASIN  
09365000 SAN JUAN RIVER AT FARMINGTON, NM -- Continued  
WATER-QUALITY RECORDS

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	348	---	---	---	457							
2	140	---	---	---	431							
3	108	432	---	---	423							
4	623	458	490	---	492							
5	460	430	---	---	520							
6	437	494	---	550	490							
7	421	553	---	410	549							
8	416	606	---	---	479							
9	422	548	---	478	528							
10	412	---	---	434	505							
11	412	---	---	443	---							
12	418	549	---	443	509							
13	401	525	---	401	540							
14	415	---	---	494	502							
15	428	---	---	493	537							
16	710	---	---	485	505							
17	418	---	---	492	624							
18	415	---	---	481	636							
19	424	---	---	481	680							
20	426	---	---	440	625							
21	425	---	---	494	---							
22	402	---	---	490	608							
23	407	---	---	481	585							
24	426	---	---	482	633							
25	---	---	---	455	647							
26	424	---	---	431	644							
27	431	---	---	467	---							
28	431	---	---	481	---							
29	414	---	---	489	---							
30	419	---	---	515	---							
31	418	---	---	501	---							

MEAN 415 511 490 472 548  
NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.5	---	---	---	4.5							
2	13.0	---	---	---	4.0							
3	12.5	10.0	---	---	4.0							
4	12.5	10.0	2.0	---	3.0							
5	15.5	16.0	---	---	2.0							
6	15.5	10.0	---	4.0	.5							
7	15.0	9.0	---	2.0	.5							
8	14.0	9.5	---	---	1.0							
9	14.0	10.0	---	1.0	2.5							
10	10.0	---	---	1.0	4.5							
11	11.0	---	---	.0	---							
12	10.0	9.5	---	1.5	1.5							
13	10.5	9.5	---	2.0	3.5							
14	14.0	---	---	3.0	3.5							
15	11.0	---	---	3.0	3.5							
16	11.5	---	---	2.0	4.5							
17	10.0	---	---	3.0	5.5							
18	12.0	---	---	4.0	4.5							
19	13.0	---	---	6.0	8.0							
20	11.0	---	---	5.5	6.5							
21	11.5	---	---	5.0	---							
22	11.5	---	---	1.5	6.5							
23	12.0	---	---	1.0	6.0							
24	9.5	---	---	1.0	6.5							
25	---	---	---	6.0	6.0							
26	10.0	---	---	7.0	6.5							
27	9.5	---	---	4.5	---							
28	10.5	---	---	4.0	---							
29	9.5	---	---	6.0	---							
30	8.5	---	---	6.5	---							
31	5.0	---	---	4.5	---							

MEAN 11.5 10.5 2.0 3.5 4.0  
NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR



## 09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 36°59'51", long 108°11'17", in NW¼SE¼ sec.10, T.32 N., R.13 W., La Plata County, Colorado, Hydrologic Unit 14080105, on right bank at Colorado-New Mexico State Line, 0.2 mi (0.3 km) downstream from Ponds Arroyo, and 4.8 mi (7.7 km) north of La Plata, NM.

DRAINAGE AREA.--331 mi<sup>2</sup> (857 km<sup>2</sup>).

PERIOD OF RECORD.--January 1920 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1313: 1934(M), 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 5,975.15 ft (1,821.226 m) National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 17, 1934.

REMARKS.--Records good. Diversions above station for irrigation of about 15,000 acres (61 km<sup>2</sup>), mostly above station.

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

AVERAGE DISCHARGE.--62 years, 34.6 ft<sup>3</sup>/s (0.980 m<sup>3</sup>/s), 25,070 acre-ft/yr (30.9 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft<sup>3</sup>/s (135 m<sup>3</sup>/s) Aug. 24, 1927, gage height, 11.36 ft (3.463 m), present datum, from rating curve extended above 750 ft<sup>3</sup>/s (21 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 680 ft<sup>3</sup>/s (19.3 m<sup>3</sup>/s) Oct. 3, gage height, 3.73 ft (1.137 m); minimum daily, 2.4 ft<sup>3</sup>/s (0.068 m<sup>3</sup>/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	13	9.5	10	9.5	17	38	107	73	77	17	27
2	3.8	13	13	10	8.5	21	39	123	80	60	14	22
3	7.6	12	13	8.0	9.5	23	37	131	82	55	15	18
4	13	10	13	6.2	9.5	20	36	173	63	50	12	18
5	8.0	9.5	13	10	7.0	18	39	232	74	37	9.0	16
6	5.8	9.5	13	11	6.0	15	41	192	67	32	9.0	14
7	5.4	11	13	8.0	7.0	16	40	129	77	30	31	12
8	5.5	12	13	6.5	7.5	16	38	83	78	27	29	15
9	5.5	9.5	12	8.0	7.0	16	38	63	80	26	13	17
10	6.0	8.5	12	8.5	9.0	16	38	59	74	24	10	15
11	7.0	8.5	12	9.0	9.5	19	40	52	73	21	8.5	26
12	8.0	8.5	13	9.0	8.5	67	54	52	83	18	7.5	43
13	9.0	8.5	12	8.5	9.5	102	101	63	79	20	5.4	34
14	8.5	8.0	12	9.0	9.5	61	124	66	68	21	6.2	43
15	8.5	8.0	12	9.0	10	58	164	50	74	21	5.8	21
16	8.5	7.0	12	9.5	11	48	164	47	74	19	6.6	15
17	9.5	5.8	11	10	12	41	152	41	73	18	6.2	14
18	9.5	4.4	11	10	13	40	140	42	72	19	5.8	14
19	10	4.8	13	11	16	39	132	54	75	21	5.4	15
20	10	5.4	12	9.5	16	36	103	63	73	22	4.2	13
21	10	5.1	12	9.5	16	34	96	70	78	16	23	13
22	10	5.4	11	10	16	32	97	90	82	16	14	14
23	10	6.6	10	9.5	15	31	82	72	78	14	16	14
24	12	7.0	12	9.0	16	31	73	73	74	10	79	14
25	13	6.2	15	9.5	23	31	54	73	79	9.0	156	15
26	14	6.6	12	10	19	36	50	72	70	9.5	126	14
27	14	5.8	15	10	18	44	48	110	74	12	69	14
28	14	6.6	11	10	17	41	44	68	74	33	43	15
29	14	12	13	10	---	41	52	88	67	36	30	14
30	14	10	13	9.0	---	39	79	95	56	32	33	13
31	13	---	10	9.0	---	35	---	62	---	24	36	---
TOTAL	357.9	248.2	378.5	286.2	335.5	1084	2233	2695	2224	829.5	883.4	552
MEAN	11.5	8.27	12.2	9.23	12.0	35.0	74.4	86.9	74.1	26.8	28.5	18.4
MAX	7.6	13	15	11	23	102	164	232	83	77	156	43
MIN	2.4	4.4	9.5	6.2	6.0	15	36	41	56	9.0	5.4	12
AC-FT	710	492	751	568	665	2150	4430	5350	4410	1650	1750	1090

CAL YR 1981 TOTAL 6481.5 MEAN 17.8 MAX 585 MIN 1.2 AC-FT 12860  
WTR YR 1982 TOTAL 12107.2 MEAN 33.2 MAX 232 MIN 2.4 AC-FT 24010

## 09367400 LA PLATA RIVER TRIBUTARY NEAR FARMINGTON, NM

LOCATION.--Lat 36°47'10", long 108°13'31", in sec.29, T.30 N., R.13 W., San Juan County, Hydrologic Unit 14080104, on left bank 700 ft (213 m) upstream from culvert on State Highway 170, 3.6 mi (5.8 km) north of U.S. Highway 550, 4.1 mi (6.6 km) northwest of Farmington, and 10.0 mi (16.1 km) south of La Plata.

DRAINAGE AREA.--1.03 mi<sup>2</sup> (2.67 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1970-78 (annual maximum only), May 1979 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,376 ft (1,638.6 m) from topographic map.

REMARKS.--Water-discharge records poor. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORDS.--Maximum discharge, 245 ft<sup>3</sup>/s (6.94 m<sup>3</sup>/s) Mar. 1973, gage-height, 4.25 ft (1.295 m) from rating curve extended above 35 ft<sup>3</sup>/s (1.0 m<sup>3</sup>/s) on basis of slope-area measurement at gage height 4.02 ft (1.225 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 56 ft<sup>3</sup>/s (1.59 m<sup>3</sup>/s) Oct. 2, gage height, 2.77 ft (0.844 m) no other peak above base of 10 ft<sup>3</sup>/s (0.28 m<sup>3</sup>/s); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.37	.00	.00	.00	.00	.00	.00	.00	.00
2	2.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	3.1	.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	.20
12	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00	.00	1.4
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.35
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	.40	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.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	1.7	.00	.00	.00	.00	.00	.95	.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	.34	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.11	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	2.50	.45	.00	.47	2.10	3.10	.00	.00	.00	.00	2.35	1.95
MEAN	.081	.015	.000	.015	.075	.10	.000	.000	.000	.000	.076	.065
MAX	2.5	.34	.00	.37	1.7	3.1	.00	.00	.00	.00	1.0	1.4
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	5.0	.9	.00	.9	4.2	6.1	.00	.00	.00	.00	4.7	3.9
(++)	0.96	---	---	---	---	---	0.45	0.81	0.00	0.50	1.70	1.24

CAL YR 1981 TOTAL 14.60 MEAN .040 MAX 4.8 MIN .00 AC-FT 29

WTR YR 1982 TOTAL 12.92 MEAN .035 MAX 3.1 MIN .00 AC-FT 26

(++) Monthly rainfall, in inches.

SAN JUAN RIVER BASIN  
09367400 LA PLATA RIVER TRIBUTARY NEAR FARMINGTON, NM--Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1980 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)		
DATE	TIME									
OCT										
02...	1045	E17	610	--	6.8	--	--	--		
02...	1100	E17	550	--	7.1	--	--	--		
FEB										
25...	1315	5.5	600	650	8.2	7.6	5.0	6.0		
		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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)
DATE										
OCT										
02...	--	--	--	--	--	--	--	--	--	98
02...	--	--	--	--	--	--	--	--	--	88
FEB										
25...	14	4.6	.6	130	16	2.1	130	.0	--	--
		CAR- BONATE FETFLD (MG/L AS CO3) (00445)	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)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SAMPLE SOURCE (72005)	
DATE										
OCT										
02...	0	80	--	--	--	--	--	--	--	40
02...	0	72	--	--	--	--	--	--	--	40
FEB										
25...	--	--	250	6.6	1.2	10	528	29		

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SAMPLE SOURCE (72005)
OCT							
02...	1045	--	590000	--	23000	--	40
02...	1100	--	550000	--	12000	--	40
FEB							
25...	1315	30	380000	640	8900	7	29

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	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)
DATE	TIME						
OCT 02...	1045	El7	--	175000	20	23	33
02...	1100	El7	--	93700	35	45	62
FEB 25...	1315	5.5	6.0	54000	--	--	--
		SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
DATE							SAMPLE SOURCE (72005)
OCT 02...	54	76	94	99	100	--	40
02...	93	99	100	--	--	--	40
FEB 25...	--	--	--	--	--	80	29

## 09367500 LA PLATA RIVER NEAR FARMINGTON, NM

LOCATION.--Lat 36°44'23", long 108°14'51", in NE¼SW¼ sec.7, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080105, on right bank 1,300 ft (400 m) upstream from bridge on U.S. Highway 550 in Farmington, and 1,800 ft (550 m) upstream from mouth.

DRAINAGE AREA.--583 mi<sup>2</sup> (1,510 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1938 to current year.

REVISED RECORDS.--WSP 1243: 1944-45. WSP 1313: 1943-44(M), 1946-50(M). WSP 1733: 1951(M).

GAGE.--Water-stage recorder. Altitude of gage is 5,214 ft (1,589 m), from river-profile map. Prior to July 28, 1978 at altitude 1.0 ft (0.305 m) higher.

REMARKS.--Water-discharge records good except those below 10 cfs (0.3 m<sup>3</sup>/s), which are poor. Diversions for irrigation of about 24,000 acres (97 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--44 years, 26.3 ft<sup>3</sup>/s (0.745 m<sup>3</sup>/s), 19,050 acre-ft/yr (23.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, that of Sept. 10, 1939, "discharge not determined", gage height, 6.03 ft (1.838 m), site and datum then in use; no flow for long periods in some years. Major floods occurred Sept. 5 or 6, 1909, and Oct. 5 or 6, 1911.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,260 ft<sup>3</sup>/s (35.7 m<sup>3</sup>/s) Sept. 11, gage height, 5.29 ft (1.612 m); minimum daily, 0.24 ft<sup>3</sup>/s (0.007 m<sup>3</sup>/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	7.2	4.0	4.5	5.5	16	15	8.0	8.0	.91	3.1	17
2	13	8.7	9.6	4.6	5.0	16	19	28	7.0	5.1	2.6	13
3	361	6.4	14	3.1	4.5	28	19	32	7.0	2.0	1.1	12
4	30	4.0	17	4.0	4.0	25	17	68	6.0	1.9	.85	13
5	15	2.8	15	5.0	3.5	19	14	144	7.0	2.4	.80	19
6	8.8	2.4	12	8.4	3.0	16	13	194	6.0	2.1	.55	19
7	5.4	2.8	13	5.0	4.0	13	27	57	5.5	1.7	.41	13
8	1.8	3.2	14	3.0	5.1	12	25	28	6.5	.90	1.88	12
9	1.2	2.8	14	3.3	6.4	10	21	25	8.0	.70	.22	15
10	1.0	2.6	12	3.8	7.6	9.0	17	15	8.0	.57	.14	19
11	1.7	2.8	11	4.5	9.0	8.1	18	12	7.7	.43	.12	241
12	2.0	3.2	10	5.0	8.2	17	19	12	7.7	.28	.12	209
13	1.8	3.7	10	6.0	7.6	133	49	11	7.4	.32	.11	132
14	1.7	2.0	10	7.0	7.0	64	79	10	7.2	.26	.11	167
15	1.4	1.8	11	7.0	10	54	150	9.3	7.0	.28	.11	26
16	1.2	2.0	9.3	7.0	14	48	94	5.2	6.7	.34	.56	13
17	1.1	1.8	9.5	7.0	15	29	74	5.4	6.6	.27	.33	11
18	.98	2.0	11	7.0	14	22	61	6.6	6.5	.24	.9.8	10
19	1.1	2.0	12	7.0	12	18	53	12	6.4	.26	.9.6	9.0
20	4.5	1.8	16	6.5	19	18	31	18	6.1	.92	.9.4	7.5
21	2.4	2.2	12	5.5	18	15	25	29	5.8	13	228	6.5
22	1.4	2.0	8.0	5.0	18	14	20	30	5.3	4.8	124	5.5
23	1.7	1.8	6.5	4.0	14	12	14	29	4.8	3.7	23	5.1
24	2.4	1.8	5.0	4.1	13	12	12	5.2	4.4	3.4	29	4.6
25	2.8	1.7	6.0	4.3	57	11	10	6.4	4.0	3.4	77	4.2
26	4.0	1.6	6.0	4.5	35	16	10	3.5	3.4	4.6	212	4.3
27	6.8	1.6	6.5	4.8	23	22	9.5	13	2.8	3.6	68	4.6
28	9.3	2.6	6.5	6.3	18	20	9.0	22	2.2	3.6	37	5.5
29	7.2	5.4	7.0	7.5	---	19	8.0	4.5	1.9	3.8	28	8.6
30	6.0	3.4	7.5	6.7	---	19	8.0	6.8	1.0	35	20	5.8
31	7.2	---	7.6	6.6	---	16	---	9.6	---	6.8	17	---
TOTAL	506.08	90.1	313.0	168.0	360.4	751.1	940.5	859.5	173.9	198.66	1311.80	1032.2
MEAN	16.3	3.00	10.1	5.42	12.9	24.2	31.4	27.7	5.80	6.41	42.3	34.4
MAX	361	8.7	17	8.4	57	133	150	194	8.0	.92	228	241
MIN	.20	1.6	4.0	3.0	3.0	8.1	8.0	3.5	1.0	.24	.55	4.2
AC-FT	1000	179	621	333	715	1490	1870	1700	345	394	2600	2050

CAL YR 1931 TOTAL 2973.44 MEAN 8.15 MAX 490 MIN .18 AC-FT 5900  
WTR YR 1982 TOTAL 6705.24 MEAN 18.4 MAX 361 MIN .20 AC-FT 13300

SAN JUAN RIVER BASIN  
09367540 SAN JUAN RIVER NEAR FRUITLAND, NM--Continued  
WATER-QUALITY RECORD

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
APR 16...	1200	2930	360	363	7.6	7.9	17.0	10.0	160	9.7
MAY 03...	1350	3750	350	351	7.8	7.7	22.0	15.0	210	10.8
JUL 07...	0830	2840	330	326	7.9	8.0	23.0	14.0	17	8.9
SEP 08...	0830	1640	430	438	8.3	8.4	21.0	16.5	80	8.7

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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
APR 16...	139	38	43	7.7	17	.7	1.8	98	.0	74
MAY 03...	128	39	40	6.8	17	.7	1.6	120	.0	72
JUL 07...	125	44	40	6.0	16	.7	1.4	96	.0	66
SEP 08...	158	58	50	8.0	26	.9	2.1	120	.0	100

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, 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, DIS- TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
APR 16...	5.0	.2	8.1	213	218	.15	.310	.320	.040
MAY 03...	4.4	.2	7.8	205	203	--	--	--	--
JUL 07...	5.6	.3	7.8	198	192	--	--	--	--
SEP 08...	7.9	.3	9.4	269	264	.12	.070	.090	.030

SAN JUAN RIVER BASIN  
09367540 SAN JUAN RIVER NEAR FRUITLAND, NM--Continued  
WATER-QUALITY RECORD

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
APR 16...	1200	4	2	500	73	2	< 3	20	< 10	10
SEP 08...	0830	2	1	100	76	1	2	< 10	< 10	4

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER; DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
APR 16...	< 1	75	3	21000	42	49	< 1	1000	7	.2
SEP 08...	< 1	13	2	5600	15	4	< 1	200	7	.7

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
APR 16...	.1	16	3	1	1	< 1	< 1	300	39
SEP 08...	.8	5	< 1	1	1	< 1	< 1	40	7

SAN JUAN RIVER BASIN  
09367540 SAN JUAN RIVER NEAR FRUITLAND, NM--Continued  
WATER-QUALITY RECORD

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
IDENTIFICATION OF PHYTOPLANKTON

DATE TIME	APR 16, 82 1200	SEP 8, 82 0830
TOTAL CELLS/ML	18000	3400
DIVERSITY: DIVISION	0.9	1.0
..CLASS	0.9	1.0
..ORDER	2.2	1.3
...FAMILY	2.6	1.4
....GENUS	3.0	2.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)				
..BACILLARIOPHYCEAE				
...ACHNANTHALES				
....ACHNANTHACEAE				
.....ACHNANTHES	210	1	--	-
.....COCCONEIS	140	1	41	1
.....RHOICOSPHENIA	*	0	--	-
..BACILLARIALES				
...NITZSCHIA				
....NITZSCHIA	1100	6	120	4
...EUPODISCALES				
....COSCINODISCACEAE				
.....CYCLOTELLA	420	2	41	1
..FRAGILARIALES				
...FRAGILARIACEAE				
....DIATOMA	210	1	120	4
....FRAGILARIA	5300#	30	--	-
....SYNEDRA	140	1	41	1
..NAVICULALES				
...CYMBELLACEAE				
....CYMBELLA	2100	12	41	1
...GOMPHONEMACEAE				
....GOMPHONEMA	420	2	--	-
...NAVICULACEAE				
....NAVICULA	1600	9	*	0
..SURIPELLALES				
...SURIPELLACEAE				
....SURIPELLA	840	5	*	0
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
....MICRACTINIACEAE				
.....MICRACTINIUM	--	-	220	7
...SCENEDESMACEAE				
....TETRASTRUM	--	-	110	3
..VOLVOCALES				
...PHACOTACEAE				
....PHACOTUS	--	-	*	0
CYANOPHYTA (BLUEGREEN ALGAE)				
..CYANOPHYCEAE				
...OSCILLATORIALES				
....OSCILLATORIA				
.....LYNGBYA	3900#	22	1300#	37
....OSCILLATORIA	1400	8	1300#	40

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR					
16...	1200	2930	10.0	2460	31
MAY					
03...	1350	3750	15.0	2290	40
JUL					
07...	0830	2840	14.0	156	33
SEP					
08...	0830	1640	16.5	1250	33



09367555 SHUMWAY ARROYO NEAR FRUITLAND, NM

LOCATION.--Lat 36°48'23", long 108°23'42", in NE¼NE¼ sec. 22, T.30 N., R.15 W., San Juan County, Hydrologic Unit 14080102, on right bank 1.7 mi (2.7 km) downstream from Narrows Wash, 2.0 mi (3.2 km) northeast of San Juan Power Plant, 4.6 mi (7.4 km) north of Fruitland, and at mile 8.5 (13.7 km).

DRAINAGE AREA.--62.8 mi<sup>2</sup> (163 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1975 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,240 ft (1,597 m), from topographic map.

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--7 years, 0.620 ft<sup>3</sup>/s (0.018 m<sup>3</sup>/s), 449 acre-ft/yr (553,600 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft<sup>3</sup>/s (142 m<sup>3</sup>/s) May 20, 1978, gage height, 13.00 ft (3.962 m), from floodmarks, from rating curve extended above 4.0 ft<sup>3</sup>/s (0.11 m<sup>3</sup>/s) on basis of slope-area measurements of peak flow at gage heights, 9.98 ft (3.042 m) and 13.00 ft (3.962 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft<sup>3</sup>/s (0.85 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 3	0315	475 13.5	4.28 1.305	Aug. 21	2130	*1060 30.0	5.90 1.798
July 28	0230	188 5.32	3.04 0.927	Sept. 12	1900	355 10.1	3.80 1.158
Aug. 20	1900	139 3.94	2.76 0.841	Sept. 13	2300	61 1.73	2.11 0.643

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	57	.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	.29
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	32
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.8
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.0
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	.01	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	5.1	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	67	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	14	.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	1.3	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.02	.00	.00	.00	.42	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.6	.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	69.00	.00	.00	.00	1.39	.02	.00	.00	.00	8.02	87.00	38.09
MEAN	2.23	.000	.000	.000	.050	.001	.000	.000	.000	.26	2.81	1.27
MAX	57	.00	.00	.00	1.3	.02	.00	.00	.00	7.6	67	32
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	137	.00	.00	.00	2.8	.04	.00	.00	.00	16	173	76

CAL YR 1981	TOTAL	152.01	MEAN	.42	MAX	58	MIN	.00	AC-FT	302
WTR YR 1982	TOTAL	203.52	MEAN	.56	MAX	67	MIN	.00	AC-FT	404

SAN JUAN RIVER BASIN  
09367555 SHUMWAY ARROYO NEAR FRUITLAND, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976, 1978 to current year.

REMARKS.--Under the heading SAMPLE SOURCE NUMERICAL values are used to indicate method of sampling; 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (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 CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
JUL 27...	1030	.28	650	651	7.1	7.9	31.0	22.5	126	36
DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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)
JUL 27...		8.7	94	3.8	7.1	200	6.0	.8	7.8	433

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC	BERYL-	BORON,	CADMIUM	CHRO-	COPPER,	IRON,
		DIS-	LIUM,	DIS-	DIS-	MIUM,	DIS-	TOTAL
		SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	RECOV-
		(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	ERABLE
		AS AS)	AS BE)	AS B)	AS CD)	AS CR)	AS CU)	AS FE)
		(01000)	(01010)	(01020)	(01025)	(01030)	(01040)	(01045)
JUL 27...	1030	1	<1	100	<1	<10	10	180000
DATE		IRON,	MANGA-	MANGA-	MERCURY	NICKEL,	SELE-	ZINC,
		DIS-	NESE,	NESE,	DIS-	DIS-	NIUM,	DIS-
		SOLVED	TOTAL	DIS-	SOLVED	SOLVED	SOLVED	SOLVED
		(UG/L	RECOV-	DIS-	(UG/L	(UG/L	(UG/L	(UG/L
		AS FE)	ERABLE	SOLVED	AS HG)	AS NI)	AS SE)	AS ZN)
		(01046)	(UG/L	(UG/L	(71890)	(01065)	(01145)	(01090)
		(01049)	AS MN)	AS MN)				
		(01055)	(01056)					
JUL 27...	70	<1	3600	44	1.1	2	2	37

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUL 27...	1030	.28	22.5	13600	100

## 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 (1.0 km) downstream from Westwater Arroyo, 0.7 mi (1.1 km) upstream from highway to San Juan Power Plant, 14 mi (22 km) west of Farmington, and at mile 4.5 (7.2 km).

DRAINAGE AREA.--73.8 mi<sup>2</sup> (191 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,130 ft (1,564 m), from topographic map. Prior to May 20, 1978, at datum, 10.0 ft (3.048 m) higher.

REMARKS.--Water-discharge records fair except those above 10 ft<sup>3</sup>/s (0.28 m<sup>3</sup>/s) and those for winter months, which are poor.

AVERAGE DISCHARGE.--8 years, 2.46 ft<sup>3</sup>/s (0.070 m<sup>3</sup>/s) 1,780 acre-ft/yr (2.19 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,420 ft<sup>3</sup>/s (182 m<sup>3</sup>/s) May 20, 1978, gage height, 18.94 ft (5.773 m), from floodmark, from rating curve extended above 4.0 ft<sup>3</sup>/s (0.11 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 80 ft<sup>3</sup>/s (2.3 m<sup>3</sup>/s), revised, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 3	0500	543 15.4	7.90 2.408	Aug. 21	2345	*1,010 28.6	11.38 3.469
July 30	1830	147 4.16	7.82 2.384	Sept. 12	0645	258 7.31	8.57 2.612
Aug. 20	1915	105 2.97	7.44 2.268	Sept. 12	2015	234 6.63	8.42 2.566

Minimum daily discharge, 1.1 ft<sup>3</sup>/s (0.031 m<sup>3</sup>/s) May 20, June 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	2.4	5.4	3.4	4.4	3.3	4.1	2.6	2.7	2.4	2.3	3.5
2	13	2.4	3.8	3.4	5.5	3.1	3.9	2.5	2.2	2.4	2.1	2.3
3	102	2.4	4.2	3.5	3.6	3.2	5.6	2.3	2.5	2.3	2.9	2.4
4	9.1	2.3	4.2	4.2	3.6	3.6	4.5	2.5	2.6	2.4	3.5	2.4
5	4.4	2.5	5.2	4.5	3.6	3.5	5.1	3.8	2.4	2.4	3.5	2.6
6	3.5	2.5	5.0	4.6	4.4	3.1	5.9	3.6	2.3	2.5	3.3	2.5
7	3.0	2.4	4.4	3.9	4.0	1.8	4.7	3.9	2.4	2.4	3.3	2.5
8	2.7	2.4	4.8	4.4	3.5	1.9	4.5	3.5	2.4	2.5	4.0	2.3
9	2.5	2.4	4.0	3.5	3.5	4.2	3.6	3.1	2.4	2.3	3.4	2.8
10	2.6	2.4	3.8	3.8	3.0	4.7	2.6	3.2	3.4	2.1	3.0	2.9
11	2.5	2.4	3.8	4.2	3.0	4.2	3.2	3.2	3.2	2.1	3.0	3.5
12	2.8	2.5	4.6	5.2	3.0	4.5	4.2	2.6	2.6	2.1	3.2	4.4
13	2.3	2.5	4.7	6.8	3.0	4.7	3.1	2.4	2.8	2.3	3.0	11
14	2.5	2.8	4.8	6.6	2.8	4.6	2.6	2.9	3.0	2.1	3.3	13
15	3.0	2.8	4.6	3.5	2.8	3.9	2.1	3.0	3.2	2.3	3.3	2.9
16	3.7	3.9	4.9	3.3	2.7	4.3	2.1	2.3	2.6	2.6	3.3	2.8
17	3.7	4.4	5.6	4.5	2.6	4.0	2.2	2.6	2.4	3.9	3.2	3.3
18	3.7	5.1	5.7	4.7	2.6	3.8	2.2	2.8	2.0	3.4	3.4	2.8
19	3.7	4.7	5.3	4.1	2.6	3.5	2.3	2.4	1.1	2.5	3.5	2.6
20	3.6	5.0	3.9	4.7	2.6	4.8	2.5	1.1	1.1	2.2	15	2.6
21	3.5	4.3	4.5	5.3	2.6	4.8	2.8	1.7	2.0	2.9	30	2.3
22	3.5	3.7	4.6	5.7	3.3	4.8	2.3	3.0	2.7	2.8	61	1.8
23	3.4	3.6	5.3	5.3	3.3	4.7	2.3	2.4	2.6	2.6	4.2	2.5
24	3.4	3.7	5.0	5.0	3.3	3.5	2.1	2.3	2.5	2.7	5.2	2.3
25	3.5	3.7	5.3	4.4	4.9	4.2	2.1	2.4	2.4	2.6	2.9	1.8
26	3.7	4.8	5.4	5.2	3.8	5.8	2.9	2.5	2.5	2.5	2.7	1.2
27	3.5	3.8	4.6	5.0	4.1	5.4	2.7	2.8	3.1	11	2.5	1.2
28	3.0	3.6	4.9	4.6	3.6	4.5	2.6	2.4	2.9	5.5	2.2	1.8
29	2.5	3.9	4.7	4.2	---	4.3	2.5	4.2	2.6	2.5	2.4	2.3
30	2.5	3.8	4.4	4.4	---	4.4	3.1	3.7	2.3	19	2.3	2.6
31	2.4	---	3.9	4.2	---	4.2	---	3.4	---	5.2	2.3	---
TOTAL	212.0	99.1	145.3	140.1	95.7	125.3	96.4	87.1	74.9	108.5	193.2	134.5
MEAN	6.84	3.30	4.69	4.52	3.42	4.04	3.21	2.81	2.50	3.50	6.23	4.48
MAX	102	5.1	5.7	6.8	5.5	5.8	5.9	4.2	3.4	19	61	44
MIN	2.3	2.3	3.8	3.3	2.6	1.8	2.1	1.1	1.1	2.1	2.1	1.2
AC-FT	421	197	288	278	190	249	191	173	149	215	383	267

CAL YR 1981 TOTAL 1338.28 MEAN 3.67 MAX 142 MIN .57 AC-FT 2650  
WTR YR 1982 TCTAL 1512.10 MEAN 4.14 MAX 102 MIN 1.1 AC-FT 3000

SAN JUAN RIVER BASIN  
09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM -- Continued  
WATER-QUALITY RECORDS

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

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate method of sampling; 29 indicates dip or grab sample and 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
NOV 04...	1330	2.0	14000	17200	6.8	6.4	18.0	17.0
FEB 02...	1210	6.4	9000	9400	6.3	3.5	3.0	8.0
MAY 14...	0945	3.2	8500	8190	6.7	6.3	12.0	14.5
AUG 11...	1130	3.1	10000	10400	9.4	7.8	25.0	25.0

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	ACIDITY (MG/L AS H) (71825)	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)
NOV 04...	1.4	941	927	7.6	250	77	3500	51	14
FEB 02...	6.7	967	--	3.6	300	53	1900	28	11
MAY 14...	1.7	980	--	5.5	290	62	1800	26	9.8
AUG 11...	6.7	429	--	--	76	58	2500	54	9.0

DATE	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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)	SAMPLE SOURCE (72005)
NOV 04...	--	--	7800	360	28	35	12800	--
FEB 02...	--	--	4500	320	28	41	7550	29
MAY 14...	--	--	4100	290	20	23	6910	--
AUG 11...	190	71	5200	620	31	14	8900	29

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 04...	1330	--	10000	--	--	--	9900	1300
FEB 02...	1210	--	8800	--	--	--	14000	490
MAY 14...	0945	--	3800	--	--	--	2500	1200
AUG 11...	1130	2	12000	2	40	11	1800	30

SAN JUAN RIVER BASIN  
09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
NOV 04...	--	720	660	--	--	--	--	--
FEB 02...	--	550	430	--	--	--	--	29
MAY 14...	--	370	360	--	--	--	--	--
AUG 11...	1	270	230	.2	6	5	90	29

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)
AUG 11...	1130	6	<1	1	<10	<15	2500

DATE	TIME	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)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G AS NI) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	SAMPLE SOURCE (72005)
AUG 11...		<10	85	.06	2	13	29

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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, RADON METHOD (PCI/L AS U) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SAMPLE SOURCE (72005)
AUG 11...	1130	<220	5.6	<110	2.4	<100	2.2	<.58	3.6	29

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
NOV 04...	1330	2.0	17.0	1700	78	--
DEC 16...	1400	3.9	13.0	970	--	--
FEB 02...	1210	6.4	8.0	971	51	29
MAY 14...	0945	3.2	14.5	120	75	--
AUG 11...	1130	3.1	25.0	56	87	29
SEP 13...	0030	32	--	8360	96	26
13...	0055	29	--	18700	97	26
13...	0145	25	--	19000	98	26

DATA NOT PREVIOUSLY PUBLISHED

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	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)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)
NOV 18...	1245	5	22	83	96	99	100

## 09367660 CHACO WASH NEAR STAR LAKE TRADING POST, NM

LOCATION.--Lat 35°56'07", long 107°31'39", in NE¼NW¼SE¼ sec.25, T.20 N., R.7 W., McKinley County, Hydrologic Unit 14080106, on right bank, 4.8 mi (7.7 km) northwest of Star Lake Trading Post, and 7.6 mi (12.2 km) southeast of Pueblo Pintada.

DRAINAGE AREA.--59.0 mi<sup>2</sup> (153 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,580 ft (2,006 m), from topographic map.

REMARKS.--Water-discharge records poor.

AVERAGE DISCHARGE.--5 years, 0.83 ft<sup>3</sup>/s (0.024 m<sup>3</sup>/s), 601 acre-ft/yr (741,000 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 750 ft<sup>3</sup>/s (21.2 m<sup>3</sup>/s), Aug. 26, 1982, gage height, 11.5 ft (3.505 m) from rating curve extended above 50 ft<sup>3</sup>/s (1.4 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 750 ft<sup>3</sup>/s (21.2 m<sup>3</sup>/s) at 0100 hours Aug. 26, gage height, 11.5 ft (3.505 m) from rating curve extended above 50 ft<sup>3</sup>/s (1.4 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.00	.00	.00	.00	.10	.00	.00	.00	.00	.85	.69
2	.82	.00	.00	.00	.00	.46	.00	.00	.00	.00	.00	.30
3	22	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00
4	1.0	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.79
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	.11	.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	.99	.00
14	.00	.00	.00	.00	.00	3.2	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.65	1.4
19	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00	.60	.65
20	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	2.4	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	2.4	.00	.00	.00	.00	.00	1.2	.00
23	.00	.00	.00	.00	2.2	.00	.00	.00	.00	.00	.68	.00
24	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00	20	.00
25	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00	37	.00
26	.00	.00	.00	1.0	.20	.57	.00	.00	.00	.00	141	.00
27	.00	.00	.00	1.3	.40	1.1	.00	.00	.00	.00	.99	.00
28	.00	.00	.00	1.1	.18	.00	.00	.00	.00	.23	29	.00
29	.00	.00	.00	.98	---	.00	.00	.00	.00	.95	7.5	.00
30	.00	.00	.00	.93	---	.00	.00	.00	.00	.78	.65	.00
31	.00	---	.00	.00	---	.00	---	.00	---	3.2	1.6	---
TOTAL	24.40	.00	.00	5.31	12.08	7.19	.00	.00	.00	5.16	242.82	5.14
MEAN	.79	.000	.000	.17	.43	.23	.000	.000	.000	.17	7.83	.17
MAX	22	.00	.00	1.3	2.4	3.2	.00	.00	.00	3.2	141	1.4
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	48	.00	.00	11	24	14	.00	.00	.00	10	482	10

CAL YR 1981 TOTAL 212.47 MEAN .58 MAX 46 MIN .00 AC-FT 421  
WTR YR 1982 TOTAL 302.10 MEAN .83 MAX 141 MIN .00 AC-FT 599

09367660 CHACO WASH NEAR STAR LAKE TRADING POST, NM--Continued

## WATER-QUALITY RECORDS

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

REMARKS.--Under the heading of SAMPLE SOURCE numerical values are used to indicate sampling method; 40 indicates the single-stage sample.

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
MAR 27...	0150	2.5	440	468	7.0	7.7	--	--	65	23	1.8
JUL 31...	1800	10	450	475	6.8	7.8	--	--	49	17	1.5
AUG 26...	1145	51	200	205	--	7.6	26.0	20.0	24	8.3	.8

DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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)	SAMPLE SOURCE (72005)
MAR 27...	73	4.1	3.8	170	--	69	6.0	.6	15	308	--	--
JUL 31...	98	6.4	5.6	140	.0	90	6.4	.7	18	336	40	40
AUG 26...	31	2.9	3.0	--	--	35	5.1	.2	11	165	--	--

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
MAR 27...	0150	--	--	50	--	--	--	250000	470
JUL 31...	1800	--	--	60	--	--	--	250000	130
AUG 26...	1145	1	<1	140	2	<10	7	84000	120

DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
MAR 27...	--	--	6100	4	--	--	--	--	--
JUL 31...	--	--	5800	94	--	--	--	--	40
AUG 26...	<1	1300	7	.1	1	<1	17	--	--

## INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	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. 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)	SAMPLE SOURCE (72005)
JUL 31...	1800	10	--	20200	--	--	--	100	--	--	--	40
AUG 26...	1145	51	20.0	4380	71	74	83	92	96	99	100	--



## SAN JUAN RIVER BASIN

09367676 CHACO WASH AT EAST BOUNDARY CHACO NATIONAL MONUMENT, NM

LOCATION.--Lat 36°01'12", long 107°51'04", in NE¼SW¼ sec.25, T.21 N., R.10 W., San Juan County, Hydrologic Unit 14080106, in Chaco Canyon National Monument, on right bank, 0.4 mi (0.6km) downstream from east boundary of Chaco Canyon National Monument, 1.0 mi (1.6km) upstream from Wijiji Ruins and 4.2 mi (6.8km) east of Chaco Canyon National Monument Visitors Center.

DRAINAGE AREA.--364 mi<sup>2</sup> (943 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.-- March 1980 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,220 ft (1,895.9 m), from topographic map.

REMARKS.--Water-discharge records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 467 ft<sup>3</sup>/s (13.2 m<sup>3</sup>/s) Aug. 24, 1982, gage height, 6.15 ft (1.875 m), from rating curve extended above 70 ft<sup>3</sup>/s (2.0 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 467 ft<sup>3</sup>/s (13.2 m<sup>3</sup>/s) at 0345 hours Aug. 24, gage height, 6.15 ft (1.875 m) from rating curve extended above 70 ft<sup>3</sup>/s (2.0 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.50	.00	.00	.00	.00	.00	1.5
2	29	.00	.00	.00	.00	2.3	.00	.00	.00	.00	.00	6.4
3	104	.00	.00	.00	.00	.69	.00	.00	.00	.00	.00	.00
4	35	.00	.00	.00	.00	5.1	.00	.00	.00	.00	.80	3.7
5	2.5	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	7.7
6	.00	.00	.00	.00	.00	.60	.00	.00	.00	.00	.00	.70
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.3	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.50	4.6
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.1
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.50
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.8
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	16
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0
15	.00	.00	.00	.00	.00	1.0	.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	.42	.00	.00
19	.00	.00	.00	.00	2.4	.00	.00	.00	.00	1.2	.00	11
20	.00	.00	.00	.00	10	.00	.00	.00	.00	.00	.90	7.0
21	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	126	1.5
22	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	9.3	.10
23	.00	.00	.00	.00	11	.00	.00	.00	.00	.00	12	.00
24	.00	.00	.00	.00	10	.00	.00	.00	.00	.00	128	.00
25	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.15	72	.00
26	.00	.00	.00	.00	1.0	.21	.00	.00	.00	.68	167	.00
27	.00	.00	.00	.00	2.0	8.7	.00	.00	.00	.00	141	.00
28	.00	.00	.00	.00	.90	.60	.00	.00	.00	.00	18	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	13	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	16	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	5.0	---
TOTAL	170.50	.00	.00	.00	63.30	37.20	.00	.00	.00	2.45	717.10	74.60
MEAN	5.50	.000	.000	.000	2.26	1.20	.000	.000	.000	.079	23.1	2.49
MAX	104	.00	.00	.00	12	16	.00	.00	.00	1.2	167	16
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	338	.00	.00	.00	126	74	.00	.00	.00	4.9	1420	148

CAL YR 1981 TOTAL 388.00 MEAN 1.06 MAX 104 MIN .00 AC-FT 770  
WTR YR 1982 TOTAL 1065.15 MEAN 2.92 MAX 167 MIN .00 AC-FT 2110

SAN JUAN RIVER BASIN  
09367676 CHACO WASH AT EAST BOUNDARY AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)
AUG 24...	1400	67	449	419	8.0	8.8	20.0	27

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)
AUG 24...	9.8	.7	91	7.9	2.6	51	3.0	.6	13

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	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)
AUG 24...	278	1.1	1.2	.280	2.1	3.5	8.40	.090

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
AUG 24...	1400	50	350000	13	16000	<1

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
AUG 24...	1400	67	20.0	46800	97

## SAN JUAN RIVER BASIN

09367678 FAJADA WASH AT CHACO CANYON NATIONAL MONUMENT, NM

LOCATION.--Lat 36°01'03", long 107°55'04", in SW¼SE¼ sec.29, T.21 N., R.10 W., San Juan County, Hydrologic Unit 14080106, in Chaco Canyon National Monument, on left bank 300 ft (91.4 m) downstream from south boundary of Chaco Canyon National Monument, 0.5 mi (0.80 km) west of Fajada Butte, 0.7 mi (1.1 km) upstream from mouth and 1.0 mi (1.6 km) southwest of Chaco Canyon National Monument Visitors Center.

DRAINAGE AREA.--199 mi<sup>2</sup> (515 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 6,155 ft (1,876.0 m), from topographic map.

REMARKS.--Water-discharge records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 491 ft<sup>3</sup>/s (13.9 m<sup>3</sup>/s) June 30, 1981, gage height, 5.68 ft (1.731 m), from rating curve extended above 25 ft<sup>3</sup>/s (0.71 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 256 ft<sup>3</sup>/s (7.25 m<sup>3</sup>/s) at 0215 hours Aug. 26, gage height, 3.96 ft (1.207 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	1.8	.00	.00	.00	.00	.00	.00	1.6	.00	.00	.86	.00
5	.83	.00	.00	.00	.00	.00	.00	.70	.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	.04	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.21	10
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.84	5.1
12	.00	.00	.00	.00	.91	.00	.00	.00	.00	.00	.00	3.3
13	.00	.00	.00	.00	5.5	1.1	.00	.00	.00	.00	.00	2.4
14	.00	.00	.00	.00	3.1	1.7	.00	.00	.00	.00	.87	2.1
15	.00	.00	.00	.00	1.4	.00	.00	.00	.00	.00	.53	1.9
16	.00	.00	.00	.00	1.4	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.42	.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	56
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.32	.00	11
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.75	67	2.1
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.2	.06
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.1	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	37	.00
25	.00	.00	.00	.00	.90	.00	.00	.00	.00	.00	6.0	.00
26	.00	.00	.00	.00	.93	.84	.00	.00	.00	.00	47	.00
27	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	5.7	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.4	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	3.7	2.5	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	1.8	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	1.3	---
TOTAL	45.63	.00	.00	.00	14.56	5.14	.00	2.30	.00	4.77	185.35	95.46
MEAN	1.47	.000	.000	.000	.52	.17	.000	.074	.000	.15	5.98	3.18
MAX	28	.00	.00	.00	5.5	1.7	.00	1.6	.00	3.7	67	56
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	91	.00	.00	.00	29	10	.00	4.6	.00	9.5	368	189

CAL YR 1981 TOTAL 213.12 MEAN .58 MAX 76 MIN .00 AC-FT 423  
WTR YR 1982 TOTAL 353.21 MEAN .97 MAX 67 MIN .00 AC-FT 701

SAN JUAN RIVER BASIN  
09367678 FAJADA WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
JUL 29...	1230	4.3	320	307	8.3	7.7	23.0	20.5	25	8.8
AUG 24...	1330	14	302	252	7.9	8.5	--	22.0	57	19

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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)
JUL 29...	.7	65	5.9	3.4	140	.0	51	4.4	.7	17
AUG 24...	2.4	40	2.4	3.7	--	--	38	4.3	.6	8.6

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 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, ORTHOS, DIS- SOLVED (MG/L AS P) (00671)
JUL 29...	232	301	2.0	1.9	.110	16	18	4.20	.180
AUG 24...	178	--	.90	.81	.190	.71	1.8	2.90	.070

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)
JUL 29...	1230	7	2	1500	18	<1	40	<1	<1	130
AUG 24...	1330	--	--	--	--	--	40	--	--	--

SAN JUAN RIVER BASIN  
09367678 FAJADA WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI) (01132)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)
JUL 29...	<10	280	13	250000	840	180	<1	260	5	3700
AUG 24...	--	--	--	220000	42	--	--	--	--	4400

DATE	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR) (01082)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
JUL 29...	14	1.0	.7	<1	2	1	1700	38	1000	160
AUG 24...	2	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		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)	
JUL 29...	1230	<2.0	3.4	170	5	<10	1	
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)
JUL 29...	<10	<10	1100	<100	140	<.01	4	

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	TEMPERATURE (DEG C) (00010)	SEDIMENT, SUSPENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUL 29...	1230	4.3	20.5	19000	99
AUG 24...	1330	14	22.0	12400	100

## 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 (240 m) downstream from Fajada Wash, and 0.5 mi (0.8 km) southwest of Chaco Canyon National Monument Visitors Center.

DRAINAGE AREA.--578 mi<sup>2</sup> (1,497 km<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. Altitude of gage is 6,140 ft (1,871 m), from topographic map.

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--6 years, 4.76 ft<sup>3</sup>/s (0.135 m<sup>3</sup>/s), 3,450 acre-ft/yr (4.25 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,260 ft<sup>3</sup>/s (35.7 m<sup>3</sup>/s) Jan. 18, 1979, gage height, 6.62 ft (2.018 m), from rating curve extended above 350 ft<sup>3</sup>/s (9.91 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights, 3.44 ft (1.049 m), 3.68 ft (1.122 m) and 5.32 ft (1.622 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 3	1200	344 9.74	3.29 1.003	Aug. 24	0515	416 11.8	3.60 1.097
Aug. 21	0545	*429 12.1	3.65 1.113				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.68	.64	.00	.00	.00	.00	.00
2	45	.00	.00	.00	.00	.29	.49	.00	.00	.00	.00	.60
3	187	.00	.00	.00	.00	.00	.21	.00	.00	.00	.00	.04
4	56	.00	.00	.00	.00	1.2	.03	1.6	.00	.00	1.4	.60
5	.00	.00	.00	.00	.00	.26	.00	.80	.00	.00	.17	2.4
6	.00	.00	.00	.00	.00	.00	.00	.07	.00	.00	.01	.00
7	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00	5.0	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.64	.00
9	.00	.00	.00	.00	.00	.25	.00	.00	.00	.00	.43	.68
10	.00	.00	.00	.00	.00	.40	.00	.00	.00	.00	.41	4.3
11	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	1.2	.47
12	.00	.00	.00	.00	.38	.28	.00	.19	.00	.00	.51	1.1
13	.00	.00	.00	.00	.00	.76	.00	.47	.00	.00	1.3	7.9
14	.00	.00	.00	.00	.00	30	.00	.31	.00	.00	1.0	.30
15	.00	.00	.00	.00	.00	9.4	.00	.16	.00	.00	.57	.00
16	.00	.00	.00	.00	.00	3.8	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.36	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.73	.00	50
20	.00	.00	.00	.00	7.3	.00	.00	.00	.00	.12	.00	12
21	.00	.00	.00	.00	16	.00	.00	.00	.00	2.4	155	3.7
22	.00	.00	.00	.00	10	.00	.00	.00	.00	.11	5.6	.66
23	.00	.00	.00	.00	6.7	.00	.00	.00	.00	.05	6.6	.05
24	.00	.00	.00	.00	4.1	.00	.00	.00	.00	.00	145	.00
25	.00	.00	.00	.00	3.1	.00	.00	.00	.00	.00	70	.00
26	.00	.00	.00	.00	1.4	2.8	.00	.00	.00	.00	187	.00
27	.00	.00	.00	.00	2.4	4.4	.00	.00	.00	.00	179	.00
28	.00	.00	.00	.00	.95	1.7	.00	.00	.00	.00	22	.00
29	.00	.00	.00	.00	---	.76	.00	.00	.00	4.4	6.4	.00
30	.00	.00	.00	.00	---	2.0	.00	.00	.00	.14	11	.00
31	.00	---	.00	.00	---	2.0	---	.00	.00	.02	2.5	---
TOTAL	288.00	.00	.00	.00	52.33	63.34	1.37	3.66	.00	7.97	802.74	84.80
MEAN	9.29	.000	.000	.000	1.87	2.04	.046	.12	.000	.26	25.9	2.83
MAX	187	.00	.00	.00	16	30	.64	1.6	.00	4.4	187	50
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	571	.00	.00	.00	104	126	2.7	7.3	.00	16	1590	168

CAL YR 1981	TOTAL	767.52	MEAN 2.10	MAX 187	MIN .00	AC-FT 1520
WTR YR 1982	TOTAL	1304.21	MEAN 3.57	MAX 187	MIN .00	AC-FT 2590

SAN JUAN RIVER BASIN  
09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate method of sampling; 29 indicates dip or grab sample and 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
MAR 31...	1425	.68	710	715	7.5	7.9	--	17.5	36	13
JUL 29...	1345	2.6	320	322	8.3	7.9	23.0	26.0	15	5.1
AUG 24...	1600	101	341	341	7.8	8.6	--	23.0	48	17

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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 31...	.9	150	11	3.4	349	.0	68	12	1.8
JUL 29...	.6	66	7.7	3.9	--	--	55	4.4	.8
AUG 24...	1.4	53	3.5	3.1	--	--	55	3.0	.5

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	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)
MAR 31...	17	484	--	--	--	--	--	--	--
JUL 29...	14	245	2.0	1.7	.150	4.4	6.5	4.20	.140
AUG 24...	12	224	.50	.50	.220	1.3	2.0	.760	.070

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)
MAR 31...	1425	--	--	--	--	--	80	--	--	--
JUL 29...	1345	10	2	1800	17	<1	40	<1	<1	130
AUG 24...	1600	--	--	--	--	--	40	--	--	--

	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
MAR 31...	--	--	--	140000	410	--	--	--	--	2000
JUL 29...	<10	280	13	260000	530	210	<1	280	6	4100
AUG 24...	--	--	--	310000	27	--	--	--	--	8400



TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
MAR 31...	10	--	--	--	--	--	--	--	--	--
JUL 29...	7	.8	.4	<1	1	2	1700	39	1100	73
AUG 24...	36	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
JUL 29...	1345	<2.0	3.6	170	3	<10	1

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)
JUL 29...	<10	<10	900	<100	130	.01	5	

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
AUG 24...	1530	105	20.0	38800	97

## SAN JUAN RIVER BASIN

09367683 CHACO WASH AT PUEBLO BONITO BRIDGE AT CHACO CANYON NATIONAL MONUMENT, NM

LOCATION.--Lat 36°03'15", long 107°57'52", in NE¼NW¼ sec.13, T.21 N., R.11 W., San Juan County, Hydrologic Unit 14080106, in Chaco Canyon National Monument, on downstream side of center brige pier, 800 ft (244 m) south of Pueblo Bonito Ruins, 2.3 mi (3.7 km) downstream from Gallo Wash, and 3.6 mi (5.8 km) northwest of Chaco Canyon National Monument Visitors Center.

DRAINAGE AREA.--619 mi<sup>2</sup> (1,603 km<sup>2</sup>)

## WATER DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 6,090 ft (1,856.2 m) from topographic map.

REMARKS.--Water-discharge records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 428 ft<sup>3</sup>/s (12.1 m<sup>3</sup>/s) Aug. 24, 1982, gage height, 5.84 ft (1.780 m), from rating curve extended above 175 ft<sup>3</sup>/s (5.0 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 428 ft<sup>3</sup>/s (12.1 m<sup>3</sup>/s) at 0645 hours Aug. 24, gage height, 5.84 ft (1.780 m) from rating curve extended above 175 ft<sup>3</sup>/s (5.0 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

REVISIONS.--Revised figures of discharge and annual maximum (\*) for the water year 1981, superseding those published in the report for 1981 are given herein.

Water Year	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)		Gage height (ft) (m)	
1981	June 30	0430	300	8.50	4.92	1.500

## DISCHARGE, IN CUBIC FEET PER SECOND OCTOBER 1980 TO SEPTEMBER 1981

March 16, 1981	0.85	July 9, 1981	12	August 8, 1981	33
March 17, 1981	2.3	July 10, 1981	2.0	August 9, 1981	12
March 18, 1981	0.90	July 11, 1981	1.5	August 10, 1981	20
March 19, 1981	0.53	July 12, 1981	25	August 11, 1981	1.0
April 1, 1981	0.06	July 13, 1981	25	September 6, 1981	11
May 30, 1981	1.8	July 14, 1981	43	September 7, 1981	13
May 31, 1981	0.05	July 15, 1981	9.4	September 8, 1981	6.6
June 30, 1981	58	July 16, 1981	35	September 9, 1981	1.3
July 1, 1981	7.0	July 17, 1981	4.0	September 10, 1981	0.35
July 2, 1981	4.7	July 26, 1981	10	September 17, 1981	10
July 3, 1981	0.70	July 27, 1981	2.7	September 18, 1981	52
July 4, 1981	0.33	July 28, 1981	0.60	September 19, 1981	13
July 5, 1981	0.25	July 29, 1981	0.20	September 20, 1981	2.7
July 6, 1981	0.10				

Month	cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
March 1981.....	4.58	2.3	0	0.15	9.1
April 1981.....	0.06	0.06	0	0.002	0.1
May 1981.....	1.85	1.8	0	0.06	3.7
June 1981.....	58.00	58	0	1.93	115
July 1981.....	183.48	43	0	5.92	364
August 1981.....	66.00	33	0	2.13	131
September 1981.....	109.95	52	0	3.67	218
WTR YR 1981.....	423.92	58	0	1.16	841

NOTE: Flow occurred only on days listed above.

09367683 CHACO WASH AT PUEBLO BONITO BRIDGE AT CHACO NATL MON, NM -- Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.8	.43	.00	.00	.00	.00	.00
2	50	.00	.00	.00	.00	1.0	.28	.00	.00	.00	.00	.50
3	168	.00	.00	.00	.00	.86	.18	.00	.00	.00	.03	.05
4	56	.00	.00	.00	.00	5.8	.00	.24	.00	.00	1.1	.00
5	.00	.00	.00	.00	.00	2.0	.00	1.0	.00	.00	.10	3.2
6	.00	.00	.00	.00	.00	1.0	.00	.06	.00	.00	.00	.05
7	.00	.00	.00	.00	.00	.84	.00	.00	.00	.00	4.7	.00
8	.00	.00	.00	.00	.00	.66	.00	.00	.00	.00	.20	.00
9	.00	.00	.00	.00	.00	.55	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.48	.00	.00	.00	.00	.34	5.4
11	.00	.00	.00	.00	.00	.46	.00	.00	.00	.00	.72	.26
12	.00	.00	.00	.00	.00	.39	.00	.00	.00	.00	.21	.36
13	.00	.00	.00	.00	.00	.35	.00	.00	.00	.00	.06	9.6
14	.00	.00	.00	.00	.00	19	.00	.00	.00	.00	1.4	1.5
15	.00	.00	.00	.00	.00	9.4	.00	.00	.00	.00	.10	.41
16	.00	.00	.00	.00	.00	4.0	.00	.00	.00	.00	.00	.15
17	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.50	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	37
20	.00	.00	.00	.00	9.4	.00	.00	.00	.00	.00	.00	15
21	.00	.00	.00	.00	13	.00	.00	.00	.00	.87	153	.00
22	.00	.00	.00	.00	16	.00	.00	.00	.00	.00	17	.00
23	.00	.00	.00	.00	11	.00	.00	.00	.00	.00	21	.00
24	.00	.00	.00	.00	6.2	.00	.00	.00	.00	.00	150	.00
25	.00	.00	.00	.00	6.9	.00	.00	.00	.00	.00	82	.00
26	.00	.00	.00	.00	3.9	3.0	.00	.00	.00	.00	157	.00
27	.00	.00	.00	.00	6.0	7.8	.00	.00	.00	.00	167	.00
28	.00	.00	.00	.00	2.3	2.0	.00	.00	.00	.00	25	.00
29	.00	.00	.00	.00	---	.90	.00	.00	.00	3.5	5.0	.00
30	.00	.00	.00	.00	---	2.0	.00	.00	.00	.32	10	.00
31	.00	---	.00	.00	---	.80	---	.00	---	.01	2.0	---
TOTAL	274.00	.00	.00	.00	74.70	67.09	.89	1.30	.00	4.70	797.96	73.48
MEAN	8.84	.000	.000	.000	2.67	2.16	.030	.042	.000	.15	25.7	2.45
MAX	168	.00	.00	.00	16	19	.43	1.0	.00	3.5	167	37
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	543	.00	.00	.00	148	133	1.8	2.6	.00	9.3	1580	146

CAL YR 1981	TOTAL	697.92	MEAN 1.91	MAX 168	MIN .00	AC-FT 1380
WTR YR 1982	TOTAL	1294.12	MEAN 3.55	MAX 168	MIN .00	AC-FT 2570

SAN JUAN RIVER BASIN  
09367683 CHACO WASH NEAR PUEBLO BONITO AT CHACO NATIONAL MONUMENT, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)		
AUG 24...	1200	173	339	343	7.8	8.7	20.0	60		
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)	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)
AUG 24...	21		1.8	51	3.0	3.5	53	3.6	.5	11
DATE	TIME	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	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)	
AUG 24...	227		.70	.78	.380	33	34	6.30	.070	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
AUG 24...	1200	50	310000	6	7500	1

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUL 29...	1300	18	20.0	15600	97
AUG 24...	1200	173	20.0	23900	97

## SAN JUAN RIVER BASIN

471

09367685 AH-SHI-SLE-PAH WASH NEAR KIMBETO, NM

LOCATION (REVISED).--Lat 36°09'13", long 107°56'47", in NW¼SW¼ sec.7, T.22 N., R.10 W., San Juan County, Hydrologic Unit 14080106, on right bank 6.0 mi (9.7 km) west of Kimbeto, and 6.0 mi (9.7 km) upstream from mouth.

DRAINAGE AREA.--8.2 mi<sup>2</sup> (21.2 km<sup>2</sup>).

## WATER-DISCHARGE RECORD

PERIOD OF RECORD.--March 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,180 ft (1,884 m) from topographic map.

REMARKS.--Water-discharge records fair. Recording rain gage at station.

AVERAGE DISCHARGE.--5 years, 1.29 ft<sup>3</sup>/s (0.037 m<sup>3</sup>/s), 935 acre-ft/yr (1.15 hm<sup>3</sup>/yr)

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft<sup>3</sup>/s (33.1 m<sup>3</sup>/s) July 20, 1977, gage height, 4.46 ft (1.359 m), from rating curve extended above 6.0 ft<sup>3</sup>/s (0.17 m<sup>3</sup>/s) on basis of step-back water analysis; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft<sup>3</sup>/s (8.5 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
July 30	2035	*688 19.5	3.21 0.978	Sept. 12	1755	310 8.78	2.05 0.625
Aug. 22	1805	304 8.61	2.03 0.619				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	37	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	5.6	.00	.01	.00	.00	24	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	4.4	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00
6	.00	.00	.00	.30	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.5	.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	6.1	.00	.00	.00	.00	.00	4.7	.00
11	.00	.00	.00	.00	14	.00	.00	.00	.00	.00	6.2	5.7
12	.00	.00	.00	.00	15	.02	.00	24	.00	.00	.00	36
13	.00	.00	.00	.00	8.7	35	.00	4.3	.00	.00	.29	.00
14	.00	.00	.00	.00	10	2.8	.00	.00	.00	.00	.02	.27
15	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	24	.00	.00	.00	.00	.16	.00	.00
17	.00	.00	.00	.00	44	.00	.00	.00	.00	.09	.00	.00
18	.00	.00	.00	.00	11	.00	.00	.00	.00	12	.00	1.2
19	.00	.00	.00	2.0	20	.00	.00	.00	.00	.99	.00	.32
20	.00	.00	.00	2.0	15	.00	.00	.00	.00	.01	.00	.00
21	.00	.00	.00	1.1	3.3	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.85	3.3	.00	.00	.00	.00	.00	25	.00
23	.00	.00	.00	.55	2.8	.00	.15	.00	.00	.00	.71	.00
24	.00	.00	.00	.84	6.0	.00	.16	.00	.00	.00	22	.00
25	.00	.00	.00	1.5	13	.00	.00	.00	.00	.00	11	.00
26	.00	.00	.00	1.1	19	34	.00	.00	.00	.00	3.6	.00
27	.00	.00	.00	.55	12	1.6	.00	.00	.00	15	.00	.00
28	.00	.00	.00	.00	.20	.00	.00	.00	.00	23	.00	.00
29	.00	.61	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.34	.00	.00	---	.00	.00	.00	.00	62	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	1.4	.00	---
TOTAL	42.60	.95	.08	10.79	239.40	97.42	.31	33.00	.00	114.65	81.02	43.49
MEAN	1.37	.032	.003	.35	8.55	3.14	.010	1.06	.000	3.70	2.61	1.45
MAX	37	.61	.05	2.0	44	35	.16	24	.00	62	25	36
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	84	1.9	.2	21	475	193	.6	65	.00	227	161	86
(++)	0.75	0.20	0.02	0.16	0.84	1.30	0.14	0.65	0.04	1.50	0.98	0.59

CAL YR 1981 TOTAL 319.79 MEAN .88 MAX 55 MIN .00 AC-FT 634  
WTR YR 1982 TOTAL 663.71 MEAN 1.82 MAX 62 MIN .00 AC-FT 1320

(++) Monthly rainfall, in inches.

SAN JUAN RIVER BASIN  
09367685 AH-SHI-SLE-PAH WASH NEAR KIMBETO, NM--Continued  
WATER-QUALITY RECORDS

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

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate method of sampling; 26 indicates method of sampling; 26 indicates by automatic pump and 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (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 CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
JAN 26...	1325	1.1	450	520	8.6	8.0	16.0	1.0	11	3.4	.5
JUL 18...	2145	E140	1770	1770	6.7	7.7	--	--	44	16	1.1
30...	2115	E480	561	561	7.3	8.3	--	--	18	6.0	.8

DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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)	SAMPLE SOURCE (72005)
JAN 26...	94	13	1.9	--	--	99	20	.5	6.8	325	29	
JUL 18...	300	21	4.6	180	.0	78	410	.5	13	963	40	
30...	140	15	3.2	230	.0	130	28	.5	19	193	40	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
JAN 26...	1325	1	<1	50	<1	<10	10	120000	610
JUL 18...	2145	--	--	60	--	--	--	470000	92
30...	2115	--	--	50	--	--	--	380000	540

DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
JAN 26...	2	1200	18	3.1	8	2	32	29	
JUL 18...	--	14000	4	--	--	--	--	40	
30...	--	9800	6	--	--	--	--	40	

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
JAN 26...	1325	1.1	1.0	8920	99	29
JUL 18...	2145	E140	--	58800	89	40
30...	2115	E480	--	62800	91	40
AUG 22...	1710	111	--	73000	82	26
22...	1800	140	--	79600	78	40
22...	1801	140	--	721000	87	40
22...	1802	140	--	48500	88	40
25...	2150	111	--	38700	95	26
25...	2205	102	--	36900	94	26
SEP 18...	2300	145	--	237000	95	--

09367687 KIM-ME-NI-OLI WASH NEAR CROWNPOINT, NM

LOCATION.--Lat 35°50'55", long 108°03'36", in SE¼NE¼ sec. 25, T.19 N., R.12 W., McKinley County, Hydrologic Unit 14080106, on left bank, 1.0 mi (1.6 km) north of proposed Phillips Petroleum Nose Rock Uranium Mine, 4.5 mi (7.2 km) north of State Highway 57, and 13.2 mi (21.2 km) northeast of Crownpoint.

DRAINAGE AREA.--228 mi<sup>2</sup> (590 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage 6,300 ft (1,920 m) from topographic map.

REMARKS.--Water-discharge records fair. Base discharge is result of discharge from proposed Phillips Petroleum Nose Rock Uranium Mine which is upstream 1.0 mi (1.6 km). Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 1,060 ft<sup>3</sup>/s (30.0 m<sup>3</sup>/s), gage height, 4.49 ft (1.369 m) Sept. 21, 1982 from rating curve extended above 10 ft<sup>3</sup>/s (0.3 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum daily, 1.1 ft<sup>3</sup>/s (0.031 m<sup>3</sup>/s) Jan. 10, 1982.

EXTREMES CURRENT YEAR.--Maximum discharge, 1,060 ft<sup>3</sup>/s (30.0 m<sup>3</sup>/s) at 0115 hours Sept. 21, gage height, 4.49 ft (1.369 m) from rating curve extended above 10 ft<sup>3</sup>/s (0.3 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum daily, 1.1 ft<sup>3</sup>/s (0.031 m<sup>3</sup>/s) Jan. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	3.9	4.0	3.1	3.1	6.2	4.5	4.8	4.6	5.5	5.0	4.9
2	25	4.0	4.1	3.2	3.1	6.2	4.5	5.0	5.0	5.5	5.0	4.9
3	70	4.0	4.2	3.1	3.1	6.0	4.7	5.0	6.4	5.2	5.2	5.0
4	18	3.9	4.4	3.1	3.2	6.0	4.6	5.1	5.4	5.3	5.1	11
5	12	3.9	4.3	3.0	3.2	6.1	4.7	5.0	4.8	5.1	5.0	9.1
6	9.2	3.9	4.3	2.8	3.4	6.1	4.5	4.8	4.9	5.2	5.0	5.1
7	7.2	3.8	4.1	1.6	3.5	5.7	4.6	4.8	5.3	5.2	7.5	4.6
8	6.5	3.9	4.1	1.2	3.9	5.7	4.7	4.7	5.2	5.2	4.6	4.5
9	6.5	3.9	4.1	1.2	4.4	5.7	4.9	4.6	5.2	5.0	4.5	4.5
10	6.4	3.9	4.1	1.1	4.6	5.7	4.8	4.6	5.2	5.2	4.5	4.5
11	6.3	3.9	4.1	1.2	4.5	5.7	4.9	4.8	5.3	5.0	4.8	4.5
12	6.2	3.9	4.1	1.2	4.2	5.7	4.7	4.9	5.2	5.0	4.8	4.5
13	6.2	3.9	4.1	1.2	4.2	6.1	4.9	5.0	5.2	5.0	5.6	4.5
14	5.8	3.9	3.9	1.3	4.5	6.6	4.8	4.9	5.0	4.9	4.8	4.6
15	2.6	3.9	3.8	1.2	5.1	5.7	5.0	4.8	5.0	5.0	4.7	5.2
16	1.7	3.9	3.4	1.3	5.7	5.6	5.0	4.8	5.2	4.8	4.5	5.4
17	1.7	3.9	3.4	1.6	6.6	5.4	5.0	5.8	5.2	5.1	4.5	5.4
18	2.9	3.9	3.4	2.0	6.8	5.1	5.0	4.9	5.2	5.1	4.6	7.0
19	3.6	3.9	3.4	4.6	6.6	5.1	5.0	4.4	5.2	5.1	4.7	6.4
20	3.7	4.0	3.2	5.1	6.5	5.2	5.0	4.6	5.4	5.0	9.0	32
21	3.7	4.0	3.3	1.5	6.6	5.2	4.7	4.6	5.7	5.0	10	168
22	3.7	4.0	3.9	1.5	6.5	5.2	4.1	4.5	5.7	5.0	4.7	6.9
23	3.8	4.0	3.8	1.9	6.7	5.2	4.4	4.5	5.8	4.9	4.5	4.6
24	3.8	3.9	3.3	2.5	6.7	5.2	4.9	4.5	5.8	4.6	5.7	5.0
25	3.8	3.9	3.2	3.3	6.5	5.2	4.9	4.5	5.8	4.8	7.4	5.0
26	3.9	4.0	3.3	4.2	6.5	5.2	7.2	4.5	5.6	5.0	5.2	4.9
27	4.0	4.0	3.2	5.8	6.3	5.2	5.4	4.3	5.7	5.4	4.8	4.7
28	3.9	4.1	3.3	5.0	6.2	5.1	4.9	4.3	5.6	5.0	4.8	5.0
29	3.8	4.1	3.3	3.9	---	4.8	4.9	4.6	5.5	5.1	4.9	5.2
30	3.8	4.0	3.1	3.1	---	4.6	4.7	4.7	5.6	5.0	4.9	5.2
31	3.9	---	3.2	3.1	---	4.8	---	4.8	---	5.0	5.0	---
TOTAL	250.1	118.2	115.4	79.9	142.2	171.3	145.9	147.1	160.7	157.2	165.3	352.1
MEAN	8.07	3.94	3.72	2.58	5.08	5.53	4.86	4.75	5.36	5.07	5.33	11.7
MAX	70	4.1	4.4	5.8	6.8	6.6	7.2	5.6	6.4	5.5	10	168
MIN	1.7	3.8	3.1	1.1	3.1	4.6	4.1	4.3	4.6	4.6	4.5	4.5
AC-FT	496	234	229	156	282	340	289	292	319	312	328	698

WTR YR 1982 TOTAL 2005.4 MEAN 5.49 MAX 168 MIN 1.1 AC-FT 3980



SAN JUAN RIVER BASIN  
09367687 KIM-ME-NI-OLI WASH NEAR CROWNPOINT, NM--Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
OCT 16...	1245	1.7	1700	--	8.9	--	12.5	18.0	8.0	--	--	--
NOV 06...	1115	3.9	1950	2030	9.1	8.9	20.5	13.5	9.3	--	26	0
APR 28...	1400	5.0	1900	1850	8.5	8.9	21.0	24.0	8.4	--	37	--
JUN 08...	1330	5.0	2100	2110	9.5	9.5	28.0	18.0	9.2	14	33	0
JUN 22...	1315	5.4	2000	2120	9.1	9.7	32.0	28.0	8.8	--	25	--
AUG 24...	1400	5.2	1800	1880	9.1	9.2	25.0	28.0	6.0	--	36	--

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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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)
OCT 16...	--	--	--	--	--	270	10	--	--	--	--	--
NOV 06...	8.9	.8	440	40	2.3	350	36	580	82	1.7	8.4	--
APR 28...	13	.9	420	32	2.2	310	30	590	82	1.7	17	1350
JUN 08...	11	1.1	450	36	2.1	290	10	610	84	1.6	14	--
JUN 22...	8.6	.9	420	38	2.3	200	58	620	80	1.7	9.5	1330
AUG 24...	12	1.4	390	30	3.4	250	25	530	70	1.5	13	1200

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOSPHATE, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	SAMPLE SOURCE (72005)
OCT 16...	--	--	--	--	--	--	--	--	--	--	29
NOV 06...	1280	--	.17	--	--	--	--	--	--	--	--
APR 28...	1470	.12	.12	.100	.54	.76	.020	.020	2.0	.6	--
JUN 08...	1340	--	<.10	.100	.60	--	.070	--	3.1	4.0	--
JUN 22...	--	--	--	--	--	--	--	--	--	--	--
AUG 24...	--	.10	.15	.070	2.4	2.6	.300	.030	3.6	2.5	29

SAN JUAN RIVER BASIN  
09367687 KIM-ME-NI-OLI WASH NEAR CROWNPOINT, NM--Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)
NOV 06...	1115	--	--	--	--	--	--	--	--	--	--
APR 28...	1400	--	--	--	--	2	2	100	27	--	< 3
JUN 08...	1330	890	40	<1	<1	1	1	<100	<100	<10	<10
22...	1315	--	--	--	--	--	--	--	--	--	--
AUG 24...	1400	--	--	--	--	2	3	100	30	--	1

DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 06...	--	--	--	--	--	--	--	--	--	--	33
APR 28...	190	<1	<3	<10	<10	--	<9	14	3	2500	72
JUN 08...	190	<1	<1	<10	1	<1	<1	3	5	1100	50
22...	190	--	--	--	--	--	--	--	--	2400	30
AUG 24...	180	<1	<1	20	<10	--	<3	22	3	21000	130

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
NOV 06...	--	--	--	--	--	2	--	--	--	--	--
APR 28...	6	1	60	76	30	3	.3	.3	--	<30	--
JUN 08...	<1	<1	70	70	10	<10	.5	1.1	10	10	3
22...	--	--	--	--	40	20	--	--	--	--	--
AUG 24...	3	<1	70	62	220	3	.1	.1	--	<10	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
APR 28...	3	<1	<1	--	--	1000	890	<10	40	18	--
JUN 08...	<1	<1	<1	<1	<1	760	740	<.1	10	10	--
22...	--	--	--	--	--	--	--	--	--	--	--
AUG 24...	3	1	<1	--	--	730	570	<6.0	80	5	29

SAN JUAN RIVER BASIN  
09367687 KIM-ME-NI-OLI WASH NEAR CROWNPOINT, NM--Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)
JUN 08...	1330	--	--	--	4	<1	30	<10	3
AUG 24...	1400	<2.0	11	310	6	<1	1	<10	4

DATE	TIME	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)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C) (00693)	SAMPLE SOURCE (72005)
JUN 08...	2600	<10	110	.01	<1	16	--	--	--
AUG 24...	1800	<10	110	.10	--	12	4.3	29	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)	SAMPLE SOURCE (72005)
OCT 16...	1245	<27	3.4	<15	2.0	<14	1.9	.89	1.4	--	29
NOV 06...	1115	<36	11	<16	3.9	<15	3.8	1.5	1.7	--	--
APR 28...	1400	<37	19	<16	5.0	<15	4.7	1.5	--	.46	--
JUN 08...	1330	<32	9.1	<20	3.0	<19	2.8	.94	--	.38	--
AUG 24...	1400	<28	88	<16	62	<15	58	.32	--	.53	29

DATE	TIME	GROSS ALPHA, BOTTOM MATERIAL, (UG/G AS UNAT) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS CS-137) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	RADIUM- 226, BOTTOM MATERIAL, RADON METHOD (PCI/G) (CUSTOM EXTRACTION)	URANIUM, BOTTOM MATERIAL, (UG/G AS U) (CUSTOM EXTRACTION)
JUNE 08	1330	33.06	10.56	9.98	6.77	0.57

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
IDENTIFICATION OF PHYTOPLANKTON

DATE	JUN 8,82
TIME	1330
TOTAL CELLS/ML	1400
DIVERSITY: DIVISION	2.1
.CLASS	2.1
..ORDER	2.6
...FAMILY	2.7
....GENUS	2.7
ORGANISM	CELLS PER- /ML CENT
BACILLARIOPHYTA (DIATOMS)	
.BACILLARIOPHYCEAE	
..ACHNANTHALES	
...ACHNANTHACEAE	
....ACHNANTHES	280# 20
..BACILLARIALES	
...NITZSCHIA	
....NITZSCHIA	28 2
...FRAGILARIALES	
....FRAGILARIALES	
....SYNEDRA	28 2
..NAVICULALES	
...ENTOMONEIDACEAE	
....ENTOMONEIS	14 1
...NAVICULACEAE	
....CALONEIS	14 1
....NAVICULA	41 3
CHLOROPHYTA (GREEN ALGAE)	
.CHLOROPHYCEAE	
..CHLOROCOCCALES	
...OOCYSTACEAE	
....OOCYSTIS	220# 16
CYANOPHYTA (BLUEGREEN ALGAE)	
.CYANOPHYCEAE	
..CHROOCOCCALES	
...CHROOCOCCACEAE	
....AGMENELLUM	55 4
..OSCILLATORIALES	
...OSCILLATORIALES	
....OSCILLATORIA	390# 28
EUGLENOPHYTA (EUGLENOIDS)	
.EUGLENOPHYCEAE	
..EUGLENALES	
...EUGLENACEAE	
....TRACHELOMONAS	280# 20
PYRRHOPHYTA (FIRE ALGAE)	
.DINOPHYCEAE	
..DINOKONTAE	
...PERIDINIACEAE	
....PERIDINIUM	41 3

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	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)	SAMPLE SOURCE (72005)
OCT										
16...	1245	1.7	18.0	29	--	--	--	--	--	29
16...	1246	1.7	--	27	--	--	--	--	--	26
NOV										
06...	1115	3.9	13.5	82	--	--	--	--	--	--
APR										
28...	1400	5.0	24.0	96	91	--	--	--	--	--
JUN										
08...	1330	5.0	18.0	70	74	31	89	99	100	--
22...	1315	5.4	28.0	298	12	--	--	--	--	--
AUG										
24...	1400	5.2	28.0	682	99	34	75	98	100	29

09367689 KIM-ME-NI-OLI WASH NEAR LAKE VALLEY, NM

LOCATION.--Lat 35°58'45", long 108°08'15", in NE¼SW¼ sec.8, T.20 N., R. 12 W., McKinley County, Hydrologic Unit 14080106, on left bank, 100 ft (30.5 m) below primitive road crossing, 4.1 mi (6.6 km) east of State Highway 371, 8.5 mi (13.7 km) upstream from Lake Valley, and 9.0 mi (14.5 km) upstream from mouth.

DRAINAGE AREA.--400 mi<sup>2</sup> (1,036 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to September 1982.

GAGE.--Water-stage recorder. Altitude of gage 6,060 ft (1,847 m) from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 320 ft<sup>3</sup>/s (9.06 m<sup>3</sup>/s) Sept. 21, 1982, gage height, 2.50 ft (0.762 m) from rating curve extended above 10 ft<sup>3</sup>/s (0.3 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum daily, 2.1 ft<sup>3</sup>/s (0.059 m<sup>3</sup>/s) Oct. 17, 18, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 320 ft<sup>3</sup>/s (9.06 m<sup>3</sup>/s) at 1145 hours Sept. 21, gage height, 2.50 ft (0.762 m) from rating curve extended above 10 ft<sup>3</sup>/s (0.3 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum daily, 2.1 ft<sup>3</sup>/s (0.059 m<sup>3</sup>/s) Oct. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	3.8	3.7	3.4	2.5	4.2	4.0	4.7	4.2	3.7	4.0	5.0
2	6.9	4.0	4.7	3.4	2.5	4.2	3.9	4.8	4.1	3.8	6.4	5.0
3	5.4	4.0	5.5	3.3	2.5	4.1	3.9	5.0	4.1	3.8	19	5.0
4	27	4.0	5.0	3.2	2.6	5.9	4.1	4.9	4.5	3.8	5.0	5.0
5	11	3.5	3.6	3.1	2.5	5.2	4.0	5.8	4.4	3.8	4.0	6.5
6	7.6	2.4	3.7	3.1	2.5	4.2	4.1	5.0	4.0	3.8	4.0	8.0
7	6.2	2.7	3.9	2.9	2.5	3.9	4.2	4.7	3.9	3.7	27	6.4
8	6.0	2.9	3.9	2.9	2.6	4.1	4.2	4.6	4.2	3.8	6.4	6.4
9	6.0	3.0	4.0	2.8	2.6	4.0	4.2	4.4	4.2	3.8	5.0	6.4
10	5.9	3.1	3.9	2.7	2.6	4.0	4.3	4.4	4.2	3.7	4.4	6.5
11	5.8	3.2	3.8	2.6	2.6	4.0	4.5	4.5	4.2	4.0	4.4	6.9
12	5.8	3.2	3.9	2.6	2.6	4.0	4.3	4.6	4.1	4.0	4.4	7.0
13	5.9	3.3	3.9	2.5	2.6	4.5	4.3	5.1	3.9	4.0	5.6	7.0
14	5.8	3.4	4.2	2.5	2.6	5.4	4.4	4.8	4.0	4.0	5.4	7.4
15	5.2	3.5	4.0	2.4	2.5	4.5	4.3	4.6	3.9	4.0	4.8	5.5
16	2.3	3.4	3.8	2.4	2.9	4.0	4.3	4.7	4.0	3.8	4.4	4.1
17	2.1	3.4	5.0	2.4	4.2	3.9	4.4	4.7	4.0	3.7	4.4	4.1
18	2.1	3.3	4.7	2.9	4.4	3.7	4.6	5.1	4.0	4.0	4.4	4.2
19	2.6	3.2	3.4	3.3	4.5	3.4	4.5	4.7	4.0	4.1	4.1	4.8
20	3.4	2.9	3.8	3.6	4.5	3.4	4.6	4.2	4.0	4.0	4.0	7.9
21	3.5	2.6	4.2	2.6	4.4	3.6	4.6	4.3	4.0	3.8	20	55
22	3.6	3.5	4.4	2.5	4.4	3.5	4.4	4.4	4.1	3.8	11	29
23	3.6	3.5	4.0	2.5	4.4	3.5	3.9	4.4	4.0	3.4	14	8.8
24	3.7	3.9	3.9	2.6	4.2	3.7	4.3	4.2	3.8	3.4	18	4.4
25	3.6	3.6	4.0	2.9	4.9	3.9	4.7	4.3	4.0	3.4	8.3	3.8
26	3.7	3.0	3.9	3.8	5.0	3.9	4.7	4.4	4.0	3.4	13	3.7
27	3.8	3.4	3.8	4.6	4.6	4.2	5.6	4.2	3.8	3.6	5.6	3.5
28	3.8	3.5	3.8	3.0	4.5	4.1	5.1	4.2	3.8	4.4	4.6	3.4
29	3.8	3.6	3.7	2.6	---	4.0	4.7	4.0	3.8	12	4.7	3.7
30	3.6	3.4	3.6	2.5	---	3.9	4.7	4.0	3.6	48	4.8	3.8
31	3.6	---	3.6	2.5	---	4.1	---	4.2	---	5.6	4.9	---
TOTAL	217.9	100.2	125.3	90.1	95.2	127.0	131.8	141.9	120.8	172.1	240.0	238.2
MEAN	7.03	3.34	4.04	2.91	3.40	4.10	4.39	4.58	4.03	5.55	7.74	7.94
MAX	54	4.0	5.5	4.6	5.0	5.9	5.6	5.8	4.5	48	27	55
MIN	2.1	2.4	3.4	2.4	2.5	3.4	3.9	4.0	3.6	3.4	4.0	3.4
AC-FT	432	199	249	179	189	252	261	281	240	341	476	472

WTR YR 1982 TOTAL 1800.5 MEAN 4.93 MAX 55 MIN 2.1 AC-FT 3570

SAN JUAN RIVER BASIN  
09367689 KIM-ME-NI-OLI WASH NEAR LAKE VALLEY, NM--Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 06...	1315	--	2020	2110	8.9	8.7	16.5	8.5	10.4	--	44	0
APR 28...	1030	4.9	2200	1950	8.4	8.7	19.0	11.5	9.2	--	45	--
JUN 09...	1030	4.3	2300	2230	9.3	9.1	21.5	9.5	9.3	27	31	0
21...	1145	3.9	2200	2270	8.8	9.0	30.0	18.5	7.9	--	28	--
AUG 18...	1130	4.0	2000	2110	8.8	8.2	27.0	21.5	7.4	--	35	--

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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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)
NOV 06...	15	1.7	440	30	2.7	370	30	620	92	1.7	<1.9	--	--
APR 28...	15	1.5	460	32	2.6	350	14	660	86	1.8	13	1440	--
JUN 09...	9.8	1.4	480	40	2.3	310	29	640	88	1.7	9.1	--	--
21...	8.9	1.4	450	39	2.6	310	17	660	83	1.7	6.5	1420	--
AUG 18...	11	1.6	440	34	2.9	310	16	620	81	1.6	9.5	1360	--

DATE	TIME	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, ORTH- DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	SAMPLE SOURCE (72005)
NOV 06...	--	--	--	.18	--	--	--	--	--	--	--	--
APR 28...	--	--	<.10	<.10	.060	1.0	--	.100	.040	3.3	1.5	--
JUN 09...	1400	--	--	<.10	.180	.62	--	.130	--	3.0	1.8	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	--	--	.15	<.10	.260	1.4	1.9	.150	.020	7.2	1.9	29

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)
NOV 06...	1315	--	--	--	--	--	--	--	--	--	--
APR 28...	1030	--	--	--	--	3	2	100	26	--	<3
JUN 09...	1030	6300	90	1	1	2	2	100	<100	<10	<10
21...	1145	--	--	--	--	--	--	--	--	--	--
AUG 18...	1130	--	--	--	--	4	2	200	100	--	<10

SAN JUAN RIVER BASIN  
09367689 KIM-ME-NI-OLI WASH NEAR LAKE VALLEY, NM--Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 06...	--	--	--	--	--	--	--	--	--	--	50
APR 28...	210	<1	<3	20	<10	--	<9	16	2	11000	95
JUN 09...	200	<1	<1	10	1	3	<1	9	3	7300	70
JUN 21...	200	--	--	--	--	--	--	--	--	7100	150
AUG 18...	210	<1	<1	10	10	--	--	9	2	10000	80

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)
NOV 06...	--	--	--	--	--	<10	--	--	--	--	--
APR 28...	9	1	70	80	160	4	.2	.4	--	<30	--
JUN 09...	1	<1	80	80	100	10	.1	.1	8	10	5
JUN 21...	--	--	--	--	90	10	--	--	--	--	--
AUG 18...	1	4	60	70	160	10	.7	.9	--	--	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
APR 28...	2	<1	<1	--	--	940	780	<10	60	<12	--
JUN 09...	<1	<1	<1	<1	<1	670	560	2.6	30	20	--
JUN 21...	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	1	1	1	--	--	480	490	--	50	20	29



SAN JUAN RIVER BASIN  
09367689 KIM-ME-NI-OLI WASH NEAR LAKE VALLEY, NM--Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)
APR 28...	1030	<2.0	3.2	<40	4	<1	3	<10	6
APR 28...	1400	<2.0	1.8	<40	9	<1	5	<10	7
JUN 09...	1030	--	--	--	5	<1	50	10	8
AUG 18...	1130	<2.0	7.2	140	5	<1	2	<10	4

DATE	TIME	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)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C) (00693)	SAMPLE SOURCE (72005)
APR 28...	2800	<10	210	.01	--	17	4.3	--	--
APR 28...	6500	<10	260	.06	--	37	--	--	--
JUN 09...	3900	10	220	.04	<1	20	--	--	--
AUG 18...	2400	<10	170	.01	--	11	--	29	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)	SAMPLE SOURCE (72005)
NOV 06...	1315	<34	7.1	<17	5.0	<16	4.8	.11	2.4	--	--
APR 28...	1030	<36	27	<17	13	<16	13	.17	1.1	--	--
JUN 09...	1030	<39	14	<20	11	<19	11	.11	1.0	--	--
AUG 18...	1130	<34	26	<20	<16	<20	<15	.08	--	.59	29

DATE	TIME	GROSS ALPHA, BOTTOM MATERIAL, (UG/G AS UNAT) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS CS-137) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	RADIUM- 226, BOTTOM MATERIAL, RADON METHOD (PCI/G) (CUSTOM EXTRACTION)	URANIUM, BOTTOM MATERIAL, (UG/G AS U) (CUSTOM EXTRACTION)
JUNE 09	1030	10.78	3.99	3.84	0.68	0.58

SAN JUAN RIVER BASIN  
09367689 KIM-ME-NI-OLI WASH NEAR LAKE VALLEY, NM--Continued  
WATER-QUALITY RECORDS

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
IDENTIFICATION OF PHYTOPLANKTON

DATE JUN 9,82  
TIME 1030

TOTAL CELLS/ML 790

DIVERSITY: DIVISION 0.8  
..CLASS 0.8  
...ORDER 2.0  
...FAMILY 2.0  
....GENUS 2.0

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
.BACILLARIOPHYCEAE		
..BACILLARIALES		
...NITZSCHIACEAE		
....NITZSCHIA	140#	18
..FRAGILARIALES		
...FRAGILARIACEAE		
....SYNEDRA	220#	27
..NAVICULALES		
...NAVICULACEAE		
....NAVICULA	220#	27
PYRRHOPHYTA (FIRE ALGAE)		
.DINOPHYCEAE		
..DINOKONTAE		
...PERIDINIACEAE		
....PERIDINIUM	220#	27

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%  
\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN (70331)	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. FALL DIAM. % FINER THAN (80162)	SAMPLE SOURCE (72005)
NOV											
06...	1315	2.4	8.5	637	--	--	--	--	--	--	--
APR											
28...	1030	4.9	11.5	410	100	--	--	--	--	--	--
JUN											
09...	1030	4.3	9.5	254	97	79	89	99	100	--	--
21...	1145	3.9	18.5	231	100	--	--	--	--	--	--
AUG											
18...	1130	4.0	21.5	292	96	36	64	96	99	100	29

09367710 DE-NA-ZIN WASH NEAR BISTI TRADING POST, NM

LOCATION.--Lat 36°13'51", long 108°11'57", in NE¼NW¼ sec. 14, T.23 N., R.13 W., San Juan County, Hydrologic Unit 14080106, on right bank 400 ft (122 m) upstream from State Highway 371, 0.8 mi (1.3 km) downstream from Alamo Wash, 4.5 mi (7.2 km) southeast of Bisti Trading Post, and at mile 7.3 (11.7 km).

DRAINAGE AREA.--184 mi<sup>2</sup> (477 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1975 to September 1982 (discontinued).

REVISED RECORDS.--WDR NM-79-1: 1978(P).

GAGE.--Water-stage recorder. Altitude of gage is 5,840 ft (1,780 m), from topographic map.

REMARKS.--Water-discharge records poor.

AVERAGE DISCHARGE.--6 years, 4.96 ft<sup>3</sup>/s (0.140 m<sup>3</sup>/s), 3,590 acre-ft/yr (4.43 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,010 ft<sup>3</sup>/s (56.9 m<sup>3</sup>/s), May 7, 1978, gage height, 3.20 ft (0.975 m) from rating curve extended above 90 ft<sup>3</sup>/s (2.5 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; maximum gage height, 5.40 ft (1.646 m) Aug. 20, 1982; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft<sup>3</sup>/s (9.9 m<sup>3</sup>/s), maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 2	2330	1180 33.4	3.40 1.036	Aug. 24	0615	794 22.5	4.30 1.311
Aug. 20	2030	*1480 41.9	5.40 1.646	Sept. 11	1300	854 24.2	4.40 1.341
Aug. 22	1930	1220 34.6	5.00 1.524	Sept. 12	1700	1240 35.1	5.00 1.524

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.0	.00	5.1	.00	.00	.25	.00
2	93	.00	.00	.00	.00	.13	.00	10	.00	.00	12	.00
3	59	.00	.00	.00	.00	26	.00	1.5	.00	.00	26	.00
4	6.0	.00	.00	.00	.00	10	.00	4.0	.00	.00	.42	.00
5	.26	.00	.00	.00	.00	.07	.00	15	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	2.8	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.87	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	22
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	25
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	16	24
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.4	245
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	15	258
13	.00	.00	.00	.00	2.3	3.6	.00	2.7	.00	.00	16	28
14	.00	.00	.00	.00	5.0	19	.00	.60	.00	.00	.07	2.3
15	.00	.00	.00	.00	14	.63	.00	.00	.00	.00	.00	.32
16	.00	.00	.00	.00	48	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	33	.00	.00	.00	.00	12	.00	.00
18	.00	.00	.00	.00	2.8	.00	.00	.00	.00	.16	.00	.00
19	.00	.00	.00	.00	36	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	3.2	.00	.00	.00	.00	.00	80	.00
21	.00	.00	.00	.00	2.8	.00	.00	.00	.00	.00	21	7.1
22	.00	.00	.00	.00	10	.00	.00	.00	.00	.00	78	1.8
23	.00	.00	.00	.00	3.6	.00	.00	.00	.00	.00	.10	.00
24	.00	.00	.00	.00	1.8	.00	.00	.00	.00	.00	57	.00
25	.00	.00	.00	.00	30	.00	.00	.00	.00	.00	33	.00
26	.00	.00	.00	.00	30	.89	.00	.00	.00	.00	31	.00
27	.00	.00	.00	.00	16	20	.00	.00	.00	.00	23	.00
28	.00	.00	.00	.00	16	.07	.00	.00	.00	.58	22	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	6.6	13	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	9.9	5.5	.00
31	.00	---	.00	.00	---	.00	---	.00	---	14	2.9	---
TOTAL	158.26	.00	.00	.00	254.50	81.39	.00	42.57	.00	43.24	456.64	613.52
MEAN	5.11	.000	.000	.000	9.09	2.63	.000	1.37	.000	1.39	14.7	20.5
MAX	93	.00	.00	.00	48	26	.00	15	.00	14	80	258
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	314	.00	.00	.00	505	161	.00	84	.00	86	906	1220

CAL YR 1981 TOTAL 1203.21 MEAN 3.30 MAX 201 MIN .00 AC-FT 2390  
WTR YR 1982 TOTAL 1650.12 MEAN 4.52 MAX 258 MIN .00 AC-FT 3270

SAN JUAN RIVER BASIN  
09367710 DE-NA-ZIN WASH NEAR BISTI TRADING POST, NM -- Continued  
WATER-QUALITY RECORDS

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

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate sampling method; 29 indicates dip or grab sample and 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	
DATE	TIME									
OCT 02...	2230	E297	690	--	7.8	--	--	--	--	
FEB 23...	1345	1.8	600	540	8.1	8.0	16.0	11.5	8	
AUG 12...	1200	6.6	1000	1020	8.1	7.7	29.0	25.0	30	
24...	1100	23	--	741	7.8	8.3	25.5	19.5	19	
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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)
OCT 02...	--	--	--	--	--	--	--	--	--	160
FEB 23...	0	2.6	.3	110	18	1.5	340	.0	310	310
AUG 12...	--	9.8	1.3	210	17	4.1	160	.0	--	--
24...	--	6.6	.5	160	17	2.5	190	--	--	--
DATE		CAR- BONATE FETFLD (MG/L AS CO3) (00445)	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)	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)	SAMPLE SOURCE (72005)
OCT 02...	0	131	--	--	--	--	--	--	--	40
FEB 23...	--	254	95	3.7	1.4	14	381	382	29	29
AUG 12...	--	--	330	14	1.2	34	919	--	29	29
24...	--	--	180	5.6	1.1	16	507	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 02...	2230	--	--	--	--	--	--	520000	--
FEB 23...	1345	--	--	40	--	--	--	150000	600
AUG 12...	1200	4	<1	90	<1	<10	16	430000	3000
24...	1100	--	--	210	--	--	--	410000	12
DATE		LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
OCT 02...	--	--	17000	--	--	--	--	--	40
FEB 23...	--	--	2900	9	--	--	--	--	29
AUG 12...	<1	10000	69	.4	6	7	42	29	29
24...	--	12000	9	--	--	--	--	--	--

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS HG) (71921)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
AUG 24...	1100	5	<1	<1	<10	2	900	<10	300	.01	<1	4

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 (PCI/L RADON METHOD (UG/L AS U) (09511)	URANIUM DIS- SOLVED (UG/L AS U) (22703)
AUG 24...	1100	<12	2100	<6.9	1100	<6.6	1000	.18	3.3

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (800154)	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)	SAMPLE SOURCE (72005)
OCT 02...	2230	E297	--	55000	62	68	86	97	99	100	--	40
FEB 23...	1345	1.8	11.5	20200	--	--	--	--	--	--	99	29
AUG 12...	1200	6.6	25.0	12200	94	97	98	100	--	--	99	29
12...	1201	6.6	25.0	48000	--	--	--	--	--	--	99	29
14...	1900	.10	--	26400	--	--	--	--	--	--	--	26
20...	1915	112	--	82600	--	--	--	--	--	--	96	26
20...	2000	112	--	40600	--	--	--	--	--	--	94	26
20...	2001	350	--	207000	28	35	49	86	99	100	--	40
20...	2015	565	--	41300	--	--	--	--	--	--	99	26
20...	2045	1320	--	45000	--	--	--	--	--	--	98	26
20...	2046	1320	--	80500	56	63	77	99	100	--	--	40
20...	2100	1170	--	93600	--	--	--	--	--	--	90	26
20...	2130	165	--	76100	--	--	--	--	--	--	97	26
20...	2145	165	--	78000	--	--	--	--	--	--	93	26
20...	2200	166	--	47000	--	--	--	--	--	--	97	26
20...	2215	100	--	80700	--	--	--	--	--	--	97	26
20...	2400	50	--	79000	--	--	--	--	--	--	99	26
21...	0530	62	--	84300	--	--	--	--	--	--	98	26
21...	0615	35	--	74800	--	--	--	--	--	--	99	26
21...	0630	30	--	39800	--	--	--	--	--	--	98	26
21...	0645	30	--	57300	--	--	--	--	--	--	99	26
21...	0700	25	--	52300	--	--	--	--	--	--	100	26
21...	0715	25	--	61800	--	--	--	--	--	--	97	26
21...	2100	15	--	34800	--	--	--	--	--	--	100	26
21...	2130	12	--	36600	--	--	--	--	--	--	100	26
22...	1830	360	--	44300	--	--	--	--	--	--	97	26
22...	2000	668	--	31000	--	--	--	--	--	--	100	26
22...	2100	54	--	49400	--	--	--	--	--	--	100	26
24...	0400	140	--	84100	--	--	--	--	--	--	95	26
24...	0445	95	--	52800	--	--	--	--	--	--	99	26
24...	0515	95	--	56700	--	--	--	--	--	--	97	26
24...	0645	267	--	34900	--	--	--	--	--	--	93	26
24...	0700	267	--	43200	--	--	--	--	--	--	97	26
24...	0915	42	--	52000	--	--	--	--	--	--	97	26
24...	0930	42	--	49800	--	--	--	--	--	--	98	26
24...	1100	23	19.5	44200	72	85	94	98	98	100	--	--

09367900 BLACK SPRINGS WASH NEAR MEXICAN SPRINGS, NM

LOCATION.--Lat 35°45'40", long 108°49'00", McKinley County, Hydrologic Unit 14080106, in Navajo Indian Reservation, on left bank 0.9 mi (1.4 km) upstream from Figueredo Wash, 2.5 mi (4.0 km) south of Mexican Springs and 17 mi (27.4 km) north of Gallup.

DRAINAGE AREA.--7.05 mi<sup>2</sup> (18.3 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1953-78 (annual maximum only), April 1979 to September 1982 (discontinued).

GAGE.--Water-stage recorder with rock and concrete artificial control. Altitude of gage is 6,300 ft (1,902.2 m) from topographic map. Prior to April 12, 1979 at datum 2.01 ft (0.613 m) higher.

REMARKS.--Water-discharge records fair. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,200 ft<sup>3</sup>/s (62.3 m<sup>3</sup>/s) Aug. 18, 1955, gage height, 4.77 ft (1.454 m); Maximum gage height, 4.89 ft (1.490 m) July 14, 1981; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 469 ft<sup>3</sup>/s (13.3 m<sup>3</sup>/s) at 2250 hours Aug. 23, gage height, 2.69 ft (0.820 m); no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
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	2.0
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.90	1.0
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	6.3	.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	11	.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	43	.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	61.20	3.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.97	.10
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	43	2.0
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	121	6.0
(++)	0.62	---	---	---	---	0.62	0.24	0.65	0.00	0.66	4.17	0.59

CAL YR 1981 TOTAL 160.55 MEAN .44 MAX 115 MIN .00 AC-FT 318  
WTR YR 1982 TOTAL 64.20 MEAN .18 MAX 43 MIN .00 AC-FT 127

(++) Monthly rainfall, in inches.

SAN JUAN RIVER BASIN  
09367900 BLACK SPRINGS WASH NEAR MEXICAN SPRINGS, NM -- Continued  
WATER-QUALITY RECORDS

487

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

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.
		% FINER THAN .062 MM (80158)	% FINER THAN .125 MM (80159)	% FINER THAN .250 MM (80160)	% FINER THAN .500 MM (80161)	% FINER THAN 1.00 MM (80168)	% FINER THAN 2.00 MM (80169)	% FINER THAN 4.00 MM (80170)	% FINER THAN 8.00 MM (80171)	% FINER THAN 16.0 MM (80172)
JUN										
29...	1330	6	10	25	28	30	33	41	63	88
29...	1335	7	14	35	45	48	56	69	79	94
29...	1340	15	41	90	100	--	--	--	--	--



## 09367930 HUNTER WASH AT BISTI TRADING POST, NM

LOCATION.--Lat 36°16'37", long 108°15'12", in NW¼NW¼ sec.32, T.24 N., R.13 W., San Juan County, Hydrologic Unit 14080106, on right bank 150 ft (46 m) upstream from road crossing at Bisti Trading Post, and 35 mi (56 km) south of Farmington.

DRAINAGE AREA.--45.6 mi<sup>2</sup> (118 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1975 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,770 ft (1,759 m), from topographic map.

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--7 years, 0.91 ft<sup>3</sup>/s (0.026 m<sup>3</sup>/s), 659 acre-ft/yr (812,500 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,570 ft<sup>3</sup>/s (44.5 m<sup>3</sup>/s) Aug. 19, 1976, gage height, 6.22 ft (1.896 m), from rating curve extended above 60 ft<sup>3</sup>/s (1.70 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft<sup>3</sup>/s (5.7 m<sup>3</sup>/s), revised, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 2	2215	586 16.6	3.94 1.201	Aug. 11	2330	274 7.76	3.08 0.939
July 16	1315	235 6.66	3.05 0.930	Aug. 13	1815	718 20.3	4.26 1.298
July 30	1800	*738 20.9	4.32 1.317	Sept. 11	1330	590 16.7	3.95 1.204
Aug. 2	1800	534 15.1	3.81 1.161				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	.00	.00	.00	.00	.00	.00	.00	10	.00	.00	.00	.00
2	73	.00	.00	.00	.00	.00	.00	3.7	.00	.00	45	.00
3	46	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.5	.00
4	.00	.00	.00	.00	.00	.08	.00	9.6	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	3.6	.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	.12	.00	.00	.00	.00	.00	.00	1.9
10	.00	.00	.00	.00	3.9	.00	.00	.00	.00	.00	2.6	6.1
11	.00	.00	.00	.00	4.1	.00	.00	.00	.00	.00	11	73
12	.00	.00	.00	.00	4.8	.00	.00	.00	.00	.00	15	25
13	.00	.00	.00	.00	2.5	.92	.00	.00	.00	.00	78	.15
14	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.62	.00
15	.00	.00	.00	.00	.80	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	13	.00	.00	.00	.00	9.8	.00	.00
17	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.74	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	4.5	1.2
21	.00	.00	.00	.00	.88	.00	.00	.00	.00	.00	3.9	.00
22	.00	.00	.00	.00	.34	.00	.00	.00	.00	.00	6.3	.00
23	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00	.20	.00
24	.00	.00	.00	.00	4.3	.00	.00	.00	.00	.00	4.0	.00
25	.00	.00	.00	.00	30	.00	.00	.00	.00	.00	9.0	.00
26	.00	.00	.00	.00	23	2.6	.00	.00	.00	.00	.25	.00
27	.00	.00	.00	.00	.00	9.5	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	2.5	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	1.8	.00	.00	30	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	119.00	2.50	.00	.00	95.41	26.10	1.80	26.90	.00	43.70	186.87	107.35
MEAN	3.84	.083	.000	.000	3.41	.84	.060	.87	.000	1.41	6.03	3.58
MAX	73	2.5	.00	.00	30	13	1.8	10	.00	30	78	73
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	236	5.0	.00	.00	189	52	3.6	53	.00	87	371	213

CAL YR 1981 TOTAL 443.83 MEAN 1.22 MAX 73 MIN .00 AC-FT 880  
WTR YR 1982 TCTAL 609.63 MEAN 1.67 MAX 78 MIN .00 AC-FT 1210

SAN JUAN RIVER BASIN  
09367930 HUNTER WASH AT BISTI TRADING POST, NM -- Continued  
WATER-QUALITY RECORDS

489

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

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate sampling method; 29 indicates dip or grab sample and 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)
FEB 23...	1300	.11	850	690	7.7	8.1	17.0	12.0	18
JUL 16...	1315	235	380	--	8.5	--	--	--	--
30...	1815	E283	1650	1730	6.9	8.0	--	--	102
AUG 11...	1130	E155	2200	--	7.6	--	--	--	--
11...	1145	283	450	--	8.0	--	--	--	--
24...	0930	2.3	1100	1100	7.3	8.2	24.0	18.5	76

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)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)
FEB 23...	0	6.1	.8	150	16	2.1	280	.0	250
JUL 16...	--	--	--	--	--	--	180	.0	--
30...	--	36	3.0	360	16	27	210	.0	--
AUG 11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
24...	--	27	2.2	210	11	4.7	90	--	--

DATE	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)	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)	SAMPLE SOURCE (72005)
FEB 23...	205	210	6.3	1.2	18	504	519	29
JUL 16...	--	--	--	--	--	--	--	40
30...	--	610	26	.8	26	1210	--	--
AUG 11...	--	--	--	--	--	--	--	40
11...	--	--	--	--	--	--	--	40
24...	--	420	8.7	.7	20	765	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SAMPLE SOURCE (72005)
FEB 23...	1300	40	190000	900	3300	11	29
JUL 16...	1315	--	1400	--	3200	--	40
30...	1815	90	480000	220	14000	72	--
AUG 11...	1130	--	670000	--	38000	--	40
11...	1145	--	390000	--	15000	--	40
24...	0930	160	330000	16	7600	1	--

SAN JUAN RIVER BASIN  
09367930 HUNTER WASH AT BISTI TRADING POST, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	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)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G AS ZN) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
AUG 24...	0930	9	<1	1	<10	3	1700	<10	410	.01	<1	6

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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) (22703)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
AUG 24...	0930	24	<1400	<10	<890	<9.9	<850	.09	.8

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	% FINER THAN .002 MM (70337)	% FINER THAN .004 MM (70338)	% FINER THAN .016 MM (70340)
FEB 23...	1300	.11	12.0	22800	--	--	--
JUL 16...	1315	235	--	48400	--	--	--
30...	1800	E155	--	52200	--	--	--
AUG 11...	1130	E155	--	152000	--	--	--
11...	1145	283	--	58100	--	--	--
12...	1030	2.2	24.0	53000	75	86	95
13...	1700	E155	--	37600	--	--	--
13...	1715	E283	--	45800	--	--	--
13...	1800	E600	--	126000	--	--	--
22...	1630	155	--	66000	--	--	--
24...	0930	2.3	18.5	24800	93	95	99
SEP 10...	1300	E155	--	39200	43	49	70
11...	1245	E283	--	105000	40	43	53

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 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
FEB 23...	--	--	--	--	--	93	29
JUL 16...	--	--	--	--	--	79	40
30...	--	--	--	--	--	99	40
AUG 11...	--	--	--	--	--	95	40
11...	--	--	--	--	--	76	40
12...	98	99	100	--	--	--	29
13...	--	--	--	--	--	--	40
13...	--	--	--	--	--	--	40
13...	--	--	--	--	--	--	40
22...	--	--	--	--	--	--	40
24...	100	--	--	--	--	--	--
SEP 10...	94	100	--	--	--	--	40
11...	74	88	95	98	100	--	40

## SAN JUAN RIVER BASIN

491

09367934 TEEC-NI-DI-TSO WASH NEAR BURNHAM TRADING POST, NM

LOCATION.--Lat 36°18'26", long 108°27'22", San Juan County, Hydrologic Unit 14080106, in Navajo Indian Reservation, on right bank 4.9 mi (7.9 km) southeast of Burnham Trading Post, and 6.5 mi (10.5 km) upstream from mouth.

DRAINAGE AREA.--7.2 mi<sup>2</sup> (18.6 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,500 ft (1,676 m), from topographic map.

REMARKS.--Water-discharge records poor.

AVERAGE DISCHARGE.--5 years, 0.154 ft<sup>3</sup>/s (0.004 m<sup>3</sup>/s), 112 acre-ft/yr (138,100 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft<sup>3</sup>/s (52.1 m<sup>3</sup>/s), Aug. 24, 1982, gage height, 5.70 ft (1.737 m), from floodmarks, from rating curve extended above 40 ft<sup>3</sup>/s (0.85 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,840 ft<sup>3</sup>/s (52.1 m<sup>3</sup>/s) at 0030 hours Aug. 24, gage height, 5.70 ft (1.737 m), from floodmarks, from rating curve extended above 40 ft<sup>3</sup>/s (0.85 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.39	.00	.00	.00	.00
2	2.0	.00	.00	.00	.00	.00	.00	.94	.00	.00	.00	.00
3	.50	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	2.1	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	2.4	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.04	.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	.07
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.50	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	5.8	.00	.00	.00	.00	.00	.61	.00
17	.00	.00	.00	.00	9.9	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	4.2	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	3.8	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.57	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.92	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.6	.00
23	.00	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.90	.00
24	.00	.00	.00	.00	.52	.00	.00	.00	.00	.00	45	.00
25	.00	.00	.00	.00	11	.00	.00	.00	.00	.58	16	.00
26	.00	.00	.00	.00	3.3	.00	.00	.00	.00	.00	1.0	.00
27	.00	.00	.00	.00	.68	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	1.8	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.12	.00	.00	---	.00	.00	.00	.00	.86	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.02	.00	---
TOTAL	2.50	1.92	.00	.00	40.30	2.40	1.00	5.87	.00	1.46	67.60	.07
MEAN	.081	.064	.000	.000	1.44	.077	.033	.19	.000	.047	2.18	.002
MAX	2.0	1.8	.00	.00	11	1.9	1.0	2.4	.00	.86	45	.07
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	5.0	3.8	.00	.00	80	4.8	2.0	12	.00	2.9	134	.1

CAL YR 1981 TOTAL 15.17 MEAN .042 MAX 2.9 MIN .00 AC-FT 30  
WTR YR 1982 TOTAL 123.12 MEAN .34 MAX 45 MIN .00 AC-FT 244

SAN JUAN RIVER BASIN  
09367934 TECC-NI-DI-TSO WASH NEAR BURNHAM, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	
DATE	TIME									
OCT										
02...	1200	E39	580	--	8.0	--	--	--	--	
02...	1205	E135	510	--	8.1	--	--	--	--	
MAR										
03...	1130	5.8	630	580	8.1	7.9	12.5	12.0	15	
		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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)
OCT										
02...	--	--	--	--	--	--	--	--	--	210
02...	--	--	--	--	--	--	--	--	--	210
MAR										
03...	0	5.5	.4	130	15	2.1	140	.0	140	140
		CAR- BONATE FETFLD (MG/L AS CO3) (00445)	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)	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)	SAMPLE SOURCE (72005)
OCT										
02...	0	172	--	--	--	--	--	--	--	--
02...	0	172	--	--	--	--	--	--	--	--
MAR										
03...	--	115	140	8.9	1.0	9.9	388	367	29	29

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT									
02...	1200	--	--	--	--	--	--	430000	--
02...	1205	--	--	--	--	--	--	470000	--
MAR									
03...	1130	2	<1	20	<1	<10	6	180000	290
DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
OCT									
02...	--	--	22000	--	--	--	--	--	--
02...	--	--	22000	--	--	--	--	--	--
MAR									
03...	1	3400	2	4.8	2	6	<3	29	29

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
MAR						
03...	1130	5.8	12.0	16300	97	29

09367936 BURNHAM WASH NEAR BURNHAM, NM

LOCATION.--Lat 36°21'11", long 108°27'16", San Juan County, Hydrologic Unit 14080106, in Navajo Indian Reservation, on left bank 3.0 mi (4.8 km) upstream from Brimhall Wash, 3.2 mi (5.1 km) east of Burnham Trading Post, and 32 mi (51.5 km) southeast of Shiprock.

DRAINAGE AREA.--8.6 mi<sup>2</sup> (22.3 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1982 (discontinued).

GAGE.--Water-Stage recorder and concrete control. Altitude of gage is 5,480 ft (1,670 m), from topographic map.

REMARKS.--Water-discharge records poor.

AVERAGE DISCHARGE.--5 years, 0.316 ft<sup>3</sup>/s (0.009 m<sup>3</sup>/s), 229 acre-ft/year (282,400 m<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 518 ft<sup>3</sup>/s (14.7 m<sup>3</sup>/s) Sept. 7, 1978, gage height, 4.20 ft (1.280 m) from rating curve extended above 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft<sup>3</sup>/s (2.8 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 4	1815	157 4.45	2.65 0.808	Aug. 22	1630	*398 11.3	3.76 1.146
Aug. 16	2115	395 11.2	3.75 1.143	Aug. 24	0030	387 11.0	3.72 1.134

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.46	.00	.00	.00	.00
2	5.9	.00	.00	.00	.00	.00	.00	1.2	.00	.00	.00	.00
3	1.3	.00	.00	.00	.00	.53	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	3.6	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.75	.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	.96	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	3.0	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	7.2	.00	.00	.00	.00	.00	.00	.02
13	.00	.00	.00	.00	8.4	.67	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	7.0	.67	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	6.4	.02	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	6.7	.00	.00	.00	.00	.00	12	.00
17	.00	.00	.00	.00	5.0	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	4.8	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	5.6	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	5.6	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	4.5	.00	.00	.00	.00	.00	.24	.00
22	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	13	.00
23	.00	.00	.00	.00	.00	.00	.84	.00	.00	.00	.93	.00
24	.00	.00	.00	.00	1.0	.00	1.0	.00	.00	.00	17	.00
25	.00	.00	.00	.00	8.2	.00	.00	.00	.00	.01	.68	.00
26	.00	.00	.00	.00	2.0	.81	.00	.00	.00	.00	1.4	.00
27	.00	.00	.00	.00	.86	.86	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.34	.08	.00	.00	.00	.00	.00	.00
29	.00	1.5	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.28	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	7.20	1.78	.00	.00	78.66	3.64	1.84	6.01	.00	.01	45.25	.02
MEAN	.23	.059	.000	.000	2.81	.12	.061	.19	.000	.000	1.46	.001
MAX	5.9	1.5	.00	.00	8.4	.86	1.0	3.6	.00	.01	17	.02
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	14	3.5	.00	.00	156	7.2	3.6	12	.00	.02	90	.04

CAL YR 1981	TOTAL	29.88	MEAN	.082	MAX	5.9	MIN	.00	AC-FT	59
WTR YR 1982	TOTAL	144.41	MEAN	.40	MAX	17	MIN	.00	AC-FT	286

SAN JUAN RIVER BASIN  
09367936 BURNHAM WASH NEAR BURNHAM, NM -- Continued  
WATER-QUALITY RECORDS

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

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate sampling method; 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (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 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)
MAR 03...	0950	.63	550	--	8.1	--	7.5	8.0	--	--	--	--
MAY 04...	1800	60	623	623	7.4	7.6	--	--	39	14	.9	130

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)	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)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SAMPLE SOURCE (72005)
MAR 03...	--	--	130	.0	120	98	--	--	--	--	--	29
MAY 04...	9.5	4.3	191	.0	--	--	110	12	.6	15	473	40

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
MAR 03...	0950	4	<1	--	<1	<10	8	--	--
MAY 04...	1800	--	--	50	--	--	--	380000	360



SAN JUAN RIVER BASIN  
09367936 BURNHAM WASH NEAR BURNHAM, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
MAR 03...	2	--	--	5.0	1	6	8	29
MAY 04...	--	16000	55	--	--	--	--	40

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	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)
MAR 03...	0950	.63	8.0	13900	--	--	--
MAY 04...	1800	60	--	69800	--	--	--
AUG 16...	2045	18	--	286000	39	42	55
16...	2055	60	--	154000	40	54	66
16...	2100	186	--	135000	51	60	74

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 1.00 MM (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
MAR 03...	--	--	--	--	--	99	29
MAY 04...	--	--	--	--	--	74	40
AUG 16...	76	86	92	94	100	--	40
16...	88	97	99	100	--	--	40
16...	90	98	100	--	--	--	40

## 09367938 CHACO RIVER NEAR BURNHAM, NM

LOCATION.--Lat 36°21'57", long 108°33'57", San Juan County, Hydrologic Unit 14080106, in Navajo Indian Reservation, on downstream end of second pier on Navajo Highway bridge, 1,300 ft (396 m) downstream from Captain Tom Wash, 2,100 ft (640 m) downstream from Brimhall Wash, 3.5 mi (5.6 km) west of Burnham Trading Post, and about 35 mi (56.3 km) upstream from mouth.

DRAINAGE AREA.--3,640 mi<sup>2</sup> (9,430 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,320 ft (1,622 m), from topographic map.

REMARKS.--Water-discharge records poor.

AVERAGE DISCHARGE.--5 years, 26.0 ft<sup>3</sup>/s (0.737 m<sup>3</sup>/s), 18,840 acre-ft/yr (23.2 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,740 ft<sup>3</sup>/s (191 m<sup>3</sup>/s) Jan. 18, 1979, gage height, 4.38 ft (1.335 m) from rating curve extended above 3,540 ft<sup>3</sup>/s (100 m<sup>3</sup>/s); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft<sup>3</sup>/s (28 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 3	Unknown	*6120 173	4.30 1.311	Aug. 20	1600	5040 143	4.14 1.262
Aug. 18	1930	4440 126	4.05 1.234	Sept. 2	1515	1380 39.1	3.49 1.064

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	38	1.7	.00	.00	1.0	42
2	.00	.00	.00	.00	.00	.00	19	2.2	.00	.00	.30	149
3	1680	.00	.00	.00	.00	9.2	29	4.9	.00	.00	1.6	30
4	74	.00	.00	.00	.00	19	35	4.0	.00	.00	15	3.9
5	1.2	.00	.00	.00	.00	17	28	3.5	.00	.00	3.0	.18
6	.00	.00	.00	.00	.00	17	34	3.0	.00	.00	8.8	2.3
7	.00	.00	.00	.00	.00	20	13	2.8	.00	.00	1.7	1.7
8	.00	.00	.00	.00	.00	29	3.1	3.4	.00	.00	1.4	1.1
9	.00	.00	.00	.00	.00	24	3.3	1.8	.00	.00	.25	2.0
10	.00	.00	.00	.00	.00	28	3.4	.76	.00	.00	.00	.46
11	.00	.00	.00	.00	.00	27	5.0	.16	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	27	5.1	.49	.00	.00	7.5	.00
13	.00	.00	.00	.00	.00	21	5.0	.80	.00	.00	66	.00
14	.00	.00	.00	.00	.00	25	4.6	.00	.00	.00	24	.00
15	.00	.00	.00	.00	.00	21	3.6	.00	.00	.00	162	.29
16	.00	.00	.00	.00	.00	23	2.6	.00	.00	.00	220	.77
17	.00	.00	.00	.00	.00	28	3.1	.00	.00	.00	271	.20
18	.00	.00	.00	.00	.00	30	2.9	.00	.00	.00	725	.00
19	.00	.00	.00	.00	.00	17	2.1	.00	.00	.00	660	.31
20	.00	.00	.00	.00	.00	18	1.7	.00	.00	.00	707	.00
21	.00	.00	.00	.00	.00	19	1.6	.00	.00	.00	207	.05
22	.00	.00	.00	.00	.00	21	1.5	.00	.00	.00	50	.34
23	.00	.00	.00	.00	.00	21	1.5	.00	.00	.00	44	.60
24	.00	.00	.00	.00	.00	23	1.7	.00	.00	.00	44	2.4
25	.00	.00	.00	.00	.00	33	2.0	.00	.00	.00	26	2.5
26	.00	.00	.00	.00	.00	21	2.5	.00	.00	.78	56	.68
27	.00	.00	.00	.00	.00	23	2.0	.00	.00	.00	50	.00
28	.00	.00	.00	.00	.00	32	3.9	.00	.00	.09	275	.00
29	.00	2.5	.00	.00	---	20	3.8	.00	.00	.05	235	.00
30	.00	.00	.00	.00	---	20	2.7	.00	.00	.50	88	.06
31	.00	---	.00	.00	---	28	---	.00	---	8.8	51	---
TOTAL	1755.20	2.50	.00	.00	.00	661.20	264.7	29.51	.00	10.22	4001.55	240.84
MEAN	56.6	.083	.000	.000	.000	21.3	8.82	.95	.000	.33	129	8.03
MAX	1680	2.5	.00	.00	.00	33	38	4.9	.00	8.8	725	149
MIN	.00	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00
AC-FT	3480	5.0	.00	.00	.00	1310	525	59	.00	20	7940	478

CAL YR 1981	TOTAL	4428.19	MEAN 12.1	MAX 1680	MIN .00	AC-FT 8780
WTR YR 1982	TOTAL	6965.72	MEAN 19.1	MAX 1680	MIN .00	AC-FT 13820

SAN JUAN RIVER BASIN  
09367938 CHACO RIVER NEAR BURNHAM, NM--Continued  
WATER-QUALITY RECORDS

497

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

REMARKS.--Under the heading SAMPLE SOURCE numerical values are used to indicate sampling method; 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (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 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)
MAR 03...	1330	16	680	--	8.2	--	16.0	12.5	--	--	--	--
AUG 13...	1300	13	950	1010	7.8	8.5	35.0	26.5	55	20	1.3	200
25...	1330	250	750	780	8.1	8.3	26.0	21.0	47	17	1.2	150

DATE	TIME	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)	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)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SAMPLE SOURCE (72005)
MAR 03...	--	--	--	310	.0	270	221	--	--	--	--	--	29
AUG 13...	12	6.2	430	.0	--	--	300	13	1.2	16	673	--	--
25...	9.9	4.0	190	--	--	--	170	10	.9	16	520	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
MAR 03...	1330	5	<1	--	<1	<10	8	--	--
AUG 13...	1300	3	<1	100	<1	<10	9	320000	150
25...	1330	4	<1	220	<1	<10	11	470000	110

DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
MAR 03...		3	--	--	6.0	2	3	18	29
AUG 13...		<1	9800	4	.3	2	4	6	--
25...		<5	13000	3	.2	7	2	4	--

SAN JUAN RIVER BASIN  
09367938 CHACO RIVER NEAR BURNHAM, NM--Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	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)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G AS ZN) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
AUG 13...	1300	7	<1	<1	<10	2	900	<10	120	.01	<1	4

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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)
AUG 13...	1300	< 20	< 2300	< 11	1400	< 11	1300	.12	3.8

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	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)	SAMPLE SOURCE (72005)
MAR 03...	1330	16	12.5	30300	--	--	--	--	--	--	99	29
AUG 13...	1300	13	26.5	44500	--	--	--	--	--	--	100	--
25...	1330	250	21.0	42800	68	73	84	90	95	100	--	--

## 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 (6.8 km) upstream from Dead Mans Wash, 5.3 mi (8.5 km) downstream from the Hogback, 6.6 mi (10.6 km) southwest of Waterflow, 7.2 mi (11.6 km) southeast of Shiprock and at mile 4.5 (7.2 km).

DRAINAGE AREA.--4,350 mi<sup>2</sup> (11,300 km<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. Altitude of gage is 4,980 ft (1,518 m), from topographic map. Prior to 1975 at site 1.8 mi (2.9 km) upstream at different datum.

REMARKS.--Water-discharge records good except those for winter months, which are poor.. Base flow is mostly waste water from Four Corners Power Plant.

AVERAGE DISCHARGE.--6 years (water years 1977-82), 42.4 ft<sup>3</sup>/s (1.20 m<sup>3</sup>/s), 30,720 acre-ft/yr (37.9 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft<sup>3</sup>/s (207 m<sup>3</sup>/s), Sept. 20, 1969, gage height, 7.88 ft (2.402 m) site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft<sup>3</sup>/s (23 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 4	0330	3010 85.2	6.96 2.121	Sept. 12	1400	992 28.1	5.07 1.545
Aug. 14	1800	1110 31.4	5.31 1.618	Sept. 21	1115	1370 38.8	5.67 1.728
Aug. 24	1800	*3730 106	8.33 2.539				

No flow June 6 to July 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	13	19	19	.28	.05	79	57	28	19	.00	28	24
2	16	18	18	.29	.05	50	35	17	19	.33	41	9.9
3	1050	18	18	.22	.07	49	24	41	15	17	32	8.0
4	1150	18	18	.25	.12	32	31	73	.89	17	73	7.9
5	180	19	18	.23	.09	114	25	108	.34	17	46	8.3
6	94	18	18	.29	.07	85	21	65	.00	17	26	8.8
7	64	17	18	.24	.03	54	22	31	.00	17	56	8.8
8	28	17	18	.17	.03	32	27	22	.00	17	63	9.1
9	22	17	18	.04	.00	26	29	18	.00	18	34	68
10	20	18	18	.02	.00	18	28	17	.00	18	20	30
11	20	18	18	.05	2.1	17	29	17	.00	17	14	53
12	18	18	18	.11	3.0	15	26	16	.00	17	13	413
13	18	18	18	.61	1.9	27	20	14	.00	17	45	196
14	20	18	18	.23	.75	26	13	13	.00	17	253	123
15	18	18	18	.25	.16	90	13	14	.00	17	87	53
16	19	18	18	.32	.00	108	9.4	14	.00	18	31	41
17	19	18	18	.44	.06	57	9.2	14	.00	18	87	34
18	18	18	18	.57	1.2	34	8.9	15	.00	29	72	28
19	18	18	18	.26	30	23	9.1	16	.00	16	26	26
20	18	18	18	.24	30	17	9.6	16	.00	16	21	35
21	18	18	18	.20	78	17	10	18	.00	16	101	437
22	19	18	18	.18	79	15	20	18	.00	16	414	373
23	19	18	19	.17	35	16	16	18	.00	16	466	135
24	19	17	15	.16	33	22	12	19	.00	16	1610	72
25	19	18	.89	.16	65	27	10	19	.00	16	1000	69
26	19	18	.51	.14	186	25	10	19	.00	18	1850	68
27	18	18	.36	.09	149	25	10	19	.00	44	893	66
28	17	18	.40	.06	115	54	11	19	.00	24	221	63
29	18	18	.39	.07	---	177	11	19	.00	16	100	62
30	19	18	.32	.07	---	116	31	19	.00	12	40	62
31	19	---	.34	.05	---	79	---	19	---	12	56	---
TOTAL	3027	538	434.21	6.46	809.68	1526	587.2	775	54.23	526.33	7819	2591.8
MEAN	97.6	17.9	14.0	.21	28.9	49.2	19.6	25.0	1.81	17.0	252	86.4
MAX	1150	19	19	.61	186	177	57	108	19	44	1850	437
MIN	13	17	.32	.02	.00	15	8.9	13	.00	.00	13	7.9
AC-FT	6000	1070	861	13	1610	3030	1160	1540	108	1040	15510	5140

CAL YR 1981 TOTAL 9997.96 MEAN 27.4 MAX 1150 MIN .00 AC-FT 19830  
WTR YR 1982 TCTAL 18694.91 MEAN 51.2 MAX 1850 MIN .00 AC-FT 37080

SAN JUAN RIVER BASIN  
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 DISCHARGE: October 1976 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler.

REMARKS.--Under the heading of SAMPLE SOURCE numerical values are used to indicate sampling method; 26 indicates by automatic pump, 29 indicates dip or grab sample, and 40 indicates single-stage sample.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 140,000 mg/L Jan. 18, 1979; minimum daily, no flow on many days in 1981 and 1982.

SEDIMENT LOADS: Maximum daily, 740,000 tons (671,000 tonnes) Sept. 25, 1978; minimum daily 0 tons (0 tonne) on many days in 1981 and 1982.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 86,100 mg/L Sept. 12; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 271,000 tons (246,000 tonnes) Oct. 4; minimum daily 0 tons (0 tonne) on many days.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
NOV 04...	1045	19	1300	1420	7.5	8.2	10.0	13.0	9.2	394
FEB 02...	0945	.06	12600	12900	8.1	8.6	5.0	.0	12.2	4328
MAY 13...	1020	13	1440	1620	8.1	8.2	16.0	13.0	8.0	466
AUG 09...	1230	35	1300	1330	8.2	8.9	30.0	25.0	9.2	203
24...	1500	2730	1050	1170	7.8	7.5	27.0	22.0	--	180

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)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)
NOV 04...	279	100	35	160	3.6	5.5	--	--	140
FEB 02...	3928	480	760	2200	15	24	277	.0	0
MAY 13...	--	109	47	210	4.4	5.9	140	.0	--
AUG 09...	--	67	8.7	200	6.4	8.5	120	.0	--
24...	--	63	5.4	190	6.5	5.9	160	--	--

DATE	CAR- BONATE FETFLD (MG/L AS CO3) (00445)	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)	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)	SAMPLE SOURCE (72005)
NOV 04...	0	115	540	66	1.0	2.6	1020	980	--
FEB 02...	240	400	7600	720	.6	<1.9	13300	--	29
MAY 13...	--	--	640	71	1.0	4.4	1250	--	--
AUG 09...	--	--	460	42	1.2	11	864	--	--
24...	--	--	410	12	.8	18	839	--	--

SAN JUAN RIVER BASIN  
09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 04...	1045	--	--	770	--	--	--	15000	<10
FEB 02...	0945	--	--	2500	--	--	--	900	130
MAY 13...	1020	--	--	750	--	--	--	8800	730
AUG 09...	1230	2	<1	370	<1	<10	5	280000	< 3
24...	1500	--	--	240	--	--	--	620000	11

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
NOV 04...	--	220	3	--	--	--	--	--
FEB 02...	--	70	50	--	--	--	--	29
MAY 13...	--	150	22	--	--	--	--	--
AUG 09...	<1	7700	2	.8	4	2	17	--
24...	--	22000	150	--	--	--	--	--

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
AUG 09...	1230	0	<1	0	<10	20	950	<10	0	.01	<1	4



SAN JUAN RIVER BASIN  
09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued  
WATER-QUALITY RECORDS

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)
AUG 09...	1230	.0	<2000	.0	<940	.0	.0	.00

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	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							
04...	1045	19	13.0	715	--	--	--
DEC							
16...	1030	18	7.5	296	--	--	--
FEB							
02...	0945	.06	.0	77	--	--	--
24...	1000	34	4.0	60000	--	--	--
MAY							
13...	1020	13	13.0	357	--	--	--
JUL							
26...	2330	385	--	23000	--	--	--
AUG							
07...	2200	385	--	31500	--	--	--
09...	1230	35	25.0	26700	--	--	--
14...	1600	160	--	56900	--	--	--
17...	1915	160	--	66800	--	--	--
24...	0920	660	--	57200	--	--	--
24...	1005	1170	--	49100	--	--	--
24...	1101	1690	--	110000	--	--	--
24...	1120	2180	22.0	103000	--	--	--
24...	1250	2430	22.5	78200	--	--	--
24...	1304	2480	--	75800	--	--	--
24...	1500	2730	22.0	71700	49	59	78
24...	1509	3180	--	70300	--	--	--
24...	1736	3700	--	63000	--	--	--
24...	2036	2320	--	39700	--	--	--
24...	2121	1920	--	86700	--	--	--
25...	0036	1260	--	34600	--	--	--
25...	0421	950	--	30800	--	--	--
25...	0551	820	--	29000	--	--	--
25...	0806	1060	--	27100	--	--	--
25...	1020	1580	--	24900	--	--	--
25...	1320	1050	--	28000	--	--	--
25...	1620	590	--	39800	--	--	--
25...	1920	1070	--	80200	--	--	--
25...	2050	1340	--	75300	--	--	--
26...	0120	1360	--	83100	--	--	--
26...	0250	1580	--	49600	--	--	--
26...	0550	1620	--	36600	--	--	--
26...	0850	1690	--	57600	--	--	--
26...	1125	2100	--	49600	--	--	--

SAN JUAN RIVER BASIN  
09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
NOV							
04...	--	--	--	--	--	98	--
DEC							
16...	--	--	--	--	--	--	--
FEB							
02...	--	--	--	--	--	--	29
24...	--	--	--	--	--	100	--
MAY							
13...	--	--	--	--	--	97	--
JUL							
26...	--	--	--	--	--	82	26
AUG							
07...	--	--	--	--	--	93	26
09...	--	--	--	--	--	99	--
14...	--	--	--	--	--	79	26
17...	--	--	--	--	--	93	26
24...	--	--	--	--	--	81	26
24...	--	--	--	--	--	94	26
24...	--	--	--	--	--	89	26
24...	--	--	--	--	--	85	--
24...	--	--	--	--	--	88	--
24...	--	--	--	--	--	92	26
24...	86	91	96	99	100	--	--
24...	--	--	--	--	--	94	26
24...	--	--	--	--	--	93	26
24...	--	--	--	--	--	93	26
24...	--	--	--	--	--	85	26
25...	--	--	--	--	--	92	26
25...	--	--	--	--	--	91	26
25...	--	--	--	--	--	92	26
25...	--	--	--	--	--	92	26
25...	--	--	--	--	--	93	26
25...	--	--	--	--	--	86	26
25...	--	--	--	--	--	86	26
25...	--	--	--	--	--	85	26
25...	--	--	--	--	--	87	26
26...	--	--	--	--	--	80	26
26...	--	--	--	--	--	84	26
26...	--	--	--	--	--	87	26
26...	--	--	--	--	--	82	26
26...	--	--	--	--	--	86	26

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
AUG					
26...	1430	2300	41300	85	26
26...	1600	2300	57700	80	26
26...	1730	2220	40600	83	26
26...	2200	1820	35200	78	26
27...	0400	1340	31200	80	26
27...	1000	992	28900	86	26
27...	1600	630	31300	86	26
27...	2200	389	30100	91	26
28...	0400	296	27400	91	26
28...	0700	266	29600	91	26
28...	1000	236	30800	92	26
28...	1600	185	32800	96	26
28...	2200	152	31300	97	26
29...	0400	128	29200	97	26
29...	1000	106	29600	97	26
29...	1430	90	28500	95	26
29...	1900	77	25600	97	26
30...	0100	61	25900	98	26
30...	0400	55	26400	93	26
30...	1000	42	17800	95	26
SEP					
21...	1340	790	69800	78	--
21...	1446	660	71900	73	--
21...	1530	554	71400	72	--



## SAN JUAN RIVER BASIN

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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 (5 km) west of Shiprock, 6 mi (10 km) downstream from Chaco River, and at mile 215.0 (345.9 km).

DRAINAGE AREA.--12,900 mi<sup>2</sup> (33,400 km<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 (1,477.878 m) 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 (5 km) upstream at different datum. Oct. 26, 1933, to Sept. 30, 1936, water-stage recorder at present site at datum 3.31 ft (1.01 m) higher and Oct. 1, 1936, to Sept. 30, 1952, at datum 1.77 ft (0.54 m) higher. Supplementary water-stage recorders at nearby sites, same datum, used at times.

REMARKS.--Water-discharge records good except those for October, which are fair. Since 1962 flow partly regulated by Navajo Reservoir (station 09355100). Diversions for irrigation of about 118,000 acres (480 km<sup>2</sup>) above station. Ungaged canals bypass station on both right and left bank, though some of bypass flow is returned to river below gage.

AVERAGE DISCHARGE.--56 years (water years 1927-82), 2,172 ft<sup>3</sup>/s (61.51 m<sup>3</sup>/s), 1,574,000 acre-ft/yr (1.94 km<sup>3</sup>/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD (SINCE 1927).--Maximum discharge, about 80,000 ft<sup>3</sup>/s (2,270 m<sup>3</sup>/s) Aug. 11, 1929, gage height, 5.7 ft (1.73 m), site and datum then in use; minimum daily, 8 ft<sup>3</sup>/s (0.23 m<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 (6.7 m), site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,540 ft<sup>3</sup>/s (214 m<sup>3</sup>/s) at 1915 hours Aug. 26, gage height, 7.16 ft (2.182 m), no other peak above base of 6,000 ft<sup>3</sup>/s (170 m<sup>3</sup>/s); minimum daily, 648 ft<sup>3</sup>/s (18.4 m<sup>3</sup>/s) Feb. 8, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230	1340	792	857	953	920	1390	2870	4590	3810	2370	1600
2	1510	1300	784	915	903	888	1330	3170	4850	4390	1880	1570
3	5610	1250	791	368	928	1140	1320	3650	4860	3880	1640	1620
4	3050	1180	788	824	920	1200	1410	4170	5050	3680	1640	1570
5	1810	1070	781	872	746	1070	1320	4690	4950	3480	1520	1570
6	1680	827	786	824	704	946	1400	4740	4900	3120	1340	1600
7	1640	772	784	792	662	873	1530	4250	4540	2770	1480	1490
8	1580	787	802	784	648	832	1520	3830	4310	2610	1900	1370
9	1510	779	817	746	697	848	1540	3470	4380	2290	1620	1390
10	1500	799	819	760	662	857	1590	3410	4490	2410	1350	1500
11	1530	768	795	848	746	893	1560	3360	4570	2370	1150	1770
12	1580	769	798	848	711	966	1570	3430	4600	2470	1090	3420
13	1600	781	792	896	648	1960	1960	3380	4610	2360	1070	2900
14	1690	826	795	840	669	1500	2680	3160	4820	2340	1330	3200
15	1620	787	800	912	704	1350	2880	2850	4570	2220	1500	2840
16	1660	789	814	923	711	1350	2980	2760	4300	2180	1460	2800
17	1570	770	810	903	739	1300	2950	2720	4050	2290	1500	2920
18	1520	823	798	893	776	1300	2850	2740	4360	2150	1310	2810
19	1480	856	787	920	832	1300	2790	2700	4080	2050	1170	2670
20	1560	859	768	987	840	1250	2600	2900	3830	2070	1210	2850
21	1440	780	785	976	896	1250	2610	2900	3560	2010	1710	3080
22	1440	793	819	957	944	1220	2600	2990	3690	1930	3290	3080
23	1440	809	785	945	976	1170	2750	3480	3460	1870	2840	2780
24	1370	770	819	953	1060	1120	2710	3610	3380	1840	3820	2520
25	1380	769	808	940	1240	1100	2570	3530	3440	1820	4730	2320
26	1340	768	781	970	1320	1200	2450	3560	3850	1820	6560	2150
27	1330	768	784	986	1090	1300	2380	3870	4130	2040	4540	2010
28	1290	768	792	1010	952	1500	2380	4480	4460	2090	2990	1940
29	1310	778	800	1020	---	1450	2430	4480	4410	2400	2370	2060
30	1340	814	776	985	---	1400	2700	4780	4260	2560	1850	1950
31	1340	---	813	955	---	1200	---	4780	---	3690	1740	---
TOTAL	51950	25949	24663	27909	23677	36653	64750	110710	129350	79010	65970	67350
MEAN	1676	865	796	900	846	1182	2158	3571	4312	2549	2128	2245
MAX	5610	1340	819	1020	1320	1960	2980	4780	5050	4390	6560	3420
MIN	1230	768	768	746	648	832	1320	2700	3380	1820	1070	1370
AC-FT	103000	51470	48920	55360	46960	72700	128400	219600	256600	156700	130900	133600

CAL YR 1981 TOTAL 436960 MEAN 1197 MAX 5610 MIN 231 AC-FT 866700  
WTR YR 1982 TOTAL 707941 MEAN 1940 MAX 6560 MIN 648 AC-FT 1404000

SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1941-45, 1951 to current year.

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 DISCHARGE: 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 1957-82): Maximum daily, 4,360 micromhos July 31, 1959; minimum daily, 138 micromhos 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, 114,000 mg/L Aug. 11, 1967; minimum daily, 2 mg/L May 4, 1963.

SEDIMENT LOADS: Maximum daily, 2,000,000 tons (1,810,000 tonnes) Aug. 11, 1967; minimum daily, 1 ton (.91 tonne) on several days during July and September 1959, September 1962, May and July 1963.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 924 micromhos Oct. 3-4; minimum daily, 138 micromhos Nov. 1.

WATER TEMPERATURES: Maximum, 24.0°C July 30; minimum, 0.0°C on many days during December to February.

SEDIMENT CONCENTRATIONS: Maximum daily, 58,600 mg/L Oct. 3; minimum daily, 41 mg/L July 16.

SEDIMENT LOADS: Maximum daily, 878,000 tons (797,000 tonnes) Oct. 3; minimum daily, 97 tons (88 tonnes) Dec. 11.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)	
DATE	TIME											
OCT 28...	1245	1270	600	610	8.0	8.1	19.0	12.0	58	10.2	200	
JAN 15...	1300	984	650	650	8.1	7.9	3.0	.5	30	13.0	223	
MAR 30...	1130	1530	650	620	7.8	8.3	10.0	5.0	1100	10.8	199	
MAY 10...	1030	3470	390	373	7.7	7.3	20.0	11.0	43	9.2	145	
MAY 17...	1030	2780	500	--	--	--	--	13.0	--	--	--	
JUL 06...	0915	3160	320	335	7.9	8.0	20.0	15.0	22	8.5	123	
SEP 07...	1400	1510	520	525	8.3	8.0	31.0	22.0	150	8.7	181	
		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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)	CAR- BONATE FETFLD (MG/L AS CO3) (00445)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)
DATE												
OCT 28...	93	62	11	41	1.3	2.2	--	--	130	0	107	
JAN 15...	108	68	13	44	1.3	2.6	150	.0	140	0	115	
MAR 30...	76	60	12	53	1.7	2.5	150	.0	150	--	123	
MAY 10...	50	45	7.9	18	.7	1.7	110	.0	--	--	--	
MAY 17...	--	--	--	--	--	--	--	--	--	--	--	
JUL 06...	41	39	6.3	17	.7	1.6	98	.0	--	--	--	
SEP 07...	68	57	9.4	34	1.1	2.4	120	.0	--	--	--	
		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 CONSTIT- UENTS, 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)	CYANIDE TOTAL (MG/L AS CN) (00720)
DATE												
OCT 28...	160	15	.3	9.7	374	366	.22	.050	.090	<.020	--	
JAN 15...	180	35	.4	9.9	400	424	.30	.320	.230	.050	--	
MAR 30...	200	12	.4	9.2	412	421	.40	.130	.160	.040	--	
MAY 10...	79	5.4	.2	8.0	224	222	.12	.140	.140	.020	--	
MAY 17...	--	--	--	--	--	--	--	--	--	--	.03	
JUL 06...	71	6.0	.3	7.3	197	198	.60	.060	.170	<.010	--	
SEP 07...	130	10	.4	9.4	328	321	.25	<.060	.140	.050	--	

SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
OCT 28...	1245	3	1	300	75	70	<1	<1	10	10
JAN 15...	1300	--	--	--	--	70	--	--	--	--
MAR 30...	1130	6	2	900	89	60	<1	<3	30	<10
MAY 10...	1030	3	1	300	72	30	1	<3	10	<10
JUL 06...	0915	--	--	--	--	30	--	--	--	--
SEP 07...	1400	4	1	300	85	70	3	<1	10	<10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 28...	4	<3	60	3	10000	<10	23	<1	500	4
JAN 15...	--	--	--	--	--	13	--	--	--	--
MAR 30...	18	1	76	4	52000	17	33	<1	1100	3
MAY 10...	4	<1	31	5	8300	26	30	2	520	5
JUL 06...	--	--	--	--	--	25	--	--	--	--
SEP 07...	8	<1	46	4	12000	23	20	<1	520	6

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 28...	.3	.5	8	<1	2	2	<1	<1	130	6
JAN 15...	--	--	--	--	--	--	--	--	--	--
MAR 30...	.3	1.0	23	4	4	2	1	<1	200	<12
MAY 10...	.7	.5	11	4	1	1	1	<1	160	19
JUL 06...	--	--	--	--	--	--	--	--	--	--
SEP 07...	.1	.1	14	3	2	3	1	<1	90	8

SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		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)
MAY 17...	1030	< 2.0	2.3	76	3	< 1	< 1
	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)
MAY 17...	< 10	50	1200	< 10	180	< .01	26

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 28...	1245	< 13	14	< 5.1	12	< 4.8	11	.06	2.0
MAY 10...	1030	< 4.9	16	< 2.9	14	< 2.8	13	.07	2.3

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 28...	77	190
MAR 30...	300	260
MAY 10...	83	200
JUL 06...	290	140
SEP 07...	--	500



SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		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)	
DATE	TIME								
OCT									
03...	1000	7150	15.0	44400	857000	56	66	81	
28...	1245	1270	12.0	1720	5900	--	--	--	
DEC									
02...	1120	792	.0	391	836	--	--	--	
JAN									
15...	1300	984	.5	816	2170	--	--	--	
FEB									
01...	1245	1010	3.5	583	1590	--	--	--	
19...	1105	920	3.0	2460	6110	79	85	90	
25...	0920	1200	5.0	6820	22100	69	80	92	
28...	1000	952	5.0	5420	13900	71	81	89	
MAR									
04...	1100	1170	6.5	3120	9860	38	50	62	
13...	1220	2060	8.0	7050	39200	48	57	88	
16...	0900	1630	7.0	6150	27100	47	57	81	
29...	1105	1670	6.0	2940	13300	43	54	72	
30...	1130	1530	5.0	3360	13900	--	--	--	
31...	0830	2300	5.0	1630	10100	--	--	--	
APR									
17...	1115	2980	11.0	1330	10700	--	--	--	
MAY									
07...	1100	4300	10.0	1030	12000	--	--	--	
10...	1030	3470	11.0	1410	13200	--	--	--	
JUN									
02...	1200	4720	15.0	325	4140	--	--	--	
03...	1345	4680	13.5	931	11800	4	5	9	
JUL									
06...	0915	3160	15.0	550	4690	--	--	--	
27...	1355	2160	24.0	1310	7640	45	72	92	
AUG									
22...	1230	3900	21.0	34200	360000	42	55	84	
SEP									
07...	1400	1510	22.0	3210	13100	5	7	10	
12...	1015	2730	18.0	27100	200000	--	--	--	
22...	0830	3180	15.0	4590	39400	--	--	--	
		SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	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									
03...	94	98	100	--	--	--	--	--	--
28...	--	--	--	--	--	14	--	--	--
DEC									
02...	--	--	--	--	--	28	--	--	--
JAN									
15...	--	--	--	--	--	21	--	--	--
FEB									
01...	--	--	--	--	--	19	--	--	--
19...	--	--	--	--	--	98	100	--	--
25...	--	--	--	--	--	99	100	--	--
28...	--	--	--	--	--	97	99	100	--
MAR									
04...	75	88	99	100	--	--	--	--	--
13...	100	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	98	100	--	--
29...	88	99	100	--	--	--	--	--	--
30...	--	--	--	--	--	67	--	--	--
31...	--	--	--	--	--	68	--	--	--
APR									
17...	--	--	--	--	--	75	--	--	--
MAY									
07...	--	--	--	--	--	61	--	--	--
10...	--	--	--	--	--	20	--	--	--
JUN									
02...	--	--	--	--	--	84	--	--	--
03...	25	42	87	100	--	--	--	--	--
JUL									
06...	--	--	--	--	--	13	--	--	--
27...	--	--	--	--	--	99	100	--	--
AUG									
22...	99	100	--	--	--	--	--	--	--
SEP									
07...	19	22	37	92	100	--	--	--	--
12...	--	--	--	--	--	98	--	--	--
22...	--	--	--	--	--	93	--	--	--

SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	465	138	709	496	521	727	576	391	298	283	393	366
2	549	562	679	500	549	766	569	385	285	272	384	358
3	924	573	689	531	549	793	604	370	285	276	412	409
4	924	578	671	538	505	805	682	348	275	186	405	366
5	600	578	700	600	568	736	547	347	282	376	378	421
6	539	613	699	543	577	736	549	374	275	393	399	439
7	525	684	678	567	608	704	540	341	288	404	389	390
8	518	738	669	496	577	695	514	353	297	400	548	381
9	502	750	696	511	554	690	524	354	289	443	460	393
10	502	699	687	513	562	710	501	360	283	522	413	447
11	463	687	684	766	593	689	498	366	283	405	429	414
12	454	701	680	766	592	692	493	367	287	394	432	462
13	474	665	694	641	626	758	494	403	288	404	489	487
14	488	665	668	528	611	828	441	393	273	400	439	434
15	493	636	668	733	641	830	419	399	281	413	527	358
16	509	638	656	537	609	686	382	396	302	413	394	325
17	551	684	653	590	633	645	375	390	302	416	408	362
18	481	680	661	536	642	569	414	399	280	461	424	386
19	490	675	641	544	702	574	377	385	281	442	453	337
20	518	669	676	530	718	562	383	380	279	437	328	321
21	493	664	647	530	661	532	391	356	312	456	448	391
22	504	665	662	545	711	569	390	358	314	456	470	388
23	493	633	639	485	698	597	399	358	312	458	480	315
24	491	642	688	540	635	556	428	339	322	456	417	300
25	529	633	671	515	680	592	409	336	315	463	731	332
26	515	645	673	530	752	583	402	331	297	527	396	311
27	536	634	648	518	744	615	407	318	284	732	354	385
28	561	636	655	516	676	635	403	311	272	499	278	345
29	564	638	668	530	---	643	397	308	266	496	289	353
30	543	681	664	507	---	654	391	286	258	480	309	363
31	544	---	647	525	---	591	---	275	---	464	301	---
MEAN	540	636	672	555	625	670	463	357	289	427	419	378
WTR YR 1982		MEAN	502	MAX	924	MIN	138					

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	9.0	3.0	2.0	1.0	8.0	7.0	13.0	---	---	---	---
2	16.0	10.0	1.0	2.0	1.0	8.0	7.0	14.0	---	---	---	---
3	15.0	8.0	2.0	2.0	1.0	8.0	8.0	15.0	---	---	---	---
4	13.0	10.0	2.0	.0	2.0	6.0	12.0	13.0	---	---	---	---
5	13.0	8.0	5.0	.0	.0	5.0	7.0	12.0	---	---	---	---
6	14.0	10.0	5.0	2.0	.0	4.0	10.0	10.0	---	---	---	---
7	14.0	9.0	4.0	.0	.0	4.0	9.0	10.0	---	---	---	---
8	16.0	9.0	4.0	.0	.0	5.0	9.0	16.0	---	---	---	---
9	13.0	8.0	4.0	.0	.0	6.0	7.0	14.0	---	---	---	---
10	13.0	8.0	4.0	.0	2.0	5.0	10.0	12.0	---	---	---	---
11	12.0	9.0	5.0	.0	2.0	8.0	11.0	12.0	---	---	---	---
12	13.0	8.0	4.0	.0	1.0	7.0	9.0	11.0	---	---	---	---
13	13.0	8.0	4.0	.0	2.0	8.0	11.0	9.0	---	---	---	---
14	13.0	9.0	3.0	.0	1.0	8.0	12.0	14.0	---	---	---	---
15	13.0	12.0	3.0	.0	2.0	8.0	11.0	14.0	---	---	---	---
16	13.0	8.0	4.0	.0	2.0	7.0	11.0	11.0	---	---	---	---
17	11.0	7.0	2.0	.0	3.0	7.0	11.0	---	---	---	---	---
18	9.0	7.0	1.0	1.0	4.0	4.0	10.0	---	---	---	---	---
19	10.0	7.0	2.0	.0	3.0	5.0	10.0	---	---	---	---	---
20	11.0	7.0	2.0	4.0	5.0	6.0	8.0	---	---	---	---	---
21	9.0	7.0	2.0	.0	4.0	8.0	8.0	---	---	---	---	---
22	9.0	7.0	2.0	2.0	7.0	5.0	8.0	---	---	---	---	---
23	8.0	6.0	2.0	1.0	7.0	8.0	8.0	---	---	---	---	---
24	8.0	5.0	.0	1.0	6.0	7.0	8.0	---	---	---	---	---
25	8.0	6.0	.0	5.0	5.0	8.0	10.0	---	---	---	---	---
26	11.0	3.0	2.0	1.0	6.0	6.0	14.0	---	---	---	---	---
27	11.0	4.0	2.0	1.0	6.0	9.0	13.0	---	---	---	---	---
28	10.0	6.0	2.0	1.0	5.0	11.0	12.0	---	---	---	---	---
29	10.0	5.0	1.0	4.0	---	6.0	12.0	---	---	---	---	---
30	9.0	5.0	3.0	3.0	---	6.0	12.0	---	---	---	---	---
31	8.0	---	3.0	1.0	---	5.0	---	---	---	---	---	---
MEAN	11.5	7.5	2.5	1.0	3.0	6.5	10.0	---	---	---	---	---

SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS

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TEMPERATURE WATER (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1										---	---	---
2										---	---	---
3										---	---	---
4										---	---	---
5										---	---	---
6										---	---	---
7										---	---	---
8										---	---	---
9										---	---	---
10										---	---	---
11										---	---	---
12										---	---	---
13										---	---	---
14										---	---	---
15										---	---	---
16										---	---	---
17										16.0	13.0	15.0
18										16.5	12.5	14.5
19										16.0	12.5	14.0
20										15.5	12.0	13.5
21										16.5	12.0	14.0
22										16.0	13.0	14.5
23										16.5	12.5	14.5
24										16.0	13.5	15.0
25										17.0	13.0	15.0
26										17.0	13.5	15.0
27										15.0	13.0	14.0
28										14.5	11.5	13.0
29										16.0	13.0	14.0
30										15.0	13.0	14.0
31										14.5	13.0	13.5
MONTH										17.0	11.5	14.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15.0	13.0	14.0	19.0	---	---	21.5	20.0	20.5	20.5	19.5	20.0
2	15.0	13.0	14.0	18.0	15.5	16.5	21.5	20.5	21.0	20.0	19.0	19.5
3	15.0	13.0	14.0	19.0	15.0	17.0	21.5	20.5	20.5	20.0	19.0	19.5
4	15.0	12.5	14.0	18.5	15.5	17.0	21.5	19.5	20.5	20.0	19.5	19.5
5	14.5	12.5	13.5	18.5	15.0	16.5	21.5	19.5	20.5	20.0	19.0	19.5
6	14.0	11.5	12.5	17.5	14.5	16.0	22.5	20.0	21.0	20.0	18.0	19.0
7	15.5	12.0	13.5	18.5	15.5	17.0	23.5	21.0	21.5	20.5	18.5	19.5
8	16.0	12.5	14.0	20.5	16.5	18.0	21.5	20.0	21.0	20.0	19.0	19.5
9	16.0	12.5	14.5	21.0	17.5	19.0	21.5	20.0	21.0	20.0	19.0	19.5
10	16.0	13.5	14.5	20.5	17.5	19.0	21.5	20.5	21.0	20.0	18.5	19.0
11	15.5	12.5	14.0	21.5	18.0	19.5	22.5	20.5	21.5	19.0	18.0	18.0
12	16.5	13.5	15.0	22.5	19.0	20.5	22.5	21.0	22.0	18.0	15.5	16.5
13	15.5	13.5	14.5	23.0	19.5	21.0	22.5	21.5	22.0	15.5	15.5	15.5
14	15.5	13.5	14.5	23.0	19.0	21.0	22.5	21.0	21.5	15.5	14.0	14.5
15	16.0	13.0	14.5	22.0	19.5	20.5	22.5	21.0	21.5	16.0	14.0	15.0
16	17.0	13.5	15.0	21.5	19.0	20.0	22.0	21.0	21.5	17.5	15.0	16.0
17	16.5	14.0	15.0	22.0	19.0	20.5	22.5	21.0	22.0	17.5	16.0	17.0
18	17.0	14.0	15.5	22.0	19.5	20.5	23.0	21.5	22.5	17.0	16.5	17.0
19	17.5	14.5	16.0	23.0	20.0	21.5	23.0	21.0	22.0	16.5	16.0	16.5
20	17.0	15.5	16.0	23.5	20.5	22.0	23.5	21.5	22.5	17.0	16.5	17.0
21	18.5	14.5	16.0	22.5	20.5	21.5	23.0	21.5	22.5	16.5	15.5	16.5
22	18.5	15.0	16.5	22.0	21.0	21.5	23.0	21.0	21.5	17.0	16.5	16.5
23	19.0	15.5	17.0	22.5	20.5	21.5	22.0	21.0	21.5	17.5	17.0	17.0
24	19.5	15.5	17.5	22.5	21.0	21.5	21.0	20.0	20.5	17.5	16.5	17.0
25	19.0	15.5	17.0	22.5	21.0	22.0	21.0	20.0	20.5	17.0	16.5	16.5
26	18.5	15.0	17.0	23.0	21.5	22.0	20.0	17.5	18.5	17.5	16.5	17.0
27	19.0	15.5	17.0	23.0	21.5	22.0	19.0	18.0	18.5	17.5	15.5	16.5
28	19.5	16.0	17.5	23.0	21.0	22.0	19.0	18.5	19.0	15.5	14.0	14.5
29	18.5	16.5	17.5	23.5	20.5	22.0	20.0	18.5	19.0	14.0	13.0	13.5
30	18.5	16.5	17.5	24.0	20.0	22.0	20.5	19.0	19.5	14.5	13.5	14.0
31	---	---	---	21.5	19.5	20.5	20.5	19.5	20.0	---	---	---
MONTH	19.5	11.5	15.5	24.0	14.5	20.0	23.5	17.5	21.0	20.5	13.0	17.0

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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	238	790	79	286	158	338	206	477	287	738	3650	9070
2	4360	24000	185	649	215	455	179	442	201	490	1430	3430
3	58600	878000	227	766	153	327	173	405	133	333	2180	6710
4	43700	408000	371	1180	134	285	163	363	113	281	3450	11200
5	11600	56700	204	589	99	209	164	386	135	272	4980	14400
6	2620	11900	203	453	99	210	134	298	266	506	1430	3650
7	1960	8680	228	475	75	159	165	353	111	198	655	1540
8	1090	4650	164	348	78	169	119	252	148	259	673	1510
9	800	3260	630	1330	94	207	83	167	160	301	441	1010
10	1120	4540	308	664	74	164	152	312	137	245	330	764
11	998	4120	111	230	45	97	129	295	158	318	501	1210
12	660	2820	147	305	83	179	344	788	198	380	8180	21300
13	742	3210	224	472	86	184	483	1170	415	726	7400	39200
14	800	3650	215	479	95	204	327	742	215	388	16300	86300
15	975	4260	124	263	83	179	521	1280	103	196	10400	50300
16	1180	5290	92	196	101	222	219	546	134	257	5500	25200
17	1090	4620	116	241	108	236	154	375	900	1800	1740	7890
18	912	3740	124	276	91	196	114	275	1680	3520	1610	7260
19	494	1970	139	321	83	176	159	395	2260	5080	2130	9370
20	398	1680	101	234	127	263	350	933	2430	5510	852	3610
21	330	1280	95	200	230	487	222	585	3630	8780	935	3890
22	370	1440	99	212	114	252	475	1230	4240	10800	998	4070
23	513	1990	83	181	66	140	154	393	5750	15200	1400	6120
24	433	1600	108	225	69	153	174	448	5700	16300	660	2730
25	344	1280	84	174	124	271	193	490	7250	24300	827	3350
26	301	1090	88	182	107	226	121	317	8540	30400	575	2410
27	264	948	88	182	103	218	173	461	6080	17900	1600	7690
28	747	2600	65	135	107	229	172	469	5310	13600	1230	5840
29	248	877	55	116	110	238	92	253	---	---	2700	13100
30	231	836	270	593	109	228	66	176	---	---	2740	10400
31	271	980	---	---	171	375	115	297	---	---	1600	5180
TOTAL	---	1450801	---	11957	---	7276	---	15373	---	159078	---	369704
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	1160	4350	800	6200	241	2990	105	1080	6060	38800	2220	9590
2	924	3320	853	7300	335	4390	114	1350	2820	14300	1260	5340
3	675	2410	1570	15500	580	7610	145	1520	1550	6860	960	4200
4	525	2000	1040	11700	355	4840	46	457	2100	9300	400	1700
5	493	1760	1850	23400	407	5440	99	930	1240	5090	1590	6740
6	850	3210	2110	27000	420	5560	318	2680	597	2160	4980	21500
7	875	3610	1040	11900	282	3460	108	808	1770	10700	2080	8370
8	622	2550	678	7010	178	2070	453	3190	4750	24400	495	1830
9	427	1780	430	4030	141	1670	102	631	1950	8530	1410	5290
10	500	2150	732	6740	117	1420	2170	14100	601	2190	2150	8710
11	461	1940	418	3790	213	2630	151	966	276	857	3630	22900
12	898	3810	370	3430	174	2160	145	967	175	515	26100	241000
13	1430	7570	380	3470	198	2460	76	484	1610	4650	13000	102000
14	2160	15600	340	2900	247	3210	126	796	4730	22900	8240	71200
15	2860	22200	299	2300	195	2410	43	258	10300	41700	2620	20100
16	2470	19900	461	3440	120	1390	41	241	1390	5480	1400	10600
17	1360	10800	267	1960	117	1280	43	266	820	3320	1100	8670
18	1060	8160	257	1900	113	1330	99	575	2720	9620	3150	23900
19	952	7170	211	1540	128	1410	142	786	825	2610	1660	12000
20	723	5080	332	2600	180	1860	119	665	4400	14400	1000	7690
21	750	5290	274	2150	102	980	210	1140	13600	62800	3890	32300
22	679	4770	191	1540	84	837	114	594	27500	255000	4070	33800
23	825	6130	306	2880	68	635	81	409	13400	103000	1330	9980
24	702	5140	522	5090	78	712	74	368	25600	264000	512	3480
25	485	3370	257	2450	208	1930	100	491	23500	300000	510	3190
26	545	3610	250	2400	154	1600	730	3590	18600	329000	419	2430
27	525	3370	319	3330	138	1540	1240	6830	6900	84600	279	1510
28	550	3530	709	8580	168	2020	743	4190	4490	36200	422	2210
29	575	3770	381	4610	171	2040	895	5800	2080	13300	348	1940
30	615	4480	630	8130	161	1850	1180	8160	790	3950	232	1220
31	---	---	391	5050	---	---	4400	49500	1800	8460	---	---
TOTAL	---	172830	---	194320	---	73734	---	113822	---	1688692	---	685390
TOTAL LOAD FOR YEAR:		4942977	TONS.									

## 09371010 SAN JUAN RIVER AT FOUR CORNERS, CO

LOCATION.--Lat 37°00'20", long 109°02'00", SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.21, T.32 N., R.20 W., Montezuma County, Hydrologic Unit 14080201, on left bank 1,300 ft (396 m) upstream from bridge on U.S. Highway 160, 0.1 mi (0.16 km) north of New Mexico-Colorado State Line, 1.0 mi (1.6 km) east of Four Corners monument, 3.0 mi (4.8 km) downstream from Mancos River, and at mile 187.2 (301 km).

DRAINAGE AREA.--14,600 mi<sup>2</sup> (37,810 km<sup>2</sup>), approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,900 ft (1,494 m), from topographic map.

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--5 years, 2,287 ft<sup>3</sup>/s (64.77 m<sup>3</sup>/s), 1,657,000 acre-ft/yr (2.04 km<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft<sup>3</sup>/s (479 m<sup>3</sup>/s) May 29, 1979, gage height, 6.25 ft (1.905 m<sup>3</sup>/s); maximum gage height, 14.43 ft (4.398 m) Dec. 12, 1978 (backwater from ice); minimum 110 ft<sup>3</sup>/s (3.11 m<sup>3</sup>/s) Aug. 19, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft<sup>3</sup>/s (170 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 3	1715	*7190 204	4.56 1.390	Aug. 25	0330	6790 192	4.46 1.359
May 5	1530	6550 185	4.50 1.372				

Minimum daily discharge, 822 ft<sup>3</sup>/s (23.3 m<sup>3</sup>/s) Nov. 12, 13.

SUPPLEMENTAL DATA.--Daily discharges, in cubic feet per second, to complete water year 1978 have been estimated as shown in the following table:

Oct. 1, 1977.....420	Oct. 6, 1977.....424	Oct. 11, 1977.....760	Oct. 16, 1977.....660
2.....435	7.....670	12.....720	17.....615
3.....440	8.....710	13.....660	18.....615
4.....480	9.....750	14.....620	19.....605
5.....560	10.....785	15.....630	

Month	Total	Mean	Max	Min	Ac-ft
October 1977	19640	634	785	420	38960
WTR YR 1978	492684	1350	4600	110	977200

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	1300	1040	1120	1170	1160	1470	3020	5020	3500	2620	2200
2	1270	1260	1010	1060	1130	1150	1410	3280	4780	3880	2090	1940
3	4680	1240	962	988	1100	1300	1470	4030	4810	3700	1950	1790
4	3920	1300	938	888	1080	1690	1420	4780	4840	3400	1870	1570
5	2140	1200	988	875	900	1320	1390	5400	4630	3530	1730	1540
6	1800	1080	1060	950	854	1100	1400	5050	4600	3330	1600	1620
7	1640	912	1110	962	941	1020	1490	4570	4480	2930	1440	1580
8	1680	875	1110	950	848	971	1490	4330	4180	2660	2090	1460
9	1680	888	1140	975	999	973	1440	3970	4510	2200	1880	1390
10	1710	888	1080	925	1010	1040	1490	3730	4780	2240	1610	1570
11	1570	854	1020	1020	1000	1060	1490	3520	4810	2090	1380	1650
12	1560	822	975	1040	1030	1220	1520	3420	4510	2050	1280	3730
13	1650	822	1060	1060	923	2070	1710	3420	4570	1970	1350	4350
14	1750	900	962	1040	940	1920	2420	3020	4870	1890	1420	3930
15	1690	938	975	1000	870	1730	2720	2820	4660	1890	1670	3130
16	1550	900	1020	1000	902	1680	3000	3020	4300	1780	1630	2780
17	1740	875	975	912	979	1620	3080	3180	4270	1850	1550	2660
18	1540	864	913	888	1160	1560	3020	2950	4420	1810	1460	2480
19	1530	912	912	950	1110	1560	2930	2860	4300	1740	1200	2390
20	1450	875	938	1080	1130	1490	2860	2930	4030	1760	1170	2530
21	1420	888	1000	1150	1120	1450	2700	3020	3730	1740	1760	2780
22	1430	912	1010	1110	1230	1440	2640	3150	3700	1670	2870	2730
23	1370	925	938	1080	1240	1460	2840	3760	3820	1610	2940	2490
24	1330	938	875	1110	1240	1390	2930	3820	3480	1580	3810	2180
25	1270	925	988	1220	1280	1350	2790	3650	3300	1540	5610	2060
26	1290	938	912	1100	1580	1380	2660	3880	3550	1550	6270	1940
27	1270	1000	988	1150	1290	1730	2700	4060	3760	1690	5610	1830
28	1190	1040	1000	1150	1160	1610	2860	4540	4000	1820	4010	1680
29	1190	1100	988	1200	---	1560	2950	4540	3940	2150	3330	1790
30	1220	1140	950	1200	---	1600	3120	4930	3820	2160	2830	1760
31	1300	---	1010	1170	---	1520	---	5110	---	2810	2620	---
TOTAL	51880	29511	30847	32323	30216	44124	67470	117760	128470	70520	74650	67530
MEAN	1674	984	995	1043	1079	1423	2249	3799	4282	2275	2408	2251
MAX	4680	1300	1140	1220	1580	2070	3120	5400	5020	3880	6270	4350
MIN	1050	822	875	875	848	971	1390	2820	3300	1540	1170	1390
AC-FT	102900	58540	61190	64110	59930	87520	133800	233600	254800	139900	148100	133900

CAL YR 1981	TOTAL	458158	MEAN	1255	MAX	4680	MIN	428	AC-FT	908800
WTR YR 1982	TOTAL	745301	MEAN	2042	MAX	6270	MIN	822	AC-FT	1478000

## 09379500 SAN JUAN RIVER NEAR BLUFF, UT

Location.--Lat 37°08'49", long 109°51'51", in SE¼NE¼NW¼ sec.7, T.42 S., R.19 E., San Juan County, Hydrologic Unit 14080205, on left bank 1,600 ft (490 m) downstream from Gypsum Creek, 1,800 ft (550 m) upstream from highway bridge, 20 mi (32 km) southwest of Bluff, and at mile 113.5 (182.6 km).

DRAINAGE AREA.--23,000 mi<sup>2</sup> (60,000 km<sup>2</sup>), approximately.

PERIOD OF RECORD.--October 1914 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1940. WSP 1313: 1917, 1929. WSP 1343: 1945.

GAGE.--Water-stage recorder. Datum of gage is 4,048 ft (1,234 m) from levels of Topographic Division, USGS. Prior to Mar. 16, 1927, chain gages at sites about 1,700 ft (520 m) downstream at different datums.

REMARKS.--Records fair. Diversions for irrigation of approximately 200,000 acres (810 km<sup>2</sup>) above station. No diversion between station and mouth of river. Flow regulated by Navajo Reservoir since June 28, 1962 (see station 09355100). Water quality records for the current year are published in Water Resources Data for Utah.

AVERAGE DISCHARGE.--68 years, 2,532 ft<sup>3</sup>/s (71.71 m<sup>3</sup>/s), 1,834,000 acre-ft/yr (2.26 km<sup>3</sup>/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD (1914-17 AND SINCE 1927).--Maximum discharge, 70,000 ft<sup>3</sup>/s (1,980 m<sup>3</sup>/s) Sept. 10, 1927, gage height, 32.0 ft (9.75 m) from rating curve extended above 31,000 ft<sup>3</sup>/s (787 m<sup>3</sup>/s) and slope-area measurement at gage height 26.62 ft (8.114 m); no flow July 3-13, 1934, Aug. 24-27, 29, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 6, 1911, which is greatest known at Shiprock, NM, probably exceeded that of Sept. 10, 1927 at this station but stage was not accurately determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft<sup>3</sup>/s (227 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 4	0445	8180 232	9.32 2.841	Aug. 25	1515	*19200 544	14.87 4.532

Minimum discharge, 739 ft<sup>3</sup>/s (20.9 m<sup>3</sup>/s) Feb. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1120	1400	1100	939	1150	1230	1550	3060	4810	4000	3070	2550
2	1300	1390	1080	1030	1130	1190	1500	3290	4730	3910	2510	2190
3	2840	1390	1030	1050	1130	1130	1450	3610	5000	4190	2280	1920
4	6610	1360	980	1030	1130	1250	1510	4290	5060	3730	2580	1800
5	3750	1430	955	901	1110	1480	1460	5480	4920	3430	2130	1810
6	2100	1340	969	901	940	1300	1440	6260	4880	3200	1780	2200
7	1820	1240	1020	920	856	1220	1470	4440	4790	2930	1580	1980
8	1710	1110	1020	949	857	1090	1510	3490	4430	2650	1490	1650
9	1690	1040	1020	920	800	1020	1490	3100	4290	2390	2070	1610
10	1650	1010	1020	949	910	1020	1460	2870	4350	2000	1740	1440
11	1640	1010	1000	901	1020	1050	1530	2960	4510	2110	1510	1770
12	1630	974	993	1060	1070	1100	1500	3110	4580	1980	1370	3090
13	1630	929	1000	1140	1010	1290	1500	3340	4520	2000	1520	5560
14	1740	920	1000	1140	930	2680	1870	3240	4670	1900	1810	5540
15	1810	981	982	1140	927	2060	2620	3070	4770	1820	1810	4090
16	1730	1020	969	1120	966	1970	2870	2850	4450	1720	1800	3060
17	1740	978	984	1120	1160	1910	3060	2830	4180	1660	1880	3020
18	1730	945	996	1040	1310	1720	2990	2750	4180	1730	1880	3040
19	1610	932	966	1050	1450	1640	2970	2680	4330	1670	1600	2900
20	1590	978	965	1050	1260	1620	2940	2640	4060	1610	1250	2810
21	1540	960	948	1110	1220	1520	2860	2840	3790	1610	1270	3200
22	1530	967	1000	1150	1230	1440	2790	2870	3520	1610	2150	3790
23	1550	970	1010	1120	1260	1390	2770	3120	3540	1560	4420	3190
24	1520	977	967	1080	1270	1390	2830	3500	3380	1500	4260	2700
25	1480	971	916	1090	1300	1330	2810	3620	3260	1500	11600	2480
26	1430	945	953	1110	1400	1340	2680	3560	3460	1530	11700	2370
27	1440	951	957	1090	1770	1490	2640	3650	3770	1590	10500	2260
28	1430	999	947	1140	1460	1760	2650	4180	4050	1760	6320	2620
29	1360	1070	954	1170	---	1650	2630	4590	4150	2100	4470	2100
30	1340	1050	931	1190	---	1610	2750	4700	4190	2300	3110	1950
31	1360	---	939	1210	---	1640	---	5000	---	2170	2860	---
TOTAL	57420	32237	30571	32810	32026	45530	66100	110990	128620	69860	100320	80690
MEAN	1852	1075	986	1058	1144	1469	2203	3580	4287	2254	3236	2690
MAX	6610	1430	1100	1210	1770	2680	3060	6260	5060	4190	11700	5560
MIN	1120	920	916	901	800	1020	1440	2640	3260	1500	1250	1440
AC-FT	113900	63940	60640	65080	63520	90310	131100	220100	255100	133600	199000	160000

CAL YR 1981	TOTAL	444881	MEAN	1219	MAX	6610	MIN	459	AC-FT	582400
WTR YR 1982	TOTAL	787174	MEAN	2157	MAX	11700	MIN	800	AC-FT	1561000



## 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 (1.4 km) upstream from Nutria Diversion Dam, 1.3 mi (2.1 km) northeast of Upper Nutria, and 10.4 mi (16.7 km) northwest of Ramah.

DRAINAGE AREA.--71.4 mi<sup>2</sup> (185 km<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 (0.305 m) June 6, 1975. Altitude of gage is 6,860 ft (2,091 m), from topographic map.

REMARKS.--Records good except those for winter period and August and September, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 6.25 ft<sup>3</sup>/s (0.177 m<sup>3</sup>/s), 4,530 acre-ft/yr (5.59 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 782 ft<sup>3</sup>/s (22.1 m<sup>3</sup>/s) Apr. 14, 1973, gage height, 5.58 ft (1.701 m), from rating curve extended above 470 ft<sup>3</sup>/s (13.3 m<sup>3</sup>/s); maximum gage height, 6.92 ft (2.109 m) Aug. 21, 1982 [backwater from aquatic growth]; no flow Oct. 1-20, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft<sup>3</sup>/s (1.4 m<sup>3</sup>/s), and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Mar. 12	0830	269 7.62	4.61 1.405	Aug. 21	1800	716 20.3	6.92 2.109
July 30	1800	a*770 21.8	6.00 1.829				

a from slope-area measurement of peak flow.

Minimum daily discharge, 0.09 ft<sup>3</sup>/s (0.003 m<sup>3</sup>/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	.09	.15	.15	.31	14	55	1.1	.43	.34	3.0	.34
2	2.1	.10	.15	.15	.28	16	61	1.3	.38	.34	.50	.26
3	7.0	.10	.15	.15	.29	15	41	1.1	.34	.34	1.0	.22
4	.29	.10	.15	.15	.30	7.0	33	1.3	.31	.33	.70	.21
5	.13	.10	.15	.15	.27	3.7	26	2.2	.31	.33	.50	.21
6	.10	.10	.15	.15	.27	1.2	24	1.7	.30	.33	.30	.18
7	.11	.10	.13	.15	.27	.86	20	1.4	.29	.34	.20	.40
8	.12	.10	.12	.15	.29	1.2	15	1.3	.28	.34	.10	.35
9	.10	.10	.15	.17	.28	6.6	11	1.1	.28	.34	.10	.24
10	.11	.10	.15	.18	.29	13	8.0	.87	.29	.38	.09	.21
11	.12	.10	.15	.18	.32	24	7.1	.74	.28	.40	.09	.31
12	.12	.11	.15	.18	.29	156	7.7	1.2	.29	.40	.12	.31
13	.12	.12	.15	.15	.28	70	8.8	2.9	.27	.41	1.7	.27
14	.11	.12	.13	.12	.27	132	6.6	3.0	.27	.44	6.1	.24
15	.12	.10	.12	.12	.26	93	4.7	3.0	.29	.48	.38	.24
16	.12	.10	.12	.12	.28	75	3.5	1.9	.29	.52	.18	.21
17	.13	.10	.15	.13	.37	82	2.8	1.5	.30	.58	.25	.21
18	.11	.10	.15	.15	.47	90	2.4	1.2	.31	.61	.16	.24
19	.12	.10	.15	.15	.56	64	2.1	.95	.32	.61	.11	.24
20	.12	.10	.15	.16	1.1	47	1.7	.71	.34	.73	.15	.27
21	.12	.10	.17	.17	6.4	31	1.8	.56	.34	.79	52	5.2
22	.10	.10	.16	.18	8.2	27	1.6	.53	.35	.75	14	.72
23	.10	.12	.14	.15	13	38	1.7	.54	.37	.72	2.6	.27
24	.10	.12	.12	.16	12	59	2.1	.55	.40	.72	1.4	.18
25	.10	.14	.15	.18	26	68	1.7	.52	.40	.72	.54	.15
26	.10	.15	.15	.19	18	93	1.5	.52	.38	.78	.52	.15
27	.11	.15	.18	.22	14	130	1.2	.52	.37	.86	1.2	.12
28	.12	.15	.16	.21	15	104	1.0	.59	.34	.99	1.0	.12
29	.13	.15	.15	.21	---	91	1.0	.60	.34	1.1	.57	.12
30	.10	.15	.16	.21	---	36	.97	.47	.35	83	.99	.12
31	.09	---	.18	.26	---	41	---	.47	---	10	1.1	---
TOTAL	12.98	3.37	4.59	5.15	119.65	1629.56	355.97	36.34	9.81	109.02	91.65	12.31
MEAN	.42	.11	.15	.17	4.27	52.6	11.9	1.17	.33	3.52	2.96	.41
MAX	7.0	.15	.18	.26	26	156	61	3.0	.43	.83	.52	5.2
MIN	.09	.09	.12	.12	.26	.86	.97	.47	.27	.33	.09	.12
AC-FT	26	6.7	9.1	10	237	3230	706	72	19	216	182	24

CAL YR 1981 TOTAL 290.36 MEAN .80 MAX 44 MIN .08 AC-FT 576  
WTR YR 1982 TCTAL 2390.40 MEAN 6.55 MAX 156 MIN .09 AC-FT 4740



## 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 (1.3 km) upstream from flow line of Black Rock Reservoir, 2.3 mi (3.7 km) northeast of Black Rock, and 5.9 mi (9.5 km) northeast of Zuni Pueblo.

DRAINAGE AREA.--810 mi<sup>2</sup> (2,100 km<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 and concrete control. Altitude of gage is 6,480 ft (1,975 m), from topographic map.

REMARKS.--Water-discharge records good except those for winter periods, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 12.4 ft<sup>3</sup>/s (0.351 m<sup>3</sup>/s), 8,980 acre-ft/yr (11.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft<sup>3</sup>/s (147 m<sup>3</sup>/s) Aug. 4, 1974, gage height, 6.61 ft (2.015 m), from rating curve extended above 670 ft<sup>3</sup>/s (19.0 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 4.05 ft (1.234 m), 3.94 ft (1.201 m), 5.16 ft (1.573 m), and 6.61 ft (2.015 m); no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft<sup>3</sup>/s (4.2 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 3	0445	210 5.95	3.80 1.158	Aug. 24	1900	*4160 118	6.30 1.920
Feb. 21	0745	311 8.81	3.90 1.189	Aug. 29	1800	441 12.5	4.10 1.250
Aug. 12	1715	1530 43.3	4.97 1.515	Aug. 30	1645	353 10.0	4.00 1.219
Aug. 16	2200	405 11.5	4.06 1.237	Sept. 3	2300	360 10.2	4.01 1.222

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.42	.30	.93	1.1	3.5	69	12	1.9	.00	5.7	.85
2	.00	.38	.40	.88	1.6	3.4	58	12	1.7	.00	1.6	.82
3	53	.32	.49	.70	1.4	3.6	57	12	1.2	.00	2.7	21
4	3.9	.32	.66	.55	1.3	3.3	53	11	.41	.00	1.8	38
5	.68	.32	.91	.41	1.2	2.8	52	12	.07	.00	.75	4.4
6	.15	.38	1.2	.40	1.1	6.7	16	12	.06	.00	.33	1.3
7	.03	.45	1.0	.38	.96	4.4	11	12	.05	.00	.19	6.2
8	.00	.49	.80	.36	1.2	2.3	10	9.9	.12	.00	.14	16
9	.00	.53	.74	.36	1.2	2.0	17	3.5	.16	.00	.07	3.7
10	.00	.49	1.3	.36	1.3	1.8	19	1.3	.27	.00	.05	2.2
11	.00	.53	.78	.80	2.8	1.9	18	.84	.32	.00	.03	.99
12	.00	.57	.84	1.1	4.3	3.3	14	1.2	.22	.00	141	1.5
13	.01	.57	.89	.90	15	3.9	9.3	3.9	.18	.00	16	1.3
14	.19	.53	.85	.85	10	5.6	7.8	2.4	.13	.00	.47	.73
15	.21	.57	.96	.81	7.2	3.4	7.8	1.3	.09	.00	.15	.54
16	.20	.61	.91	.81	7.2	2.6	7.2	.95	.10	.00	39	.35
17	.21	.49	.85	.69	11	2.0	6.0	1.0	.11	.00	21	.77
18	.25	.38	.58	.81	11	1.8	6.0	1.1	.07	.00	1.5	.42
19	.28	.35	.56	1.1	11	2.0	5.5	.99	.05	.00	.35	.05
20	.28	.28	.50	1.2	17	2.3	4.6	.89	.00	.00	.06	.77
21	.30	.44	.45	1.2	72	2.0	3.8	.86	.00	.00	1.7	9.4
22	.32	.70	.40	.81	20	1.8	3.4	.86	.00	.00	4.7	2.1
23	.38	.64	.35	.69	11	1.6	3.8	.80	1.4	.00	1.6	.80
24	.38	.67	.32	.69	8.9	1.5	4.1	.64	1.3	.00	371	.39
25	.40	.51	.36	.73	15	10	3.5	.49	.14	.00	33	.23
26	.42	.33	.54	.77	8.1	38	3.2	.66	.00	.00	10	.06
27	.42	.32	.94	1.4	5.0	53	2.7	1.3	.00	.00	2.4	.00
28	.42	.32	.83	1.6	4.1	53	2.1	1.9	.00	.00	2.5	.00
29	.45	.31	.77	1.6	---	64	1.9	1.9	.00	.54	18	.00
30	.45	.30	.35	1.6	---	70	3.4	1.7	.00	.22	30	.00
31	.45	---	1.0	1.3	---	77	---	2.2	---	6.8	14	---
TOTAL	63.78	13.52	22.33	26.79	252.96	434.5	480.1	125.58	10.05	7.56	721.79	114.87
MEAN	2.06	.45	.72	.86	9.03	14.0	16.0	4.05	.34	.24	23.3	3.83
MAX	53	.70	1.3	1.6	72	77	69	12	1.9	6.8	371	38
MIN	.00	.28	.30	.36	.96	1.5	1.9	.49	.00	.00	.03	.00
AC-FT	127	27	44	53	502	862	952	249	20	15	1430	226

CAL YR 1981 TOTAL 596.29 MEAN 1.63 MAX 79 MIN .00 AC-FT 1180  
WTR YR 1982 TOTAL 2273.83 MEAN 6.23 MAX 371 MIN .00 AC-FT 4510

LITTLE COLORADO BASIN  
09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	
MAY 11...	1500	.81	511	8.6	18.0	78	<.3	34	
DATE	TIME	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)	CAR- BONATE FETFLD (MG/L AS CO3) (00445)	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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
MAY 11...	4.3	200	12	184	41	15	.4	327	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)
MAY 11...	1500	50

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	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)
NOV 19...	1245	.61	4.5	61	.10	--	--	--	--	--	--
JAN 13...	1100	.88	.0	45	.11	--	--	--	--	--	--
FEB 17...	1330	8.7	5.0	1410	33	--	--	--	33	--	--
APR 08...	1300	9.1	12.0	52	1.3	--	--	--	72	--	--
MAY 11...	1500	.81	18.0	21	.05	--	--	--	--	--	--
AUG 09...	1420	.08	30.0	38	.00	--	--	--	99	--	--
18...	0923	.98	16.0	1130	3.0	76	78	80	81	91	100

## 09395350 PUERCO RIVER NEAR CHURCH ROCK, NM

LOCATION.--Lat 35°36'04", long 108°35'12" in SE¼NW¼ sec.24, T.16 N., R.17 W., McKinley County, Hydrologic Unit 15020006, on right bank 100 ft (30.5 m) downstream from three 5 ft (1.5 m) CMC pipe bridge on dirt road 1 mi (1.6 km) northwest of State Highway 566, 2.7 mi (4.3 km) upstream from Hard Ground Canyon, 7.4 mi (12 km) upstream from South Fork, and 9.5 mi (15 km) northeast of Gallup.

DRAINAGE AREA.--205 mi<sup>2</sup> (531 km<sup>2</sup>).

PERIOD OF RECORD.--October 1977 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,710 ft (2,045 m) from topographic map. Prior December 4, 1980 at site 1.7 mi (2.7 km) upstream at different datum.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--5 years, 9.45 ft<sup>3</sup>/s (0.268 m<sup>3</sup>/s), 6,850 acre-ft/yr (8.45 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,040 ft<sup>3</sup>/s (114 m<sup>3</sup>/s) Aug. 24, 1982, gage height, 4.94 ft (1.506 m) from floodmarks, from rating curve extended above 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 3.80 ft (1.158 m) and 4.80 ft (1.463 m); minimum daily, 1.3 ft<sup>3</sup>/s (0.04 m<sup>3</sup>/s) May 19, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4040 ft<sup>3</sup>/s (114 m<sup>3</sup>/s) at 2000 hours Aug. 24, gage height, 4.94 ft (1.506 m) from floodmarks, from rating curve extended above 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 3.80 ft (1.158 m) and 4.80 ft (1.463 m); minimum daily, 3.0 ft<sup>3</sup>/s (0.06 m<sup>3</sup>/s) Dec. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	8.0	4.0	5.4	9.0	8.1	4.6	5.3	4.0	8.1	6.8	17
2	9.4	7.7	4.0	6.0	9.0	5.7	7.3	5.1	4.0	5.5	37	11
3	60	4.8	4.0	6.5	9.0	6.1	4.2	8.7	4.1	7.6	30	21
4	15	5.1	4.0	7.0	8.0	8.1	3.9	4.8	4.8	6.1	15	78
5	10	5.1	4.1	8.0	8.0	7.4	4.5	6.1	4.5	15	14	35
6	10	4.1	4.1	9.0	8.0	6.1	3.9	6.7	4.4	7.4	16	17
7	7.0	4.6	4.0	4.0	8.0	4.9	3.9	4.8	4.8	6.8	14	19
8	5.3	4.4	4.0	4.0	8.0	3.5	5.7	4.4	4.6	8.1	7.4	18
9	4.9	4.2	3.8	8.0	8.0	4.3	4.3	5.1	5.2	13	7.4	20
10	6.1	4.4	3.5	8.0	8.0	4.5	5.1	5.5	4.9	13	47	23
11	9.4	3.9	3.0	7.0	7.0	5.5	4.5	5.8	5.4	13	14	17
12	15	4.0	3.0	7.0	7.0	7.2	4.2	9.9	5.2	9.4	28	22
13	12	4.0	3.2	10	8.0	5.6	3.8	15	5.8	8.7	14	19
14	5.7	4.0	3.5	10	10	8.6	4.0	9.6	5.1	6.1	110	25
15	4.9	4.3	3.5	10	17	6.3	4.9	6.1	5.4	5.3	80	29
16	4.5	4.4	3.9	10	25	9.7	4.9	5.2	5.3	4.9	37	22
17	8.1	4.4	4.0	11	40	14	4.3	5.2	5.3	6.1	26	26
18	6.1	3.5	4.0	12	20	14	4.2	5.2	5.2	5.3	75	31
19	6.8	3.5	4.0	9.7	10	15	4.3	4.8	7.2	5.3	126	53
20	7.4	3.5	4.0	9.0	7.4	15	5.0	5.1	6.0	4.9	57	13
21	5.7	4.0	4.0	9.0	4.2	10	4.5	4.9	6.9	4.5	85	15
22	5.7	4.5	4.0	8.0	4.9	7.1	4.3	4.5	6.6	23	29	11
23	4.4	4.8	4.0	8.0	3.9	7.4	4.6	4.4	6.1	5.7	133	10
24	4.7	4.0	4.0	7.0	4.9	7.5	5.1	4.5	6.5	7.4	446	10
25	5.1	3.5	4.0	8.0	5.7	6.8	5.2	4.4	5.5	5.7	121	12
26	7.4	6.4	4.0	10	5.7	5.9	4.6	4.4	5.4	3.7	39	11
27	5.4	5.6	4.0	10	6.1	6.4	4.9	5.4	5.2	4.9	13	9.4
28	5.4	4.7	4.5	10	6.1	5.3	4.8	4.7	5.0	266	15	10
29	6.0	4.9	4.5	9.4	---	7.0	5.4	4.8	5.5	24	50	12
30	6.6	4.0	5.0	10	---	5.7	4.9	4.9	5.5	18	33	10
31	7.7	---	5.0	10	---	9.4	---	4.7	---	9.4	50	---
TOTAL	275.0	138.3	122.6	261.0	275.9	238.1	139.8	180.0	159.4	531.9	1775.6	626.4
MEAN	8.87	4.61	3.95	8.42	9.85	7.68	4.66	5.81	5.31	17.2	57.3	20.9
MAX	60	8.0	5.0	12	40	15	7.3	15	7.2	266	446	78
MIN	3.3	3.5	3.0	4.0	3.9	3.5	3.8	4.4	4.0	3.7	6.8	9.4
AC-FT	545	274	243	518	547	472	277	357	316	1060	3520	1240

CAL YR 1981 TOTAL 2870.8 MEAN 7.87 MAX 110 MIN 2.0 AC-FT 5690  
WTR YR 1982 TOTAL 4724.0 MEAN 12.9 MAX 446 MIN 3.0 AC-FT 9370

## 09395500 PUERCO RIVER AT GALLUP, NM

LOCATION.--Lat 35°31'45", long 108°44'41", in NE¼SE¼ sec.16, T.15 N., R.18 W., McKinley County, Hydrologic Unit 15020006, near center of span on downstream side of Third Street bridge in Gallup, 0.8 mi (1.3 km) upstream from Gamarco Wash, 3.5 mi (5.6 km) downstream from Hogback, and 4.9 mi (7.9 km) downstream from South Fork.

DRAINAGE AREA.--558 mi<sup>2</sup> (1,450 km<sup>2</sup>).

## WATER DISCHARGE RECORDS

PERIOD OF RECORD.--June 1940 to July 1946, June 1957 to August 1977 (annual maximum only), September 1977 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,480 ft (1,975 m) from topographic map. Prior to September 1977 at site 2,000 ft (610 m) upstream at different datum.

REMARKS.--Water-discharge records poor.

AVERAGE DISCHARGE.--10 years (water years 1941-45, 1978-82), 9.42 ft<sup>3</sup>/s (0.267 m<sup>3</sup>/s), 6,820 acre-ft/yr (8.41 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft<sup>3</sup>/s (340 m<sup>3</sup>/s) July 17, 1972, gage height, 15.3 ft (4.663 m) site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft<sup>3</sup>/s (53.5 m<sup>3</sup>/s) at 2200 hours Aug. 24, gage height, 6.34 ft (1.932 m), no other peak above base of 1,000 ft<sup>3</sup>/s (28 m<sup>3</sup>/s); minimum daily, 2.0 ft<sup>3</sup>/s (0.06 m<sup>3</sup>/s) Dec. 13, 14, 17-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	6.8	7.9	6.0	9.0	8.0	13	6.6	5.0	3.1	6.0	10
2	62	6.9	6.1	4.5	9.0	6.0	16	7.0	3.6	2.9	8.0	9.0
3	100	6.5	5.5	4.5	9.0	6.0	12	6.0	3.7	3.0	7.0	11
4	25	6.2	6.2	5.0	8.0	8.0	11	5.0	4.4	2.8	6.0	40
5	10	5.6	5.8	5.0	8.0	7.0	9.0	6.0	3.0	3.0	6.0	7.0
6	6.0	5.5	4.2	3.5	8.0	6.0	7.0	6.0	2.7	3.1	7.0	7.0
7	5.5	7.0	3.8	3.5	8.0	5.0	5.0	7.0	2.5	3.2	6.0	10
8	5.3	6.4	4.2	3.5	8.0	3.0	6.1	7.0	2.5	3.9	6.0	8.0
9	5.7	5.7	3.0	4.0	8.0	4.0	5.1	6.0	3.0	3.9	6.2	10
10	6.5	5.2	3.0	5.0	8.0	4.0	3.6	8.0	2.9	3.9	8.4	11
11	7.3	4.8	3.0	8.0	8.5	5.0	2.7	8.8	4.9	3.4	8.4	7.0
12	9.2	4.5	2.3	8.0	9.0	7.0	2.3	7.9	4.2	3.2	48	11
13	7.9	4.3	2.0	8.0	10	5.0	2.4	8.0	3.8	3.3	15	9.0
14	7.0	4.2	2.0	8.0	15	8.0	2.9	6.9	2.7	2.9	30	12
15	6.7	4.4	2.5	8.0	30	6.0	2.7	7.0	2.4	3.0	18	15
16	6.4	4.3	2.5	9.0	48	10	3.2	7.4	3.6	4.0	11	11
17	6.5	4.0	2.0	9.0	58	13	3.2	7.1	4.5	6.3	11	13
18	6.2	4.1	2.0	9.0	39	11	3.1	6.9	3.7	4.6	11	15
19	6.7	3.2	2.0	10	10	15	3.4	6.9	3.0	4.5	13	20
20	6.9	4.8	3.0	9.0	7.0	10	3.7	6.8	2.8	3.6	13	7.0
21	7.5	3.9	3.6	8.0	4.0	13	4.9	6.4	2.9	2.9	58	7.0
22	6.5	4.0	2.6	7.0	5.0	16	5.6	6.5	3.0	3.6	123	5.0
23	6.4	3.9	2.5	6.0	4.0	11	6.2	7.0	3.1	10	113	5.0
24	6.3	3.4	2.5	7.0	5.0	11	6.1	6.4	3.0	6.7	237	5.0
25	7.1	3.1	2.7	8.0	6.0	12	5.0	6.6	3.0	4.2	74	6.0
26	6.7	3.0	3.0	9.0	6.0	20	5.0	6.1	2.9	7.7	25	5.0
27	6.7	4.4	2.9	10	6.0	23	4.0	5.8	3.0	5.0	9.2	5.0
28	6.5	6.4	2.9	10	6.0	15	4.0	6.5	3.0	26	15	5.0
29	5.7	7.0	3.2	9.0	---	17	4.0	5.6	3.1	15	20	6.0
30	5.6	5.2	4.0	10	---	18	5.0	4.5	3.1	12	15	5.0
31	6.8	---	5.7	10	---	12	---	5.0	---	10	40	---
TOTAL	372.6	148.7	108.6	224.5	359.5	315.0	167.2	204.7	99.0	174.7	974.2	297.0
MEAN	12.0	4.96	3.50	7.24	12.8	10.2	5.57	6.60	3.30	5.64	31.4	9.90
MAX	100	7.0	7.9	10	58	23	16	8.8	5.0	26	237	40
MIN	4.0	3.0	2.0	3.5	4.0	3.0	2.3	4.5	2.4	2.8	6.0	5.0
AC-FT	739	295	215	445	713	625	332	406	196	347	1930	589

CAL YR 1981 TOTAL 2976.50 MEAN 8.15 MAX 100 MIN .70 AC-FT 5900  
WTR YR 1982 TOTAL 3445.70 MEAN 9.44 MAX 237 MIN 2.0 AC-FT 6830

NOTE: No gage-height record Jan. 2 to Feb. 17 and Aug. 30 to Sept. 30.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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)
OCT 08...	--	--	--	--	--	--	--	--	--	--
NOV 19...	.030	1.6	1.7	.130	.140	1.3	3.0	.060	.060	17
JAN 12...	--	--	--	--	--	--	--	--	--	--
FEB 17...	--	--	--	--	--	--	--	--	--	--
MAR 17...	--	--	--	--	--	--	--	--	--	--
MAY 17...	--	--	--	--	--	--	--	--	--	--
JUN 28...	--	--	--	--	--	--	--	--	--	--
	--	1.7	1.6	.680	--	1.3	3.7	1.30	.070	25

LITTLE COLORADO RIVER BASIN  
09395500 PUERCO RIVER AT GALLUP, NM  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)	MUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	MUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01030)	TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	DIS- SOLVED (UG/L AS CU) (01040)
NOV 19...	1000	10	4	150	<1	<1	30	<10	32	10
MAR 17...	0930	--	--	90	--	--	--	--	--	--
MAY 11...	1800	13	3	140	<1	<3	60	<10	80	3
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, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01145)	TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	DIS- SOLVED (UG/L AS ZN) (01090)
NOV 19...	17	16	1	.1	.1	50	43	140	4	
MAR 17...	130	--	--	--	--	--	--	--	--	--
MAY 11...	<9	6	1	.2	<.1	60	5	300	<12	

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 19...	1000	1200	350	280	650	260	620	.18	1000
MAY 11...	1800	1500	670	220	830	210	800	.16	1800

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. FALL DIAM. % FINER THAN (70337)	SED. SUSP. FALL DIAM. % FINER THAN (70338)	SED. SUSP. FALL DIAM. % FINER THAN (70340)	SED. SUSP. FALL DIAM. % FINER THAN (70331)
MAY 11...	1800	8.7	16.0	3780	69	82	95	99
JUN 29...	1535	--	--	--	--	--	--	--
JUN 29...	1540	--	--	--	--	--	--	--
JUN 29...	1545	--	--	--	--	--	--	--
DATE		SED. SUSP. SIEVE DIAM. % FINER THAN (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN (70333)	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. FALL DIAM. % FINER THAN (80162)
MAY 11...		99	100	--	--	--	--	--
JUN 29...		--	--	56	95	99	100	--
JUN 29...		--	--	4	18	80	98	100
JUN 29...		--	--	94	98	99	100	--

## 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 (2.6 km) upstream from Mogollon Creek, 7 mi (11 km) northeast of Gila, and at mile 572.5 (921.2 km).

DRAINAGE AREA.--1,864 mi<sup>2</sup> (4,828 km<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 (1,419.09 m) National Geodetic Vertical Datum of 1929, (river-profile survey). Prior to Dec. 31, 1928, at site 5 mi (8 km) upstream at different datum. Dec. 31, 1928, to Jan. 7, 1942, at site 200 ft (61 m) upstream at same datum.

REMARKS.--Records good. Diversions for irrigation of about 500 acres (2.0 km<sup>2</sup>) above station. Several observations of water temperature were made during the year. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--55 years (water years 1928-82), 139 ft<sup>3</sup>/s (3.936 m<sup>3</sup>/s), 100,700 acre-ft/yr (124 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft<sup>3</sup>/s (918 m<sup>3</sup>/s) Dec. 18, 1978, gage height, 12.5 ft (3.81 m), from floodmark, from rating curve extended above 7,000 ft<sup>3</sup>/s (200 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; maximum gage height, 17.2 ft (5.24 m) from flood mark, Sept. 29, 1941; minimum, 14 ft<sup>3</sup>/s (0.40 m<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 above base of 600 ft<sup>3</sup>/s (17 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Feb. 26	0530	*944 26.7	2.78 0.847	Mar. 14	0630	838 23.7	2.64 0.805

Minimum discharge, 17 ft<sup>3</sup>/s (0.48 m<sup>3</sup>/s) Aug. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	67	86	59	109	438	246	179	113	36	60	78
2	123	67	78	73	101	385	229	205	108	36	71	70
3	371	68	74	84	94	428	228	249	101	35	60	62
4	151	68	73	82	91	476	222	266	93	32	56	51
5	104	68	69	68	87	404	218	288	91	30	55	41
6	96	68	66	75	86	336	214	301	84	29	58	43
7	88	68	67	110	84	289	219	288	79	29	63	36
8	79	66	66	112	83	256	278	256	74	31	70	34
9	78	67	64	101	84	232	359	223	69	29	59	28
10	74	67	64	93	81	214	304	202	67	27	49	36
11	73	67	63	89	146	211	263	191	64	25	43	85
12	71	67	63	100	445	236	237	182	59	24	36	215
13	69	67	63	162	302	374	240	174	58	23	118	213
14	67	67	63	135	237	800	291	165	56	23	85	164
15	67	67	63	118	208	757	291	151	54	24	80	149
16	65	67	63	109	203	719	263	139	52	23	60	123
17	63	66	63	103	222	633	240	133	50	32	44	99
18	64	65	63	99	230	615	223	131	49	43	47	95
19	64	64	63	96	279	550	208	131	47	42	35	151
20	64	63	61	101	315	424	202	135	46	46	33	133
21	66	63	62	107	324	371	196	143	44	48	60	113
22	70	63	60	106	315	318	191	146	41	50	55	154
23	67	63	60	102	336	282	185	150	38	54	54	249
24	67	63	60	101	367	257	172	151	37	52	42	144
25	68	62	59	99	567	243	159	147	36	40	28	106
26	68	61	58	105	882	237	149	139	35	41	46	82
27	68	61	59	114	672	258	140	134	33	57	42	76
28	68	65	59	119	522	289	135	132	30	54	33	67
29	67	78	59	121	---	290	135	130	29	53	22	61
30	65	90	58	121	---	288	156	125	30	55	59	60
31	67	---	58	115	---	267	---	121	---	47	92	---
TOTAL	2627	2003	1987	3179	7472	11877	6593	5507	1767	1170	1715	3018
MEAN	84.7	66.8	64.1	103	267	383	220	178	58.9	37.7	55.3	101
MAX	371	90	86	162	882	800	359	301	113	57	118	249
MIN	55	61	58	59	81	211	135	121	29	23	22	28
AC-FT	5210	3970	3940	6310	14820	23560	13080	10920	3500	2320	3400	5990

CAL YR 1981	TOTAL	27882	MEAN	76.4	MAX	458	MIN	18	AC-FT	55300
WTR YR 1982	TOTAL	48915	MEAN	134	MAX	882	MIN	22	AC-FT	97020



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 (0.5 km) downstream from Rain Creek, 0.8 mi (1.3 km) downstream from Gila Wilderness Boundary, 12 mi (19 km) upstream from mouth, and 14 mi (23 km) north of Cliff.

DRAINAGE AREA.--69 mi<sup>2</sup> (179 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,440 ft (1,658 m), from topographic map.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--15 years, 28.6 ft<sup>3</sup>/s (0.810 m<sup>3</sup>/s), 20,720 acre-ft/yr (25.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft<sup>3</sup>/s (306 m<sup>3</sup>/s) Aug. 12, 1967, gage height, 13.7 ft (4.18 m), from floodmarks, from rating curve extended above 220 ft<sup>3</sup>/s (6.23 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft<sup>3</sup>/s (4.5 m<sup>3</sup>/s), and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Mar. 13	1930	222 6.29	2.74 0.835	July 31	1730	*263 7.45	2.90 0.884

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.9	4.1	2.0	17	73	58	60	6.9	.00	4.2	2.0
2	11	1.9	3.1	5.2	18	80	63	60	6.0	.00	1.9	1.7
3	27	1.9	2.6	3.8	17	97	61	60	5.4	.00	1.4	1.2
4	16	1.9	2.4	7.8	12	82	58	61	4.6	.00	1.2	.74
5	11	1.9	2.3	5.4	10	65	60	67	3.9	.00	1.5	.47
6	7.9	1.9	2.0	9.2	9.0	52	60	52	3.4	.00	3.5	.43
7	6.5	2.4	2.1	12	8.2	43	85	43	3.0	.00	3.3	.10
8	5.4	3.4	1.9	9.7	8.1	38	84	39	2.7	.00	2.3	.00
9	4.5	3.5	1.9	9.5	7.4	37	65	38	2.3	.00	4.8	.00
10	3.9	3.5	1.7	8.5	8.8	46	53	36	2.0	.00	2.3	11
11	3.6	3.5	1.7	17	85	62	56	32	1.7	.00	1.5	31
12	3.1	3.5	1.7	47	88	82	89	30	1.5	.00	2.8	29
13	2.9	3.3	1.7	31	56	148	104	26	1.2	.00	2.1	19
14	2.7	3.0	1.6	20	48	149	85	21	.98	.00	1.3	9.9
15	3.1	2.9	1.5	18	40	126	72	20	.84	.00	.90	5.8
16	2.7	2.9	1.5	18	44	94	65	21	.72	.00	.55	3.8
17	2.5	2.9	1.5	16	52	92	58	23	.60	.00	.28	2.9
18	2.4	2.9	1.4	20	57	94	58	25	.50	2.4	.20	2.4
19	2.3	2.7	1.4	21	62	78	59	25	.32	.92	2.3	2.3
20	2.1	2.7	1.5	20	79	66	53	23	.20	.58	3.3	2.2
21	2.4	2.7	1.4	17	76	57	50	21	.00	.32	.65	16
22	3.2	2.5	1.5	16	76	50	41	21	.00	.66	.55	7.7
23	2.8	2.5	1.4	17	84	47	33	20	.00	3.0	.21	4.6
24	2.5	2.5	3.0	13	88	46	28	18	.00	1.2	.98	3.0
25	2.3	2.4	6.6	23	118	45	27	16	.00	.64	.87	2.2
26	2.1	2.3	2.6	37	113	55	31	15	.00	.66	2.2	1.7
27	2.1	2.4	1.6	44	85	89	39	14	.00	.92	1.5	1.3
28	2.1	4.4	1.6	39	74	90	47	13	.00	.51	.69	.98
29	2.1	7.4	1.5	32	---	86	53	11	.00	.26	.38	.85
30	1.9	6.6	1.7	25	---	74	47	9.6	.00	1.7	2.2	.65
31	1.9	---	2.0	20	---	62	---	8.3	---	12	1.4	---
TOTAL	148.1	90.4	64.5	584.1	1440.5	2307	1742	928.9	48.76	25.77	53.26	164.92
MEAN	4.78	3.01	2.08	18.8	51.4	74.4	58.1	30.0	1.63	.83	1.72	5.50
MAX	27	7.4	6.6	47	118	149	104	67	6.9	12	4.8	31
MIN	1.9	1.9	1.4	2.0	7.4	37	27	8.3	.00	.00	.20	.00
AC-FT	294	179	128	1160	2860	4580	3460	1840	97	51	106	327

CAL YR 1981	TOTAL	2706.22	MEAN	7.41	MAX	102	MIN	.00	AC-FT	5370
WTR YR 1982	TOTAL	7598.21	MEAN	20.8	MAX	149	MIN	.00	AC-FT	15070

GILA RIVER BASIN  
09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
DEC 08...	1200	5.7	110	98	7.3	8.0	18.0	7.0	10.0	47	4
FEB 16...	1130	44	76	99	7.4	8.3	13.5	5.0	10.8	32	5
APR 12...	1550	88	59	--	7.9	--	--	12.0	--	--	--
JUN 21...	1130	50	47	45	7.6	8.1	13.0	8.0	9.9	20	4
SEP 08...	1300	3.1	95	97	7.6	7.5	30.0	20.0	8.4	30	0
SEP 16...	1400	3.8	96	101	7.9	8.4	24.0	17.0	8.3	37	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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
DEC 08...	14	2.9	6.4	.4	.8	6.0	1.4	.4	17	78	75
FEB 16...	9.5	2.1	4.3	.3	1.1	7.0	1.3	.3	18	68	60
APR 12...	--	--	--	--	--	--	--	--	--	--	--
JUN 21...	6.1	1.2	3.8	.4	.6	5.0	.8	.2	18	54	45
SEP 08...	9.0	1.8	4.7	.4	.9	13	.9	.4	19	74	70
SEP 16...	11	2.2	5.6	.4	.9	11	1.1	2.3	19	71	69

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, AMMONIA SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	CYANIDE TOTAL (MG/L AS CN) (00720)
DEC 08...	<.10	<.10	.110	.110	.38	.29	<.010	--	--	--	--
FEB 16...	<.10	<.10	<.060	.120	--	.31	.010	5.0	--	--	--
APR 12...	--	--	--	--	--	--	--	--	--	--	--
JUN 21...	<.10	<.10	.100	.120	.47	.39	.010	4.4	--	--	--
SEP 08...	<.10	<.10	.260	.100	.44	.70	.030	--	4.1	--	<.01
SEP 16...	<.10	<.10	.070	<.060	.43	.77	<.010	--	5.8	.3	<.01

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		ARSENIC AS AS) (01002)	ARSENIC DIS- AS AS) (01000)	BARIUM, TOTAL RECOV- AS BA) (01007)	BARIUM, DIS- AS BA) (01005)	BERYL- LIUM, DIS- AS BE) (01010)	CADMIUM TOTAL RECOV- AS CD) (01027)	CADMIUM DIS- AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- AS CR) (01034)	CHRO- MIUM, DIS- AS CR) (01030)	COBALT, DIS- AS CO) (01035)
DATE											
JUN 08...	1300	<1	1	<100	6	<1	<1	<1	<10	<1	<3
SEP 16...	1400	<1	<1	100	13	<1	<1	<1	<10	<1	<3

GILA RIVER BASIN  
09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
JUN 08...	4	<10	90	<3	<1	<10	10	10	<1	.1
SEP 16...	1	<10	60	13	<1	<10	5	10	<1	.1

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	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, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
JUN 08...	<.1	<10	<1	<1	<1	<1	46	<6.0	10	4
SEP 16...	.1	<10	<1	<1	<1	<1	55	<6.0	10	<3

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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, RADON METHOD (PCI/L) (09511)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
SEP 16...	1400	<1.2	<.4	1.1	<.4	1.1	<.4	.03	.13

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	PCB, TOTAL (UG/L) (39516)	PCB, IN BOT- TOM MA- TERIAL (UG/KG) (39519)	ALDRIN, TOTAL (UG/L) (39330)	ALDRIN, IN BOT- TOM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DANE, IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL (UG/L) (39360)	DDD, IN BOT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)
SEP 16...	1400	<.10	<1	<.01	<.1	<.10	<1.0	<.01	<.1	<.01

GILA RIVER BASIN  
09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/L) (39370)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39373)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)
SEP 16...	<.1	<.01	<.1	<.01	<.01	<.1	<.01	<.01	<.1	<.01
DATE	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481)	
SEP 16...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.01	<.1	
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)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	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 16...	<.01	<.01	<.01	<1	<10	<.01	<.10	<.10	<.01	

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
DEC 08...	<1	20
FEB 16...	<1	47
APR 21...	<1	21
JUN 08...	K3	34
SEP 16...	K12	66

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
DEC 08...	1200	5.7	7.0	2	.03	--
FEB 16...	1130	44	5.0	4	.48	--
APR 21...	1130	50	8.0	6	.81	--
JUN 08...	1300	3.1	20.0	0	.00	--
SEP 16...	1400	3.8	17.0	5	.05	76

GILA RIVER BASIN  
09431100 MANGAS CREEK BELOW MANGAS SPRINGS, NM  
WATER-QUALITY RECORDS

527

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, NM.

DRAINAGE AREA.--177 mi<sup>2</sup> (458 km<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 (0.2 km) upstream from Blacksmith Canyon and 15 mi (24 km) southeast of Gila.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
OCT 15...	1735	3.8	660	--	8.2	--	23.0	18.0	--	--
NOV 06...	0845	3.4	380	--	8.1	--	12.0	11.0	--	--
DEC 09...	1500	4.2	590	619	8.5	8.0	23.0	17.0	--	--
JAN 13...	1545	4.3	630	638	8.5	7.8	10.0	14.0	--	--
FEB 09...	1500	4.7	600	680	8.6	7.9	12.5	17.5	264	84
MAR 24...	1415	3.8	590	556	8.2	--	23.0	19.0	--	--
JUN 08...	1030	--	--	748	8.1	--	--	--	--	--
JUN 09...	1600	2.8	660	661	7.8	7.9	34.0	24.0	269	81
JUL 14...	1430	3.4	610	629	7.9	8.2	39.0	27.0	--	--
AUG 11...	1215	4.0	630	660	7.8	7.8	34.0	24.5	--	--
SEP 14...	1200	4.0	610	658	8.2	8.2	25.0	21.0	284	94

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)
OCT 15...	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--
DEC 09...	--	--	--	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--	--	--
FEB 09...	81	15	27	.8	2.3	100	14	.5	32	380
MAR 24...	--	--	--	--	--	--	--	--	--	--
JUN 08...	--	--	--	--	--	--	--	--	--	--
JUN 09...	83	15	30	.8	2.1	120	15	.5	33	412
JUL 14...	--	--	--	--	--	--	--	--	--	--
AUG 11...	--	--	--	--	--	--	--	--	--	--
SEP 14...	89	15	28	.8	2.7	130	13	1.5	33	426

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
FEB 09...	1500	30	49
JUN 09...	1600	40	< 3
SEP 14...	1200	40	3

GILA RIVER BASIN  
09431500 GILA RIVER NEAR REDROCK, NM  
(National stream-quality accounting network,  
and radiochemical network station)

LOCATION.--Lat 32°43'37", long 108°40'30", in W½ sec.23, T.18 S., R.18 W., Grant County, Hydrologic Unit 15040002, on left bank 0.2 mi (0.3 km) downstream from Copper Canyon, 0.2 mi (0.3 km) upstream from lower end of box canyon, 4.7 mi (7.6 km) northeast of Redrock, 14 mi (23 km) downstream from Mangas Creek, and at mile 539.2 (867.6 km).

DRAINAGE AREA.--2,829 mi<sup>2</sup> (7,327 km<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. Altitude of gage is 4,090 ft (1,247 m), from plane table survey. Prior to Dec. 31, 1907, nonrecording gage at site 13.5 mi (21.7 km) upstream at different datum. May 14, 1908, to July 16, 1909, nonrecording gage at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Water-discharge records good except those for July and August, which are poor. Diversions for irrigation of about 5,000 acres (20 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--66 years (water years 1906, 1909-10, 1913-55, 1963-82), 199 ft<sup>3</sup>/s (5.636 m<sup>3</sup>/s), 144,200 acre-ft/yr (178 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,800 ft<sup>3</sup>/s (1,380 m<sup>3</sup>/s) Dec. 19, 1978, gage height, 29.8 ft (9.08 m) in gage well, 34.1 ft (10.4 m) from floodmarks, from rating curve extended above 9,500 ft<sup>3</sup>/s (269 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum, 2.2 ft<sup>3</sup>/s (0.062 m<sup>3</sup>/s) Aug. 5, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,990 ft<sup>3</sup>/s (84.7 m<sup>3</sup>/s) at 2130 hours Oct. 2, gage height, 9.55 ft (2.911 m), no peak above base of 3,000 ft<sup>3</sup>/s (85 m<sup>3</sup>/s); minimum daily, 21 ft<sup>3</sup>/s (0.59 m<sup>3</sup>/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	73	89	77	120	540	319	133	97	32	80	95
2	468	65	85	79	118	500	271	201	125	35	70	90
3	587	69	81	81	103	492	245	516	110	33	60	80
4	208	75	75	81	101	580	246	316	116	31	55	70
5	123	69	77	81	101	540	233	356	103	30	50	60
6	108	71	73	77	103	436	226	372	94	28	55	58
7	110	71	73	83	105	380	230	348	100	28	60	56
8	99	73	75	97	105	324	289	276	100	29	65	54
9	95	71	77	97	101	245	466	220	85	27	60	52
10	91	71	81	93	101	230	381	201	69	26	50	60
11	83	65	79	87	105	230	276	177	66	24	45	89
12	79	67	79	85	382	250	219	186	62	23	60	117
13	79	69	81	126	422	420	237	220	59	22	110	193
14	75	71	79	166	304	1130	330	196	58	21	90	181
15	73	75	79	145	248	1160	348	177	57	22	80	146
16	73	73	79	128	202	1060	300	182	55	26	70	101
17	71	73	75	120	208	942	276	186	52	35	55	75
18	71	73	75	115	268	916	225	155	51	41	50	56
19	71	75	71	115	312	814	177	136	48	40	45	413
20	67	75	71	122	355	686	177	159	45	45	40	140
21	65	73	73	122	395	596	182	155	43	48	78	120
22	64	73	77	120	390	508	177	168	40	50	63	100
23	64	75	77	115	410	436	172	230	38	58	62	145
24	65	73	75	118	455	356	159	245	35	54	60	142
25	65	69	77	120	547	306	129	205	35	39	50	120
26	65	71	77	122	1070	252	110	172	34	32	54	90
27	65	73	71	122	904	302	94	155	31	30	56	77
28	65	79	65	125	652	398	86	159	29	50	50	70
29	64	83	65	120	---	423	94	148	28	60	60	64
30	64	87	69	120	---	394	119	97	29	56	80	62
31	69	---	75	122	---	388	---	89	---	54	90	---
TOTAL	3406	2180	2355	3381	8687	16234	6793	6536	1894	1129	1953	3176
MEAN	110	72.7	76.0	109	310	524	226	211	63.1	36.4	63.0	106
MAX	587	87	89	166	1070	1160	466	516	125	60	110	413
MIN	60	65	65	77	101	230	86	89	28	21	40	52
AC-FT	6760	4320	4670	6710	17230	32200	13470	12960	3760	2240	3870	6300

CAL YR 1981 TOTAL 31940.5 MEAN 87.5 MAX 612 MIN 7.0 AC-FT 63350  
WTR YR 1982 TOTAL 57724.0 MEAN 158 MAX 1160 MIN 21 AC-FT 114500

NOTE: Indefinite stage-discharge relationship June 11 to September 10.

GILA RIVER BASIN  
09431500 GILA RIVER NEAR REDROCK, NM -- Continued  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--Water years 1967 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)
DEC 09...	1130	77	400	410	8.2	8.4	17.5	7.5	3.8
FEB 17...	1030	208	290	290	8.0	8.5	16.0	10.0	28
APR 22...	1100	177	258	258	7.9	8.2	15.0	10.5	17
JUN 09...	1100	80	400	364	8.1	8.4	25.0	17.0	5.4
JUL 15...	1200	22	400	411	8.0	8.5	35.5	24.5	3.4
SEP 15...	1200	93	--	300	8.3	8.0	23.0	18.0	87

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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
DEC 09...	11.2	139	0	42	8.2	33	1.3	2.2	33
FEB 17...	9.0	89	0	26	5.9	22	1.1	2.3	28
APR 22...	9.7	84	0	25	5.2	21	1.0	1.4	21
JUN 09...	9.3	126	0	39	6.9	29	1.2	2.0	27
JUL 15...	7.4	135	0	40	8.5	36	1.4	2.9	37
SEP 15...	8.0	95	0	29	5.5	25	1.2	2.4	24

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L 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)
DEC 09...	15	2.3	33	256	259	.26	<.070	.040	.040
FEB 17...	11	1.7	32	185	189	.13	<.060	.060	.030
APR 22...	8.4	1.7	32	189	170	.13	.090	.110	.030
JUN 09...	11	2.0	33	229	231	<.10	.110	.070	.020
JUL 15...	11	2.2	36	268	269	<.10	.120	.050	.040
SEP 15...	10	.8	37	196	201	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)
DEC 09...	1130	3	3	<100	<100	<1	<1	<10	<10	<1
APR 22...	1100	2	1	200	19	1	<3	<10	<10	3
JUN 09...	1100	1	1	<100	23	<1	<1	10	<10	<1
SEP 15...	1200	1	1	100	29	1	1	<10	<10	4



GILA RIVER BASIN  
09431500 GILA RIVER NEAR REDROCK, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
DEC 09...	<1	6	<1	420	<10	1	<1	30	20	.1
APR 22...	<1	19	1	2100	23	9	2	70	9	<.1
JUN 09...	5	3	5	220	26	<1	5	30	6	.1
SEP 15...	<1	37	4	6400	46	6	<1	280	4	<.1

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
DEC 09...	<.1	<1	1	<1	<1	<1	<1	10	<10
APR 22...	<.1	7	1	<1	<1	<1	<1	60	20
JUN 09...	.3	3	<5	<1	<1	<1	5	10	10
SEP 15...	<.1	10	<1	<1	<1	<1	<1	60	28

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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)
DEC 09...	1130	<7.3	<.5	<3.0	1.0	<2.8	1.0	.06	2.0
JUN 09...	1100	<5.7	<.6	<3.0	.6	<2.9	.6	.19	1.5

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
DEC 09...	7	29
FEB 17...	15	220
APR 22...	28	410
JUN 09...	K40	K50
JUL 15...	23	700
SEP 15...	K350	K500

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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)
DEC 09...	1130	77	7.5	18	3.7	80
FEB 17...	1030	208	10.0	135	76	83
APR 22...	1100	177	10.5	132	63	68
JUN 09...	1100	80	17.0	743	160	3
JUL 15...	1200	22	24.5	21	1.2	94
SEP 15...	1200	93	18.0	349	87	88

GILA RIVER BASIN  
09432000 GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, NM

LOCATION.--Lat 32°38'53", long 108°50'43", in SE¼SW¼ sec.18, T.19 S., R.19 W., Grant County, Hydrologic Unit 15040002, on left bank at head of canyon, 1.4 mi (2.3 km) downstream from Blue Creek, 10 mi (16 km) east of Virden, 16 mi (26 km) upstream from New Mexico-Arizona State line, and at mile 523.6 (842.5 km).

DRAINAGE AREA.--3,203 mi<sup>2</sup> (8,296 km<sup>2</sup>), excluding Animas River Basin.

PERIOD OF RECORD.--May to November 1914, March to September 1915, July 1927 to current year. July 1927 to May 1931 monthly discharge only, published in WSP 1313, computed as sum of flow at Virden Bridge, 9 mi (14 km) downstream, and in Sunset Canal. Published as Gila River near Duncan, AZ, 1914-15 and as Gila River at Fuller's Ranch, near Duncan, AZ, 1931-38.

REVISED RECORDS.--WSP 1283: Drainage area. WSP 1313: 1929, 1931-32(M).

GAGE.--Water-stage recorder. Altitude of gage is 3,875 ft (1,181.1 m), from river-profile map. May 11, 1914, to Sept. 30, 1915, at site 6 mi (10 km) downstream, 1,000 ft (300 m) upstream from intake of Sunset Canal. June 1 to July 7, 1931, nonrecording gage at present site and datum. Since April 18, 1980, supplementary gage on left bank 800 ft (244 m) downstream at same datum. Since June 1980, crest-stage gage at supplementary gage site.

REMARKS.--Records good except those above 300 ft<sup>3</sup>/s (8.50 m<sup>3</sup>/s) which are poor. Station is above all Duncan Valley diversions. Diversions for irrigation of about 6,200 acres (25 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--55 years (water years 1928-82), 183 ft<sup>3</sup>/s (5.183 m<sup>3</sup>/s), 132,600 acre-ft/yr (163 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,700 ft<sup>3</sup>/s (1,660 m<sup>3</sup>/s) Dec. 19, 1978, gage height, 29.00 ft (8.839 m) from rating curve extended above 38,000 ft<sup>3</sup>/s (1,080 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum, 1 ft<sup>3</sup>/s (0.028 m<sup>3</sup>/s) July 14, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,680 ft<sup>3</sup>/s (104 m<sup>3</sup>/s) at 1530 hours Oct. 2, gage height, 8.1 ft (2.47 m) no other peak above base of 1,900 ft<sup>3</sup>/s (54 m<sup>3</sup>/s); minimum daily, 25 ft<sup>3</sup>/s (0.71 m<sup>3</sup>/s) July 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	60	92	80	142	674	354	244	105	30	94	103
2	508	60	91	85	119	632	332	268	105	30	71	95
3	758	60	82	88	118	612	320	414	105	30	62	116
4	293	70	80	92	112	653	314	329	99	30	53	84
5	181	64	73	96	108	660	308	366	99	30	47	77
6	153	64	68	91	110	612	305	378	92	30	52	71
7	131	66	65	92	116	510	311	374	88	30	47	69
8	119	66	65	105	121	454	323	332	80	30	44	68
9	121	65	71	121	119	382	410	293	80	30	68	62
10	110	64	78	124	118	342	450	266	75	30	54	189
11	99	57	85	115	119	332	394	250	70	30	46	160
12	88	51	80	110	217	338	346	238	66	30	51	130
13	89	51	84	130	402	410	338	236	61	30	116	120
14	88	51	80	158	293	706	382	220	61	30	80	110
15	82	65	77	160	254	856	414	204	61	25	85	100
16	75	66	81	143	228	835	398	194	58	25	77	100
17	77	60	78	131	228	758	398	184	54	25	62	90
18	73	57	74	124	254	716	358	177	48	40	47	90
19	75	62	69	116	299	674	317	169	44	40	37	120
20	73	66	65	126	320	618	311	162	37	50	58	100
21	62	62	68	124	354	552	311	162	38	50	77	80
22	58	61	68	128	354	482	287	165	40	50	66	70
23	52	65	77	124	358	430	280	177	36	50	66	110
24	54	64	81	121	406	378	280	179	37	50	64	100
25	61	56	81	131	466	350	270	177	36	40	64	80
26	61	49	82	136	811	326	270	170	35	40	61	60
27	58	57	80	142	920	326	260	160	35	40	60	50
28	56	66	68	140	744	354	250	155	33	50	62	50
29	60	78	65	145	---	390	240	150	31	100	84	50
30	70	80	65	143	---	398	242	131	33	69	81	57
31	70	---	75	136	---	390	---	113	---	66	106	---
TOTAL	3891	1863	2348	3757	8210	16150	9773	7039	1842	1230	2042	2761
MEAN	126	62.1	75.7	121	293	521	326	227	61.4	39.7	65.9	92.0
MAX	758	80	92	160	920	856	450	414	105	100	116	189
MIN	36	49	65	80	108	326	240	113	31	25	37	50
AC-FT	7720	3700	4660	7450	16280	32030	19380	13960	3650	2440	4050	5480
CAL YR 1981	TOTAL	31069.3	MEAN	65.1	MAX	758	MIN	5.3	AC-FT	61630		
WTR YR 1982	TOTAL	60906.0	MEAN	167	MAX	920	MIN	25	AC-FT	120800		

## 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 (400 m) downstream from Rainbow Bridge Canyon, 1.7 mi (2.7 km) northwest of Reserve, and at mile 563.1 (906.0 km).

DRAINAGE AREA.--350 mi<sup>2</sup> (907 km<sup>2</sup>), approximately.

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

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

GAGE.--Water-stage recorder. Altitude of gage is 5,820 ft (1,774 m), from topographic map. Prior to Dec. 15, 1972 at site 1,800 ft (549 m) upstream at different datum.

REMARKS.--Records good except those for May thru August, which are fair. Possible minor regulation by Luna Lake, 27 mi (43 km) upstream. Diversions for irrigation of about 280 acres (1.1 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years, 24.5 ft<sup>3</sup>/s (0.694 m<sup>3</sup>/s), 17,750 acre-ft/yr (21.9 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft<sup>3</sup>/s (337 m<sup>3</sup>/s) Oct. 20, 1972, gage height, 7.47 ft (2.277 m) in gage well, 8.05 ft (2.454 m), from outside floodmarks, site and datum then in use, from rating curve extended above 9,000 ft<sup>3</sup>/s (255 m<sup>3</sup>/s) on basis of velocity-area study; maximum gage height, 9.40 ft (2.865 m) Nov. 25, 1978; minimum, 1.0 ft<sup>3</sup>/s (0.028 m<sup>3</sup>/s) Mar. 16, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 15 ft (4.6 m), 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 (566 m<sup>3</sup>/s) at Alma (downstream). See WSP 1313.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 331 ft<sup>3</sup>/s (9.37 m<sup>3</sup>/s) Mar. 13, gage height, 2.70 ft (0.823 m) no peak above base of 450 ft<sup>3</sup>/s (12.7 m<sup>3</sup>/s); minimum daily discharge, 1.4 ft<sup>3</sup>/s (0.04 m<sup>3</sup>/s) July 11-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	5.4	5.8	4.4	4.1	5.8	9.3	18	3.2	2.3	4.1	16
2	13	5.5	5.6	6.8	3.8	4.9	9.3	22	2.8	2.0	3.6	11
3	30	5.7	5.6	6.2	5.0	5.3	9.6	25	2.0	2.0	4.0	8.4
4	15	6.5	5.5	5.6	5.0	5.7	8.9	30	2.5	1.9	4.4	6.6
5	8.0	6.6	6.3	6.2	5.4	5.6	8.7	28	2.4	1.7	4.0	4.1
6	7.4	5.7	5.5	7.4	4.5	5.5	8.4	25	2.1	1.9	3.9	4.0
7	6.8	5.0	5.1	6.2	4.7	5.5	8.3	23	2.5	1.8	3.7	4.8
8	6.8	5.1	5.1	7.0	4.7	6.1	9.4	20	2.4	1.6	3.8	4.6
9	6.2	3.0	5.0	6.5	4.2	5.7	10	17	2.3	1.6	3.6	12
10	6.2	4.9	5.0	5.5	5.1	5.9	10	14	1.8	1.5	3.7	16
11	5.6	4.9	5.9	6.0	29	5.9	9.1	12	1.6	1.4	3.6	11
12	5.6	5.0	5.6	6.5	7.7	6.2	8.2	9.0	1.6	1.4	3.3	8.7
13	5.0	5.0	5.6	5.3	6.1	5.4	6.1	7.0	1.6	1.4	3.1	7.1
14	4.4	5.1	4.4	6.2	6.3	21	4.1	5.5	2.0	1.4	4.7	6.3
15	3.0	5.3	4.4	5.9	5.7	18	4.8	4.0	2.1	1.6	7.0	6.1
16	4.2	5.1	4.4	6.7	5.4	13	6.4	4.5	2.1	1.6	5.5	5.8
17	4.1	5.1	4.1	6.9	5.4	9.4	6.2	3.2	2.2	1.6	4.7	5.1
18	4.2	5.3	3.8	6.0	5.8	10	5.6	4.4	2.0	1.6	4.2	4.9
19	4.7	5.1	4.1	7.5	6.0	9.7	5.0	4.3	1.5	2.0	4.0	4.6
20	4.8	4.7	5.6	6.3	5.7	13	5.0	4.0	1.9	3.0	4.0	4.5
21	3.2	5.1	6.8	5.2	5.6	13	5.6	2.4	2.2	2.3	4.1	6.2
22	4.6	4.9	4.4	5.1	5.1	12	6.2	3.3	2.3	2.2	3.8	5.9
23	4.8	3.0	3.5	4.1	5.1	9.2	6.8	3.9	2.5	2.2	4.2	5.6
24	5.4	2.9	6.8	6.1	5.8	8.4	6.2	4.3	2.4	2.2	6.7	4.9
25	4.9	4.2	7.9	6.1	12	7.5	5.6	4.2	2.1	2.2	6.0	4.4
26	4.6	4.2	6.8	5.1	8.0	8.3	5.0	3.8	2.0	1.7	4.8	4.0
27	4.9	5.3	6.8	4.9	6.4	8.9	4.4	3.7	2.4	1.7	4.3	3.8
28	5.0	5.9	4.1	4.8	6.1	11	4.1	3.4	2.3	1.7	4.1	3.6
29	5.0	11	6.2	5.3	---	12	5.0	2.0	2.2	1.8	30	3.6
30	5.5	8.1	6.8	4.9	---	13	15	3.2	2.0	2.3	18	3.6
31	5.4	---	5.6	4.2	---	11	---	3.3	---	5.5	20	---
TOTAL	202.3	160.6	168.1	180.9	183.7	330.5	216.3	317.4	65.0	61.1	188.9	197.2
MEAN	6.53	5.35	5.42	5.84	6.56	10.7	7.21	10.2	2.17	1.97	6.09	6.57
MAX	30	11	7.9	7.5	29	54	15	30	3.2	5.5	30	16
MIN	3.0	2.9	3.5	4.1	3.8	4.9	4.1	2.0	1.5	1.4	3.1	3.6
AC-FT	401	319	333	359	364	656	429	630	129	121	375	391

CAL YR 1981 TOTAL 2536.5 MEAN 6.95 MAX 50 MIN 2.0 AC-FT 5030  
WTR YR 1982 TOTAL 2272.0 MEAN 6.22 MAX 54 MIN 1.4 AC-FT 4510

## 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 (0.6 km) upstream from first diversion, 1.4 mi (2.3 km) northeast of Aragon, and 8 mi (13 km) upstream from Apache Creek.

DRAINAGE AREA.--94 mi<sup>2</sup> (244 km<sup>2</sup>).

PERIOD OF RECORD.--July 1966 to current year. 1955 to 1965 at site 0.6 mi (1.0 km) upstream (drainage area, 89 mi<sup>2</sup> or 231 km<sup>2</sup>), annual maximum only.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,750 ft (2,057 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 3.32 ft<sup>3</sup>/s (0.094 m<sup>3</sup>/s), 2,410 acre-ft/yr (2.97 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 392 ft<sup>3</sup>/s (11.1 m<sup>3</sup>/s) Sept. 1, 1971, gage height, 3.13 ft (0.954 m), from rating curve extended above 80 ft<sup>3</sup>/s (2.27 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; minimum, 1.1 ft<sup>3</sup>/s (0.031 m<sup>3</sup>/s) July 22, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19 ft<sup>3</sup>/s (0.538 m<sup>3</sup>/s) at 0145 hours July 31, gage height, 1.74 ft (0.530 m), no peak above base of 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s); minimum, 2.6 ft<sup>3</sup>/s (0.07 m<sup>3</sup>/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.9	2.8	2.7	2.9	2.8	2.8	3.0	3.0	2.9	3.0	3.0
2	3.0	2.9	2.8	2.8	2.9	2.8	2.8	3.0	3.0	2.8	3.0	3.0
3	3.0	2.9	2.8	2.8	2.9	2.8	2.8	3.0	3.0	2.8	3.2	3.0
4	2.9	2.9	2.7	2.8	2.9	2.8	2.8	3.1	3.0	2.9	3.1	3.0
5	2.8	2.9	2.7	2.8	2.9	2.8	2.7	3.3	2.9	2.9	3.0	3.0
6	2.8	2.9	2.7	2.7	2.9	2.8	2.8	3.2	2.9	3.0	3.0	3.0
7	2.8	2.9	2.7	2.7	2.9	2.8	2.8	3.1	2.8	2.9	3.0	3.0
8	2.8	2.9	2.6	2.8	2.9	2.8	2.8	3.1	2.9	2.9	3.0	3.0
9	2.8	2.9	2.6	2.8	2.9	2.8	2.8	3.1	2.9	2.9	2.9	3.0
10	2.8	2.9	2.6	2.8	2.9	2.8	2.8	3.0	3.0	2.9	2.9	3.1
11	2.7	3.0	2.6	2.8	3.3	2.8	2.9	3.0	2.9	3.0	2.9	3.2
12	2.7	2.9	2.6	2.9	3.0	2.8	2.8	3.1	2.9	2.9	3.2	3.1
13	2.7	2.9	2.7	2.8	3.0	3.2	2.9	3.1	2.8	2.9	3.1	3.0
14	2.7	2.8	2.6	2.7	2.9	3.0	2.9	3.0	2.8	3.0	3.1	3.0
15	2.7	2.8	2.6	2.7	2.9	2.9	2.9	3.0	2.8	3.0	3.1	3.0
16	2.7	2.8	2.6	2.7	2.8	2.9	2.9	3.0	2.9	3.1	3.1	3.0
17	2.7	2.8	2.6	2.7	2.8	2.8	2.9	3.0	2.8	3.0	3.1	3.0
18	2.7	2.8	2.6	2.7	2.9	2.8	2.9	3.0	2.8	3.2	3.0	2.9
19	2.7	2.8	2.6	2.7	2.9	2.8	2.9	3.1	2.8	3.1	3.1	2.9
20	2.8	2.8	2.6	2.7	2.8	2.8	2.9	3.1	2.9	3.0	3.0	2.9
21	2.9	2.7	2.6	2.7	2.8	2.8	2.9	3.0	3.0	3.0	3.0	2.9
22	2.9	2.8	2.7	2.7	2.8	2.8	3.0	3.0	3.0	3.0	3.0	2.9
23	2.9	2.8	2.7	2.7	2.8	2.8	2.9	3.0	3.0	2.9	2.9	2.8
24	2.8	2.8	2.7	2.7	2.8	2.8	3.0	3.0	2.9	2.9	3.0	2.9
25	2.8	2.8	2.7	2.8	3.0	2.7	3.0	3.0	2.8	3.0	3.1	2.9
26	2.9	2.7	2.7	2.8	2.8	2.8	2.9	3.0	2.8	3.1	3.0	2.8
27	2.9	2.7	2.8	2.8	2.8	2.7	2.9	3.1	2.8	3.0	2.9	2.8
28	2.9	2.8	2.8	2.8	2.8	2.7	2.9	3.1	2.8	2.9	3.0	2.7
29	2.9	2.9	2.8	2.8	---	2.8	2.9	3.0	2.8	3.0	3.0	2.7
30	2.9	2.8	2.8	2.9	---	2.8	3.0	3.0	2.9	3.1	3.0	2.7
31	2.9	---	2.8	2.9	---	2.8	---	3.0	---	4.6	3.0	---
TOTAL	87.1	85.2	83.2	85.7	80.9	87.3	86.2	94.5	86.6	93.6	93.7	88.2
MEAN	2.81	2.84	2.68	2.76	2.89	2.82	2.87	3.05	2.89	3.02	3.02	2.94
MAX	3.0	3.0	2.8	2.9	3.3	3.2	3.0	3.3	3.0	4.6	3.2	3.2
MIN	2.6	2.7	2.6	2.7	2.8	2.7	2.7	3.0	2.8	2.8	2.9	2.7
AC-FT	173	169	165	170	160	173	171	187	172	186	186	175

CAL YR 1981 TOTAL 1129.3 MEAN 3.09 MAX 20 MIN 2.5 AC-FT 2240  
WTR YR 1982 TOTAL 1052.2 MEAN 2.88 MAX 4.6 MIN 2.6 AC-FT 2090

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 (1.9 km) downstream from Alma, 4 mi (6 km) northwest of Glenwood, 6 mi (10 km) upstream from Whitewater Creek, and at mile 523.5 (842.3 km).

DRAINAGE AREA.--1,546 mi<sup>2</sup> (4,004 km<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. Altitude of gage is 4,842 ft (1,476 m), from topographic map. Prior to Aug. 11, 1912, nonrecording gages at various sites, within 500 ft (150 m) of each other, 0.8 mi (1.3 km) 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 (0.91 m) higher.

REMARKS.--Records good except those for June and July, which are fair. Diversions for irrigation of about 1,600 acres (6.5 km<sup>2</sup>) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years (water years 1965-82), 70.4 ft<sup>3</sup>/s (1.994 m<sup>3</sup>/s), 51,000 acre-ft/yr (62.9 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft<sup>3</sup>/s (867 m<sup>3</sup>/s) Oct. 20, 1972, gage height, 18.16 ft (5.535 m), present datum, from floodmarks in well, from rating curve extended above 9,000 ft<sup>3</sup>/s (255 m<sup>3</sup>/s) on basis of slope-area measurement of peak flow; 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 (1,700 m<sup>3</sup>/s) were computed at Clifton, Az.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,000 ft<sup>3</sup>/s (28 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
July 29	2000	*2,780 78.7	6.62 2.018	Aug. 29	1800	1,180 33.4	5.20 1.585

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	1.2	.00	8.7	12	27	55	6.5	.40	.20	23	35
2	4.8	1.8	2.1	10	11	25	51	14	.40	.20	9.4	31
3	22	1.8	5.0	12	11	23	49	17	.35	.20	7.4	28
4	18	1.4	4.9	11	11	27	45	18	.35	.20	7.0	23
5	10	.00	4.3	9.8	11	26	43	40	.35	.15	6.6	18
6	11	.00	4.5	12	11	24	38	53	.35	.15	6.5	16
7	13	.00	4.9	12	11	21	42	53	.35	.15	6.4	14
8	8.5	.00	5.3	12	11	20	65	47	.30	.15	35	11
9	4.6	.00	5.8	12	11	17	63	41	.30	.15	18	43
10	1.5	.00	5.9	13	9.1	16	58	34	.30	.10	9.1	50
11	1.2	.00	6.4	13	6.7	13	50	29	.30	.10	7.7	35
12	2.1	.00	6.8	14	15	11	48	28	.30	.10	10	36
13	5.8	.00	6.8	14	15	63	50	26	.30	.10	7.7	27
14	3.1	.00	6.7	13	13	184	50	21	.30	.10	54	21
15	.53	.00	7.3	13	13	246	45	18	.30	.10	14	16
16	.36	.00	7.2	13	12	193	36	17	.30	.10	10	15
17	.00	.00	7.1	13	11	150	29	15	.30	.10	8.0	14
18	.00	.00	6.3	13	11	154	27	10	.25	.10	7.0	14
19	.00	.00	6.1	13	12	146	23	1.8	.25	.10	6.0	15
20	.00	.00	7.0	13	12	123	18	2.7	.25	.10	5.0	14
21	.00	.00	6.8	13	12	101	16	1.1	.25	.10	8.0	14
22	.00	.00	7.5	12	11	85	14	.46	.25	.10	11	36
23	.00	.00	7.8	12	11	75	12	.81	.25	.10	1.5	11
24	.00	.00	7.3	12	11	65	4.9	.50	.25	.10	.20	7.5
25	.00	.00	6.4	12	23	58	3.7	.50	.20	.10	.00	6.2
26	.54	.00	6.9	12	31	55	2.4	.50	.20	.10	.00	5.2
27	1.1	.00	7.6	12	27	59	1.6	.45	.20	.10	.00	4.5
28	.11	.00	8.4	12	27	64	2.0	.40	.20	.10	.00	4.2
29	.10	.00	8.3	12	---	71	3.2	.40	.20	228	115	4.5
30	.60	.00	8.3	12	---	67	3.3	.40	.20	16	29	4.2
31	.99	---	8.2	12	---	59	---	.40	---	19	34	---
TOTAL	114.43	6.20	193.90	377.5	382.8	2268	948.1	497.92	8.50	266.45	456.50	573.3
MEAN	3.69	.21	6.25	12.2	13.7	73.2	31.6	16.1	.28	8.60	14.7	19.1
MAX	22	1.8	8.4	14	31	246	65	53	.40	228	115	50
MIN	.00	.00	.00	6.7	6.7	11	1.6	.40	.20	.10	.00	4.2
AC-FT	227	12	385	749	759	4500	1880	988	17	529	905	1140

CAL YR 1981 TOTAL 2645.12 MEAN 7.25 MAX 184 MIN .00 AC-FT 525C  
WTR YR 1982 TOTAL 6093.60 MEAN 16.7 MAX 246 MIN .00 AC-FT 12090

GILA RIVER BASIN  
09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM

LOCATION.--Lat 33°14'48", long 108°52'47", in NE¼NW¼ sec.23, T.12 S., R.20 W., Catron County, Hydrologic Unit 15040004, on left bank 0.2 mi (0.3 km) upstream from hot springs, 5 mi (8 km) south of Glenwood, 6 mi (10 km) downstream from Whitewater Creek, and at mile 511.5 (823.0 km).

DRAINAGE AREA.--1,653 mi<sup>2</sup> (4,281 km<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. Altitude of gage is 4,560 ft (1,390 m), from topographic map; prior to Feb. 15, 1934, at site 4.5 mi (7.2 km) upstream at datum 98.82 ft (30.120 m) higher.

REMARKS.--Water-discharge records good. Diversions for irrigation of about 2,000 acres (8.1 km<sup>2</sup>) above station. Gage height Satellite telemeter at station.

AVERAGE DISCHARGE.--55 years, 74.3 ft<sup>3</sup>/s (2.104 m<sup>3</sup>/s), 53,830 acre-ft/yr (66.4 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft<sup>3</sup>/s (680 m<sup>3</sup>/s), Oct. 20, 1972, gage height, 16.61 ft (5.063 m), from rating curve extended 6,500 ft<sup>3</sup>/s (184 m<sup>3</sup>/s) on basis of slope-area measurements at gage heights 10.74 ft (3.274 m) and 15.6 ft (4.755 m); minimum, 1.5 ft<sup>3</sup>/s (0.042 m<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 (1,700 m<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 (708 m<sup>3</sup>/s) was measured (by float-area method) at station at Alma (about 12 mi or 19 km upstream, drainage area, 1,560 mi<sup>2</sup> or 4,040 km<sup>2</sup>); a similar measurement of 21,000 ft<sup>3</sup>/s (595 m<sup>3</sup>/s) was made at the Alma station for peak of Dec. 3, 1906.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,120 ft<sup>3</sup>/s (31.7 m<sup>3</sup>/s) at 0015 hours July 30, gage height, 3.99 ft (1.216 m), no other peak above base of 800 ft<sup>3</sup>/s (23 m<sup>3</sup>/s); minimum, 12 ft<sup>3</sup>/s (0.34 m<sup>3</sup>/s) July 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	22	21	26	30	57	84	61	34	19	56	33
2	45	26	20	27	30	54	83	80	35	19	34	31
3	62	26	20	28	29	49	74	97	32	21	28	29
4	78	26	20	28	29	51	70	100	31	20	26	25
5	50	26	20	29	29	53	68	133	28	19	23	20
6	37	25	19	29	29	49	66	144	28	17	23	16
7	31	25	19	30	29	46	74	132	22	19	20	14
8	28	25	19	31	29	44	110	116	22	17	30	13
9	23	25	19	31	29	42	118	100	22	15	45	14
10	21	24	16	31	30	40	104	89	22	14	25	73
11	18	24	17	31	31	38	90	74	23	14	19	42
12	21	24	16	32	30	35	88	67	21	15	31	45
13	20	24	16	32	36	77	112	65	23	14	25	32
14	20	21	18	31	33	262	115	54	24	15	24	25
15	21	18	20	31	34	286	108	45	23	15	66	18
16	22	22	21	30	33	234	95	41	22	14	42	15
17	19	21	21	30	33	185	75	37	24	15	29	13
18	20	21	22	30	32	196	66	36	24	15	26	26
19	23	21	20	30	33	193	60	38	24	14	25	19
20	23	22	20	30	32	160	54	38	23	15	23	17
21	24	21	22	30	31	138	51	41	20	14	22	18
22	25	21	23	31	31	114	50	47	21	13	26	40
23	24	21	23	30	31	93	46	44	22	15	28	37
24	25	22	23	29	31	82	38	43	21	16	27	29
25	25	21	23	29	38	76	34	44	21	17	23	26
26	25	21	24	29	59	73	30	47	18	17	23	24
27	26	22	24	29	56	79	32	44	18	16	22	22
28	26	21	24	29	54	83	38	42	18	16	20	19
29	25	22	24	30	---	100	45	38	21	20	51	19
30	24	21	24	31	---	102	48	38	19	181	78	18
31	23	---	26	30	---	91	---	38	---	27	32	---
TOTAL	879	681	644	924	951	3182	2126	2013	706	678	972	772
MEAN	28.4	22.7	20.8	29.8	34.0	103	70.9	64.9	23.5	21.9	31.4	25.7
MAX	78	26	26	32	59	286	118	144	35	181	78	73
MIN	18	18	16	26	29	35	30	36	18	13	19	13
AC-FT	1740	1350	1280	1830	1890	6310	4220	3990	1400	1340	1930	1530

CAL YR 1981	TOTAL	11128	MEAN 30.5	MAX 196	MIN 10	AC-FT	22070
WTR YR 1982	TOTAL	14528	MEAN 39.8	MAX 286	MIN 13	AC-FT	28820



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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
OCT 15...	1145	22	360	--	8.2	--	22.0	18.0	--	--
NOV 03...	1200	26	320	--	8.1	--	14.0	11.0	--	--
DEC 08...	1415	19	320	346	8.8	8.2	22.0	17.5	--	--
JAN 13...	1000	33	400	390	8.2	7.7	4.0	6.5	--	--
FEB 09...	1115	27	343	394	7.7	8.0	--	11.0	134	0
MAR 23...	1145	93	292	--	8.1	--	--	14.0	--	--
APR 13...	1300	112	220	223	8.3	8.2	29.0	17.0	--	--
JUN 08...	1030	23	395		7.9	8.1	25.0	18.0	121	0
JUL 13...	1600	15	329	344	7.9	8.2	36.5	25.0	--	--
AUG 09...	1730	33	320	308	7.8	7.7	34.0	27.5	--	--
SEP 14...	0900	26	300	315	8.1	8.5	15.0	15.0	120	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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 15...	--	--	--	--	--	--	--	--	--	--
NOV 03...	--	--	--	--	--	--	--	--	--	--
DEC 08...	--	--	--	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--	--	--
FEB 09...	37	10	22	.9	2.3	8.0	11	.4	36	229
MAR 23...	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--
JUN 08...	34	8.7	34	1.4	3.0	16	23	.5	37	243
JUL 13...	--	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--
SEP 14...	34	8.5	20	.8	2.2	11	5.3	.6	36	205

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
FEB 09...	1115	20	75
JUN 08...	1030	30	17
SEP 14...	0900	20	9

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, DIS- SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
JUN 08...	1030	23	18.0	4	.25

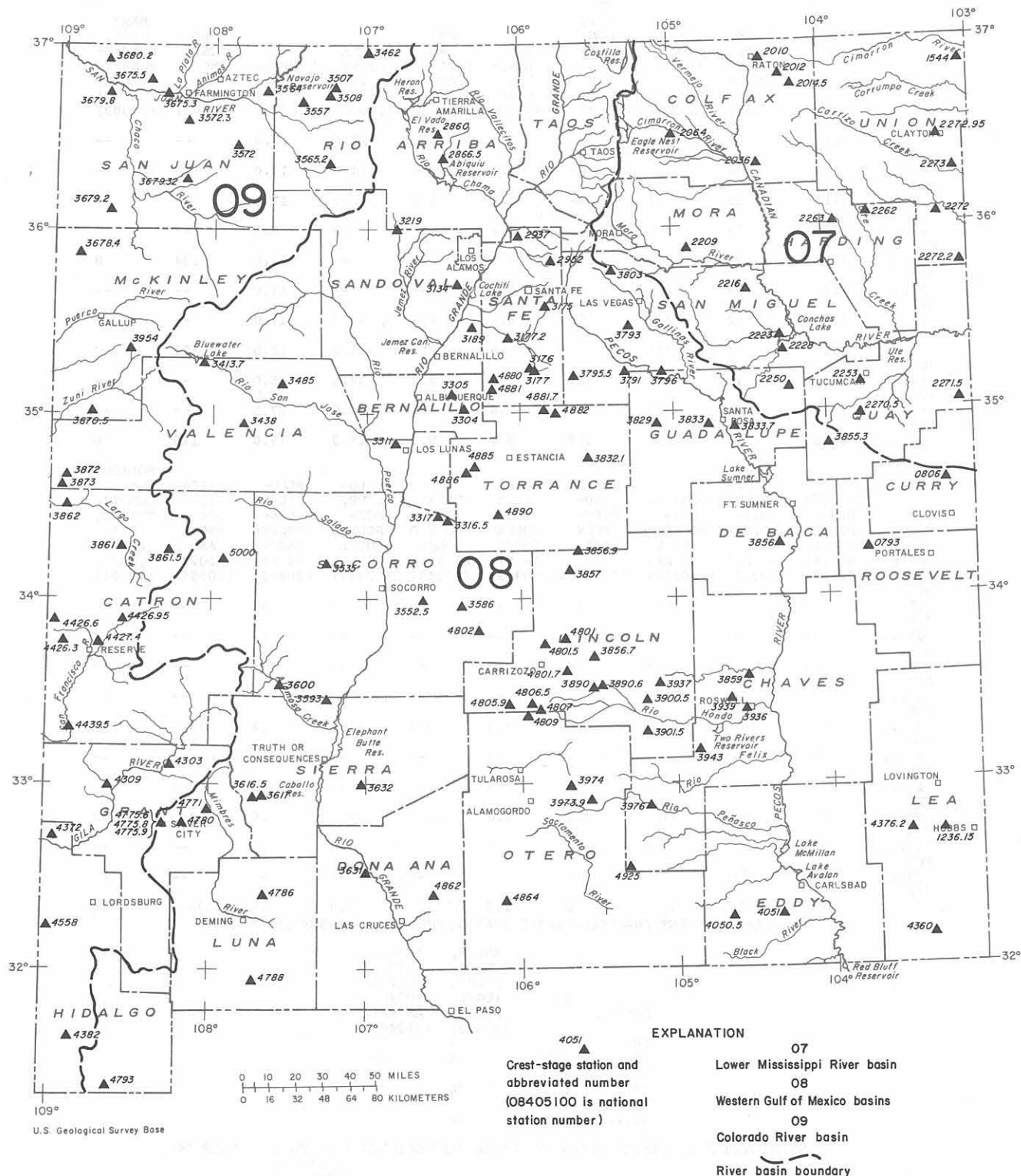


Figure 7.--Map of New Mexico showing location of partial-record stations.

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 which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each year is given. Information on some lower floods may have been obtained, and discharge measurements made for purposes of establishing the stage-discharge relation, but these are not published herein. The year given in the period of record column represents the first year of a period extending through the current year unless otherwise noted. For some stations, publication of discharge is delayed pending definition of stage-discharge relationship. Published maximums are for water years.

## Annual maximum discharge at crest-stage partial-record stations

Station name no.	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage Station height (feet)	Discharge (ft <sup>3</sup> /s)
Arkansas River Basin						
07154400	Carrizozo Creek near Kenton, Okla.	Lat 36°52'55", long 103°01'05", Union County, under bridge on New Mexico State Highway 18, 4 miles southwest of Kenton.	111	1953-	06-22-81 h3.97 07-29-82 3.88	h1,130 1,090
07201000	Raton Creek at Raton, N. Mex.	Lat 36°55'38", long 104°26'22", Colfax County, 60 ft above bridge on State Highway 72 at Raton.	14.4	1953-	09-28-62 h2.10 08-04-63 h1.07 08-09-64 1.88 06-17-65 14.8 08-21-66 3.54 06-17-67 5.15 08-10-68 2.08 07-17-69 2.88 05-29-71 0.55 08-04-72 4.05 09-27-73 1.41 08- -74 1.45 07-08-75 1.38 04-30-76 0.75 08-17-77 1.49 h11-04-78 h1.19 09-15-80 0.74 08-16-82 0.93	h548 116 h462 h3,990 h1,050 h1,610 h540 h837 h52 h1,220 h283 h297 h273 h88 h312 h212 h86 134
07201200	Chicorica Creek tributary near Raton, N. Mex.	Lat 36°49'41", long 104°19'58", Colfax County, upstream from culvert on U.S. Highway 64-87, 7.7 miles southeast of Raton.	5.18	1971-	08-05-82 18.30	1,340
07201450	Green Mountain Arroyo near Raton, N. Mex.	Lat 36°47'00", long 104°15'42", Colfax County, about 1,500 feet upstream from bridge on U.S. Highway 64-87 12.8 miles southeast of Raton.	18.2	1971-82	08-05-82 3.46	c8
07203600	Rio del Plano tributary near Taylor Springs, N. Mex.	Lat 36°26'59", long 104°22'34", Colfax County, 1.7 miles south of Sauble Ranch, 11.0 miles northeast of Taylor Springs.	6.71	1971-	07-29-81 12.31	724

## Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)
Arkansas River Basin - Continued							
07206400	Clear Creek near Ute Park, N. Mex.	Lat 36°31'35", long 105°10'30", Colfax County, Maxwell Grant, 0.25 mile upstream from mouth, and 4 miles southwest of Ute Park.	7.44	1962-67*	07-13-69	2.61	h62
					06-21-70	2.01	h26
					05- -73	2.35	h40
					06-07-74	1.44	h11
					07-09-75	1.66	h16
					04- -76	1.43	h11
					04-25-77	0.88	h3
					05-17-81	2.42	h44
					06-19-82	1.84	21
07220900	Dog Creek near Shoemaker, N. Mex.	Lat 36°49'32", long 104°53'28", Mora County, 0.5 mile above Valmora-Shoemaker road, and 1.8 miles northwest of Shoemaker.	18.4	1954-	07-15-80	12.44	h5,440
					08-08-81	h9.81	h1,960
					07-08-82	d14.90	7,280
07221600	Lagartija Creek tributary near Sanchez, N. Mex.	Lat 35°39'21", long 104°24'57" San Miguel County, at bridge on State Highway 65, 0.9 mile northeast of Sanchez.	h1.19	1961-	07-07-82	5.42	1,130
07222300	Trementina Creek at Trementina, N. Mex.	Lat 35°29'28", long 104°24'59", San Miguel County, at bridge on State Highway 65, at Trementina.	h63.9	1959-	06-20-82	d11.66	12,900
07222800	Garita Creek tributary near Variadero, N. Mex.	Lat 35°20'10", long 104°21'50", San Miguel County, 1.2 miles upstream from mouth, 6.3 miles southeast of Variadero.	h23.0	1971-	07-08-82	11.37	(+)
07225000	Pajarito Creek at Newkirk, N. Mex.	Lat 35°04'20", long 104°14'50" Guadalupe County, downstream side of bridge on U.S. Highway 66, 1 mile east of Newkirk.	55.0	1954-	07-11-82	4.66	1,260
07225300	Bluewater Creek near Tucumcari, N. Mex.	Lat 35°08'31", long 103°47'32", Quay County, in Tucumcari Metropolitan Park, 1,600 feet north of the park's southern boundary, and 4.8 miles southwest of Tucumcari.	15.2	1971-	08-11-81	12.71	h2,350
					06-11-82	(e)	c2,200
07226200	Bueyeros Creek at Bueyeros, N. Mex.	Lat 35°58'10", long 103°41'05", in E½ sec.7, T.20 N., R.31 E., Harding County, on right upstream wingwall of culvert on State Road 102 at Bueyeros.	h33.4	1957-	07-30-82	3.43	(+)
07226300	Carrizo Creek near Roy, N. Mex.	Lat 36°02'58", long 103°57'48", Harding County, 800 ft below State Highway 120, and 15 miles northeast of Roy.	a68	1954-	05-02-78	h5.46	h890
					05-20-79	h4.64	h580
					06-14-82	3.77	348
07227050	Plaza Larga Creek tributary near Ragland, N. Mex.	Lat 34°48'29", long 103°45'35", Quay County, at culvert on State Highway 18, 1.2 miles northwest of Ragland.	.36	1952-	07-30-82	7.08	232
07227150	Arroyo del Puerto near Endee, N. Mex.	Lat 35°03'32", long 103°06'04", Quay County, at bridge on State Highway 93, 5.4 miles south of Endee.	a25	1961-	07-30-82	7.87	(+)
07227200	Tramperos Creek near Stead, N. Mex.	Lat 36°04'15", long 103°12'10", in NW¼NW¼ sec.10, T.21 N., R.35 E., Union County, at bridge on State Highway 18, 2.1 miles south of Stead and 26 miles south Clayton.	a556	1966-73* 1974-	08-07-82	6.83	864

## Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)
Arkansas River Basin - Concluded							
07227220	Fullingim Draw, near Nara Visa, N. Mex.	Lat 35°45'50", long 103°07'30", Union County upstream from culvert on State Highway 18, 11.3 miles north of Nara Visa.	15.1	1971-	07-30-82	6.95	(+)
07227295	Sand Draw tributary near Clayton, N. Mex.	Lat 36°23'20", long 103°19'05", Union County, above culvert on State Highway 56, 8 miles southwest of Clayton.	1.25	1952-	- -82	(e)	(+)
07227300	Sand Draw near Clayton, N. Mex.	Lat 36°20'30", long 103°11'30", Union County, on downstream side of bridge on State Highway 18, 7.5 miles south of Clayton.	a42	1953-	08-06-82	2.43	(+)
Brazos River basin							
08079300	Blackwater Draw tributary near Floyd, N. Mex.	Lat 34°14'52", long 103°44'51", Roosevelt County, 0.5 mile below section road and 10 miles west of Floyd.	a10	1963-	- -63 - -64 05-12-65 07-27-66 03-19-67 - -68 09-01-69 09-15-70 - -71 09-02-72 07-26-73 - -74 10-23-74 08-05-76 08-11-77 05-02-78 05-20-79 - -80 08-11-81 07-11-82	- - 0.73 1.05 1.45 - 5.96 0.43 - 5.05 0.60 - 0.63 2.50 1.11 0.41 1.08 - h3.10 0.78	0 0 16 38 84 0 3,400 5 0 2,620 10 0 12 356 44 5 41 48 430 19
08080600	Running Water Draw near Clovis, N. Mex.	Lat 34°31'55", long 103°12'05", Curry County, 0.25 mile upstream from Highway 18 and 8 miles north of Clovis.	109	1953-56 1957-64* 1965-	07-30-82	4.87	2,240
08123615	Monument Draw near Monument, N. Mex.	Lat 32°41'48", long 103°16'10", SW¼SE¼ sec.32, T.18 S., R.37 E., Lea County upstream from culvert on U.S. Highway 62-180, 8 miles west of Hobbs, and 5 miles north of Monument.	17.2	1975-	- -82	1.89	(+)
Rio Grande basin							
08286000	Rio Nutrias near Cebolla, N. Mex.	Lat 36°34'45", long 106°30'43", Rio Arriba County, on upstream from culvert on U.S. Highway 84, 4.8 miles upstream from Canada del Policarpo, 3.2 miles northwest of Cebolla.	74.3	1980-	- -80 05-08-81 07-28-82	1.62 1.07 3.76	J91 45 379
08286650	Canjilon Creek above Abiquiu Reservoir, N. Mex.	Lat 36°18'55", long 106°29'05", Rio Arriba County, in Piedra Lumbre Grant, 300 ft upstream from bridge on U.S. Highway 84, 0.2 mile northwest of entrance to Ghost Ranch and about 12 miles northwest of Abiquiu.	144	1965-	h08-02-80 06-30-81 08-23-82	d9.10 6.61 7.61	h2,370 919 1,240
08293700	Arroyo Seco tributary near Pojoaque, N. Mex.	Lat 35°56'33", long 106°01'12", Santa Fe County, upstream from culvert on U.S. Highway 64-84-285, 3.5 miles north of Pojoaque.	.72	1971-	07-08-80 09-18-82	6.12 6.17	56 61

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (ft <sup>2</sup> )	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)
Rio Grande basin - Continued							
08295200	Rio en Medio near Santa Fe, N. Mex.	Lat 35°47'30", long 105°47'38", Santa Fe County, in Santa Fe National Forest, on right bank 300 feet east of Santa Fe Ski Basin parking area, and 10.8 miles northeast of Santa Fe.		1963-73* 1973-	07-31-82	1.80	18
08313400	Bland Canyon near Cochiti Pueblo, N. Mex.	Lat 35°42'11", long 106°24'56", Sandoval County, 200 ft south of Forest Service Road, 0.3 mile inside Santa Fe National Forest, 7.5 miles north of Cochiti.	7.57	1962-	09-05-81 09-20-82	3.12 2.39	h137 57
08317500	Galisteo Creek at Canoncito, N. Mex.	Lat 35°33'02", long 105°49'20", Santa Fe County, above railroad bridge, 0.2 mile above Apache Canyon at Canoncito.	11.3	1955-56 1959-	06-08-79 08-27-81 09-17-82	h2.33 h4.16 2.87	h453 h1,440 722
08317600	San Cristobal Arroyo near Galisteo, N. Mex.	Lat 35°22'55", long 105°51'05", Santa Fe County, at bridge on U.S. Highway 285, 5.5 miles east of Galisteo.	116	1955-	05-16-80 08-01-81 09-17-82	2.95 8.75 6.21	h153 h3,560 1,400
08317700	Tarhole Canyon near Galisteo N. Mex.	Lat 35°21'55", long 105°50'40", Santa Fe County, at culvert on U.S. Highway 285, 6 miles southeast of Galisteo.	2.15	1952-	- 77 08-04-78 - 80 09-04-81 09-17-82	b 16.62 b 14.16 13.98	<180 571 <180 h222 201
08317720	Canada de la Cueva near Galisteo, N. Mex.	Lat 35°26'13", long 106°00'45", Santa Fe County, 6.4 miles east of Cerrillos and 4.8 miles northwest of Galisteo.	h1.81	1970-	08-04-78 06-08-79 05-16-80 06-30-81 09-18-82	h2.59 h3.02 h2.28 h3.39 4.78	h82 h135 h54 h194 919
08318900	San Pedro Creek near Golden, N. Mex.	Lat 35°13'45", long 106°18'00", Sandoval County, 1 mile below bridge on State Highway 10 and 5.5 miles southwest of Golden.	45.2	1953-	08-23-82	1.70	1,190
08321900	Rio de las Vacas near Senorita, N. Mex.	Lat 35°59'35", long 106°47'45", Sandoval County, at bridge on side road, 0.1 mile south of State Highway 126 and 6.5 miles east of Senorita.	26.8	1957-	06-22-82	3.89	270
08330400	Juan Toro Canyon near Miera, N. Mex.	Lat 35°00'57", long 106°20'14", Bernalillo County, 150 ft east of State Highway 10, 1 mile southeast of Cedro, and 4.5 miles northwest of Miera.	1.57	1959-	07-30-82	0.83	(+)
08330500	Tijeras Arroyo at Albuquerque, N. Mex.	Lat 35°03'40", long 106°28'40", Bernalillo County, 300 ft south of U.S. Highway 66 and 0.4 mile southeast of city limits of Albuquerque.	75.3	1943-48* 1958-	09-18-82	2.79	1,140
08331100	Belen Highline Canal tributary near Los Lunas,	Lat 34°49'20", long 106°49'10", Valencia County, above culvert on Highway 6, 5.0 miles west of Los Lunas.	.16	1952-53 1955-	08-21-82	b	<10
08331650	Canada Montoso near Scholle, N. Mex.	Lat 34°23'11", long 106°28'37", County, 130 ft upstream from dip on abandoned highway, 500 ft upstream from bridge on U.S. Highway 60, 3.6 miles southwest of Scholle.	a35	1961-	09-06-82	3.53	1,100

## Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)
Rio Grande basin - Continued							
08331700	Abo Arroyo tributary near Scholle, N. Mex.	Lat 34°24'10", long 106°30'35", Socorro County, at culvert on U.S. Highway 60, 2.5 miles south-east of junction of U.S. Highway 60, and State Highway 6, southwest of of Scholle.	.23	1954-	09-06-82	16.43	188
08341370	Pine Canyon near Thoreau, N. Mex.	Lat 35°18'34", long 108°10'14", McKinley County, about 1 mile southwest of the north end of Bluewater Lake and about 7 miles southeast of Thoreau.	6.09	1969-	03-14-82	2.92	110
08343800	Sand Canyon near Grants, N. Mex.	Lat 34°42'31", long 107°55'24", Cibola County, 23 miles southwest of Acoma Pueblo and about 30 miles south of junction of I-40 and State 117.	-	1981	- -82	b	(+)
08348500	Encinal Creek near Casa Blanca, N. Mex.	Lat 35°08'35", long 107°27'55", Valencia County, 1.8 miles north of village of Encinal and 6.8 miles north of Casa Blanca.	6.19	1937-39* 1959-	- -82	b	10
08353500	La Jencia Creek near Magdalena, N. Mex.	Lat 34°09'45", long 107°12'35", Socorro County, 3.5 miles northeast of Magdalena.	195	1957-	07-28-82	1.80	620
08355250	Arroyo Del Tajo near Socorro, N. Mex.	Lat 34°02'43", long 106°48'42", Socorro County, about 15 miles east of Socorro and 1/3 mile northeast of Pueblito well.	-	1981	- -82	2.80	(+)
08358600	Chupadera Wash tributary at Bingham, N. Mex.	Lat 33°51'39", long 106°22'06", Socorro County, 75 ft upstream from culvert on U.S. Highway 380, 0.1 mile west of Bingham.	1.29	1961	08-05-82	1.62	100
08359300	San Jose Arroyo near Monticello, N. Mex.	Lat 33°28'05", long 107°14'30", Sierra County, at head of box canyon just below major tributary, 800 ft below culvert on U.S. Highway 85, 13 miles Northeast of Monticello.	26.9	1959-	- -82	b	10
08360000	Alamosa Creek near Monticello, N. Mex.	Lat 33°34'09", long 107°35'33", Socorro County, on left bank at Alamosa damsite and below Old Fort Ojo Caliente, just downstream from Wildhorse Creek, 15 miles northwest of Monticello.	403	1931-42* 1956-58 1958-69* 1973-	08-06-82	5.76	1,660
08361650	Percha Creek near Kingston, N. Mex.	Lat 32°55'05", long 107°38'55", Sierra County, at bridge on State Highway 180, 3.3 miles east of Kingston.	21.5	1953-	- -82	b	10
08361700	Percha Creek near Hillsboro, N. Mex.	Lat 32°54'55", long 107°36'05", Sierra County, 150 ft south of State Highway 180, and 2 miles west of Hillsboro.	35.4	1957-78 1980-	- -82	b	100
08363100	Rio Grande tributary near Radium Springs, N. Mex.	Lat 32°30'05", long 106°57'05", Dona Ana County, above culvert on U.S. Highway 85, 120 ft above mouth, and 1.4 miles west of Radium Springs.	.40	1955-	09-17-82	4.75	92
08363200	Aleman Draw at Aleman, N. Mex.	Lat 33°00'00", long 107°00'20", Sierra County, on Santa Fe Railroad bridge, 140 ft above dip on Engle-Rincon road, and 0.26 mile west of Aleman.	25.5	1959-	08-06-82	6.19	2,300



## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)
Rio Grande basin - Continued							
08379100	Pecos River tributary near Sena, N. Mex.	Lat 35°18'37", long 105°23'37", San Miguel County, upstream from culvert on State Highway 3, 0.8 mile north of Sena.	1.24	1971-82	09-17-82	6.40	(+)
08379300	Tecolote Creek at Tecolote, N. Mex.	Lat 35°27'20", long 105°16'55", San Miguel County, on bridge on U.S. Highway 85 at Tecolote.	122	1954-	07-30-82	7.19	1,650
08379550	Canon Blanco near Leyba, N. Mex.	Lat 35°13'14", long 105°40'12", San Miguel County, 0.2 mile south of White Lakes-Leyba road and 5.0 miles west of Leyba.	11.2	1971-	09-20-82	6.38	877
08379600	Pecos River tributary near Dilia, N. Mex.	Lat 35°12'50", long 105°04'50", Guadalupe County, above culvert on U.S. Highway 84, and 1.7 miles northwest of Dilia.	.16	1952-	09-07-82	2.76	74
08380300	Sandoval Canyon at Gallinas, N. Mex.	Lat 35°41'19", long 105°21'17", San Miguel County, about 500 ft upstream from culvert on State Highway 65, at north edge of Gallinas.	7.6	1957 1961-	09-05-82	2.55	395
08382900	Pecos River tributary near Pintada, N. Mex.	Lat 34°58'06", long 105°05'38", Guadalupe County, in Anton Chico Grant, 1,500 ft south of U.S. Highway 66, 6.8 miles north of Pintada.	.16	1961-	08-18-82	1.83	285
08383210	Pintada Arroyo tributary near Encino, N. Mex.	Lat 34°48'40", long 105°34'00", Torrance County, above culvert on U.S. Highway 285, 0.1 mile south of ranch road, and 12.5 miles northwest of Encino.	h0.55	1959-	- -82	-	0
08383300	Pintada Arroyo near Santa Rosa, N. Mex.	Lat 34°53'20", long 104°43'50", Guadalupe County, at bridge on U.S. Highway 54, and 4.5 miles southwest of Santa Rosa.	896	1959-	08-18-82	5.31	(+)
08383370	Pecos River tributary near Puerto de Luna, N. Mex.	Lat 34°52'35", long 104°38'16", Guadalupe County, 25 ft upstream from culvert on State Highway 91, 3.1 miles north of Puerto de Luna.	.37	1961-	08-18-82	6.23	58
08385530	Alamosa Creek tributary near Jordan, N. Mex.	Lat 34°47'44", long 103°58'07", Quay County, 500 ft upstream from dip on State Highway 156, 6.9 miles west of Jordan.	9.71	1962-	07-30-82	1.75	12
08385600	Yeso Creek near Fort Sumner, N. Mex.	Lat 34°16'32", long 104°17'28", De Baca County, at abandoned bridge 1 mile downstream from State Highway 20, and 14.5 miles south of Fort Sumner.	242	1937	08-18-82	2.68	1,300
08385670	Aragon Creek tributary near Encinoso, N. Mex.	Lat 33°43'35", long 105°31'43", Lincoln County, 0.3 mile upstream from wooden bridge on dirt road, 1.2 miles north of State Highway 48, 4.3 miles west.	6.07	1961-	09-30-82	5.05	1,550

## Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)
Rio Grande basin - Continued							
08385690	Bonita Canyon tributary near Corona, N. Mex.	Lat 34°14'04", long 105°37'12", Lincoln County, above culvert on U.S. Highway 54, and 1.8 miles southwest of Corona.	a.6	1959-	07-28-82	1.63	28
08385700	Cloud Canyon tributary near Gallinas, N. Mex.	Lat 34°07'53", long 105°40'57", Lincoln County, above culvert on U.S. Highway 54, and 2.0 miles southwest of Gallinas.	a10	1957-	- -82	-	0
08385900	Salt Creek tributary near Roswell, N. Mex.	Lat 33°32'22", long 104°31'08", Chavez County, at culvert on U.S. Highway 285, 4.7 miles north of junction of U.S. Highway 70 and 285, and 10 miles north of Roswell.	.04	1952-	- -82	1.29	17
08389000	Rio Bonito near Fort Stanton, N. Mex.	Lat 33°31'05", long 105°29'10", Lincoln County, at bridge on U.S. Highway 380, 2.5 miles northeast of Fort Stanton.	a85	1955-	09-30-82	6.01	1,950
08389060	Rio Bonito tributary near Fort Stanton, N. Mex.	Lat 33°31'15", long 105°28'05", Lincoln County, at culvert on U.S. Highway 380, 150 ft above mouth, and 3.5 miles northeast of Fort Stanton.	.72	1955-	09-30-82	6.40	512
08390050	Rio Hondo tributary at Tinnie, N. Mex.	Lat 33°22'36", long 105°13'01", Lincoln County, upstream from culvert on U.S. Highway 70-380, 0.5 mile east of junction of U.S. Highway 70-380 and State Highway 368, and at Tinnie.	.23	1971-	09-30-82	7.32	180
08390150	Gallo Canyon near Picacho, N. Mex.	Lat 33°17'23", long 105°10'49", Lincoln County, 500 ft east of road, 5 miles south of Arabela.	1.32	1962-	09-30-82	4.33	118
08393600	North Spring River at Roswell, N. Mex.	Lat 33°23'47", long 105°32'53", Chavez County, Roswell Municipal Golf Course, 2,400 ft upstream from Montana Ave. in Roswell.	19.5	1958-	- -82	-	0
08393700	Pancho Canyon near Arabela, N. Mex.	Lat 33°30'36", long 105°11'38", Lincoln County, 200 ft downstream from dip on State Highway 368, 5.6 miles south of Arabela.	16.7	1962-	- -82	3.28	(+)
08393900	Eight Mile Draw near Roswell, N. Mex.	Lat 33°24'05", long 104°37'54", Chavez County, 6.5 miles west of Roswell.	397	1941 1952-	- -82	(b)	<10
08394300	Twin Butte Canyon tributary near Roswell, N. Mex.	Lat 33°10'34", long 104°51'30", Chavez County, about 0.1 mile upstream from mouth and about 22 miles southwest of Roswell.	5.01	1968-	- -82	(b)	<10
08397390	Curtis Canyon near Mayhill, N. Mex.	Lat 32°51'52", long 105°31'05", Otero County, 0.26 mile above SCS dam, 0.4 mile west of State Highway 130, and 2.5 miles southwest of Mayhill.	10.3	1959-	- -82	(b)	<20

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum			
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)	
Rio Grande basin - Concluded								
08397400	Hyatt Canyon near Cloudcroft, N. Mex.	Lat 32°56'06", long 105°37'37", Otero County, 0.5 mile south of State Highway 83, and 7 miles east of Cloudcroft.	3.08	1953-	- -82	1.32	(+)	
08397600	Rio Penasco near Dunken, N. Mex.	Lat 33°52'55", long 105°10'40", Chavez County, on bridge on State Highway 24, 5 miles north of Dunken.	583	1952-56 1956-62* 1963-	09-30-82	7.69	670	
08405050	Last Chance Canyon tributary near Carlsbad Caverns, N. Mex.	Lat 32°17'30", long 104°36'20", Eddy County, above culvert on State Highway 137, 0.1 mile north of road to Sitting Bull Falls, and 12.5 miles northwest of Carlsbad Caverns.	0.2	1959-	- -82	4.70	a310	
08405100	Mosley Canyon White City, N. Mex.	Lat 32°15'27", long 104°22'43", Eddy County, 600 ft below dip on Park Canyon Road, and 5.5 miles north of White City.	14.6	1959-	- -82	3.79	1,400	
08436000	Antelope Draw near Jal, N. Mex.	Lat 32°09'18", long 103°21'51", Lea County, 0.4 mile south of State Highway 128, and 10.7 miles west of Jal.	a20	1963-	- -82	(b)	(+)	
08437620	Monument Draw tributary near Monument, N. Mex.	Lat 32°39'44", long 103°27'16", Lea County, upstream from culvert on U.S. Highway 62-180, about 12 miles northwest of Monument and 19.5 miles west of Hobbs.	6.23	1968-	- -82	(b)	<6	
Mimbres River basin								
08477100	Willow Springs Canyon at Mimbres, N. Mex.	Lat 32°51'20", long 107°58'35", Grant County, about 600 ft downstream from State Road 61, 0.2 mile north of post office in Mimbres.	3.84	1970-82	- -82	e	(+)	
08477560	Little Walnut Creek near Silver City, N. Mex.	Lat 32°48'20", long 108°17'35", Grant County, 85 ft above dip on Bear Mountain Road, and 2 miles north of Silver City.	5.10	1959-	- -82	b	<10	
08477580	Silva Creek at Silver City, N. Mex.	Lat 32°46'41", long 108°16'41", Grant County, 190 ft above Twelfth Street bridge at Silver City.	10.0	1958-	07-29-82	2.40	310	
08477590	Pinos Altos Creek at Silver City, N. Mex.	Lat 32°46'52", long 108°16'04", Grant County, 2 blocks below U.S. Highway 260 at Silver City.	4.63	1958-	- -82	(b)	(+)	
08478000	Cameron Creek at Central, N. Mex.	Lat 32°47'38", long 108°08'58", Grant County, 0.5 mile above culvert on U.S. Highway 260, at north edge of Central.	18.8	1954-	11-28-81	6.46	2,150	
08478600	Mimbres basin tributary near Florida, N. Mex.	Lat 32°21'30", long 107°37'30", Luna County, above culvert on State Highway 26, and 5 miles southwest of Florida.	.55	1959-	- -82	b	<100	
08478800	Seventysix Draw tributary near Waterloo, N. Mex.	Lat 31°56'34", long 107°44'38", Luna County, upstream from culvert on State Road 11, 3.9 miles southeast of Waterloo, and 7.9 miles north of Columbus.	.2	1967-	07-28-82	5.51	140	

## Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum			
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)	
Playas Valley								
08479300	Deer Creek tributary near Antelope Wells, N. Mex.	Lat 31°23'00", long 108°42'15", Hidalgo County, 0.1 mile below dip on State Highway 79, 2.5 miles east of San Luis Pass, and 12 miles west of Antelope Wells.	4.3	1959-	09-19-82	1.45	190	
Tularosa Valley								
08480100	White Oaks Canyon at White Oaks, N. Mex.	Lat 33°46'06", long 105°43'26", Lincoln County, 40 ft upstream from culvert on State Highway 349, 1 mile northeast of White Oaks.	1.14	1961-	- -81 07-14-82	h2.16 4.58	(+) (+)	
08480150	White Oaks Canyon near Carrizozo, N. Mex.	Lat 33°43'51", long 105°50'11", Lincoln County, 100 ft upstream from culvert on U.S. Highway 54, 6 miles north of Carrizozo.	31	1959 1961-	- -81 09-30-82	h3.66 2.24	h1,380 860	
08480170	Nogal Creek tributary near Nogal, N. Mex.	Lat 33°34'54", long 105°41'10", Lincoln County, upstream from culvert on U.S. Highway 380, about 2.0 road miles west of Indian Divide, 7 miles northwest of Capitan and 2 miles north of Nogal.	1.94	1968-	- -82	2.07	(+)	
08480200	Taylor Canyon tributary near Bingham, N. Mex.	Lat 33°48'11", long 106°12'00", Socorro County, 200 ft north of U.S. Highway 380, 12 miles southeast of Bingham.	2.66	1961-	07-14-82	1.14	(+)	
08480590	Tularosa Valley tributary near Oscura, N. Mex.	Lat 33°24'41", long 106°04'09", Lincoln County, 50 ft below culvert on U.S. Highway 54, and 5.2 miles south of Oscura.	3.22	1958-	- -82	(b)	(+)	
08480650	Minnie Hall Draw near Three Rivers, N. Mex.	Lat 33°23'40", long 105°58'11", Lincoln County, 8 miles northeast of Three Rivers.	9.70	1956-	- -82	(e)	(+)	
08480700	Indian Creek near Three Rivers, N. Mex.	Lat 33°22'10", long 105°53'25", Otero County, 150 ft above diversion dam, and 12 miles east of Three Rivers.	6.8	1956-58* 1959-	- -82	3.61	132	
08480900	Indian Creek at mouth near Three Rivers, N. Mex.	Lat 33°22'45", long 105°57'25", Otero County, 75 ft above diversion dam, 0.35 mile above mouth, and 5.5 miles east of three Rivers.	10.9	1956-58* 1959-	- -82	(b)	<100	
08486200	Black Prince Canyon tributary near Organ, N. Mex.	Lat 32°26'11", long 106°32'03", Dona Ana County, above culvert on U.S. Highway 70, 2.3 miles east of San Augustin Pass, and 4.0 miles east of Organ.	.73	1959-	- -82	(b)	<10	
08486400	Tularosa Valley tributary near Orogrande, N. Mex.	Lat 32°24'55", long 106°04'20", Otero County, at bridge on U.S. Highway 54, and 2.7 miles northeast of Orogrande.	2.53	1959-	10-01-82	4.47	(+)	

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)
Estancia Valley							
08488000	Estancia Valley tributary at Cedar Grove, N. Mex.	Lat 35°10'05", long 106°10'08", Santa Fe County, 50 ft upstream from culvert on State Highway 344, 0.1 mile south of Cedar Grove.	1.21	1955-1961-	08-21-82	6.87	(+)
08488100	Juan Tomas Canyon near Edgewood, N. Mex.	Lat 35°04'35", long 106°13'46", Santa Fe County, 140 ft upstream from culvert on U.S. Highway 66, 2.5 miles northwest of Edgewood.	a20	1962-	- -82	-	0
08488170	Chavez Draw tributary near Clines Corners, N. Mex.	Lat 35°01'06", long 105°49'06", Torrance County, one mile north of Interstate 40, 13 miles east of Moriarty and 9 miles west of Clines Corners.	2.73	1968-	09-20-82	7.13	208
08488200	Osita Draw near Clines Corners N. Mex.	Lat 35°00'18", long 105°48'00", Torrance County, 100 ft upstream from culvert on U.S. Highway 66, 7.5 miles west of Clines Corners.	a10	1961-	- -82	-	0
08488500	Canon de Torreon at Torreon, N. Mex.	Lat 34°43'20", long 106°17'50", Torrance County, at culvert on State Highway 10, in Torreon.	18.2	1954-	- -82	-	0
08488600	Arroyo del Cuervo near Torreon, N. Mex.	Lat 34°41'35", long 106°18'27", Torrance County, in Town of Torreon Grant, about 0.3 mile above culvert on State Road 10 and 2 miles south of Torreon.	11.8	1969-	09-18-82	3.73	680
08489000	Big Draw near Mountainair, N. Mex.	Lat 34°18'45", long 106°11'35", 0.25 mile above culvert on State Highway 10, and 8.4 miles southeast of Mountainair.	h4.06	1953-	09-18-82	4.35	94
Crow Flats							
08492500	Fleming Draw near Pinon, N. Mex.	Lat 32°31'01", long 105°20'42", Otero County, 0.2 mile above dip in ranch road, and 7.5 miles south of Pinon.	16.6	1959-	- -82 (b)		<450
San Augustin Plains basin							
08500000	Swingle Canyon near Datil, N. Mex.	Lat 34°11'17", long 107°53'55", Catron County, about 0.3 mile upstream from U.S. Highway 60, and 4.3 miles northwest of Datil.	6.35	1970-72-1976-	08-21-82	4.01	5
San Juan River basin							
09346200	Rio Amargo at Dulce, N. Mex.	Lat 36°56'00", long 107°00'00", Rio Arriba County, under bridge on State Highway 17, at Dulce.	168	1956-	10-03-81	5.41	820
09350700	Ruben Canyon near Gobernador, N. Mex.	Lat 36°44'26", long 107°14'33", Rio Arriba County, in Carson National Forest, upststream from culvert on State Highway 17, and 6.5 miles east of Gobernador.	5.06	1970-	09-11-82	3.62	(+)

## Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)
San Juan River basin - Continued							
09350800	Vaqueros Canyon near Gobernador, N. Mex.	Lat 36°43'23", long 107°16'47", Rio Arriba County, 100 ft east of State Highway 17, and 4.2 miles east of Gobernador.	60.5	1956-	09-11-82	3.90	260
09355700	Gobernador Canyon near Gobernador, N. Mex.	Lat 36°41'05", long 107°25'10", San Juan County, 0.2 mile south of State Highway 17, and 4 miles southwest of Gobernador.	19.8	1956-	- -82	(b)	< 400
09356400	Manzanares Canyon near Turley, N. Mex.	Lat 36°44'15", long 107°42'15", San Juan County, 600 ft above culvert on State Highway 17, and 4.2 miles east of Turley.	3.20	1956-	- -82	(b)	< 200
09356520	Burro Canyon near Lindrith, N. Mex.	Lat 36°16'21", long 107°14'46", Rio Arriba County, upstream from culvert on State Highway 537, 11.5 miles west of Lindrith.	9.11	1970-	08-22-82	3.91	42
09357200	Gallegos Canyon tributary near Nageezi, N. Mex.	Lat 36°24'59", long 107°51'45", San Juan County, at culvert on State Highway 44, 1.1 miles northwest of Huerfano Trading Post, and 12.5 miles northwest of Nageezi.	.20	1952-	07-31-82	2.11	120
09357230	West Draw near Farmington, N. Mex.	Lat 36°35'24", long 108°11'03", San Juan County, 15 ft upstream of culvert on State Highway 371, 11 miles south of Farmington.	.32	1975-	08-26-82	3.68	(+)
09367530	Locke Arroyo near Kirtland, N. Mex.	Lat 36°43'51", long 108°17'46", San Juan County, on upstream side of abandoned culvert, 200 ft above U.S. Highway 550, 0.4 mile above mouth, and 3.3 miles east of Kirtland.	2.96	1951-	10-03-82	2.23	134
09367550	Stevens Arroyo near Kirtland, N. Mex.	Lat 36°45'56", long 108°21'59", San Juan County, upstream from gravel road to Young's Lake, 0.6 mile north of El Paso Natural Gas, San Juan Plant, and 2.3 miles north of Kirtland.	4.52	1970-	08-22-82	12.24	(+)
09367840	Yazzie Wash near Mexican Springs, N. Mex.	Lat 35°50'40", long 108°53'00", McKinley County, 5.0 miles northwest of Mexican Springs, and 23 miles north of Gallup.	2.1	1953-54 1956-	08-03-82	1.55	33
09367920	Coyote Wash tributary near Naschitti, N. Mex.	Lat 36°05'56", long 108°41'48", San Juan County, on bridge on U.S. Highway 666, 2.4 miles north of Naschitti, and 39 miles north of Gallup.	12.0	1967-	09-12-82	7.17	(+)
09367932	Hunter Wash tributary near Bisti Trading Post, N. Mex.	Lat 36°15'33", long 108°15'06", San Juan County, on left bank upstream of culverts, 1.2 mile south of Bisti Trading Post.	8.47	1975-	08-12-82	6.88	(+)
09367980	Rattlesnake Arroyo near Shiprock, N. Mex.	Lat 36°46'14", long 108°43'32", San Juan County, upstream from bridge on State Highway 504, 0.8 mile west of Shiprock.	-	1980-	09-10-80 07-14-81 08-03-82	6.19 2.81 5.77	(+) (+) (+)

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations - Continued

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum			
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)	
San Juan River basin - Concluded								
09368020	Malpais Arroyo near Shiprock, N. Mex.	Lat 36°55'33", long 108°43'26", San Juan County, upstream from bridge on U.S. Highway 666, 3.3 miles north of Shiprock.	-	1980-	09-10-80 07-14-81 09-11-82	0.95 0.80 1.39	(+) (+) (+)	
Little Colorado River basin								
09386100	Largo Creek near Quemado, N. Mex.	Lat 34°19'25", long 108°31'40", Catron County, on downstream side of bridge on ranch road 2.5 miles southwest of Quemado.	151	1954-	09-20-82	2.67	465	
09386150	Mangas Creek tributary near Pietown, N. Mex.	Lat 34°18'11", long 108°08'30", Catron County, above culvert on U.S. Highway 60, 1.3 miles west of Junction with state road 36 in Pietown.	a.08	1952-	08-21-82	3.21	(+)	
09386200	Carrizo Creek near Salt Lake, N. Mex.	Lat 34°30'39", long 109°01'35", Catron County, on left downstream wingwall of bridge, 1.3 miles east of New Mexico-Arizona State line and 15 miles west of Salt Lake.	af560	1957-	09-20-82	0.21	(+)	
09387050	Galestena Canyon tributary near Black Rock, N. Mex.	Lat 34°58'45", long 108°40'00", McKinley County, 100 ft below bridge on State Highway 32 and 10.5 miles southeast of Black Rock.	a19	1957-	08-13-83	2.32	96	
09387200	Un-named Arroyo near Ojo Caliente, N.Mex.	Lat 34°56'06", long 108°57'58", Cibola County, about 1.5 miles north of Ojo Caliente.	-	1981-	03-30-81 08-13-82	2.75 3.67	(+) (+)	
09387300	Zuni River near NM.-AZ state line, N.Mex.	Lat 34°52'35", long 109°02'29", Cibola County, about 5 miles southwest of Ojo Caliente.	-	1981-	08-13-82	3.57	310	
09395400	Milk Ranch Canyon near Fort Wingate, N. Mex.	Lat 35°25'55", long 108°33'30", McKinley County, 0.5 mile below culvert on secondary road between Fort Wingate and McGaffey, and 3 miles south of Fort Wingate.	14.0	1949	05-13-82	1.08	275	
Gila River Basin								
09430300	Copperas Canyon near Pinos Altos, N. Mex.	Lat 33°04'42", long 108°12'14", Grant County, on east side of Copperas Canyon road and 15 miles north of Pinos Altos.	3.95	1963-	- -82	(b)	10	
09430900	Duck Creek at Cliff, N. Mex.	Lat 32°58'03", long 108°36'36", Grant County, at Cliff below bridge on State Highway 211, and 0.6 mile above mouth.	a228	1957-	03-12-82	6.38	3,300	
09437200	Mexican Canyon at Virden, N. Mex.	Lat 32°41'03", long 108°59'00", Hidalgo County, upstream from dip in State Road 82, and about 0.8 mile east of Virden.	3.40	1968-82	- -82	(b)	(+)	



## Annual maximum discharge at crest-stage partial-record stations - Concluded

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Annual maximum			
					Date	Gage height (feet)	Discharge (ft <sup>3</sup> /s)	
Gila River Basin - Concluded								
09438200	Animas Creek near Cloverdale, N. Mex.	Lat 31°34'15", long 108°52'30", Hidalgo County, near head of small box canyon 0.1 mile west of State Highway 338, and 11 miles north of Cloverdale.	157	1959-	08-19-82	2.90	100	
09442630	Mail Hollow near Luna, N. Mex.	Lat 33°47'38", long 108°56'59", Catron County, upstream from culvert on U.S. Highway 180, 2.3 miles south of Luna.	4.20	1970-	08-09-82	2.78	43	
09442660	Trout Creek at Luna, N. Mex.	Lat 33°50'50", long 108°59'38", Catron County, 500 ft downstream from bridge on Luna-Red Hill road and 2.6 miles north of Luna.	31.9	1954-	- -82	(b)	<10	
09442695	Negro Canyon at Aragon, N. Mex.	Lat 33°52'47", long 108°33'08", Catron County, above culvert on State Highway 12, at west edge of Aragon.	9.62	1958-	08-30-82	1.12	160	
09442740	Tularosa River near Reserve, N. Mex.	Lat 33°44'00", long 108°42'10", Catron County, 150 ft west of Eagle Peak Lookout road and 3.3 miles northeast of Reserve.	426	1956-	08-30-82	3.08	240	
09443950	Red Colt Canyon at Pleasanton, N. Mex.	Lat 33°15'30", long, 108°52'15", Catron County, above culvert on U.S. Highway 260, and 1 mile south of Pleasanton.	3.00	1959-	09-18-82	8.98	(+)	
09455800	Steins Creek at Steins, N. Mex.	Lat 32°13'47", long 109°00'01", Hidalgo County, at culvert on State Highway 14, 0.9 mile west of Steins.	1.26	1959-	06-30-82	3.03	155	

Less than

+ Discharge not yet determined.

\* Operated as continuous-record gaging station.

a Approximately.

b Peak did not reach bottom of 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.

## 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 1982

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> )
Rio Grande Basin						
Alamosa Creek 08360000	Rio Grande	Lat 33°34'09", long 107°35'33", in SE¼ sec.31, T.8 S., R.7 W., Socorro County, just downstream from Wildhorse Creek, and 15 miles northwest of Monticello, NM	403	1931-42 1958-71 1972-81	11-24-81 02-26-82 05-27-82 08-27-82	6.93 7.40 7.60 6.88
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, just below road crossing at Bottomless Lake State Roswell.	-	1976-81	12-16-81 01-29-82 04-08-82	4.6 5.0 3.7
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, above all diversions, 5.5 miles east of White City, NM.	-	1907 1919-20 1923 1935 1952-70 1974-81	01-14-82 03-17-82 06-29-82 09-16-82	18 13 12 12
Castle Springs 08405490	Black River	Lat 32°11'59", long 104°15'13", in SW¼SW¼SW¼ sec. 24, T.24 S., R.26 E., above mouth at Black River Village, Eddy County, 7.2 miles east of White City, NM.	-	1975-81	01-14-82 03-17-82 06-29-82 09-16-82	2.1 1.8 0.97 0.59
Gila River basin						
Mangas Creek a09431100	Gila River	Lat 32°50'48", long 108°30'57", in NW¼NE¼ sec.8, T.17 S., R.16 W., Grant County, 0.4 mile northwest	177	1972-81	10-15-81 11-06-81 12-09-81 01-13-82 02-09-82 03-24-82 06-09-82 07-14-82 08-11-82 09-14-82	3.80 3.41 4.20 4.30 4.73 3.79 2.78 3.37 4.03 3.99
Arkansas River basin						
Canadian River b07227140	Arkansas River	Lat 35°23'35", long 103°02'30", in SW° Sec.32, T.14 N., R.37 E., Quay County at New Mexico-Texas State Line 14.7 miles north of Glenrio, NM		1969-81	11-18-81 01-20-82 03-23-82 05-18-82 08-11-82	10.9 10.2 6.43 2.25 498

a Also a water-quality partial record station.

b Also a national stream-quality accounting network station.

Water-quality partial-record stations are particular sites where chemical-quality, biological and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected less than quarterly; usually one to three times a year. Under the heading SAMPLE SOURCE, numerical values are used to indicate method of sampling; 40 indicates single stage method.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

## RIO GRANDE BASIN

08405450 BLUE SPRINGS ABOVE DIVERSIONS, NM (LAT 32 11 07 LONG 104 16 50 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
MAR 17...	1500	13	1560	7.6	--	16.0
JUN 29...	1000	12	1580	7.7	30.0	20.0

## SAN JUAN RIVER BASIN

WESTWATER ARROYO AT SAN JUAN POWERPLANT, NM (LAT 36 47 37 LONG 108 25 47 10)  
(LOCAL IDENTIFIER-30N.15W.21.333)

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	
DATE	TIME									
FEB 19...	0945	4.7	6600	7400	7.3	6.5	6.0	18.5	.7	
AUG 10...	1130	2.2	10250	10900	8.9	7.6	30.5	28.0	4.2	
		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 ITFLD AS HCO3) (99440)	CAR- BONATE ITFLD AS CO3) (99445)
DATE										
FEB 19...	357	62	110	20	1500	36	8.1	380	.00	
AUG 10...	134	--	40	8.3	2600	102	9.0	380	26	

	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)	ALKA- LINTY 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 CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
DATE								
FEB 19...	360	295	3400	200	9.6	18	5770	5450
AUG 10...	--	--	5200	800	35	18	9240	--

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
FEB 19...	0945	3300	1400	350	110	120	58	75	29
AUG 10...	1130	12000	1200	320	90	60	39	72	29

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites. Under the heading SAMPLE SOURCE, numerical values are used to indicate method of sampling; 26 indicates by automatic pump, 29 indicates dip or grab, and 40 indicates single stage sample.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

 RIO GRANDE BASIN  
 RIO GALLINA NEAR GALLINA, NM (LAT 36 14 12 LONG 106 51 12 10)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L) AS (00900)	HARD- NESS, NONCAR- BONATE (MG/L) (00902)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)
SEP 10...	1230	560	599	8.0	8.0	21.0	18.5	12.5	284	99	94	12

DATE	TIME	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)	SULFATE SOLVED (MG/L) AS SO4 (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F (00950)	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- SOLVED (MG/L) AS N (00631)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L) AS P (00671)
SEP 10...	25	.7	1.2	120	2.7	.3	.55	12	379	<.10	.020	

DATE	TIME	ARSENIC DIS- SOLVED (UG/L) AS AS (01000)	BORON, DIS- SOLVED (UG/L) AS B (01020)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	LITHIUM DIS- SOLVED (UG/L) AS LI (01130)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	VANA- DIUM, DIS- SOLVED (UG/L) AS V (01085)
SEP 10...	1230	1	190	5	26	37	<.1	<1.0

## POLVADERA CREEK NEAR CANONES, NM (LAT 36 10 20 LONG 106 25 55 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
JUL 14...	1345	E.30	135	157	7.6	8.3	31.5	21.0	7.5

DATE	TIME	HARD- NESS (MG/L) AS (00900)	HARD- NESS, NONCAR- BONATE (MG/L) AS CA (00902)	CALCIUM 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 ITFLD (MG/L) AS HCO3 (99440)	CAR- BONATE ITFLD (MG/L) AS CO3 (99445)
JUL 14...	49	0	14	3.5	11	.7	1.9	70	.00	

DATE	TIME	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- SOLVED (MG/L) AS N (00631)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L) AS P (00671)
JUL 14...	13	1.6	.3	.02	51	134	.17	<.010	

DATE	TIME	ARSENIC DIS- SOLVED (UG/L) AS AS (01000)	BORON, DIS- SOLVED (UG/L) AS B (01020)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	LITHIUM DIS- SOLVED (UG/L) AS LI (01130)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	VANA- DIUM, DIS- SOLVED (UG/L) AS V (01085)
JUL 14...	1345	3	10	21	15	4	<.1	9.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
SAN JUAN RIVER BASIN - ContinuedPOWERPLANT ARROYO BELOW SAN JUAN POWERPLANT RESERVOIR, NM (LAT 36 47 06 LONG 108 26 26 10)  
(LOCAL IDENTIFIER-30N.15W.29.322)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
FEB 19...	1115	.23	5900	--	8.3	--	12.0	7.0	13.4	--	--
AUG 10...	1300	.54	5800	5850	8.4	8.2	35.0	25.0	8.1	2581	440

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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)
FEB 19...	--	--	--	--	240	.00	--	--	--	--	--
AUG 10...	360	700	6.1	10	220	5.0	3500	31	.5	1.6	5740

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SAMPLE SOURCE (72005)
FEB 19...	1115	--	--	--	--	--	13	57	29
AUG 10...	1300	400	240	60	80	60	27	87	29

09367700 ALAMO WASH NEAR TANNER LAKE, NM (LAT 36 14 07 LONG 108 10 52 00)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	BICAR- BONATE FETFLD (MG/L AS HCO3) (00440)	CAR- BONATE FETFLD (MG/L AS CO3) (00445)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)
OCT 02...	0800	E500	1400	7.3	440	0	361

DATE	TIME	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
OCT 02...	0800	620000	30000

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
 08319945 REDONDO CREEK NEAR JEMEZ SPRINGS, NM (LAT 35 52 34 LONG 106 37 50 00)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)	
SEP 09...	1115	.92	143	158	7.2	8.1	19.0	12.5	9.7	50	13	17	
DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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 AS N) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
		SEP 09...	1.8	10	.6	2.5	10	17	.1	<.01	29	110	<.10
DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)					
									SEP 09...	1115	1	220	330

08319950 SULFUR CREEK NEAR JEMEZ SPRINGS, NM (LAT 35 52 14 LONG 106 38 17 00)

		SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)											
DATE	TIME	STREAM- FLOW, INSTAN- TANEUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (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)	
SEP 09...	1000	.64	230	238	6.6	7.7	16.0	9.5	10.0	73	52	24	
DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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 AS N) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
SEP 09...	3.1	12	.6	1.2	62	15	.2	.07	32	163	<.10	.020	
		ARSENIC DIS- SOLVED (UG/L AS AS) (01000)											
		BORON, DIS- SOLVED (UG/L AS B) (01020)											
		IRON, DIS- SOLVED (UG/L AS FE) (01046)											
		LITHIUM DIS- SOLVED (UG/L AS LI) (01130)											
		MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)											
		MERCURY DIS- SOLVED (UG/L AS HG) (71890)											
		VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)											
SEP 09...	1000	1	210	71	62	280	<.1	<1.0					

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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RIO GRANDE BASIN - Continued  
COCHITI CREEK .8 MILE SOUTH OF TENT ROCK, NM (LAT 35 46 35 LONG 106 26 04 10)  
(LOCAL IDENTIFIER-18N.05E.20.34411)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)		
MAY 30...	1130	E3.0	92	124	7.7	8.0	36	0	11		
DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)		
MAY 30...		2.1	8.6	.6	2.4	8.0	2.0	55	119		
BERNALILLO ACEQUIA NEAR NORTH BOUNDARY OF SANDIA PUEBLO, NM (LAT 35 18 04 LONG 106 32 31 10)											
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)	
APR 16...	1300	3.6	418	432	7.9	8.1	19.0	20.0	9.3	25	
DATE	TIME	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 (MG/L AS HCO3) (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 16...	159	49	48	9.5	26	.9	3.3	130	98	6.3	
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) (70301)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	
APR 16...	.3	20	278	<.10	.110	.73	.080	3.2	.7		
DATE	TIME			BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)			
APR 16...	1300			40	<9	73	30	930			



ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
ALBUQUERQUE MAIN CANAL NEAR NORTH BOUNDARY OF SANDIA PUEBLO, NM (LAT 35 17 55 LONG 106 33 47 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
APR 14...	1230	121	407	374	7.7	8.4	23.5	12.5	10.4	26
DATE	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 (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 14...	148	38	45	8.7	23	.9	3.2	130	91	6.3
DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L AS (70301)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	
APR 14...	.4	20	264	<.10	.090	1.3	.130	2.8	1.1	
DATE				BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L AS N) (80154)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)		
APR 14...	1230		40	< 9	272	50	420			

SANDIA ACEQUIA NEAR NORTH BOUNDARY OF SANDIA PUEBLO, NM (LAT 35 17 38 LONG 106 33 31 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
APR 16...	1120	28	412	394	7.9	8.3	17.5	12.5	10.4	25	164
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 (MG/L AS K) (00935)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
APR 16...	54	50	9.5	22	.8	2.8	130	96	6.1	.3	
DATE		SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L AS N) (70301)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
APR 16...	21	274	.030	<.10	<.10	.160	.94	.150	3.3	1.2	
DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, 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)		
APR 16...	1120	3	2	200	100	30	< 30	< 3	10		

RIO GRANDE BASIN - Continued  
SANDIA ACEQUIA NEAR NORTH BOUNDARY OF SANDIA PUEBLO, NM (LAT 35 17 38 LONG 106 33 31 10)

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELENIUM, TOTAL (UG/L AS SE) (01147)
APR 16...	10	< 50	2	330	< 100	< 1	.1	< .1	< 1

DATE	SELENIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDIMENT, SUSPENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. 0.7 % FINER THAN (70331)	COLIFORM, FECAL, 0.7 UMMF (COLS./100 ML) (31625)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PHYTOPLANKTON, TOTAL (CELLS PER ML) (60050)
APR 16...	< 1	< 1	50	14	311	82	160	4700	190

PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO APRIL 1982

DATE	APR 16, 82
TIME	1120
TOTAL CELLS/ML	190
DIVERSITY: DIVISION	0.9
...CLASS	0.9
...ORDER	2.7
...FAMILY	2.9
...GENUS	3.2

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...ACHNANTHALES		
....ACHNANTHACEAE		
....ACHNANTHES	4	2
....COCCONEIS	3	2
..BACILLARIALES		
...NITZSCHIA	4	2
...NITZSCHIA		
...EPITHEMIALES		
...EPITHEMIALES		
....EPITHEMIA	6	3
..EUPODISCALES		
...COSCINODISCALES		
....CYCLOTELLA	57#	30
....STEPHANODISCUS	7	4
..FRAGILARIALES		
...FRAGILARIALES		
....DIATOMA	20	11
....FRAGILARIA	9	5
..NAVICULALES		
...CYMBELLACEAE		
....CYMBELLA	6	3
...GOMPHONEMACEAE		
....GOMPHONEMA	6	3
...NAVICULACEAE		
....NAVICULA	23	12
..SURIRELLALES		
...SURIRELLACEAE		
....SURIRELLA	6	3
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
...SCENEDESMACEAE		
....SCENEDESMUS	23	12
CYANOPHYTA (BLUEGREEN ALGAE)		
..CYANOPHYCEAE		
...NOSTOCALES		
...HAMMATOIDEACEAE		
....RAPHIIDIOPSIS	16	8

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
BERNALILLO RIVERSIDE DRAIN NEAR NORTH BOUNDARY OF SANDIA PUEBLO, NM (LAT 35 18 32 LONG 106 33 32 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)	
APR 14...	1035	383	439	417	7.8	8.7	21.5	11.0	9.4	31	
DATE	TIME	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 ITFLD AS HCO3 (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 14...	158	48	49	8.6	26	.9	3.1	140	92	7.8	
DATE	TIME	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 AS N) (70301)	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)	CARBON, ORGANIC SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	
APR 14...		.4	22	275	<.10	.070	.82	.220	2.7	1.8	
DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, 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)	
APR 14...	1035	3	2	100	82	40	<30	<3	10	<10	
DATE	TIME	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)
APR 14...	3	<50	1	150	<100	<1	.1	<.1	5	<1	
DATE	TIME	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML) (60050)	
APR 14...		<1	<1	40	<12	351	55	43	310	4900	

RIO GRANDE BASIN - Continued  
BERNALILLO RIVERSIDE DRAIN NEAR NORTH BOUNDARY OF SANDIA PUEBLO, NM (LAT 35 18 32 LONG 106 33 32 10)

PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO APRIL 1982

DATE	APR 14, 82
TIME	1035
TOTAL CELLS/ML	4900
DIVERSITY: DIVISION	1.3
..CLASS	1.3
...ORDER	2.7
...FAMILY	2.8
....GENUS	3.1

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...ACHNANTHALES		
....ACHNANTHACEAE		
....ACHNANTHES	140	3
....COCCONEIS	35	1
....RHOICOSPHENIA	35	1
..BACILLARIALES		
...NITZSCHIA	170	4
...EPISTEMIALES		
...EPISTEMIACEAE		
....EPISTEMIA	100	2
..EUPODISCALES		
...COSCIDINACEAE		
....CYCLOTELLA	2200#	44
....STEPHANODISCUS	70	1
..FRAGILARIALES		
...FRAGILARIA	350	7
...SYNEDRA	280	6
...SYNEDRA	100	2
..NAVICULALES		
...CYMBELLA	70	1
...NAVICULACEAE		
....NAVICULA	170	4
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	100	2
CHRYSOPHYTA		
..CHRYSOPHYCEAE		
...OCHROMONADALES		
...OCHROMONADACEAE		
....OCHROMONAS	170	4
CYANOPHYTA (BLUEGREEN ALGAE)		
..CYANOPHYCEAE		
...CHROOCOCCALES		
...CHROOCOCCACEAE		
....ANACYSTIS	70	1
...OSCILLATORIALES		
...OSCILLATORIA	350	7
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
...EUGLENACEAE		
....EUGLENA	310	6
PYRRHOPHYTA (FIRE ALGAE)		
..DINOPHYCEAE		
...DINOKONTAE		
...PERIDINIACEAE		
....PERIDINIUM	210	4

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%  
\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued

SANDIA ACEQUIA NEAR SOUTH BOUNDARY OF SANDIA PUEBLO, NM (LAT 35 12 52 LONG 106 35 41 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
APR 19...	0925	3.9	407	8.1	8.4	19.0	12.5	9.3	48	179
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 (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD SULFATE DIS- SOLVED (MG/L AS HCO3) (99440)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	
APR 19...	79	55	10	23	.8	3.6	140	100	5.6	
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 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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
APR 19...	.3	27	286	<.10	.090	1.6	.290	3.8	2.0	
DATE				BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)		
APR 19...	0925		30	1600	473	1400	9600			

BERNALILLO INTERIOR DRAIN NEAR BERNALILLO, NM (LAT 35 17 35 LONG 106 33 28 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)	
APR 16...	0945	.74	1220	1240	7.7	8.6	17.0	15.0	7.7	21	
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 (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS HCO3) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 16...	248	8	81	11	180	5.2	12	300	120	200	
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 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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	
APR 16...	1.2	59	809	<.10	.080	.71	.090	2.2	.6		

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

 RIO GRANDE BASIN - Continued  
 BERNALILLO INTERIOR DRAIN NEAR BERNALILLO, NM (LAT 35 17 35 LONG 106 33 28 10)

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML) (31673)
APR 16...	0945	360	26	6	100	180

## BERNALILLO RIVERSIDE DRAIN NEAR SOUTH BOUNDARY OF SANDIA PUEBLO, NM (LAT 35 15 58 LONG 106 35 35 10)

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
DATE	TIME									
APR 19...	1120	380	408	403	7.6	8.5	21.0	12.0	8.8	24
	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NONCAR- BONATE (MG/L AS CA) (00902)	CALCIUM DIS- SOLVED (MG/L AS MG) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS NA) (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 ITFLD (MG/L AS HCO3) (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 19...	157	47	48	9.1	25	.9	3.4	140	93	8.2

DATE	TIME	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 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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
APR 19...	.4	21	274	<.10	.110	.65	.160	2.7	.8	

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML) (31673)
APR 19...	1120	50	12	153	30	290

## 08329936 TAYLOR RANCH DRAIN AT ALBUQUERQUE, NM (LAT 35 08 56 LONG 106 42 03)

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	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)	
AUG 12...	2000	.97	80	87	7.3	6.7	21.0	58	33	0	
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)	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)
AUG 12...	12	.7	3.4	.3	1.9	10	1.2	.1	7.4	60	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
08329936 TAYLOR RANCH DRAIN AT ALBUQUERQUE, NM (LAT 35 08 56 LONG 106 42 03)

		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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
AUG 12...		.68	.70	.300	.260	1.7	.94	2.7	.180	16	.9
		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)
AUG 12...	2000	2	2	30	<1	<1	<10	<10	12	7	72
		LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
AUG 12...	24	<1	<1	.2	<1	<1	30	7	31	91	
		GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90) (80060)		
AUG 12...	2000	<1.3	4.2	3.0	7.7	2.8	7.4				
		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)	
AUG 12...	2000	<.10	<.01	.40	<.01	<.01	<.01	1.2	<.01	<.01	
		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 12...		<.01	<.10	.01	.01	.02	1.7	<.01	<.10	<.10	
		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 12...		<.10	<1	<.10	.23	<.01	.02	<.10	<.10	<.01	





ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued

08330680 AIRPORT DRAIN AT ALBUQUERQUE, NM (LAT 35 03 16 LONG 106 38 09 00)

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)
JUL 30...	<.01	<.01	<.01	<.01	<.01	<.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)
JUL 30...	<.01	<1	<.01	.19	<.01	<.01	<.10	<.10	<.01

08351500 RIO SAN JOSE AT CORREO, NM (LAT 34 58 05 LONG 107 11 11 00)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)
AUG 17...	1230	313	21.0

DATE	TIME	SEDI- MENT, SUS- PENDE (MG/L) (80154)
AUG 17...	1230	32500

ARENAL MAIN CANAL NEAR NORTH BOUNDARY OF ISLETA PUEBLO, NM (LAT 34 57 24 LONG 106 42 13 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
APR 19...	1345	30	410	435	7.7	8.3	26.0	16.5	9.6	38

DATE	TIME	HARD- NESS (MG/L 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 ITFLD (MG/L HCO3) (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 19...	162	52	50	9.0	28	1.0	3.6	140	92	9.6	

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) (70301)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
APR 19...	.4	21	280	<.10	.140	.67	.120	2.5	.3	

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
APR 19...	1345	50	<9	116	57	970

RIO GRANDE BASIN - Continued  
LOS PADILLAS DRAIN NEAR NORTH BOUNDARY OF ISLETA PUEBLO, NM (LAT 34 57 23 LONG 106 41 56 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)	
APR 09...	0935	2.1	860	877	7.8	7.9	13.5	11.5	5.0	56	
DATE	TIME	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 ITFLD AS HCO3 (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 09...	334	104	109	15	65	1.6	6.0	350	170	30	
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 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00605)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	
APR 09...		.6	33	568	.14	.100	.74	.030	4.2	.3	
DATE	TIME			BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)			
APR 09...	0935			130	<9	80	86	1800			

ISLETA LATERAL CANAL NEAR NORTH BOUNDARY OF ISLETA PUEBLO, NM (LAT 34 57 17 LONG 106 41 24 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
APR 09...	1115	42	452	432	7.7	8.5	17.0	11.5	9.5	51
DATE	TIME	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 ITFLD AS HCO3 (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
APR 09...	158	28	50	8.1	30	1.1	3.8	150	83	
DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS SIO2) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)
APR 09...	18	.4	22	294	<.10	<.060	.070	2.1	.5	
DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	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 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)	
APR 09...	1115	4	4	88	60	<30	<3	20	<10	

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

## RIO-GRANDE BASIN - Continued

ISLETA LATERAL CANAL NEAR NORTH BOUNDARY OF ISLETA PUEBLO, NM (LAT 34 57 17 LONG 106 41 24 10)

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
APR 09...	<50	1	<9	<100	<1	.2	<.1	<1	<1

DATE	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML) (60050)
APR 09...	<1	120	<12	100	78	140	2400	3800

## PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO APRIL 1982

DATE	APR 9,82
TIME	1115
TOTAL CELLS/ML	3800
DIVERSITY: DIVISION	0.4
..CLASS	0.4
...ORDER	1.2
....FAMILY	1.2
.....GENUS	2.0

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...ACHNANTHALES		
....ACHNANTHACEAE		
.....ACHNANTHES	35	1
.....COCCONEIS	35	1
...BACILLARIALES		
...NITZSCHIALES		
....NITZSCHIA	70	2
...EUPODISCALES		
...COSCONODISCACEAE		
....CYCLOTELLA	980#	26
....STEPHANODISCUS	2100#	55
...FRAGILARIALES		
...FRAGILARIALES		
....DIATOMA	170	5
...NAVICULALES		
...CYMBELLACEAE		
....CYMBELLA	35	1
...NAVICULACEAE		
....NAVICULA	140	4
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
...SCENEDESMACEAE		
....SCENEDESMUS	140	4
CRYPTOPHYTA (CRYPTOMONADS)		
..CRYPTOPHYCEAE		
...CRYPTOMONADALES		
...CRYPTOCHRYSIDACEAE		
....CHROOMONAS	100	3

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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RIO GRANDE BASIN - Continued

ATRISCO RIVERSIDE DRAIN NEAR NORTH BOUNDARY OF ISLETA PUEBLO, NM (LAT 34 57 10 LONG 106 41 07 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
APR 09...	1400	39	510	473	7.8	8.4	20.0	15.0	7.2	42

DATE	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 ITFLD AS HCO3 (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 09...	159	19	50	8.2	37	1.3	4.5	190	85	18

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 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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)
APR 09...	.5	24	312	<.10	.480	.46	.460	2.1	.2

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	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 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)
APR 09...	1400	5	5	120	90	<30	<3	10	<10

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
APR 09...	<50	<1	<9	<100	<1	.2	<.1	<1	<1

DATE	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML) (60050)
APR 09...	<1	30	38	51	63	79	1400	720

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
ATRISCO RIVERSIDE DRAIN NEAR NORTH BOUNDARY OF ISLETA PUEBLO, NM (LAT 34 57 10 LONG 106 41 07 10)

PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO APRIL 1982

DATE	APR 9, 82
TIME	1400
TOTAL CELLS/ML	720
DIVERSITY: DIVISION	0.0
..CLASS	0.0
...ORDER	1.8
....FAMILY	1.8
.....GENUS	2.0

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...BACILLARIALES		
....NITZSCHIA	100	14
...EUPODISCALES		
....CYCLOTELLA	390#	54
...MELOSIRA	29	4
...FRAGILARIALES		
....FRAGILARIA	29	4
...NAVICULACEAE		
....NAVICULA	120#	16
...SURIRELLALES		
....CYMATOPLEURA	29	4
....SURIRELLA	29	4

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%  
\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ALBUQUERQUE RIVERSIDE DRAIN NEAR NORTH BOUNDARY OF ISLETA PUEBLO, NM (LAT 34 56 45 LONG 106 40 42 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
APR 12...	0925	123	475	453	7.7	7.8	24.0	13.5	7.4	54

DATE	TIME	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 ITFLD (MG/L) AS (HCO3) (99440)	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)
APR 12...	163	33	51	8.6	31	1.1	4.0	160	89	14	

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) (70301)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L) AS C (00689)
APR 12...	.5	23	300	.13	.260	.84	.220	2.5	.8	

DATE	TIME	BORON, DIS- SOLVED (UG/L) AS B (01020)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)
APR 12...	0925	70	<9	124	110	2800

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
 ISLETA RIVERSIDE DRAIN NEAR SOUTH BOUNDARY OF ISLETA PUEBLO, NM (LAT 34 52 42 LONG 106 43 03 10)

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)	
DATE	TIME												
APR 13...	0930	5.8	525	508	7.8	8.3	25.5	13.0	8.2	51	193	33	
		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 ITFLD (MG/L AS HCO3) (99440)	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)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
DATE	TIME												
APR 13...	61	9.9	35	1.1	4.5	200	100	16	.5	25	348	.9	
						BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)			
						DATE	TIME						
APR 13...						0930	90	<9	100	220	2100		

## TOME DRAIN NEAR SOUTH BOUNDARY OF ISLETA PUEBLO, NM (LAT 34 52 34 LONG 106 40 40 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)	
APR 12...	1130	3.0	760	736	7.6	8.3	27.5	17.5	11.6	47	298	78	
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 ITFLD (MG/L AS HCO3) (99440)	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)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
APR 12...	98	13	56	1.5	5.9	320	130	30	.6	31	497	.2	
DATE	TIME					BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)			
APR 12...	1130					120	25	46	50	770			



ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
ICE CAVE POND NEAR GRANTS, NM (LAT 34 54 47 LONG 108 04 03 10)  
(LOCAL IDENTIFIER-08N.12W.23.213)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	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)
SEP 27...	1400	265	272	7.5	7.6	9.0	86	48	24	6.4
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS N) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
SEP 27...	14	.7	7.5	29	6.6	.2	21	185	12	
DATE				ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	
SEP 27...	1400		1	6	<1	<10	47	130		
DATE				LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	
SEP 27...		<1	10	<.1	<1	<1	<1	39		
DATE				GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS BETA, DIS- SOLVED (PCI/L AS CS137) (03515)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT90) (80050)	RADIUM 226, DIS- SOLVED (PCI/L METHOD (09511)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)		
SEP 27...	1400	<4.1	7.0	6.7	.05	.08				

RIO SAN JOSE 1.9 MILES WEST OF McCARTY, NM (LAT 35 03 48 LONG 107 42 33 10)  
(LOCAL IDENTIFIER-10N.08W.29.323)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)	
APR 26...	1300	4.8	1240	1300	8.6	8.6	22.5	14.5	9.9	21	
DATE		HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	AD- SORP- TION RATIO (00931)	SIUM, DIS- SOLVED (MG/L AS K) (00935)	BONATE ITFLD (MG/L AS HCO3) (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 26...	372	152	83	40	150	3.5	6.9	240	300	140	
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 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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	
APR 26...	.9	25	884	.95	.090	.68	.730	3.3	.3		

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
 RIO SAN JOSE 1.9 MILES WEST OF MCCARTY, NM (LAT 35 03 48 LONG 107 42 33 10)  
 (LOCAL IDENTIFIER-10N.08W.29.323)

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, 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)
APR 26...	1300	7	6	100	47	340	<30	<3	10	<10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)
APR 26...	1	<50	1	14	<100	<1	.1	<.1	8	4

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML) (60050)
APR 26...	3	<1	20	19	42	87	1	100	3500

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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)
APR 26...	1300	<25	1.0	<12	1.7	<11	1.6	.11	4.5

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
RIO SAN JOSE 1.9 MILES WEST OF McCARTY, NM (LAT 35 03 48 LONG 107 42 33 10)  
(LOCAL IDENTIFIER-10N.08W.29.323)

PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO APRIL 1982

DATE	APR 26, 82
TIME	1300
TOTAL CELLS/ML	3500
DIVERSITY: DIVISION	1.7
..CLASS	1.7
..ORDER	3.0
...FAMILY	3.0
....GENUS	3.2

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...ACHNANTHALES		
....ACHNANTHACEAE		
.....ACHNANTHES	230	7
.....COCCONEIS	300	9
...BACILLARIALES		
...NITZSCHIA	370	10
...EUPODISCALES		
...COSCIDINODISCACEAE		
...CYCLOTETRA	400	11
...FRAGILARIALES		
...FRAGILARIACEAE		
....DIATOMA	130	4
...NAVICULALES		
...NAVICULACEAE		
....CALONEIS	33	1
....NAVICULA	230	7
...SURIPELLALES		
...SURIPELLACEAE		
....SURIPELLA	100	3
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	130	4
CRYPTOPHYTA (CRYPTOMONADS)		
..CRYPTOPHYCEAE		
...CRYPTOMONADALES		
...CRYPTOCHRYSIDACEAE		
....CHROOMONAS	130	4
CYANOPHYTA (BLUEGREEN ALGAE)		
..CYANOPHYCEAE		
...CHROOCOCCALES		
...CHROOCOCCACEAE		
....ANACYSTIS	100	3
...OSCILLATORIALES		
...OSCILLATORIA	200	6
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
...EUGLENACEAE		
....EUGLENA	1100#	32

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

RIO SAN JOSE 3.2 MILES WEST OF ACOMITA, NM (LAT 35 03 28 LONG 107 37 43 10)  
(LOCAL IDENTIFIER-10N.08W.36.221)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
APR 26...	1500	4.6	1620	1640	9.0	9.1	27.5	16.0	14.2	23

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
 RIO SAN JOSE 3.2 MILES WEST OF ACOMITA, NM (LAT 35 03 28 LONG 107 37 43 10)  
 (LOCAL IDENTIFIER-10N.08W.36.221)

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 ITFLD (MG/L AS HCO3) (99440)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
APR 26...	458	198	96	53	220	4.6	6.4	230	480	160
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 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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	
APR 26...	1.0	18	1190	.22	.070	.57	.620	3.5	.2	
DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, 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)
APR 26...	1500	7	6	<100	45	400	<30	<3	10	<10
DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)
APR 26...	1	<50	1	<9	<100	<1	<.1	<.1	8	4
DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	COLI- FORM, FECAL, 0.7 UMMF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML) (60050)	
APR 26...	3	<1	120	<12	16	68	1	40	360	
DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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)	
APR 26...	1500	<33	.5	<14	.9	<13	.9	.10	4.7	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
RIO SAN JOSE 3.2 MILES WEST OF ACOMITA, NM (LAT 35 03 28 LONG 107 37 43 10)  
(LOCAL IDENTIFIER-10N.08W.36.221)

PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO APRIL 1982

DATE	APR 26, 82
TIME	1500
TOTAL CELLS/ML	360
DIVERSITY: DIVISION	1.4
..CLASS	1.4
..ORDER	2.8
...FAMILY	3.0
....GENUS	3.0

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...ACHNANTHALES		
...ACHNANTHACEAE		
....COCCONEIS	42	12
...EUPODISCALES		
...COSCINODISCACEAE		
....CYCLOTELLA	42	12
..NAVICULALES		
...GOMPHONEMACEAE		
....GOMPHONEMA	14	4
...NAVICULACEAE		
....NAVICULA	42	12
..RHIZOSOLENIALES		
...RHIZOSOLENIACEAE		
....RHIZOSOLENIA	14	4
..SURIRELLALES		
...SURIRELLACEAE		
....SURIRELLA	14	4
CRYPTOPHYTA (CRYPTOMONADS)		
..CRYPTOPHYCEAE		
...CRYPTOMONADALES		
...CRYPTOCHRYSIDACEAE		
....CHROOMONAS	14	4
CYANOPHYTA (BLUEGREEN ALGAE)		
..CYANOPHYCEAE		
...CHROOCOCCALES		
...CHROOCOCCACEAE		
....COCCOCHLORIS	84#	23
...OSCILLATORIALES		
...OSCILLATORIAACEAE		
....LYNGBYA	84#	23
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
...EUGLENACEAE		
....TRACHELOMONAS	14	4

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

ESCONDIDA LAKE NEAR ESCONDIDA, NM (LAT 34 07 17 LONG 106 53 20 10)  
(LOCAL IDENTIFIER-02S.01W.24.422)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	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)
AUG 06...	1045	1600	1610	8.3	7.6	25.5	386	174	92	38
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS N) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
AUG 06...	200		4.6	11	390	170	.5	29	1060	<.10

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Continued  
ESCONDIDA LAKE NEAR ESCONDIDA, NM (LAT 34 07 17 LONG 106 53 20 10)  
(LOCAL IDENTIFIER-02S.01W.24.422)

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
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AUG 06...	1045	3	120	<1	<10	2	<3
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DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
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AUG 06...		<1	15	.1	<1	<1	10
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DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90) (80050)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
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AUG 06...	1045	<23	<13	<13	.09	5.6
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RIO GRANDE AT PUEBLITO BRIDGE NEAR PUEBLITO, NM (LAT 34 07 15 LONG 106 53 13 10)  
(LOCAL IDENTIFIER-02S.01E.19.311)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	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)
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AUG 03...	1005	481	7.8	7.8	28.0	139	33	43	7.7
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DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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- SOLVED (MG/L AS N) (00631)
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AUG 03...	44	1.7	4.4	100	21	.5	19	308	1.0
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DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
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AUG 03...	1005	3	56	<1	<10	3	65
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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO GRANDE BASIN - Concluded  
RIO GRANDE AT PUEBLITO BRIDGE NEAR PUEBLITO, NM (LAT 34 07 15 LONG 106 53 13 10)  
(LOCAL IDENTIFIER-02S.01E.19.311)

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
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AUG 03...	<1	7	<.1	1	<1	10
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DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (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)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
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AUG 03...	1005	<8.1	4.7	4.6	.11	2.0
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SOTOL CREEK NEAR AGUIRRE SPRING, NM (LAT 32 22 02 LONG 106 33 29 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	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)
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FEB 19...	1200	.15	200	200	7.5	8.3	8.0	84	26	23	6.3
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DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
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FEB 19...	8.9	.4	.9	37	4.4	.3	20	132	136	<.09
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DATE	TIME	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
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FEB 19...	1200	<1	25	0	<1	10	8	<10
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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)	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)
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FEB 19...	<1	7	<1	<.1	<1	<1	140	<3
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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

579

PECOS RIVER BASIN  
BOTTOMLESS LAKES OVERFLOW NEAR BOTTOMLESS STATE PARK NEAR ROSWELL, NM (LAT 33 18 13 LONG 104 20 15 10)  
(LOCAL IDENTIFIER-12S.26E.04.410)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L CACO3) (00900)	HARD- NESS, NONCAR- BONATE AS (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED AS CA (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED AS MG (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED AS NA (MG/L AS NA) (00930)
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MAR 22...	1400	15500	7.8	18.0	3312	3182	980	210	2800
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DATE	TIME	SODIUM AD- SORP- TION RATIO (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS SO4) (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 AS SIO2) (MG/L AS N) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS N) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
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MAR 22...	22	14	2800	4500	1.9	20	11400	<.10
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DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
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MAR 22...	1400	2	100	<1	30	44	900
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DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
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MAR 22...	<1	80	<.1	<1	<1	290
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CASTLE SPRING ABOVE DIVERSION DAM AT MILE 15.4, NM (LAT 32 11 59 LONG 104 15 13 10)  
(LOCAL IDENTIFIER-24S.26E.24.441)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
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MAR 17...	1400	1.8	1890	7.8	17.0	22
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TULAROSA RIVER BASIN  
RIO LA LUZ ABOVE LA LUZ, NM (LAT 32 58 56 LONG 105 55 32 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
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JUN 10...	1430	2.4	1720	2210	8.2	7.8	26.0	812	656	220
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DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS SO4) (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 AS SIO2) (MG/L AS N) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS N) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
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JUN 10...	63	190	3.0	1.9	610	280	.4	13	1480	.59
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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

TULAROSA RIVER BASIN - Continued  
RIO LA LUZ ABOVE LA LUZ, NM (LAT 32 58 56 LONG 105 55 32 10)

		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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DATE	TIME							
JUN 10...	1430	<1	300	80	<1	10	2	20
	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
DATE								
JUN 10...	2	20	10	<.1	1	<1	2300	20

DOG CANYON CREEK AT MOUTH AT OLIVER LEE STATE PARK NEAR VALMONT, NM (LAT 32 44 58 LONG 105 54 45 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
JUN 10...	1210	.05	700	874	8.3	8.0	24.0	424	243	110	
DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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- SOLVED (MG/L AS N) (00631)
JUN 10...	36	29	.6	1.8	230	43	.3	14	574	<.10	
DATE	TIME	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)			
JUN 10...	1210	<1	42	40	<1	10	2	9			
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)	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)		
JUN 10...	3	30	9	<.1	1	<1	920	37			

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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SAN JUAN RIVER BASIN  
NAVAJO MINE 1973 RECLAMATION PLOT NEAR FRUITLAND, NM (LAT 36 40 42 LONG 108 27 14 10)  
(LOCAL IDENTIFIER-29N.15W.31.441)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	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)
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APR 23...	1500	250	275	7.5	7.7	96	31	4.5	10	.5
JUL 28...	0300	350	332	7.3	7.1	93	30	4.4	22	1.0

DATE	TIME	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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 SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
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APR 23...	9.3	88	--	17	2.5	.8	6.8	159	--	--
JUL 28...	14	110	.00	62	6.8	.8	6.4	213	257	--

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM 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)
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APR 23...	1500	20	--	10	--	190	<1	--	40	--
JUL 28...	0300	--	3	--	<1	210	--	<1	--	<10

DATE	TIME	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
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APR 23...	43	--	70000	49	37	--	2400	400	.6	--
JUL 28...	--	11	260000	50	--	<1	11000	200	--	--

DATE	TIME	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
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APR 23...	--	100	--	5	--	320	--	3570	99	--
JUL 28...	.9	--	<1	--	2	--	11	--	--	--

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SAN JUAN RIVER BASIN - Continued  
 SAN JUAN MINE 1977 GRADED PILE NEAR FRUITLAND, NM (LAT 36 46 31 LONG 108 25 08 10)  
 (LOCAL IDENTIFIER-30N.15W.33.214)

		SPE- CIFIC CON- DUCT- ANCE	SPE- CIFIC CON- DUCT- ANCE LAB	PH	PH LAB	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO		
DATE	TIME	(UMHOS) (00095)	(UMHOS) (90095)	(UNITS) (00400)	(UNITS) (00403)	(00900)	(00915)	(00925)	(00930)	(00931)		
OCT 02...	2030	600	625	6.9	7.9	200	67	7.9	53	1.7		
APR 23...	1500	610	620	7.4	7.8	106	36	3.9	86	3.8		
23...	1515	5000	4580	7.0	7.2	943	310	41	800	12		
SEP 12...	0450	700	761	6.5	8.1	103	35	3.7	120	5.4		
12...	0500	590	622	7.1	8.0	84	29	2.9	99	4.9		
DATE	TIME	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	CAR- BONATE FETFLD (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)	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)	
OCT 02...	15	--	--	--	330	33	4.2	.5	14	419	--	
APR 23...	8.7	150	--	--	--	160	4.9	.8	7.9	393	--	
23...	14	110	.00	--	--	2300	22	.5	6.7	3800	3600	
SEP 12...	7.1	210	.00	--	--	180	7.6	.9	9.3	492	--	
12...	6.5	200	.00	--	--	130	7.4	.9	11	393	--	
DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 02...	2030	170	30	260	4	180	410	480000	3000	160	12000	1100
APR 23...	1500	40	10	190	<1	90	180	170000	54	9	2700	16
23...	1515	5	10	290	<1	30	30	2800	80	3	120	60
SEP 12...	0450	100	20	240	<1	140	530	290000	54	330	5300	230
12...	0500	80	20	270	<1	140	480	290000	62	280	5000	220
DATE	TIME	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	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 .062 MM (70331)	SAMPLE SOURCE (72005)
OCT 02...	3.4	220	10	2500	37500	--	--	--	--	--	--	--
APR 23...	.5	200	2	880	5890	--	--	--	--	100	--	--
23...	.4	9	8	40	212	--	--	--	--	90	--	--
SEP 12...	1.8	270	11	1500	23300	78	89	96	100	--	40	40
12...	1.3	230	11	1500	22000	76	86	99	100	--	40	40

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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SAN JUAN RIVER BASIN - Continued  
SAN JUAN MINE 1974 RECLAMATION PLOT NEAR FRUITLAND, NM (LAT 36 46 37 LONG 108 25 10 10)  
(LOCAL IDENTIFIER-30N.15W.33.212)

		SPE- CIFIC CON- DUCT- ANCE	SPE- CIFIC CON- DUCT- ANCE	PH	PH	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO			
		(UMHOS) (00095)	(UMHOS) (90095)	(UNITS) (00400)	(UNITS) (00403)	(00900)	(00915)	(00925)	(00930)	(00931)			
OCT 02...	2000	500	495	7.1	7.5	125	39	6.7	47	1.9			
APR 23...	1500	5500	4800	8.0	7.7	378	110	25	1200	28			
23...	1515	1590	--	8.4	--	--	--	--	--	--			
JUL 30...	2230	1200	1180	6.9	7.5	123	37	7.5	240	9.8			
SEP 12...	0445	890	968	7.4	8.4	46	15	2.1	190	13			
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	CAR- BONATE FETFLD (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)	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)		
OCT 02...	22	--	--	250	8.0	15	.3	11	303	--			
APR 23...	13	140	.00	--	2300	54	1.1	6.3	3580	3850			
23...	--	190	--	--	--	--	--	--	--	--			
JUL 30...	16	220	.00	--	210	20	.9	17	979	--			
SEP 12...	5.8	190	.00	--	250	24	1.0	8.1	616	--			
DATE		TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 02...	2000	44	20	150	3	100	300	440000	140	140	10000	640	
APR 23...	1500	120	50	260	<1	260	1400	580000	40	<1	13000	20	
23...	1515	160	60	--	<1	200	940	--	--	<1	--	--	
JUL 30...	2230	100	70	280	<1	400	1300	900000	1200	560	28000	720	
AUG 21...	2300	--	--	--	--	--	--	--	--	--	--	--	
SEP 12...	0445	70	30	190	<1	190	730	420000	260	360	7100	8	
DATE		MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	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 .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70332)	SAMPLE SOURCE (72005)
OCT 02...	.5	80	3	2200	8680	41	50	76	--	99	100	--	--
APR 23...	1.4	13	50	3000	50200	--	--	--	--	100	--	--	--
23...	2.6	29	30	2100	161000	--	--	--	--	100	--	--	--
JUL 30...	4.2	76	37	4300	--	--	--	--	--	--	--	--	--
AUG 21...	--	--	--	--	89800	46	59	77	100	--	--	--	--
SEP 12...	1.6	330	19	1700	37600	73	87	99	100	--	--	40	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SAN JUAN RIVER BASIN - Continued  
CHACO RIVER AT HIWAY 371 BRIDGE NEAR LAKE VALLEY, NM (LAT 36 06 50 LONG 108 11 28 10)  
(LOCAL IDENTIFIER-22N.13W.26.2314)

DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	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)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G AS ZN) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
JUN 10...	1200	3	<1	20	<10	2	1100	<10	75	.01	<1	4

		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)
JUN 10...	1200	3	27	76	92	98	100
		GROSS ALPHA, BOTTOM MATERIAL, (UG/G AS UNAT) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS CS-137) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	RADIUM- 226, BOTTOM MATERIAL, (PCI/G RADON METHOD (CUSTOM EXTRACTION)	URANIUM, BOTTOM MATERIAL, (UG/G AS U) (CUSTOM EXTRACTION)	
DATE	TIME						
JUNE 10	1200	2.65	1.34	1.29	0.10	0.20	

KIM-ME-NI-OLI WASH 6.0 MILES EAST OF MILK LAKE, NM (LAT 35 55 04 LONG 108 07 34 10)  
(LOCAL IDENTIFIER-20N.12W.33.331)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)	
JUN 08...	1715	3.7	2200	2250	9.4	9.4	27.5	17.0	7.9	24	
DATE	TIME	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 HCO3) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
JUN 08...	35	0	10	2.3	470	36	2.3	73	200	660	
DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
JUN 08...	82	1.6	9.3	1410	<.10	.200	.70	.160	3.5	1.6	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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SAN JUAN RIVER BASIN - Continued  
KIM-ME-NI-OLI WASH 6.0 MILES EAST OF MILK LAKE, NM (LAT 35 55 04 LONG 108 07 34 10)  
(LOCAL IDENTIFIER-20N.12W.33.331)

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	
JUN 08...	1715	9000	2600	1	1	2	2	<100	<100	<10	10	
DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
JUN 08...	210	<1	<1	10	4	5	1	12	6	10000	2200	
DATE	TIME	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	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)	
JUN 08...	4	4	4	80	80	140	50	.1	<.1	7	6	
DATE	TIME	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	
JUN 08...	7	1	<1	<1	<1	<1	<1	640	590	3.6	40	
DATE	TIME	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. DIAM. % FINER THAN .062 MM (70331)	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)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML) (60050)	
JUN 08...	20	567	66	1	5	78	90	96	100	1000		
DATE	TIME	ARSENIC TOTAL FM BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	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 BA) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)		
JUN 08...	1715	8	<1	30	<10	2	2600	10	230	.01		
DATE	TIME	SELE- NIUM, TOTAL FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR) (80060)	RADIUM 226, DIS- SOLVED RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	
JUN 08...	<1	9	<35	19	<20	14	<19	13	.09	.7		



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SAN JUAN RIVER BASIN - Continued  
 KIM-ME-NI-OLI WASH 6.0 MILES EAST OF MILK LAKE, NM (LAT 35 55 04 LONG 108 07 34 10)  
 (LOCAL IDENTIFIER-20N.12W.33.331)

DATE	TIME	GROSS ALPHA, BOTTOM MATERIAL, (UG/G AS UNAT) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS CS-137) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	RADIUM- 226, BOTTOM MATERIAL, RADON METHOD (PCI/G) (CUSTOM EXTRACTION)	URANIUM, 226, BOTTOM MATERIAL, (UG/G AS U) (CUSTOM EXTRACTION)
JUNE 08	1715	3.50	1.22	1.18	0.27	0.29

## PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO JUNE 1982

DATE	JUN 8,82
TIME	1715
TOTAL CELLS/ML	1000
DIVERSITY: DIVISION	0.7
..CLASS	0.7
..ORDER	0.8
...FAMILY	0.8
....GENUS	0.8

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...EUPODISCALES		
...COSGINODISCAEAE		
....STEPHANODISCUS	14	1
..FRAGILARIALES		
...FRAGILARIACEAE		
....FRAGILARIA	28	3
..NAVICULALES		
...NAVICULACEAE		
....NAVICULA	14	1
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
...OOCYSTACEAE		
....OOCYSTIS	69	7
CYANOPHYTA (BLUEGREEN ALGAE)		
..CYANOPHYCEAE		
...OSCILLATORIALES		
...OSCILLATORIAEAE		
....OSCILLATORIA	900#	87
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
...EUGLENACEAE		
....TRACHELONAS	14	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%  
 \* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

KIM-ME-NI-OLI WASH AT KIM-ME-NI-OLI RUINS, NM (LAT 36 00 23 LONG 108 09 09 10)  
 LOCAL IDENTIFIER-21N.12W.31.414)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH LAB (UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
JUN 09...	1300	3.2	2240	2290	9.3	24.0	13.0	31	0	10

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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SAN JUAN RIVER BASIN - Continued  
KIM-ME-NI-OLI WASH AT KIM-ME-NI-OLI RUINS, NM (LAT 36 00 23 LONG 108 09 09 10)  
LOCAL IDENTIFIER-21N.12W.31.414)

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)	SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
JUN 09...	1.4	480	39	1.9	690	87	1.7	9.0	1460
				BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)		
		DATE	TIME						
	JUN 09...		1300	210	90	349	99		
	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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)	
JUN 09...	1300	<30	14	<20	<7.6	<19	<7.1	.12	.8
		GROSS ALPHA, BOTTOM MATERIAL, (UG/G AS UNAT) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS CS-137) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	RADIUM- 226, BOTTOM MATERIAL, RADON METHOD (PCI/G) (CUSTOM EXTRACTION)	URANIUM, BOTTOM MATERIAL, (UG/G AS U) (CUSTOM EXTRACTION)		
JUNE 09	1300	15.01	5.22	5.04	0.74	0.58			
KIM-ME-NI-OLI WASH 1.1 MILES SOUTH OF LAKE VALLEY, NM (LAT 36 04 32 LONG 108 08 58 10) (LOCAL IDENTIFIER-21N.12W.07.222)									
		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	
JUN 09...	1500	2.4	2660	2690	9.2	9.0	28.5	18.0	
	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L AS CA) (00300)	CALCIUM DIS- SOLVED (MG/L AS NA) (00915)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	
JUN 09...	8.0	40	15	570	3.8	340	53	800	110
	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	
JUN 09...	2.0	4.9	<.10	.470	1.1	.240	6.3	4.4	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
 WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

 SAN JUAN RIVER BASIN - Continued  
 KIM-ME-NI-OLI WASH 1.1 MILES SOUTH OF LAKE VALLEY, NM (LAT 36 04 32 LONG 108 08 58 10)  
 (LOCAL IDENTIFIER-12N.12W.07.222)

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	
JUN 09...	1500	21000	310	1	1	3	3	200	<10	<10	260	1	
DATE	TIME	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)
JUN 09...	<1	20	1	7	<1	23	6	22000	160	4	1	100	
DATE	TIME	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)
JUN 09...	80	300	10	.6	1.4	7	10	11	<1	<1	<1	<1	
DATE	TIME	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	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)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML) (60050)
JUN 09...	<1	680	7.9	70	10	774	97	76	93	99	100	790	
DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	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 SE) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)			
JUN 09...	1500	5	<1	60	10	9	4300	<10	250	.04			
DATE	TIME	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 RADON METHOD (PCI/L) (09511)			
JUN 09...	<1	23	<44	32	<24	32	<23	30	.11				
DATE	TIME	GROSS ALPHA, BOTTOM MATERIAL, (UG/G AS UNAT) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS CS-137) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	RADIUM- 226, BOTTOM MATERIAL, (PCI/G AS RADON METHOD (CUSTOM EXTRACTION)	URANIUM, BOTTOM MATERIAL, (UG/G AS U) (CUSTOM EXTRACTION)							
JUNE 09	1500	<6.51	<2.27	<2.21	0.35	0.46							

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

589

SAN JUAN RIVER BASIN  
KIM-ME-NI-OLI WASH 1.1 MILES SOUTH OF LAKE VALLEY, NM (LAT 36 04 32 LONG 108 08 58 10)  
(LOCAL IDENTIFIER-12N.12W.07.222)

PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO JUNE 1982

DATE	JUN 9,82
TIME	1500
TOTAL CELLS/ML	790
DIVERSITY: DIVISION	0.8
..CLASS	0.8
..ORDER	1.4
...FAMILY	1.4
....GENUS	1.4

ORGANISM	CELLS /ML	PER-CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...FRAGILARIALES		
...FRAGILARIACEAE		
....SYNEDRA	140#	18
...NAVICULALES		
...NAVICULACEAE		
....NAVICULA	430#	55
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
...OOCYSTACEAE		
....ANKISTRODESMUS	220#	27

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%  
\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

JUANS LAKE INLET NEAR LAKE VALLEY, NM (LAT 36 05 32 LONG 108 09 33 10)  
(LOCAL IDENTIFIER-22N.12W.31.343)

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (UMHOS) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
NOV 06...	1430	2230	2300	8.4	8.6	17.5	8.5	10.6	66	0	21	3.2
JUN 09...	1700	2900	2830	8.7	9.0	29.0	23.0	--	48	0	15	2.5

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE ITFLD (MG/L AS HCO3) (99440)	CAR-BONATE ITFLD (MG/L AS CO3) (99445)	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-SOLVED (MG/L AS N) (00631)
NOV 06...	470	26	3.7	410	16	670	97	1.8	<1.9	--	.18
JUN 09...	600	39	5.0	--	--	870	110	2.2	3.8	1830	--

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)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	PHYTO-PLANK-TON, TOTAL (CELLS PER ML) (60050)
NOV 06...	1430	--	190	<10	323	--
JUN 09...	1700	280	130	--	999	3000

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SAN JUAN RIVER BASIN - Continued  
JUANS LAKE INLET NEAR LAKE VALLEY, NM (LAT 36 05 32 LONG 108 09 33 10)  
(LOCAL IDENTIFIER-22N.12W.31.343)

		GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (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 06...	1430	<43	11	<20	9.7	<19	9.3	.09	2.1
JUN 09	1700	<59	<39	<24	32	<23	31	.06	1.6
		GROSS ALPHA, BOTTOM MATERIAL, (UG/G AS UNAT) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS CS-137) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT-90) (CUSTOM EXTRACTION)	RADIUM- 226, BOTTOM MATERIAL, RADON METHOD (PCI/G CUSTOM EXTRACTION)	URANIUM, BOTTOM MATERIAL (UG/G AS U) (CUSTOM EXTRACTION)
DATE	TIME								
JUNE 09	1700		14.02	6.21	6.00		0.36		0.50

PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO JUNE 1982

DATE TIME	JUN 9,82 1700
TOTAL CELLS/ML	3000
DIVERSITY: DIVISION	1.6
..CLASS	1.6
..ORDER	2.3
...FAMILY	2.3
....GENUS	2.5

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...BACILLARIALES		
....NITZSCHIA	290	10
...EUPODISCALES		
...COSCINODISCACEAE		
....CYCLOTELLA	220	8
..FRAGILARIALES		
...FRAGILARIAEAE		
....SYNEDRA	*	0
..NAVICULALES		
...NAVICULACEAE		
....FRUSTULIA	*	0
....NAVICULA	390	13
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
...OOCYSTACEAE		
....ANKISTRODESMUS	56	2
....KIRCHNERIELLA	*	0
...OOCYSTIS	110	4
..VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	56	2
..ZYGNEMATALES		
...DESMIDIACEAE		
....CLOSTERIUM	*	0
CYANOPHYTA (BLUEGREEN ALGAE)		
..CYANOPHYCEAE		
...CHROOCOCCALES		
...CHROOCOCCACEAE		
....ANACYSTIS	28	1
...OSCILLATORIALES		
...OSCILLATORIAEAE		
....OSCILLATORIA	1500#	52
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
...EUGLENACEAE		
....EUGLENA	56	2
....PHACUS	130	4
....TRACHELOMONAS	42	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%  
\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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SAN JUAN RIVER BASIN - Continued  
JUANS LAKE AT NORTH SHORE NEAR LAKE VALLEY, NM (LAT 36 05 22 LONG 108 10 18 10)  
(LOCAL IDENTIFIER-21N.13W.01.212)

DATE	TIME	SPE- CIFIC DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	HARD- (MG/L AS CACO3) (00900)	HARD- NESS, BONATE (MG/L CACO3) (00902)	CALCIUM SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, SOLVED (MG/L AS MG) (00925)
NOV 06...	1600	5600	4890	8.9	8.9	17.0	8.5	98	0	21	11
JUN 09...	1715	5950	5700	8.8	9.5	28.0	17.0	83	0	15	11

DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	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- SOLVED (MG/L AS N) (00631)
NOV 06...	1100	50	12	860	40	1600	250	4.2	2.0	3400	.18	
JUN 09...	950	47	7.6	--	--	1800	280	5.8	3.7	3520	--	

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)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML) (60050)
NOV 06...	1600	--	10	<10	551	--
JUN 09...	1715	560	170	--	540	3900

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L AS U) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L (22703)
NOV 06...	1600	<100	25	<49	17	<46	17	.08	4.6
JUN 09...	1715	<130	24	<66	16	<64	15	.13	6.0

DATE	TIME	GROSS ALPHA, BOTTOM MATERIAL, (UG/G AS UNAT) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS CS137) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT90) (CUSTOM EXTRACTION)	RADIUM- 226, BOTTOM MATERIAL, RADON METHOD (PCI/G) (CUSTOM EXTRACTION)	URANIUM, BOTTOM MATERIAL, (UG/G AS U) (CUSTOM EXTRACTION)
JUNE 09	1715	8.58	4.37	4.15	0.32	0.48

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SAN JUAN RIVER BASIN - Continued  
JUANS LAKE AT NORTH SHORE NEAR LAKE VALLEY, NM (LAT 36 05 22 LONG 108 10 18 10)  
(LOCAL IDENTIFIER-21N.13W.01.212)

PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO JUNE 1982

DATE	JUN 9,82
TIME	1715
TOTAL CELLS/ML	3900
DIVERSITY: DIVISION	1.0
..CLASS	1.0
...ORDER	1.0
...FAMILY	1.7
....GENUS	2.2
ORGANISM	CELLS PER- /ML CENT
BACILLARIOPHYTA (DIATOMS)	
..BACILLARIOPHYCEAE	
...NAVICULALES	
...NAVICULACEAE	
....NAVICULA	140 4
CHLOROPHYTA (GREEN ALGAE)	
..CHLOROPHYCEAE	
...CHLOROCOCCALES	
...DICTYOSPHAERIACEAE	
....DICTYOSPHAERIUM	1100# 29
...OOCYSTACEAE	
....ANKISTRODESMUS	1200# 31
....KIRCHNERIELLA	290 7
....OOCYSTIS	290 7
CYANOPHYTA (BLUEGREEN ALGAE)	
..CYANOPHYCEAE	
...CHROOCOCCALES	
...CHROOCOCCACEAE	
....ANACYSTIS	860# 22

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%  
\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

JUANS LAKE AT OUTFLOW AT LAKE VALLEY, NM (LAT 36 05 34 LONG 108 09 38 10)  
(LOCAL IDENTIFIER-22N.12W.31.341)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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 06...	1515	--	3880	3930	8.8	8.9	17.0	12.0	9.1	--	
JUN 10...	0945	.00	5600	5300	8.9	8.8	18.0	14.5	4.8	82	
DATE		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 ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 06...	90	0	23	7.8	860	41	10	680	32	1200	
JUN 10...	103	0	21	12	1200	53	10	750	61	1800	
DATE		CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS (70301)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)
NOV 06...	210	3.5	<1.9	--	.16	--	--	--	--	--	
JUN 10...	250	4.5	3.0	3720	<.10	.380	2.2	.250	13	11	



ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SAN JUAN RIVER BASIN - Continued  
JUANS LAKE AT OUTFLOW AT LAKE VALLEY, NM (LAT 36 05 34 LONG 108 09 38 10)  
(LOCAL IDENTIFIER-22N.12W.31.341)

		ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	
NOV 06... JUN 10...	1515 0945	-- 12000	-- 110	-- 1	-- 1	-- 5	-- 4	-- <100	-- <100	-- <10	
DATE	TIME	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
NOV 06... JUN 10...	-- <10	-- 520	-- <1	-- <1	-- 10	-- <1	-- 5	-- 1	-- 17	-- 3	
DATE	TIME	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
NOV 06... JUN 10...	-- 11000	-- 70	20 3	-- 2	-- 150	-- 140	-- 210	-- 10	<10 .2	-- <.1	
DATE	TIME	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)
NOV 06... JUN 10...	-- 26	-- 26	-- 11	-- 1	-- 1	-- 1	-- <1	-- <1	-- 1000	-- 960	
DATE	TIME	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	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)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML) (60050)
NOV 06... JUN 10...	-- 9.1	-- 40	-- 30	-- 382	463 98	-- 60	-- 82	-- 98	-- 100	-- 11000	
DATE	TIME	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 CU) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS SR) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	
NOV 06... JUN 10...	1515 0945	-- 4	-- <1	-- 60	-- 10	-- 7	-- 5000	-- <10	-- 150	-- .03	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SAN JUAN RIVER BASIN - Continued  
JUANS LAKE AT OUTFLOW AT LAKE VALLEY, NM (LAT 36 05 34 LONG 108 09 38 10)  
(LOCAL IDENTIFIER-22N.12W.31.341)

	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01093)	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) AS U) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L (22703)
NOV 06...	--	--	<67	21	<35	20	<33	20	.08	3.7
JUN 10...	<1	21	<100	21	<67	12	<64	12	.10	4.3
			GROSS ALPHA, BOTTOM MATERIAL, (UG/G AS UNAT) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS CS137) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT90) (CUSTOM EXTRACTION)		RADIUM- 226, BOTTOM MATERIAL, (PCI/G) RADON METHOD (CUSTOM EXTRACTION)		URANIUM, BOTTOM MATERIAL, (UG/G AS U) (CUSTOM EXTRACTION)	
DATE	TIME									
JUNE 10	0945		7.08	4.25	4.11		0.28		0.43	

PHYTOPLANKTON ANALYSES, OCTOBER 1981 TO JUNE 1982

DATE	JUN 10,82	
TIME	0945	
TOTAL CELLS/ML	11000	
DIVERSITY: DIVISION	0.9	
..CLASS	0.9	
..ORDER	1.0	
...FAMILY	2.2	
....GENUS	2.7	
ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...EUPODISCALES		
...COSCIDINODISCACEAE		
....CYCLOTELLA	580	5
...NAVICULALES		
...NAVICULACEAE		
....NAVICULA	230	2
...SURIPELLALES		
...SURIPELLACEAE		
....SURIPELLA	120	1
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
...DICTYOSPHAERIAEAE		
....DICTYOSPHAERIUM	4300#	38
...OOCYSTACEAE		
....ANKISTRODESMUS	1700	15
....KIRCHNERIELLA	520	5
....OOCYSTIS	810	7
...SCENEDESMACEAE		
....SCENEDESMUS	1300	11
....TETRASTRUM	690	6
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
...EUGLENACEAE		
....TRACHELOMONAS	1200	10

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## SAN JUAN RIVER BASIN - Continued

09367840 YAZZIE WASH NEAR MEXICAN SPRINGS, NM (LAT 35 50 40 LONG 108 53 00 00)

DATE	TIME	BED	BED	BED	BED	BED	BED
		MAT.	MAT.	MAT.	MAT.	MAT.	MAT.
		FALL	FALL	FALL	FALL	FALL	FALL
		DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.
		% FINER	% FINER	% FINER	% FINER	% FINER	% FINER
		THAN	THAN	THAN	THAN	THAN	THAN
		.062 MM (80158)	.125 MM (80159)	.250 MM (80160)	.500 MM (80161)	1.00 MM (80162)	2.00 MM (80163)
JUN							
29...	1145	10	35	85	97	100	--
29...	1150	6	13	29	36	--	--
29...	1155	32	56	87	95	97	100

	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN	BED MAT. SIEVE DIAM. % FINER THAN
DATE	1.00 MM (80168)	2.00 MM (80169)	4.00 MM (80170)	8.00 MM (80171)	16.0 MM (80172)	32.0 MM (80173)
JUN						
29...	--	--	--	--	--	--
29...	39	47	60	79	89	100
29...	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SAN JUAN RIVER BASIN - Concluded

KIM-ME-NI-OLI WASH AT HIWAY 57 CROSSING NEAR CROWNPOINT, NM (LAT 35 47 00 LONG 108 01 06 10)  
(LOCAL IDENTIFIER-18N.11W.21.111)

DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
JUN 08...	1145	8	<1	60	10	8	3400	<10	260	.03	<1	16

DATE	TIME	BED MAT. SIEVE DIAM. % FINER THAN (80164)	BED MAT. SIEVE DIAM. % FINER THAN (80165)	BED MAT. SIEVE DIAM. % FINER THAN (80166)	BED MAT. SIEVE DIAM. % FINER THAN (80167)	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)
JUN 08...	1145	.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM	2.00 MM	4.00 MM	8.00 MM	

DATE	TIME	GROSS ALPHA, BOTTOM MATERIAL, (UG/G AS UNAT) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS CS137) (CUSTOM EXTRACTION)	GROSS BETA, BOTTOM MATERIAL, (PCI/G AS SR/YT90) (CUSTOM EXTRACTION)	RADIUM- 226, BOTTOM MATERIAL, (UG/G AS U) (CUSTOM EXTRACTION)	URANIUM, BOTTOM MATERIAL, (UG/G AS U) (CUSTOM EXTRACTION)
JUNE 08	1145	<4.2	2.54	2.43	0.27	0.32

09367880 CATRON WASH NEAR MEXICAN SPRINGS, NM (LAT 35 46 15 LONG 108 49 40 00)

DATE	TIME	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. FALL DIAM. % FINER THAN (80162)	BED MAT. FALL DIAM. % FINER THAN (80168)	BED MAT. FALL DIAM. % FINER THAN (80169)	BED MAT. FALL DIAM. % FINER THAN (80170)	BED MAT. FALL DIAM. % FINER THAN (80171)	BED MAT. FALL DIAM. % FINER THAN (80172)
JUN 29...	1230	35	61	93	100	--	--	--	--	--	--
JUN 29...	1235	8	19	62	72	--	76	80	89	97	100
JUN 29...	1240	30	61	94	99	100	--	--	--	--	--

09395400 MILK RANCH CANYON NEAR FORT WINGATE, NM (LAT 35 25 55 LONG 108 33 30 00)

DATE	TIME	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. FALL DIAM. % FINER THAN (80162)	BED MAT. FALL DIAM. % FINER THAN (80168)	BED MAT. FALL DIAM. % FINER THAN (80169)	BED MAT. FALL DIAM. % FINER THAN (80170)	BED MAT. FALL DIAM. % FINER THAN (80171)	BED MAT. FALL DIAM. % FINER THAN (80172)	BED MAT. FALL DIAM. % FINER THAN (80173)
JUN 29...	1646	40	60	92	99	100	--	--	--	--	--	--
JUN 29...	1651	17	25	43	61	--	68	79	87	93	100	--
JUN 29...	1655	12	17	23	25	--	27	31	42	60	89	100

WAGON TRAIL WASH NEAR GAMERCO, NM (LAT 35 39 00 LONG 108 47 00 00)

DATE	TIME	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. FALL DIAM. % FINER THAN (80162)	BED MAT. FALL DIAM. % FINER THAN (80163)
JUN 29...	1430	27	64	98	100	--	--
JUN 29...	1435	26	42	85	94	95	96
JUN 29...	1440	27	60	98	100	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

597

LITTLE COLORADO RIVER BASIN  
CERRO POMO LAKE NEAR QUEMADO, NM (LAT 34 21 22 LONG 108 44 12 10)  
(LOCAL IDENTIFIER-02N.18W.33.131)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	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)
SEP 08...	1340	245	263	7.3	7.5	22.5	76	0	24	4.0
DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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- SOLVED (MG/L AS N) (00631)
SEP 08...	20	1.0	5.8	17	2.5	.4	10	145	.29	
DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)			
SEP 08...	1340	2	80	<1	<10	5	47			
DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)			
SEP 08...		<1	9	.3	<1	<1	15			
DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS BETA, DIS- SOLVED (PCI/L AS CS137) (03515)	GROSS BETA, DIS- SOLVED (PCI/L AS YT90) (80050)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L AS U) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L (22703)				
SEP 08...	1340	10	6.5	6.3	.11	2.4				

RADIOCHEMICAL ANALYSES OF ATMOSPHERIC PRECIPITATION

1206 FIELD DRIVE NE, ALBUQUERQUE, NM (LAT 35 05 35 LONG 106 32 40 00)

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TRITIUM IN WATER MOLE- CULES (TU) (07012)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU) (07013)
OCT 01-DEC 31	11.7	.7
JAN 01-MAR 31	79.4	4.2
APR 01-JUN 30	24.5	1.1
JUL 01-SEP 30	18.2	.9

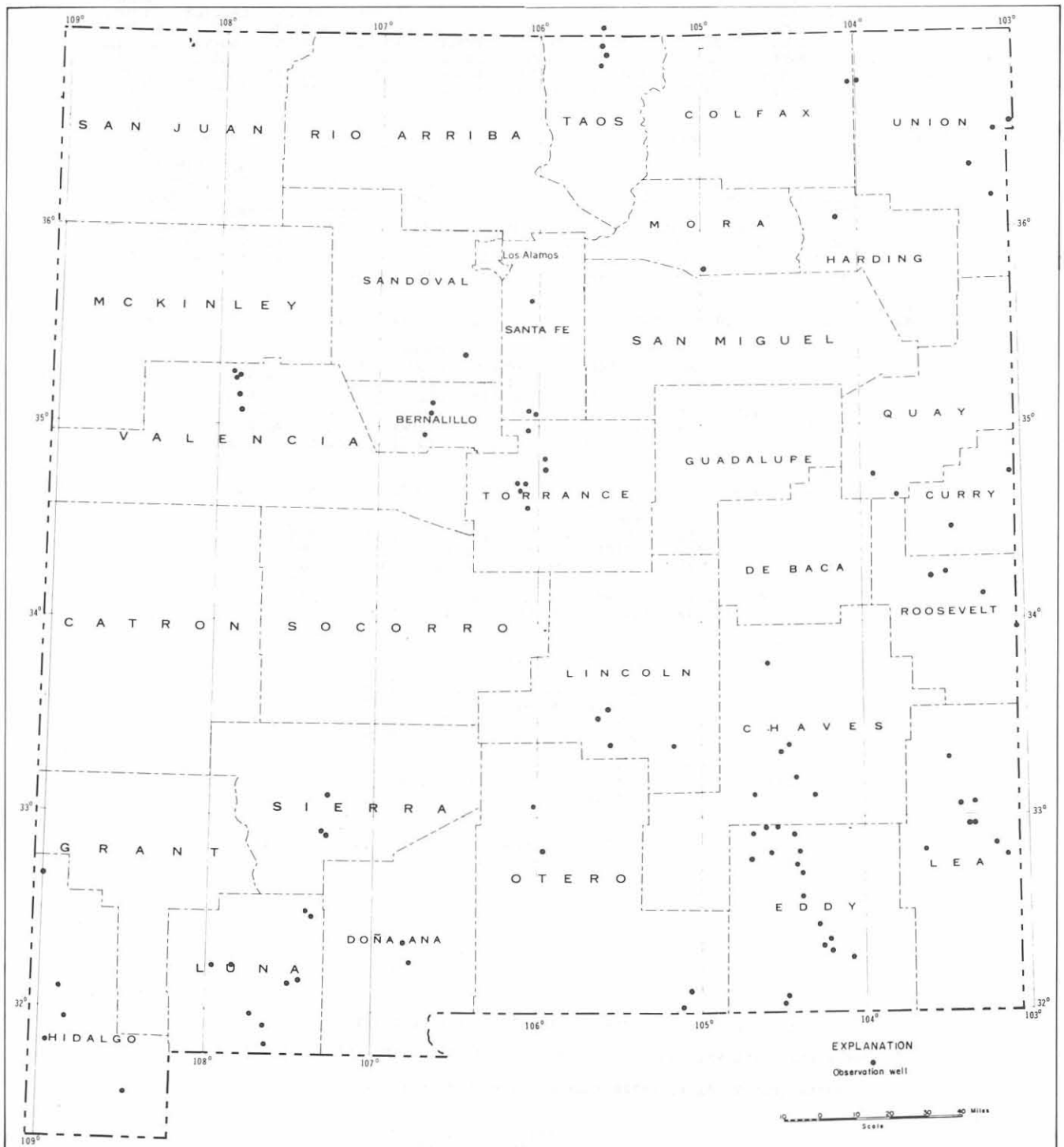


Figure 8.-- Map of New Mexico showing location of observation wells.

BERNALILLO COUNTY  
Albuquerque Area

345730106431001. Local number, 9N.2E.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 (0.30 m), depth unknown, cased to 12 ft (3.7 m).

DATUM.--Altitude of land-surface datum is 4,910 ft (1,497 m). Measuring point: Top of casing, 1.38 ft (0.42 m) above land-surface datum.

PERIOD OF RECORD.--July 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.22 ft (3.42 m) below land-surface datum, Aug. 10, 1973; lowest, 16.30 ft (4.97 m) below land-surface datum, Jan. 12, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 22	13.51
Sept. 9	12.67

350655106395001. Local number, 10N.2E.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 (0.15 m), depth 950 ft (290 m).

DATUM.--Altitude of land-surface datum is 4,962 ft (1,512 m). Measuring point: Top north side of casing, 6.00 ft (1.83 m) 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 (3.69 m) below land-surface datum, Apr. 16, 1953, lowest measured, 34.74 ft (10.59 m) below land-surface datum, Aug. 31, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 22	30.25
Sept. 9	31.56

350415106403001. Local number, 10N.2E.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 (0.15 m), depth and casing information not available.

DATUM.--Altitude of land-surface datum is 4,945 ft (1,507 m). Measuring point: Top east side of casing, 5.50 ft (1.68 m) above land-surface datum.

PERIOD OF RECORD.--Nov. 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.82 ft (3.91 m) below land-surface datum, Sept. 9, 1982; lowest measured, 27.05 ft (8.24 m) below land-surface datum, Aug. 12, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 22	13.03
Sept. 9	12.82

CHAVES COUNTY  
Roswell Basin

334645104344501. Local number, 7S.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 (0.36 m), depth 426 ft (130 m).

DATUM.--Altitude of land-surface datum is 3,810 ft (1,161 m). Measuring point: Lower outer edge of mouth of discharge pipe, 3.71 ft (1.13 m) above land-surface datum.

PERIOD OF RECORD.--May 1951-Mar. 1960, Jan. 1962-Jan. 1966, Jan. 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 239.83 ft (73.10 m) below land-surface datum, May 26, 1951; lowest, 290.80 ft (88.40 m) below land-surface datum, Aug. 21, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 to SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 18	286.76
Aug. 30	pumping



## GROUND-WATER LEVELS

CHAVES COUNTY  
Roswell Basin

332615104303601. Local number, 10S.24E.21.212.

LOCATION.--Lat 33°26'15", long 104°30'36", Hydrologic Unit 13060008.

Owner: U.S. Geological Survey.

AQUIFER.--San Andres Limestone.

WELL CHARACTERISTICS.--Drilled artesian observation well completed in San Andres Limestone, diameter 10 in (.25 m), depth 324 ft (98.8 m).

DATUM.--Altitude of land-surface datum is 3,580.65 ft (1,091 m). Measuring point: Top of recorder shelf, 3.60 ft (1.10 m) above land-surface datum.

PERIOD OF RECORD.--June 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.06 ft (1.85 m) below land-surface datum Jan. 19, 1946; lowest, 74.40 ft (22.68 m) below land-surface datum, July 30, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	60.12	57.96	56.48	--	53.89	54.82	59.05	62.69	64.13	64.39	67.33	67.52
10	59.52	57.71	56.11	--	53.62	55.23	60.14	61.99	65.81	66.19	67.73	68.05
15	59.18	57.42	55.91	--	53.58	55.44	61.00	63.17	65.70	--	67.13	67.84
20	59.27	57.20	55.57	54.35	53.86	57.08	61.82	63.08	64.60	--	67.81	66.66
25	58.47	56.81	55.41	54.20	54.18	58.03	62.52	62.58	65.17	--	67.98	65.58
eom	58.30	56.57	--	53.90	54.06	58.70	63.13	63.14	65.40	67.31	68.04	64.68

WTR YEAR 1982 MAX 53.53 Feb. 14, 1982 MIN 70.41 Sept. 21, 1982

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 (0.41 m), depth 160 ft (48.8 m), cased to 160 ft (48.8 m).

DATUM.--Altitude of land-surface datum is 3,535 ft (1,077 m). 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, 16.20 ft (4.94 m) below land-surface datum, Jan. 13, 1975; lowest measured, 21.72 ft (6.62 m) below land-surface datum, Aug. 26, 1980.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 19	18.93
Aug. 30	21.56

332200104270001. Local number, 12S.25E.9.422.

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 (0.25 m), reported depth 90 ft (27.4 m), cased to 90 ft (27.4 m).

DATUM.--Altitude of land-surface datum is 3,564 ft (1,086 m). Measuring point: Top of 3/4 in (1.9 cm) collar, 0.62 ft (0.19 m) above land-surface datum.

PERIOD OF RECORD.--May 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.64 ft (11.78 m) below land-surface datum, Oct. 16, 1941; lowest measured, 83.06 ft (25.32 m) below land-surface datum, Aug. 21, 1973.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 19	79.10
Aug. 30	78.78

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 (0.23 to 0.18 m), depth 930 ft (283 m), 9 in (0.23 m) casing 0-304 ft (0-93 m), 7 in (0.18 m) casing 304-714 ft (93-218 m).

DATUM.--Altitude of land-surface datum is 3,539 ft (1,079 m). Measuring point: Top of recorder shelf, 2.90 ft (0.88 m) above land surface datum.

PERIOD OF RECORD.--Jan. 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.55 ft (7.48 m) below land-surface datum, Feb. 5, 1975; lowest, 199.68 ft (60.86 m) below land-surface datum, June 20, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	--	37.21	31.29	--	26.62	48.74	110.84	107.87	136.01	110.62	138.76	115.45
10	--	36.31	31.19	--	27.35	63.66	111.90	85.05	143.14	131.19	130.02	127.81
15	--	34.99	32.17	--	27.57	70.60	110.90	106.61	128.96	125.02	122.56	124.97
20	41.86	34.92	30.49	27.43	33.26	89.32	111.91	113.14	109.27	128.51	138.83	108.45
25	39.74	33.16	28.82	27.53	43.45	110.49	118.03	112.93	129.30	130.62	136.51	98.11
eom	40.78	32.08	--	26.16	40.40	111.88	125.16	105.97	138.33	141.33	124.55	93.75

WTR YEAR 1982 MAX 25.42 Feb. 8, 1982 MIN 151.78 July 29, 1982

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 (0.18 m), total depth 231 ft (70.4 m), cased to total depth, perforated 105-231 ft (32.0-70.4 m).

DATUM.--Altitude of land-surface datum is 3,540 (1,079 m). Measuring point: Top of recorder shelf 2.90 ft (0.88 m) above land-surface datum.

PERIOD OF RECORD.--1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 102.79 ft (31.33 m) below land-surface datum, April 6 and 14, 1969; lowest 111.17 (33.88 m) below land-surface datum, Sept. 22, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	110.24	110.03	109.65	109.37	109.34	109.04	108.72	108.85	109.12	109.51	109.75	109.90
10	110.20	109.91	109.61	109.40	109.14	108.87	108.73	108.93	109.16	109.54	109.77	109.88
15	110.18	109.95	109.59	109.32	109.15	108.83	108.64	108.95	109.31	--	109.82	110.01
20	110.10	109.80	109.53	109.40	109.11	108.80	108.81	109.01	109.29	--	109.84	110.10
25	110.00	109.69	109.45	109.39	109.10	108.86	108.73	109.01	109.38	--	109.84	110.04
eom	110.15	109.72	109.50	109.23	109.04	108.75	108.86	109.18	109.44	109.67	109.88	110.12

WTR YEAR 1982 MAX 108.61 Apr. 6, 1982 MIN 110.26, Oct. 1, 1981

33100210427201. 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. (.25 m), depth 880 ft (268 m).

DATUM.--Altitude of land-surface datum is 3,523.76 ft (1,074 m). Measuring point: Top of recorder shelf 3.59 ft (1.09 m) above land-surface datum.

PERIOD OF RECORD.--1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.94 ft (3.9 m) above land-surface datum, Jan. 13, 1942; lowest, 198.30 ft (60.4 m) below land-surface datum, July 18, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	54.55	32.06	24.25	22.78	18.85	--	106.60	--	146.80	127.10	--	--
10	46.82	31.28	23.95	22.02	21.76	--	99.57	--	153.80	141.20	--	148.63
15	40.50	28.85	23.84	20.35	20.77	--	150.53	--	139.00	178.58	--	144.67
20	41.32	29.23	24.34	20.65	27.46	--	149.64	--	116.40	--	--	113.41
25	34.66	26.87	21.88	20.95	38.35	102.75	--	131.57	147.83	--	159.48	100.86
eom	33.10	25.33	22.41	18.66	35.10	98.28	--	120.65	150.00	--	145.08	97.89

WTR YEAR 1982 MAX 17.63 Feb. 8, 1982 MIN 186.60 July 16, 1982

330640104174501. Local number, 14S.26E.12.433b.

LOCATION.--Lat 33°06'40", long 104°17'45", Hydrologic Unit 13060007.

Owner: C. B. Donaghy.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 13 in (0.33 m), depth 125 ft (38.1 m), cased 0-125 ft (0-38.1 m), perforated 50-115 ft (15.2-35.1 m).

DATUM.--Land-surface datum is 3,396.4 ft (1,035.2 m) above mean sea level. 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 (3.81 m) below land-surface datum, Jan. 22, 1942; lowest measured, 23.77 ft (7.25 m) below land-surface datum, Aug. 25, 1967.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 19	20.18
Aug. 30	21.65

## GROUND-WATER LEVELS

CHAVES COUNTY  
Roswell Basin

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 (0.22 m), depth 910 ft (277 m), casing 0-548 ft (0-167 m).

DATUM.--Altitude of land-surface datum is 3,528.92 ft (1,076 m). Measuring point: Top of recorder shelf 3.15 ft (0.96 m) above land-surface datum.

PERIOD OF RECORD.--1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.27 ft (0.39 m) below land-surface datum, Jan. 22, 1982; lowest 102.30 ft (31.2 m) below land-surface datum, July 17, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	--	3.61	2.61	9.61	3.64	21.87	66.05	49.31	73.71	50.09	66.92	62.51
10	--	2.93	4.46	8.71	5.90	30.32	66.19	39.82	79.28	63.71	58.23	73.67
15	--	2.53	8.14	2.80	6.29	41.47	74.14	35.23	66.01	58.56	47.03	55.46
20	4.09	2.45	7.10	1.46	13.72	52.14	75.73	49.70	38.62	53.71	66.20	39.41
25	4.61	2.05	7.12	2.18	13.81	51.19	60.12	56.38	39.11	41.81	60.28	36.83
com	3.74	2.88	8.92	4.72	14.86	69.04	62.86	57.57	53.77	58.87	44.25	26.52

WTR YEAR 1982 MAX 1.27 Jan. 22, 1982

MIN 80.80 June 9, 1982

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 (0.41 m), depth 216 ft (65.8 m). DATUM.--Altitude of land-surface datum is 6,455 ft (1,967 m). Measuring point: Top of 1/2 in (1.3 cm) hole in pump base, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.18 ft (6.76 m) below land-surface datum, Feb. 21, 1952; lowest measured, 34.69 ft (11.57 m) below land-surface datum, Jan. 17, 1977.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 23	30.23
Sept. 7	30.55

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 (0.41-0.30 m), depth 158 ft (48.2 m), perforated to 58 ft (17.7 m).

DATUM.--Altitude of land-surface datum is 6,840 ft (1,975 m). Measuring point: Top of 1 in (2.5 cm) hole in pump base, 1.35 ft (0.41 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.86 ft (6.05 m) below land-surface datum, Feb. 20, 1953; lowest measured, 39.08 ft (11.91 m) below land-surface datum, Aug. 1, 1972.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 23	28.51
Sept. 7	28.59

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 (0.46 m), reported depth 205 ft (62.5 m), cased 0-150 ft (0-45.7 m), perforated 93-130 ft (28.4-39.6 m).

DATUM.--Altitude of land-surface datum is 6,552 ft (1,997 m). Measuring point: Lower edge of hole in north side of casing, 2.20 ft (0.67 m) 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 (19.95 m) below land-surface datum, Oct. 14, 1944; lowest measured, 107.61 ft (32.80 m) below land-surface datum, Aug. 6, 1975.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 23	90.04
Sept. 7	91.58

## GROUND-WATER LEVELS

603

CIBOLA COUNTY  
Grants-Bluewater Area

351650107535001. Local number, 12N.11W.9.424.

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 (0.41 m), reported depth 505 ft (154 m),

DATUM.--Altitude of land-surface datum is 6,642 ft (2,024 m). Measuring point: Top of casing, 3.05 ft (0.93 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 93.75 ft (28.58 m) below land-surface datum, May 10, 1946; lowest measured, 139.05 ft (42.38 m) below land-surface datum, Aug. 1, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST WATER LEVEL, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	109.54	--	110.57	110.56	110.67	110.39	110.45	110.00	109.18	108.21	107.48	106.94
10	109.67	--	110.60	110.79	110.64	110.54	110.41	109.79	108.95	108.13	107.40	106.75
15	109.71	--	110.55	110.72	110.66	110.31	110.23	109.72	108.73	107.90	107.28	106.78
20	109.93	110.32	110.58	110.67	110.76	110.45	110.24	109.73	108.62	107.65	107.22	106.79
25	109.73	110.11	110.49	110.90	110.59	110.47	110.16	109.58	108.58	107.69	107.10	106.72
eom	109.80	110.28	110.54	110.71	110.63	110.48	110.12	109.49	108.47	107.57	106.99	106.47

WTR YEAR 1982 MAX 106.47 Sept. 30, 1982 MIN 110.76 Feb. 20, 1982

WATER LEVEL, IN FEET BELOW LAND-SURFACE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 23	110.65
Sept. 7	106.98

351610107514501. 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 (0.10 m), depth 130 ft (39.6 m), surface casing 5 ft (1.5 m).

DATUM.--Land-surface datum is 6,605.4 ft (2,013.3 m). Measuring point: Top of 4 in (0.10 m) down spout, 3.70 ft (1.3 m) 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, 84.01 ft (25.61 m) below land-surface datum, Sept. 7, 1982; lowest measured, 101.39 ft (30.90 m) below land-surface datum, June 10, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 23	84.20
Sept. 7	84.01

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 (0.20 m), depth 120 ft (37 m), cased to 20 ft (6.10 m).

DATUM.--Land-surface datum is 6,821.5 ft (2,079.2 m) above mean sea level. Measuring point: Top of casing, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 1957-Feb. 1969, Feb. 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.65 ft (1.42 m) below land-surface datum, Feb. 3 and Aug. 24, 1960, lowest measured, 9.37 ft (2.86 m) below land-surface datum, Aug. 13, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 11	8.53
Sept. 1	9.10

## GROUND-WATER LEVELS

COSTILLA COUNTY (in Colorado)  
Sunshine Valley

375655105354001. Local number, 1N.74W.33.322.

LOCATION.--Lat 37°56'55", long 105°35'40", Hydrologic unit 13020101.

Owner: Waller and Allen.

AQUIFER.--Santa Fe Group.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 15 in (0.38 m), depth 232 ft (70.7 m), casing information not available.

DATUM.--Altitude of land-surface datum is 7,495 ft (2,284 m). Measuring point: Edge of hole inside pumpcase, 2.00 ft (0.60 m) 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 (31.03 m) below land-surface datum, Aug. 26, 1968; lowest measured, 139.24 ft (42.44 m) below land-surface datum, Sept. 2, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 18	136.48
Sept. 2	139.24

CURRY COUNTY  
Clovis area

342358103093601. Local number, 2N.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.

DATUM.--Altitude of land-surface datum is 4,227 ft (1,288 m). Measuring point: Top of concrete base 1.00 ft (0.3048 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 266.89 ft (81.34 m) below land-surface datum, Jan. 4, 1974; lowest measured, 287.45 ft (87.61 m) below land-surface datum, Aug. 31, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 11	281.20
Aug. 31	287.45

342815103270001. Local number, 3N.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 (0.41 m), depth 418 ft (127 m), cased to 418 ft (127 m), perforated 365-418 ft (111-127 m).

DATUM.--Altitude of land-surface datum is 4,432 ft (1,351 m). Measuring point: Top of casing, level with concrete base, 0.40 ft (0.12 m) 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 (103.82 m) below land surface datum, Mar. 16, 1957; lowest measured, 360.64 ft (109.92 m) below land-surface datum, July 23, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 11	351.77
Aug. 31	353.23

CURRY COUNTY  
Clovis Area

343743103201501. Local number, 5N.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 (0.41 m), depth 510 ft (155.44 m).

DATUM.--Altitude of land-surface datum is 4,632 ft (1,411.83 m). Measuring point: Top of 4 ft X 4 ft concrete pump base, 0.50 ft (0.15024 m) 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 (211.26 m) below land-surface datum, Jan. 6, 1971; lowest measured, 448.41 ft (136.67 m) below land-surface datum, Jan. 6, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 9	445.82
Sept. 1	445.09

343615103123801. Local number, 5N.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 (0.41 m), depth 527 ft (160.62 m).

DATUM.--Altitude of land-surface datum is 4,504 ft (1,372.81 m). Measuring point: Top of casing 0.50 ft (0.15024 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 376.40 ft. (114.72 m) Mar. 26, 1954; lowest measured, 439.08 ft (133.83 m) Sept. 1, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 9	438.40
Sept. 1	439.08

344500103032001. Local number, 6N.37E.8.333.

LOCATION.--Lat 34°45'00", long 103°05'20", Hydrologic Unit 11120101.

Owner: Paul Harrison.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 16 in (0.41 m), depth 400 ft (121 m), casing information not available.

DATUM.--Altitude of land-surface datum is 4,430 ft (1,340 m). Measuring point: Southeast anchor bolt hole, 0.10 ft (0.03 m) above concrete base and 0.70 ft (0.21 m) above land surface datum.

PERIOD OF RECORD.--Jan. 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 289.30 ft (88.13 m) below land-surface datum, Jan. 3, 1975; lowest measured, 295.98 ft (89.97 m) below land-surface datum, Aug. 15, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 8	290.30
Sept. 1	289.88

DONA ANA COUNTY  
Rincon and Mesilla Valleys

322210106483001. Local number, 22S.1E.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 (0.46 m), depth 107 ft (32.6 m), cased to 107 ft (32.6 m).

DATUM.--Altitude of land-surface datum is 3,920 ft (1,195 m). Measuring point: Top of east side of casing, 1.50 ft (0.46 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.12 ft (3.07 m) below land-surface datum, Jan. 27, 1977; lowest measured, 25.57 ft (7.79 m) below land-surface datum, Apr. 25, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 12	14.00
Sept.	not measured

## GROUND-WATER LEVELS

DONA ANA COUNTY  
Rincon and Mesilla Valleys

321620106461501. Local number, 23S.2E.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 (0.36 m), reported depth 70 ft (21.3 m), cased to 70 ft (21.3 m).

DATUM.--Altitude of land-surface datum is 3,880 ft (1,183 m). Measuring point: Top of 5/8 in (0.63 cm) hole in pumpbase, 1.08 ft (0.33 m) 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 (4.31 m) below land-surface datum, Feb. 10, 1948; lowest measured, 29.12 ft (8.88 m) below land-surface datum, Jan. 7, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 12	24.55
Sept.	not measured

EDDY COUNTY  
Roswell Basin

325735104360701. Local number, 16S.24E.4.23123.

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 (186 m).

DATUM.--Altitude of land-surface datum is 3,623 ft (1,104 m). Measuring point: southwest side of pump, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 85.96 ft (26.20 m) below land-surface datum Jan. 21, 1982; lowest measured, 100.54 ft (30.64 m) below land-surface datum, Aug. 27, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 21	85.96
Aug. 30	pumping

325638104274801. Local number, 16S.25E.11.113A.

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 (0.18 m), depth 171 ft (52 m), casing 0-171 ft (0.52 m), perforated 94-170 ft (29-51.8 m).

DATUM.--Altitude of land-surface datum is 3,450 ft (1,052 m). Measuring point: Top of recorder shelf 3.00 ft (0.91 m) above land-surface datum.

PERIOD OF RECORD.--1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.90 ft (12.16 m) below land-surface datum, Feb. 18, 1966; lowest measured, 62.66 ft (19.11 m) below land-surface datum, Aug. 26, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	58.34	57.24	56.38	55.69	55.07	55.22	55.53	56.18	56.42	57.05	57.86	58.57
10	58.18	57.08	56.27	55.62	55.00	55.42	55.66	56.20	56.46	57.19	57.98	58.66
15	57.99	56.92	56.16	55.42	54.99	55.56	55.84	56.28	56.56	57.30	58.11	58.79
20	57.84	56.75	56.03	55.16	55.04	55.45	56.05	56.24	56.61	57.43	58.24	58.89
25	57.71	56.54	55.95	55.12	55.16	55.46	56.15	56.23	56.76	57.56	58.34	58.92
eom	57.41	56.46	55.85	55.05	55.17	55.52	56.23	56.36	56.89	57.73	58.45	58.96

WTR YEAR 1982 MAX 54.98 Feb. 14, 1982 MIN 58.99 Sept. 6, 1982



## GROUND-WATER LEVELS

607

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 (0.30 m), depth 107 ft (32.6 m) cased to 107 ft (32.6 m).

DATUM.--Land-surface datum is 3,397.9 ft (1,035.7 m) above mean sea level. Measuring point: Hole in top of pump, west side, 0.30 ft (0.09 m) 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 (2.85 m) below land-surface datum, Jan. 15, 1942; lowest measured, 110.68 ft (33.73 m) below land-surface datum, Sept. 16, 1980.

## WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 21	101.42
Aug. 30	pumping

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 (0.30 m), depth 242 ft (73.8 m), cased to 242 ft (73.8 m).

DATUM.--Altitude of land-surface datum is 3,373 ft (1,028 m). Measuring point: 3/4 in (1.9 cm) plug on discharge pipe, 2.00 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1938-Jan. 1945, Jan. 1947-Aug. 1958, Jan. 1960-Jan. 1963, Jan. 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.23 ft (13.18 m) below land-surface datum, Jan. 13, 1955; lowest measured, 109.80 ft (33.47 m) below land-surface datum, Aug. 12, 1981.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 21	92.20
Aug. 30	106.09

324624104244501. Local number, 18S.26E.6.442a.

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 (0.23 m), depth 1,008 ft (307 m), cased to 726 ft (221 m).

DATUM.--Land-surface datum is 3402.10 ft (1036.96 m) above mean sea level. Measuring point: Top of recorder shelf, 3.40 ft (1.04 m) above land-surface datum.

REMARKS.--Depth to artesian aquifers 768 ft (234 m), 820 ft (250 m), 889 ft (271 m), and 999 ft (305 m).

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 71.79 ft (21.88 m) below land-surface datum, Jan. 26, 1962; lowest, 209.15 ft (63.75 m) below land-surface datum, July 31-Aug. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST WATER LEVEL, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	118.75	104.33	--	--	--	--	134.33	128.22	150.44	147.19	174.19	158.28
10	114.99	103.26	--	--	--	--	143.27	120.74	151.60	152.18	174.21	165.04
15	112.23	102.57	--	--	--	--	150.58	120.13	148.91	146.00	174.21	163.67
20	110.06	100.98	--	--	--	--	150.17	126.32	151.90	146.91	165.30	149.73
25	107.92	99.24	--	--	--	--	141.66	134.84	158.78	158.69	162.46	141.01
eam	106.09	97.20	--	--	--	--	138.84	139.38	164.96	169.44	156.50	135.85

WTR YEAR 1982 MAX 97.11 Dec. 1, 1981

MIN 174.30 Aug. 4, 1982

## GROUND-WATER LEVELS

EDDY COUNTY  
Roswell Basin

324620104255101. Local number, 18S.26E.06.422b.

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 (0.18 m), depth 246 ft (75 m), casing 0-246 ft (0-75 m).

DATUM.--Altitude of land-surface datum is 3,042 ft (927 m). Measuring point: Top of recorder shelf 2.70 ft (0.82 m) above land-surface datum.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 106.83 ft (32.56 m) below land-surface datum, Jan. 7, 1974; lowest measured, 140.36 ft (42.78 m) below land-surface datum, Oct. 2, 1977.

WATER LEVEL IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	132.75	128.10	124.21	121.13	118.96	117.35	124.12	130.60	133.21	136.52	137.56	138.95
10	131.94	127.28	123.61	120.82	118.33	117.61	125.82	130.77	133.97	136.76	137.97	138.77
15	131.07	126.67	123.07	120.38	117.94	118.16	127.02	130.69	134.34	136.68	138.47	139.31
20	130.29	125.98	122.54	119.98	117.90	119.58	128.47	130.83	135.05	136.54	138.89	139.50
25	129.29	125.10	122.11	119.59	117.78	121.15	128.97	131.34	135.43	136.67	139.06	139.19
eom	128.96	124.70	121.61	119.10	117.55	122.86	130.16	132.25	136.25	137.21	139.09	138.59

WTR YEAR 1982 MAX 117.16 Mar. 2, 1982 MIN 139.50 Sept. 20, 1982

324325104233001. Local number, 18S.26E.28.121a.

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 (0.20 m), depth 250 ft (76.2 m), cased to 182 ft (55.5 m), casing slotted 92-182 ft (28.0-55.5 m).

DATUM.--Altitude of land-surface datum is 3,403 ft (1,037 m). Measuring point: Top of casing, 0.06 ft (0.02 m) above land-surface datum.

PERIOD OF RECORD.--Aug. 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.79 ft (18.22 m) below land-surface datum, Feb. 5, 1952; lowest, 124.87 ft (38.06 m) below land-surface datum, Feb. 25, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	120.42	120.47	120.46	120.51	120.54	124.76	123.98	124.06	119.72	119.73	120.66	120.81
10	120.44	120.44	120.46	120.63	120.44	124.77	124.04	--	119.73	119.75	120.63	120.77
15	120.45	120.47	120.49	--	120.44	124.75	124.03	--	119.72	119.76	120.65	120.79
20	120.39	120.46	120.48	120.49	124.79	124.81	124.03	119.68	119.76	120.63	120.53	120.87
25	120.23	120.36	120.44	120.45	124.87	124.87	123.93	119.66	119.74	120.61	121.27	120.72
eom	120.58	120.46	120.51	120.43	124.77	124.03	124.06	119.69	119.74	120.62	120.83	120.86

WTR YEAR 1982 MAX 119.66 May 21, 1982 MIN 124.87 Feb. 25, 1982

## Carlsbad Area

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 (0.51 m), depth 327 ft (100 m), casing 0-290 ft (0-88.4 m).

DATUM.--Altitude of land-surface datum is 3,121.84 ft (951.5 m). Measuring point: Top of recorder shelf 4.14 ft (1.26 m) above land-surface datum.

PERIOD OF RECORD.--April 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.23 ft (5.25 m) below land-surface datum, Jan. 9 and Feb. 15, 1975; lowest measured, 26.07 ft (7.95 m) below land-surface datum, Aug. 2, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	22.37	22.32	22.38	--	22.17	22.37	23.15	23.01	23.36	23.28	23.70	23.90
10	22.25	22.32	22.26	--	22.04	22.83	23.36	22.91	23.88	23.37	23.76	23.86
15	22.45	22.27	22.23	--	22.01	23.05	23.28	23.00	23.58	23.43	23.78	23.95
20	22.51	22.32	22.27	--	22.16	23.54	23.57	23.21	23.38	23.78	23.89	23.72
25	22.28	22.15	--	22.21	22.36	23.75	23.14	23.12	23.58	23.91	24.17	23.53
eom	22.38	22.20	--	22.10	22.25	23.39	23.30	23.00	23.85	23.90	24.14	23.54

WTR YEAR 1982 MAX 21.99 Feb. 14, 1982 MIN 24.23 Aug. 29, 1982

## GROUND-WATER LEVELS

609

EDDY COUNTY  
Roswell Basin

324620104255101. Local number, 18S.26E.06.422b.

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 (0.18 m), depth 246 ft (75 m), casing 0-246 ft (0-75 m).

DATUM.--Altitude of land-surface datum is 3,042 ft (927 m). Measuring point: Top of recorder shelf 2.70 ft (0.82 m) above land-surface datum.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 106.83 ft (32.56 m) below land-surface datum, Jan. 7, 1974; lowest measured, 140.36 ft (42.78 m) below land-surface datum, Oct. 2, 1977.

WATER LEVEL IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	132.75	128.10	124.21	121.13	118.96	117.35	124.12	130.60	133.21	136.52	137.56	138.95
10	131.94	127.28	123.61	120.82	118.33	117.61	125.82	130.77	133.97	136.76	137.97	138.77
15	131.07	126.67	123.07	120.38	117.94	118.16	127.02	130.69	134.34	136.68	138.47	139.31
20	130.29	125.98	122.54	119.98	117.90	119.58	128.47	130.83	135.05	136.54	138.89	139.50
25	129.29	125.10	122.11	119.59	117.78	121.15	128.97	131.34	135.43	136.67	139.06	139.19
eom	128.96	124.70	121.61	119.10	117.55	122.86	130.16	132.25	136.25	137.21	139.09	138.59

WTR YEAR 1982 MAX 117.16 Mar. 2, 1982 MIN 139.50 Sept. 20, 1982

324325104233001. Local number, 18S.26E.28.121a.

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 (0.20 m), depth 250 ft (76.2 m), cased to 182 ft (55.5 m), casing slotted 92-182 ft (28.0-55.5 m).

DATUM.--Altitude of land-surface datum is 3,403 ft (1,037 m). Measuring point: Top of casing, 0.06 ft (0.02 m) above land-surface datum.

PERIOD OF RECORD.--Aug. 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.79 ft (18.22 m) below land-surface datum, Feb. 5, 1952; lowest, 124.87 ft (38.06 m) below land-surface datum, Feb. 25, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	120.42	120.47	120.46	120.51	120.54	124.76	123.98	124.06	119.72	119.73	120.66	120.81
10	120.44	120.44	120.46	120.63	120.44	124.77	124.04	--	119.73	119.75	120.63	120.77
15	120.45	120.47	120.49	--	120.44	124.75	124.03	--	119.72	119.76	120.65	120.79
20	120.39	120.46	120.48	120.49	124.79	124.81	124.03	119.68	119.76	120.63	120.53	120.87
25	120.23	120.36	120.44	120.45	124.87	124.87	123.93	119.66	119.74	120.61	121.27	120.72
eom	120.58	120.46	120.51	120.43	124.77	124.03	124.06	119.69	119.74	120.62	120.83	120.86

WTR YEAR 1982 MAX 119.66 May 21, 1982 MIN 124.87 Feb. 25, 1982

## Carlsbad Area

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 (0.51), depth 327 ft (100 m), casing 0-290 ft (0-88.4 m).

DATUM.--Altitude of land-surface datum is 3,121.84 ft (951.5 m). Measuring point: Top of recorder shelf 4.14 ft (1.26 m) above land-surface datum.

PERIOD OF RECORD.--April 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.23 ft (5.25 m) below land-surface datum, Jan. 9 and Feb. 15, 1975; lowest measured, 26.07 ft (7.95 m) below land-surface datum, Aug. 2, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	22.37	22.32	22.38	--	22.17	22.37	23.15	23.01	23.36	23.28	23.70	23.90
10	22.25	22.32	22.26	--	22.04	22.83	23.36	22.91	23.88	23.37	23.76	23.86
15	22.45	22.27	22.23	--	22.01	23.05	23.28	23.00	23.58	23.43	23.78	23.95
20	22.51	22.32	22.27	--	22.16	23.54	23.57	23.21	23.38	23.78	23.89	23.72
25	22.28	22.15	--	22.21	22.36	23.75	23.14	23.12	23.58	23.91	24.17	23.53
eom	22.38	22.20	--	22.10	22.25	23.39	23.30	23.00	23.85	23.90	24.14	23.54

WTR YEAR 1982 MAX 21.99 Feb. 14, 1982 MIN 24.23 Aug. 29, 1982

## GROUND-WATER LEVELS

EDDY COUNTY  
Carlsbad Area

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 (0.30 m), reported depth 305 ft (93 m).

DATUM.--Altitude of land-surface datum is 3,112 ft (949 m). Measuring point: Top of casing, 0.40 ft (0.12 m) above land-surface datum.

PERIOD OF RECORD.--Oct. 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.64 ft (1.41 m) below land-surface datum, Jan. 17, 1950; lowest measured, 17.35 ft (5.29 m) below land-surface datum, Aug. 9, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 19	13.08
Aug. 19	not measured

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 (0.22-.14 m), reported depth 1,060 ft (323 m), plugged back total depth 906 ft (276 m).

DATUM.--Altitude of land-surface datum is 3,181.71 ft (907 m). Measuring point: Top of casing 1.64 ft (0.50 m) above land-surface datum.

PERIOD OF RECORD.--1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 89.72 ft (27.3 m) below land-surface datum, Jan. 9 and Feb. 10, 1975; lowest measured, 98.68 ft (30.1 m) below land-surface datum, Aug. 3, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	94.85	94.65	94.65	94.43	94.36	94.56	95.38	--	95.58	95.49	--	96.18
10	94.67	94.59	94.54	94.54	94.20	94.84	95.59	--	96.02	95.65	--	96.16
15	94.87	94.60	94.56	94.44	94.21	95.09	95.49	--	95.79	95.62	--	96.19
20	95.04	94.57	94.47	94.43	94.33	95.59	--	95.42	95.56	95.97	96.16	96.07
25	94.67	94.36	94.53	94.46	94.55	95.83	--	95.37	95.78	--	96.47	--
eom	94.80	94.49	94.51	94.29	94.48	95.58	--	95.26	96.05	--	96.37	--

WTR YEAR 1982 MAX 94.10 Feb. 8, 1982 MIN 96.56 Aug. 28, 1982

322120104151501. Local number, 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 (0.30m), depth 260 ft (79.3 m), cased to 260 ft (79.3 m).

DATUM.--Altitude of land-surface datum is 3,225 ft (983 m). Measuring point: Top of recorder platform, 2.70 ft (0.83 m) above land-surface datum.

PERIOD OF RECORD.--July 1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 131.50 ft (40.08 m) below land-surface datum, Oct. 14, 1942; lowest, 214.82 ft (65.47 m) below land-surface datum, Sept. 15, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	175.57	--	167.79	164.71	163.55	164.20	169.97	173.82	175.78	179.69	181.81	182.92
10	175.24	--	167.18	164.51	163.08	164.54	171.31	173.31	176.06	179.78	181.71	182.92
15	174.66	--	166.66	163.99	163.07	165.00	172.56	172.88	176.63	179.79	181.89	183.46
20	173.85	--	166.13	163.72	163.60	166.21	173.89	173.12	177.70	180.26	182.51	184.01
25	173.05	--	165.65	163.45	163.97	167.68	174.33	174.16	178.64	180.97	182.90	183.84
eom	172.56	--	165.15	163.60	164.20	169.14	174.25	175.37	179.50	181.71	182.92	183.24

WTR YEAR 1982 MAX 163.02 Feb. 14, 1982 MIN 184.11 Sept. 21, 1982

322231104131001. Local number, 22S.27E.22.421.

LOCATION.--Lat 32°22'31", long 104°31'10", Hydrologic Unit 13060011.

Owner: Enea Grandi.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 16 in (0.41 m), reported depth 150 ft (45.7 m).

DATUM.--Altitude of land-surface datum is 3,100 ft (945 m). Measuring point: Top of casing, 1.20 ft (0.37 m) above land-surface datum.

PERIOD OF RECORD.--Sept. 1947-Aug. 1968, Jan. 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.43 ft (6.53 m) below land-surface datum, Sept. 15, 1950; lowest measured, 81.10 ft (24.65 m) below land-surface datum, Aug. 8, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 19	50.15
Aug. 19	55.47

## GROUND-WATER LEVELS

611

EDDY COUNTY  
Carlsbad Area

320257104295201. Local number, 26S.24E.9.441.

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 (0.30 m), depth 100 ft (30.5 m), cased to 85 ft (25.9 m).

DATUM.--Land-surface datum is 3,749.4 ft (1,142.8 m) above mean sea level. Measuring point: Top of air-line flange support, 1.40 ft (0.43 m) above land-surface datum.

PERIOD OF RECORD.--Apr. 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.08 ft (12.22 m) below land-surface datum, Jan. 26, 1982; lowest measured, 54.98 ft (16.76 m) below land-surface datum, Sept. 8, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 26	40.08
Aug. 19	43.53

## HARDING COUNTY

360340104085001. Local number, 21N.26E.3.4443.

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 (0.13 m), depth 120 ft (36.3 m), cased to 120 ft (36.3 m).

DATUM.--Altitude of land-surface datum is 5,870 ft (1,777 m). Measuring point: Top of 5 in (0.13 m) galvanized casing, 0.30 ft (0.09 m) 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 (25.27 m) below land-surface datum, Jan. 28, 1976; lowest measured, 84.45 ft (25.74 m) below land-surface datum, Sept. 3, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 2	83.60
Sept. 1	83.53

HIDALGO COUNTY  
Virden Valley

324053108594101. Local number, 19S.21W.3.414.

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 (0.51 m), depth 72 ft (22.0 m).

DATUM.--Altitude of land-surface datum is 3,750 ft (1,143 m). Measuring point: Hole inside pumpshell, 0.90 ft (0.27 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.27 ft (2.82 m) below land-surface datum, Jan. 12, 1979; lowest measured, 14.54 ft (4.43 m) below land-surface datum, Sept. 12, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Dec. 11	10.44
Aug. 4	13.38

## 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 (0.41 m), depth 358 ft (109 m), cased to 358 ft (109 m).

DATUM.--Altitude of land-surface datum is 4,420 ft (1,347 m). Measuring point: Top edge of 1 1/4 in (3.16 cm) pipe in concrete pump base, 1.25 ft (0.38 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 132.12 ft (40.27 m) below land-surface datum, Jan. 19, 1950; lowest measured, 198.50 ft (60.34 m) below land-surface datum, Aug. 1, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Dec. 28	191.40
Aug. 4	188.80

## GROUND-WATER LEVELS

HIDALGO COUNTY  
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 (0.41 m), depth 654 ft (199 m), 16 in (0.41 m) casing.

DATUM.--Altitude of land-surface datum is 4,400 ft (1,341 m). Measuring point: Bottom edge of shelf, 4.05 ft (1.23 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.66 ft (13.61 m) below land-surface datum, Apr. 18-20, and 30, 1973; lowest, 54.95 ft (16.74 m) below land-surface datum, Sept. 4, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 4	47.32
Aug. 7	not measured

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 (0.38 m), depth 87 ft (26.5 m).

DATUM.--Altitude of land-surface datum is 4,150 ft (1,265 m). Measuring point: Top of concrete pump base, 0.80 ft (0.24 m) above land-surface datum.

PERIOD OF RECORD.--May 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.57 ft (9.01 m) below land-surface datum, May 24, 1949; lowest measured, 34.03 ft (10.34 m) below land-surface datum, Aug. 9, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 6	32.81
Aug. 31	32.48

330325103245501. Local number, 14S.35E.33.433.

LOCATION.--Lat 33°03'25", long 103°24'55", Hydrologic Unit 12.

Owner: W. A. Anderson.

AQUIFER.--Ogallala Formation of Pliocene Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 62 ft (18.9 m), not cased.

DATUM.--Land-surface datum is 4,013.61 ft (1,223.35 m) above mean sea level. Measuring point: Top of concrete collar on well, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--Nov. 1929 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.65 ft (12.09 m) below land-surface datum, May 21, July 25, 1951 and Jan. 9, May 24, 1952; lowest measured, 46.84 ft (14.28 m) below land-surface datum, Aug. 13, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 5	45.85
Aug. 31	44.56

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 (0.41 m), depth and casing information not available.

DATUM.--Altitude of land-surface datum is 3,990 ft (1,216 m). Measuring point: Top of concrete pump base, 0.50 ft (0.15 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1949-Jan. 1950, Jan. 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.38 ft (15.9 m) below land-surface datum, Jan. 19, 1949, lowest measured, 70.07 ft (21.36 m) below land-surface datum, Jan. 14, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 5	66.70
Aug. 31	66.78



LEA COUNTY  
Tatum-Lovington-Hobbs Area

325703103213201. Local number, 16S.36E.4.322.

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 (0.33 m), depth 212 ft (64.6 m), perforated 80-208 ft (24.4-63.4 m).

DATUM.--Altitude of land-surface datum is 3,926 ft (1,197 m). Measuring point: Top of shelf, 4.00 ft (1.22 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 64.28 (19.59 m) below land-surface datum, May 26, 1982; lowest measured, 67.11 ft (20.46 m) below land-surface datum, Aug. 24, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	65.19	65.07	64.95	64.88	--	64.42	64.37	64.30	64.30	64.29	64.42	--
10	65.13	65.06	64.95	--	--	64.42	64.34	64.31	64.30	64.29	--	--
15	65.13	65.05	64.87	--	--	64.40	64.36	64.30	64.30	64.30	--	--
20	65.12	64.96	64.95	--	--	64.41	64.33	64.30	64.31	64.31	--	--
25	65.09	64.95	64.93	--	64.44	64.40	64.31	64.30	64.30	64.31	--	--
ecm	65.09	64.95	64.90	--	64.43	64.40	64.34	64.30	64.29	64.41	--	--

WTR YEAR 1982 MAX 64.28 May 26, 1982 MIN 65.20 Oct. 1, 1981

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 (0.41 m), reported depth 118 ft (36.0 m).

DATUM.--Altitude of land-surface datum is 3,900 ft (1,189 m). Measuring point: Top of 1 in (2.54 cm) hole in southwest side of pump, 1.34 ft (0.41 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.93 ft (9.73 m) below land-surface datum, Jan. 23, 1949; lowest measured, 78.64 ft (23.96 m) below land-surface datum, Jan. 3, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 6	74.90
Aug. 31	72.21

325132103112501. Local number, 17S.38E.7.111a.

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 (0.41 m), reported depth 125 ft (38.1 m).

DATUM.--Altitude of land-surface datum is 3,740 ft (1,140 m). Measuring point: Edge of small pipe projecting from west side of pump, 0.96 ft (0.29 m) above concrete pump base, and 1.91 ft (0.58 m) 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 (10.85 m) below land-surface datum, Mar. 21, 1952; lowest measured, 74.15 ft (22.60 m) below land-surface datum, July 22, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 5	69.03
Aug. 31	72.85

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 (0.30 m), depth 125 ft (38.1 m), cased to 90 ft (27.4 m).

DATUM.--Altitude of land-surface datum is 3,660 ft (1,116 m). Measuring point: Top of 1/2 in (1.3 cm) hole in pump base, 0.54 ft (0.16 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.78 ft (7.55 m) below land-surface datum, Jan. 15, 1944; lowest measured, 57.67 ft (17.58 m) below land-surface datum, Aug. 31, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 5	56.44
Aug. 31	57.67



## GROUND-WATER LEVELS

LINCOLN COUNTY  
Hondo Valley

333015105382201. Local number, 9S.13E.25.113.

LOCATION.--Lat 33°30'15", long 105°38'22", Hydrologic Unit 13060008, 0.4 mi (0.6 km) 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 (0.20 m), depth 90 ft (27.4 m), cased to 40 ft (12.1 m).

DATUM.--Altitude of land-surface datum is 6,750 ft (2,057 m). 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 (5.05 m) below land-surface datum, Nov. 25, 1958; lowest measured, 44.36 ft (13.52 m) below land-surface datum, Aug. 13, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 3	29.40
Aug. 30	not measured

333242105340701. Local number, 9S.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 (0.20 m), depth 324 ft (98.8 m), cased to 271 ft (82.6 m).

DATUM.--Altitude of land-surface datum is 6,340 ft (1,932 m). Measuring point: Top of breather hole on west side of pump base, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.34 ft (11.38 m) below land-surface datum, Aug. 30, 1979; lowest measured, 69.77 ft (21.27 m) below land-surface datum, Nov. 28, 1956.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 3	38.56
Aug. 30	39.22

332157105094101. Local number, 11S.18E.16.444.

LOCATION.--Lat 33°21'57", long 105°09'41", Hydrologic Unit 13060008, 0.4 mi (0.6 km) south of Picacho Bridge on east side of Casey Canyon Road.

Owner: Lincoln County Livestock Co.

AQUIFER.--Yeso Formation of Permian Age.

WELL CHARACTERISTICS.--Drilled domestic and stock water-table well, diameter 12 in (0.30 m), depth 125 ft (38.1 m), cased to 110 ft (33.5 m).

DATUM.--Altitude of land-surface datum is 5,010 ft (1,526 m). Measuring point: Top of casing, 0.5 ft (0.15 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.02 ft (13.68 m) below land-surface datum, Jan. 25, 1977; lowest measured, 60.18 ft (18.34 m) below land-surface datum, Jan. 15, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 3	45.12
Aug. 30	51.25

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 (0.41 m), depth 435 ft (133 m), cased to 435 ft (133 m).

DATUM.--Altitude of land-surface datum is 4,530 ft (1,381 m). Measuring point: Hole in NE side of pump shell, 1.60 ft (0.49 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 102.06 ft (31.11 m) below land-surface datum, Jan. 17, 1962; lowest measured, 169.44 ft (51.64 m) below land-surface datum, Aug. 3, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 16	167.94
Aug.	not measured

## GROUND-WATER LEVELS

612

LUNA COUNTY  
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 (0.91 m), reported depth 132 ft (40.2 m).

DATUM.--Altitude of land-surface datum is 4,330 ft (1,319 m). Measuring point: Top of recorder shelter shelf, 1.36 ft (0.42 m) above land-surface datum.

PERIOD OF RECORD.--Apr. 1939 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 71.61 ft (23.66 m) below land-surface datum, May 6-13, 1940; lowest, 113.30 ft (34.53 m) below land-surface datum, Aug. 12 and 20, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	--	--	--	--	--	--	99.24	101.16	101.53	102.38	--	--
10	--	--	--	--	--	--	99.54	101.30	101.49	102.37	--	--
15	--	--	--	--	--	--	99.57	101.44	101.46	102.26	--	--
20	--	--	--	--	--	97.77	99.88	101.63	101.47	--	--	--
25	--	--	--	--	--	98.65	100.84	101.59	102.42	--	--	--
com	--	--	--	--	--	99.08	101.03	101.65	102.40	--	--	--

WTR YEAR 1982 MAX 97.52 Mar. 16, 1982 MIN 102.48 June 22, 1982

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 (0.30 m), reported depth 210 ft (64.0 m), cased to 198 ft (60.4 m).

DATUM.--Altitude of land-surface datum is 4,405 ft (1,343 m). Measuring point: Top of 1 in (2.54 cm) hole in pump base, 0.80 ft (0.24 m) above land-surface datum.

PERIOD OF RECORD.--July 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 107.66 ft (32.82 m) below land-surface datum, Jan. 23, 1952; lowest measured, 228.00 ft (69.31 m) below land-surface datum, May 11, 1956.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 19	170.10
Aug. 3	not measured

321015107260501. Local number, 25S.6W.2.111.

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 (0.41 m), depth 235 ft (71.6 m), perforated 180-235 ft (54.9-71.6 m), gravel packed.

DATUM.--Altitude of land-surface datum is 4,220 ft (1,282 m). Measuring point: Top of casing, 1.30 ft (0.40 m) above land-surface datum.

PERIOD OF RECORD.--May 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.45 ft (0.14 m) below land-surface datum, Mar. 14, 1953; lowest measured, 117.66 ft (35.86 m) below land-surface datum, Aug. 6, 1980.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 19	53.06
Aug. 6	55.37

320915104294501. Local number, 25S.6W.7.211.

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 (0.41 m), depth 230 ft (70.1 m), cased to 230 ft (70.1 m).

DATUM.--Land-surface datum is 4,084.22 ft (1,244.87 m) above mean sea level. Measuring point: Hole in pump base, 1.20 ft (0.37 m) 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 (19.92 m) below land-surface datum, Mar. 14, 1953; lowest measured, 122.16 ft (37.23 m) below land-surface datum, Aug. 13, 1970.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 15	91.34
Aug. 6	91.40

## GROUND-WATER LEVELS

LUNA COUNTY  
Mimbres Valley

315525107374501. Local number, 27S.8W.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 in (0.30 m) to 8 in (0.20 m), depth 550 ft (168 m), cased to 550 ft (168 m), perforated 155-550 ft (47-168 m).

DATUM.--Altitude of land-surface datum is 4,070 ft (1,241 m). Measuring point: Top of casing, 0.20 ft (0.06 m), above land-surface datum.

PERIOD OF RECORD.--July 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.84 ft (6.35 m) below land-surface datum, Mar. 16, 1953; lowest measured, 119.34 ft (36.37 m) below land-surface datum, Aug. 3, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 13	91.05
Aug. 5	114.80

315905107425001. Local number, 27S.9W.1.431

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 (0.41 m), depth 62 ft (18.9 m), cased to 62 ft (18.9 m).

DATUM.--Altitude of land-surface datum is 4,135 (1,260 m). Measuring point: Top edge of rectangular hole in pump base, 0.65 ft (0.20 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.61 ft (9.33 m) below land-surface datum, Jan. 19, 1954; lowest measured, 47.26 ft (14.36 m) below land-surface datum, Aug. 11, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 23	38.89
Aug. 5	38.36

314938107371401. Local number, 28S.8W.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 (0.41 m), depth 250 ft (76.2 m), cased to 250 ft (76.2 m).

DATUM.--Altitude of land-surface datum is 4,008 ft (1,222 m). Measuring point: Top of casing, 1.85 ft (0.56 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.04 ft (2.76 m) below land-surface datum, Aug. 3, 1981; lowest measured, 27.85 ft (8.49 m) below land-surface datum, Jan. 14, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 7	9.78
Aug. 5	9.14

## MORA COUNTY

354840104590301. Local number, 18N.18E.1.333.

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 (0.36 m), depth 100 ft (30.5 m).

DATUM.--Altitude of land-surface datum is 6,420 ft (1,944 m). Measuring point: Hole in southeast corner of pump base, 2.00 ft (0.64 m) above land-surface datum.

PERIOD OF RECORD.--1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.23 ft (0.98 m) below land-surface datum, July 25, 1979; lowest measured, 5.97 ft (1.82 m) below land-surface datum, Aug. 23, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 11	5.05
Sept. 9	4.20

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 (70.1 m) diameter 17 in (0.43 m), casing 0-130 ft (0-39 m).

DATUM.--Altitude of land-surface datum is 4,450 ft (1,356 m). Measuring point: Top edge of 1 in (2.54 cm) hole in pump base, 0.70 ft (0.21 m) above land-surface datum.

PERIOD OF RECORD.--Apr. 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 73.75 ft (22.48 m) below land-surface datum, Apr. 8, 1952; lowest measured, 134.21 ft (40.79 m) below land-surface datum, Aug. 3, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 8	113.91
July	pumping

Crow Flats Basin  
(Salt Basin)

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 (0.46 m), depth 544 ft (165 m).

DATUM.--Altitude of land-surface datum is 4,000 ft (1,216 m). Measuring point: Top of casing, 2.50 ft (0.75 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 51.08 ft (15.57 m) below land-surface datum, Jan. 8, 1973; lowest measured, 82.94 ft (25.21 m) below land-surface datum, Aug. 17, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 26	61.74
Aug. 18	74.96

QUAY COUNTY  
House Area

344350103553001. Local number, 6N.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 (0.41 m), reported depth 131 ft (39.9 m), cased to 131 ft (39.9 m).

DATUM.--Altitude of land-surface datum is 4,790 ft (1,460 m). Measuring point: Top of 2 in (5 cm) opening in concrete base, 1.21 ft (0.37 m) above land-surface datum.

PERIOD OF RECORD.--Mar. 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 77.97 ft (23.77 m) below land-surface datum, Mar. 27, 1944; lowest measured, 113.50 ft (34.60 m) below land-surface datum, Aug. 20, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan.	not measured
Sept. 1	105.33

## GROUND-WATER LEVELS

ROOSEVELT COUNTY  
Portales Valley

341852103090701. Local number, 1N.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.

DATUM.--Altitude of land-surface datum is 4,141 ft (1,262 m). Measuring point: 1 in. hole in pump base west side 1.45 ft (0.4419 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 141.57 ft. (43.15 m) below land-surface datum, Jan. 30, 1963; lowest measured, 195.51 ft (59.59 m) below land-surface datum, Sept. 1, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 11	190.35
Sept. 1	195.51

341530103292001. Local number, 1S.33E.4.1121.

LOCATION.--Lat 34°15'30", long 103°29'20", Hydrologic Unit 12050001.

Owner: Unknown.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 12 in (0.30 m), depth unknown.

DATUM.--Altitude of land-surface datum is 4,109 ft (1,252 m). Measuring point: Top of casing level with 4 ft x 4 ft (1 m x 1 m) concrete base, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 79.07 ft (24.10 m) below land-surface datum, Jan. 8, 1973; lowest measured, 96.27 ft (29.34 m) below land-surface datum, Aug. 18, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 11	87.22
Sept. 1	not measured

340740103145501. Local number, 2S.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.

DATUM.--Altitude of land-surface datum is 3,963 ft (1,208 m). Measuring point: Top of concrete pump base, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--Jan 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.32 ft (6.50 m) below land-surface datum, Mar. 27, 1951; lowest measured, 49.26 ft (15.01 m) below land-surface datum, Aug. 11, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 8	41.98
Sept. 1	44.51

## Causey-Lingo Area

335655103032001. Local number, 6S.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 (0.41 m), depth 140 ft (42.7 m), cased to 140 ft (42.7 m), casing slotted 100-140 ft (30.5-42.7 m).

DATUM.--Altitude of land-surface datum is 3,927 ft (1,197 m). Measuring point: Top of 1 in (2.54 cm) hole in north side of pump, 2.10 ft (0.64 m) above land-surface datum.

PERIOD OF RECORD.--Jan. 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 87.18 ft (26.57 m) below land-surface datum, Jan. 13, 1956; lowest measured, 115.21 ft (35.12 m) below land-surface datum, Aug. 11, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 7	97.68
Aug. 31	97.68

## GROUND-WATER LEVELS

619

SANTA FE COUNTY  
Estancia Valley

350525106025001. Local number, 10N.8E.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 (156 m), casing information not available.

DATUM.--Altitude of land-surface datum is 6,265 ft (1,910 m). Measuring point: Lower inside edge of hole in south side of casing, 0.45 ft (0.14 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 86.75 ft (26.44 m) below land-surface datum, Feb. 22, 1950; lowest measured, 150.00 ft (45.72 m) below land-surface datum, July 17, 1981.

WATER YEAR, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 24	130.60
Aug. 30	146.63

350340106005001. Local number, 10N.9E.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 (0.36 m), reported depth 200 ft (61.0 m), cased to 140 ft (42.7 m).

DATUM.--Altitude of land-surface datum is 6,240 ft (1,902 m). Measuring point: Top edge of 3 in (7.5 cm) pipe on north side of pump, 1.30 ft (0.40 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.96 ft (17.67 m) below land-surface datum, Feb. 16, 1951; lowest measured, 116.12 ft (35.39 m) below land-surface datum, Aug. 30, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 24	100.38
Aug. 30	116.12

## Santa Fe Area

353810106025501. Local number, 16N.8E.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 (0.13 m), depth 400 ft (122 m).

DATUM.--Altitude of land-surface datum is 6,420 ft (1,957 m). Measuring point: Top of 3/8 in (0.95 cm) hole in cover plate, 0.20 ft (0.06 m) 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 (75.56 m) below land-surface datum, Jan. 22, 1979; lowest measured, 272.06 ft (82.92 m) below land-surface datum, Aug. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Jan. 20	249.40
July	not measured

SIERRA COUNTY  
Hot Springs Area

3310021071500. Local number, 13S.4W.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 (0.3962 m), depth unknown.

DATUM.--Altitude of land-surface datum is 4,355 ft (1,327 m). Measuring point: 1½ in hole in top of discharge pipe, 3.0 ft (0.9144 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 25, 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.35 ft (18.69 m) below land-surface datum, Feb. 10, 1976; lowest measured, 65.56 ft (19.98 m) below land-surface datum, Feb. 25, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 30	63.34
Sept. 21	not measured

## GROUND-WATER LEVELS

SIERRA COUNTY  
Hot Springs Area

325550107184001. Local number, 15S.5W.24.312.

LOCATION.--Lat 32°55'50", long 107°18'40", Hydrologic Unit 13030101.

Owner: William M. Dawson.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 16 in (0.41 m), depth and casing information not available.

DATUM.--Altitude of land-surface datum is 4,279 ft (1,304 m). Measuring point: Top of casing, 1.20 ft (0.36 m) above land-surface datum.

PERIOD OF RECORD.--May 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.13 ft (7.66 m) below land-surface datum, Sept. 11, 1975; lowest, 40.76 ft (12.42 m) below land-surface datum, June 29, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	37.13	38.31	39.00	39.26	39.47	39.78	40.16	40.48	40.58	39.35	40.44	40.14
10	37.42	38.46	39.09	39.29	39.52	39.83	40.22	40.45	40.60	39.75	40.41	39.48
15	37.62	38.58	39.15	39.32	39.58	39.89	40.27	40.45	40.61	39.92	40.39	38.48
20	37.81	38.71	39.16	39.35	39.64	39.94	40.33	40.50	40.64	40.10	40.42	37.63
25	37.96	38.81	39.20	39.39	39.69	40.00	40.39	40.53	40.26	40.21	40.42	36.38
eom	38.17	38.89	39.23	39.45	39.72	40.11	40.43	40.56	39.46	40.36	40.46	35.81

WTR YEAR 1982 MAX 35.81 Sept. 30, 1982 MIN 40.64 June 19, 1982

## Rincon Valley

325350107175501. Local number, 16S.5W.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 (0.25 m), depth 32 ft (9.8 m), cased to 32 ft (9.8 m).

DATUM.--Altitude of land-surface datum is 4,050 ft (1,234 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.03 ft (3.97 m) below land-surface datum, Jan. 8, 1975; lowest measured, 27.78 ft (8.47 m) below land-surface datum, Jan. 6, 1958.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 15	22.98
Sept. 21	23.55

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 (0.25 m), depth 500 ft (152 m).

DATUM.--Altitude of land-surface datum is 7,600 ft (2,316 m). Measuring point: Top of casing, 2.00 ft (0.60 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 70.00 ft (21.34 m) below land-surface datum, Aug. 14, 1975; lowest measured, 77.33 ft (23.50 m) below land-surface datum, Aug. 9, 1978.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 18	74.92
Sept. 2	75.04



## GROUND-WATER LEVELS

621

TAOS COUNTY  
Sunshine Valley

65410105354501. Local number, 2S.73W.5.222.

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 (0.15 m), depth unknown.

DATUM.--Altitude of land-surface datum is 7,587 ft (2,313 m). Measuring point: 1 in (2.54 cm) hole in plate over casing, 0.10 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 77.54 ft (26.63 m) below land-surface datum,

Aug. 14, 1975; lowest measured, 84.78 ft (25.77 m) below land-surface datum, Jan. 27, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Mar. 18	81.67
Sept. 2	81.05

TORRANCE COUNTY  
Estancia Valley

343458106042001. Local number, 4N.8E.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 (0.41 m), reported depth 180 ft (54.9 m), cased to 160 ft (48.8 m).

DATUM.--Altitude of land-surface datum is 6,148 ft (1,874 m). Measuring point: Top of casing at high point on northwest side of well, 0.70 ft (0.21 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.93 ft (25.28 m) below land-surface datum,

May 2, 1951; lowest measured, 117.25 ft (35.74 m) below land-surface datum, Aug. 30, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 24	108.97
Aug. 30	117.25

344016106064701. Local number, 5N.8E.8.424.

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 (0.41 m), reported depth 204 ft (62.2 m), cased to 98 ft (29.9 m).

DATUM.--Altitude of land-surface datum is 6,214 ft (1,894 m). Measuring point: Top of casing, 0.80 ft (0.24 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.03 ft (18.91 m) below land-surface datum,

Mar. 23, 1948; lowest measured, 129.40 ft (39.44 m) below land-surface datum, Aug. 30, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 24	114.82
Aug. 30	129.40

344234106074901. Local number, 6N.8E.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 (0.46 m), reported depth 209 ft (63.7 m), cased to 84 ft (25.6 m).

DATUM.--Altitude of land-surface datum is 6,165 ft (1,879 m). Measuring point: Top of 1 1/2 in (3.8 cm) hole in pumpbase, 0.04 ft (0.01 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.22 ft (7.08 m) below land-surface datum,

Feb. 18, 1947; lowest measured, 80.26 ft (24.46 m) below land-surface datum, July 9, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 24	74.34
Aug. 30	78.89

## GROUND-WATER LEVELS

TORRANCE COUNTY  
Estancia Valley

344622105575501. Local number, 6N.9E.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 (0.46 m), reported depth 148 ft (45.1 m), cased to 140 ft (42.7 m).

DATUM.--Altitude of land-surface datum is 6,086 ft (1,855 m). Measuring point: Top of casing, 0.75 ft (0.23 m) above land-surface datum.

PERIOD OF RECORD.--Feb. 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.80 ft (1.77 m) below land-surface datum, Feb. 8, 1950; lowest measured, 28.25 ft (8.61 m) below land-surface datum, July 19, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 24	14.94
Aug. 30	24.78

344937106092201. Local number, 7N.7E.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 (0.18 m), depth and casing information not available.

DATUM.--Altitude of land-surface datum is 6,500 ft (1,980 m). Measuring point: Top of casing, level with concrete slab, 0.2 ft (0.06 m) 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 (33.53 m) below land-surface datum, Jan. 19, 1979; lowest measured, 110.37 ft (33.55 m) below land-surface datum, Jan. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 24	110.34
Aug. 30	110.34

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 (0.36 m), depth 206 ft (62.8 m).

DATUM.--Altitude of land-surface datum is 4,326 ft (1,318 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 145.22 ft (44.26 m) below land-surface datum, Mar. 17, 1971; lowest measured, 155.65 ft (47.77 m) below land-surface datum, Mar. 24, 1970.

WATER YEAR, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 11	147.59
Sept. 1	145.81

## Clayton Area

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 (0.25 m), depth 231 ft (70.4 m).

DATUM.--Altitude of land-surface datum is 4,707 ft (1,434 m). Measuring point: Top of casing, 1.30 ft (0.40 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.99 ft (27.23 m) below land-surface datum, Jan 8, 1972; lowest measured, 89.47 ft (27.27 m) below land-surface datum, Sept. 1, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 11	89.10
Sept. 1	89.47

363005103081001. Local number, 26N.36E.7.142

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 (0.41 m), depth 770 ft (234 m).

DATUM.--Altitude of land-surface datum is 4,980 ft (1,517 m). Measuring point: Top of 16 in (0.41 m) casing level with concrete base, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 127.41 ft (38.83 m) below land-surface datum, Mar. 17, 1971; lowest measured, 233.26 ft (70.91 m) below land-surface datum, Sept. 20, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 11	150.72
Sept. 1	180.90

## Capulin Area

364430103595501. Local number, 29N.28E.18.341.

LOCATION.--Lat 36°44'30", long 103°59'55", Hydrologic Unit 11040001, 300 ft (91 m) 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 (0.41 m), depth 78 ft (23.8 m).

DATUM.--Land-surface datum is 6,821.2 ft (2,079.1 m) above mean sea level. Measuring point: Edge of 2 in (5 cm) hole in west side of steel plate, at land-surface datum.

PERIOD OF RECORD.--July 1951, Feb. 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.01 ft (8.54 m) below land-surface datum, Feb. 8, 1974; lowest measured, 36.23 ft (10.97 m) below land-surface datum, Aug. 24, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL
Feb. 11	34.43
Sept. 1	35.87

EXPLANATION OF GEOLOGIC UNIT (AQUIFER) CODES (LISTED FROM YOUNGEST TO OLDEST AGE) U-UPPER, M-MIDDLE, L-LOWER: 000 IRSV-UNKNOWN, Intrusive Rocks; 110 AVMB-Cenozoic, Quaternary, Alluvium, Bolson Deposits and other Surface Deposits; 110 BLSN-Cenozoic, Quaternary, Bolson Fill; 110 PTOD-Cenozoic, Quaternary, Piedmont, Terrace, and other Deposits of Gravel, Sand and Caliche; 112 SNTF-Cenozoic, Quaternary, Pleistocene, Santa Fe Group; 120 DTILC-Cenozoic, Tertiary, Datil Formation (Clastic Rocks of Volcanic Fragments); 122 SNTFL-Cenozoic, Tertiary, Miocene, Santa Fe Group, Lower Part; 211 ALSN-Mesozoic, Upper Cretaceous, Allison Member of Menefee Formation of Mesa Verde Group; 211 DKOT-Mesozoic, Upper Cretaceous, Dakota Sandstone or Formation; 211 DTLN-Mesozoic, Upper Cretaceous, Dalton Sandstone Member of Cravasse Canyon Formation of Mesa Verde Group; 211 GLLP-Mesozoic, Upper Cretaceous, Gallup Sandstone; 211 MLTT-Mesozoic, Upper Cretaceous, Mulatto Tongue; 211 OJAM-Mesozoic, Upper Cretaceous, Ojo Almo Sandstone; 211 PNLC-Mesozoic, Upper Cretaceous, Point Lookout Sandstone; 211 SATN-Mesozoic, Upper Cretaceous, Santan Tongue of Mancos Shale; 221 BRSE-Mesozoic, Upper Jurassic, Brushy Basin Shale Member of Morrison Formation; 221 RCPR-Mesozoic, Upper Jurassic, Recapture Shale member of Morrison Formation; 221 WSRC-Mesozoic, Upper Jurassic, Westwater Canyon Sandstone Member of Morrison Formation; 231 CHNL-Mesozoic, Upper Triassic, Chinle Formation; 310 YESO-Paleozoic, Permian, Yesso Formation, Manzano Group; 313 SADG-Paleozoic, Permian, Guadalupian, San Andres Limestone and Glorieta Sandstone; 313 SADRU-Paleozoic, Permian, Guadalupian, San Andres Limestone, Upper Clastic Member; 320 ORDTK-Paleozoic, Pennsylvanian, Red Tanks Member of Madera Formation; 325 MDER-Paleozoic, Middle Pennsylvanian, Des Moinesian, Madera Limestone; 325 MDERU-Paleozoic, Middle Pennsylvanian, Des Moinesian, Madera Limestone, Upper Arkosic Limestone Member.

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)	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT)	DEPTH TO TOP OF WATER- BEARING ZONE (FT)
ALAMEDA GR WEST MESA 3	351051106395301		001	GW	81-11-11	1335	112SNTF	26.00	--	--
			001	GW	81-11-11	1635	112SNTF	26.00	--	--
ATRISCO GR WEST MESA 1-A	350449106493101		001	GW	82-03-31	1400	112SNTF	24.00	360	350
11N.02E.18.313 WEST MESA 2	351046106464701		001	GW	81-11-13	1320	112SNTF	881.00	--	--
			001	GW	82-05-24	1500	112SNTF	792.00	--	--
			001	GW	82-06-01	1500	112SNTF	791.00	--	--
LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND OR SURFACE DATUM (FT. ABOVE NGVD) (72000)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	DEPTH OF HOLE, INSTAN- TANEOUS (FEET) (72001)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)
ALAMEDA GR WEST MESA 3	81-11-11	1060	1050	350	4995.00	--	1060	40	330	358
	81-11-11	1060	1050	350	4995.00	--	1060	192	330	397
	82-03-31	1050	360	350	4995.00	30	--	15	320	337
ATRISCO GR WEST MESA 1-A	81-11-13	1224	1180	980	5795.00	--	1200	--	1160	1250
11N.02E.18.313 WEST MESA 2	82-05-24	1830	1805	1445	5730.00	--	--	--	370	426
	82-06-01	1830	1425	1250	5730.00	--	--	--	325	291
LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH (UNITS) (00400)	PH LAB (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
ALAMEDA GR WEST MESA 3	81-11-11	8.0	8.1	17.0	130	42	6.3	18	.7	7.7
	81-11-11	8.0	8.2	17.0	130	40	6.5	18	.7	7.7
	82-03-31	7.8	7.9	21.0	120	40	5.9	18	.7	7.0
ATRISCO GR WEST MESA 1-A	81-11-13	7.9	8.2	33.0	76	22	5.1	250	13	8.1
11N.02E.18.313 WEST MESA 2	82-05-24	8.3	7.7	20.0	57	19	2.3	63	3.8	3.8
	82-06-01	8.4	8.5	20.5	46	14	2.6	54	3.6	3.2
LOCAL IDENT- I- FIER	DATE OF SAMPLE	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	ALKA- LINITY LAB (MG/L AS CACO3) (94010)	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- SOLVED (MG/L AS N) (00631)
ALAMEDA GR WEST MESA 3	81-11-11	140	.00	110	42	18	.3	61	262	<.10
	81-11-11	135	.00	110	44	19	.3	63	265	<.10
	82-03-31	130	.00	110	43	13	.2	60	253	<.10
ATRISCO GR WEST MESA 1-A	81-11-13	270	.00	210	270	100	.9	48	831	<.10
11N.02E.18.313 WEST MESA 2	82-05-24	200	.00	157	36	6.7	1.0	18	244	<.10
	82-06-01	180	2.0	109	34	5.9	.9	12	204	2.4

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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BERNALILLO COUNTY - Concluded

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
ALAMEDA GR WEST MESA 3	81-11-11	--	--	50	--	--	--	130	--	40
	81-11-11	--	--	50	--	--	--	71	--	22
	82-03-31	--	--	--	--	--	--	55	--	10
ATRISCO GR WEST MESA 1-A	81-11-13	--	--	430	--	--	--	99	--	360
11N.02E.18.313 WEST MESA 2	82-05-24	--	--	--	--	--	--	23	--	59
	82-06-01	1	120	--	14	10	1	190	<1	390

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)
ALAMEDA GR WEST MESA 3	81-11-11	--	--	--	--
	81-11-11	--	--	--	--
	82-03-31	--	--	--	--
ATRISCO GR WEST MESA 1-A	81-11-13	--	--	--	--
11N.02E.18.313 WEST MESA 2	82-05-24	--	--	--	--
	82-06-01	<.1	2	<1	260

CATRON COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)
01N.18W.35.412 SHAY WELL	341557108412001	003	GW	82-05-18	1000	120DTILC	--	250	--	--
01S.18W.05.332 ODELL WEL	341440108444301	003	GW	82-05-18	1230	110AVMB	--	300	--	--
01S.18W.09.142 JACKSON H	341411108432301	003	GW	82-05-18	1030	110AVMB	--	150	--	--
03N.18W.22.232 JERRY WEL	342821108422701	003	GW	82-09-08	1535	211DKOT	--	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF HOLE, TOTAL (FEET) (72001)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)
01N.18W.35.412 SHAY WELL	82-05-18	7205.00	250	5.0	500	428	8.5	8.1	15.0	51
01S.18W.05.332 ODELL WEL	82-05-18	6997.00	300	8.0	408	408	9.2	8.9	18.0	14
01S.18W.09.142 JACKSON H	82-05-18	7092.00	150	8.0	800	722	9.5	9.1	18.0	23
03N.18W.22.232 JERRY WEL	82-09-08	6400.00	--	--	980	844	8.8	9.0	21.5	4

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)
01N.18W.35.412 SHAY WELL	82-05-18	15	3.3	79	5.0	1.7	187	24	11	.4
01S.18W.05.332 ODELL WEL	82-05-18	5.2	.1	91	11	.4	152	35	13	1.3
01S.18W.09.142 JACKSON H	82-05-18	7.2	1.2	140	13	.6	106	71	110	1.6
03N.18W.22.232 JERRY WEL	82-09-08	1.4	.1	210	48	.8	371	45	13	1.5

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

CATRON COUNTY - Concluded

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	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)	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)
01N.18W.35.412 SHAY WELL	82-05-18	18	271	1.4	3	110	<3	<10	4	27
01S.18W.05.332 ODELL WEL	82-05-18	12	253	.55	5	<6	<3	<10	14	980
01S.18W.09.142 JACKSON H	82-05-18	12	407	<.10	4	25	<3	<10	2	34
03N.18W.22.232 JERRY WEL	82-09-08	13	508	<.10	<1	23	<1	<10	1	20

LOCAL IDENT- I- FIER	DATE OF SAMPLE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
01N.18W.35.412 SHAY WELL	82-05-18	<1	<3	<.1	2	<1	56
01S.18W.05.332 ODELL WEL	82-05-18	2	9	<.1	3	<1	330
01S.18W.09.142 JACKSON H	82-05-18	<1	<3	<.1	<1	<1	<12
03N.18W.22.232 JERRY WEL	82-09-08	<1	1	<.1	<1	<1	8

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, DIS- SUSP. TOTAL (UG/L AS UNAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)
01S.18W.05.332 ODELL WEL	341440108444301		003	GW	82-05-18	1230	<5.5	1.5	<3.0	1.6
03N.18W.22.232 JERRY WEL	342821108422701		003	GW	82-09-08	1535	17	--	<7.0	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)
01S.18W.05.332 ODELL WEL	82-05-18	<2.9	1.6	--	--
03N.18W.22.232 JERRY WEL	82-09-08	<6.8	--	.09	.05

CHAVES 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)	DEPTH OF HOLE, TOTAL (FEET) (72001)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)
05S.27E.25. CEDAR WINDMI	335009104031501	005	GW	82-08-12	1230	--	--	4111.00	--	2.0
05S.28E.26. EDWIN DENTON	335015103581401	005	GW	82-08-11	1430	--	--	4225.00	--	2.0
05S.28E.26. SAM MOORHEAD	335008103581501	005	GW	82-08-12	1100	--	--	--	--	1.3
06S.29E.05. SAM MOORHEAD	334907104004701	005	GW	82-08-12	1400	--	--	4170.00	--	1.2
07S.21E.07.412	334312104524401	005	GW	82-08-27	1000	--	--	--	--	--
07S.22E.14.123	334244104413801	005	GW	82-08-04	1700	--	--	--	--	1.0
07S.22E.19. MAX STEVENSO	334134104460701	005	GW	82-08-04	1200	--	--	4440.00	--	4.3
07S.22E.26. TOM CORN HEA	334056104415501	005	GW	82-08-03	1400	--	--	4190.00	--	1.6
08S.22E.02. TOM CORN RAN	333858104420201	005	GW	82-08-03	1500	--	--	4130.00	--	7.0
08S.31E.04. EMMET MCCOMB	333912103463201	005	GW	82-08-11	1130	--	--	4277.00	--	1.3
08S.31E.05. EMMET MCCOMB	333917103481301	005	GW	82-08-11	1000	--	--	4240.00	--	1.5
08S.31E.17. DAVID BILBRE	333731103473801	005	GW	82-08-11	1300	--	--	4203.00	--	1.0
09S.31E.26. CAMINO WELL	333014103442201	005	GW	82-08-13	1415	--	--	--	--	--
11S.26E.25.334	331948104180301	005	GW	82-08-26	1330	--	--	--	--	--
11S.26E.35.334	331857104185701	005	SP	82-08-26	1030	--	--	--	--	--
12S.30E.07. CULP RANCH	331705103574801	005	GW	82-08-13	1015	--	--	3860.00	--	1.6
12S.30E.31. CULP RANCH WE	331803103542101	005	GW	82-08-13	1210	--	--	3970.00	--	1.3
13S.21E.11.111	331238104500601	005	GW	82-08-30	0900	--	--	--	--	--
14S.30E.02. SCOTT WELLS	330805103535301	005	GW	82-08-06	1330	--	--	3889.00	--	.5
15S.29E.03. LITTLE LUCKY	330223104002801	005	GW	82-08-06	1430	--	--	3860.00	--	1.2

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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CHAVES COUNTY - Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
05S.27E.25. CEDAR WINDMI	82-08-12	1480	1520	7.4	8.4	17.0	200	43	23	260
05S.28E.26. EDWIN DENTON	82-08-11	3400	3470	8.0	8.4	20.0	120	23	16	710
05S.28E.26. SAM MOORHEAD	82-08-12	3400	3580	8.0	8.3	18.5	100	20	13	780
06S.29E.05. SAM MOORHEAD	82-08-12	8500	7980	7.4	7.9	20.5	1900	340	260	1300
07S.21E.07.412	82-08-27	--	939	7.1	8.0	21.0	520	140	41	14
07S.22E.14.123	82-08-04	1600	1790	7.1	7.9	22.0	790	210	64	110
07S.22E.19. MAX STEVENSO	82-08-04	1900	2180	7.2	7.9	18.5	1300	380	96	18
07S.22E.26. TOM CORN HEA	82-08-03	1800	1940	7.2	8.2	21.0	890	250	64	120
08S.22E.02. TOM CORN RAN	82-08-03	4250	6020	7.1	7.6	20.0	1300	370	100	520
08S.31E.04. EMMET MCCOMB	82-08-11	2100	2230	8.4	8.7	20.0	47	14	3.0	450
08S.31E.05. EMMET MCCOMB	82-08-11	950	1010	8.5	9.0	19.0	29	9.0	1.5	230
08S.31E.17. DAVID BILBRE	82-08-11	7000	6840	7.5	7.6	22.0	480	110	50	1300
09S.31E.26. CAMINO WELL	82-08-13	750	765	7.8	8.5	19.0	82	23	5.9	140
11S.26E.25.334	82-08-26	--	3820	6.9	7.9	--	2400	600	210	170
11S.26E.35.334	82-08-26	--	3730	7.2	7.7	21.0	2400	550	260	140
12S.30E.07. CULP RANCH	82-08-13	1080	1080	7.6	8.1	20.0	310	77	28	120
12S.30E.31. CULP RANCH WE	82-08-13	370	371	7.5	8.3	18.5	160	50	8.9	13
13S.21E.11.111	82-08-30	700	667	7.0	8.4	25.0	350	91	31	14
14S.30E.02. SCOTT WELLS	82-08-06	7200	7230	7.6	8.0	28.5	250	50	31	1600
15S.29E.03. LITTLE LUCKY	82-08-06	900	952	7.5	8.2	23.0	400	69	56	52

LOCAL IDENT- IFIER	DATE OF SAMPLE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
05S.27E.25. CEDAR WINDMI	82-08-12	8.2	.8	230	370	100	3.4	79	1050	6.5
05S.28E.26. EDWIN DENTON	82-08-11	28	2.8	230	820	470	2.2	10	2190	.25
05S.28E.26. SAM MOORHEAD	82-08-12	34	2.7	266	730	570	2.2	10	2290	.50
06S.29E.05. SAM MOORHEAD	82-08-12	13	4.4	195	2600	1400	2.2	23	6060	2.1
07S.21E.07.412	82-08-27	.3	1.4	150	350	17	.6	16	681	2.4
07S.22E.14.123	82-08-04	1.8	1.7	103	730	140	.7	14	1340	--
07S.22E.19. MAX STEVENSO	82-08-04	.2	3.4	106	1300	27	1.4	14	1940	6.9
07S.22E.26. TOM CORN HEA	82-08-03	1.8	1.9	88	870	120	.7	19	1500	.80
08S.22E.02. TOM CORN RAN	82-08-03	6.4	3.1	97	1100	910	.8	12	3080	<.10
08S.31E.04. EMMET MCCOMB	82-08-11	30	1.3	97	570	260	.7	9.9	1370	.13
08S.31E.05. EMMET MCCOMB	82-08-11	19	.9	266	200	39	1.3	12	654	<.10
08S.31E.17. DAVID BILBRE	82-08-11	27	3.9	141	890	1700	.8	9.7	4150	<.10
09S.31E.26. CAMINO WELL	82-08-13	7.0	1.6	186	110	58	.9	18	469	<.10
11S.26E.25.334	82-08-26	1.6	7.6	122	2100	250	1.1	17	3440	1.5
11S.26E.35.334	82-08-26	1.3	5.7	123	2200	150	.7	21	3430	5.5
12S.30E.07. CULP RANCH	82-08-13	3.1	1.5	239	200	95	1.3	28	711	3.6
12S.30E.31. CULP RANCH WE	82-08-13	.5	.8	141	26	4.4	.3	31	239	4.4
13S.21E.11.111	82-08-30	.3	1.1	195	150	11	.5	13	437	1.7
14S.30E.02. SCOTT WELLS	82-08-06	45	4.1	141	2300	970	1.2	7.1	5050	.10
15S.29E.03. LITTLE LUCKY	82-08-06	1.2	3.0	266	130	46	2.1	47	614	11



QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

CHAVES COUNTY - Concluded

LOCAL IDENT- IFIER	DATE OF SAMPLE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
05S.27E.25. CEDAR WINDMI	82-08-12	8	51	<1	<10	7	10	<1	<1
05S.28E.26. EDWIN DENTON	82-08-11	<1	<100	<1	<10	<1	40	<1	30
05S.28E.26. SAM MOORHEAD	82-08-12	<1	<100	<1	10	4	10	<1	20
06S.29E.05. SAM MOORHEAD	82-08-12	1	<100	<1	10	31	50	<1	20
07S.21E.07.412	82-08-27	1	<100	<1	<10	<1	50	<1	10
07S.22E.14.123	82-08-04	<1	17	<1	<10	<1	130	<1	46
07S.22E.19. MAX STEVENSO	82-08-04	<1	<100	1	<10	1	30	<1	20
07S.22E.26. TOM CORN HEA	82-08-03	<1	16	<1	<10	<1	370	<1	26
08S.22E.02. TOM CORN RAN	82-08-03	<1	<100	<1	<10	<1	890	<1	60
08S.31E.04. EMMET MCCOMB	82-08-11	<1	<100	<1	10	1	10	<1	10
08S.31E.05. EMMET MCCOMB	82-08-11	7	24	<1	<10	2	55	<1	10
08S.31E.17. DAVID BILBRE	82-08-11	<1	100	<1	<10	2	320	<1	90
09S.31E.26. CAMINO WELL	82-08-13	6	24	<1	<10	1	7	<1	1
11S.26E.25.334	82-08-26	1	<100	1	10	1	50	<1	30
11S.26E.35.334	82-08-26	3	<100	<1	10	<1	40	<1	40
12S.30E.07. CULP RANCH	82-08-13	2	67	<1	<10	34	8	<1	9
12S.30E.31.CULP RANCH WE	82-08-13	5	140	<1	<10	5	19	<1	3
13S.21E.11.111	82-08-30	<1	41	<1	<10	2	57	1	10
14S.30E.02. SCOTT WELLS	82-08-06	<1	<100	<1	<10	4	30	<1	140
15S.29E.03. LITTLE LUCKY	82-08-06	16	130	<1	<10	8	34	<1	3

LOCAL IDENT- IFIER	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)
05S.27E.25. CEDAR WINDMI	82-08-12	<.1	12	<1	35
05S.28E.26. EDWIN DENTON	82-08-11	<.1	22	<1	210
05S.28E.26. SAM MOORHEAD	82-08-12	.1	23	<1	60
06S.29E.05. SAM MOORHEAD	82-08-12	<.1	39	<1	230
07S.21E.07.412	82-08-27	<.1	2	1	300
07S.22E.14.123	82-08-04	<.1	4	<1	2700
07S.22E.19. MAX STEVENSO	82-08-04	<.1	4	<1	3700
07S.22E.26. TOM CORN HEA	82-08-03	<.1	8	<1	84
08S.22E.02. TOM CORN RAN	82-08-03	<.1	1	<1	440
08S.31E.04. EMMET MCCOMB	82-08-11	<.1	<1	<1	130
08S.31E.05. EMMET MCCOMB	82-08-11	<.1	<1	<1	160
08S.31E.17. DAVID BILBRE	82-08-11	.1	<1	<1	60
09S.31E.26. CAMINO WELL	82-08-13	<.1	1	<1	13
11S.26E.25.334	82-08-26	<.1	10	<1	4300
11S.26E.35.334	82-08-26	<.1	9	<1	20
12S.30E.07. CULP RANCH	82-08-13	<.1	7	<1	240
12S.30E.31.CULP RANCH WE	82-08-13	<.1	4	<1	150
13S.21E.11.111	82-08-30	<.1	1	<1	480
14S.30E.02. SCOTT WELLS	82-08-06	.2	<1	<1	590
15S.29E.03. LITTLE LUCKY	82-08-06	<.1	3	<1	40

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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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)	SAM- PLING DEPTH (FEET) (00003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)
19S.05E.17.331 MAR-1	323906106274301		013	GW	82-03-16	1510	110BLSN	--	--	--
			013	GW	82-09-09	1220	110BLSN	223.29	--	--
19S.05E.17.334 MAR-2	323857106273201		013	GW	82-03-16	1445	110BLSN	220.92	--	--
19S.05E.22.343 LUCERO WE	323808106252301		013	GW	82-08-10	1200	--	170.00	--	--
21S.04E.23.233 HTA-1	322801106300801		013	GW	82-03-17	1440	000IRSV	62.32	--	--
			013	GW	82-08-19	1405	000IRSV	64.07	--	--
21S.05E.16.132 SMR-1	322856106262701		013	GW	82-03-16	1415	110BLSN	294.78	--	--
			013	GW	82-08-19	1330	110BLSN	295.79	--	--
21S.05E.32.222 T-13	322635106264401		013	GW	82-08-12	1108	110BLSN	212.79	410	--
22S.04E.01.431 T-9	322503106290801		013	GW	82-08-11	--	110BLSN	--	550	--
			013	GW	82-08-11	--	110BLSN	--	915	--
22S.04E.11.224 T-8	322434106295001		013	GW	82-08-11	1200	110BLSN	582.91	--	--
			013	GW	82-03-17	0940	110BLSN	512.99	--	--
22S.04E.12.214 SW-20	322446106290801		013	GW	82-08-27	0910	110BLSN	519.47	--	--
22S.04E.12.414 SW-19	322424106290301		013	GW	82-03-17	0930	110BLSN	452.79	--	--
			013	GW	82-08-24	1500	110BLSN	460.96	--	--
22S.04E.12.434 SW-18	322405106290101		013	GW	82-03-17	0920	110BLSN	428.94	--	--
			013	GW	82-08-26	1125	110BLSN	450.93	--	--
22S.04E.13.241 SW-17	322347106285801		013	GW	82-03-17	0915	110BLSN	437.64	--	--
			013	GW	82-08-23	1425	110BLSN	469.75	--	--
			013	GW	82-03-16	1200	110BLSN	298.96	--	--
22S.04E.13.311 SW-13	322331106293801		013	GW	82-08-25	1330	110BLSN	299.61	--	--
			013	GW	82-03-17	1020	110BLSN	--	--	--
22S.04E.13.432 SW-16	322325106290401		013	GW	82-08-24	1455	110BLSN	--	--	--
			013	GW	82-08-25	1200	110BLSN	--	--	--
			013	GW	82-08-23	1200	110BLSN	232.74	340	--
22S.04E.23.214 OS-12	322250106302501		013	GW	82-03-17	0850	110BLSN	--	--	--
22S.04E.24.112 SW-11	322310106293401		013	GW	82-08-24	1115	110BLSN	--	--	--
			013	GW	82-03-17	0900	110BLSN	426.59	--	--
22S.04E.24.212A SW-10A	322309106290201		013	GW	82-08-24	1510	110BLSN	436.49	--	--
			013	GW	82-08-18	1155	110BLSN	260.00	--	--
22S.04W.10.233 MONTEREY	322445107154001		013	GW	82-08-12	1140	110BLSN	272.32	530	--
22S.05E.05.313 T-10	322510106274101		013	GW	82-08-12	0900	110BLSN	--	--	--
22S.05E.07.342 T-7	322415106281801		013	GW	82-08-12	0920	110BLSN	--	440	--
			013	GW	82-08-12	0935	110BLSN	--	960	--
			013	GW	82-08-12	1430	110BLSN	137.13	--	--
22S.05E.15.221 T-14	321401106245201		013	GW	82-08-12	1440	110BLSN	132.13	200	--
			013	GW	82-08-10	1435	110BLSN	--	325	--
22S.05E.16.111 T-4	322403106263901		013	GW	82-03-17	1105	110BLSN	354.62	--	--
22S.05E.19.323 SW-21	322237106282801		013	GW	82-08-27	0805	110BLSN	360.19	--	--

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)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)
19S.05E.17.331 MAR-1	82-03-16	--	--	--	--	--	939	--	7.3	--
	82-09-09	--	--	--	--	--	906	--	7.6	--
19S.05E.17.334 MAR-2	82-03-16	--	--	--	--	--	1120	--	7.5	--
19S.05E.22.343 LUCERO WE	82-08-10	236	210	--	--	--	800	840	8.3	8.6
21S.04E.23.233 HTA-1	82-03-17	--	--	--	--	--	1020	--	7.5	--
	82-08-19	--	--	--	--	--	718	--	7.8	--
21S.05E.16.132 SMR-1	82-03-16	--	--	--	--	--	1130	--	7.4	--
	82-08-19	--	--	--	--	--	781	--	7.7	--
21S.05E.32.222 T-13	82-08-12	--	410	--	--	--	480	483	8.2	8.2
22S.04E.01.431 T-9	82-08-11	--	--	--	--	--	810	883	--	7.6
	82-08-11	--	--	--	--	--	590	626	--	8.1
22S.04E.12.214 SW-20	82-03-17	--	915	--	--	--	590	638	8.1	9.0
	82-08-27	--	--	--	--	--	572	--	7.6	--
22S.04E.12.414 SW-19	82-03-17	--	--	--	--	--	584	--	7.9	--
		--	--	--	--	--	392	--	7.6	--

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

## DONA ANA COUNTY - Continued

LOCAL IDENTIFIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTERVAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF HOLE, TOTAL (FEET) (72001)	FLOW RATE, INSTANTANEOUS (GPM) (00059)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	SPECIFIC CONDUCTANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)
22S.04E.12.434 SW-18	82-08-24	--	--	--	--	--	392	--	7.7	--
	82-03-17	--	--	--	--	--	564	--	7.8	--
	82-08-26	--	--	--	--	--	389	--	8.2	--
22S.04E.13.241 SW-17	82-03-17	--	--	--	--	--	545	--	7.8	--
	82-08-23	--	--	--	--	--	372	--	7.7	--
22S.04E.13.311 SW-13	82-03-16	--	--	--	--	--	611	--	7.2	--
22S.04E.13.432 SW-16	82-08-25	--	--	--	--	--	600	--	8.0	--
	82-03-17	--	--	--	--	--	778	--	7.4	--
	82-08-24	--	--	--	--	--	369	--	7.6	--
	82-08-25	--	--	--	--	--	385	--	7.6	--
22S.04E.23.214 OS-12	82-08-23	--	340	--	--	--	440	449	7.3	7.8
22S.04E.24.112 SW-11	82-03-17	--	--	--	--	--	683	--	7.1	--
	82-08-24	--	--	--	--	--	403	--	7.9	--
22S.04E.24.212A SW-10A	82-03-17	--	--	--	--	--	477	--	7.6	--
	82-08-24	--	--	--	--	--	331	--	7.6	--
22S.04W.10.233 MONTEREY	82-08-18	--	--	4797.00	--	2.0	600	663	7.6	8.2
22S.05E.05.313 T-10	82-08-12	--	530	--	--	--	280	331	8.2	8.2
22S.05E.07.342 T-7	82-08-12	--	--	--	--	--	--	366	--	7.9
	82-08-12	--	--	--	--	--	365	344	--	7.8
	82-08-12	--	--	--	--	--	420	441	--	8.2
22S.05E.15.221 T-14	82-08-12	--	300	--	--	--	1260	1480	--	9.9
	82-08-12	--	200	--	--	--	1320	1500	10.0	10.0
22S.05E.16.111 T-4	82-08-10	--	--	--	--	--	290	317	--	7.9
22S.05E.19.323 SW-21	82-03-17	--	--	--	--	--	288	--	7.3	--
	82-08-27	--	--	--	--	--	290	--	7.6	--
	DATE OF SAMPLE	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L as CaCO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
19S.05E.17.331 MAR-1	82-03-16	--	--	--	--	--	--	--	--	--
	82-09-09	--	--	--	--	--	--	--	--	--
19S.05E.17.334 MAR-2	82-03-16	--	--	--	--	--	--	--	--	--
19S.05E.22.343 LUCERO WE	82-08-10	25.0	320	40	53	53	1.3	2.9	178	170
21S.04E.23.233 HTA-1	82-03-17	--	--	--	--	--	--	--	--	--
21S.05E.16.132 SMR-1	82-08-19	--	--	--	--	--	--	--	--	--
	82-03-16	--	--	--	--	--	--	--	--	--
	82-08-19	--	--	--	--	--	--	--	--	--
21S.05E.32.222 T-13	82-08-12	27.0	170	50	12	34	1.2	2.6	102	88
22S.04E.01.431 T-9	82-08-11	29.0	--	--	--	--	--	--	--	--
22S.04E.11.224 T-8	82-08-11	27.0	--	--	--	--	--	--	--	--
	82-08-11	27.0	210	53	20	43	1.3	3.2	92	140
22S.04E.12.214 SW-20	82-03-17	--	--	--	--	--	--	--	--	--
22S.04E.12.414 SW-19	82-08-27	--	--	--	--	--	--	--	--	--
	82-03-17	--	--	--	--	--	--	--	--	--
22S.04E.12.434 SW-18	82-08-24	--	--	--	--	--	--	--	--	--
	82-03-17	--	--	--	--	--	--	--	--	--
	82-08-26	--	--	--	--	--	--	--	--	--
22S.04E.13.241 SW-17	82-03-17	--	--	--	--	--	--	--	--	--
	82-08-23	--	--	--	--	--	--	--	--	--
22S.04E.13.311 SW-13	82-03-16	--	--	--	--	--	--	--	--	--
	82-08-25	--	--	--	--	--	--	--	--	--
	82-03-17	--	--	--	--	--	--	--	--	--
22S.04E.13.432 SW-16	82-08-24	--	--	--	--	--	--	--	--	--
	82-08-25	--	--	--	--	--	--	--	--	--
22S.04E.23.214 OS-12	82-08-23	--	170	49	12	25	.9	2.2	116	58
	82-03-17	--	--	--	--	--	--	--	--	--
	82-08-24	--	--	--	--	--	--	--	--	--
22S.04E.24.212A SW-10A	82-03-17	--	--	--	--	--	--	--	--	--
	82-08-24	--	--	--	--	--	--	--	--	--

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DATE OF SAMPLE	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)	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)
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QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DONA ANA COUNTY - Continued

LOCAL IDENT- I- FIER	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)	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)
19S.05E.17.331 MAR-1	82-03-16	--	--	--	--	--	--	--	--
	82-09-09	--	--	--	--	--	--	--	--
19S.05E.17.334 MAR-2	82-03-16	--	--	--	--	--	--	--	--
19S.05E.22.343 LUCERO WE	82-08-10	--	--	--	6	--	--	8	--
21S.04E.23.233 HTA-1	82-03-17	--	--	--	--	--	--	--	--
	82-08-19	--	--	--	--	--	--	--	--
21S.05E.16.132 SMR-1	82-03-16	--	--	--	--	--	--	--	--
	82-08-19	--	--	--	--	--	--	--	--
21S.05E.32.222 T-13	82-08-12	--	--	--	9	--	--	<1	--
22S.04E.01.431 T-9	82-08-11	--	--	--	--	--	--	--	--
22S.04E.11.224 T-8	82-08-11	--	--	--	--	--	--	--	--
	82-08-11	--	--	--	<3	--	--	24	--
22S.04E.12.214 SW-20	82-03-17	--	--	--	--	--	--	--	--
	82-08-27	--	--	--	--	--	--	--	--
22S.04E.12.414 SW-19	82-03-17	--	--	--	--	--	--	--	--
	82-08-24	--	--	--	--	--	--	--	--
22S.04E.12.434 SW-18	82-03-17	--	--	--	--	--	--	--	--
	82-08-26	--	--	--	--	--	--	--	--
22S.04E.13.241 SW-17	82-03-17	--	--	--	--	--	--	--	--
	82-08-23	--	--	--	--	--	--	--	--
22S.04E.13.311 SW-13	82-03-16	--	--	--	--	--	--	--	--
	82-08-25	--	--	--	--	--	--	--	--
22S.04E.13.432 SW-16	82-03-17	--	--	--	--	--	--	--	--
	82-08-24	--	--	--	--	--	--	--	--
	82-08-25	--	--	--	--	--	--	--	--
22S.04E.23.214 OS-12	82-08-23	--	--	--	<3	--	--	<1	--
22S.04E.24.112 SW-11	82-03-17	--	--	--	--	--	--	--	--
	82-08-24	--	--	--	--	--	--	--	--
22S.04E.24.212A SW-10A	82-03-17	--	--	--	--	--	--	--	--
	82-08-24	--	--	--	--	--	--	--	--
22S.04W.10.233 MONTEREY	82-08-18	<1	<10	18	61	30	--	8	.2
22S.05E.05.313 T-10	82-08-12	--	--	--	6	--	--	<1	--
22S.05E.07.342 T-7	82-08-12	--	--	--	--	--	--	--	--
	82-08-12	--	--	--	--	--	--	--	--
	82-08-12	--	--	--	--	--	--	--	--
22S.05E.15.221 T-14	82-08-12	--	--	--	130	--	--	1	--
	82-08-12	--	--	--	8	--	--	1	--
22S.05E.16.111 T-4	82-08-10	--	--	--	--	--	--	--	--
22S.05E.19.323 SW-21	82-03-17	--	--	--	--	--	--	--	--
	82-08-27	--	--	--	--	--	--	--	--
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)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)				
19S.05E.17.331 MAR-1	82-03-16	--	--	--	--				
	82-09-09	--	--	--	--				
19S.05E.17.334 MAR-2	82-03-16	--	--	--	--				
19S.05E.22.343 LUCERO WE	82-08-10	--	--	--	--				
21S.04E.23.233 HTA-1	82-03-17	--	--	--	--				
	82-08-19	--	--	--	--				
21S.05E.16.132 SMR-1	82-03-16	--	--	--	--				
	82-08-19	--	--	--	--				
21S.05E.32.222 T-13	82-08-12	--	--	--	--				
22S.04E.01.431 T-9	82-08-11	--	--	--	--				
22S.04E.11.224 T-8	82-08-11	--	--	--	--				
	82-08-11	--	--	--	--				
22S.04E.12.214 SW-20	82-03-17	--	--	--	--				
	82-08-27	--	--	--	--				
22S.04E.12.414 SW-19	82-03-17	--	--	--	--				
	82-08-24	--	--	--	--				
22S.04E.12.434 SW-18	82-03-17	--	--	--	--				
	82-08-26	--	--	--	--				
22S.04E.13.241 SW-17	82-03-17	--	--	--	--				
	82-08-23	--	--	--	--				

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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DONA ANA 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)	ZINC, DIS- SOLVED (UG/L AS 2N) (01090)
22S.04E.13.311 SW-13	82-03-16	--	--	--	--
	82-08-25	--	--	--	--
22S.04E.13.432 SW-16	82-03-17	--	--	--	--
	82-08-24	--	--	--	--
	82-08-25	--	--	--	--
22S.04E.23.214 OS-12	82-08-23	--	--	--	--
22S.04E.24.112 SW-11	82-03-17	--	--	--	--
	82-08-24	--	--	--	--
22S.04E.24.212A SW-10A	82-03-17	--	--	--	--
	82-08-24	--	--	--	--
22S.04W.10.233 MONTEREY	82-08-18	4	<1	--	410
22S.05E.05.313 T-10	82-08-12	--	--	--	--
22S.05E.07.342 T-7	82-08-12	--	--	--	--
	82-08-12	--	--	--	--
	82-08-12	--	--	--	--
22S.05E.15.221 T-14	82-08-12	--	--	--	--
	82-08-12	--	--	--	--
22S.05E.16.111 T-4	82-08-10	--	--	--	--
22S.05E.19.323 SW-21	82-03-17	--	--	--	--
	82-08-27	--	--	--	--

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SAM- PLING DEPTH (FEET) (00003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)
22S.05E.20.111 T-5	322311106274101		013	GW	82-08-10	1400	110BLSN	--	330	--
22S.05E.29.412 T-11	322155106270201		013	GW	82-08-23	1200	110BLSN	272.78	--	--
			013	GW	82-08-23	1210	110BLSN	272.78	--	--
22S.05E.33.244 T-15	322108106254701		013	GW	82-08-10	1330	110BLSN	--	448	--
23S.01E.30.422 LC-36	321639106521601		013	GW	82-08-11	1750	112SNTF	317.00	--	--
23S.05E.05.321 T-18	322010106272701		013	GW	82-08-10	1300	110BLSN	--	635	--
23S.05E.10.413 WSMR T-16	321910106250701		013	GW	82-08-10	1039	110BLSN	--	480	--
23S.05E.27.142 T-17	321647106251301		013	GW	82-08-10	1100	110BLSN	--	440	--

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)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)
22S.05E.20.111 T-5	82-08-10	--	--	--	--	--	360	371	--	7.9
22S.05E.29.412 T-11	82-08-23	--	--	--	--	--	284	--	7.2	--
	82-08-23	--	--	--	--	--	315	--	7.6	--
22S.05E.33.244 T-15	82-08-10	--	--	--	--	--	300	323	--	8.0
23S.01E.30.422 LC-36	82-08-11	1230	--	4192.00	1500	1800	657	657	7.8	8.3
23S.05E.05.321 T-18	82-08-10	--	--	--	--	--	710	703	--	7.9
23S.05E.10.413 WSMR T-16	82-08-10	--	--	--	--	--	285	289	--	7.9
23S.05E.27.142 T-17	82-08-10	457	--	--	--	--	170	167	--	7.4

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DONA ANA COUNTY - Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
22S.05E.20.111 T-5	82-08-10	27.0	--	--	--	--	--	--	--	--
22S.05E.29.412 T-11	82-08-23	--	--	--	--	--	--	--	--	--
	82-08-23	--	--	--	--	--	--	--	--	--
22S.05E.33.244 T-15	82-08-10	26.0	--	--	--	--	--	--	--	--
23S.01E.30.422 LC-36	82-08-11	23.5	150	52	5.8	63	2.3	8.9	123	51
23S.05E.05.321 T-18	82-08-10	30.0	--	--	--	--	--	--	--	--
23S.05E.10.413 WSMR T-16	82-08-10	26.0	--	--	--	--	--	--	--	--
23S.05E.27.142 T-17	82-08-10	26.0	--	--	--	--	--	--	--	--

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.05E.20.111 T-5	82-08-10	--	--	--	--	--	--	--	--	--
22S.05E.29.412 T-11	82-08-23	--	--	--	--	--	--	--	--	--
	82-08-23	--	--	--	--	--	--	--	--	--
22S.05E.33.244 T-15	82-08-10	--	--	--	--	--	--	--	--	--
23S.01E.30.422 LC-36	82-08-11	96	.4	26	348	378	<.10	6	73	90
23S.05E.05.321 T-18	82-08-10	--	--	--	--	--	--	--	--	--
23S.05E.10.413 WSMR T-16	82-08-10	--	--	--	--	--	--	--	--	--
23S.05E.27.142 T-17	82-08-10	--	--	--	--	--	--	--	--	--

LOCAL IDENT- I- FIER	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)	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)
22S.05E.20.111 T-5	82-08-10	--	--	--	--	--	--	--	--
22S.05E.29.412 T-11	82-08-23	--	--	--	--	--	--	--	--
	82-08-23	--	--	--	--	--	--	--	--
22S.05E.33.244 T-15	82-08-10	--	--	--	--	--	--	--	--
23S.01E.30.422 LC-36	82-08-11	<1	<10	1	41	<1	89	29	<.1
23S.05E.05.321 T-18	82-08-10	--	--	--	--	--	--	--	--
23S.05E.10.413 WSMR T-16	82-08-10	--	--	--	--	--	--	--	--
23S.05E.27.142 T-17	82-08-10	--	--	--	--	--	--	--	--

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)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
22S.05E.20.111 T-5	82-08-10	--	--	--	--
22S.05E.29.412 T-11	82-08-23	--	--	--	--
	82-08-23	--	--	--	--
22S.05E.33.244 T-15	82-08-10	--	--	--	--
23S.01E.30.422 LC-36	82-08-11	3	<1	660	20
23S.05E.05.321 T-18	82-08-10	--	--	--	--
23S.05E.10.413 WSMR T-16	82-08-10	--	--	--	--
23S.05E.27.142 T-17	82-08-10	--	--	--	--



QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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GUADALUPE 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)
09N.20E.11.432 E-5	350057104470601		019	GW	82-09-29	1000	313SADG	--	810	376
09N.21E.05.2444 CH-32	350207104433501		019	GW	82-09-28	1400	--	140.00	--	--
09N.21E.05.3322 CH-33	350148104442201		019	GW	82-09-28	1300	--	146.00	--	--
09N.21E.06.2231 CH-20	350224104445201		019	GW	82-09-28	1200	--	267.00	--	--
09N.21E.08.231 E-3	350125104435301		019	GW	82-09-28	1100	313SADRU	336.00	836	589
09N.21E.16.3133 E-2	350007104433301		019	GW	82-09-29	1300	--	371.00	781	309
09N.21E.28.1233 E-6	345852104431701		019	GW	82-09-29	1500	313SADG	369.00	828	389
09N.22E.19.3144 E-1	345916104390701		019	GW	82-09-28	1700	313SADG	319.00	843	400

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)
09N.20E.11.432 E-5	82-09-29	810	--	--	5188.00	--	--	--	23000	21900
09N.21E.05.2444 CH-32	82-09-28	391	--	370	5014.00	0	477	.0	2400	2500
09N.21E.05.3322 CH-33	82-09-28	474	--	450	5093.00	0	474	.0	250	231
09N.21E.06.2231 CH-20	82-09-28	379	--	360	5127.00	0	564	.0	3100	3150
09N.21E.08.231 E-3	82-09-28	836	--	700	--	0	836	.0	194000	184000
09N.21E.16.3133 E-2	82-09-29	781	--	700	5001.00	0	781	.0	53800	52000
09N.21E.28.1233 E-6	82-09-29	828	--	635	4997.00	0	828	.0	11500	10800
09N.22E.19.3144 E-1	82-09-28	843	--	600	4918.00	0	843	.0	26000	26000

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH (UNITS) (00400)	PH LAB (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) (00925)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
09N.20E.11.432 E-5	82-09-29	7.0	7.4	17.5	5700	1700	350	3200	19	87
09N.21E.05.2444 CH-32	82-09-28	11.0	11.0	--	450	180	1.1	380	8.2	8.2
09N.21E.05.3322 CH-33	82-09-28	10.5	10.0	--	71	24	2.7	23	1.2	3.1
09N.21E.06.2231 CH-20	82-09-28	10.9	10.6	--	1500	540	40	370	4.3	17
09N.21E.08.231 E-3	82-09-28	4.9	3.5	20.0	99550	27000	7800	44000	63	910
09N.21E.16.3133 E-2	82-09-29	6.7	6.6	20.0	13680	3500	1200	8600	33	210
09N.21E.28.1233 E-6	82-09-29	7.1	7.2	19.0	2800	840	170	1600	14	46
09N.22E.19.3144 E-1	82-09-28	6.5	6.0	18.0	5500	1400	490	3900	24	88

LOCAL IDENT- I- FIER	DATE OF SAMPLE	BICAR- BONATE ITFLD (MG/L AS HCO3) (99440)	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)
09N.20E.11.432 E-5	82-09-29	140	108	1800	8100	.6	1.8
09N.21E.05.2444 CH-32	82-09-28	--	54	1000	130	.4	<1.2
09N.21E.05.3322 CH-33	82-09-28	--	27	27	39	.1	2.4
09N.21E.06.2231 CH-20	82-09-28	--	41	980	720	.5	<1.2
09N.21E.08.231 E-3	82-09-28	--	<1.0	470	150000	<.1	8.9
09N.21E.16.3133 E-2	82-09-29	83	51	1800	23000	1.3	3.0
09N.21E.28.1233 E-6	82-09-29	160	109	2300	2800	1.2	5.4
09N.22E.19.3144 E-1	82-09-28	--	12	2400	9500	.8	2.0

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

GUADALUPE COUNTY - Concluded

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)
09N.20E.11.432 E-5	82-09-29	15300	<.10	2200	3200
09N.21E.05.2444 CH-32	82-09-28	--	<.10	20	<10
09N.21E.05.3322 CH-33	82-09-28	138	<.10	47	2
09N.21E.06.2231 CH-20	82-09-28	--	.14	570	40
09N.21E.08.231 E-3	82-09-28	--	<.10	130000	9800
09N.21E.16.3133 E-2	82-09-29	38400	<.10	10000	2300
09N.21E.28.1233 E-6	82-09-29	7830	<.10	6000	570
09N.22E.19.3144 E-1	82-09-28	17800	<.10	14000	3100

LINCOLN COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)
09S.07E.25.134 OSCURO RA	332954106102202		027	GW	82-07-29	1200	--	137	5240	5280
10S.06E.23.242 MOUND SP	332535106170501		027	SP	82-08-03	1200	110AVMB	--	4970	4980
13S.20E.34.32 CORN CHARL	330833104570001		027	GW	82-08-30	1330	--	--	850	911

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	DENSITY (GM/ML AT 20 C) (71820)	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)
09S.07E.25.134 OSCURO RA	82-07-29	7.1	7.5	18.9	1.016	2400	660	180	420	3.9
10S.06E.23.242 MOUND SP	82-08-03	7.3	7.6	22.4	1.016	2400	700	150	360	3.3
13S.20E.34.32 CORN CHARL	82-08-30	7.2	7.9	21.0	--	480	130	37	15	.3

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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	IODIDE, DIS- SOLVED (MG/L AS I) (71865)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
09S.07E.25.134 OSCURO RA	82-07-29	4.5	121	2000	780	1.3	.66	.006	24	4150
10S.06E.23.242 MOUND SP	82-08-03	4.7	104	2000	730	1.2	.46	.000	20	4040
13S.20E.34.32 CORN CHARL	82-08-30	1.0	223	270	14	.5	--	--	13	621

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
09S.07E.25.134 OSCURO RA	82-07-29	--	<.020	4.2	.090	<.010	.7	<.1	20	<1
10S.06E.23.242 MOUND SP	82-08-03	.35	.030	.38	.320	.020	1.3	.2	10	<1
13S.20E.34.32 CORN CHARL	82-08-30	--	--	1.2	--	--	--	--	--	<1

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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LINCOLN COUNTY - Concluded

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)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
09S.07E.25.134 OSCURO RA	82-07-29	<100	300	--	10	20	60	200	10	--
10S.06E.23.242 MOUND SP	82-08-03	<100	220	--	10	20	60	200	20	--
13S.20E.34.32 CORN CHARL	82-08-30	32	--	<1	<10	6	6	<1	13	<.1

LOCAL IDENT- I- FIER	DATE OF SAMPLE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	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)
09S.07E.25.134 OSCURO RA	82-07-29	6	--	--	8300	40
10S.06E.23.242 MOUND SP	82-08-03	3	--	--	8400	40
13S.20E.34.32 CORN CHARL	82-08-30	--	1	1	--	950

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	TRITIUM TOTAL (PCI/L) (07000)	CARBON- 14, DISS AP- PARENT AGE (YEARS BP) (28004)
09S.07E.25.134 OSCURO RA	332954106102202		027	GW	82-07-29	1200	.06	6.1	5.0	15700
10S.06E.23.242 MOUND SP	332535106170501		027	SP	82-08-03	1200	.08	4.6	<1.0	19600

LOCAL IDENT- I- FIER	DATE OF SAMPLE	C-13/ C-12 STABLE ISOTOPE RATIO PER MIL (82081)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MIL (82082)	O-18/ O-16 STABLE ISOTOPE RATIO PER MIL (82085)	CARBON 14 PERCENT MODERN (82172)
09S.07E.25.134 OSCURO RA	82-07-29	-3.5	-61.0	-8.6	14.2
10S.06E.23.242 MOUND SP	82-08-03	-2.6	-61.5	-8.6	8.8

LUNA 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 TOP OF WATER- BEARING ZONE (FT) (72002)	ELEV. OF LAND SURFACE (FT. ABOVE NGVD) (72000)
21S.06W.01.222 BOGARD WE	323055107240501		029	GW	82-08-18	1146	110BLSN	272.00	--	4490.00
21S.07W.10.221 FLYING Y	323005107335001		029	GW	82-08-27	1225	110BLSN	336.00	--	4680.00
22S.05W.03.222 HYATT AND	322548107195701		029	GW	82-09-02	1130	112BLSN	168.00	--	4655.00
22S.05W.26.112 HOOD WM	322223107193701		029	GW	82-08-18	1020	110BLSN	--	--	4662.00
23S.05W.03.311 LITTLE ED	322007107205701		029	GW	82-09-02	1210	110BLSN	216.00	--	4640.00
24S.12W.32.241 MINES WEL	321039108054601		029	GW	82-08-24	1745	110PTOD	173.00	--	4417.00
25S.11W.20.311 PUMP WIND	320651108002001		029	GW	82-08-24	1110	110BLSN	44.40	--	4292.00
25S.12W.36.331 LITTLE WI	320458108023701		029	GW	82-08-24	1210	110BLSN	--	--	4395.00
26S.10W.15.312 NEW WL	320227107512201		029	GW	82-09-01	1330	110BLSN	138.00	--	4195.00
26S.12W.18.112 SEC 18 WL	320304108064301		029	GW	82-08-24	1900	110PTOD	--	--	4577.00
26S.12W.21.243 KLONDIKE	320149108035701		029	GW	82-08-24	1330	110PTOD	278.00	--	4562.00
26S.13W.11.133 ELLINWOOD	320340108084701		029	GW	82-08-24	1620	110PTOD	100.00	--	4665.00
27S.10W.03.313 JOG WELL	315906107512301		029	GW	82-09-01	1430	110BLSN	80.00	--	4208.00
27S.10W.22.211 WHITEHOUS	315700107505201		029	GW	82-09-01	1554	110BLSN	115.00	--	4215.00
27S.11W.16.444 TERRY WEL	315707108574201		029	GW	82-09-01	1240	110BLSN	200.00	--	4505.00
28S.08W.26.311 COLUMBUS	315038107381001		029	GW	82-08-26	1540	110BLSN	162.00	--	4079.00
28S.09W.13.344 RASCON WI	315157107425201		029	GW	82-08-26	1330	110PTOD	28.50	--	4495.00
28S.10W.02.444 EAST WELL	315342107493501		029	GW	82-09-01	1625	110BLSN	330.00	--	4390.00
28S.11W.29.231 CARRIZALI	315040107584801		029	SP	82-09-01	1730	110BLSN	--	--	4533.00

QUALITY OF GROUND WATER  
 WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

## LUNA COUNTY - Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	DEPTH OF HOLE, TOTAL (FEET) (72001)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
21S.06W.01.222 BOGARD WE	82-08-18	--	10	425	456	7.5	8.3	21.0	120	28
21S.07W.10.221 FLYING Y	82-08-27	376	2.0	450	465	7.7	8.0	27.0	120	37
22S.05W.03.222 HYATT AND	82-09-02	263	10	480	498	7.8	8.4	22.0	160	33
22S.05W.26.112 HOOD WM	82-08-18	--	2.0	450	480	7.8	8.4	23.0	130	34
23S.05W.03.311 LITTLE ED	82-09-02	260	1.0	500	494	7.7	8.3	30.0	93	25
24S.12W.32.241 MINES WEL	82-08-24	--	1.0	1050	1060	7.6	8.1	20.0	360	50
25S.11W.20.311 PUMP WIND	82-08-24	--	.5	400	420	8.2	8.3	20.0	31	9.4
25S.12W.36.331 LITTLE WI	82-08-24	--	.3	700	667	7.9	8.2	25.0	160	40
26S.10W.15.312 NEW WL	82-09-01	276	20	450	470	7.8	8.2	21.5	120	23
26S.12W.18.112 SEC 18 WL	82-08-24	600	.8	475	488	7.9	8.6	23.0	61	20
26S.12W.21.243 KLONDIKE	82-08-24	--	1.0	495	481	9.0	8.8	25.0	30	9.1
26S.13W.11.133 ELLINWOOD	82-08-24	--	.8	650	662	7.6	8.5	25.0	75	21
27S.10W.03.313 JOG WELL	82-09-01	105	2.0	1400	1490	7.4	7.9	25.0	140	45
27S.10W.22.211 WHITEHOUS	82-09-01	174	5.0	1200	1240	7.8	8.2	27.0	55	16
27S.11W.16.444 TERRY WEL	82-09-01	246	1.0	215	233	7.4	7.6	25.0	100	37
28S.08W.26.311 COLUMBUS	82-08-26	800	100	1100	1100	8.0	8.3	30.0	29	8.0
28S.09W.13.344 RASCON WI	82-08-26	--	2.0	825	831	7.2	7.9	23.0	300	79
28S.10W.02.444 EAST WELL	82-09-01	436	5.0	1200	1360	7.8	8.3	21.0	67	23
28S.11W.29.231 CARRIZALI	82-09-01	--	3.0	495	470	7.5	8.3	20.0	160	38

LOCAL IDENT- IFIER	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 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)
21S.06W.01.222 BOGARD WE	82-08-18	12	47	1.9	6.5	168	28	12	1.1	74
21S.07W.10.221 FLYING Y	82-08-27	7.1	46	1.9	3.6	140	73	12	.6	33
22S.05W.03.222 HYATT AND	82-09-02	19	42	1.5	4.4	158	28	15	1.7	72
22S.05W.26.112 HOOD WM	82-08-18	12	49	1.9	7.1	132	24	18	1.8	78
23S.05W.03.311 LITTLE ED	82-09-02	7.3	68	3.2	8.3	149	35	24	1.7	79
24S.12W.32.241 MINES WEL	82-08-24	58	96	2.2	4.5	305	120	88	2.6	15
25S.11W.20.311 PUMP WIND	82-08-24	1.8	86	7.0	2.6	192	10	5.6	2.9	35
25S.12W.36.331 LITTLE WI	82-08-24	15	67	2.4	3.3	177	46	49	1.1	38
26S.10W.15.312 NEW WL	82-09-01	16	61	2.4	1.5	206	39	9.2	2.1	64
26S.12W.18.112 SEC 18 WL	82-08-24	2.8	87	5.0	4.2	177	32	16	.4	39
26S.12W.21.243 KLONDIKE	82-08-24	1.8	100	8.2	2.8	222	15	8.6	1.5	28
26S.13W.11.133 ELLINWOOD	82-08-24	5.4	120	6.3	7.4	232	65	13	1.1	38
27S.10W.03.313 JOG WELL	82-09-01	7.5	270	10	16	378	300	47	7.8	51
27S.10W.22.211 WHITEHOUS	82-09-01	3.6	270	16	15	351	220	40	3.9	52
27S.11W.16.444 TERRY WEL	82-09-01	2.0	2.6	.1	10	94	23	6.5	.4	14
28S.08W.26.311 COLUMBUS	82-08-26	2.2	230	19	7.3	305	170	46	7.0	41
28S.09W.13.344 RASCON WI	82-08-26	26	69	1.8	5.2	351	54	22	.7	50
28S.10W.02.444 EAST WELL	82-09-01	2.4	280	16	7.4	299	230	83	6.1	30
28S.11W.29.231 CARRIZALI	82-09-01	17	34	1.2	2.7	167	28	20	.9	70

LOCAL IDENT- IFIER	DATE OF SAMPLE	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)	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)
21S.06W.01.222 BOGARD WE	82-08-18	328	4.2	7	16	<1	<10	3	4	<1
21S.07W.10.221 FLYING Y	82-08-27	301	.95	1	17	1	<10	2	16	7
22S.05W.03.222 HYATT AND	82-09-02	359	11	13	41	<1	<10	7	340	5
22S.05W.26.112 HOOD WM	82-08-18	370	15	13	85	3	<10	2	190	<1
23S.05W.03.311 LITTLE ED	82-09-02	366	5.9	13	26	<1	<10	23	810	4
24S.12W.32.241 MINES WEL	82-08-24	636	4.1	2	60	<1	<10	10	85	<1
25S.11W.20.311 PUMP WIND	82-08-24	269	--	16	18	<1	10	6	69	6
25S.12W.36.331 LITTLE WI	82-08-24	409	9.8	2	9	<1	<10	9	8	7
26S.10W.15.312 NEW WL	82-09-01	342	.36	3	53	<1	<10	1	12	8
26S.12W.18.112 SEC 18 WL	82-08-24	327	4.1	7	7	<1	<10	6	790	5

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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LUNA COUNTY - Concluded

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) (00631)	ARSENIC DIS- SOLVED (UG/L) (01000)	BARIUM, DIS- SOLVED (UG/L) (01005)	CADMIUM DIS- SOLVED (UG/L) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L) (01030)	COPPER, DIS- SOLVED (UG/L) (01040)	IRON, DIS- SOLVED (UG/L) (01046)	LEAD, DIS- SOLVED (UG/L) (01049)
26S.12W.21.243 KLONDIKE	82-08-24	308	1.8	11	8	<1	<10	12	15	14
26S.13W.11.133 ELLINWOOD	82-08-24	435	5.4	8	29	<1	<10	19	5	<1
27S.10W.03.313 JOG WELL	82-09-01	973	<.10	3	31	2	<10	12	330	6
27S.10W.22.211 WHITEHOUS	82-09-01	835	.66	30	11	<1	<10	8	34	2
27S.11W.16.444 TERRY WEL	82-09-01	154	.43	4	87	<1	<10	5	100	<1
28S.08W.26.311 COLUMBUS	82-08-26	697	.42	38	5	<1	10	10	<3	1
28S.09W.13.344 RASCON WI	82-08-26	538	4.7	6	110	<1	<10	11	15	5
28S.10W.02.444 EAST WELL	82-09-01	857	3.2	20	24	<1	<10	3	1100	<1
28S.11W.29.231 CARRIZALI	82-09-01	339	6.4	6	12	<1	<10	2	6	10

LOCAL IDENT- I- FIER	DATE OF SAMPLE	MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)	MERCURY DIS- SOLVED (UG/L) AS HG (71890)	SELE- NIUM, DIS- SOLVED (UG/L) AS SE (01145)	SILVER, DIS- SOLVED (UG/L) AS AG (01075)	ZINC, DIS- SOLVED (UG/L) AS ZN (01090)
21S.06W.01.222 BOGARD WE	82-08-18	<1	<.1	3	<1	23
21S.07W.10.221 FLYING Y	82-08-27	17	<.1	1	<1	270
22S.05W.03.222 HYATT AND	82-09-02	1	<.1	2	<1	330
22S.05W.26.112 HOOD WM	82-08-18	9	<.1	2	<1	220
23S.05W.03.311 LITTLE ED	82-09-02	20	.1	3	<1	840
24S.12W.32.241 MINES WEL	82-08-24	10	.2	4	<1	250
25S.11W.20.311 PUMP WIND	82-08-24	<1	<.1	1	<1	24
25S.12W.36.331 LITTLE WI	82-08-24	10	.1	2	<1	110
26S.10W.15.312 NEW WL	82-09-01	4	<.1	1	<1	190
26S.12W.18.112 SEC 18 WL	82-08-24	5	<.1	2	<1	340
26S.12W.21.243 KLONDIKE	82-08-24	<1	<.1	1	<1	38
26S.13W.11.133 ELLINWOOD	82-08-24	6	.1	2	<1	730
27S.10W.03.313 JOG WELL	82-09-01	28	.1	<1	<1	1000
27S.10W.22.211 WHITEHOUS	82-09-01	2	<.1	<1	<1	34
27S.11W.16.444 TERRY WEL	82-09-01	110	<.1	<1	<1	37
28S.08W.26.311 COLUMBUS	82-08-26	5	.1	2	<1	53
28S.09W.13.344 RASCON WI	82-08-26	6	<.1	1	<1	130
28S.10W.02.444 EAST WELL	82-09-01	11	<.1	6	<1	--
28S.11W.29.231 CARRIZALI	82-09-01	<1	<.1	2	<1	13

McKINLEY COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	TO TOP OF WATER- BEARING ZONE (FT) (72002)	DEPTH OF WELL, TOTAL (FEET) (72008)
15N.06W.01.1321 SAN MIGU	353340107254601		031	GW	82-08-28	1330	211GLLP	--	--	1315
15N.13W.25.1423 W NUCLEA	353017108100401		031	GW	82-02-24	1320	313SADG	3081	2811	3102
A15N.14W.11.2143 GULF MAR	353258108171601		031	SS	82-02-28	1306	221RCPR	--	--	695
B15N.14W.12.1323A GULF MA	353252108164201		031	SS	82-02-25	1155	221WSRC	--	--	--
C15N.14W.12.1323B GULF MA	353252108164202		031	SS	82-02-25	1202	221WSRC	--	--	--
D15N.14W.12.1432A GULF MA	353249108163201		031	SS	82-02-25	1035	221WSRC	--	--	--
E15N.14W.12.1432B GULF MA	353248108162901		031	SS	82-02-25	1110	221WSRC	--	--	--
16N.04W.28.2212 OJO DE A	353542107152401		031	SP	82-08-31	1030	211PNLK	--	--	--
16N.05W.19.414A AZABACHE	353558107241001		031	GW	82-08-28	1000	211GLLP	1110	1100	1110
16N.05W.19.414B AZABACHE	353558107241002		031	GW	82-08-28	1030	211DLTN	710	510	1110
17N.13E.15.332 MOBIL WEL	354203108125701		031	GW	82-08-17	1127	221WSRC	--	--	2150
20N.02W.33.1243 OJO DE G	355525107030501		031	SP	82-09-01	1430	211OJAM	--	--	--
20N.02W.33.1441 SMOKEY S	355517107030601		031	SP	82-09-01	1330	211OJAM	--	--	--

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

McKINLEY COUNTY - Continued

LOCAL IDENT- IFIER	DATE OF SAMPLE	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF HOLE, TOTAL (FEET) (72001)	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)
15N.06W.01.1321 SAN MIGU	82-08-28	--	6625.00	--	.5	410	432	8.2	8.3	--
15N.13W.25.1423 W NUCLEA	82-02-24	--	--	--	--	470	413	7.4	8.1	4.0
A15N.14W.11.2143 GULF MAR	82-02-28	--	--	--	--	600	580	7.4	7.0	.5
B15N.14W.12.1323A GULF MA	82-02-25	--	--	--	20	2150	2100	7.9	8.0	8.5
C15N.14W.12.1323B GULF MA	82-02-25	--	--	--	40	1750	1640	6.4	6.0	8.5
D15N.14W.12.1432A GULF MA	82-02-25	--	--	--	--	1290	1260	7.6	8.2	17.0
E15N.14W.12.1432B GULF MA	82-02-25	--	--	--	--	2210	2200	6.9	7.6	13.5
16N.04W.28.2212 OJO DE A	82-08-31	--	6400.00	--	<.1	950	965	8.9	8.7	--
16N.05W.19.414A AZABACHE	82-08-28	--	--	1110	11	3200	3180	8.4	8.5	--
16N.05W.19.414B AZABACHE	82-08-28	--	6466.00	1110	6.0	650	695	8.9	9.2	--
17N.13E.15.332 MOBIL WEL	82-08-17	--	--	--	--	415	460	8.4	8.9	--
20N.02W.33.1243 OJO DE G	82-09-01	--	7010.00	--	<.1	330	338	6.5	7.8	--
20N.02W.33.1441 SMOKEY S	82-09-01	--	7010.00	--	<.1	200	212	6.3	7.9	--

LOCAL IDENT- IFIER	DATE OF SAMPLE	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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 ITFLD (MG/L AS HCO3) (99440)
15N.06W.01.1321 SAN MIGU	82-08-28	16.5	--	18	4.6	1.5	96	10	1.2	--
15N.13W.25.1423 W NUCLEA	82-02-24	20.0	.6	200	50	18	13	.4	2.9	190
A15N.14W.11.2143 GULF MAR	82-02-28	15.0	5.6	240	79	11	32	.9	2.2	260
B15N.14W.12.1323A GULF MA	82-02-25	12.0	8.2	1400	420	94	31	.4	7.6	150
C15N.14W.12.1323B GULF MA	82-02-25	11.0	8.5	1100	320	74	20	.3	5.3	26
D15N.14W.12.1432A GULF MA	82-02-25	12.0	8.4	800	240	49	20	.3	3.3	180
E15N.14W.12.1432B GULF MA	82-02-25	13.0	6.0	1600	460	98	30	.3	7.8	150
16N.04W.28.2212 OJO DE A	82-08-31	25.0	--	250	50	31	110	3.1	5.0	--
16N.05W.19.414A AZABACHE	82-08-28	23.0	--	33	9.2	2.4	740	58	2.5	--
16N.05W.19.414B AZABACHE	82-08-28	22.0	--	4	1.1	.2	170	41	.7	--
17N.13E.15.332 MOBIL WEL	82-08-17	33.5	--	7	2.5	.2	100	17	1.0	--
20N.02W.33.1243 OJO DE G	82-09-01	12.0	--	41	12	2.6	54	3.8	1.7	--
20N.02W.33.1441 SMOKEY S	82-09-01	15.0	--	56	19	2.1	21	1.3	1.1	--

LOCAL IDENT- IFIER	DATE OF SAMPLE	CAR- BONATE ITFLD (MG/L AS CO3) (99445)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
15N.06W.01.1321 SAN MIGU	82-08-28	--	206	17	4.4	.7	14	263	<.10	<1
15N.13W.25.1423 W NUCLEA	82-02-24	.00	160	84	2.9	.5	15	284	<.09	1
A15N.14W.11.2143 GULF MAR	82-02-28	.00	300	98	10	.5	19	386	.30	4
B15N.14W.12.1323A GULF MA	82-02-25	.00	120	1300	16	.9	26	1970	.54	4
C15N.14W.12.1323B GULF MA	82-02-25	.00	9.0	1100	18	1.4	27	1600	<.09	2
D15N.14W.12.1432A GULF MA	82-02-25	.00	150	600	12	.5	18	1030	<.09	1
E15N.14W.12.1432B GULF MA	82-02-25	.00	120	1400	13	1.0	32	2120	.16	2
16N.04W.28.2212 OJO DE A	82-08-31	--	140	330	10	.5	4.2	625	.10	--
16N.05W.19.414A AZABACHE	82-08-28	--	250	1300	41	.7	11	2260	<.10	<1
16N.05W.19.414B AZABACHE	82-08-28	--	311	33	15	.6	12	420	<.10	<1
17N.13E.15.332 MOBIL WEL	82-08-17	--	195	39	3.3	.2	18	282	--	--
20N.02W.33.1243 OJO DE G	82-09-01	--	59	72	11	.2	16	207	.47	<1
20N.02W.33.1441 SMOKEY S	82-09-01	--	67	23	4.1	.1	19	131	.15	1



QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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MCKINLEY COUNTY - Concluded

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)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
15N.06W.01.1321 SAN MIGU	82-08-28	98	--	<1	<10	<1	12	<1	4	<.1
15N.13W.25.1423 W NUCLEA	82-02-24	74	--	<1	<10	1	1500	2	27	<.1
A15N.14W.11.2143 GULF MAR	82-02-28	54	--	<1	<10	1	19	1	<1	<.1
B15N.14W.12.1323A GULF MA	82-02-25	100	--	1	10	2	2200	3	1100	<.1
C15N.14W.12.1323B GULF MA	82-02-25	25	--	<1	10	4	27000	<1	1100	<.1
D15N.14W.12.1432A GULF MA	82-02-25	88	--	<1	10	2	210	<1	390	<.1
E15N.14W.12.1432B GULF MA	82-02-25	100	--	1	10	1	130	11	1300	<.1
16N.04W.28.2212 OJO DE A	82-08-31	--	--	--	--	--	7	--	3	--
16N.05W.19.414A AZABACHE	82-08-28	<100	--	<1	<10	1	180	1	20	<.1
16N.05W.19.414B AZABACHE	82-08-28	81	--	<1	<10	<1	14	4	1	<.1
17N.13E.15.332 MOBIL WEL	82-08-17	--	60	--	--	--	110	--	--	--
20N.02W.33.1243 OJO DE G	82-09-01	11	--	<1	<10	<1	29	<1	5	<.1
20N.02W.33.1441 SMOKEY S	82-09-01	15	--	<1	<10	1	840	<1	17	<.1

LOCAL IDENT- I- FIER	DATE OF SAMPLE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SAMPLE SOURCE (72005)
15N.06W.01.1321 SAN MIGU	82-08-28	--	<1	<1	--	<3	--
15N.13W.25.1423 W NUCLEA	82-02-24	3	<1	<1	2.0	9	--
A15N.14W.11.2143 GULF MAR	82-02-28	2	21	<1	14	130	--
B15N.14W.12.1323A GULF MA	82-02-25	800	90	<1	16	460	45
C15N.14W.12.1323B GULF MA	82-02-25	130	250	<1	8.0	1300	45
D15N.14W.12.1432A GULF MA	82-02-25	4	6	<1	1.0	9	45
E15N.14W.12.1432B GULF MA	82-02-25	400	70	<1	6.0	610	45
16N.04W.28.2212 OJO DE A	82-08-31	--	--	--	--	--	--
16N.05W.19.414A AZABACHE	82-08-28	--	<1	<1	--	10	--
16N.05W.19.414B AZABACHE	82-08-28	--	<1	<1	--	<3	--
17N.13E.15.332 MOBIL WEL	82-08-17	--	--	--	--	--	--
20N.02W.33.1243 OJO DE G	82-09-01	--	4	<1	--	20	--
20N.02W.33.1441 SMOKEY S	82-09-01	--	<1	<1	--	27	--

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (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 (09511)
15N.13W.25.1423 W NUCLEA	353017108100401	031	GW	82-02-24	1320	<6.6	<3.2	<3.1	1.0	
A15N.14W.11.2143 GULF MAR	353258108171601	031	SS	82-02-28	1306	30	11	11	17	
B15N.14W.12.1323A GULF MA	353252108164201	031	SS	82-02-25	1155	19000	9100	8800	333	
		031	SS	82-02-25	1157	20000	5500	5200	147	
C15N.14W.12.1323B GULF MA	353252108164202	031	SS	82-02-25	1202	13000	4300	4200	335	
D15N.14W.12.1432A GULF MA	353249108163201	031	SS	82-02-25	1035	680	180	170	30	
E15N.14W.12.1432B GULF MA	353248108162901	031	SS	82-02-25	1110	14000	5600	5300	479	
16N.05W.19.414A AZABACHE	353558107241001	031	GW	82-08-28	1000	150	<34	<33	.54	
16N.05W.19.414B AZABACHE	353558107241002	031	GW	82-08-28	1030	28	<5.8	<5.6	.07	



QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

McKINLEY COUNTY - Concluded

LOCAL IDENT- I- FIER	DATE OF SAMPLE	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
15N.13W.25.1423 W NUCLEA	82-02-24	--	.03
A15N.14W.11.2143 GULF MAR	82-02-28	22	--
B15N.14W.12.1323A GULF MA	82-02-25	17000	--
	82-02-25	20000	--
C15N.14W.12.1323B GULF MA	82-02-25	10000	--
D15N.14W.12.1432A GULF MA	82-02-25	13	--
E15N.14W.12.1432B GULF MA	82-02-25	14000	--
16N.05W.19.414A AZABACHE	82-08-28	--	.03
16N.05W.19.414B AZABACHE	82-08-28	--	.03

A GULF MARIANO POTABLE WELL

B GULF MARIANO EAST MINE SHAFT SEEP - FROM LONGHOLE SPICKET - 20 MINUTES TO COLLECT 1 GALLON

C GULF MARIANO WEST MINE SHAFT SEEP - FROM LONGHOLE SPICKET - 20 MINUTES TO COLLECT 1 GALLON

D GULF MARIANO MINE SEEP - FROM OPEN LONGHOLE ON SIDE OF TUNNEL - 1 HOUR TO COLLECT SAMPLE

E GULF MARIANO DRAINAGE IN TUNNEL TO MAIN SHAFT SUMP

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 TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)
12S.07E.08.422 MALPAIZ S	331715106183301		035	SP	82-08-02	1200	110AVMB	--	--	--
16S.06E.32.232 RATSCAT W	324522106204401		035	GW	82-01-28	1100	--	7.00	276	40

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- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	DENSITY (GM/ML AT 20 C) (71820)
12S.07E.08.422 MALPAIZ S	82-08-02	--	--	--	6050	6150	7.4	7.8	17.1	1.016
16S.06E.32.232 RATSCAT W	82-01-28	120	276	30	60600	60000	7.5	7.4	17.0	--

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)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFIDE TOTAL (MG/L AS S) (00745)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
12S.07E.08.422 MALPAIZ S	82-08-02	2300	680	150	630	5.9	6.8	3.0	--	2000
16S.06E.32.232 RATSCAT W	82-01-28	15930	440	3600	13000	45	340	220	30	20000

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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	IODIDE, DIS- SOLVED (MG/L AS I) (71865)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
12S.07E.08.422 MALPAIZ S	82-08-02	1200	1.2	.34	.010	29	--	4710	<.020	3.2
16S.06E.32.232 RATSCAT W	82-01-28	20000	.4	--	--	32	62900	57600	--	<.10

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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OTERO COUNTY - Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	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)
12S.07E.08.422 MALPAIZ S	82-08-02	.140	<.010	.6	<.1	20	1	<100	220	--
16S.06E.32.232 RATSCAT W	82-01-28	--	--	--	--	--	4	100	3500	<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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)
12S.07E.08.422 MALPAIZ S	82-08-02	10	20	50	200	--	20	--	11
16S.06E.32.232 RATSCAT W	82-01-28	110	<1	310	1	1200	100	.5	--

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)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
12S.07E.08.422 MALPAIZ S	82-08-02	--	--	9800	20
16S.06E.32.232 RATSCAT W	82-01-28	<1	<1	12000	70

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)
12S.07E.08.422 MALPAIZ S	331715106183301		035	SP	82-08-02	1200	--	--	--	.07
16S.06E.32.232 RATSCAT W	324522106204401		035	GW	82-01-28	1100	<1900	<830	<800	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	TRITIUM TOTAL (PCI/L) (07000)	CARBON- 14, DISS AP- PARENT AGE (YEARS BP) (28004)	C-13/ C-12 STABLE ISOTOPE RATIO PER MIL (82081)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MIL (82082)	O-18/ O-16 STABLE ISOTOPE RATIO PER MIL (82085)	CARBON 14 PERCENT MODERN (82172)
12S.07E.08.422 MALPAIZ S	82-08-02	3.2	7.0	<27900	-8.6	-63.0	-9.1	<3.1
16S.06E.32.232 RATSCAT W	82-01-28	--	--	--	--	--	--	--

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

RIO ARRIBA 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)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)
20N.09E.23.URANIUM SPRIN	355658105572301		039	SP	81-11-17	1100	--	1040	6200.00	360
22N.09E.15.CCC CAMP SUMP	360810105580601		039	SP	81-11-17	1400	--	--	5990.00	350
22N.09E.29.ALAMOS SPRING	360705106001501		039	SP	81-11-17	1000	--	--	5890.00	345
22N.09E.30.ORCHARD SPRIN	360659105551201		039	SP	81-11-17	1500	--	--	6425.00	250

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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)
20N.09E.23.URANIUM SPRIN	81-11-17	395	9.1	9.5	17.0	4	1.5	.0	82	19
22N.09E.15.CCC CAMP SUMP	81-11-17	393	7.5	8.0	10.0	160	49	8.6	19	.7
22N.09E.29.ALAMOS SPRING	81-11-17	355	8.5	9.0	14.0	--	3.4	<.0	79	--
22N.09E.30.ORCHARD SPRIN	81-11-17	271	7.4	7.8	11.0	130	46	4.5	6.5	.3

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) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
20N.09E.23.URANIUM SPRIN	81-11-17	.3	140	31	8.6	3.6	17	229	--	80
22N.09E.15.CCC CAMP SUMP	81-11-17	8.3	180	6.0	9.5	.6	24	233	<.10	1
22N.09E.29.ALAMOS SPRING	81-11-17	.5	120	34	11	.3	14	217	4.0	4
22N.09E.30.ORCHARD SPRIN	81-11-17	.6	130	6.0	3.5	.4	22	168	<.10	1

LOCAL IDENT- I- FIER	DATE OF SAMPLE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
20N.09E.23.URANIUM SPRIN	81-11-17	240	<1	<10	<1	--	<.1	2
22N.09E.15.CCC CAMP SUMP	81-11-17	30	<1	120	<1	1	<.1	<1
22N.09E.29.ALAMOS SPRING	81-11-17	50	<1	10	<1	<1	<.1	1
22N.09E.30.ORCHARD SPRIN	81-11-17	10	<1	12	<1	45	<.1	<1

SANDOVAL COUNTY

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)	DEPTH OF WELL, TOTAL (FEET) (72008)
15N.01W.10.1411 SALTMOU	353242106490701		043	SP	82-08-30	1430	231CHNL	--	--	--
15N.05W.17.4312 OJO DE L	353127107231101		043	SP	82-09-02	1100	211ALSN	--	--	--
16N.03W.17.3332 CERRO CU	353641107110201		043	GW	82-08-17	1030	211DKOT	1840	1785	1840
16N.04W.25.433 OJO ATASC	353448107122501		043	SP	82-08-17	1300	211MLTT	--	--	--
16N.04W.26.213 OJO FRIO	353530107133901		043	SP	82-08-18	1200	211SATN	--	--	--
			043	SP	82-08-23	1140	211SATN	--	--	0

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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SANDOVAL COUNTY - Continued

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)	DEPTH OF WELL, TOTAL (FEET) (72008)
16N.04W.36.2321 HOMESTAK	353432107121801		043	GW	82-08-17	1200	211GLLP	469	410	602
18N.01W.1122 ELK SPRING	355313106493301		043	SP	82-08-30	1100	211DKOT	--	--	--
19N.02W.05.4221 OJO JARI	355422107033801		043	SP	82-08-21	1030	211OJAM	--	--	--
20N.02W.14.3214 JOHNSON1	355744107010001		043	GW	82-08-21	1530	211OJAM	--	--	65
			043	GW	82-08-27	1330	211OJAM	--	--	65
20N.02W.16.2144 ARROYO C	355802107024601		043	GW	82-08-26	1100	211OJAM	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	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- DUCT- ANCE LAB (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)
15N.01W.10.1411 SALTMOU	82-08-30	--	5495.00	--	--	10	--	8930	6.1	7.1
15N.05W.17.4312 OJO DE L	82-09-02	--	7740.00	--	--	3.0	175	178	6.8	7.7
16N.03W.17.3332 CERRO CU	82-08-17	--	6130.00	--	1840	14	2870	2950	8.8	8.5
16N.04W.25.433 OJO ATASC	82-08-17	--	6085.00	--	--	.4	1520	1610	8.6	8.8
16N.04W.26.213 OJO FRIO	82-08-18	--	6260.00	--	--	<.1	624	624	8.9	9.3
	82-08-23	--	--	--	--	--	550	--	8.9	--
16N.04W.36.2321 HOMESTAK	82-08-17	--	6150.00	--	602	26	500	543	8.9	9.2
18N.01W.1122 ELK SPRING	82-08-30	--	7400.00	--	--	.9	1500	1500	7.2	8.1
19N.02W.05.4221 OJO JARI	82-08-21	--	7090.00	--	--	.2	160	175	7.1	7.9
20N.02W.14.3214 JOHNSON1	82-08-21	--	6770.00	--	65	2.0	2950	3100	7.2	7.6
	82-08-27	--	6770.00	--	65	2.0	2950	--	7.2	--
20N.02W.16.2144 ARROYO C	82-08-26	--	6818.00	--	--	1.3	1600	1720	7.3	8.3

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
15N.01W.10.1411 SALTMOU	82-08-30	22.0	1100	320	72	1800	25	67	1470	1200
15N.05W.17.4312 OJO DE L	82-09-02	13.0	73	18	6.7	6.4	.3	5.1	76	11
16N.03W.17.3332 CERRO CU	82-08-17	19.0	13	2.8	1.5	660	81	1.8	341	980
16N.04W.25.433 OJO ATASC	82-08-17	18.5	11	3.0	.9	350	47	1.3	239	500
16N.04W.26.213 OJO FRIO	82-08-18	15.5	3	1.0	.2	140	34	.7	292	25
	82-08-23	15.5	--	--	--	--	--	--	--	--
16N.04W.36.2321 HOMESTAK	82-08-17	18.0	5	1.7	.2	130	26	.8	239	34
18N.01W.1122 ELK SPRING	82-08-30	11.5	840	320	11	29	.5	1.6	158	720
19N.02W.05.4221 OJO JARI	82-08-21	17.0	25	7.7	1.5	23	2.1	1.9	40	32
20N.02W.14.3214 JOHNSON1	82-08-21	11.5	340	110	17	570	14	1.3	237	1200
	82-08-27	11.5	--	--	--	--	--	--	--	--
20N.02W.16.2144 ARROYO C	82-08-26	13.0	160	50	8.9	320	11	2.9	250	600

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SANDOVAL 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, 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)
15N.01W.10.1411 SALTMOU	82-08-30	1700	3.3	14	6080	.24	520	<100	2	<10
15N.05W.17.4312 OJO DE L	82-09-02	3.1	.1	27	124	.10	1	57	<1	<10
16N.03W.17.3332 CERRO CU	82-08-17	82	1.5	10	1940	<.10	<1	<100	<1	<10
16N.04W.25.433 OJO ATASC	82-08-17	22	.6	12	1030	<.10	<1	18	<1	<10
16N.04W.26.213 OJO FRIO	82-08-18	2.5	.8	11	357	<.10	--	--	--	--
16N.04W.36.2321 HOMESTAK	82-08-23	--	--	--	--	--	<1	30	<1	<10
18N.01W.1122 ELK SPRING	82-08-17	3.8	.5	14	329	<.10	<1	12	<1	<10
18N.01W.1122 ELK SPRING	82-08-30	3.8	.3	28	1210	<.10	1	61	<1	10
19N.02W.05.4221 OJO JARI	82-08-21	3.8	.1	27	121	<.10	1	19	<1	<10
20N.02W.14.3214 JOHNSON1	82-08-21	18	.1	16	2080	<.10	<1	<100	<1	10
20N.02W.16.2144 ARROYO C	82-08-27	--	--	--	--	--	--	--	--	--
	82-08-26	11	.1	14	1160	1.0	<1	16	<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)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
15N.01W.10.1411 SALTMOU	82-08-30	3	11000	9	2000	<.1	1	<1	2900
15N.05W.17.4312 OJO DE L	82-09-02	2	310	<1	5	<.1	1	<1	13
16N.03W.17.3332 CERRO CU	82-08-17	<1	70	4	10	<.1	<1	<1	<10
16N.04W.25.433 OJO ATASC	82-08-17	<1	14	<1	5	<.1	<1	<1	<3
16N.04W.26.213 OJO FRIO	82-08-18	--	<3	--	3	--	--	--	--
16N.04W.36.2321 HOMESTAK	82-08-23	1	--	<1	--	<.1	<1	<1	4
18N.01W.1122 ELK SPRING	82-08-17	<1	<3	<1	3	<.1	<1	<1	<3
18N.01W.1122 ELK SPRING	82-08-30	1	4	<1	1	<.1	1	<1	14
19N.02W.05.4221 OJO JARI	82-08-21	1	57	<1	7	<.1	1	<1	3
20N.02W.14.3214 JOHNSON1	82-08-21	<1	620	1	800	<.1	<1	<1	280
20N.02W.16.2144 ARROYO C	82-08-27	--	--	--	--	--	--	--	--
	82-08-26	1	33	<1	170	<.1	10	<1	280

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (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)
16N.04W.36.2321 HOMESTAK	353432107121801		043	GW	82-08-17	1200	<7.8	<4.0	<3.9	.07
19N.02W.05.4221 OJO JARI	355422107033801		043	SP	82-09-01	1000	65	7.0	6.6	.03
20N.02W.14.3214 JOHNSON1	355744107010001		043	GW	82-08-27	1330	800	44	42	.27

LOCAL IDENT- I- FIER	DATE OF SAMPLE	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
16N.04W.36.2321 HOMESTAK	82-08-17	--	<.01
19N.02W.05.4221 OJO JARI	82-09-01	--	.42
20N.02W.14.3214 JOHNSON1	82-08-27	1.8	--

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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SAN JUAN 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)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)
NR032.0336X1582 COTTONWO	363113108333501		045	GW	82-04-13	1100	110AVMB	12	5195.00	2930
NR032.0407X1145 CHACO R	363503108342101		045	GW	82-04-13	0915	110AVMB	8	5130.00	1400
NR032.0505X0180 CHACO R	364325108353001		045	GW	82-04-13	1425	110AVMB	0	4980.00	2500
NR048.0898X1715 HUNTER W	361503108243801		045	GW	82-04-14	1600	110AVMB	8	5650.00	23000
NR049.0115X0950 BRIMHALL	362145108310901		045	GW	82-04-15	0930	110AVMB	8	5390.00	2000
NR049.0380X0891 BURNHAM	362213108340501		045	GW	82-04-15	1100	110AVMB	0	5317.00	1100
NR066.0668X0380 CHACO R.	361142108220401		045	GW	82-04-15	1300	110AVMB	8	5545.00	950
21N.11W.07.242 CHACO R W	360415108022201		045	GW	82-04-12	1200	110AVMB	--	6018.00	795
22N.13W.24.4134 3D WELL	360725108102701		045	GW	82-04-14	0945	110AVMB	--	--	990
23N.13W.17.334 DENAZIN	361318108151401		045	GW	82-04-14	1230	110AVMB	8	5780.00	2000

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (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 CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
NR032.0336X1582 COTTONWO	82-04-13	2880	7.5	7.9	19.0	13.0	57	290	91	15
NR032.0407X1145 CHACO R	82-04-13	1400	7.4	7.7	17.0	11.0	--	180	55	9.7
NR032.0505X0180 CHACO R	82-04-13	2290	7.4	8.0	23.0	13.0	74	76	12	11
NR048.0898X1715 HUNTER W	82-04-14	20700	7.7	7.7	23.5	13.0	95	2700	390	420
NR049.0115X0950 BRIMHALL	82-04-15	1950	7.7	8.3	17.0	11.0	48	250	85	8.1
NR049.0380X0891 BURNHAM	82-04-15	1000	7.1	7.6	19.0	11.0	61	110	36	4.5
NR066.0668X0380 CHACO R.	82-04-15	908	7.3	7.8	23.5	12.0	58	110	40	3.4
21N.11W.07.242 CHACO R W	82-04-12	813	7.7	8.3	25.0	12.0	53	56	19	2.0
22N.13W.24.4134 3D WELL	82-04-14	992	7.3	8.0	20.5	11.0	76	53	17	2.4
23N.13W.17.334 DENAZIN	82-04-14	1810	7.6	7.9	21.0	11.0	35	180	62	6.4

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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 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)
NR032.0336X1582 COTTONWO	82-04-13	560	15	3.5	262	260	<.5	1100	38	1.6
NR032.0407X1145 CHACO R	82-04-13	250	8.5	3.7	271	270	<.5	450	11	.8
NR032.0505X0180 CHACO R	82-04-13	510	26	3.5	197	160	<.5	790	120	2.0
NR048.0898X1715 HUNTER W	82-04-14	6100	52	14	714	740	<.5	16000	67	1.5
NR049.0115X0950 BRIMHALL	82-04-15	380	11	3.1	262	290	<.5	760	13	1.4
NR049.0380X0891 BURNHAM	82-04-15	190	8.3	2.4	279	270	<.5	260	8.3	1.1
NR066.0668X0380 CHACO R.	82-04-15	180	7.7	2.5	295	310	<.5	200	12	1.1
21N.11W.07.242 CHACO R W	82-04-12	190	12	1.5	279	290	<.5	180	5.8	.8
22N.13W.24.4134 3D WELL	82-04-14	210	13	2.1	271	300	2.6	210	8.6	.9
23N.13W.17.334 DENAZIN	82-04-14	360	12	2.3	262	290	<.5	590	15	.8

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 CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
NR032.0336X1582 COTTONWO	82-04-13	9.4	2020	1980	1.0	<1	100	<1	<10	1
NR032.0407X1145 CHACO R	82-04-13	12	977	961	3.5	<1	100	<3	<10	1
NR032.0505X0180 CHACO R	82-04-13	5.8	1560	1550	3.6	1	2600	<1	<10	2
NR048.0898X1715 HUNTER W	82-04-14	18	23700	23500	20	<1	230	1	30	1
NR049.0115X0950 BRIMHALL	82-04-15	12	1440	1440	1.2	<1	70	<3	<10	1
NR049.0380X0891 BURNHAM	82-04-15	13	664	684	4.9	4	80	<3	<10	1
NR066.0668X0380 CHACO R.	82-04-15	11	610	640	3.5	<1	60	<3	<10	1
21N.11W.07.242 CHACO R W	82-04-12	8.0	550	583	2.5	<1	50	<3	<10	<1
22N.13W.24.4134 3D WELL	82-04-14	14	654	650	4.1	2	60	<3	<10	3
23N.13W.17.334 DENAZIN	82-04-14	11	1260	1220	2.3	<1	70	<3	<10	1

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SAN JUAN COUNTY - Concluded

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)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NR032.0336X1582 COTTONWO	82-04-13	3000	2	30	100	<.1	6	1600	210
NR032.0407X1145 CHACO R	82-04-13	3400	<.1	32	1200	<.1	<.1	990	500
NR032.0505X0180 CHACO R	82-04-13	30	3	220	130	.1	<.1	860	130
NR048.0898X1715 HUNTER W	82-04-14	780	2	290	160	<.1	1	5700	930
NR049.0115X0950 BRIMHALL	82-04-15	73	2	50	200	<.1	6	1300	460
NR049.0380X0891 BURNHAM	82-04-15	4400	4	22	900	<.1	<.1	470	480
NR066.0668X0380 CHACO R.	82-04-15	1600	3	18	740	<.1	<.1	650	520
21N.11W.07.242 CHACO R W	82-04-12	980	3	18	440	<.1	<.1	410	65
22N.13W.24.4134 3D WELL	82-04-14	1400	3	17	780	<.1	<.1	400	1500
23N.13W.17.334 DENAZIN	82-04-14	18	2	37	23	<.1	9	940	550

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (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)
NR032.0336X1582 COTTONWO	363113108333501		045	GW	82-04-13	1100	<57	<24	<23	.04
NR032.0407X1145 CHACO R	363503108342101		045	GW	82-04-13	0915	<21	<9.9	<9.5	.07
NR032.0505X0180 CHACO R	364325108353001		045	GW	82-04-13	1425	<37	<19	<18	.08
NR048.0898X1715 HUNTER W	361503108243801		045	GW	82-04-14	1600	770	380	370	<.02
NR049.0115X0950 BRIMHALL	362145108310901		045	GW	82-04-15	0930	<48	<16	<16	.06
NR049.0380X0891 BURNHAM	362213108340501		045	GW	82-04-15	1100	<17	<8.0	<7.7	.05
NR066.0668X0380 CHACO R.	361142108220401		045	GW	82-04-15	1300	<19	<7.0	<6.8	.10
21N.11W.07.242 CHACO R W	360415108022201		045	GW	82-04-12	1200	<10	<5.3	<5.1	.08
22N.13W.24.4134 3D WELL	360725108102701		045	GW	82-04-14	0945	<13	<7.3	<7.0	.05
23N.13W.17.334 DENAZIN	361318108151401		045	GW	82-04-14	1230	<32	<16	<15	.05

LOCAL IDENT- I- FIER	DATE OF SAMPLE	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
NR032.0336X1582 COTTONWO	82-04-13	8.4	--
NR032.0407X1145 CHACO R	82-04-13	5.3	--
NR032.0505X0180 CHACO R	82-04-13	--	.29
NR048.0898X1715 HUNTER W	82-04-14	220	--
NR049.0115X0950 BRIMHALL	82-04-15	18	--
NR049.0380X0891 BURNHAM	82-04-15	1.1	--
NR066.0668X0380 CHACO R.	82-04-15	7.5	--
21N.11W.07.242 CHACO R W	82-04-12	2.6	--
22N.13W.24.4134 3D WELL	82-04-14	--	.60
23N.13W.17.334 DENAZIN	82-04-14	13	--





QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SOCORRO COUNTY - Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	DENSITY (GM/ML AT 20 C) (71820)	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)
02S.01E.12.341 UNNAMED S	82-08-26	7.4	7.7	23.0	--	1400	410	93	49	.6
02S.01E.14.221 OJO PARID	82-08-26	7.6	8.1	21.0	--	1100	300	78	38	.5
02S.01E.23.331 OJO DEL C	82-08-06	--	--	19.5	--	--	--	--	--	--
02S.01E.26.123 UNNAMED S	82-08-03	--	--	17.5	--	--	--	--	--	--
02S.01E.27.243 OJO DE AM	82-08-17	--	--	20.0	--	--	--	--	--	--
02S.01W.25.344 LITTLE SH	82-02-10	7.4	8.0	18.0	--	580	176	34	140	2.6
02S.02E.06.334 PARIDA WE	82-02-22	7.4	7.6	20.0	--	1200	310	95	46	.6
	82-07-26	--	--	20.0	--	--	--	--	--	--
02S.02E.30.234 OJO DEL R	82-08-06	--	--	21.0	--	--	--	--	--	--
02S.03E.27.114 WILD HORS	82-03-30	7.4	7.5	15.0	--	1700	520	100	37	.4
03S.02E.19.314 OJO DE LA	82-08-17	--	--	25.0	--	--	--	--	--	--
03S.04W.11.341 HERTZ WEL	82-05-03	6.8	6.8	14.5	--	92	30	4.2	7.1	.3
03S.05E.15.322 A FERNAND	82-05-12	8.3	8.1	18.0	--	230	65	16	760	23
03S.05E.26.120 MWC WELL	82-01-28	7.5	--	13.0	--	--	--	--	--	--
04S.01W.12.443 KNOBLOCK	81-12-15	8.0	--	--	--	--	--	--	--	--
04S.01W.22.112 MCA WELL	81-12-15	7.5	--	18.0	--	--	--	--	--	--
04S.02E.29.33 ONINE WELL	82-03-24	7.3	7.5	12.0	--	1100	260	120	430	5.7
05S.06E.32.123 BURREGO S	82-08-12	7.9	7.5	24.0	--	110	40	2.9	2.7	.1
06S.03E.05.232 SRC-1	82-03-02	6.9	--	--	--	--	--	--	--	--
06S.03E.05.234 SRC-2	82-03-02	7.5	--	--	--	--	--	--	--	--
06S.08E.33.241 RED CANYO	82-07-31	7.0	7.5	22.3	1.013	2100	560	160	88	.9
07S.08E.14.323 RENFRO	82-08-04	7.4	7.5	22.9	1.015	2200	530	210	350	3.4

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)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	IODIDE, DIS- SOLVED (MG/L AS I) (71865)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
02S.01E.12.341 UNNAMED S	82-08-26	4.1	206	1300	10	.7	--	--	19	2010
02S.01E.14.221 OJO PARID	82-08-26	4.7	159	980	13	.6	--	--	19	1530
02S.01E.23.331 OJO DEL C	82-08-06	--	--	--	--	--	--	--	--	--
02S.01E.26.123 UNNAMED S	82-08-03	--	--	--	--	--	--	--	--	--
02S.01E.27.243 OJO DE AM	82-08-17	--	--	--	--	--	--	--	--	--
02S.01W.25.344 LITTLE SH	82-02-10	6.5	310	350	180	.4	--	--	31	1120
02S.02E.06.334 PARIDA WE	82-02-22	5.0	140	1100	10	.6	--	--	17	1670
	82-07-26	--	--	--	--	--	--	--	--	--
02S.02E.30.234 OJO DEL R	82-08-06	--	--	--	--	--	--	--	--	--
02S.03E.27.114 WILD HORS	82-03-30	2.8	88	1500	44	1.1	--	--	15	2280
03S.02E.19.314 OJO DE LA	82-08-17	--	--	--	--	--	--	--	--	--
03S.04W.11.341 HERTZ WEL	82-05-03	1.5	100	7.0	3.5	.2	--	--	31	146
03S.05E.15.322 A FERNAND	82-05-12	.8	75	1600	200	.6	--	--	9.3	2710
03S.05E.26.120 MWC WELL	82-01-28	--	--	--	--	--	--	--	--	--
04S.01W.12.443 KNOBLOCK	81-12-15	--	--	--	--	--	--	--	--	--
04S.01W.22.112 MCA WELL	81-12-15	--	--	--	--	--	--	--	--	--
04S.02E.29.33 ONINE WELL	82-03-24	59	170	960	780	2.4	--	--	21	2740
05S.06E.32.123 BURREGO S	82-08-12	2.7	88	19	2.4	.2	--	--	6.1	129
06S.03E.05.232 SRC-1	82-03-02	--	--	--	--	--	--	--	--	--
06S.03E.05.234 SRC-2	82-03-02	--	--	--	--	--	--	--	--	--
06S.08E.33.241 RED CANYO	82-07-31	5.1	150	2000	93	1.6	.56	.007	20	3030
07S.08E.14.323 RENFRO	82-08-04	5.6	89	2600	110	2.0	.49	.420	17	3890

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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SOCORRO COUNTY - Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
02S.01E.12.341 UNNAMED S	82-08-26	--	--	<.10	--	--	--	--	--	1
02S.01E.14.221 OJO PARID	82-08-26	--	--	.63	--	--	--	--	--	1
02S.01E.23.331 OJO DEL C	82-08-06	--	--	--	--	--	--	--	--	--
02S.01E.26.123 UNNAMED S	82-08-03	--	--	--	--	--	--	--	--	--
02S.01E.27.243 OJO DE AM	82-08-17	--	--	--	--	--	--	--	--	--
02S.01W.25.344 LITTLE SH	82-02-10	--	--	3.1	--	--	--	--	--	5
02S.02E.06.334 PARIDA WE	82-02-22	--	--	1.2	--	--	--	--	--	1
	82-07-26	--	--	--	--	--	--	--	--	--
02S.02E.30.234 OJO DEL R	82-08-06	--	--	--	--	--	--	--	--	--
02S.03E.27.114 WILD HORS	82-03-30	--	--	2.2	--	--	--	--	--	<1
03S.02E.19.314 OJO DE LA	82-08-17	--	--	--	--	--	--	--	--	--
03S.04W.11.341 HERTZ WEL	82-05-03	--	--	.19	--	--	--	--	--	1
03S.05E.15.322 A FERNAND	82-05-12	--	--	2.2	--	--	--	--	--	<1
03S.05E.26.120 MWC WELL	82-01-28	--	--	--	--	--	--	--	--	--
04S.01W.12.443 KNOBLOCK	81-12-15	--	--	--	--	--	--	--	--	--
04S.01W.22.112 MCA WELL	81-12-15	--	--	--	--	--	--	--	--	--
04S.02E.29.33 ONINE WELL	82-03-24	--	--	.29	--	--	--	--	--	<1
05S.06E.32.123 BURREGO S	82-08-12	--	--	<.10	--	--	--	--	--	3
06S.03E.05.232 SRC-1	82-03-02	--	--	--	--	--	--	--	--	--
06S.03E.05.234 SRC-2	82-03-02	--	--	--	--	--	--	--	--	--
06S.08E.33.241 RED CANYO	82-07-31	1.00	.070	1.1	.140	.020	1.0	.3	20	<1
07S.08E.14.323 RENFRO	82-08-04	--	<.020	<.10	.220	.020	.7	.1	20	<1
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)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
02S.01E.12.341 UNNAMED S	82-08-26	<100	--	<1	10	1	120	<1	140	<.1
02S.01E.14.221 OJO PARID	82-08-26	49	--	<1	10	1	<3	1	1	<.1
02S.01E.23.331 OJO DEL C	82-08-06	--	--	--	--	--	--	--	--	--
02S.01E.26.123 UNNAMED S	82-08-03	--	--	--	--	--	--	--	--	--
02S.01E.27.243 OJO DE AM	82-08-17	--	--	--	--	--	--	--	--	--
02S.01W.25.344 LITTLE SH	82-02-10	80	--	<1	10	2	<10	<1	16	.1
02S.02E.06.334 PARIDA WE	82-02-22	15	--	<1	10	7	23	<1	16	<.1
	82-07-26	--	--	--	--	--	--	--	--	--
02S.02E.30.234 OJO DEL R	82-08-06	--	--	--	--	--	--	--	--	--
02S.03E.27.114 WILD HORS	82-03-30	<100	--	2	10	3	70	2	100	<.1
03S.02E.19.314 OJO DE LA	82-08-17	--	--	--	--	--	--	--	--	--
03S.04W.11.341 HERTZ WEL	82-05-03	59	--	<3	<10	1	<9	<1	3	<.1
03S.05E.15.322 A FERNAND	82-05-12	<100	--	<1	<10	3	20	1	20	<.1
03S.05E.26.120 MWC WELL	82-01-28	--	--	--	--	--	--	--	--	--
04S.01W.12.443 KNOBLOCK	81-12-15	--	--	--	--	--	--	--	--	--
04S.01W.22.112 MCA WELL	81-12-15	--	--	--	--	--	--	--	--	--
04S.02E.29.33 ONINE WELL	82-03-24	<100	--	1	<10	2	70	<1	70	<.1
05S.06E.32.123 BURREGO S	82-08-12	88	--	<1	<10	1	10	<1	11	<.1
06S.03E.05.232 SRC-1	82-03-02	--	--	--	--	--	--	--	--	--
06S.03E.05.234 SRC-2	82-03-02	--	--	--	--	--	--	--	--	--
06S.08E.33.241 RED CANYO	82-07-31	<100	370	--	<10	20	390	100	130	--
07S.08E.14.323 RENFRO	82-08-04	200	2400	--	10	10	370	100	50	--

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SOCORRO COUNTY - Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	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)
02S.01E.12.341 UNNAMED S	82-08-26	--	3	<1	--	20
02S.01E.14.221 OJO PARID	82-08-26	--	5	<1	--	22
02S.01E.23.331 OJO DEL C	82-08-06	--	--	--	--	--
02S.01E.26.123 UNNAMED S	82-08-03	--	--	--	--	--
02S.01E.27.243 OJO DE AM	82-08-17	--	--	--	--	--
02S.01W.25.344 LITTLE SH	82-02-10	--	3	<1	--	160
02S.02E.06.334 PARIDA WE	82-02-22	--	13	<1	--	110
	82-07-26	--	14	--	--	--
02S.02E.30.234 OJO DEL R	82-08-06	--	--	--	--	--
02S.03E.27.114 WILD HORS	82-03-30	--	10	<1	--	1500
03S.02E.19.314 OJO DE LA	82-08-17	--	--	--	--	--
03S.04W.11.341 HERTZ WEL	82-05-03	--	<1	<1	--	75
03S.05E.15.322 A FERNAND	82-05-12	--	18	<1	--	70
03S.05E.26.120 MWC WELL	82-01-28	--	--	--	--	--
04S.01W.12.443 KNOBLOCK	81-12-15	--	--	--	--	--
04S.01W.22.112 MCA WELL	81-12-15	--	--	--	--	--
04S.02E.29.33 ONINE WELL	82-03-24	--	23	<1	--	90
05S.06E.32.123 BURREGO S	82-08-12	--	<1	<1	--	8
06S.03E.05.232 SRC-1	82-03-02	--	--	--	--	--
06S.03E.05.234 SRC-2	82-03-02	--	--	--	--	--
06S.08E.33.241 RED CANYO	82-07-31	7	--	--	7600	1100
07S.08E.14.323 RENFRO	82-08-04	11	--	--	8400	400

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS UNAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS UNAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)
02S.01E.12.341 UNNAMED S	340832106480901		053	SP	82-08-26	1010	<63	--	<23	--
02S.01E.14.221 OJO PARID	340847106473801		053	SP	82-08-26	1050	<50	--	<18	--
02S.01E.23.331 OJO DEL C	340706106490301		053	SP	82-08-06	1016	<35	--	<17	--
02S.01E.26.123 UNNAMED S	340646106485101		053	SP	82-08-03	0945	<38	--	16	--
02S.01E.27.243 OJO DE AM	340629106491701		053	SP	82-08-17	0830	<12	--	13	--
02S.01W.25.344 LITTLE SH	340600106561501		053	GW	82-02-10	1530	<30	--	<13	--
02S.02E.06.334 PARIDA WE	340932106464801		053	GW	82-02-22	1130	99	--	33	--
			053	GW	82-07-26	1106	48	--	<19	--
02S.02E.30.234 OJO DEL R	340630106460701		053	SP	82-08-06	0942	<8.4	--	22	--
03S.02E.19.314 OJO DE LA	340152106463801		053	SP	82-08-17	0940	<71	--	<48	--
03S.05E.15.322 A FERNAND	340252106244301		053	GW	82-05-12	1300	<65	<.7	<34	2.7
03S.05E.26.120 MWC WELL	340130106234201		053	GW	82-01-28	1210	<120	11	<44	6.0
04S.02E.29.33 ONINE WELL	345539106454701		053	GW	82-03-24	1610	<98	<.8	84	<.9
05S.06E.32.123 BURREGO S	335006106203101		053	SP	82-08-12	1150	<5.4	--	5.2	--
06S.08E.33.241 RED CANYO	334453106062001		053	GW	82-07-31	1200	--	--	--	--
07S.08E.14.323 RENFRO	334156106045401		053	GW	82-08-04	1200	--	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	C-13/ C-12 STABLE ISOTOPE RATIO PER MIL (82081)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MILL (82082)	O-18/ O-16 STABLE ISOTOPE RATIO PER MIL (82085)	CARBON 14 PERCENT MODERN (82172)
02S.01E.12.341 UNNAMED S	82-08-26	--	--	--	--
02S.01E.14.221 OJO PARID	82-08-26	--	--	--	--
02S.01E.23.331 OJO DEL C	82-08-06	--	--	--	--
02S.01E.26.123 UNNAMED S	82-08-03	--	--	--	--
02S.01E.27.243 OJO DE AM	82-08-17	--	--	--	--
02S.01W.25.344 LITTLE SH	82-02-10	--	--	--	--
02S.02E.06.334 PARIDA WE	82-02-22	--	--	--	--
	82-07-26	--	--	--	--
02S.02E.30.234 OJO DEL R	82-08-06	--	--	--	--
03S.02E.19.314 OJO DE LA	82-08-17	--	--	--	--
03S.05E.15.322 A FERNAND	82-05-12	--	--	--	--
03S.05E.26.120 MWC WELL	82-01-28	--	--	--	--
04S.02E.29.33 ONINE WELL	82-03-24	--	--	--	--
05S.06E.32.123 BURREGO S	82-08-12	--	--	--	--
06S.08E.33.241 RED CANYO	82-07-31	-4.4	-66.0	-9.2	4.3
07S.08E.14.323 RENFRO	82-08-04	-8.9	-88.0	-11.8	2.6

[illegible]

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

SOCORRO COUNTY - Continued

STATION	NUMBER	DATE OF SAMPLE	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	TOX- APHENE, TOTAL (UG/L) (39400)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
335815106532601		81-12-15	.00	.00	.00	.00	0	.00	.00	.00
335331106561201		81-12-15	.00	.00	.00	.00	0	.00	.00	.00

TAOS 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)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)
BIG ARSENIC SPRINGS	364047105411101		055	SP	82-03-11	1430	--	--	220	--
			055	SP	82-08-20	1500	--	--	220	234
23N.10E.22.CERRADE ARRIB	361304105512501		055	SP	81-11-17	0900	--	6260.00	550	602
28N.12E.01.FISH HATCHERY	364137105364701		055	SP	82-02-22	1445	110OPTOD	--	410	--
28N.12E.09.BLM VISITOR C	364057105401701		055	GW	82-08-20	1830	122SNTFL	--	220	234
28N.12E.09.MOTTL SPRING	364042105393901		055	SP	82-02-22	1530	122SNTFL	--	220	--
			055	SP	82-08-19	1700	122SNTFL	--	210	234
29N.12E.20.BLM CHIFLO WE	364422105403201		055	GW	82-08-20	1830	122SNTFL	--	220	239

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH (UNITS) (00400)	PH LAB (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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
BIG ARSENIC SPRINGS	82-03-11	7.9	--	17.0	--	--	--	--	--	--
	82-08-20	8.1	8.3	18.0	71	20	5.1	20	1.1	2.5
23N.10E.22.CERRADE ARRIB	81-11-17	8.0	8.3	7.0	220	68	12	49	1.5	6.4
28N.12E.01.FISH HATCHERY	82-02-22	7.0	--	7.0	--	--	--	--	--	--
28N.12E.09.BLM VISITOR C	82-08-20	7.9	8.3	17.0	68	19	5.0	21	1.1	2.5
28N.12E.09.MOTTL SPRING	82-02-22	7.5	--	17.0	--	--	--	--	--	--
	82-08-19	7.9	8.3	17.0	68	19	5.0	21	1.1	2.7
29N.12E.20.BLM CHIFLO WE	82-08-20	8.0	8.3	17.0	69	19	5.2	21	1.1	2.8

LOCAL IDENT- I- FIER	DATE OF SAMPLE	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
BIG ARSENIC SPRINGS	82-03-11	--	--	--	--	--	--	--	--	--
	82-08-20	75	75	22	6.8	1.2	33	159	.68	--
23N.10E.22.CERRADE ARRIB	81-11-17	--	280	38	6.9	1.4	16	366	--	--
28N.12E.01.FISH HATCHERY	82-02-22	131	--	--	--	--	--	--	--	.7
28N.12E.09.BLM VISITOR C	82-08-20	74	74	20	7.0	1.2	33	156	.61	--
28N.12E.09.MOTTL SPRING	82-02-22	79	--	--	--	--	--	--	--	--
	82-08-19	75	74	20	7.1	1.2	33	156	.62	--
29N.12E.20.BLM CHIFLO WE	82-08-20	77	74	23	6.9	1.3	31	158	.61	--

QUALITY OF GROUND WATER  
WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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TAOS COUNTY - Concluded

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
BIG ARSENIC SPRINGS	82-03-11	--	--	--	--	--	--	<3	<1	<1
	82-08-20	1	29	--	<1	<10	<1	4	<1	3
23N.10E.22.CERRADE ARIB	81-11-17	200	--	60	<1	--	--	<10	<1	--
28N.12E.01.FISH HATCHERY	82-02-22	--	--	--	--	--	--	5	3	2
28N.12E.09.BLM VISITOR C	82-08-20	2	23	--	<1	<10	1	7	4	3
28N.12E.09.MOTTI SPRING	82-02-22	--	--	--	--	--	--	3	<1	8
	82-08-19	1	22	--	<1	<10	<1	8	1	5
29N.12E.20.BLM CHIFLO WE	82-08-20	1	30	--	<1	<10	2	220	3	10

LOCAL IDENT- I- FIER	DATE OF SAMPLE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	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)
BIG ARSENIC SPRINGS	82-03-11	--	3	--	--	<3
	82-08-20	<.1	--	<1	<1	13
23N.10E.22.CERRADE ARIB	81-11-17	<.1	--	<1	--	--
28N.12E.01.FISH HATCHERY	82-02-22	--	12	--	--	9
28N.12E.09.BLM VISITOR C	82-08-20	<.1	--	<1	<1	48
28N.12E.09.MOTTI SPRING	82-02-22	--	6	--	--	<3
	82-08-19	<.1	--	<1	<1	3
29N.12E.20.BLM CHIFLO WE	82-08-20	<.1	--	<1	<1	97

VALENCIA 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)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)
07N.03E.30.313 OLD WELL	344820106402601		061	GW	82-02-17	1230	--	25.00	107	532
07N.03E.30.313A NEW WELL	344819106402601		061	GW	82-02-17	1200	--	25.00	170	427
LOCAL IDENT- I- FIER	DATE OF SAMPLE	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH (UNITS) (00400)	PH LAB (UNITS) (00403)	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)
07N.03E.30.313 OLD WELL	82-02-17	600	8.1	8.3	190	51	14	34	1.1	3.8
07N.03E.30.313A NEW WELL	82-02-17	490	8.0	8.1	150	41	11	25	.9	3.4
LOCAL IDENT- I- FIER	DATE OF SAMPLE	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS N) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
07N.03E.30.313 OLD WELL	82-02-17	87	130	39	.3	34	358	<.10	12	64
07N.03E.30.313A NEW WELL	82-02-17	110	73	22	.4	36	278	<.09	<10	2



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