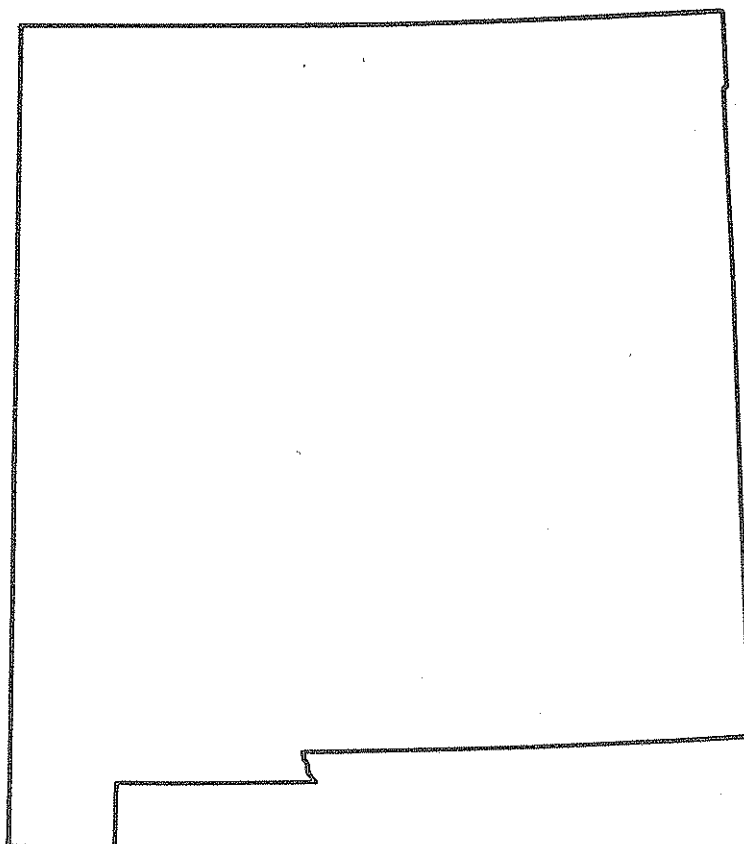


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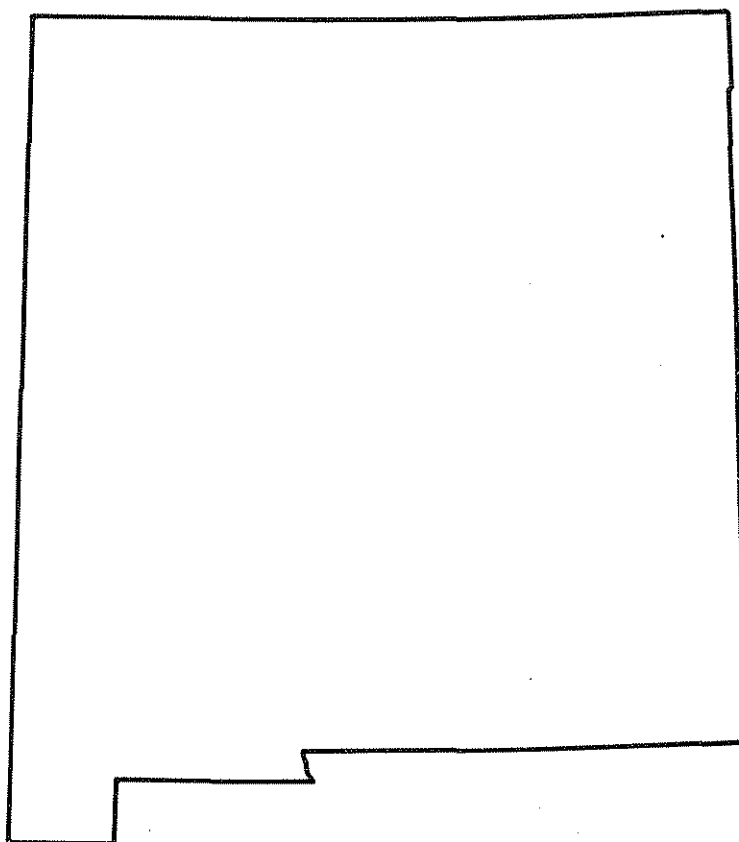


U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NM-83-1  
Prepared in cooperation with the State of New Mexico  
and with other agencies

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# Water Resources Data New Mexico Water Year 1983



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NM-83-1  
Prepared in cooperation with the State of New Mexico  
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

WILLIAM P. CLARK, Secretary

GEOLOGICAL SURVEY

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## 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, 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 178 gaging stations; stage and contents for 25 lakes and reservoirs; water quality for 78 gaging stations, 3 partial-record stations, 2 reservoirs, 18 springs, 10 miscellaneous sampling sites, and 117 wells; and water levels at 87 observation wells. Also included are 139 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, L. A. Larranaga, Chief Administrator.

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

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

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

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

Organizations that furnished data are recognized in the station description.

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## SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

As is common in New Mexico, streamflow varied considerably during the 1983 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 1979-83 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 587,300 acre-feet during the water year. The contents totaled 3,882,000 acre-feet on September 30, 1983.

The runoff in most unregulated streams in New Mexico during the 1983 water year was greater than normal (in the highest 25 percent of record for 1951-80 water years) with the exception of runoff in the southeastern corner of the State where streamflow was in the lowest 25 percent of record for 1951-80 water years.

Water-Quality Conditions

Dissolved-solids concentrations in surface waters decreased over most of the State during the 1983 water year in comparison to the two previous years. Dissolved-solids concentrations were significantly less than the average for the period of record at the NASQAN stations Rio Grande at Otowi Bridge and San Juan River at Shiprock.

Annual suspended-sediment loads at four index stations are shown in the table below in comparison to the 1974-82 median of annual suspended-sediment loads.

Station	Median for water years 1974-82*, in tons	Suspended-sediment load for 1983 water year, in tons	1983 load as a percentage of median load
Rio Grande at Otowi	1,250,000	1,466,723	117
Rio Grande at Albuquerque	960,000	1,325,704	138
Pecos River near Artesia	290,000	289,766	100
San Juan at Shiprock	4,500,000	3,190,084	71

\* Water year 1974 was selected as the beginning year for computation of the 9-year median because Cochiti Dam on the Rio Grande about 40 miles upstream from Albuquerque began storing water in November 1973, resulting in a change in flow conditions. It was desirable to use the same base period for all the index stations for determining the median suspended-sediment load.

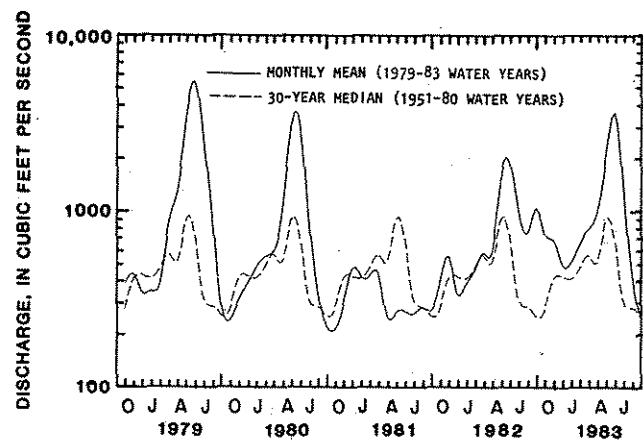
Ground-Water Levels

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. Seventeen selected wells in various parts of the State are equipped with continuous water-level recording gages.

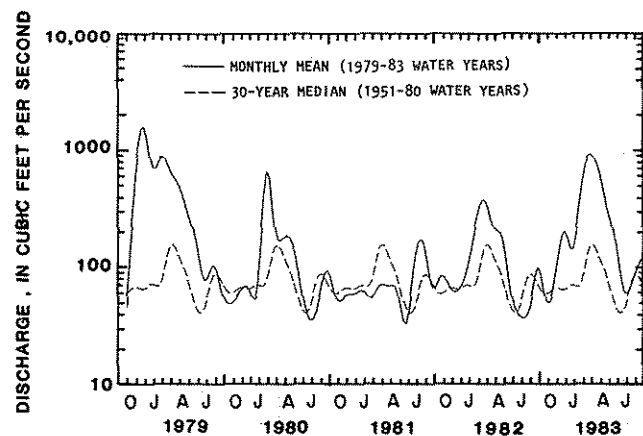
Hydrographs of wells (fig. 2) in the four quadrants of the State illustrate the water-level trends for the last 20 years (or the period of record in the case of the Unicon County well). The wells in Chaves, Luna, and Union Counties are in areas of intensive irrigation. The well in Cibola County is in an area where the mining industry has acquired most of the water rights. The decrease in ground-water withdrawals for agriculture during the last 10 years and for mining operations during the last 6 years may be responsible for the general water-level rise in the Cibola County well.

The water level in the Luna County recorder well (Mimbres Valley) reached the highest level in the past 20 years during November and December 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.

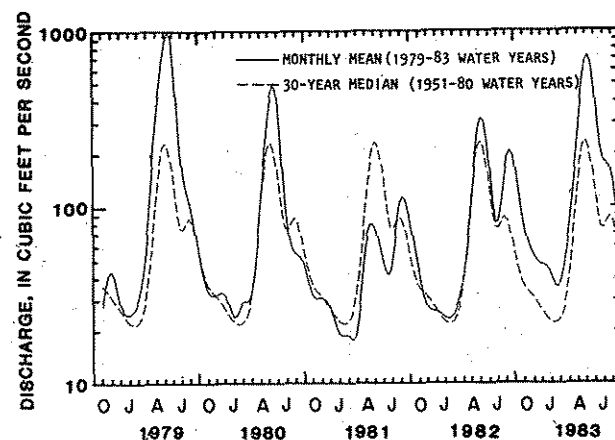
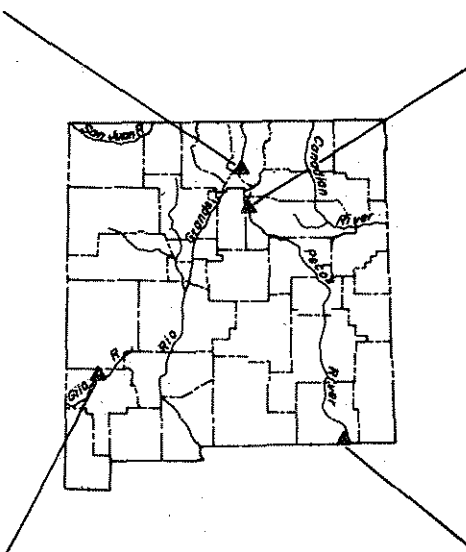
The Chaves County recorder well shows the yearly fluctuations that are typical of the Roswell Artesian Basin. Water levels in the recharge area of the Roswell Artesian Basin and in the southern part of the Roswell Shallow Basin were lower than average for the entire year.



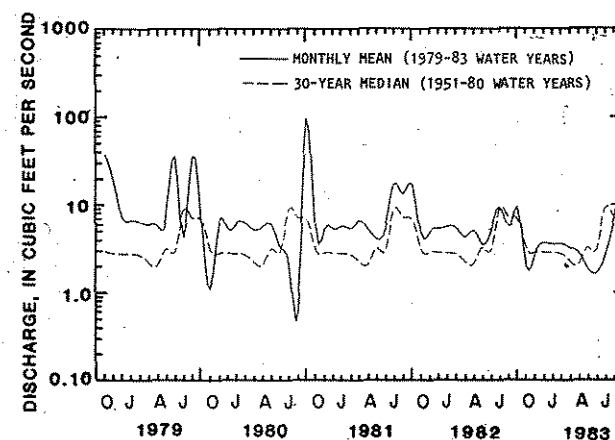
MONTHLY MEAN DISCHARGE AND 30-YEAR MEDIAN DISCHARGE FOR STATION 08276500, RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NEW MEXICO.



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



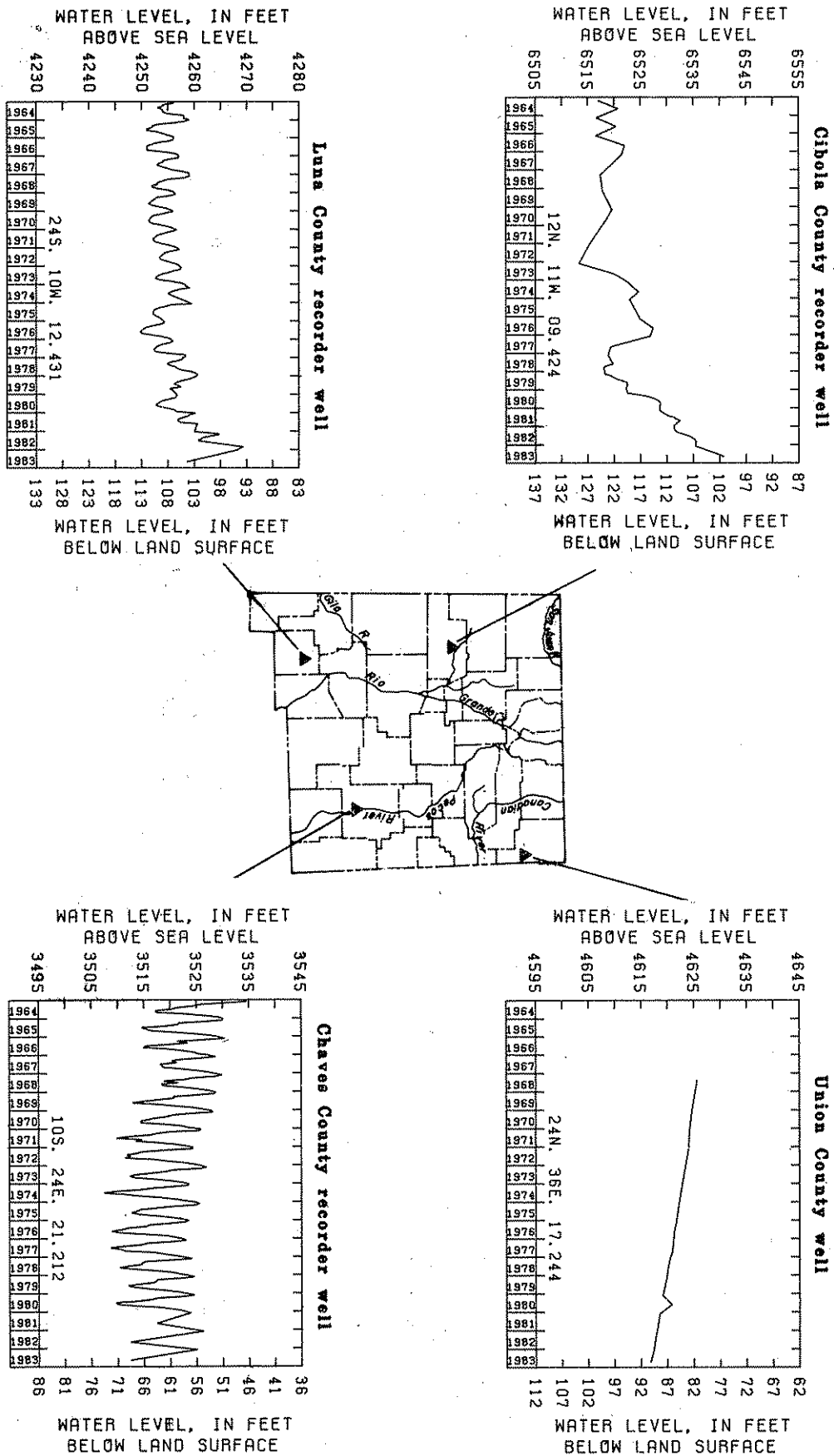
MONTHLY MEAN DISCHARGE AND 30-YEAR MEDIAN DISCHARGE FOR STATION 08378500, PECOS RIVER NEAR PECOS, NEW MEXICO.



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 (1979-83 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 ( $\text{g}/\text{m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g}/\text{m}^2$ ).

Dry mass refers to the mass of residue present after drying in an oven at 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  $\mu$  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  $\text{mg C}/(\text{m}^3 \cdot \text{time})$  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  $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$  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 batifical 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.

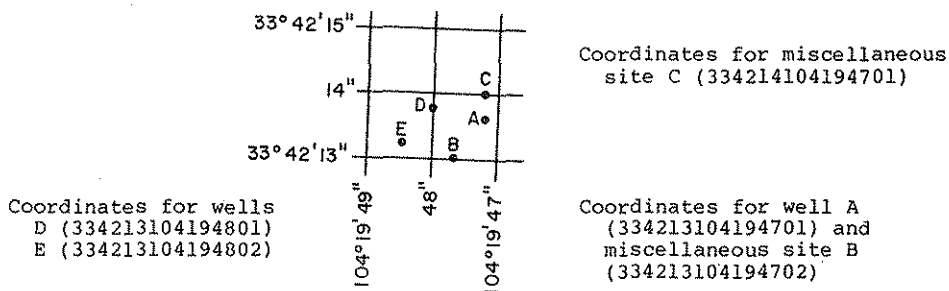


Figure 3.--System for numbering wells, springs, and miscellaneous sites

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 of 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. Footnotes - E, estimated value; K, results based on colony count outside the acceptable range. 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. Ehke, 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.

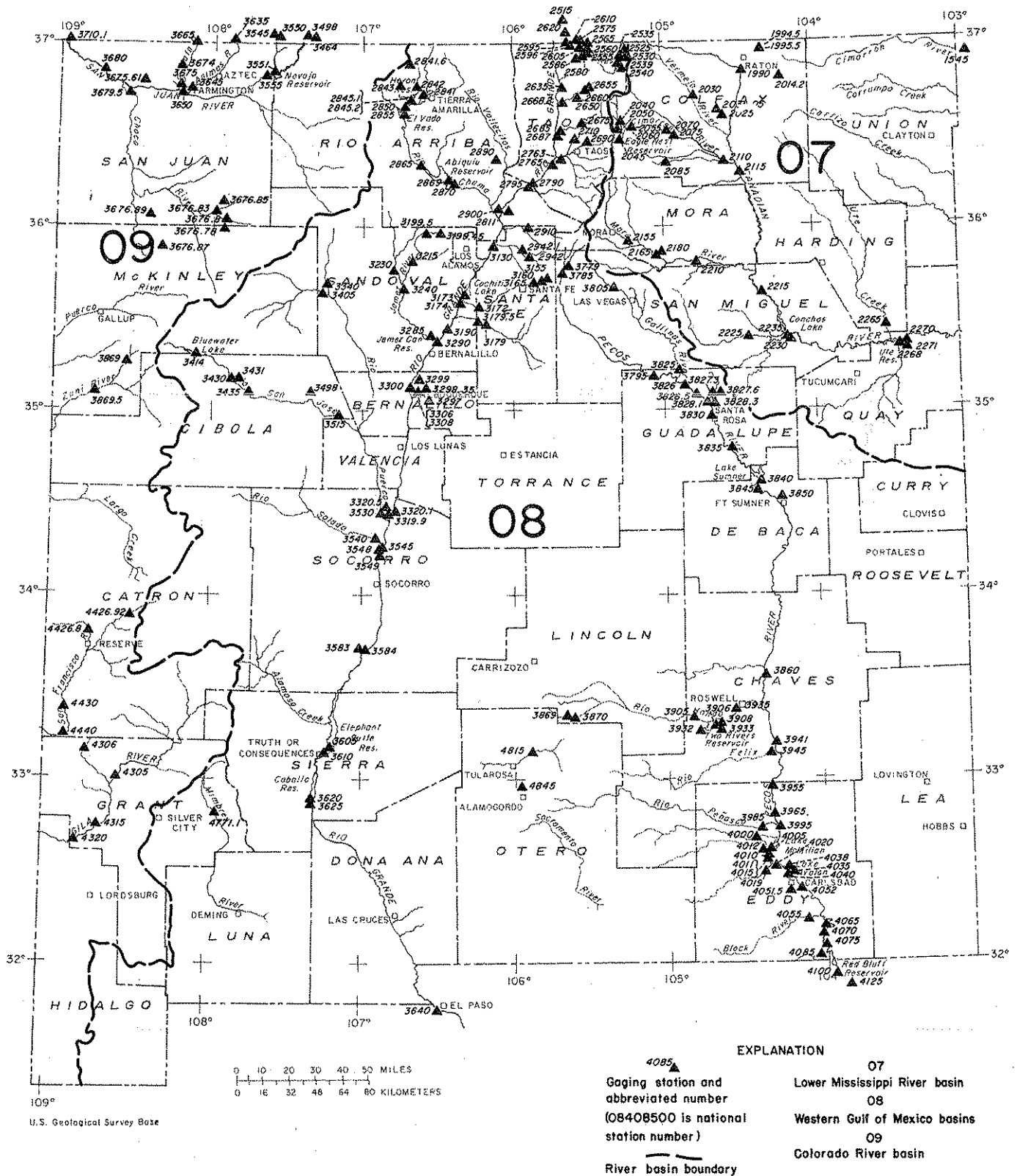
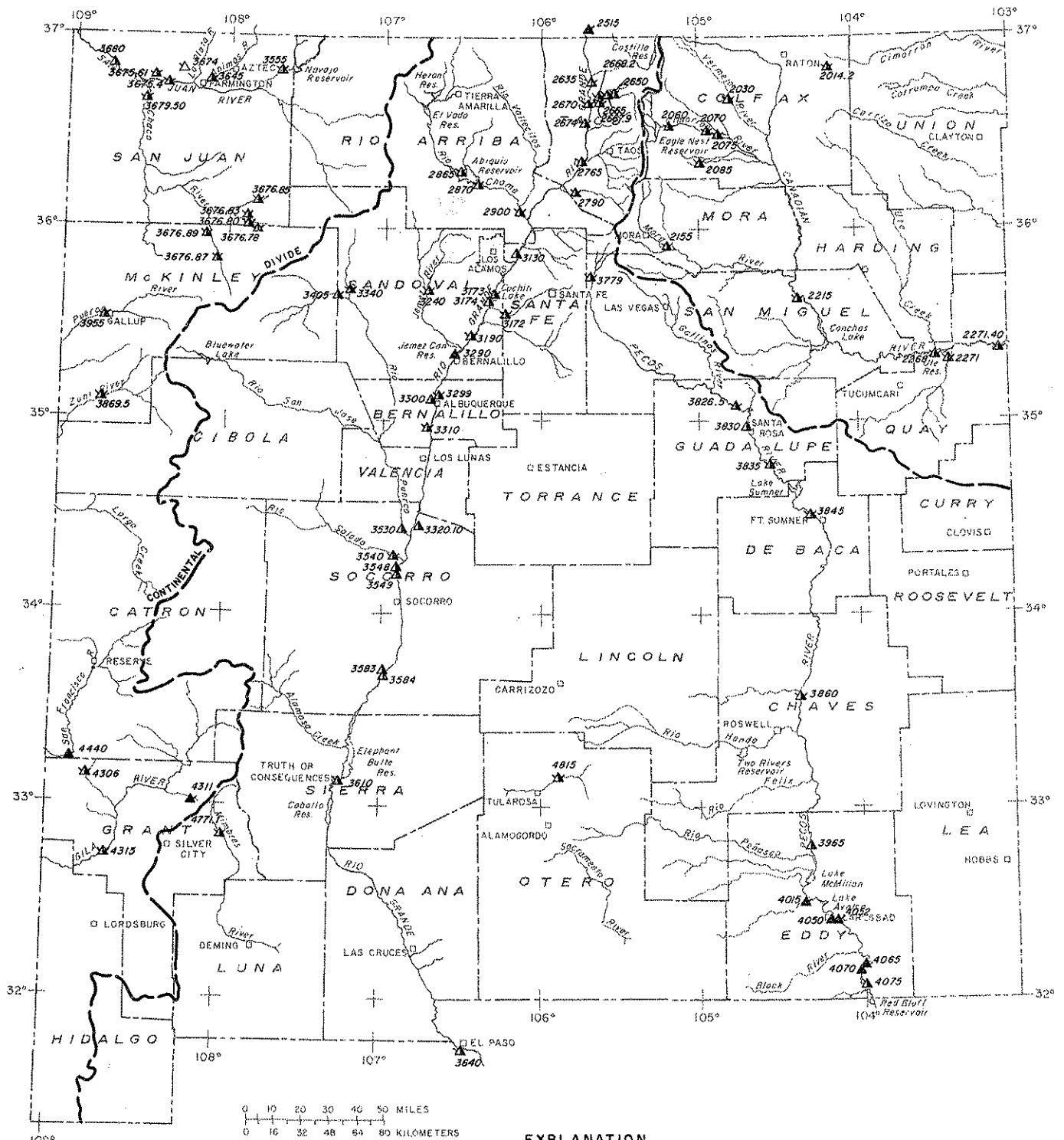


Figure 5.-- Map of New Mexico showing location of surface-water gaging stations.



## EXPLANATION

## STATION AND SAMPLING FREQUENCY

Chemical quality: ▲ daily ▲ other than daily

Suspended sediment: △ daily △ other than daily

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

▲ daily chemical  
quality and  
other than  
daily suspended  
sediment

★ daily suspended  
sediment and  
other than daily  
chemical quality  
sediment

## BASIN AND STATION NUMBER

River basin boundary: ———

Lower Mississippi River basin number: 07

Western Gulf of Mexico basin number: 08

Colorado River basin number: 09

2271.40  
▲  
Number by symbol is abbreviated  
station number. Complete station  
number of example is:

07 227140

Basin no. Station no.

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

## HYDROLOGIC-DATA STATION RECORDS

## LOWER MISSISSIPPI RIVER BASIN

## ARKANSAS RIVER BASIN

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 upstream from North Carrizo Creek, 1.7 mi northeast of Kenton, 2.2 mi downstream from Carrizozo Creek, and at mile 594.0.

DRAINAGE AREA.--1,106 mi<sup>2</sup>, of which 68 mi<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 National Geodetic Vertical Datum of 1929, (levels by State Highway Department). April 1904 to July 1905 nonrecording gage at site 0.9 mi upstream at different datum. Oct. 1, 1950 to Sept. 19, 1967, water-stage recorder at same site and at datum 5.00 ft higher.

REMARKS.--Records poor. Extensive diversions for irrigation above station.

AVERAGE DISCHARGE.--33 years (water years 1951-83), 21.5 ft<sup>3</sup>/s, 15,580 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 311 ft<sup>3</sup>/s Apr. 26, gage height, 7.91 ft, no other peak above base of 2,000 ft<sup>3</sup>/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.4	1.5	7.6	8.0	4.6	6.9	75	4.6	1.1	8.6	.00
2	2.5	1.8	1.3	8.5	9.0	5.6	6.5	64	4.6	.64	2.9	.00
3	2.2	1.9	1.5	8.7	8.9	3.1	6.4	56	3.9	.43	.46	.00
4	1.6	1.9	2.3	8.9	7.7	2.7	8.8	35	3.1	.29	.00	.00
5	.93	2.3	2.9	8.9	11	2.9	7.9	13	2.6	.23	.00	.00
6	.93	2.2	2.5	8.8	9.7	2.6	7.2	11	4.3	.20	.00	.00
7	.95	1.9	2.0	8.6	8.9	2.4	7.4	8.8	4.7	.16	.00	.00
8	1.3	1.9	1.6	8.5	11	2.1	7.4	7.8	4.3	.12	.00	.00
9	1.1	1.8	2.0	19	8.7	2.1	7.2	7.3	4.0	.08	.00	.00
10	.80	1.6	2.0	22	7.5	2.1	6.2	6.9	3.5	.02	.00	.00
11	.97	1.9	4.9	22	7.6	2.0	5.8	6.5	3.1	.00	.00	.00
12	1.4	.70	7.2	16	7.5	2.0	9.2	6.0	2.7	.00	.00	.00
13	1.5	.18	7.8	11	7.7	1.8	8.0	5.4	2.0	.00	.00	.00
14	1.7	.11	5.6	8.7	7.4	1.9	5.0	5.1	1.4	.00	.00	.00
15	1.7	.81	6.7	7.6	7.0	2.2	3.7	4.9	.96	.00	.00	.00
16	1.4	1.4	7.9	6.0	6.9	4.1	3.6	4.8	.66	.00	.00	.00
17	1.1	1.5	5.3	1.9	6.8	3.2	4.9	4.6	.70	.00	.00	.00
18	1.0	2.0	5.2	1.9	5.8	2.9	3.2	4.1	.68	.00	.00	.00
19	.87	2.1	6.5	1.9	3.2	4.2	4.0	3.9	.53	.00	.00	.00
20	.89	.58	7.4	1.6	2.8	4.0	3.3	5.5	.35	.00	.00	.00
21	1.1	.17	5.5	2.4	2.7	4.8	47	6.6	.12	.00	.00	.00
22	1.3	.17	5.7	5.3	2.3	7.9	167	6.1	.00	.00	.00	.00
23	1.4	.15	5.9	5.1	2.1	8.7	180	5.7	.15	.00	.00	.00
24	1.4	.99	6.5	7.7	1.9	8.1	223	5.1	.16	.00	.00	.00
25	1.3	1.5	7.4	6.2	2.1	7.7	228	4.6	.19	.00	.00	.00
26	1.2	1.5	10	6.4	2.0	7.3	222	4.4	1.8	.00	.00	.00
27	1.1	1.7	8.2	6.5	1.9	6.5	195	4.1	4.0	.00	.00	.00
28	1.0	2.1	15	6.6	2.1	6.4	177	3.8	3.1	.00	.00	.00
29	1.1	1.8	7.1	6.3	---	6.6	146	3.2	2.6	.00	.00	.00
30	1.3	1.7	8.0	6.4	---	6.4	96	3.7	1.8	.00	.00	.00
31	1.2	---	6.5	7.0	---	7.3	---	4.4	---	30	.00	---
TOTAL	39.84	41.76	169.9	254.0	170.2	136.2	1803.6	387.3	66.60	33.27	11.96	.00
MEAN	1.29	1.39	5.48	8.19	6.08	4.39	60.1	12.5	2.22	1.07	.39	.000
MAX	2.5	2.3	15	22	11	8.7	228	75	4.7	30	8.6	.00
MIN	.80	.11	1.3	1.6	1.9	1.8	3.2	3.2	.00	.00	.00	.00
AC-FT	79	83	337	504	338	270	3580	768	132	66	24	.00

CAL YR 1982 TOTAL 4742.54 MEAN 13.0 MAX 619 MIN .00 AC-FT 9410  
WTR YR 1983 TOTAL 3114.63 MEAN 8.53 MAX 228 MIN .00 AC-FT 6180

## 07199000 CANADIAN RIVER NEAR HEBRON, NM

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

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

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

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

GAGE.--Water-stage recorder. Altitude of gage is 6,248 ft, 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 above station for stock water, off-channel storage and irrigation.

AVERAGE DISCHARGE.--37 years, 8.11 ft<sup>3</sup>/s, 5,880 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1,520 ft<sup>3</sup>/s on Aug. 13, gage height 5.45 ft; no other peak above base of 1,000 ft<sup>3</sup>/s; no flow Sept. 11, 12 and 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	5.1	4.6	1.0	2.7	4.6	82	34	23	18	.15	.03
2	8.9	5.1	3.0	1.3	2.7	15	75	31	23	16	.12	.02
3	7.2	5.1	1.9	1.7	2.4	17	96	31	18	12	.57	.02
4	6.2	4.6	2.1	2.1	2.7	19	47	27	16	8.9	1.7	.71
5	5.6	4.2	1.9	2.7	2.7	17	45	16	17	8.3	.15	.67
6	5.1	4.2	1.7	3.4	2.4	13	56	14	36	5.1	.12	.03
7	4.6	4.2	1.3	.67	2.4	9.4	59	18	238	2.7	3.0	.06
8	4.6	3.8	1.3	3.0	2.4	10	56	17	215	2.1	1.6	.33
9	4.6	3.8	1.7	3.4	2.4	6.6	47	17	92	1.5	.12	.03
10	4.6	30	2.1	3.4	2.1	.48	54	16	93	6.1	.07	.01
11	5.1	13	2.4	3.4	2.1	5.0	89	15	67	1.3	.21	.00
12	5.1	6.2	2.4	3.0	2.1	18	111	14	47	2.9	.09	.00
13	4.6	5.6	2.7	2.7	2.1	20	96	15	40	.80	81	.02
14	4.6	5.1	3.0	2.7	2.4	38	75	16	38	.50	7.2	.02
15	4.6	5.6	2.7	2.7	2.1	47	75	17	32	.30	.12	.02
16	4.2	5.1	2.4	2.4	2.1	18	70	8.9	29	.20	.04	.01
17	4.2	5.1	2.7	2.4	1.7	18	82	2.6	27	.10	.02	.00
18	5.1	6.2	2.7	2.4	.27	27	103	7.4	16	.08	.01	.01
19	8.3	6.7	2.4	2.1	.22	21	194	8.9	6.2	.06	4.0	.01
20	8.3	7.2	2.4	1.9	1.9	16	216	12	2.7	.05	.04	.01
21	8.9	7.2	2.7	2.1	5.1	17	222	18	1.0	.05	.01	.02
22	8.3	7.2	2.7	1.9	3.4	15	177	16	.60	.05	.06	.02
23	8.3	6.7	2.7	1.9	3.8	14	149	14	.87	.05	.02	.69
24	7.8	6.7	2.4	1.9	3.8	14	158	6.9	.50	.07	.01	1.3
25	5.1	6.2	2.1	2.1	3.4	18	178	1.3	7.3	.09	.01	1.7
26	2.1	6.2	2.1	2.1	1.3	23	132	.57	11	.53	.01	.48
27	1.9	5.6	2.4	2.4	1.2	17	100	6.4	13	.22	1.1	.27
28	2.4	5.1	2.1	2.7	1.0	18	89	12	18	.09	1.2	.90
29	5.6	4.6	1.7	2.7	---	18	78	13	24	.07	1.7	.90
30	5.6	4.6	1.7	2.7	---	19	48	13	20	.07	.67	1.2
31	5.6	---	1.2	2.7	---	32	---	15	---	.25	.07	---
TOTAL	185.1	196.0	71.2	73.57	64.89	545.08	3059	453.97	1172.17	88.53	105.19	9.49
MEAN	5.97	6.53	2.30	2.37	2.32	17.6	102	14.6	39.1	2.86	3.39	.32
MAX	18	30	4.6	3.4	5.1	47	222	34	238	18	81	1.7
MIN	1.9	3.8	1.2	.67	.22	.48	45	.57	.50	.05	.01	.00
AC-FT	367	389	141	146	129	1080	6070	900	2320	176	209	19
CAL YR 1982	TOTAL	5021.88	MEAN	13.8	MAX	538	MIN	.07	AC-FT	9960		
WTR YR 1983	TOTAL	6024.19	MEAN	16.5	MAX	238	MIN	.00	AC-FT	11950		

## ARKANSAS RIVER BASIN

## 07199450 LAKE MALOYA NEAR RATON, NM

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

DRAINAGE AREA.--20.8 mi<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. Reservoir enlarged in 1916; capacity, 1,130 acre-ft, spillway elevation, 7,479.0 ft. Reservoir enlarged again in 1948; capacity, 3,690 acre-ft, spillway elevation, 7,511.0 ft. Elevation of lowest outlet, 7,439.0 ft. No dead storage. Water is for municipal use of city of Raton. See table below for total monthly diversion, in acre-feet, from Lake Maloya and Lake Alice for municipal supply for city of Raton.

COOPERATION.--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 May 31, 1975, elevation, 7,510.79 ft; maximum elevation observed, 7,512.00 ft April 30, 1983; minimum observed, 911 acre-ft Feb. 28, 1979, elevation, 7,479.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 3,810 acre-ft at month-end April 30, elevation, 7,512.00 ft; minimum observed, 3,350 acre-ft Sept. 30, elevation, 7,508.18 ft.

## 07199550 LAKE ALICE NEAR RATON, NM

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

DRAINAGE AREA.--29.4 mi<sup>2</sup>.

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

GAGE.--Nonrecording gage. 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, spillway elevation, 7,078.0 ft. Reservoir rehabilitated in 1941; capacity, 71 acre-ft, spillway elevation, 7,089.6 ft. Elevation of lowest outlet, 7,064.1 ft. No dead storage. Water is for municipal use of city of Raton. See table below for total monthly diversion, in acre-feet, from Lake Maloya and Lake Alice for municipal supply for city of Raton.

COOPERATION.--Month-end elevations furnished by city of Raton.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 73 acre-ft at month-end April 30 and May 31, elevation, 7,090.00 ft; minimum observed, 69 acre-ft July 31, elevation, 7,089.40 ft.

## MONTHEND ELEVATION AND CONTENTS AND MONTHLY DIVERSIONS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	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, 1982....	7,506.51	3,170	-	7,089.60	71	-	-
Oct. 31.....	7,508.55	3,400	+230	7,089.60	71	0	113
Nov. 30.....	7,508.55	3,430	+30	7,089.60	71	0	84
Dec. 31.....	7,509.25	3,480	+50	7,089.60	71	0	90
CAL YR 1982	-	-	-210	-	-	0	1,470
Jan. 31, 1983....	7,509.50	3,510	+30	7,089.60	71	0	93
Feb. 28.....	7,508.82	3,430	-80	7,089.60	71	0	81
Mar. 31.....	7,511.00	3,690	+260	7,089.60	71	0	94
Apr. 30.....	7,512.00	3,810	+120	7,090.00	73	+2	107
May 31.....	7,511.53	3,750	-60	7,090.00	73	0	160
June 30.....	7,511.08	3,700	-50	7,089.60	71	-2	142
July 31.....	7,510.65	3,650	-50	7,089.40	69	-2	216
Aug. 31.....	7,509.46	3,510	-140	7,089.60	71	+2	196
Sept. 30.....	7,508.18	3,350	-160	7,089.60	71	0	155
WTR YR 1983	-	-	+180	-	-	0	1,530

## ARKANSAS RIVER BASIN

25

07201420 UNA DE GATO CREEK BELOW THROTTLE DAM NEAR RATON, NM

LOCATION.--Lat 36°48'52", long 104°13'57", in SE¼SW¼ sec.24, T.30 N., R.25 E., Colfax County, Hydrologic Unit 11080001, on right bank 1.0 mi downstream from Throttle Dam and 13 mi southeast of Raton.

DRAINAGE AREA.--49.5 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1975 to September 1983 (discontinued).

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

GAGE.--Water-stage recorder. Altitude of gage is 6,635 ft, from topographic map.

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

AVERAGE DISCHARGE.--8 years, 3.48 ft<sup>3</sup>/s, 2,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 586 ft<sup>3</sup>/s Apr. 25, 1983, gage height, 4.48 ft, from rating curve extended above 5.9 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 586 ft<sup>3</sup>/s April 25, gage height, 4.48 ft, from rating curve extended above 11 ft<sup>3</sup>/s as explained above; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.03	.03	.03	.03	.11	1.1	149	20	32	10	5.9
2	.00	.03	.04	.03	.03	.12	.33	114	20	30	10	5.9
3	.00	.03	.05	.03	.03	.12	.20	66	15	25	10	3.3
4	.00	.03	.04	.04	.03	.13	.86	61	20	20	10	.05
5	.00	.03	.04	.04	.03	.14	3.0	69	19	19	10	.03
6	.00	.03	.04	.07	.04	.13	7.4	73	300	17	10	.02
7	.00	.03	.04	.10	.04	.13	7.7	54	250	15	9.9	.02
8	.00	.03	.04	.09	.04	.12	13	43	250	13	9.9	.01
9	.00	.03	.04	.08	.04	.13	16	53	200	12	10	.01
10	.00	.03	.04	.07	.04	.20	15	56	150	25	10	.00
11	.00	.03	.03	.10	.04	.21	15	45	100	10	10	.00
12	.00	.03	.02	.15	.04	.15	16	36	60	18	10	.00
13	.00	.03	.03	.20	.04	.15	16	30	35	15	10	.00
14	.00	.02	.06	.20	.06	.18	14	28	25	13	10	.00
15	.00	.02	.04	.10	.05	.11	14	28	18	12	9.9	.00
16	.00	.03	.03	.10	.04	1.1	14	28	7.7	10	9.9	.00
17	.00	.03	.04	.10	.04	.29	14	29	2.9	8.0	9.9	.00
18	.00	.03	.08	.09	.04	.12	14	28	2.7	7.0	9.9	.00
19	.00	.03	.06	.07	.07	.13	25	22	2.5	6.0	10	.00
20	.00	.03	.04	.05	.04	.09	52	20	2.0	5.4	10	.00
21	.00	.03	.04	.05	.03	.08	131	14	1.8	7.1	10	.00
22	.00	.03	.05	.04	.07	.09	175	5.9	1.8	8.3	9.9	.00
23	.02	.03	.05	.04	.08	.07	142	5.9	1.8	8.4	9.8	.00
24	.02	.02	.04	.04	.09	.07	188	4.0	6.0	8.6	9.6	.00
25	.02	.02	.02	.04	.10	.06	368	5.0	10	8.6	9.5	.00
26	.02	.03	.02	.03	.11	.06	336	10	20	9.3	9.2	.00
27	.02	.03	.03	.03	.11	.07	266	15	30	10	7.0	.00
28	.02	.03	.02	.03	.11	.06	220	8.0	50	10	5.2	4.4
29	.02	.03	.01	.03	---	.05	179	7.0	40	10	5.2	4.2
30	.02	.03	.02	.03	---	.05	161	10	34	11	5.6	2.7
31	.03	---	.02	.03	---	.10	---	15	---	10	6.2	---
TOTAL	.19	.86	1.15	2.13	1.51	4.62	2424.59	1131.8	1695.2	413.7	286.6	26.54
MEAN	.006	.029	.037	.069	.054	.15	80.8	36.5	56.5	13.3	9.25	.88
MAX	.03	.03	.08	.20	.11	1.1	368	149	300	32	10	5.9
MIN	.00	.02	.01	.03	.03	.03	.20	4.0	1.8	5.4	5.2	.00
AC-FT	.4	1.7	2.3	4.2	3.0	9.2	4810	2240	3360	821	568	53

CAL YR 1982 TOTAL 326.54 MEAN .89 MAX 8.0 MIN .00 AC-FT 648  
WTR YR 1983 TOTAL 5988.89 MEAN 16.4 MAX 368 MIN .00 AC-FT 11880

ARKANSAS RIVER BASIN  
07201420 UNA DE GATO CREEK BELOW THROTTLE DAM NEAR RATON, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
NOV 10...	0900	.03	900	1010	8.5	8.2	6.0	3.0	450	200
JAN 12...	0900	.19	890	--	7.9	--	1.0	.5	--	--
MAR 22...	1000	.20	1440	1560	7.9	8.1	.0	.5	770	530
MAY 17...	0940	29	190	217	8.4	8.0	7.0	10.0	90	19
JUL 20...	1045	5.4	345	379	8.6	8.2	27.0	21.0	170	33

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
NOV 10...	91	54	58	1.2	4.2	330	7.2	.30	7.7	702
JAN 12...	--	--	--	--	--	--	--	--	--	--
MAR 22...	170	83	90	1.5	3.1	660	10	.30	10	1170
MAY 17...	24	7.4	5.6	.3	2.4	32	1.4	.10	10	126
JUL 20...	42	17	14	.5	3.3	61	2.5	.30	12	237

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 10...	0900	1	1	60	<1	<1	<10	<10	2	2
MAR 22...	1000	--	--	50	--	--	--	--	--	--
MAY 17...	0940	--	--	10	--	--	--	--	--	--
JUL 20...	1045	--	--	30	--	--	--	--	--	--



ARKANSAS RIVER BASIN  
07201420 UNA DE GATO CREEK BELOW THROTTLE DAM NEAR RATON, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 10...	5	2	<1	<.1	<.1	2	2	10	<3
MAR 22...	9	--	--	--	--	--	--	--	--
MAY 17...	46	--	--	--	--	--	--	--	--
JUL 20...	16	--	--	--	--	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 10...	0900	.03	3.0	42	.00	66
JUL 20...	1045	5.4	21.0	13	.19	82

## ARKANSAS RIVER BASIN

## 07202500 EAGLE TAIL DITCH NEAR MAXWELL, NM

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

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,110 ft, 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.--12 years (water years 1946-49, 1976-83), 5.55 ft<sup>3</sup>/s, 4,020 acre-ft/yr.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	.79	2.2	.20	1.5	15	54	116	62	26	1.5	1.7
2	2.7	.86	2.3	.25	1.2	12	57	101	43	20	1.7	1.2
3	2.2	.91	2.1	.50	1.0	15	59	76	1.4	16	1.1	.75
4	1.6	.90	2.2	.40	1.1	25	45	42	.27	12	.88	1.3
5	1.4	.89	2.3	.50	1.3	26	23	36	.00	9.1	.85	.75
6	1.6	.95	2.0	1.0	1.2	21	29	47	15	8.0	1.8	.45
7	1.4	.96	2.6	2.0	1.2	14	5.3	45	62	8.3	1.3	.19
8	1.1	.96	2.3	1.8	1.3	17	1.3	29	113	7.1	.84	.08
9	.94	.93	3.0	1.6	1.4	21	.02	39	73	6.6	.65	.04
10	.81	1.1	2.4	1.5	1.5	22	.00	75	6.9	6.8	.41	.13
11	.76	19	1.3	2.0	1.7	29	.87	57	1.7	24	.41	.12
12	1.2	10	2.2	2.5	1.7	43	27	33	.14	13	.58	.01
13	1.3	2.7	2.1	3.5	1.6	51	22	26	.00	10	.74	.00
14	1.1	1.8	2.4	2.5	1.7	56	14	42	22	38	.45	.00
15	.95	1.6	1.8	2.0	1.8	60	12	28	59	11	.26	.08
16	.88	1.8	1.9	2.0	2.0	44	8.6	29	38	7.0	.27	.53
17	.82	1.7	1.8	1.8	2.5	33	9.1	82	.43	5.0	.08	.58
18	.82	1.6	2.2	1.5	2.5	35	14	79	.52	4.0	.00	.62
19	.85	1.4	1.4	2.0	2.0	28	51	69	.52	3.5	.00	.54
20	.70	1.3	1.9	1.5	1.4	20	113	69	.46	3.2	.02	.45
21	.70	2.2	2.1	1.3	.65	20	109	75	1.4	2.6	.23	.37
22	.73	2.3	2.0	1.4	1.6	15	.28	66	31	1.9	.07	.41
23	.78	2.4	2.3	1.5	3.8	14	.00	65	23	1.6	.03	.41
24	.74	2.0	.95	1.3	6.8	14	.00	61	17	1.4	.75	.51
25	.75	2.2	1.0	1.4	12	17	.00	57	15	1.5	.84	.47
26	.76	2.3	1.2	1.5	11	17	.00	62	14	1.7	.44	.53
27	.73	2.7	.23	1.6	14	13	.00	64	15	4.2	.27	.75
28	.73	2.8	.14	1.7	14	12	.00	52	27	1.7	.57	.84
29	.66	3.1	.10	1.8	---	13	3.7	43	38	1.1	.49	.89
30	.76	2.5	.15	2.0	---	16	101	47	30	.88	1.0	.84
31	.78	---	.20	1.8	---	26	---	53	---	.82	1.4	---
TOTAL	32.95	76.65	52.77	48.35	95.45	764	759.17	1765	710.74	258.00	19.93	15.54
MEAN	1.06	2.56	1.70	1.56	3.41	24.6	25.3	56.9	23.7	8.32	.64	.52
MAX	2.7	19	3.0	3.5	14	60	113	116	113	38	1.8	1.7
MIN	.66	.79	.10	.20	.65	12	.00	26	.00	.82	.00	.00
AC-FT	65	152	105	96	189	1520	1510	3500	1410	512	40	31

CAL YR 1982 TOTAL 1999.03 MEAN 5.48 MAX 161 MIN .00 AC-FT 3970  
WTR YR 1983 TOTAL 4598.55 MEAN 12.6 MAX 116 MIN .00 AC-FT 9120

## 07203000 VERMEJO RIVER NEAR DAWSON, NM

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

DRAINAGE AREA.--301 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Altitude of gage is 6,365 ft, 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.--59 years (water years 1916-17, 1920, 1928-83), 18.2 ft<sup>3</sup>/s, 13,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1926).--Maximum discharge, 12,600 ft<sup>3</sup>/s June 17, 1965, gage height 15.25 ft, from rating curve extended above 400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred Aug. 2, 1921, when discharge probably exceeded 10,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 452 ft<sup>3</sup>/s, June 9, gage height 4.99 ft; maximum gage height, 5.03 ft Aug 13; minimum daily 5.5 ft<sup>3</sup>/s.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	13	9.0	7.0	9.6	11	21	66	165	79	44	17
2	22	14	8.2	7.4	8.2	11	23	62	163	77	50	17
3	21	13	8.2	7.4	8.0	11	27	53	140	74	34	17
4	20	12	9.6	7.8	8.0	10	24	46	132	70	37	16
5	19	13	9.1	7.8	8.2	11	23	47	128	68	30	15
6	18	13	9.1	8.7	8.2	10	24	56	139	64	32	13
7	18	13	9.1	9.6	8.2	9.7	27	55	194	62	35	12
8	18	12	9.3	10	9.1	9.8	28	57	174	60	29	13
9	17	11	11	9.6	9.6	10	26	68	185	58	24	12
10	18	11	9.8	8.2	9.6	10	26	76	221	55	23	11
11	18	13	9.1	8.2	9.6	10	28	85	148	65	22	11
12	19	11	7.8	8.2	9.6	11	31	87	131	62	27	11
13	19	9.6	9.1	8.2	9.6	12	34	84	123	60	75	11
14	19	10	8.7	7.8	11	12	33	82	114	58	49	12
15	18	9.1	7.8	7.4	12	13	36	75	104	56	43	11
16	17	10	8.2	7.0	12	12	39	67	98	54	24	11
17	17	11	9.6	7.8	11	12	50	61	95	52	21	9.9
18	17	10	11	10	12	13	61	57	94	50	20	9.1
19	16	10	9.6	8.7	11	13	68	54	92	65	19	9.0
20	15	9.9	8.7	9.1	10	12	72	55	91	39	19	8.6
21	15	9.9	9.6	9.1	10	11	75	54	87	37	19	8.9
22	15	9.7	9.6	9.1	11	12	72	53	84	34	19	9.1
23	15	9.5	11	8.7	12	12	67	60	83	37	25	9.0
24	15	8.7	7.0	8.7	13	13	65	60	84	41	26	9.1
25	15	7.8	6.6	8.7	13	14	74	65	83	47	26	9.3
26	14	11	7.0	9.6	13	14	79	79	84	42	24	9.8
27	14	11	6.5	9.1	12	13	74	97	83	36	22	10
28	14	11	6.0	9.1	11	15	68	108	82	39	23	9.5
29	14	10	5.5	9.1	---	15	69	114	82	30	20	9.5
30	13	9.1	6.0	9.6	---	15	69	127	80	31	19	9.7
31	14	---	7.0	10	---	16	---	161	---	31	20	---
TOTAL	528	326.3	263.8	266.7	289.5	373.5	1413	2271	3563	1633	900	340.5
MEAN	17.0	10.9	8.51	8.60	10.3	12.0	47.1	73.3	119	52.7	29.0	11.4
MAX	24	14	11	10	13	16	79	161	221	79	75	17
MIN	13	7.8	5.5	7.0	8.0	9.7	21	46	80	30	19	8.6
AC-FT	1050	647	523	529	574	741	2800	4500	7070	3240	1790	675
CAL YR 1982	TOTAL	8976.7	MEAN	24.6	MAX	477	MIN	5.3	AC-FT	17810		
WTR YR 1983	TOTAL	12168.3	MEAN	33.3	MAX	221	MIN	5.5	AC-FT	24140		

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

PERIOD OF RECORD.--Water years 1945-51, 1964 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (000095)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (000020)	TEMPER- ATURE (DEG C) (000010)	HARD- NESS (MG/L AS CACO3) (000900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
NOV										
10...	1500	12	430	442	8.7	8.6	12.5	10.0	170	2
JAN										
12...	1200	14	510	--	8.0	--	9.5	.5	--	--
MAR										
23...	1140	12	465	465	8.0	8.5	-3.0	1.0	180	10
MAY										
17...	1405	66	289	317	8.2	8.2	12.0	11.0	130	7
JUL										
19...	1100	60	240	274	7.9	7.7	24.5	19.0	110	25
SEP										
19...	1545	9.6	370	--	8.3	--	22.0	16.0	--	--

[illegible]

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

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ARSENIC	ARSENIC	BORON,	CADMIUM	CADMIUM	CHRO-	CHRO-	COPPER,	COPPER,
		TOTAL (UG/L AS AS) (01002)	DIS- SOLVED (UG/L AS AS) (01000)	DIS- SOLVED (UG/L AS B) (01020)	TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	DIS- SOLVED (UG/L AS CD) (01025)	TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	DIS- SOLVED (UG/L AS CR) (01030)	TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	DIS- SOLVED (UG/L AS CU) (01040)
NOV										
10...	1500	<1	<1	20	<1	<1	<10	<10	1	1
MAR										
23...	1140	--	--	10	--	--	--	--	--	--
MAY										
17...	1405	--	--	10	--	--	--	--	--	--
JUL										
19...	1100	--	--	20	--	--	--	--	--	--

DATE	IRON,	LEAD,	LEAD,	MERCURY	MERCURY	SELE-	SELE-	ZINC,	ZINC,
	DIS- SOLVED (UG/L AS FE) (01046)	TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	DIS- SOLVED (UG/L AS PB) (01049)	TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	DIS- SOLVED (UG/L AS HG) (71890)	NIUM, TOTAL (UG/L AS SE) (01147)	NIUM, DIS- SOLVED (UG/L AS SE) (01145)	TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	DIS- SOLVED (UG/L AS ZN) (01090)
NOV									
10...	3	1	<1	.1	<.1	1	1	10	<3
MAR									
23...	12	--	--	--	--	--	--	--	--
MAY									
17...	20	--	--	--	--	--	--	--	--
JUL									
19...	150	--	--	--	--	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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						
10...	1500	12	10.0	9	.29	--
JAN						
12...	1200	14	.5	83	3.1	79
MAR						
23...	1140	12	1.0	43	1.4	78
MAY						
17...	1405	66	11.0	382	68	90
JUL						
19...	1100	60	19.0	11100	1800	99
SEP						
19...	1545	9.6	16.0	10	.26	62

## 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 southeast of Colfax, and 5.7 mi downstream from head.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,155 ft, 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, 124 ft<sup>3</sup>/s June 14, 1983; no flow several days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	13	8.0	6.0	8.5	8.6	16	45	123	59	24	13
2	20	12	7.5	6.5	7.5	8.0	20	43	118	60	35	12
3	19	11	5.5	6.5	7.0	8.0	21	37	36	60	22	13
4	18	6.9	5.1	7.0	7.0	7.7	22	28	35	60	22	15
5	17	14	7.2	7.0	7.0	8.3	22	26	34	60	20	11
6	16	14	8.7	7.5	7.0	7.4	23	34	36	60	20	7.1
7	16	13	8.1	8.0	7.0	6.6	23	33	36	60	20	6.6
8	16	13	7.4	9.0	8.0	6.0	24	31	36	65	20	8.9
9	15	12	9.0	8.0	8.5	6.6	25	32	82	62	20	7.1
10	16	15	8.5	7.5	8.5	6.6	26	35	112	66	20	5.3
11	16	16	8.0	7.5	8.5	6.3	29	37	100	54	20	5.5
12	17	13	5.2	7.5	8.5	7.4	31	40	100	48	20	6.0
13	18	8.2	7.6	7.5	8.5	8.9	34	42	99	45	20	4.4
14	18	8.0	9.3	7.0	9.0	8.9	36	46	124	44	66	5.5
15	17	8.5	5.2	6.5	12	11	39	50	111	43	30	6.6
16	16	9.0	6.9	6.0	10	11	44	54	79	43	20	7.1
17	16	10	8.6	6.5	10	11	58	65	91	43	19	6.3
18	15	9.5	9.0	8.0	7.7	12	77	58	87	40	12	6.3
19	11	9.5	6.8	7.5	9.6	12	98	70	85	45	10	6.3
20	.03	9.5	5.7	8.0	10	11	57	74	87	24	9.5	3.1
21	.00	9.5	8.5	8.0	5.8	10	60	72	77	18	13	.29
22	.00	9.0	7.9	8.0	7.1	12	55	49	72	18	12	.57
23	10	9.0	9.0	7.5	9.2	13	49	50	66	18	15	.66
24	13	8.0	6.5	7.5	11	13	47	54	63	22	16	2.1
25	12	7.5	6.0	7.5	13	13	50	60	86	28	16	3.1
26	12	9.0	6.5	8.0	13	15	60	78	76	23	16	4.1
27	12	9.0	6.0	7.5	11	12	55	77	80	22	15	3.9
28	12	9.0	5.5	7.5	8.9	13	47	89	65	23	16	2.3
29	14	8.5	5.0	7.5	---	14	45	95	61	18	16	2.3
30	13	8.0	5.5	8.0	---	15	47	111	60	18	14	4.4
31	13	---	6.0	9.0	---	13	---	103	---	18	14	---
TOTAL	429.03	311.6	219.7	231.0	248.8	316.3	1240	1718	2317	1267	612.5	179.82
MEAN	13.8	10.4	7.09	7.45	8.89	10.2	41.3	55.4	77.2	40.9	19.8	5.99
MAX	21	16	9.3	9.0	13	15	98	111	124	66	66	15
MIN	.00	6.9	5.0	6.0	5.8	6.0	16	26	34	18	9.5	.29
AC-FT	851	618	436	458	493	627	2460	3410	4600	2510	1210	357
CAL YR 1982	TOTAL	4537.86	MEAN 12.4	MAX 88	MIN .00	AC-FT 9000						
WTR YR 1983	TOTAL	9090.75	MEAN 24.9	MAX 124	MIN .00	AC-FT 18030						

## ARKANSAS RIVER BASIN

33

## 07204000 MORENO CREEK AT EAGLE NEST, NM

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

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

PERIOD OF RECORD.--April 1928 to October 1955 and June 1964 to current year (no winter records except water year 1932). Monthly discharge only for some periods, published in WSP 1311. Records for December 1930 to March 1931, published in WSP 732, are unreliable and should not be used. Published as "near Therma" 1928-34.

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

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

REMARKS.--Records good. Diversions for irrigation of about 1,200 acres 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 Sept. 1, 1946, gage height, 3.10 ft, site and datum then in use; maximum gage height, 3.55 ft May 12, 1973; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 83 ft<sup>3</sup>/s at 0645 hours Apr. 29, gage height, 2.99 ft, no other peak above base of 35 ft<sup>3</sup>/s; minimum determined 1.1 ft<sup>3</sup>/s Sept. 20-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	4.7					---	74	73	6.2	4.1	3.6
2	6.4	4.7					---	64	61	5.7	5.9	3.4
3	6.1	---					---	56	54	5.1	9.5	3.1
4	5.9	---					---	53	51	4.7	8.0	2.9
5	5.6	---					---	54	46	4.4	6.1	2.5
6	5.1	---					---	53	44	4.9	5.1	2.1
7	5.1	---					14	51	53	5.3	4.6	1.9
8	5.0	---					13	52	42	4.1	4.5	1.9
9	4.9	---					14	53	42	3.9	4.0	1.8
10	4.9	---					14	60	41	4.1	3.6	1.8
11	5.0	---					17	62	36	6.2	3.6	2.1
12	5.9	---					18	62	32	7.0	3.8	1.9
13	6.3	---					17	60	31	5.0	4.6	2.2
14	6.5	---					15	64	28	4.5	4.3	2.9
15	6.2	---					15	63	24	3.9	3.7	2.2
16	5.9	---					16	57	20	3.5	3.2	1.8
17	5.6	---					21	50	14	3.6	3.0	1.6
18	5.2	---					30	46	13	4.3	2.8	1.4
19	4.8	---					45	43	11	4.3	2.7	1.4
20	4.5	---					50	42	9.0	4.4	3.2	1.2
21	4.5	---					48	40	8.5	4.7	3.0	1.2
22	4.3	---					47	38	8.0	4.5	3.2	1.2
23	4.3	---					47	38	7.0	4.4	4.4	1.2
24	4.2	---					50	40	8.0	6.1	4.6	1.2
25	4.1	---					64	44	10	7.1	4.6	1.3
26	4.0	---					70	50	13	5.9	4.5	1.5
27	7.0	---					72	53	10	5.7	4.7	1.6
28	6.6	---					70	52	9.0	4.9	5.6	1.5
29	5.2	---					76	53	7.9	4.0	4.7	1.5
30	5.1	---					77	55	6.7	3.9	4.1	1.5
31	5.0	---					---	65	---	3.9	4.0	---
TOTAL	166.0	---					---	1647	813.1	150.2	137.7	57.4
MEAN	5.35	---					---	53.1	27.1	4.85	4.44	1.91
MAX	7.0	---					---	74	73	7.1	9.5	3.6
MIN	4.0	---					---	38	6.7	3.5	2.7	1.2
AC-FT	329	---					---	3270	1610	298	273	114

## ARKANSAS RIVER BASIN

## 07204500 CIENEGUILLA CREEK NEAR EAGLE NEST, NM

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

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

PERIOD OF RECORD.--April 1928 to September 1955 and June 1964 to current year (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, from topographic map. Prior to May 8, 1928, nonrecording gage, and May 8, 1928 to Sept. 1, 1934, water-stage recorder at site 0.2 mi downstream at different datums.

REMARKS.--Records good. Diversions for irrigation of about 1,000 acres 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 June 16, 1965, gage height, 5.61 ft, from rating curve extended above 110 ft<sup>3</sup>/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 144 ft<sup>3</sup>/s Apr. 30, gage height, 4.72 ft, no other peak above base of 70 ft<sup>3</sup>/s; minimum determined, 1.2 ft<sup>3</sup>/s Sept. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.7					---	129	88	8.3	4.7	3.6
2	2.5	3.8					---	110	64	7.5	5.4	3.1
3	2.3	---					---	86	50	6.9	6.4	2.6
4	2.3	---					---	88	44	6.5	7.6	2.3
5	2.2	---					---	125	40	6.2	7.8	2.1
6	2.0	---					---	126	42	5.9	4.9	1.7
7	2.0	---					13	105	52	5.7	4.0	1.7
8	2.2	---					11	109	40	5.0	4.0	1.8
9	2.2	---					12	112	36	4.5	3.4	2.0
10	2.3	---					13	115	32	4.5	3.1	2.3
11	2.6	---					18	109	28	5.0	3.2	2.5
12	3.0	---					17	102	25	10	4.5	1.9
13	3.3	---					18	90	24	9.0	5.0	5.8
14	4.0	---					16	80	23	9.2	4.5	4.5
15	4.7	---					16	78	20	6.6	3.6	3.2
16	4.1	---					19	62	18	5.3	2.9	2.4
17	4.0	---					22	52	16	4.7	2.5	2.2
18	3.5	---					30	48	14	5.0	2.3	1.8
19	3.3	---					41	46	13	4.4	2.3	1.6
20	3.3	---					48	45	12	3.8	2.5	1.4
21	3.2	---					52	46	11	3.8	2.3	1.3
22	3.0	---					49	42	10	5.0	2.6	1.2
23	3.0	---					46	39	9.0	6.4	4.7	1.5
24	3.0	---					55	36	10	4.9	6.6	1.5
25	2.9	---					77	37	12	4.7	6.1	2.1
26	3.3	---					94	39	16	5.5	4.4	2.3
27	5.0	---					101	40	14	5.0	3.6	2.4
28	4.8	---					112	40	12	3.7	3.3	2.4
29	4.0	---					120	45	11	3.3	3.2	2.1
30	4.0	---					132	47	9.4	3.5	5.2	2.6
31	3.7	---					---	69	---	4.4	4.4	---
TOTAL	98.3	---					---	2297	795.4	174.2	131.0	69.9
MEAN	3.17	---					---	74.1	26.5	5.62	4.23	2.33
MAX	5.0	---					---	129	88	10	7.8	5.8
MIN	2.0	---					---	36	9.0	3.3	2.3	1.2
AC-FT	195	---					---	4560	1580	346	260	139



## ARKANSAS RIVER BASIN

35

07205000 SIXMILE CREEK NEAR EAGLE NEST, NM

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

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

PERIOD OF RECORD.--April 1928 to September 1955 (no winter records in water years 1929-31, 1933-55), July 1958 to current year (no winter records subsequent to water year 1975). Prior to October 1930 monthly discharge only, published in WSP 1311. Records for December 1930 to March 1931, published in WSP 732, are unreliable and should not be used. Published as "near Therma" 1928-34.

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

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

REMARKS.--Records good. Diversions for irrigation of about 300 acres 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, 1,820 acre-ft/yr.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 12	1100	*31	1.57	July 11	1600	22	1.37

Minimum discharge determined, 1.5 ft<sup>3</sup>/s July 13, Sept. 20, result of regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.8					---	27	26	5.4	2.6	2.7
2	3.8	3.8					---	24	26	5.2	2.8	2.6
3	3.7	---					---	20	24	5.0	2.9	2.4
4	3.5	---					---	17	23	4.6	2.8	2.1
5	3.5	---					---	18	20	4.5	2.5	1.8
6	3.4	---					---	20	20	4.5	2.4	1.8
7	3.3	---					5.1	17	20	4.1	2.4	1.8
8	3.3	---					4.7	17	18	2.7	2.3	1.9
9	3.4	---					5.7	19	17	2.6	2.2	1.8
10	3.4	---					5.7	23	16	2.6	2.2	1.8
11	3.4	---					5.7	25	15	5.5	2.6	1.8
12	3.7	---					5.6	27	15	2.8	2.6	1.8
13	3.7	---					5.3	26	15	2.7	2.6	1.8
14	4.1	---					5.0	23	14	4.0	2.6	1.9
15	4.0	---					5.4	21	12	3.7	2.4	1.8
16	4.0	---					5.8	17	11	3.3	2.3	1.7
17	3.9	---					6.5	15	9.2	3.1	2.2	1.7
18	3.6	---					8.7	14	5.7	3.2	2.2	1.7
19	3.5	---					12	14	4.7	2.9	2.2	1.6
20	3.4	---					14	14	4.4	2.9	2.3	1.6
21	3.4	---					16	14	4.1	3.3	2.2	1.6
22	3.4	---					15	14	4.0	3.0	2.3	1.6
23	3.4	---					16	15	3.9	3.0	2.6	1.6
24	3.4	---					18	17	4.9	2.7	2.5	1.6
25	3.4	---					25	19	7.6	2.8	2.4	1.7
26	3.4	---					26	21	7.9	2.8	2.3	1.7
27	5.2	---					27	21	7.0	2.9	2.4	1.8
28	4.3	---					27	21	6.6	2.6	2.6	1.8
29	4.1	---					28	22	6.1	2.5	2.4	1.7
30	3.7	---					28	22	5.7	2.4	2.3	1.7
31	3.9	---					---	24	---	2.5	2.3	---
TOTAL	114.0	---					---	608	373.8	105.8	75.4	54.9
MEAN	3.68	---					---	19.6	12.5	3.41	2.43	1.83
MAX	5.2	---					---	27	26	5.5	2.9	2.7
MIN	3.3	---					---	14	3.9	2.4	2.2	1.6
AC-FT	226	---					---	1210	741	210	150	109

## ARKANSAS RIVER BASIN

07205500 EAGLE NEST LAKE NEAR EAGLE NEST, NM

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

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

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

REVISED RECORDS.--WSP 1281: Drainage area.

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 78,800 acre-ft May 31, 1942, gage height, 136.9 ft; minimum observed, 635 acre-ft Dec. 14, 1954, gage height, 61.33 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 53,800 acre-ft June 29, gage height, 125.39 ft; minimum observed, 32,310 acre-ft Oct. 4, gage height, 112.50 ft.

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
120	43,940
125	53,050
130	63,170

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	32450	32870	---	34020	35040	37060	42760	---	---	52670	50590
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	32560	---	33440	---	---	---	---	---	---	---	---
4	32310	---	---	---	---	---	---	---	---	---	---	50310
5	---	---	---	---	---	---	---	---	---	53630	---	---
6	---	---	---	---	---	---	---	---	51910	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	52480	---
9	---	---	---	---	---	---	---	45340	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	32310	---	---	33790	---	---	---	---	---	53540	---	49560
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	33120	---	---	---	---	---	53240	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	52000	---
16	---	32520	---	---	34620	---	---	47830	---	---	---	---
17	---	---	---	---	---	---	---	---	---	53240	---	---
18	32310	---	---	---	---	---	---	---	---	---	---	49100
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	53440	---	51340	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	48740	---	---	---	---
24	---	---	---	---	---	---	---	49190	---	---	---	48650
25	32310	---	---	---	---	---	---	---	---	53050	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	40410	---	53630	---	---	---
28	---	---	---	---	35000	---	---	---	---	52920	---	---
29	---	---	---	---	---	---	---	---	53800	---	50860	---
30	---	32870	---	---	---	---	42700	50030	53800	---	---	48400
31	32400	---	33400	34000	---	37140	---	50300	---	52700	50700	---
(1)	---	---	---	---	---	115.81	---	---	---	---	---	---
(11)	+100	+470	+530	+600	+1000	+2140	+5560	+7600	+3500	-1100	-2000	-2300

CAL YR 1982..... (11) +5020

WTR YR 1983..... (11) +16100

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

(11) CHANGE IN CONTENTS, IN ACRE-Feet

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

## ARKANSAS RIVER BASIN

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## 07206000 CIMARRON RIVER BELOW EAGLE NEST DAM, NM

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

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

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1281: Drainage area.

GAGE.--Water-stage recorder. Parshall flume since May 15, 1951. Altitude of gage is 8,080 ft, from topographic map. Prior to May 15, 1951, at datum 0.81 ft 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 above station.

AVERAGE DISCHARGE.--33 years, 13.6 ft<sup>3</sup>/s, 9,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 205 ft<sup>3</sup>/s June 14, 1955, maximum gage height, 3.04 ft April 20, 1983; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 72 ft<sup>3</sup>/s April 21; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.02	.01	.01	.10	.10	.11	.11	2.0	8.2	40	40
2	.02	.04	.01	.01	.10	.10	.11	.11	2.0	2.0	39	40
3	.02	.01	.01	.01	.10	.10	.11	.11	2.0	2.0	33	40
4	.02	.01	.01	.02	.10	.10	.11	.11	2.0	11	30	41
5	.02	.01	.01	.02	.10	.10	.11	.11	2.0	21	21	44
6	.02	5.4	.01	.03	.10	.10	.11	.11	2.0	22	9.1	44
7	2.0	9.1	.01	.04	.10	.10	.11	.17	2.0	22	30	45
8	3.8	9.6	.01	.05	.10	.10	.11	.11	2.0	22	40	46
9	3.7	12	.01	.08	.10	.10	.11	.11	2.0	22	40	46
10	6.4	14	.01	.05	.10	.10	.11	.11	2.0	28	45	46
11	8.6	15	.00	.10	.10	.10	.11	.11	2.0	40	53	46
12	8.6	14	.00	.10	.10	.10	.11	.11	2.0	35	46	46
13	8.6	14	.00	.10	.10	.10	.11	.11	2.0	32	32	45
14	6.2	14	.00	.10	.10	.10	.11	21	2.0	32	40	39
15	2.7	14	.00	.10	.10	.10	.11	12	2.0	32	53	30
16	2.0	6.8	.00	.10	.10	.10	.11	11	2.0	32	55	28
17	1.5	.11	.00	.10	.10	.10	.11	11	2.0	33	49	22
18	1.2	.03	.00	.10	.10	.10	.11	11	2.0	34	45	19
19	5.8	.02	.00	.10	.10	.10	.11	11	3.6	34	45	20
20	8.2	.01	.00	.10	.10	.10	31	10	10	34	28	20
21	8.2	.01	.00	.10	.10	.10	72	11	10	34	39	20
22	8.2	.01	.00	.10	.10	.10	.11	12	11	34	50	20
23	8.2	.01	.00	.10	.10	.10	.11	12	11	22	50	20
24	8.0	.01	.00	.10	.10	.10	.11	12	11	28	49	20
25	7.6	.01	.00	.10	.10	.10	.11	12	11	37	42	19
26	5.3	.01	.00	.10	.10	.10	.11	12	11	33	36	19
27	3.0	.01	.00	.10	.10	.10	.11	12	12	23	36	19
28	2.8	.01	.00	.10	.10	.10	.11	11	12	23	37	19
29	.91	.01	.00	.10	---	.11	.11	11	12	23	40	19
30	.03	.01	.00	.10	---	.11	.11	11	12	9.4	40	19
31	.02	---	.00	.10	---	.11	---	6.3	---	23	40	---
TOTAL	121.68	128.26	.10	2.42	2.80	3.13	106.08	210.79	162.6	787.6	1232.1	941
MEAN	3.93	4.28	.003	.078	.10	.10	3.54	6.80	5.42	25.4	39.7	31.4
MAX	8.6	15	.01	.10	.10	.11	72	21	12	40	55	46
MIN	.02	.01	.00	.01	.10	.10	.11	.11	2.0	2.0	9.1	19
AC-FT	241	254	.2	4.8	5.6	6.2	210	418	323	1560	2440	1870
CAL YR 1982	TOTAL	3766.31	MEAN	10.3	MAX	58	MIN	.00	AC-FT	7470		
WTR YR 1983	TOTAL	3698.56	MEAN	10.1	MAX	72	MIN	.00	AC-FT	7340		

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 1982 TO SEPTEMBER 1983

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)
NOV 11...	1500	15	310	338	8.3	8.4	-1.5	6.0	150	0
FEB 17...	1015	.10	170	--	6.1	--	6.0	1.5	--	--
MAR 31...	1237	.10	390	430	7.5	7.3	11.0	10.0	190	0
JUN 29...	1445	12	--	319	7.6	7.8	23.0	12.0	140	0
JUL 28...	1000	22	285	313	7.7	7.7	17.5	14.0	140	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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 11...	46	8.8	12	.4	2.4	16	4.9	.40	.5	186
FEB 17...	--	--	--	--	--	--	--	--	--	--
MAR 31...	56	11	15	.5	4.0	8.5	5.3	.50	13	236
JUN 29...	43	8.4	11	.4	2.3	15	3.0	.40	8.0	179
JUL 28...	43	8.2	11	.4	2.5	13	4.7	.40	8.5	182

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 11...	1500	4	4	20	<1	<1	<10	<10	2	2
MAR 31...	1237	--	--	20	--	--	--	--	--	--
JUN 29...	1445	--	--	30	--	--	--	--	--	--
JUL 28...	1000	--	--	10	--	--	--	--	--	--

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

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 11...	15	2	2	.1	<.1	1	<1	10	7
MAR 31...	15	--	--	--	--	--	--	--	--
JUN 29...	4	--	--	--	--	--	--	--	--
JUL 28...	17	--	--	--	--	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 11...	1500	15	6.0	26	1.1	85

## ARKANSAS RIVER BASIN

## 07207000 CIMARRON RIVER NEAR CIMARRON, NM

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

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

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1281: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Nov. 6, 1963. Datum of gage is 6,599.58 ft 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, part of which is below station. Philmont ditch (formerly known as Cimarroncito ditch) diverts from left bank 1.5 mi above station, flumes under river 0.9 mi above and bypasses station for off-channel storage and irrigation below; see tabulation below for monthly diversions.

AVERAGE DISCHARGE.--33 years, 20.8 ft<sup>3</sup>/s, 15,090 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 192 ft<sup>3</sup>/s April 21, gage height, 2.53 ft; minimum, 0.10 ft<sup>3</sup>/s Mar. 29, result of regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	8.4	6.3	4.5	5.2	6.0	9.3	58	96	35	35	38
2	13	8.9	6.0	5.0	5.0	6.0	9.5	54	91	26	39	38
3	12	8.0	6.5	5.5	4.5	6.1	10	48	86	26	38	37
4	11	8.2	6.5	5.5	4.5	6.1	9.6	44	79	23	37	37
5	10	8.4	6.0	6.0	5.0	6.0	11	43	75	34	30	39
6	9.9	8.2	6.5	6.5	5.0	5.9	12	44	73	36	25	39
7	9.7	10	6.5	7.5	5.0	5.7	9.8	44	72	36	20	40
8	10	13	6.0	7.0	5.5	5.8	10	44	75	35	39	39
9	11	14	6.3	6.5	5.5	5.8	9.6	46	72	33	38	39
10	12	17	7.0	6.5	5.5	5.8	9.6	55	67	31	38	39
11	14	21	6.5	7.5	5.5	5.9	9.7	66	65	44	47	39
12	15	19	7.0	7.7	5.0	6.2	9.8	70	62	51	46	39
13	15	20	8.0	8.0	5.5	6.3	11	69	62	40	38	40
14	16	19	7.5	8.0	5.5	6.7	11	76	60	42	33	40
15	14	21	7.0	7.5	5.4	6.5	11	70	55	41	46	29
16	13	20	7.5	7.5	5.4	6.0	12	61	48	38	51	23
17	12	12	8.0	7.0	5.5	5.5	16	51	44	38	48	20
18	11	9.7	8.0	5.8	5.7	5.5	19	46	41	40	41	16
19	10	8.4	9.0	6.5	5.8	5.5	21	42	38	40	43	15
20	12	7.6	10	6.0	6.0	5.7	25	41	44	42	38	16
21	14	7.4	9.4	5.5	5.8	7.5	107	38	47	48	29	16
22	14	7.1	6.3	5.5	6.3	8.0	41	39	42	46	48	16
23	14	7.0	6.2	6.0	6.1	7.6	36	39	41	40	53	15
24	14	6.8	6.0	5.5	5.9	7.9	35	42	40	30	52	14
25	14	6.5	5.5	5.5	6.1	8.3	43	49	41	40	49	14
26	14	6.8	6.0	6.0	6.1	7.7	52	61	42	38	38	P4
27	13	6.9	5.5	6.5	6.0	7.3	54	70	39	28	37	14
28	11	6.4	5.0	6.5	5.9	7.2	55	76	38	25	36	14
29	10	6.1	4.0	7.0	---	6.1	57	77	38	24	38	14
30	9.8	6.1	4.0	6.3	---	6.7	58	85	39	22	38	14
31	8.9	---	4.5	5.3	---	7.4	---	98	---	12	39	---
TOTAL	380.3	328.9	204.5	197.6	154.2	200.7	783.9	1746	1712	1084	1227	807
MEAN	12.3	11.0	6.60	6.37	5.51	6.47	26.1	56.3	57.1	35.0	39.6	26.9
MAX	16	21	10	8.0	6.3	8.3	107	98	96	51	53	40
MIN	8.9	6.1	4.0	4.5	4.5	5.5	9.3	38	38	12	20	14
AC-FT	754	652	406	392	306	398	1550	3460	3400	2150	2430	1600
(†)	0	0	0	0	0	0	0	0	0	98	406	420
(††)	0	0	0	0	0	0	0	0	54	76	42	42

CAL YR 1982 TOTAL 7485.5 MEAN 20.5 MAX 71 MIN 2.6 AC-FT 14850 (†) 1218 (††) 458  
WTR YR 1983 TOTAL 8826.1 MEAN 24.2 MAX 107 MIN 4.0 AC-FT 17510 (†) 924 (††) 214

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

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

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ARSENIC	ARSENIC	BORON,	CADMIUM	CADMIUM	CHRO-	CHRO-	COPPER,	COPPER,
		TOTAL (UG/L AS AS) (01002)	DIS- SOLVED (UG/L AS AS) (01000)	DIS- SOLVED (UG/L AS B) (01020)	TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	DIS- SOLVED (UG/L AS CD) (01025)	TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	DIS- SOLVED (UG/L AS CR) (01030)	TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	DIS- SOLVED (UG/L AS CU) (01040)
NOV										
11...	1300	2	2	20	<1	<1	<10	<10	2	1
MAR										
31...	1014	--	--	20	--	--	--	--	--	--
MAY										
16...	1200	--	--	10	--	--	--	--	--	--
JUL										
21...	1800	--	--	20	--	--	--	--	--	--

DATE	IRON,	LEAD,	LEAD,	MERCURY	MERCURY	SELE-	SELE-	ZINC,	ZINC,
	DIS- SOLVED (UG/L AS FE) (01046)	TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	DIS- SOLVED (UG/L AS PB) (01049)	TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	DIS- SOLVED (UG/L AS HG) (71890)	TOTAL SOLVED (UG/L AS SE) (01147)	NIUM, DIS- SOLVED (UG/L AS SE) (01145)	TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	DIS- SOLVED (UG/L AS ZN) (01090)
NOV									
11...	4	3	3	<.1	<.1	1	1	20	<3
MAR									
31...	12	--	--	--	--	--	--	--	--
MAY									
16...	49	--	--	--	--	--	--	--	--
JUL									
21...	11	--	--	--	--	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV						
11...	1300	20	6.0	65	3.5	46
JUL						
21...	1800	44	21.5	38	4.5	70



## ARKANSAS RIVER BASIN

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## 07207500 PONIL CREEK NEAR CIMARRON, NM

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

DRAINAGE AREA.--171 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records good except those for winter period, which are poor. Diversions for irrigation of about 250 acres above station. Diversions 1,000 ft below station for irrigation of about 300 acres.

AVERAGE DISCHARGE.--44 years (water years 1916-25, 1928, 1951-83), 13.2 ft<sup>3</sup>/s, 8,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,630 ft<sup>3</sup>/s June 17, 1965, gage height, 11.13 ft, from rating curve extended above 230 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 3.56 ft, 5.80 ft, 7.15 ft, and 11.13 ft; no flow many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Discharge for flood of Aug. 8, 1929, which destroyed gage, was estimated as 5,200 ft<sup>3</sup>/s by State Engineer.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 137 ft<sup>3</sup>/s, July 24, gage height 2.63 ft; no peak above base of 200 ft<sup>3</sup>/s; minimum discharge 0.71 ft<sup>3</sup>/s Jan. 14, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	5.2	4.5	2.5	3.3	4.1	12	104	122	17	13	5.1
2	9.9	6.0	4.0	2.7	3.0	4.3	12	92	126	16	21	5.0
3	9.2	5.5	4.0	2.7	2.5	4.3	15	79	118	15	24	4.4
4	8.7	5.2	4.1	3.0	2.5	4.5	11	72	105	13	17	4.0
5	8.0	6.3	4.0	3.0	2.7	4.4	11	76	91	13	14	3.1
6	7.5	5.7	4.0	3.2	2.8	4.3	14	88	85	12	12	2.5
7	7.5	5.6	4.0	3.5	2.8	4.1	12	83	94	12	10	2.2
8	7.1	5.3	4.1	3.5	3.0	4.1	11	83	81	11	9.8	2.3
9	7.3	5.3	4.2	3.3	3.0	4.1	9.6	91	77	9.3	8.3	2.3
10	7.3	5.8	4.1	3.0	3.0	4.2	9.6	106	76	11	7.1	1.8
11	7.4	6.6	4.0	3.2	3.2	4.6	11	115	68	12	7.3	1.8
12	8.4	4.6	3.8	3.5	3.4	5.8	12	114	61	18	7.1	1.6
13	8.7	4.2	4.2	3.5	3.3	6.6	13	108	58	17	8.7	1.7
14	8.9	3.9	4.2	3.4	3.3	7.8	13	98	55	18	11	2.2
15	8.3	4.2	4.0	3.2	2.7	9.2	14	84	50	15	8.9	2.3
16	8.1	4.7	4.5	3.3	3.0	7.9	15	73	45	11	7.9	1.8
17	8.0	4.9	4.2	3.0	2.7	8.4	20	63	42	10	6.4	1.5
18	7.4	5.3	4.3	3.0	2.7	9.0	28	58	38	9.6	5.3	1.2
19	6.8	4.9	4.5	3.3	2.9	8.0	38	53	34	11	5.1	1.1
20	6.7	4.8	4.0	3.0	3.3	6.2	47	54	32	8.0	6.9	.98
21	6.4	4.7	3.7	3.0	2.5	7.3	50	51	30	7.6	5.4	1.2
22	6.1	4.5	3.7	2.8	2.7	8.2	55	50	29	7.0	5.1	1.3
23	6.1	4.6	3.5	2.8	2.9	6.7	56	53	28	9.2	6.6	1.3
24	5.8	4.0	3.0	2.8	3.0	7.0	62	59	27	21	7.5	1.3
25	5.8	4.2	2.5	2.7	4.1	7.7	87	72	26	25	8.4	1.2
26	5.6	4.8	2.7	2.8	4.1	6.9	106	84	30	24	7.6	1.3
27	5.5	4.7	2.5	3.0	3.9	6.3	108	94	26	16	8.9	1.3
28	5.7	4.4	2.3	3.0	4.0	7.1	104	102	23	13	7.2	1.3
29	5.3	4.1	2.0	3.0	---	7.0	108	101	21	9.8	5.5	1.3
30	5.3	4.5	2.3	3.2	---	6.6	107	104	19	9.1	4.8	1.5
31	5.3	---	2.5	3.5	---	7.7	---	114	---	8.6	5.1	---
TOTAL	225.1	148.5	113.4	95.4	86.3	194.4	1171.2	2578	1717	409.2	282.9	61.88
MEAN	7.26	4.95	3.66	3.08	3.08	6.27	39.0	83.2	57.2	13.2	9.13	2.06
MAX	11	6.6	4.5	3.5	4.1	9.2	108	115	126	25	24	5.1
MIN	5.3	3.9	2.0	2.5	2.5	4.1	9.6	50	19	7.0	4.8	.98
AC-FT	446	295	225	189	171	386	2320	5110	3410	812	561	123

CAL YR 1982 TOTAL 4277.10 MEAN 11.7 MAX 118 MIN .63 AC-FT 8480  
WTR YR 1983 TOTAL 7083.28 MEAN 19.4 MAX 126 MIN .98 AC-FT 14050

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

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV										
11...	0900	6.5	240	267	8.2	8.3	1.0	4.0	100	0
JAN										
12...	1300	4.5	248	--	7.8	--	11.0	.5	--	--
MAR										
23...	1330	4.5	265	255	8.0	8.3	.0	7.0	100	3
MAY										
16...	1600	72	141	156	8.2	7.8	20.0	12.5	61	3
JUL										
21...	1030	7.8	219	236	8.4	8.4	19.0	17.5	100	0
SEP										
19...	1730	1.1	280	--	8.1	--	25.0	21.0	--	--

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)
NOV											
11...	29	7.8	12	.5	1.0	26	2.4	.30	8.8	153	
JAN											
12...	--	--	--	--	--	--	--	--	--	--	--
MAR											
23...	29	7.7	13	.6	.9	24	2.9	.30	8.4	147	
MAY											
16...	17	4.5	5.6	.3	.9	16	1.6	.20	9.9	91	
JUL											
21...	29	7.1	10	.4	1.0	22	2.2	.30	9.5	142	
SEP											
19...	--	--	--	--	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV			
11...	0900	< 10	19
MAR			
23...	1330	< 10	44
MAY			
16...	1600	< 10	34
JUL			
21...	1030	< 10	25

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV						
11...	0900	6.5	4.0	5	.09	--
JAN						
12...	1300	4.5	.5	17	.21	--
MAR						
23...	1330	4.5	7.0	18	.22	83
MAY						
16...	1600	72	12.5	220	43	73
JUL						
21...	1030	7.8	17.5	23	.48	82
SEP						
19...	1730	1.1	21.0	13	.04	75

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

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

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

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1281: 1914, 1934-35(M), 1937(M), 1941(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, from topographic map. See WSP 1921 for history of changes prior to Oct. 1, 1954. Oct. 1, 1954 to June 16, 1965, at site 270 ft downstream at datum 2.79 ft lower.

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

AVERAGE DISCHARGE.--64 years (water years 1912, 1914, 1916-20, 1924, 1928-83), 13.8 ft<sup>3</sup>/s, 10,000 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 212 ft<sup>3</sup>/s Apr. 25, gage height, 3.79 ft, no other peak above base of 100 ft<sup>3</sup>/s; minimum discharge, 0.71 ft<sup>3</sup>/s Jan. 10, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	5.4	4.6	4.0	3.7	5.2	12	96	97	19	9.7	5.7
2	7.8	5.4	3.7	4.4	3.5	5.3	11	84	80	18	9.3	6.5
3	7.3	4.1	5.4	4.3	3.3	5.4	12	71	75	17	11	8.2
4	7.1	4.4	5.6	4.6	3.1	5.6	9.1	70	69	16	12	5.7
5	6.7	6.3	5.9	4.6	3.3	5.1	9.0	76	64	16	11	4.8
6	6.5	5.9	5.2	4.8	3.7	5.2	11	80	66	16	8.9	4.3
7	6.4	5.9	4.5	4.5	4.1	4.8	11	74	74	16	9.0	4.1
8	6.1	5.8	4.6	4.5	4.4	5.7	8.5	74	63	14	9.0	4.1
9	5.9	5.9	5.1	4.0	4.1	5.5	10	77	62	13	7.8	4.1
10	5.9	6.1	4.8	4.0	4.1	6.0	8.7	84	60	13	7.3	3.9
11	5.9	6.8	4.4	4.5	4.1	7.5	9.0	86	56	15	7.2	3.7
12	6.6	4.4	4.5	4.5	4.0	9.2	9.0	86	52	22	7.0	3.7
13	6.6	4.3	4.7	4.5	3.8	11	9.3	83	49	16	7.3	3.9
14	7.0	3.7	4.8	4.5	3.8	13	8.8	79	47	15	7.1	5.5
15	7.3	4.6	4.6	4.4	4.0	13	12	74	45	14	6.4	4.5
16	6.9	5.2	4.4	4.6	4.0	10	10	67	41	13	6.1	4.1
17	6.6	5.0	4.3	4.9	3.9	12	12	59	38	12	5.9	3.7
18	6.2	5.1	4.1	4.3	4.1	11	15	54	35	12	5.6	3.5
19	5.9	5.0	4.1	5.1	4.4	8.7	22	52	33	12	5.5	3.4
20	5.8	4.8	4.1	4.9	4.2	6.5	32	50	31	11	5.9	3.0
21	5.6	4.5	4.2	4.1	3.3	9.9	39	48	28	11	5.8	3.2
22	5.6	4.2	4.2	3.9	4.3	8.6	48	46	27	9.7	6.2	3.3
23	5.4	4.3	4.3	3.9	4.6	8.3	48	46	27	9.9	6.8	3.3
24	5.4	3.8	4.0	3.9	4.5	7.7	64	47	29	11	7.1	3.3
25	5.4	5.6	3.0	3.9	4.9	8.0	133	54	32	12	6.6	3.3
26	5.4	4.5	3.5	4.1	4.8	7.7	122	61	31	9.8	6.4	3.3
27	6.9	4.4	3.0	3.9	4.8	6.9	108	67	26	8.9	6.3	3.3
28	6.6	4.5	2.8	3.7	4.9	7.3	101	69	24	8.5	5.7	3.5
29	5.3	4.3	2.5	3.7	---	7.2	101	70	22	7.9	5.1	3.3
30	5.8	4.7	3.0	3.9	---	7.0	99	74	20	7.6	5.5	3.3
31	5.5	---	3.5	3.7	---	9.0	---	85	---	8.0	5.5	---
TOTAL	196.2	148.9	131.4	132.6	113.7	243.3	1104.4	2143	1403	404.3	226.0	123.5
MEAN	6.33	4.96	4.24	4.28	4.06	7.85	36.8	69.1	46.8	13.0	7.29	4.12
MAX	8.8	6.8	5.9	5.1	4.9	13	133	96	97	22	12	8.2
MIN	5.3	3.9	2.5	3.7	3.1	4.8	8.5	46	20	7.6	5.1	3.0
AC-FT	389	295	261	263	226	483	2190	4250	2780	802	448	245

CAL YR 1982 TOTAL 3988.5 MEAN 10.9 MAX 53 MIN 1.8 AC-FT 7910  
WTR YR 1983 TOTAL 6370.3 MEAN 17.5 MAX 133 MIN 2.5 AC-FT 12640

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

ARKANSAS RIVER BASIN  
07208500 RAYADO CREEK AT SAUBLE RANCH, NEAR CIMARRON, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 11...	1100	<10	31
MAR 30...	1545	<10	82
MAY 16...	1405	<10	140
JUL 21...	1445	<10	33

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 11...	1100	7.2	4.0	6	.12	--
JAN 11...	1500	4.4	2.5	2	.02	--
MAR 30...	1545	8.8	13.0	17	.40	88
MAY 16...	1405	65	10.5	28	4.9	91
JUL 21...	1445	10	25.0	16	.43	76
SEP 19...	1340	3.6	16.0	9	.09	66

## 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 downstream from bridge on State Highway 199, 0.3 mi upstream from Salado Creek, and at mile 8.2.

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

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

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

GAGE.--Water-stage recorder. Concrete control since Nov. 5, 1954. Altitude of gage is 5,770 ft, 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 above station and a few hundred acres between station and mouth. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--59 years (water years 1921, 1925, 1927-83), 17.0 ft<sup>3</sup>/s 12,330 acre-ft/yr.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 22 ft Sept. 29, 1904 (backwater from debris on railroad bridge). Another major flood occurred June 11, 1913. Maximum discharge of these floods probably extended 10,000 ft<sup>3</sup>/s, but probably were less than the 1965 flood.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 390 ft<sup>3</sup>/s June 6, gage height, 4.83 ft, no other peak above base of 280 ft<sup>3</sup>/s; no flow Sept. 20, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.83	2.3	3.0	3.5	6.0	9.6	5.9	242	345	29	.19	1.8
2	.71	3.3	2.9	3.6	5.5	9.6	6.0	248	362	26	3.3	1.4
3	.61	3.3	2.9	3.7	5.0	9.7	6.4	202	352	9.1	1.8	.80
4	.52	3.3	2.9	4.0	6.0	9.3	8.6	167	332	3.7	.62	1.1
5	.52	3.6	2.6	4.3	6.5	9.3	16	119	302	2.1	.35	.99
6	.26	3.6	2.9	4.6	6.5	9.2	15	118	342	1.3	.17	1.2
7	.37	2.9	3.3	5.1	6.9	8.8	16	132	327	1.0	.25	.83
8	.37	2.9	3.8	5.8	6.3	8.5	18	131	272	.82	.25	.74
9	.37	2.5	4.3	5.7	6.7	8.3	17	144	232	.58	.20	.47
10	.52	2.4	3.9	5.1	7.5	8.2	17	159	150	.40	.20	.24
11	.71	2.3	3.5	4.7	8.6	8.3	16	169	120	.76	.25	.38
12	1.9	2.0	3.7	4.9	10	9.2	16	51	133	5.9	.30	.33
13	3.6	1.9	3.6	4.9	11	10	29	26	191	3.7	.46	.90
14	3.6	2.1	3.6	5.0	15	12	34	20	193	1.6	.99	.56
15	2.9	2.1	3.6	4.3	20	9.5	36	38	176	1.4	1.0	.34
16	1.6	2.4	3.5	4.3	14	9.1	36	79	145	3.1	.87	.33
17	3.2	2.3	3.8	4.3	11	9.4	36	131	120	3.9	.72	.29
18	.71	2.0	4.2	5.4	10	9.5	38	118	77	5.0	.49	.30
19	.83	2.0	4.3	5.9	9.8	10	47	77	21	4.0	.31	.19
20	1.3	1.9	4.0	5.0	11	11	50	45	14	2.7	1.2	.14
21	1.1	1.9	4.1	5.0	11	10	77	42	11	2.0	2.0	.27
22	1.3	1.9	4.3	5.6	10	12	119	36	8.0	1.5	2.8	.31
23	1.5	2.0	4.4	5.1	9.4	12	88	35	3.7	1.6	2.6	.53
24	2.1	2.1	3.8	5.2	9.5	11	86	34	3.2	1.8	4.5	.06
25	1.9	3.3	3.5	5.8	9.7	10	90	36	4.0	1.8	2.0	.16
26	2.1	3.1	4.0	5.4	10	8.4	72	28	4.4	1.5	1.7	.35
27	2.3	3.0	3.5	5.3	10	7.9	90	20	4.7	1.2	2.5	.31
28	2.3	3.7	3.0	5.5	9.8	7.7	155	16	4.0	.67	3.5	.19
29	2.6	3.6	2.5	6.1	---	7.5	147	13	19	.50	6.1	.23
30	2.9	3.3	2.5	6.9	---	7.5	171	128	33	.33	3.2	.24
31	2.6	---	3.0	6.5	---	7.1	---	259	---	.21	2.3	---
TOTAL	48.13	79.0	108.9	156.5	262.7	289.6	1558.9	3063	4301.0	119.17	47.12	15.98
MEAN	1.55	2.63	3.51	5.05	9.38	9.34	52.0	98.8	143	3.84	1.52	.53
MAX	3.6	3.7	4.4	6.9	20	12	171	259	362	29	6.1	1.8
MIN	.26	1.9	2.5	3.5	5.0	7.1	5.9	13	3.2	.21	.17	.06
AC-FT	95	157	216	310	521	574	3090	6080	8530	236	93	32
CAL YR 1982	TOTAL	1568.06	MEAN	4.30	MAX	44	MIN	.03	AC-FT	3110		
WTR YR 1983	TOTAL	10050.00	MEAN	27.5	MAX	362	MIN	.06	AC-FT	19930		

## ARKANSAS RIVER BASIN

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## 07211500 CANADIAN RIVER NEAR TAYLOR SPRINGS, NM

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

DRAINAGE AREA.--2,850 mi<sup>2</sup>.

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

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

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

REMARKS.--Records poor. Diversions for irrigation of about 30,000 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years (water years 1940-58, 1965-83), 79.6 ft<sup>3</sup>/s, 57,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 162,000 ft<sup>3</sup>/s June 18, 1965, gage height, 47.4 ft, from floodmarks, from rating curve extended above 7,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood prior to 1965 occurred Sept. 29, 1904, discharge published as 91,100 ft<sup>3</sup>/s in WSP 842, 847.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,180 ft<sup>3</sup>/s at 1945 hrs, July 11, gage height, 4.65 ft, no peak above base of 3,000 ft<sup>3</sup>/s; minimum discharge 0.26 ft<sup>3</sup>/s Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	20	15	24	23	44	588	417	77	5.2	6.8
2	23	13	18	16	25	23	72	573	439	66	14	5.6
3	18	16	18	17	19	27	72	504	515	52	24	4.7
4	12	15	18	18	20	33	82	427	571	43	14	3.4
5	10	20	18	20	22	39	75	373	581	36	10	2.6
6	9.3	18	18	23	19	39	69	388	614	30	9.1	1.7
7	7.9	15	16	27	22	36	76	449	737	20	8.0	1.3
8	10	14	16	28	22	32	88	431	899	16	5.8	1.1
9	6.4	14	18	24	22	30	90	408	806	14	4.3	.97
10	7.3	14	18	22	21	30	77	416	533	12	3.8	.76
11	8.6	15	15	20	20	26	77	421	398	290	2.7	.44
12	12	32	13	19	25	23	99	313	339	404	2.0	.31
13	16	20	15	19	35	28	186	200	388	69	1.7	112
14	17	16	16	18	40	39	181	166	381	36	1.9	9.4
15	16	15	15	16	106	49	157	180	260	24	22	4.7
16	14	15	16	17	64	60	150	192	239	20	10	3.6
17	12	15	18	18	41	47	142	233	230	42	5.3	2.7
18	13	18	20	18	33	43	197	176	174	80	3.3	2.2
19	10	17	21	21	30	52	320	148	102	25	7.9	2.6
20	9.4	15	23	17	31	50	347	105	72	17	6.7	1.7
21	16	14	23	17	30	44	386	124	61	14	3.6	1.3
22	20	15	20	17	29	45	504	133	53	11	4.9	1.1
23	21	14	20	16	29	42	517	130	36	9.7	5.0	1.2
24	16	13	17	15	28	40	532	124	47	62	5.8	1.5
25	13	13	19	16	28	39	542	101	69	25	5.4	1.1
26	13	15	19	17	28	42	652	82	37	16	3.5	1.3
27	12	14	20	18	28	44	780	68	33	23	4.2	3.2
28	9.5	18	16	18	25	40	798	60	33	11	5.1	3.8
29	9.6	16	10	19	---	39	715	56	51	7.9	6.3	2.7
30	10	18	17	21	---	41	582	148	83	6.2	8.7	2.0
31	10	---	16	25	---	41	---	317	---	5.2	9.7	---
TOTAL	394.0	478	547	592	866	1186	8609	8034	9198	1564.0	223.9	187.78
MEAN	12.7	15.9	17.6	19.1	30.9	38.3	287	259	307	50.5	7.22	6.26
MAX	23	32	23	28	106	60	798	588	899	404	24	112
MIN	6.4	11	10	15	19	23	44	56	33	5.2	1.7	.31
AC-FT	781	948	1080	1170	1720	2350	17080	15940	18240	3100	444	372
CAL YR 1982	TOTAL	8737.24	MEAN 23.9	MAX 440	MIN .00	AC-FT 17330						
WTR YR 1983	TOTAL	31879.68	MEAN 87.3	MAX 899	MIN .31	AC-FT 63230						

## ARKANSAS RIVER BASIN

07215500 MORA RIVER AT LA CUEVA, NM

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

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

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

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

GAGE.--Water-stage recorder. Altitude of gage is 7,000 ft, 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 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, 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.--56 years (water years 1907-10, 1932-83), 27.2 ft<sup>3</sup>/s, 19,720 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 238 ft<sup>3</sup>/s at 0445 hours June 1, gage height, 3.45 ft, from rating curve extended above 69 ft<sup>3</sup>/s, no peak above base of 300 ft<sup>3</sup>/s; minimum, 2.4 ft<sup>3</sup>/s at times in February and March

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	14	23	20	18	8.3	28	117	220	93	68	39
2	26	17	20	20	18	8.6	27	110	204	83	85	40
3	22	18	19	20	17	5.5	29	97	184	79	80	42
4	19	19	18	20	17	2.7	25	85	167	68	72	38
5	19	19	17	20	18	2.4	22	81	157	60	55	35
6	16	19	17	20	17	2.4	28	87	171	55	52	32
7	16	19	16	20	16	2.5	27	83	162	57	66	31
8	19	19	17	20	15	2.5	27	77	156	48	63	31
9	19	20	21	19	14	2.4	28	83	155	41	49	29
10	20	22	22	19	11	2.4	31	92	157	33	43	29
11	24	29	20	18	3.1	2.6	31	106	164	32	35	27
12	29	24	19	18	4.7	2.7	31	110	159	88	32	26
13	30	26	18	18	4.0	2.9	31	101	146	63	31	25
14	40	26	17	17	4.1	3.3	32	92	123	68	41	25
15	36	26	17	17	4.0	4.4	32	88	110	57	29	22
16	34	28	15	17	4.7	13	34	73	106	48	27	17
17	33	28	19	16	4.5	21	32	66	104	51	30	15
18	33	28	18	17	4.8	24	35	60	101	59	28	14
19	31	27	17	16	5.1	24	44	52	101	53	26	14
20	30	25	16	16	5.0	21	58	52	104	59	23	15
21	27	22	17	16	4.9	19	66	55	99	68	22	17
22	26	22	17	17	5.4	24	73	54	93	64	22	16
23	24	23	20	17	5.6	24	77	61	93	63	32	17
24	22	23	18	17	6.3	26	80	63	105	63	55	18
25	21	23	18	16	6.9	28	99	79	121	69	46	15
26	20	25	17	17	6.7	22	115	106	112	81	42	15
27	19	25	19	16	7.0	20	119	134	106	70	43	15
28	18	25	20	17	7.7	20	117	134	106	64	42	15
29	16	23	20	18	---	21	114	144	98	60	41	15
30	14	22	20	20	---	20	113	161	98	64	38	15
31	14	---	20	19	---	23	---	194	---	64	39	---
TOTAL	753	686	572	558	255.5	405.6	1605	2897	3982	1925	1357	704
MEAN	24.3	22.9	18.5	18.0	9.13	13.1	53.5	93.5	133	62.1	43.8	23.5
MAX	40	29	23	20	18	28	119	194	220	93	85	42
MIN	14	14	15	16	3.1	2.4	22	52	93	32	22	14
AC-FT	1490	1360	1130	1110	507	805	3180	5750	7900	3820	2690	1400
(t)	468	76	0.9	0	571	785	251	306	378	684	277	234

CAL YR 1982 TOTAL 9542.5 MEAN 26.1 MAX 120 MIN 1.7 AC-FT 18930 (t) 5,860  
WTR YR 1983 TOTAL 15700.1 MEAN 43.0 MAX 220 MIN 2.4 AC-FT 31140 (t) 4,030

(t) Diversion, in acre-feet, by La Cueva Canal.



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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (000095)	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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
NOV 23...	1310	24	460	465	8.9	8.0	3.0	4.0	260	76
JAN 25...	1300	17	485	--	8.2	--	2.0	2.0	--	--
MAR 30...	1210	20	500	506	8.4	7.9	16.0	10.0	250	102
JUN 01...	1130	230	300	288	8.2	7.7	17.0	9.0	130	28
JUL 06...	1100	56	500	429	8.3	8.2	23.0	15.0	200	22
SEP 07...	1645	29	440	--	9.0	--	24.5	14.0	--	--

[illegible]

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

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 23...	1310	30	140
MAR 30...	1210	30	16
JUN 01...	1130	20	53
JUL 06...	1100	30	21

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 23...	1310	24	4.0	23	1.5	--
DEC 22...	1145	16	3.0	32	1.4	86
JAN 25...	1300	17	2.0	63	2.9	44
MAR 30...	1210	20	10.0	29	1.6	90
JUN 01...	1130	230	9.0	556	345	78
JUL 06...	1100	56	15.0	32	4.8	78
SEP 07...	1645	29	14.0	23	1.8	59

## ARKANSAS RIVER BASIN

53

07216500 MORA RIVER NEAR COLONDRINAS, NM

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

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

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

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

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

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 12,000 acres 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.--66 years (water years 1916-20, 1922, 1924-83), 33.1 ft<sup>3</sup>/s, 24,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft<sup>3</sup>/s Aug. 22, 1952, gage height, 14.4 ft, site and datum then in use, from rating curve extended above 660 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Sept. 29, 1904, and June 11, 1913, probably exceeded 25,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 284 ft<sup>3</sup>/s at 0915 hours June 1, gage height, 2.54 ft, no peak above base of 400 ft<sup>3</sup>/s; minimum, 1.1 ft<sup>3</sup>/s Mar. 12, 13, but may have been less during periods of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	16	25	24	24	13	50	110	251	99	67	37
2	29	20	25	24	23	14	41	108	240	88	90	36
3	25	22	24	23	23	15	39	86	218	82	91	39
4	20	22	23	23	24	8.3	37	72	194	72	73	36
5	18	24	22	23	22	6.4	34	64	180	61	53	33
6	15	22	21	23	21	5.9	36	64	200	56	50	30
7	15	22	20	29	20	6.1	37	63	194	58	55	28
8	16	22	19	26	19	5.8	38	53	181	48	85	25
9	19	22	22	25	17	6.0	36	61	182	40	44	25
10	18	25	26	23	16	5.8	40	70	189	35	39	27
11	21	30	25	22	9.8	5.5	38	89	195	33	32	26
12	27	27	25	22	8.8	5.2	38	93	186	112	29	26
13	30	27	25	22	9.1	4.8	38	89	172	78	28	24
14	38	28	25	21	10	4.9	39	77	139	78	38	24
15	40	27	25	21	13	6.8	40	82	120	67	28	24
16	34	28	24	21	18	9.7	46	64	112	53	24	19
17	32	28	24	21	17	25	42	55	108	48	26	16
18	32	28	23	21	13	27	41	50	107	64	26	16
19	30	28	22	21	16	31	51	41	101	55	22	16
20	29	26	22	22	11	29	65	42	101	55	19	16
21	26	24	21	22	9.8	25	77	48	96	69	17	9.7
22	25	24	21	22	11	29	83	47	91	62	17	9.8
23	24	25	21	22	11	30	85	54	90	70	18	9.0
24	21	25	21	22	12	31	86	59	108	64	42	14
25	21	25	21	21	13	39	99	73	127	82	39	13
26	20	27	21	21	13	34	119	102	122	92	35	11
27	19	27	22	21	13	32	124	139	111	77	36	10
28	18	28	22	20	13	32	120	147	111	67	38	8.5
29	17	26	23	22	---	33	114	152	106	59	38	9.3
30	17	25	23	24	---	34	109	176	102	66	34	11
31	16	---	24	27	---	38	---	211	---	71	37	---
TOTAL	756	750	707	701	430.5	592.2	1842	2641	4434	2061	1270	628.3
MEAN	24.4	25.0	22.8	22.6	15.4	19.1	61.4	85.2	148	66.5	41.0	20.9
MAX	44	30	26	29	24	39	124	211	251	112	91	39
MIN	15	16	19	20	8.8	4.8	34	41	90	33	17	8.5
AC-FT	1500	1490	1400	1390	854	1170	3650	5240	8790	4090	2520	1250

CAL YR 1982 TOTAL 9983.3 MEAN 27.4 MAX 195 MIN 1.3 AC-FT 19800  
WTR YR 1983 TOTAL 16813.0 MEAN 46.1 MAX 251 MIN 4.8 AC-FT 33350

## ARKANSAS RIVER BASIN

## 07218000 COYOTE CREEK NEAR GOLONDRINAS, NM

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

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

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

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

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

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

AVERAGE DISCHARGE.--55 years, 11.3 ft<sup>3</sup>/s, 8,190 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 275 ft<sup>3</sup>/s July 11, gage height 3.64 ft, from rating curve extended above 210 ft<sup>3</sup>/s as explained above; no other peak above base of 180 ft<sup>3</sup>/s; minimum discharge 1.04 ft<sup>3</sup>/s part or all of each day July 6-9, but may have been less during periods of ice effect.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	3.9	12	4.9	8.8	19	49	52	50	3.1	9.8	4.6
2	10	3.8	8.0	4.8	8.6	20	46	53	53	3.6	9.0	5.0
3	9.6	4.4	7.0	4.7	8.5	21	41	53	46	3.2	7.1	4.6
4	9.4	5.0	7.1	4.5	8.5	22	34	46	30	2.3	7.9	4.3
5	8.6	4.9	7.3	4.5	9.3	21	31	44	25	2.2	8.2	3.9
6	5.3	7.0	7.4	4.6	11	20	35	40	23	2.1	8.4	3.8
7	4.6	8.0	7.7	4.6	10	19	30	36	24	2.1	7.7	3.9
8	5.2	5.2	8.0	4.7	9.0	18	26	24	22	2.1	7.2	4.3
9	6.5	4.3	10	4.7	9.1	18	23	24	25	2.0	6.0	4.1
10	7.0	4.3	10	4.7	9.6	17	21	28	30	2.2	4.7	3.7
11	7.5	5.8	9.0	4.7	9.8	16	20	28	25	37	4.2	3.6
12	9.5	5.4	9.0	4.6	12	18	23	31	20	37	4.1	3.5
13	9.4	5.2	11	4.7	13	18	27	28	15	14	5.4	3.3
14	12	9.2	10	4.7	13	19	30	33	10	22	6.2	3.2
15	13	9.6	11	4.8	13	25	28	46	8.1	18	4.7	2.7
16	9.7	11	11	5.0	12	27	27	57	6.0	13	3.7	2.5
17	9.6	11	12	5.4	12	27	24	39	5.0	11	3.6	2.4
18	9.0	10	11	5.8	11	28	26	33	4.3	13	3.5	2.4
19	8.6	9.9	9.5	6.4	12	32	29	23	4.1	7.0	6.6	2.9
20	8.3	9.0	8.5	5.6	12	26	39	26	4.0	6.4	3.9	3.2
21	9.2	7.8	8.0	5.8	11	22	52	27	3.9	6.7	3.6	3.4
22	8.8	10	8.0	6.2	11	30	56	22	3.8	7.1	3.6	3.4
23	8.3	10	9.0	6.6	11	29	50	24	3.6	7.5	3.6	3.5
24	8.1	10	7.0	7.6	12	27	51	22	3.5	7.1	4.5	3.4
25	7.6	9.7	5.5	9.6	12	30	55	17	3.5	6.6	3.9	3.4
26	7.7	8.4	6.4	10	14	24	65	17	3.4	5.9	4.7	3.6
27	8.4	10	7.0	9.1	14	19	62	15	3.3	17	4.5	4.7
28	8.0	10	6.6	8.6	17	21	56	16	3.2	6.4	4.4	4.9
29	8.1	10	4.5	8.6	---	20	52	18	3.1	4.6	4.8	3.6
30	7.4	13	5.0	10	---	15	52	19	3.1	8.7	5.8	3.5
31	7.0	---	5.0	9.6	---	22	---	38	---	11	4.8	---
TOTAL	263.4	235.8	258.5	190.1	314.2	690	1160	979	463.9	291.9	170.1	109.3
MEAN	8.50	7.66	8.34	6.13	11.2	22.3	38.7	31.6	15.5	9.42	5.49	3.64
MAX	13	13	12	10	17	32	65	57	53	37	9.8	5.0
MIN	4.6	3.8	4.5	4.5	8.5	15	20	15	3.1	2.0	3.5	2.4
AC-FT	522	468	513	377	623	1370	2300	1940	920	579	337	217
CAL YR 1982	TOTAL	3497.24	MEAN	9.58	MAX	109	MIN	.87	AC-FT	6940		
WTR YR 1983	TOTAL	5126.20	MEAN	14.0	MAX	65	MIN	2.0	AC-FT	10170		

## ARKANSAS RIVER BASIN

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## 07221000 MORA RIVER NEAR SHOEMAKER, NM

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

DRAINAGE AREA.--1,104 mi<sup>2</sup>, of which 71 mi<sup>2</sup> is probably noncontributing.

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

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

GAGE.--Water-stage recorder. Altitude of gage is 6,145 ft, from topographic map. Prior to Oct. 10, 1934, at site 2,000 ft upstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 26,000 acres 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 1915-18, 1920-24, 1928-83), 55.3 ft<sup>3</sup>/s, 40,060 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge 394 ft<sup>3</sup>/s, June 1, gage height 2.78 ft, no peak above base of 800 ft<sup>3</sup>/s minimum discharge 0.74 ft<sup>3</sup>/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	33	50	30	34	36	114	161	359	84	66	35
2	61	33	49	32	32	37	136	163	366	63	57	32
3	48	38	46	36	31	39	118	147	340	61	76	27
4	42	46	44	41	31	41	117	111	298	55	77	24
5	38	46	46	42	31	42	106	87	273	41	70	22
6	31	48	46	44	30	38	111	79	302	29	49	20
7	25	50	35	45	30	35	117	77	305	26	44	18
8	23	53	25	55	30	33	114	81	276	25	60	17
9	16	52	20	51	30	30	111	73	283	20	53	16
10	22	42	25	46	30	27	99	73	272	15	38	18
11	28	45	27	46	30	27	101	77	268	14	32	21
12	32	49	30	39	30	24	94	95	265	47	29	24
13	39	53	33	39	30	23	95	107	247	92	24	20
14	53	52	35	39	32	19	103	109	216	71	25	22
15	61	53	35	36	34	11	99	126	165	86	35	12
16	61	54	35	36	37	11	92	128	144	67	31	7.9
17	55	55	39	34	41	19	92	106	125	57	23	7.6
18	53	58	45	40	42	34	81	81	112	61	22	7.3
19	54	60	47	43	37	50	86	68	111	61	20	7.0
20	54	53	45	41	35	64	94	54	90	51	21	6.6
21	55	48	45	37	34	71	112	69	65	48	23	6.6
22	44	47	45	33	32	73	124	73	55	47	20	6.3
23	41	50	46	32	31	81	130	66	56	44	17	6.3
24	39	49	46	32	31	80	130	59	55	43	16	6.3
25	36	47	39	32	31	90	132	60	79	49	21	6.3
26	34	50	35	33	31	99	162	74	102	65	25	6.1
27	37	48	30	33	31	88	193	97	97	68	27	5.9
28	39	50	27	35	33	85	185	135	86	66	30	5.6
29	38	49	22	37	---	86	174	169	85	54	34	5.3
30	34	50	19	39	---	89	157	217	89	46	35	5.2
31	33	---	24	35	---	83	---	276	---	64	36	---
TOTAL	1294	1461	1135	1193	911	1565	3579	3298	5586	1620	1136	424.3
MEAN	41.7	48.7	36.6	38.5	32.5	50.5	119	106	186	52.3	36.6	14.1
MAX	68	60	50	55	42	99	193	276	366	92	77	35
MIN	16	33	19	30	30	11	81	54	55	14	16	5.2
AC-FT	2570	2900	2250	2370	1810	3100	7100	6540	11080	3210	2250	842
CAL YR 1982	TOTAL	13370.2	MEAN	36.6	MAX	1040	MIN	3.4	AC-FT	26520		
WTR YR 1983	TOTAL	23202.3	MEAN	63.6	MAX	366	MIN	5.2	AC-FT	46020		

## ARKANSAS RIVER BASIN

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

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

DRAINAGE AREA.--6,015 mi<sup>2</sup>, of which 303 mi<sup>2</sup> is probably noncontributing.

## WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records fair. Diversions for irrigation of about 56,000 acres above station.

AVERAGE DISCHARGE.--50 years (water years 1913-14, 1936-83), 186 ft<sup>3</sup>/s, 134,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft<sup>3</sup>/s June 18, 1965, gage height, about 36.6 ft, from floodmarks, present site and datum, from rating curve extended above 91,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Sept. 29, or 30, 1904, probably exceeded 100,000 ft<sup>3</sup>/s, but is believed to have been less than the peak of June 18, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 2,590 ft<sup>3</sup>/s at 2115 hrs Sept. 2, gage height 7.06 ft; minimum discharge 3.6 ft<sup>3</sup>/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	45	68	52	78	67	157	758	383	132	166	28
2	80	42	68	46	84	71	161	712	626	147	105	178
3	80	42	69	56	86	77	200	712	665	160	91	98
4	74	42	66	54	84	74	214	610	718	138	106	35
5	62	44	65	54	68	75	228	495	762	124	93	29
6	55	52	65	60	69	76	222	412	781	108	80	22
7	56	57	64	59	58	75	205	355	854	85	72	21
8	50	59	61	61	66	76	214	357	1050	70	66	23
9	40	63	63	63	74	76	230	368	1200	56	56	19
10	34	69	69	69	72	75	245	361	1030	46	62	16
11	29	71	57	70	75	69	234	364	787	40	57	13
12	27	62	55	71	72	62	221	384	639	41	41	13
13	25	62	63	63	69	59	222	353	575	312	32	11
14	40	69	70	61	64	59	259	296	551	187	27	14
15	48	70	66	65	60	56	295	283	558	171	22	21
16	62	76	57	63	68	61	297	263	456	138	18	20
17	76	80	59	60	128	65	279	283	405	132	16	17
18	80	81	62	60	135	77	270	301	378	153	23	18
19	71	81	56	63	120	98	266	279	338	93	22	15
20	65	80	65	66	110	125	304	248	287	106	30	11
21	64	80	68	75	94	133	378	216	233	108	16	8.2
22	63	71	67	68	87	150	429	180	185	82	13	7.1
23	66	67	67	59	81	143	558	201	155	68	12	5.9
24	55	65	66	62	78	141	598	204	135	61	13	5.9
25	48	67	66	60	73	143	647	194	128	54	15	5.9
26	49	65	67	61	70	143	656	181	115	52	11	18
27	52	69	56	63	69	158	834	176	157	50	8.8	7.8
28	49	75	65	68	68	155	979	179	179	92	7.5	4.9
29	46	70	46	67	---	152	1020	199	150	84	15	4.3
30	47	70	55	66	---	155	910	221	133	79	18	4.1
31	48	---	53	71	---	153	---	268	---	146	22	---
TOTAL	1728	1946	1944	1936	2260	3099	11732	10413	14613	3315	1336.3	694.1
MEAN	55.7	64.9	62.7	62.5	80.7	100	391	336	487	107	43.1	23.1
MAX	87	81	70	75	135	158	1020	758	1200	312	166	178
MIN	25	42	46	46	58	56	157	176	115	40	7.5	4.1
AC-FT	3430	3860	3860	3840	4480	6150	23270	20650	28980	6580	2650	1380
CAL YR 1982	TOTAL	57459.2	MEAN 157	MAX 7900	MIN 3.8	AC-FT 114000						
WTR YR 1983	TOTAL	55016.4	MEAN 151	MAX 1200	MIN 4.1	AC-FT 109100						

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 1982 TO SEPTEMBER 1983

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 CAC03) (00900)
OCT 04...	1415	74	570	571	8.7	8.3	25.0	18.0	8.1	22	230
DEC 07...	1400	65	1000	988	8.1	8.3	6.0	5.0	6.1	14	390
FEB 07...	1330	36	1130	--	8.3	--	8.5	2.0	11.7	12	--
APR 11...	1400	239	800	--	8.4	8.3	19.5	11.5	--	24	310
JUN 13...	1500	601	570	603	8.3	8.2	24.5	21.0	7.7	57	250
AUG 08...	1400	60	483	503	8.2	8.1	28.0	27.0	7.1	43	190

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 04...	69	58	20	33	1.0	2.2	--	--	--	130	8.1
DEC 07...	208	87	42	75	1.7	2.6	--	--	--	350	18
FEB 07...	--	--	--	--	--	--	--	--	--	--	--
APR 11...	--	70	32	57	1.5	2.2	--	--	--	240	13
JUN 13...	96	59	24	35	1.0	2.4	--	--	150	180	6.8
AUG 08...	63	48	18	29	.9	2.9	160	.0	--	110	7.2

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	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 04...	.40	11	358	<.10	<.10	.170	1.0	--	.060	.020	3.4
DEC 07...	.40	9.5	694	<.10	<.10	<.060	--	--	.020	<.010	2.3
FEB 07...	--	--	--	<.10	<.10	<.060	--	--	.020	.010	1.8
APR 11...	.40	8.9	--	.10	<.10	.070	.93	1.1	.050	<.010	--
JUN 13...	.30	11	409	.20	.20	.140	.66	1.0	.390	.020	13
AUG 08...	.40	10	304	<.10	<.10	.120	1.2	--	.050	.020	3.9

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

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 04...	1415	--	--	50	--	--	--	--	--	--
DEC 07...	1400	<1	<1	70	1	<1	<10	<10	3	6
APR 11...	1400	--	--	40	--	--	--	--	--	--
JUN 13...	1500	--	--	40	--	--	--	--	--	--
AUG 08...	1400	2	1	60	1	<1	10	<10	9	3

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)
OCT 04...	<3	--	--	--	--	--	--	--	--
DEC 07...	<3	4	1	.1	<.1	1	1	10	150
APR 11...	9	--	--	--	--	--	--	--	--
JUN 13...	6	--	--	--	--	--	--	--	--
AUG 08...	<3	3	1	.1	<.1	1	1	50	4

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS U) (01029)
DEC 07...	1400	<2.0	7.2	140	2	<1	<1

DATE	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS Hg) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
DEC 07...	<10	2	1300	<10	180	.01	5

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
DEC 07...	1400	<17	<.4	<9.0	.9	<8.6	.9	.09	3.7



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

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PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 04...	1415	.10	<.01	<.10	<.01	<.01	<.01	<.01	<.01	<.01
JUN 13...	1500	--	--	--	--	--	--	--	--	--

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)
OCT 04...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
JUN 13...	--	--	--	--	--	--	--	--	--

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)
OCT 04...	<.01	<.1	<.01	--	--	--	<.10	<.10	<.01
JUN 13...	--	--	--	<.01	<.01	<.01	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 04...	70	K110
DEC 07...	K0	K0
APR 11...	K0	--
JUN 13...	460	700
AUG 08...	110	220

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 04...	1415	74	18.0	20	4.0	91
DEC 07...	1400	65	5.0	184	32	82
FEB 07...	1330	36	2.0	22	2.1	97
APR 11...	1400	239	11.5	135	87	96
JUN 13...	1500	601	21.0	515	836	99
JUN 13...	1505	601	21.0	505	819	99
AUG 08...	1400	60	27.0	71	12	98

## ARKANSAS RIVER BASIN

## 07222500 CONCHAS RIVER AT VARIADERO, NM

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

DRAINAGE AREA.--523 mi<sup>2</sup> of which 130 mi<sup>2</sup> is probably noncontributing.

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

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

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

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

AVERAGE DISCHARGE.--47 years, 14.5 ft<sup>3</sup>/s, 10,500 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft<sup>3</sup>/s at 0300 hours July 11, gage height, 3.85 ft, no peak above base of 1,500 ft<sup>3</sup>/s; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	.02	.23	.72	1.2	.35	.39	.04	.48	.17	4.8	.97
2	6.6	.02	.20	.74	1.2	.31	.39	.03	.39	.04	4.8	.73
3	3.0	.03	.20	.76	1.2	.27	.39	.03	.27	.01	4.2	.63
4	1.9	.03	.14	.79	1.3	.27	.48	.03	.20	.00	3.1	.39
5	1.8	.03	.14	.79	1.3	.27	.53	.01	.17	.00	2.5	.20
6	1.4	.03	.14	.79	1.4	.27	.48	.00	.43	.00	2.1	.10
7	1.2	.04	.11	.73	1.4	.20	.43	.00	.48	.00	2.0	.05
8	1.0	.04	.11	.73	1.4	.17	.48	.00	.90	.00	14	.00
9	.85	.06	.20	.73	1.3	.17	.48	.00	151	.00	15	.00
10	.73	.06	.35	.68	1.2	.14	.48	.00	17	.00	4.6	.00
11	.53	.11	.43	.68	1.1	.14	.48	.00	3.1	.00	3.3	.00
12	.58	.09	.39	.63	1.1	.14	.43	.00	1.7	196	2.8	.00
13	.58	.06	.53	.63	.97	.11	.43	.00	1.0	15	2.3	.00
14	.53	.06	.48	.63	.91	.11	.43	.00	.68	23	2.0	.00
15	.53	.03	.48	.58	.79	.14	.43	.00	.53	5.8	1.8	.00
16	.48	.02	.48	.58	.79	.35	.39	.00	.39	3.9	1.5	.00
17	.48	.03	.53	.63	.73	.31	.35	.00	.31	3.1	1.2	.00
18	.48	.09	.48	.68	.68	.31	.35	.00	.27	3.8	.97	.00
19	.35	.09	.48	.68	.63	.39	.31	.00	.17	8.4	.73	.00
20	.31	.03	.43	.85	.63	.43	.27	.11	.09	4.6	31	.00
21	.27	.04	.53	.90	.48	.53	.23	.20	.03	3.3	9.6	.00
22	.27	.04	.53	.90	.53	.58	.20	.09	.01	2.8	4.8	.00
23	.27	.03	.58	.90	.53	.58	.20	.23	.20	2.3	3.5	.00
24	.20	.02	.53	.90	.48	.58	.20	.23	.04	2.0	2.9	.00
25	.17	.04	.53	1.0	.43	.53	.17	.17	.02	2.0	2.4	.00
26	.11	.04	.53	1.0	.43	.53	.14	30	.00	1.8	2.1	.00
27	.11	.17	.63	1.0	.39	.48	.14	2.5	.00	1.6	1.9	.00
28	.06	.20	.63	1.0	.43	.43	.11	1.0	.02	1.4	1.8	.00
29	.06	.20	.68	1.1	---	.43	.09	.68	.14	1.2	1.6	.00
30	.03	.17	.68	1.1	---	.43	.06	.68	.31	1.0	1.4	.00
31	.02	---	.70	1.1	---	.39	---	.63	---	.91	1.1	---
TOTAL	28.10	1.92	13.08	24.93	24.93	10.34	9.94	36.66	180.33	284.13	137.80	3.07
MEAN	.91	.064	.42	.80	.89	.33	.33	1.18	6.01	9.17	4.45	.10
MAX	6.6	.20	.70	1.1	1.4	.58	.53	30	151	196	31	.97
MIN	.02	.02	.11	.58	.39	.11	.06	.00	.00	.00	.73	.00
AC-FT	56	3.8	26	49	49	21	20	73	358	564	273	6.1
CAL YR 1982	TOTAL	4421.98	MEAN	12.1	MAX	1010	MIN	.00	AC-FT	8770		
WTR YR 1983	TOTAL	755.23	MEAN	2.07	MAX	196	MIN	.00	AC-FT	1500		

## 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 downstream from Conchas Dam, and 23.5 mi 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, from headgate elevations.

REMARKS.--Records good except those below 1.0 ft<sup>3</sup>/s, which are poor. Canal diverts from Conchas Lake (station 07223500) for irrigation of about 700 acres 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, 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 1982 TO SEPTEMBER 1983

Month	Maximum	Minimum	Mean	Diversion in acre-feet
October.....	4.4	3.6	4.01	247
November.....	4.8	3.6	4.28	254
December.....	4.8	0	0.83	51
CAL YR 1982.....	10	0	3.50	2,530
January.....	0	0	0	0
February.....	0	0	0	0
March.....	0	0	0	0
April.....	1.2	0	.073	4.4
May.....	0	0	0	0
June.....	0	0	0	0
July.....	8.5	0	7.72	475
August.....	9.8	8.5	9.30	572
September.....	8.7	4.8	7.83	466
WTR YR 1983.....	9.8	0	2.86	2,070

## ARKANSAS RIVER BASIN

## 07223500 CONCHAS LAKE AT CONCHAS DAM, NM

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

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

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

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

REMARKS.--Lake is formed by dam consisting of concrete main section and earthfill wings, completed Sept. 15, 1939; storage began Dec. 29, 1938. Capacity, 330,100 acre-ft between elevations 4,060.0 ft and 4,201.0 ft, crest of 300 ft ungated service spillway. Inactive storage, 70,490 acre-ft, at elevation 4,155.0 ft. Lake usually not drawn below elevation, 4,157.35 ft, sill of irrigation outlet, capacity, 77,790 acre-ft, except for minor sluicing; at times irrigation water is pumped into Conchas Canal. Capacity of 198,800 acre-ft between elevations 4,201.0 ft, crest of 300 ft ungated service spillway, and 4,218.0 ft, crest of 3,000 ft ungated emergency spillway, acts as detention storage in the control of floods. Figures given herein represent total contents. Lake is used for irrigation, flood control, and recreation. Diversions above station for irrigation of about 57,000 acres. Direct diversions through Conchas Dam to Bell Ranch Canal and Conchas Canal (stations 07223000, 07223300) irrigate about 36,000 acres near Tucumcari, and on Bell Ranch.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 479,600 acre-ft Apr. 24, 1942, elevation, 4,208.41 ft; minimum after initial filling, 78,080 acre-ft Sept. 18, 1976, elevation, 4,157.44 ft; minimum elevation, 4,155.80 ft Sept. 24, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 291,500 acre-ft June 20, elevation, 4,196.81 ft; minimum, 236,300 acre-ft Nov. 1, 6-8, elevation, 4,189.89 ft.

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

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

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242600	236300	237400	239900	243400	247000	251200	267900	271200	289300	276500	260900
2	242600	236400	237500	239900	243600	247000	251300	268700	271900	288800	276400	260400
3	242600	236400	237500	240000	243900	247100	251600	269500	273000	288400	276300	260100
4	242500	236400	237600	240100	244200	247100	252000	270400	273900	288100	275700	259500
5	242300	236400	237600	240100	244300	247200	252300	270800	275500	287800	275500	258700
6	242200	236300	237700	240200	244400	247300	252500	270900	276700	287300	275100	257900
7	242000	236300	237700	240300	244500	247400	252900	270900	278000	286800	275000	256900
8	241600	236300	237800	240300	244600	247400	253300	271000	280300	286300	275000	256000
9	241300	236400	238100	240400	244700	247600	253600	271200	282500	285800	274600	255000
10	241000	236400	238400	240500	244900	247700	254000	271300	284400	285300	274100	254300
11	240800	236400	238400	240600	245000	247700	254200	271300	285900	284900	273600	253500
12	240500	236400	238400	240700	245000	247700	254400	271300	286800	284900	273100	252700
13	240200	236400	238500	240800	245100	247800	254700	271300	287500	285000	272600	252000
14	240000	236400	238600	240900	245300	247800	255100	271300	288300	285000	272100	251000
15	239800	236400	238700	240900	245300	248200	255500	271200	289200	285000	271600	250400
16	239500	236400	238700	241000	245300	248300	256000	271200	290000	284500	270800	249700
17	239200	236500	238800	241100	245500	248300	256600	271100	290600	284300	270000	249000
18	238700	236500	238800	241200	245600	248400	257000	271000	291100	283900	269100	248400
19	238200	236500	238900	241200	245900	248600	257300	271000	291400	283500	268600	247500
20	237800	236500	238900	241700	246000	248700	257800	271200	291500	283000	268200	246600
21	237600	236600	239000	241900	246200	248900	258400	271200	291400	282400	267500	245800
22	237400	236700	239200	242000	246300	249000	259100	271100	291300	281900	266900	245000
23	237200	236800	239200	242100	246500	249300	260100	271100	291100	281300	266900	244300
24	237000	236800	239200	242200	246500	249500	261000	271000	290900	280900	266200	243500
25	236900	236800	239200	242300	246700	249600	261700	271000	290700	280300	265500	242900
26	236800	236900	239300	242300	246800	249800	262400	270900	290200	279600	264800	242200
27	236700	237200	239500	242400	246900	250000	263300	270800	290100	279000	264300	241500
28	236600	237300	239600	242600	246900	250200	264700	270800	290100	278300	263700	240600
29	236500	237300	239700	242600	---	250400	265500	270800	290100	277700	263000	239800
30	236500	237300	239800	242700	---	250600	267300	270800	289500	277200	262300	239200
31	236400	---	239800	243300	---	250900	---	270900	---	276800	261600	---
MAX	242600	237300	239800	243300	246900	250900	267300	271300	291500	289300	276500	260900
MIN	236400	236300	237400	239900	243400	247000	251200	267900	271200	276800	261600	239200
(↑)	4189.90	4190.03	4190.37	4190.84	4191.32	4191.84	4193.93	4194.37	4196.58	4195.08	4193.21	4190.29
(↑↑)	-5400	+900	+2500	+3500	+3600	+4000	+16400	+3600	+18600	-12700	-15200	-22400
CAL YR 1982	MAX	245100	MIN	125900	(↑↑)	+89500						
WTR YR 1983	MAX	291500	MIN	236300	(↑↑)	-2600						

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

ARKANSAS RIVER BASIN

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07226500 UTE CREEK NEAR LOGAN, NM

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

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

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

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

GAGE.--Water-stage recorder. Altitude of gage is 3,815 ft, 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.--41 years, 24.1 ft<sup>3</sup>/s, 17,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft<sup>3</sup>/s May 28, 1946, July 12, 1951, gage height, 8.4 ft, site and datum then in use, from rating curve extended above 7,700 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 5.2 ft and 7.2 ft; maximum gage height, 9.94 ft Aug. 11, 1981; no flow most of time.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,640 ft<sup>3</sup>/s Oct. 1, gage height, 3.45 ft, no peak above base of 3,700 ft<sup>3</sup>/s; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	587	.00	.78	.00	1.5	4.5	3.3	.00	37	.00	.60	.00
2	154	.00	.16	.00	1.5	4.5	3.9	.00	10	.00	.00	.00
3	56	.00	.00	.00	1.0	4.5	2.0	.00	2.8	.00	.00	.00
4	26	.00	.00	.00	1.0	4.5	1.3	.00	.78	.00	.00	.00
5	13	.00	.00	.00	1.0	4.5	2.4	.00	.10	.00	.00	.00
6	5.9	.00	.00	.20	1.5	5.0	2.0	.00	.10	.00	.00	.00
7	2.4	.00	.00	.50	1.0	5.0	5.2	.00	.05	.00	.00	.00
8	.40	.00	.01	1.0	1.5	5.0	8.5	.00	.78	.00	.00	.00
9	.00	.00	.03	2.0	2.0	5.2	6.7	.00	37	.00	.00	.00
10	.00	.00	.41	1.8	3.0	4.5	4.5	.00	81	.00	.00	.00
11	.00	.00	1.6	1.7	3.0	2.4	2.0	.00	70	.00	.00	.00
12	.00	.00	5.9	1.7	3.0	2.4	.27	.00	13	.00	.00	.00
13	.00	.00	4.5	1.6	3.0	1.6	.17	.00	1.0	.00	.00	.00
14	.00	.00	3.3	1.0	3.0	.57	.09	.00	.00	.00	.00	.00
15	.00	.00	1.6	1.0	3.0	.05	.00	.00	25	.00	.00	.00
16	.00	.00	1.6	.78	3.5	.05	.00	.00	38	.00	.00	.00
17	.00	.00	1.0	.41	3.5	.17	.00	.00	12	.00	.00	.00
18	.00	.00	1.2	1.3	3.5	2.4	.00	.00	.65	.00	.00	.00
19	.00	.00	.76	1.3	3.5	9.4	.00	.00	.00	.00	.00	.00
20	.00	.00	1.1	5.2	3.5	20	.00	2.2	.00	.00	.00	.00
21	.00	.00	.41	3.0	4.0	23	.00	.69	.00	.00	.00	.00
22	.00	.00	.18	1.0	4.0	20	.00	.00	.00	.00	.00	.00
23	.00	.00	.17	.50	4.0	15	.00	.00	.00	.00	.00	.00
24	.00	.00	.21	1.0	4.0	13	.00	.00	.00	.00	.00	.00
25	.00	.00	.01	2.0	4.0	12	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	2.0	4.0	9.4	.00	.00	.00	.00	.00	.00
27	.00	.00	.01	2.0	4.0	5.2	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	2.0	4.0	3.9	.00	.00	.00	.00	.00	.00
29	.00	.01	.00	2.0	---	2.4	.00	.00	.00	.00	.00	.00
30	.00	1.0	.00	2.0	---	1.6	.00	39	.00	.00	.00	.00
31	.00	---	.00	2.0	---	.78	---	60	---	.00	.84	---
TOTAL	844.70	1.01	24.94	40.99	79.5	192.52	42.33	101.89	329.26	.00	.84	.00
MEAN	27.2	.034	.80	1.32	2.84	6.21	1.41	3.29	11.0	.000	.027	.000
MAX	587	1.0	5.9	5.2	4.0	23	8.5	60	81	.00	.84	.00
MIN	.00	.00	.00	.00	1.0	.05	.00	.00	.00	.00	.00	.00
AC-FT	1680	2.0	49	81	158	382	84	202	653	.00	1.7	.00
CAL YR 1982	TOTAL	13370.41	MEAN	36.6	MAX	3920	MIN	.00	AC-FT	26520		
WTR YR 1983	TOTAL	1657.98	MEAN	4.54	MAX	587	MIN	.00	AC-FT	3290		

## 07226800 UTE RESERVOIR NEAR LOGAN, NM

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

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

## WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Reservoir is formed by earthfill dam 121 ft high above streambed, 2,050 ft long; an earth-dike section on north (left) bank of Canadian River is 2,860 ft long and has a maximum height of 27 ft; a concrete spillway section 840 ft long is constructed between main embankment and the dike. Construction completed in May 1963; storage began Dec. 13, 1962. Capacity, 90,470 acre-ft at elevation 3,760.0 ft, crest of 840 ft ungated service spillway. Top of dam is at elevation 3,801.0 ft. Maximum design capacity of 285,700 acre-ft at elevation 3,791.0 ft, 31.0 ft above crest of spillway, allows 195,200 acre-ft of capacity for protection of the structure. Dead storage, 12,620 acre-ft at elevation 3,725.0 ft, sill of outlet gate; inactive pool of 37,530 acre-ft below elevation 3,741.6 ft 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 119,900 acre-ft June 17, 1969, elevation, 3,762.4 ft; minimum since reservoir first filled in September 1965, 68,680 acre-ft Apr. 12, 1977, elevation, 3,753.59 ft; minimum elevation observed, 3,752.8 ft May 29, 1966, contents, 82,360 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 79,310 acre-ft Oct. 3, elevation, 3,756.88 ft; minimum, 34,530 acre-ft Sept. 13-16, 19, elevation, 3,740.09 ft.

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

3,740	34,350	3,750	58,040
3,742	38,360	3,752	63,840
3,744	42,720	3,754	69,960
3,746	47,460	3,756	76,380
3,748	52,580	3,758	83,150

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75590	62100	45240	41860	39860	38880	39410	36880	37140	37860	36420	35150
2	79070	61430	44810	41860	39970	38930	39350	36860	37410	37780	36440	35130
3	79170	60850	44170	41930	40100	38930	39310	36840	37470	37700	36400	35070
4	78840	60330	43660	41930	40250	38950	39310	36800	37510	37620	36380	35030
5	78300	59720	43180	41980	40300	39010	39220	36780	37570	37550	36310	34970
6	77800	59180	42720	42000	40450	39010	39220	36760	37620	37470	36310	34880
7	77300	58560	42200	42040	40530	39010	39180	36720	37780	37390	36270	34880
8	76570	58040	41700	42130	40560	39050	39180	36680	38110	37350	36220	34860
9	75950	57510	41260	42180	40730	39100	39140	36660	39930	37290	36220	34800
10	75330	57010	41150	42240	40910	39100	39140	36620	40190	37240	36160	34760
11	74710	56540	41170	42290	41040	39120	39080	36580	39740	37160	36100	34720
12	74130	55960	41260	42310	41170	39140	38840	36560	39290	37120	36080	34680
13	73580	55380	41330	42360	41300	39140	38590	36540	38860	37120	36040	34530
14	73000	54800	41350	42380	41420	39140	38360	36500	38510	37120	36000	34530
15	72436	54180	41390	42400	41500	39180	38090	36460	38280	37020	35960	34530
16	71850	53600	41460	42420	41620	39180	37860	36420	38320	36980	35860	34530
17	71280	53030	41480	42420	41660	39180	37660	36380	38340	36960	35820	34540
18	70720	52450	41530	42180	41750	39220	37430	36350	38380	36900	35760	34540
19	69990	51900	41550	41640	41820	39370	37200	36290	38380	36860	35700	34530
20	69340	51330	41570	41260	41820	39370	37000	36290	38380	36800	35640	34540
21	68840	50760	41620	40800	41820	39440	37000	36560	38300	36740	35600	34560
22	68190	50200	41660	40340	41860	39500	37000	36600	38260	36720	35540	34560
23	67630	49650	41700	39840	41590	39500	36980	36620	38210	36660	35520	34580
24	67050	49100	41640	39370	41110	39580	36980	36640	38190	36680	35460	34560
25	66440	48550	41620	39200	40600	39580	36980	36680	38150	36700	35440	34540
26	65830	48000	41730	39260	40080	39580	36960	36820	38090	36660	35380	34540
27	65160	47450	41770	39330	39560	39580	36960	36980	38050	36600	35320	34540
28	64560	46900	41800	39410	39100	39560	36940	37020	38030	36560	35280	34560
29	63930	46350	41820	39440	---	39520	36920	37040	37990	36520	35240	34560
30	63310	45800	41840	39480	---	39480	36900	37060	37920	36460	35210	34560
31	62720	---	41860	39720	---	39480	---	37080	---	36420	35170	---
MAX	79170	62100	45240	42420	41860	39580	39410	37080	40190	37860	36440	35150
MIN	62720	45800	41150	39200	39100	38880	36900	36290	37140	36420	35170	34530
(†)	3751.62	---	3743.62	3742.64	3742.35	3742.53	---	---	3741.79	3741.05	3740.42	3740.11
(††)	-8310	-16920	-3940	-2140	-620	+380	-2580	+180	+840	-1500	-1250	-610

CAL YR 1982 MAX 94880 MIN 41150 (††) -39450  
WTR YR 1983 MAX 79170 MIN 34530 (††) -36470

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

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

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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.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	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, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
AUG											
17...	0900	30.0	35	920	871	7.9	7.8	29.5	23.5	.0	160
17...	0901	25.0	35	--	--	--	--	--	24.0	.0	--
17...	0902	20.0	35	--	--	--	--	--	26.0	5.0	--
17...	0903	15.0	35	--	--	--	--	--	26.0	6.2	--
17...	0904	10.0	35	--	--	--	--	--	26.0	6.5	--
17...	0905	5.00	35	--	--	--	--	--	26.0	6.5	--
17...	0906	.00	35	--	--	--	--	--	26.0	6.6	--

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L HCO3) (99440)	CAR- BONATE IT-FLD (MG/L CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
AUG											
17...	190	0	43	19	120	3.9	4.6	250	.0	180	53
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--

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) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHORUS, ORTHOPHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CARBON, TOTAL (MG/L AS C) (00680)
AUG										
17...	.60	7.5	551	<.10	<.10	.250	.45	.040	.020	4.4
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, TOTAL RECOV- ERABLE (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
AUG										
17...	0900	4	3	160	<1	<1	<10	<10	2	<1

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

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

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	IRON,	LEAD,		MERCURY		SELE-	SELE-	ZINC,	
	DIS- SOLVED (UG/L AS FE) (01046)	TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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)	NIUM, DIS- SOLVED (UG/L AS SE) (01145)	TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
AUG 17...	5	3	1	< .1	.1	1	1	10	5

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)		
		AUG							
		17...	0900	<2.0	43	560	11	<1	3

DATE	COBALT, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TIERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS ZN) (01093)
AUG 17...	10	10	2200	20	350	.05	13

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS	GROSS	GROSS	GROSS	GROSS	GROSS	RADIUM	URANIUM
		ALPHA,	ALPHA,	BETA,	BETA,	BETA,	BETA,	226,	
		DIS-	DIS-	DIS-	DIS-	DIS-	SUSP.	DIS-	NATURAL
		SOLVED	TOTAL	SOLVED	TOTAL	SOLVED	TOTAL	SOLVED,	DIS-
	(UG/L	(UG/L	(PCI/L	(PCI/L	(PCI/L	(PCI/L	RADON	SOLVED	
	AS	AS	AS	AS	AS SR/	AS SR/	METHOD	(UG/L	
	U-NAT)	U-NAT)	CS-137)	CS-137)	YT-90)	YT-90)	(PCI/L)	AS U)	
	(80030)	(80040)	(03515)	(03516)	(80050)	(80060)	(09511)	(22703)	
AUG									
17...	0900	< 18	.5	< 8.4	1.8	< 8.0	1.8	.13	6.9

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]



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

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	PER- THANE TOTAL (UG/L) (39034)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	MIREX, TOTAL (UG/L) (39755)
AUG 17...	<.01	<.01	<.01	<1	<.01	<.10	<.10	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
AUG 17...	<1	8

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
AUG 17...	0900	23.5	26

07226800 UTE RESERVOIR NEAR LOGAN, NM

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L) AS (00900)	HARD- NESS, NONCAR- BONATE (MG/L) CACO3 (00902)	CALCIUM SOLVED (MG/L) AS CA (00915)
AUG 17...	1145	E2.0	1900	1870	7.6	7.9	16.0	1.6	190	0	39

DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)	BICAR- BONATE IT-FLD (MG/L) AS HCO3 (99440)	CAR- BONATE IT-FLD (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)
AUG 17...	22	360	12	3.9	360	.0	190	310	1.1	12	1120	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L) AS B (01020)	IRON, DIS- SOLVED (UG/L) AS FE (01046)
AUG 17...	1145	240	6

## ARKANSAS RIVER BASIN

07227000 CANADIAN RIVER AT LOGAN, NM

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

DRAINAGE AREA.--11,141 mi<sup>2</sup>, of which 1,100 mi<sup>2</sup> is probably noncontributing.

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

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

GAGE.--Water-stage recorder. Datum of gage is 3,668.1 ft 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 upstream (station 07223500) and Ute Reservoir, 2 mi upstream (station 07226800). Diversions for irrigation of about 90,000 acres 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 284,000 acre-ft/yr, prior to completion of Conchas dam.

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

21 years (water years 1963-83), 39.7 ft<sup>3</sup>/s 28,760 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 341 ft<sup>3</sup>/s Oct. 1, gage height 2.70 ft; minimum, 0.91 ft<sup>3</sup>/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284	299	267	6.5	7.7	117	22	2.7	2.4	5.5	1.8	1.5
2	281	300	267	6.5	7.2	10	23	2.8	2.4	5.3	2.3	1.6
3	281	297	267	6.5	7.1	8.1	22	2.7	2.4	5.3	1.9	1.7
4	281	298	265	6.5	7.5	7.3	23	2.7	2.4	5.7	1.9	1.6
5	280	298	262	6.5	6.8	7.0	23	2.7	2.4	5.6	1.8	1.4
6	282	297	261	6.4	6.7	6.9	23	2.7	2.4	5.4	1.8	1.4
7	281	296	232	6.1	6.5	6.3	23	2.7	2.3	5.4	1.7	1.6
8	281	294	259	6.1	6.2	6.2	23	2.7	2.7	5.5	1.7	1.7
9	283	296	258	5.9	5.9	5.9	23	4.0	5.5	5.4	1.6	1.4
10	285	293	130	5.9	5.8	5.7	22	2.4	270	5.5	1.6	1.3
11	283	290	8.0	5.9	5.7	5.6	22	2.1	267	5.5	1.7	1.5
12	286	290	7.0	5.9	5.6	5.5	75	2.1	264	5.6	1.9	1.3
13	286	289	6.5	5.9	5.6	5.5	124	2.1	262	5.5	2.0	1.3
14	286	289	6.5	5.8	5.6	5.2	126	2.2	259	5.1	1.9	1.4
15	288	287	6.5	5.8	5.5	5.5	127	2.1	115	5.1	1.9	1.2
16	287	286	6.5	5.8	5.6	5.5	127	2.1	11	5.1	1.8	1.3
17	290	286	6.5	5.8	5.4	5.6	127	1.8	8.3	4.9	1.7	1.2
18	289	285	6.5	143	5.3	5.3	126	1.9	7.0	4.6	1.7	1.2
19	290	283	6.5	254	5.1	5.7	126	1.9	6.4	4.0	1.7	1.2
20	291	282	6.5	255	5.2	5.3	59	2.9	6.2	3.5	1.7	1.1
21	290	284	6.5	253	5.2	5.2	4.7	2.6	5.8	3.2	1.6	1.3
22	291	283	6.5	252	5.1	5.1	3.8	2.3	5.7	3.0	1.5	1.2
23	294	278	6.5	252	134	5.1	3.3	2.2	5.8	2.8	1.5	1.4
24	294	275	6.5	250	253	5.2	3.0	2.2	5.6	2.6	1.6	1.4
25	293	277	6.5	116	252	5.2	2.9	2.2	5.4	2.4	1.5	1.3
26	296	275	6.5	12	252	5.2	2.8	2.8	5.6	2.2	1.4	1.4
27	297	275	6.5	9.4	252	5.2	2.8	3.0	5.7	2.0	1.4	1.3
28	295	271	6.5	8.3	250	14	2.8	2.7	5.6	1.9	1.4	1.2
29	296	274	6.5	7.8	---	23	2.8	2.5	5.6	1.8	1.4	1.2
30	299	271	6.5	7.5	---	22	2.8	2.4	5.7	1.8	1.4	1.3
31	301	---	6.5	8.1	---	22	---	2.4	---	1.8	1.4	---
TOTAL	8941	8598	2606.5	1931.9	1525.3	352.3	1297.7	76.6	1606.8	129.0	52.2	40.9
MEAN	288	287	84.1	62.3	54.5	11.4	43.3	2.47	53.6	4.16	1.68	1.36
MAX	301	300	267	255	253	117	127	4.0	270	5.7	2.3	1.7
MIN	280	271	6.5	5.8	5.1	5.1	2.8	1.8	2.3	1.8	1.4	1.1
AC-FT	17730	17050	5170	3830	3030	699	2570	152	3190	256	104	81
CAL YR 1982	TOTAL	72476.2	MEAN	199	MAX	3100	MIN	1.5	AC-FT	143800		
WTR YR 1983	TOTAL	27158.2	MEAN	74.4	MAX	301	MIN	1.1	AC-FT	53870		

## ARKANSAS RIVER BASIN

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07227100 REVUELTO CREEK NEAR LOGAN, NM

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

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

## WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--24 years, 44.6 ft<sup>3</sup>/s, 32,310 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft<sup>3</sup>/s July 9, 1960, gage height, 14.3 ft, site and datum then in use; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD (1941-47).--Maximum discharge determined, about 13,400 ft<sup>3</sup>/s Sept. 18, 1946, gage height, 9.04 ft, at site 180 ft downstream at different datum, from unpublished records collected by Bureau of Reclamation.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 1	0330	4490	6.66	June 8	2145	*4900	6.94
No flow at times.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1440	3.4	11	.80	35	3.0	2.7	.83	20	.25	58	4.6
2	310	4.8	5.7	1.3	65	3.3	5.7	6.5	13	.10	94	4.6
3	190	5.1	4.1	2.2	71	3.0	2.4	12	9.3	.05	46	5.8
4	80	4.9	3.2	3.1	44	3.2	3.0	8.8	9.4	.08	29	7.4
5	40	5.7	3.3	5.8	33	4.0	59	9.3	7.6	.07	23	6.8
6	17	6.3	3.2	4.2	45	4.4	87	7.4	12	.05	21	6.3
7	10	3.1	2.8	10	50	3.3	19	11	13	.02	19	5.4
8	8.0	2.5	1.7	8.4	70	3.6	13	11	688	.00	95	17
9	5.1	2.6	2.4	1.6	128	3.4	8.4	12	880	.00	23	16
10	5.2	2.3	6.5	.32	100	3.3	5.1	16	74	.00	6.8	10
11	6.1	1.6	18	.20	99	2.8	2.6	10	287	.00	2.4	8.6
12	6.1	1.1	27	.13	107	2.5	1.4	5.7	87	.04	5.7	8.6
13	6.3	.99	18	.06	102	2.5	2.4	7.0	30	.17	3.9	8.6
14	5.6	.91	9.6	.03	99	2.2	2.7	8.2	14	.06	2.1	7.2
15	6.9	.84	3.6	.00	53	1.7	3.0	9.6	8.6	.81	2.1	5.6
16	7.5	.84	2.3	.01	25	28	2.6	9.1	9.5	2.4	2.1	4.5
17	10	1.0	2.1	.00	13	33	1.1	9.2	4.6	3.3	1.4	4.9
18	10	1.1	1.2	.03	8.7	15	1.3	9.1	2.6	1.3	.90	4.2
19	7.6	.83	.51	.02	6.7	87	.78	9.2	1.8	.61	.55	4.0
20	7.3	.60	.46	.02	4.8	93	.56	21	1.1	.70	.37	3.2
21	17	.63	.53	.20	4.6	21	.89	39	.62	1.0	14	3.6
22	16	.63	.35	.41	4.6	14	.87	34	.33	1.0	9.8	7.7
23	14	.78	.23	2.5	4.7	9.1	.91	35	.23	.43	4.6	7.2
24	14	.80	.15	8.7	4.2	4.9	.79	23	.20	.25	3.6	7.9
25	13	.88	.04	22	3.9	3.4	.25	49	.14	.26	2.8	42
26	11	1.0	.03	35	3.5	2.9	.22	23	.10	.09	2.1	20
27	8.1	2.4	.07	3.8	3.3	2.3	.25	18	.32	.07	1.9	13
28	5.9	7.5	.30	1.7	3.2	1.9	.23	9.3	.51	.04	32	9.1
29	4.0	55	.46	.89	---	1.5	.89	5.8	1.2	.01	32	8.6
30	3.6	23	.55	.53	---	1.5	.22	12	.79	.01	11	9.4
31	3.7	---	.65	20	---	1.3	---	21	---	.00	6.3	---
TOTAL	2289.0	143.13	130.03	133.95	1191.2	366.0	229.26	462.03	2176.94	13.17	556.42	271.8
MEAN	73.8	4.77	4.19	4.32	42.5	11.8	7.64	14.9	72.6	.42	17.9	9.06
MAX	1440	55	27	35	128	93	87	49	880	3.3	95	42
MIN	3.6	.60	.03	.00	3.2	1.3	.22	.83	.10	.00	.37	3.2
AC-FT	4540	284	258	266	2360	726	455	916	4320	26	1100	539
CAL YR 1982	TOTAL	15098.85	MEAN	41.4	MAX	2220	MIN	.00	AC-FT	29950		
WTR YR 1983	TOTAL	7962.93	MEAN	21.8	MAX	1440	MIN	.00	AC-FT	15790		

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

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
OCT										
06...	1545	15	950	--	8.8	--	19.0	21.0	--	--
DEC										
09...	1400	1.9	--	1990	8.5	8.4	2.0	1.0	260	29
FEB										
08...	1730	66	830	--	8.3	--	2.0	6.0	--	--
APR										
13...	1400	2.9	2220	2290	8.3	8.3	5.5	7.0	350	126
JUN										
15...	1445	7.5	1310	1390	8.5	8.3	27.0	28.5	240	49
AUG										
10...	1430	6.6	1210	1180	8.7	8.6	32.0	32.5	200	4

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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										
06...	--	--	--	--	--	--	--	--	--	--
DEC										
09...	55	30	310	8.6	3.7	380	260	.50	7.9	1190
FEB										
08...	--	--	--	--	--	--	--	--	--	--
APR										
13...	63	48	360	8.5	3.4	660	180	.60	6.3	1460
JUN										
15...	54	25	220	6.4	5.7	370	92	.60	7.8	889
AUG										
10...	46	21	190	6.0	5.0	320	70	.70	9.5	781

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
DEC			
09...	1400	290	50
APR			
13...	1400	370	10
JUN			
15...	1445	270	8
AUG			
10...	1430	300	6

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

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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							
06...	1545	15	21.0	176	7.1	--	--
FEB							
08...	1730	66	6.0	2180	388	55	64
APR							
13...	1400	2.9	7.0	49	.38	--	--
JUN							
15...	1445	7.5	28.5	81	1.6	--	--
AUG							
10...	1430	6.6	32.5	790	14	--	--

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)
OCT						
06...	--	--	--	--	--	97
FEB						
08...	77	84	89	99	100	--
APR						
13...	--	--	--	--	--	86
JUN						
15...	--	--	--	--	--	94
AUG						
10...	--	--	--	--	--	95

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

LOCATION.--Lat 35°23'35", long 103°02'30", in SW¼ sec.32, T. 4 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 1982 TO SEPTEMBER 1983

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 05...	1045	326	800	771	8.6	8.4	26.0	21.0	600	8.1
DEC 08...	1100	206	1000	996	8.1	8.2	-2.0	.0	3.5	13.4
APR 12...	1200	40	3700	3740	8.4	8.1	20.0	15.0	120	--
JUN 14...	1145	275	1030	1070	8.4	8.3	20.5	21.0	450	8.4
AUG 09...	1200	38	6800	5810	8.2	8.3	29.0	27.0	41	7.2

DATE	TIME	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LITY FIELD (MG/L AS CAC03) (00410)
------	------	---	---	---	---	---	--	--	---	--	--

OCT 05...	120	0	31	10	120	5.0	4.1	--	--	--
DEC 08...	150	0	36	14	150	5.5	4.2	--	--	--
APR 12...	360	125	78	40	620	15	5.5	--	--	--
JUN 14...	200	0	47	19	160	5.1	4.7	--	--	220
AUG 09...	500	300	100	60	1100	22	--	240	.0	--

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)	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 05...	100	100	.60	7.2	441	462	.17	<.060	.680	.010
DEC 08...	110	150	.50	6.8	638	571	.21	.060	.100	.020
APR 12...	330	840	.60	7.4	2130	2060	.28	.060	.080	<.010
JUN 14...	190	110	.60	6.7	647	672	.14	.080	.780	<.010
AUG 09...	470	1700	.60	7.7	3400	--	<.10	.120	4.50	.040

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
OCT 05...	1045	200	3	220	<1	<1	<1	<3	5	74	3
APR 12...	1200	20	2	100	<10	<1	<1	1	3	30	<1
JUN 14...	1145	40	3	170	<1	<1	2	<3	2	11	<1
AUG 09...	1200	20	1	100	--	1	<1	<1	3	30	<1

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

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 05...	28	<1	.2	<10	1	1	<1	840	14	<3
APR 12...	110	10	<.1	3	2	1	<1	--	14	20
JUN 14...	49	2	<.1	<10	1	1	<1	1300	12	8
AUG 09...	--	10	<.1	6	1	1	<1	--	24	20

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 05...	400	180
DEC 08...	K15	100
APR 12...	K0	E40
JUN 14...	380	190
AUG 09...	360	K2400

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 05...	1045	326	21.0	1560	1370	76
DEC 08...	1100	206	.0	200	111	77
APR 12...	1200	40	15.0	148	16	94
JUN 14...	1145	275	21.0	951	706	91
JUN 14...	1150	275	21.0	1140	846	79
AUG 09...	1200	38	27.0	964	99	96

## WESTERN GULF OF MEXICO BASINS

## RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO

LOCATION.--Lat 37°04'42", long 105°45'22", in sec.22, T.33 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on right bank at highway bridge, 6 mi north of Colorado-New Mexico State line, 7 mi downstream from Culebra Creek, 10 mi east of Lobatos, 14 mi east of Antonito and at mile 1,722.1.

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

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 210: Drainage area. WSP 1312: 1919 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 7,427.63 ft 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, 612,900 acre-ft/yr, includes period of extensive development for irrigation.  
53 years (water years 1931-1983), 417 ft<sup>3</sup>/s, 302,100 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 13,200 ft<sup>3</sup>/s June 8, 1905, gage height, 9.1 ft, from rating curve extended above 8,000 ft<sup>3</sup>/s; no flow at times in 1950-51, 1956.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,230 ft<sup>3</sup>/s June 29, gage height, 4.67 ft; minimum daily discharge, 23 ft<sup>3</sup>/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	824	192	255	255	355	664	520	685	2420	2260	223	60
2	934	202	245	250	355	650	544	562	2730	2320	293	53
3	1140	380	260	250	345	601	562	508	2770	2130	306	41
4	1430	580	250	255	345	615	502	420	2430	1820	266	37
5	1240	574	250	280	325	615	564	385	1850	1700	278	33
6	988	562	275	295	345	587	538	405	1690	1610	286	32
7	848	587	295	305	345	556	496	445	1780	1440	282	31
8	706	594	320	325	350	544	502	405	1820	1220	250	28
9	502	657	375	325	355	520	502	460	1840	1110	274	28
10	445	713	430	325	370	508	490	574	1800	952	278	27
11	410	752	465	330	375	514	478	864	1720	824	234	29
12	385	685	455	315	370	532	472	1080	1920	898	220	32
13	355	657	405	320	400	550	490	1130	2500	816	250	28
14	335	608	370	320	430	562	490	997	2800	760	220	29
15	325	526	285	315	455	594	496	943	2600	713	238	26
16	310	556	215	320	475	622	490	856	2350	650	234	26
17	290	574	240	330	500	629	478	808	1910	580	198	24
18	350	615	280	330	510	594	484	713	1690	484	170	23
19	315	538	290	330	495	587	490	636	1620	478	133	27
20	286	514	290	335	510	568	526	587	1740	425	133	28
21	350	484	315	335	510	556	601	615	1670	385	105	34
22	325	460	345	345	530	544	664	657	1760	360	92	25
23	262	430	360	340	570	544	685	713	1690	380	82	25
24	238	385	305	340	580	538	699	800	1660	345	73	29
25	226	365	235	330	615	544	840	925	1760	325	71	31
26	202	330	265	335	650	538	1060	1110	2000	345	69	27
27	195	325	295	340	650	520	997	1310	2380	335	67	27
28	216	325	275	345	664	502	824	1550	2880	315	65	43
29	258	320	250	345	---	502	728	1740	3150	274	67	36
30	246	290	245	355	---	502	752	1760	2750	234	78	37
31	202	---	270	350	---	502	---	2060	---	212	62	---
TOTAL	15138	14780	9410	9870	12779	17404	17964	26703	63680	26700	5597	956
MEAN	488	493	304	318	456	561	599	861	2123	861	181	31.9
MAX	1430	752	465	355	664	664	1060	2060	3150	2320	306	60
MIN	195	192	215	250	325	502	472	385	1620	212	62	23
AC-FT	30030	29320	18660	19580	25350	34520	35630	52970	126300	52960	11100	1900

CAL YR 1982 TOTAL 221664 MEAN 607 MAX 1860 MIN 125 AC-FT 439700  
WTR YR 1983 TOTAL 220981 MEAN 605 MAX 3150 MIN 23 AC-FT 438300



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

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to 1981.

WATER TEMPERATURE: October 1975 to 1981.

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

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV									
04...	1200	608	184	195	7.6	8.6	4.5	24	12.2
DEC									
10...	1030	440	--	242	7.5	7.6	.5	1.2	13.5
FEB									
08...	1145	350	--	216	7.8	7.8	.5	4.7	12.2
APR									
20...	1515	472	--	277	8.3	7.9	14.5	13	9.7
JUN									
22...	1400	1850	233	241	7.5	8.0	20.0	11	8.3
AUG									
26...	1030	58	482	487	8.1	8.3	19.0	11	9.0

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV									
04...	66	1	20	3.9	11	.6	2.9	28	3.8
DEC									
10...	79	0	24	4.7	15	.8	3.0	32	4.5
FEB									
08...	72	0	22	4.0	13	.7	2.8	27	3.8
APR									
20...	92	4	28	5.3	19	.9	3.6	41	5.9
JUN									
22...	78	8	23	4.9	16	.8	3.3	44	4.3
AUG									
26...	160	35	49	10	39	1.4	6.0	110	10

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF 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								
04...	.20	24	130	134	<.10	.220	.210	.050
DEC								
10...	.30	28	171	160	.23	.160	.180	.060
FEB								
08...	.20	30	153	148	.26	.230	.150	.120
APR								
20...	.30	26	179	182	<.10	.110	.080	.110
JUN								
22...	.20	19	161	157	<.10	.090	.160	.020
AUG								
26...	.60	20	317	323	<.10	.040	.200	.090

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

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV											
04...	1200	70	1	25	<1	1	<1	<3	12	130	<1
FEB											
08...	1145	20	2	27	1	1	6	<3	6	57	<1
JUN											
22...	1400	40	1	36	<1	2	1	<3	9	67	1
AUG											
26...	1030	20	4	62	1	<1	<1	<3	6	25	<1

DATE	TIME	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV											
04...		15	11	<.1	<10	<1	<1	<1	150	<6.0	10
FEB											
08...		11	21	<.1	<10	<1	<1	<1	160	<6.0	23
JUN											
22...		10	17	<.1	<10	2	<1	<1	190	<6.0	5
AUG											
26...		19	59	<.1	<10	<1	<1	<1	420	8.0	5

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
NOV										
04...	1200	<3.0	<1.5	3.4	1.4	3.2	1.4	.04	--	.39
JUN										
22...	1400	<5.2	4.0	3.9	2.2	3.2	1.9	.05	.6	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV		
04...	K27	660
DEC		
10...	K28	140
FEB		
08...	K32	160
APR		
20...	K24	110
JUN		
22...	100	160
AUG		
26...	K20	83

RIO GRANDE BASIN

77

08252500 COSTILLA CREEK ABOVE COSTILLA DAM, NM

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

DRAINAGE AREA.--25.1 mi<sup>2</sup>.

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

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

GAGE.--Water-stage recorder. Concrete control since Sept. 17, 1965. Altitude of gage is 9,429 ft, from topographic map. See WSP 1923 for history of changes prior to Sept. 17, 1965.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,870 ft<sup>3</sup>/s July 22, 1954, gage height, about 4.8 ft, from floodmarks, site and datum then in use, on basis of slope-area measurement of peak flow; minimum not determined.

The flood in 1954 destroyed the gaging station and is highest since about 1909, from information by local range rider.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 28	1830	106	3.20	June 25	1830	88	3.13
May 11	2100	144	3.42	July 11	2000	40	2.66
May 30	1215	*178	3.67	July 23	2315	48	2.74
June 13	0200	94	3.26	Aug. 13	1715	54	2.80

a From rating curve extended above 54 ft<sup>3</sup>/s.

Minimum discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6							25	118	27	14	7.0
2	6.8							20	100	24	13	6.7
3	6.5							20	84	22	14	6.6
4	6.1							30	81	20	14	6.2
5	6.2							43	83	20	12	5.4
6								32	92	19	12	5.2
7								37	88	20	13	5.5
8								54	70	18	11	5.6
9								66	67	17	9.5	4.9
10								79	63	17	9.2	4.9
11								85	74	23	9.4	6.8
12								76	80	24	15	5.1
13								58	82	18	19	8.6
14								40	52	16	13	7.4
15								38	43	14	10	6.8
16								37	42	12	9.3	5.1
17								30	43	12	9.1	4.6
18								29	51	15	8.5	4.6
19								26	58	13	10	4.2
20								25	58	13	8.7	4.5
21								24	51	13	8.6	4.0
22								28	49	17	8.7	3.9
23								36	48	18	10	3.9
24								45	46	24	11	4.0
25								58	60	21	11	4.6
26								73	48	27	11	6.0
27								90	42	20	11	5.2
28								41	84	17	9.9	4.5
29								41	85	16	8.3	4.8
30								31	139	15	7.7	5.2
31								132		16	7.4	
TOTAL								1644	1874	568	338.3	161.8
MEAN								53.0	62.5	18.3	10.9	5.39
MAX								139	118	27	19	8.6
MIN								20	30	12	7.4	3.9
AC-FT								3260	3720	1130	671	321

## RIO GRANDE BASIN

08253000 CASIAS CREEK NEAR COSTILLA, NM

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

DRAINAGE AREA.--16.6 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1937 to current year (no winter records). Monthly discharge only for some periods, published in WSP 1312 and 1732. Records for Nov. 1-7, 1947 and Nov. 1-16, 1948, published in WSP 1118 and 1148, are unreliable and should not be used.

REVISED RECORDS.--WSP 1282: 1948-51. WSP 1923: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 9,404 ft, from topographic map. Prior to July 18, 1940, water-stage recorder and wooden control 100 ft downstream at datum 1.56 ft lower.

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

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 12	1200	42	1.08	June 25	1430	*123	1.74
June 1	0100	116	1.46				

Minimum discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12							16	85	75	38	12
2	12							13	72	71	37	12
3	11							13	70	66	34	12
4	11							18	68	64	35	12
5	11							19	69	63	34	11
6	---							18	79	64	32	10
7	---							20	80	63	31	10
8	---							23	70	60	29	10
9	---							26	71	58	27	9.7
10	---							29	71	57	27	10
11	---							32	81	68	26	11
12	---							34	88	69	29	9.8
13	---							33	92	58	28	12
14	---							32	79	52	25	12
15	---							32	71	48	22	11
16	---							31	70	45	20	9.8
17	---							27	75	45	20	9.3
18	---							23	81	48	19	9.1
19	---							22	88	45	20	8.8
20	---							22	93	45	18	9.0
21	---							22	96	44	18	8.6
22	---							25	98	45	17	8.4
23	---							28	97	46	17	8.3
24	---							30	96	49	17	8.2
25	---							35	104	47	17	9.0
26	---							44	93	52	17	9.3
27	---							52	84	49	15	9.3
28	---							61	80	47	14	8.2
29	---							69	81	44	14	8.1
30	---							88	78	42	13	8.8
31	---							85	---	40	13	---
TOTAL	---							1022	2460	1669	723	296.7
MEAN	---							33.0	82.0	53.8	23.3	9.89
MAX	---							88	104	75	38	12
MIN	---							13	68	40	13	8.1
AC-FT	---							2030	4880	3310	1430	589

## RIO GRANDE BASIN

79

08253500 SANTISTEVAN CREEK NEAR COSTILLA, NM

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

DRAINAGE AREA.--2.15 mi<sup>2</sup>.

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

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 9,487 ft, from topographic map. Prior to June 27, 1940, water-stage recorder and wooden control at datum 0.99 ft 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 Aug. 11, 1941, July 12, 1957; maximum gage height, 1.73 ft Aug. 11, 1941; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6.0 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
June 21	2400	*16	1.44	Aug. 12	1730	7.2	0.83
July 11	1615	15	1.38	Aug. 13	1400	8.4	0.92
July 12	1330	15	1.40				

Minimum discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5						---	1.5	9.8	11	5.4	2.0
2	1.5						---	1.5	9.9	11	5.2	2.0
3	1.4						---	1.5	10	9.9	4.9	1.9
4	1.4						---	1.7	10	9.5	4.8	1.9
5	1.4						---	1.9	10	9.3	4.5	1.9
6	---						---	1.9	11	9.2	4.3	1.9
7	---						---	2.0	11	9.1	4.2	1.7
8	---						---	2.4	11	8.9	4.1	1.6
9	---						---	2.9	10	8.9	4.1	1.6
10	---						---	3.3	11	8.9	3.9	1.6
11	---						---	3.8	11	10	3.9	1.6
12	---						.59	4.0	12	10	4.2	1.6
13	---						.59	3.9	13	8.9	4.6	1.8
14	---						.59	3.6	13	8.1	4.0	1.8
15	---						.54	3.4	12	7.6	3.7	1.7
16	---						.52	3.2	11	7.1	3.5	1.6
17	---						.55	3.0	11	7.1	3.4	1.5
18	---						.62	2.9	12	7.0	3.2	1.5
19	---						.64	2.7	13	7.0	3.2	1.6
20	---						.69	2.7	14	6.9	2.9	1.7
21	---						.73	2.6	15	6.5	3.0	1.6
22	---						.72	2.6	15	6.6	3.0	1.5
23	---						.73	2.9	15	6.7	2.8	1.6
24	---						.99	3.3	14	6.4	2.8	1.6
25	---						1.2	3.8	15	6.3	2.7	1.7
26	---						1.3	4.7	14	6.1	2.5	1.4
27	---						1.4	5.5	13	5.7	2.2	1.3
28	---						1.6	5.9	12	5.6	2.2	1.2
29	---						1.6	6.5	12	5.4	2.1	1.3
30	---						1.6	8.1	12	5.4	2.0	1.4
31	---						---	9.1	---	5.6	2.0	---
TOTAL	---						---	108.8	362.7	241.7	109.3	49.1
MEAN	---						---	3.51	12.1	7.80	3.53	1.64
MAX	---						---	9.1	15	11	5.4	2.0
MIN	---						---	1.5	9.8	5.4	2.0	1.2
AC-FT	---						---	216	719	479	217	97

## 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 southeast of Costilla, and at mile 34.8.

DRAINAGE AREA.--54.6 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1922 to September 1965 (monthend contents only), October 1965 to September 1983 (discontinued). 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, from topographic map.

REMARKS.--Reservoir is formed by earthfill dam faced with rock. Storage began in 1920. Capacity 15,740 acre-ft between gage heights 9,405.0 ft, sill of outlet, and 9,513.0 ft, 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 maximum, and 10,880 acre-ft for not to exceed 60 days. Diversions for irrigation of about 1,300 acres 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 June 13, 1938, June 20-23, 1941, gage height, 9,511.5 ft; no storage October 1925 to February 1926, September 1956, Aug. 22 to Sept. 24, 1972, July 29 to Sept. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 13,390 acre-ft July 10-13, 24, gage height, 9,507.0 ft; minimum observed, 5,590 acre-ft Oct. 5, gage height, 9,481.4 ft.

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

9,480	5,270	9,500	10,880
9,490	7,790	9,510	14,540

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	10880	11470	13090	12830	9260
2	---	---	---	---	---	---	---	10850	11570	13090	12720	9080
3	---	---	---	---	---	---	---	10820	11500	13050	12610	---
4	---	---	---	---	---	---	---	10820	11430	13120	12540	9080
5	5590	---	---	---	---	---	---	10820	11470	13160	12350	8990
6	---	---	---	---	---	---	---	10850	11570	13160	12350	8900
7	---	---	---	---	---	---	---	10850	11750	13200	12350	8810
8	---	---	---	---	---	---	---	10880	11710	13240	12170	8690
9	---	---	---	---	---	---	---	10920	11640	13350	12030	8570
10	---	---	---	---	---	---	---	11020	11540	13390	11890	---
11	---	---	---	---	---	---	---	11020	11470	13390	11710	8570
12	---	---	---	---	---	---	---	11050	11400	13390	11500	8420
13	---	---	---	---	---	---	---	11050	11400	13390	11500	---
14	---	---	---	---	---	---	---	11020	11360	13350	11500	8220
15	---	---	---	---	---	---	---	10950	11360	13350	11360	8100
16	---	---	---	---	---	---	---	10880	11360	13350	11160	7960
17	---	---	---	---	---	---	---	10880	11360	13310	10950	---
18	---	---	---	---	---	---	---	10850	11470	13310	10750	7960
19	---	---	---	---	---	---	---	10850	11600	13310	10550	---
20	---	---	---	---	---	---	---	10850	11750	13310	---	---
21	---	---	---	---	---	---	---	10850	11890	13310	10550	7710
22	---	---	---	---	---	---	---	10880	12070	13350	10410	---
23	---	---	---	---	8780	---	---	10920	12210	13350	10320	7540
24	---	---	---	---	---	---	---	10950	12320	13390	10150	---
25	---	---	---	---	---	---	10450	11050	12460	13310	10020	---
26	---	---	---	---	---	---	10580	11120	12640	13240	9860	---
27	---	---	---	---	---	---	10710	11220	12790	13160	---	7540
28	---	---	---	---	8800	---	10820	11290	12900	13050	9860	---
29	---	---	---	---	---	---	10880	11330	12980	12980	9730	7540
30	---	7200	---	---	---	---	10880	11400	13090	12900	9580	7540
31	6400	---	7900	8400	---	9250	---	11430	---	12870	9390	---
MAX	---	---	---	---	---	---	---	11430	13090	13390	---	---
MIN	---	---	---	---	---	---	---	10820	11360	12870	---	---
(†)	---	---	---	---	---	---	9500.0	9501.6	9506.2	9505.6	9495.4	9489.1
(††)	+1000	+800	+700	+500	+400	+450	+1630	+550	+1660	-220	-3480	-1850

CAL YR 1982..... (††) +4900

WTR YR 1983..... (††) +2140

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

(††) CHANGE IN CONTENTS, IN ACRE-FEET

NOTE.--Contents interpolated at end of each month October thru March.

## 08254000 COSTILLA CREEK BELOW COSTILLA DAM, NM

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

DRAINAGE AREA.--54.6 mi<sup>2</sup>.

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

REVISED RECORDS.--WSP 1923: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 9,290 ft, from topographic map.

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

AVERAGE DISCHARGE.--37 years (water years 1945-47, 1950-83), 17.2 ft<sup>3</sup>/s, 12,460 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 217 ft<sup>3</sup>/s June 2, 7, 10, 11, 12, 13, 14, gage height, 2.63 ft; minimum not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.02	.02	.02	.02	.02	.02	61	211	98	112	105
2	.06	.02	.02	.02	.02	.02	.02	61	153	99	112	56
3	.03	.02	.02	.02	.02	.02	.02	60	207	85	112	25
4	.02	.02	.02	.02	.02	.02	.02	54	165	72	112	37
5	.02	.02	.02	.02	.02	.02	.02	50	102	72	92	71
6	.02	.02	.02	.02	.02	.02	.02	50	110	70	60	71
7	.02	.02	.02	.02	.02	.02	.02	50	162	65	89	70
8	.02	.02	.02	.02	.02	.02	.02	55	212	42	124	70
9	.02	.02	.02	.02	.02	.02	.02	65	211	50	124	42
10	.02	.02	.02	.02	.02	.02	.02	77	211	99	124	24
11	.02	.02	.02	.02	.02	.02	.02	93	212	99	124	44
12	.02	.02	.02	.02	.02	.02	.02	102	212	105	89	83
13	.02	.02	.02	.02	.02	.02	.02	107	212	112	59	82
14	.02	.02	.02	.02	.02	.02	.02	107	180	96	83	82
15	.02	.02	.02	.02	.02	.02	.02	106	143	86	136	81
16	.02	.02	.02	.02	.02	.02	.02	106	116	74	135	47
17	.02	.02	.02	.02	.02	.02	.02	82	93	68	135	24
18	.02	.02	.02	.02	.02	.02	.02	55	93	68	134	30
19	.02	.02	.02	.02	.02	.02	.02	56	89	67	77	47
20	.02	.02	.02	.02	.02	.02	.02	55	82	67	41	60
21	.02	.02	.02	.02	.02	.02	.02	49	82	67	57	60
22	.02	.02	.02	.02	.02	.02	.02	43	82	67	107	60
23	.02	.02	.02	.02	.02	.02	.02	43	83	67	107	33
24	.02	.02	.02	.02	.02	.02	.02	43	83	80	106	15
25	.02	.02	.02	.02	.02	.02	.02	53	83	112	106	15
26	.02	.02	.02	.02	.02	.02	.02	74	83	112	64	15
27	.02	.02	.02	.02	.02	.02	.02	87	83	112	36	15
28	.02	.02	.02	.02	.02	.02	20	105	83	112	58	15
29	.02	.02	.02	.02	---	.02	52	130	84	96	106	15
30	.02	.02	.02	.02	---	.02	57	167	88	73	106	5.5
31	.02	---	.02	.02	---	.02	---	196	---	83	106	---
TOTAL	.71	.60	.62	.62	.56	.62	129.54	2442	4010	2575	3033	1399.5
MEAN	.023	.020	.020	.020	.020	.020	4.32	78.8	134	83.1	97.8	46.7
MAX	.06	.02	.02	.02	.02	.02	57	196	212	112	136	105
MIN	.02	.02	.02	.02	.02	.02	.02	43	82	42	36	5.5
AC-FT	1.4	1.2	1.2	1.2	1.1	1.2	257	4840	7950	5110	6020	2780
CAL YR 1982	TOTAL	5738.58	MEAN	15.7	MAX	130	MIN	.01	AC-FT	11380		
WTR YR 1983	TOTAL	13592.77	MEAN	37.2	MAX	212	MIN	.02	AC-FT	26960		

## RIO GRANDE BASIN

08255500 COSTILLA CREEK NEAR COSTILLA, NM

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

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

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

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

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

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

AVERAGE DISCHARGE.--42 years (water years 1942-83), 42.3 ft<sup>3</sup>/s, 30,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,150 ft<sup>3</sup>/s May 11, 1942, gage height, 5.37 ft, site and datum then in use; minimum, 0.34 ft<sup>3</sup>/s Mar. 15, 1969, result of freezeup.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 595 ft<sup>3</sup>/s June 1, gage height, 4.68 ft; minimum, 1.7 ft<sup>3</sup>/s Dec. 13, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	16	13	6.0	9.0	14	23	207	571	193	143	119
2	22	14	10	6.5	9.0	15	19	193	503	188	152	102
3	21	10	7.0	7.0	8.0	14	21	168	518	178	153	52
4	20	13	7.5	8.0	8.5	14	13	181	482	152	155	52
5	20	14	8.0	8.5	9.0	13	16	195	387	143	143	79
6	19	15	9.0	9.0	7.0	13	18	204	387	141	97	83
7	19	15	9.7	9.0	7.5	13	18	175	420	139	100	83
8	19	16	9.8	9.0	9.0	13	17	196	444	124	146	83
9	19	18	11	9.0	9.5	13	17	234	441	94	144	74
10	19	18	11	7.0	9.5	14	17	258	434	134	141	44
11	21	17	11	7.5	9.5	18	19	282	429	152	142	45
12	21	12	7.7	8.0	9.5	20	20	298	432	172	132	88
13	21	11	7.0	8.0	9.5	21	18	301	434	177	92	99
14	21	13	7.5	8.0	9.5	24	17	289	399	162	88	97
15	21	10	6.8	8.0	10	27	17	278	345	137	146	97
16	20	12	7.4	7.5	10	21	18	270	314	128	148	83
17	19	15	8.4	8.0	10	21	19	231	279	113	149	44
18	18	17	7.9	9.0	10	21	25	176	278	116	147	42
19	17	18	7.5	8.0	10	18	37	163	283	114	127	54
20	17	18	8.4	8.5	10	17	45	157	262	110	69	69
21	16	16	8.6	9.0	10	15	48	152	244	111	65	70
22	16	16	9.1	8.5	9.0	18	55	145	235	112	110	71
23	16	17	8.5	8.0	10	16	56	154	225	114	119	64
24	16	14	6.3	8.0	11	17	76	177	224	122	121	34
25	16	16	6.0	8.5	12	17	137	210	234	161	122	33
26	16	13	7.0	8.0	12	14	173	269	237	162	111	33
27	21	17	8.0	8.0	12	14	158	314	219	154	66	33
28	18	15	7.0	8.5	12	16	140	360	209	149	64	32
29	15	14	6.0	9.0	---	16	231	392	197	143	115	31
30	17	17	6.0	10	---	16	215	465	187	114	117	31
31	17	---	6.0	10	---	20	---	514	---	113	118	---
TOTAL	581	447	254.1	255.0	272.0	523	1703	7608	10253	4322	3742	1921
MEAN	18.7	14.9	8.20	8.23	9.71	16.9	56.8	245	342	139	121	64.0
MAX	23	18	13	10	12	27	231	514	571	193	155	119
MIN	15	10	6.0	6.0	7.0	13	13	145	187	94	64	31
AC-FT	1150	887	504	506	540	1040	3380	15090	20340	8570	7420	3810
CAL YR 1982	TOTAL	14069.6	MEAN	38.5	MAX	138	MIN	3.7	AC-FT	27910		
WTR YR 1983	TOTAL	31881.1	MEAN	87.3	MAX	571	MIN	6.0	AC-FT	63240		



## RIO GRANDE BASIN

83

08260500 COSTILLA CREEK BELOW DIVERSION DAM, AT COSTILLA, NM

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

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

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

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

REMARKS.--Records poor. Flow partly regulated by Costilla Reservoir (station 08253900) 20 mi upstream, and by canal headgates or sluice gates at diversion dam. Diversions above station for irrigation of about 5,000 acres, 3,000 acres 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 June 9, 1979, gage height, 4.66 ft, from rating curve extended above 220 ft<sup>3</sup>/s; maximum gage height, 6.77 ft May 30, 1983 (backwater from debris); no flow Oct. 14, 1963, Aug. 6, 1983.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 485 ft<sup>3</sup>/s June 1, gage height, 6.24 ft; maximum gage height, 6.77 ft May 30 (backwater from debris); no flow Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5						---	182	460	38	8.6	32
2	4.8						---	166	392	35	6.4	27
3	13						---	140	420	30	9.3	5.0
4	8.3						---	160	392	28	12	4.7
5	8.0						---	166	283	25	5.4	4.3
6	---						---	182	250	21	.00	4.3
7	---						---	148	264	19	1.2	5.4
8	---						3.1	160	298	19	17	5.4
9	---						3.1	185	310	18	14	5.4
10	---						3.1	219	310	18	9.8	3.7
11	---						2.8	229	322	45	10	4.0
12	---						2.8	225	334	89	29	9.3
13	---						2.8	236	334	89	11	15
14	---						2.8	228	294	80	9.6	13
15	---						2.8	219	246	62	15	14
16	---						2.6	219	182	56	14	9.8
17	---						2.6	171	148	53	14	2.6
18	---						2.6	111	152	33	13	1.8
19	---						4.0	84	180	6.4	30	1.8
20	---						11	82	155	5.5	20	2.1
21	---						13	74	115	4.7	6.1	2.1
22	---						23	65	113	7.1	7.5	4.0
23	---						26	79	100	6.8	7.1	5.0
24	---						52	100	75	6.1	5.4	4.3
25	---						113	82	75	14	24	5.4
26	---						158	150	75	11	47	5.4
27	---						148	219	65	8.2	21	5.4
28	---						124	290	57	8.3	10	6.1
29	---						200	298	47	7.8	11	6.4
30	---						188	374	40	3.9	22	6.4
31	---						---	402	---	3.8	24	---
TOTAL	---						---	5645	6488	851.6	434.40	221.1
MEAN	---						---	182	216	27.5	14.0	7.37
MAX	---						---	402	460	89	47	32
MIN	---						---	65	40	3.8	.00	1.8
AC-FT	---						---	11200	12870	1690	862	439

## RIO GRANDE BASIN

## 08261000 COSTILLA CREEK AT GARCIA, CO

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

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

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

GAGE.--Water-stage recorder. Concrete control since Oct. 9, 1956. Altitude of gage is 7,758 ft, from topographic map. Prior to Apr. 20, 1950, at site 0.4 mi downstream at different datum.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 500 ft<sup>3</sup>/s June 1, 1983, gage height, 4.91 ft; no flow for many days most years.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 500 ft<sup>3</sup>/s June 1, gage height, 4.91 ft; no flow Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3						---	171	444	32	6.0	29
2	2.9						---	155	378	30	5.3	28
3	9.5						---	120	406	26	7.1	5.5
4	5.9						---	147	378	22	11	5.1
5	5.8						2.2	160	266	19	6.3	4.3
6	5.6						2.2	174	228	16	.30	4.7
7	---						2.2	139	252	15	.08	4.9
8	---						2.2	152	286	15	16	5.1
9	---						2.2	177	293	14	15	5.3
10	---						2.2	214	293	14	8.9	3.7
11	---						2.2	218	301	38	8.2	3.5
12	---						2.2	214	313	78	27	6.5
13	---						2.2	218	321	88	11	14
14	---						2.2	218	274	75	9.2	14
15	---						2.2	211	224	62	14	14
16	---						2.2	208	180	54	12	11
17	---						2.2	158	147	51	12	2.8
18	---						2.2	97	152	34	11	1.5
19	---						2.5	69	177	6.3	29	1.5
20	---						8.8	65	144	4.8	28	1.7
21	---						13	59	109	4.1	5.6	1.8
22	---						21	55	101	6.2	7.1	3.5
23	---						25	61	89	6.5	7.5	5.0
24	---						36	77	66	5.1	6.9	3.8
25	---						108	60	63	12	22	4.3
26	---						171	120	64	11	45	4.2
27	---						149	208	56	8.4	22	3.9
28	---						110	270	51	7.8	9.4	4.2
29	---						195	274	42	6.5	11	4.1
30	---						180	351	34	3.2	21	4.1
31	---						---	382	---	2.8	22	---
TOTAL	---						---	5202	6132	767.7	416.88	205.0
MEAN	---						---	168	204	24.8	13.4	6.83
MAX	---						---	382	444	88	45	29
MIN	---						---	55	34	2.8	.08	1.5
AC-FT	---						---	10320	12160	1520	827	407

## 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 downstream from new diversion dam, and 1.2 mi southeast of the intersection of State Highways 3 and 196 at Costilla. PERIOD OF RECORD, May 1944 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,870 ft, from topographic map. Acequia diverts from right bank of Costilla Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 50 ft<sup>3</sup>/s June 25, 1944, July 31, 1945; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 36 ft<sup>3</sup>/s June 7, 25, 26; no flow at times.

08256500 MESA DITCH NEAR GARCIA, CO.--Lat 36°59'50", long 105°30'49", Costilla County, Hydrologic Unit 13020101, on left bank 429 ft north of milepost No. 136 + 54 on New Mexico-Colorado State line, and 1.4 mi east of Garcia. PERIOD OF RECORD, June 1944 to September 1965, May 1969 to July 1983 (discontinued). GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,780 ft, 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 June 25, 1944, Aug. 3, 7, 1945; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1.2 ft<sup>3</sup>/s May 25, June 3; no flow many days.

08257500 CORDILLERA DITCH AT GARCIA, CO.--Lat 36°59'41", long 105°31'39", Taos County, Hydrologic Unit 13020101, on left bank 570 ft south of New Mexico-Colorado State line, and 0.9 mi southeast of Garcia. PERIOD OF RECORD, June 1944 to July 1983 (discontinued). GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,750 ft, 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 June 13, 15, July 11, 1961; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 6.3 ft<sup>3</sup>/s June 12, 13; no flow many days.

08258000 CERRO CANAL AT COSTILLA, NM.--Lat 36°57'56", long 105°31'07", Taos County, Hydrologic Unit 13020101, on right bank 1,350 ft downstream from new diversion dam, and 1.2 mi southeast of the intersection of State Highways 3 and 196 at Costilla. PERIOD OF RECORD, April 1944 to current year. GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,870 ft, 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 July 10, 1980; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 133 ft<sup>3</sup>/s July 1; minimum, 3.1 ft<sup>3</sup>/s Apr. 28.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 66 ft<sup>3</sup>/s July 25; no flow part of Oct. 3.

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 downstream from headgate, and 2.7 mi east of Jaroso. PERIOD OF RECORD, June 1944 to July 1983 (discontinued). GAGE, water-stage recorder and Parshall flume. Altitude of gage is 7,680 ft, 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 July 21, 1948; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 13 ft<sup>3</sup>/s June 1, 2; no flow Apr. 30 to May 10.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 54 ft<sup>3</sup>/s July 24; minimum daily, 2.3 ft<sup>3</sup>/s Oct. 3.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 60 ft<sup>3</sup>/s July 12; no flow many days.

RIO GRANDE BASIN  
PRINCIPAL DIVERSIONS FROM COSTILLA CREEK, NEW MEXICO-COLORADO -- Continued

MONTHLY DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	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 .....	-	-	-	-	-	-	-	42
November ....	-	-	-	-	-	-	-	259
December ....	-	-	-	-	-	-	-	-
January .....	-	-	-	-	-	-	-	-
February .....	-	-	-	-	-	-	-	-
March .....	-	-	-	-	-	-	-	339
April .....	-	-	-	-	-	-	-	618
May .....	776	28	70	3,100	1,840	208	1,520	588
June .....	1,290	13	128	6,160	2,570	502	1,720	4.8
July .....	1,260	-	-	5,550	2,900	-	2,100	584
August .....	1,040	-	-	5,520	2,750	-	1,960	237
September ...	460	-	-	2,920	2,160	-	1,480	306

## RIO GRANDE BASIN

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08263500 RIO GRANDE NEAR CERRO, NM

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

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

## WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Altitude of gage is 7,110 ft, from topographic map.

REMARKS.--Water-discharge records good except those for August and September, which are fair. Diversions above station for irrigation of about 620,000 acres in Colorado and 7,000 acres in New Mexico.

AVERAGE DISCHARGE.--35 years, 403 ft<sup>3</sup>/s, 292,000 acre-ft/yr.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 4	2130	1410	7.28	June 3	0915	2850	9.96
Apr. 27	1645	1160	6.76	June 14	1745	2820	9.91
May 13	1830	1310	7.15	June 30	0130	*2900	10.02

Minimum daily discharge, 65 ft<sup>3</sup>/s Sept. 20, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	893	247	309	325	378	704	538	873	2420	2170	237	90
2	924	239	256	281	382	718	542	769	2700	2110	327	84
3	1050	257	271	276	381	676	577	675	2810	2070	354	82
4	1300	465	295	276	373	612	572	586	2690	1780	269	78
5	1320	627	262	283	374	661	407	505	2150	1640	278	77
6	1110	606	286	306	352	635	572	482	1840	1580	295	76
7	979	612	317	323	371	596	531	531	1860	1450	301	75
8	888	637	328	335	370	584	525	554	1940	1290	285	75
9	686	653	367	350	380	565	524	521	2000	1130	264	75
10	542	731	441	354	383	542	529	641	1960	1060	289	74
11	489	783	479	352	398	528	495	841	1930	931	280	74
12	457	775	511	357	401	530	482	1110	1900	913	246	74
13	419	724	466	344	397	551	505	1250	2340	916	239	76
14	385	678	411	347	427	568	518	1180	2750	850	271	74
15	365	603	388	350	458	593	525	1100	2630	823	240	72
16	350	564	250	344	480	628	525	1040	2410	737	240	70
17	336	637	240	347	503	656	509	964	2070	687	241	70
18	314	674	295	357	529	647	495	892	1750	594	230	68
19	369	654	319	359	536	609	503	792	1690	516	210	68
20	321	585	312	358	525	606	508	700	1720	483	185	65
21	316	561	327	364	537	587	579	684	1710	431	170	66
22	369	525	356	364	535	570	660	734	1680	387	155	67
23	333	498	395	371	560	558	719	775	1690	376	140	70
24	287	460	382	367	599	563	722	845	1620	387	140	69
25	266	418	292	367	607	564	780	971	1630	342	125	65
26	252	396	245	357	642	561	962	1090	1810	343	120	68
27	254	358	340	364	678	554	1110	1300	2070	348	115	70
28	247	359	310	368	678	532	972	1540	2480	336	115	68
29	268	353	299	371	---	522	889	1810	2810	313	120	66
30	280	343	260	371	---	520	867	1840	2710	270	110	68
31	275	---	290	383	---	522	---	2080	---	253	100	---
TOTAL	16644	16022	10299	10671	13234	18262	18642	29675	63770	27516	6691	2174
MEAN	537	534	332	344	473	589	621	957	2126	888	216	72.5
MAX	1320	783	511	383	678	718	1110	2080	2810	2170	354	90
MIN	247	239	240	276	352	520	407	482	1620	253	100	65
AC-FT	33010	31780	20430	21170	26250	36220	36980	58860	126500	54580	13270	4310

CAL YR 1982	TOTAL	238617	MEAN 654	MAX 1910	MIN 152	AC-FT 473300
WTR YR 1983	TOTAL	233600	MEAN 640	MAX 2810	MIN 65	AC-FT 463300

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

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 20...	1500	314	250	--	8.1	--	8.0	--	--	--	--	--
DEC 08...	1330	289	250	--	8.1	--	1.0	11.6	--	--	--	--
FEB 09...	1415	346	190	--	7.8	--	3.0	--	--	--	--	--
APR 27...	1500	1150	150	--	7.6	--	11.0	10.4	--	--	--	--
JUN 07...	1930	1930	190	--	7.7	--	15.0	9.0	--	--	--	--
JUL 21...	1730	413	340	--	8.0	--	21.0	--	--	--	--	--
SEP 02...	1700	86	400	409	8.4	8.5	20.0	--	130	13	13	39

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 20...	--	--	--	--	75	--	--	--	--	--	--	--
DEC 08...	--	--	--	--	87	--	--	--	--	--	--	2.4
FEB 09...	--	--	--	--	67	--	--	--	--	--	--	1.6
APR 27...	--	--	--	--	56	--	--	--	--	--	--	10
JUN 07...	--	--	--	--	66	--	--	--	--	--	--	7.6
JUL 21...	--	--	--	--	97	--	--	--	--	--	--	5.4
SEP 02...	8.5	32	1.3	4.9	120	118	81	9.1	.60	25	272	3.2

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	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 20...	1500	--	0	0	30	6	1	1	30	0
DEC 08...	1330	--	0	0	30	9	<1	<1	30	0
FEB 09...	1415	--	0	0	30	11	<1	<1	20	0
APR 27...	1500	--	0	10	140	10	<1	<1	60	0
JUN 07...	1930	--	0	0	140	7	<1	<1	30	10
JUL 21...	1730	--	0	0	20	7	2	2	30	0
SEP 02...	1700	0	0	20	10	6	2	2	50	0

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

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INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT					
20...	1500	314	8.0	3	2.5
DEC					
08...	1330	289	1.0	21	16
APR					
27...	1500	1150	11.0	180	559
JUL					
21...	1730	413	21.0	47	52
SEP					
02...	1700	86	20.0	29	6.7

## RIO GRANDE BASIN

08265000 RED RIVER NEAR QUESTA, NM

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

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

## WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records good except those for winter period and those for May and June, which are poor. 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 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 upstream bypass gage in tailings pipelines on left bank and discharge into settling pond 3 mi downstream.

Effluent from this pond enters Red River as surface water and is included in discharge at Red River below Fish Hatchery, near Questa (station 08266820). See tabulation below for bypass flow of water.

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

18 years (water years 1966-83), 35.6 ft<sup>3</sup>/s, 25,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1929).--Maximum discharge, 886 ft<sup>3</sup>/s May 25, 1942, from rating curve extended above 450 ft<sup>3</sup>/s; maximum gage height, 5.80 ft June 8, 1979; minimum discharge, 0.60 ft<sup>3</sup>/s Jan. 21, 1981, result of freezeup.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 11	1915	193	3.66	July 24	1545	279	4.12
May 30	1930	*395	4.75	July 26	2045	177	3.56
July 12	1645	282	4.13	Aug. 1	2145	249	3.97

Minimum discharge, 10 ft<sup>3</sup>/s Dec. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	32	23	11	19	19	23	106	332	218	92	49
2	47	30	20	11	19	19	22	99	311	207	88	47
3	45	27	16	11	18	19	23	89	265	193	87	46
4	45	28	17	11	20	19	20	95	257	189	90	45
5	43	27	19	11	19	19	21	114	273	187	85	43
6	42	27	19	12	17	19	22	120	292	185	79	41
7	41	27	19	13	14	19	22	116	265	182	76	41
8	41	27	21	14	17	19	22	131	253	173	74	41
9	40	31	24	16	19	19	21	149	258	164	69	40
10	38	31	23	12	19	19	21	149	266	159	68	40
11	40	29	22	14	18	21	22	175	271	163	70	39
12	41	26	19	16	18	21	21	168	286	174	71	38
13	40	28	17	17	18	22	22	173	298	159	73	37
14	40	28	21	18	18	23	21	165	267	139	68	35
15	38	28	17	17	18	23	21	147	243	131	64	34
16	37	29	16	20	18	21	22	135	233	125	60	33
17	37	28	18	21	18	22	22	127	233	123	58	33
18	36	28	18	21	18	23	24	120	246	132	56	33
19	35	27	17	21	19	21	27	118	274	125	56	33
20	34	27	17	21	18	22	31	117	284	117	54	32
21	34	27	18	21	18	18	32	113	284	116	52	32
22	33	27	18	20	18	22	35	122	275	108	51	31
23	32	26	20	19	18	20	35	131	267	103	52	31
24	32	25	19	20	18	21	42	162	269	111	51	30
25	32	25	18	21	19	20	63	208	282	103	51	31
26	32	25	14	21	19	20	83	229	292	110	52	32
27	42	25	20	20	19	19	89	268	265	109	52	35
28	35	25	17	20	19	20	92	271	253	97	54	33
29	32	23	14	19	---	20	107	261	239	93	54	32
30	32	24	10	20	---	20	109	317	227	95	48	33
31	32	---	10	19	---	22	---	330	---	91	46	---
TOTAL	1177	817	561	528	510	631	1137	5025	8060	4381	2001	1100
MEAN	38.0	27.2	18.1	17.0	18.2	20.4	37.9	162	269	141	64.5	36.7
MAX	49	32	24	21	20	23	109	330	332	218	92	49
MIN	32	23	10	11	14	18	20	89	227	91	46	30
AC-FT	2330	1620	1110	1050	1010	1250	2260	9970	15990	8690	3970	2180
(t)	80	104	124	121	101	108	122	111	107	72	73	151

CAL YR 1982 TOTAL 15816.3 MEAN 43.3 MAX 142 MIN 7.7 AC-FT 31370 (t) 1070

WTR YR 1983 TOTAL 25928.0 MEAN 71.0 MAX 332 MIN 10 AC-FT 51430 (t) 1270

(t) Bypass flow of water in acre-feet through tailings pipelines; records furnished by MolyCorp.  
Mill did not operate during year.



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

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 19...	1600	32	265	7.4	6.0	9.4	49	--
DEC 07...	1645	21	295	7.1	.5	11.0	41	1.2
FEB 08...	1630	22	310	7.3	1.0	11.0	44	1.7
APR 26...	1500	81	240	6.8	9.0	8.6	28	8.3
JUN 07...	1515	247	145	7.2	9.0	8.7	39	4.5
JUL 21...	1340	123	200	7.3	11.0	9.1	48	2.4
AUG 31...	1300	47	290	7.2	15.0	7.7	61	1.0

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CU) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 19...	1600	0	20	30	390	5	5	110	60
DEC 07...	1645	0	30	40	530	2	4	160	110
FEB 08...	1630	0	40	30	520	5	4	170	90
APR 26...	1500	1	90	0	1200	5	2	420	190
JUN 07...	1515	0	20	50	130	6	<1	70	30
JUL 21...	1340	0	20	0	250	5	<1	120	40
AUG 31...	1300	0	20	0	430	4	4	160	50

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 19...	1600	32	6.0	3	.26
DEC 07...	1645	21	.5	26	1.5
FEB 08...	1630	22	1.0	47	2.8
APR 26...	1500	81	9.0	300	66
JUN 07...	1515	247	9.0	351	234
JUL 21...	1340	123	11.0	63	21
AUG 31...	1300	47	15.0	31	3.9

## 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 downstream from Llano ditch heading, 2.6 mi downstream from Lake Fork, 3 mi northeast of Questa, and at mile 3.5.

DRAINAGE AREA.--36.7 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1712: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,845 ft, from river-profile map.

REMARKS.--Water-discharge records good. Llano ditch (station 08265500), the only diversion above station, diverts from right bank 900 ft above gage for irrigation of about 800 acres 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, after reconstruction in 1928) on Lake Fork 1 mi above mouth. Present capacity of Cabresto Reservoir is 1,100 acre-feet after further rehabilitation between 1959 and 1961.

AVERAGE DISCHARGE.--40 years, 9.92 ft<sup>3</sup>/s, 7,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 204 ft<sup>3</sup>/s June 2, 1983, gage height, 4.82 ft; minimum, 0.44 ft/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, 204 ft<sup>3</sup>/s June 2, gage height, 4.82 ft; minimum, 0.77 ft<sup>3</sup>/s. Oct. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	4.9	2.0	4.0	5.4	5.4	7.4	28	167	35	16	12
2	13	4.9	1.8	4.0	5.4	5.4	7.2	26	170	31	17	12
3	13	4.4	1.2	4.5	5.0	5.4	7.6	24	143	29	15	12
4	13	4.3	1.5	4.5	5.5	5.5	5.3	23	129	28	15	12
5	12	4.0	2.3	4.5	5.4	5.5	4.8	27	125	28	13	11
6	12	4.0	2.3	5.0	4.5	5.5	6.2	32	119	26	14	11
7	12	4.0	2.3	5.2	5.1	5.6	6.4	33	114	28	14	11
8	12	4.1	2.4	5.4	5.3	5.9	6.8	39	108	23	13	11
9	12	4.4	2.4	5.6	5.3	5.8	6.6	51	102	20	14	11
10	12	4.5	2.4	4.5	5.3	5.9	6.4	64	92	18	14	10
11	12	4.2	2.5	5.4	5.2	6.2	6.3	77	88	21	13	10
12	12	3.7	2.0	5.0	5.0	6.8	6.1	91	91	21	12	10
13	12	3.8	2.0	5.0	5.5	6.9	6.0	81	96	19	13	11
14	12	4.0	2.5	5.0	5.5	7.7	5.9	73	83	17	13	10
15	12	3.9	2.0	4.5	5.4	7.8	5.8	63	75	15	12	10
16	12	4.3	2.1	5.5	5.4	6.9	5.7	57	69	13	14	10
17	12	4.2	2.6	5.5	5.4	7.3	5.8	55	64	13	18	9.9
18	11	4.2	2.6	5.5	5.4	7.5	6.3	50	63	12	17	9.9
19	11	3.6	2.3	5.5	5.6	7.0	7.0	42	69	12	17	9.8
20	11	2.4	2.4	5.5	5.5	7.3	8.0	41	72	12	17	9.6
21	10	2.2	2.5	5.4	5.3	6.3	8.9	39	69	12	16	9.8
22	10	2.2	2.6	5.5	5.5	7.2	9.5	43	66	11	16	9.7
23	10	2.1	4.6	5.4	5.5	7.0	9.4	46	60	11	15	9.5
24	9.7	2.1	4.3	5.4	5.6	7.0	11	64	60	11	15	9.5
25	9.5	2.0	3.7	5.5	5.7	7.3	16	79	67	9.4	14	9.5
26	9.4	2.1	3.0	5.5	5.4	7.1	20	91	64	13	14	9.6
27	7.6	2.1	4.5	5.5	5.4	6.0	23	101	55	15	13	10
28	1.5	2.1	3.4	5.4	5.4	6.9	24	111	47	14	14	10
29	.91	2.0	3.3	5.4	---	6.8	27	109	40	16	15	9.8
30	3.1	2.1	3.5	5.4	---	7.6	28	124	38	16	14	9.9
31	5.0	---	3.8	5.4	---	7.1	---	154	---	16	16	---
TOTAL	317.71	102.8	82.8	159.4	149.9	203.6	304.4	1938	2605	565.4	453	310.5
MEAN	10.2	3.43	2.67	5.14	5.35	6.57	10.1	62.5	86.8	18.2	14.6	10.4
MAX	13	4.9	4.6	5.6	5.7	7.8	28	154	170	35	18	12
MIN	.91	2.0	1.2	4.0	4.5	5.4	4.8	23	38	9.4	12	9.5
AC-FT	630	204	164	316	297	404	604	3840	5170	1120	899	616
(1)	40	---	---	---	---	---	0	264	733	825	833	23

CAL YR 1982 TOTAL 3245.81 MEAN 8.89 MAX 33 MIN .91 AC-FT 6440  
WTR YR 1983 TOTAL 7192.51 MEAN 19.7 MAX 170 MIN .91 AC-FT 14270

(1) Diversion, in acre-feet, by Llano ditch.

RIO GRANDE BASIN  
08266500 RED RIVER BELOW QUESTA, NM  
WATER-QUALITY RECORDS

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LOCATION.--Lat 36°41'34", long 105°36'42", SW¼NE¼ sec. 1, T. 28N., R. 12E., Taos County, Hydrologic Unit 13020101, at bridge on State Highway 3, 1.3 mi (2.1 km) southwest of Questa.

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 1982 TO SEPTEMBER 1983

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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 19...	1530	E48	255	7.5	7.0	9.1	48	--
DEC 07...	1700	E25	305	7.3	1.0	10.5	26	.8
FEB 08...	1700	E29	290	7.5	2.0	10.5	48	1.3
APR 26...	1300	96	225	7.3	8.0	9.3	33	8.6
JUN 07...	1430	E400	140	7.1	10.0	8.9	38	5.0
JUL 22...	1430	112	218	7.5	13.0	--	51	1.3
AUG 31...	1400	E50	290	7.4	15.5	7.7	49	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 19...	1530	0	10	20	280	5	5	80	40
DEC 07...	1700	0	20	10	500	5	4	120	80
FEB 08...	1700	0	30	10	390	5	3	160	70
APR 26...	1300	1	50	0	950	2	2	310	90
JUN 07...	1430	0	20	20	87	7	<1	60	10
JUL 22...	1430	0	20	0	240	3	3	140	40
AUG 31...	1400	0	20	0	360	6	5	120	40

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 19...	1530	E48	7.0	19	2.5
FEB 08...	1700	E29	2.0	48	--
APR 26...	1300	96	8.0	345	89
JUN 07...	1430	E400	10.0	594	--
JUL 22...	1430	112	13.0	28	8.5
AUG 31...	1400	E50	15.5	46	--

RIO GRANDE BASIN  
08266790 RED RIVER ABOVE STATE FISH HATCHERY NEAR QUESTA, NM  
WATER-QUALITY RECORDS

LOCATION.--Lat 36°41'12" long 105°38'40", in SE¼SE¼ sec. 3, T.28N., R.12E., Taos County, Hydrologic Unit 130020101, 0.5 mi (0.8 km) upstream from Red River State Fish Hatchery and 3.0 mi (4.8 km) southwest of Questa.

DRAINAGE AREA.--175 mi<sup>2</sup> (453 km<sup>2</sup>).

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 19...	1415	52	300	8.0	8.0	9.3	79	--
DEC 08...	1030	E29	370	7.9	3.0	10.8	44	.9
FEB 09...	1030	30	370	7.3	2.5	11.2	56	.9
APR 26...	1030	E109	245	7.2	4.0	10.2	34	9.0
JUN 07...	1230	E418	150	7.2	8.0	9.7	38	5.8
JUL 21...	1015	E127	235	7.3	10.0	8.1	53	1.5
AUG 31...	1500	E65	328	7.9	16.0	--	64	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, TOTAL DIS- SOLVED (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 19...	1415	0	10	20	240	63	65	70	30
DEC 08...	1030	0	10	0	350	91	99	80	40
FEB 09...	1030	0	20	0	400	88	95	100	50
APR 26...	1030	1	100	10	850	29	25	350	70
JUN 07...	1230	0	30	20	88	13	6	80	20
JUL 21...	1015	0	10	20	240	21	21	70	70
AUG 31...	1500	--	20	0	310	37	44	90	20

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 19...	1415	52	8.0	30	4.2
FEB 09...	1030	30	2.5	18	1.5
APR 26...	1030	E109	4.0	474	--
JUN 07...	1230	E418	8.0	1970	--
JUL 21...	1015	E127	10.0	43	--
AUG 31...	1500	E65	16.0	18	--

## 08266820 RED RIVER BELOW FISH HATCHERY, NEAR QUESTA, NM

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

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

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 7,070 ft, from topographic map. Prior to Aug. 16, 1979, at site about 250 ft upstream at datum 5.55 ft higher.

REMARKS.--Water-discharge records good. Diversions for irrigation of about 3,000 acres above station.

AVERAGE DISCHARGE.--5 years, 86.2 ft<sup>3</sup>/s, 62,450 acre-ft/yr.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 11	2345	296	3.42	Aug. 1	2330	280	2.96
June 1	2330	*621	4.39	Aug. 7	1815	196	2.89

Minimum discharge, 28 ft<sup>3</sup>/s Dec. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	53	51	33	47	48	55	153	556	320	117	79
2	76	55	47	34	46	49	52	138	563	302	125	84
3	73	47	40	35	42	49	54	133	503	275	116	80
4	72	48	41	36	48	49	49	133	456	264	120	77
5	70	48	44	38	47	50	43	137	419	256	113	73
6	67	48	44	39	41	49	47	144	406	247	106	71
7	60	48	45	41	42	49	47	148	424	246	109	71
8	67	48	47	42	47	49	50	179	411	244	103	73
9	67	52	50	43	47	48	49	207	409	239	97	73
10	65	53	51	40	45	48	49	222	388	237	95	70
11	66	59	50	43	45	50	49	261	384	230	96	71
12	68	50	45	44	43	51	48	275	392	244	97	68
13	66	51	42	44	46	52	49	272	410	220	98	67
14	68	53	48	45	46	54	50	257	386	190	95	64
15	66	51	41	46	45	56	49	228	361	185	93	63
16	65	54	42	46	45	53	50	207	337	175	89	60
17	65	53	45	47	45	54	51	194	332	170	85	60
18	63	54	45	48	45	55	53	181	345	190	79	61
19	63	53	41	47	46	53	55	173	362	180	78	61
20	64	54	42	47	45	53	60	168	384	165	77	60
21	62	53	43	48	44	48	63	161	390	160	77	59
22	62	52	44	47	45	52	65	166	388	150	76	60
23	60	52	46	45	46	50	66	175	370	145	76	59
24	61	51	47	46	48	51	73	215	380	155	76	58
25	63	51	39	48	49	51	94	283	399	145	76	57
26	64	51	39	46	49	50	130	318	403	155	78	60
27	72	52	47	46	49	47	132	360	370	143	77	61
28	64	51	42	46	48	50	144	382	350	130	80	61
29	58	50	32	46	---	50	169	420	331	123	81	58
30	57	52	35	47	---	50	164	458	323	124	77	58
31	54	---	34	46	---	52	---	528	---	119	74	---
TOTAL	2026	1547	1349	1349	1281	1570	2109	7276	11932	6128	2836	1977
MEAN	65.4	51.6	43.5	43.5	45.8	50.6	70.3	235	398	198	91.5	65.9
MAX	78	59	51	48	49	56	169	528	563	320	125	84
MIN	54	47	32	33	41	47	43	133	323	119	74	57
AC-FT	4020	3070	2680	2680	2540	3110	4180	14430	23670	12150	5630	3920
CAL YR 1982	TOTAL	25889	MEAN	70.9	MAX	167	MIN	28	AC-FT	51350		
WTR YR 1983	TOTAL	41380	MEAN	113	MAX	563	MIN	32	AC-FT	82080		

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

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

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LITY FIELD (MG/L) AS CAC03 (00410)	ALKA- LITY LAB (MG/L) AS CAC03 (90410)	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)
OCT 19...	1445	68	300	--	7.8	--	11.0	--	67	--	--
DEC 08...	1115	47	340	--	7.5	--	6.5	9.8	74	--	--
FEB 09...	1115	46	320	--	6.5	--	6.5	9.5	66	--	--
APR 26...	1100	124	--	--	--	--	7.0	9.2	43	--	--
JUN 07...	1330	413	150	--	7.2	--	10.0	9.0	41	--	--
JUL 21...	1145	160	240	--	7.6	--	12.0	8.5	57	--	--
AUG 31...	1615	76	375	330	7.8	8.1	18.0	--	69	72	73

DATE	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F (00950)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) AS N (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L) AS N (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N (00605)	NITRO- GEN, TOTAL (MG/L) AS N (00600)	PHOS- PHORUS, TOTAL (MG/L) AS P (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L) AS P (00671)	CARBON, ORGANIC TOTAL (MG/L) AS C (00680)	CYANIDE TOTAL (MG/L) AS CN (00720)
OCT 19...	--	--	--	--	--	--	--	--	--	1.9	<.01
DEC 08...	--	--	--	--	--	--	--	--	--	--	<.01
FEB 09...	--	--	--	--	--	--	--	--	--	1.5	<.01
APR 26...	--	--	--	--	--	--	--	--	--	8.2	<.01
JUN 07...	--	--	--	--	--	--	--	--	--	6.1	<.01
JUL 21...	--	--	--	--	--	--	--	--	--	1.1	<.01
AUG 31...	5.0	.80	.20	.26	.070	.33	.60	.060	.030	1.2	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	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 19...	1445	--	--	--	--	--	--	0	--	10
DEC 08...	1115	--	--	--	0	--	--	0	--	0
FEB 09...	1115	--	--	--	0	--	--	0	--	0
APR 26...	1100	--	--	--	1	--	--	60	--	20
JUN 07...	1330	--	--	--	0	--	--	20	--	20
JUL 21...	1145	--	--	--	0	--	--	10	--	10
AUG 31...	1615	1	1	0	<1	<10	<10	10	4	--

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

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 19...	--	--	170	--	--	52	48	--	40	20
DEC 08...	--	--	220	--	--	62	71	--	60	30
FEB 09...	--	--	230	--	--	58	65	--	70	40
APR 26...	--	--	690	--	--	24	24	--	300	40
JUN 07...	--	--	78	--	--	13	9	--	110	10
JUL 21...	--	--	200	--	--	21	21	--	60	30
AUG 31...	0	<1	--	<.0	1.0	31	37	<1	130	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 19...	8
FEB 09...	13

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
DEC 08...	1115	47	6.5	33	4.2
FEB 09...	1115	46	6.5	23	2.9
APR 26...	1100	124	7.0	365	122
JUN 07...	1330	413	10.0	1790	2000
JUL 21...	1145	160	12.0	44	19
AUG 31...	1615	76	18.0	80	16

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

LOCATION.--Lat 36°38'53", long 105°41'34", in SW¼NW¼ sec. 20, T.28N., R.12E., Taos County, Hydrologic Unit 13020101, in Carson National Forest, 250 ft (76 m) upstream from Rio Grande, and 6.5 mi (10.5 km) southwest of Questa.

DRAINAGE AREA.--190 mi<sup>2</sup> (492 km<sup>2</sup>).

PERIOD OF RECORD.--Water years 1966-1969, 1979 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 20...	1700	E70	290	8.0	11.0	9.4	67	--
DEC 07...	1430	54	330	8.3	8.0	10.0	61	1.2
FEB 11...	1300	E58	300	7.6	3.0	--	69	1.0
APR 27...	1100	153	240	7.3	6.0	10.0	41	8.3
JUL 22...	1045	E166	243	7.0	12.0	--	57	1.0
SEP 02...	1500	E95	300	7.1	17.0	--	61	1.0

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 20...	1700	0	0	0	120	48	47	40	0
DEC 07...	1430	0	0	0	160	54	58	50	10
FEB 11...	1300	0	0	0	130	57	61	40	10
APR 27...	1100	1	50	0	610	22	23	280	30
JUL 22...	1045	0	10	0	180	25	22	60	20
SEP 02...	1500	0	10	0	180	28	32	70	10

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 20...	1700	E70	11.0	40	--
DEC 07...	1430	54	8.0	33	4.8
APR 27...	1100	153	6.0	361	149
JUL 22...	1045	E166	12.0	41	--
SEP 02...	1500	E95	17.0	21	--



RIO GRANDE BASIN  
08267400 RIO GRANDE ABOVE RIO HONDO AT DUNN BRIDGE, NM  
WATER-QUALITY RECORDS

99

LOCATION.--Lat 36°32' 06", long 105°42'30" in NW¼sec. 31, T.27N., R.12E., Taos County, Hydrologic Unit 13020101, at Dunn bridge on county road, 50 ft (15 m) upstream from mouth of Arroyo Hondo, 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.--Undetermined.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 19...	1300	492	260	7.9	9.5	9.7	80	--
DEC 07...	1130	465	280	8.3	3.0	10.5	87	2.1
FEB 08...	1500	459	205	7.4	3.0	11.6	64	1.3
APR 25...	1600	898	205	7.9	13.0	8.6	69	--
JUN 06...	1700	2450	180	7.6	13.0	8.2	59	6.6
JUL 20...	1430	722	--	8.0	20.0	6.9	--	3.7
AUG 31...	1730	249	315	8.4	19.0	--	90	1.9

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 19...	1300	0	0	20	15	9	9	30	0
DEC 07...	1130	0	0	180	36	7	7	40	0
FEB 08...	1500	0	0	20	19	6	5	20	10
APR 25...	1600	0	20	70	38	4	4	70	0
JUN 06...	1700	0	20	40	9	4	<1	50	0
JUL 20...	1430	0	0	20	23	6	7	30	10
AUG 31...	1730	0	0	10	35	14	13	50	0

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 19...	1300	492	9.5	18	24
DEC 07...	1130	465	3.0	29	36
FEB 08...	1500	459	3.0	17	21
JUN 06...	1700	2450	13.0	1440	9530
JUL 20...	1430	722	20.0	21	42
AUG 31...	1730	249	19.0	22	15

## RIO GRANDE BASIN

08267500 RIO HONDO NEAR VALDEZ, NM

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

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

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

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

GAGE.--Water-stage recorder. Concrete control since Oct. 28, 1938. Altitude of gage is 7,650 ft, from topographic map. Prior to Oct. 28, 1938, at datum 1.92 ft lower.

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

AVERAGE DISCHARGE.--49 years, 34.4 ft<sup>3</sup>/s, 24,920 acre-ft/yr.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	1130	ice jam	*4.59	June 26	0100	*321	3.78
Apr. 30	0030	89	2.64				

Minimum discharge, 9.3 ft<sup>3</sup>/s Feb. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	24	17	10	12	15	19	81	222	215	65	33
2	41	24	18	11	12	15	18	74	209	206	66	32
3	39	21	21	11	11	15	19	64	195	200	63	31
4	37	21	19	11	12	16	17	60	201	190	61	30
5	36	22	18	12	12	15	16	65	212	181	57	30
6	35	22	17	13	11	15	17	80	223	173	55	29
7	33	21	17	14	11	14	16	75	223	171	53	29
8	35	21	17	13	12	15	15	80	243	167	52	29
9	37	24	17	14	12	15	15	90	238	161	50	29
10	36	23	17	13	12	17	15	105	231	154	49	28
11	35	21	17	14	12	20	15	125	233	154	49	28
12	35	21	17	13	12	22	15	130	239	147	50	27
13	33	22	17	13	12	25	14	120	224	137	52	27
14	33	21	16	13	12	28	13	110	221	128	51	26
15	32	21	15	13	12	27	14	95	207	121	48	26
16	32	21	15	13	12	24	14	80	208	116	45	25
17	31	20	15	13	12	22	14	65	211	113	43	24
18	29	21	15	13	12	22	16	60	227	109	42	24
19	28	21	15	13	13	20	20	65	240	101	41	24
20	27	21	16	13	13	19	27	70	260	96	40	23
21	27	20	15	13	13	20	31	75	257	92	39	23
22	26	20	15	13	13	18	32	80	266	89	38	22
23	25	20	15	13	14	18	30	90	267	86	38	21
24	25	20	15	13	15	17	37	130	277	83	37	21
25	25	20	14	13	16	16	60	152	283	79	36	21
26	25	19	14	12	15	16	75	185	274	78	36	21
27	35	19	14	12	15	16	80	202	262	76	35	25
28	28	19	13	12	15	15	75	220	249	71	34	22
29	26	19	12	12	---	14	83	242	243	68	35	21
30	25	19	11	12	---	15	86	233	224	66	33	22
31	25	---	10	12	---	17	---	199	---	65	32	---
TOTAL	980	628	484	390	355	563	918	3502	7069	3893	1425	773
MEAN	31.6	20.9	15.6	12.6	12.7	18.2	30.6	113	236	126	46.0	25.8
MAX	44	24	21	14	16	28	86	242	283	215	66	33
MIN	25	19	10	10	11	14	13	60	195	65	32	21
AC-FT	1940	1250	960	774	704	1120	1820	6950	14020	7720	2830	1530

CAL YR 1982 TOTAL 13186.2 MEAN 36.1 MAX 124 MIN 6.4 AC-FT 26150  
WTR YR 1983 TOTAL 20980.0 MEAN 57.5 MAX 283 MIN 10 AC-FT 41610

## 08268500 ARROYO HONDO AT ARROYO HONDO, NM

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

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

## WATER-DISCHARGE RECORDS

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

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, from topographic map. See WSP 1923 for history of changes prior to Sept. 11, 1963. Sept. 11, 1963 to Apr. 2, 1969, at site 25 ft downstream on right bank at same datum.

REMARKS.--Water-discharge records good. Diversions above station for irrigation of about 2,500 acres, of which about 1,700 acres is a transbasin diversion to Rio Lucero.

AVERAGE DISCHARGE.--67 years (water years 1913-28, 1933-83), 27.0 ft<sup>3</sup>/s, 19,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1937).--Maximum discharge, 1,060 ft<sup>3</sup>/s July 19, 1948, gage height, 3.75 ft, from rating curve extended above 200 ft/s; maximum gage height, 5.06 ft June 8, 1979, backwater from debris; minimum discharge, 3.3 ft<sup>3</sup>/s May 7, 1977.

Maximum gage height observed, 5.45 ft, site and datum then in use, Aug. 23, 1935; discharge uncertain, but probably exceeded 1,200 ft<sup>3</sup>/s. A minimum daily discharge of 3 ft<sup>3</sup>/s occurred Oct. 19, 1912. Discharge not determined for the major floods of Oct. 6, 1911, Sept. 1, 1932 and July 22, 1934.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 12	0645	144	3.39	June 25	1400	293	4.03
June 1	0715	*303	4.11	Aug. 3	1530	98	3.08

Minimum discharge, 8.1 ft<sup>3</sup>/s Dec. 29, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	27	24	13	21	24	29	87	288	194	43	15
2	42	26	26	15	21	24	27	81	260	179	43	16
3	40	21	25	15	19	24	27	72	244	170	41	16
4	39	22	27	15	21	25	24	66	213	158	43	14
5	37	22	27	17	21	25	22	72	200	153	41	13
6	36	22	26	19	18	24	25	87	199	142	39	12
7	34	23	25	21	18	23	23	83	198	135	42	12
8	32	24	25	20	21	23	24	87	214	127	37	12
9	32	27	26	20	21	23	23	101	216	118	34	11
10	32	30	26	17	21	24	22	117	219	112	33	11
11	32	29	26	20	20	27	23	132	221	109	33	11
12	33	25	24	20	20	28	22	138	230	104	30	11
13	33	25	24	20	22	30	23	126	222	100	28	11
14	35	26	25	20	23	35	22	115	200	97	28	11
15	32	26	21	20	22	35	23	100	183	93	28	11
16	32	26	22	20	22	33	22	87	179	91	24	11
17	31	26	24	21	22	31	22	72	179	89	21	10
18	31	27	23	21	22	32	24	62	185	90	21	10
19	30	26	22	21	22	30	28	66	200	77	20	10
20	29	25	23	20	22	28	35	76	218	59	19	10
21	28	25	23	20	21	26	39	71	238	62	18	10
22	28	25	23	20	22	28	40	64	238	63	17	10
23	28	25	25	19	23	26	38	53	238	56	17	11
24	26	25	24	20	24	26	45	71	248	52	16	11
25	24	24	19	20	26	25	67	112	269	49	16	11
26	25	24	22	20	25	24	83	162	275	50	16	11
27	34	24	23	21	25	23	84	186	261	48	16	12
28	30	24	19	21	24	24	78	196	238	48	15	9.9
29	29	23	11	21	---	23	87	230	212	47	16	9.6
30	28	24	11	22	---	23	95	255	199	46	15	9.8
31	27	---	12	21	---	25	---	270	---	44	15	---
TOTAL	996	748	703	600	609	821	1146	3497	6684	2962	825	343.3
MEAN	32.1	24.9	22.7	19.4	21.8	26.5	38.2	113	223	95.5	26.6	11.4
MAX	47	30	27	22	26	35	95	270	288	194	43	16
MIN	24	21	11	13	18	23	22	53	179	44	15	9.6
AC-FT	1980	1480	1390	1190	1210	1630	2270	6940	13260	5880	1640	681

CAL YR 1982 TOTAL 8906.8 MEAN 24.4 MAX 78 MIN 5.5 AC-FT 17670  
WTR YR 1983 TOTAL 19934.3 MEAN 54.6 MAX 288 MIN 9.6 AC-FT 39540

## RIO GRANDE BASIN

08268700 RIO GRANDE NEAR ARROYO HONDO, NM

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

DRAINAGE AREA.--8,760 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,470 ft, from topographic map.

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres in Colorado and 15,000 acres in New Mexico. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 597 ft<sup>3</sup>/s, 432,500 acre-ft/yr.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 4	2145	1590	3.69	June 3	0030	*3850	5.77
Apr. 27	2000	1480	3.61	June 14	2030	3690	5.56
May 13	2245	1770	3.95	June 30	0215	3750	5.60

Minimum discharge, 188 ft<sup>3</sup>/s Sept. 20, 21, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	380	457	407	509	847	703	1170	3430	2920	462	256
2	1050	369	402	387	503	864	697	1060	3820	2760	559	260
3	1180	359	393	391	503	839	734	938	3920	2720	538	251
4	1440	510	406	391	509	767	727	858	3720	2390	568	241
5	1530	713	409	402	512	802	624	799	3100	2190	517	227
6	1310	703	405	423	474	788	662	800	2690	2090	524	218
7	1130	701	442	449	496	757	679	815	2670	1960	548	214
8	1030	727	457	462	502	732	679	870	2760	1780	524	215
9	876	744	486	474	517	723	672	873	2810	1590	476	212
10	705	814	549	477	517	701	677	1010	2770	1490	487	208
11	648	877	595	483	527	693	654	1220	2750	1360	502	209
12	618	868	613	487	535	693	633	1540	2700	1290	459	208
13	581	819	590	476	542	713	646	1710	3130	1300	436	211
14	554	791	562	477	568	740	670	1640	3610	1200	446	205
15	523	721	518	485	592	766	670	1490	3470	1160	444	201
16	507	674	382	478	609	794	673	1380	3200	1070	421	199
17	496	713	363	485	632	819	662	1250	2820	1010	418	196
18	472	751	430	492	665	820	649	1160	2420	945	386	195
19	505	770	444	489	676	778	659	1050	2370	834	363	195
20	488	690	450	493	661	767	678	972	2450	781	334	190
21	451	670	446	497	669	742	732	926	2490	731	316	191
22	510	637	468	496	681	730	819	961	2420	691	302	195
23	495	613	521	495	704	711	884	994	2440	654	285	199
24	439	580	517	499	754	713	903	1110	2360	667	284	194
25	416	539	458	504	780	713	984	1340	2400	629	265	191
26	406	522	365	488	792	711	1200	1580	2590	620	262	200
27	405	493	459	497	815	699	1420	1860	2800	638	260	212
28	384	484	430	501	828	685	1280	2150	3210	608	260	203
29	388	482	400	500	---	674	1200	2470	3620	576	262	197
30	433	476	350	503	---	672	1170	2560	3580	537	260	211
31	417	---	378	512	---	677	---	2910	---	496	257	---
TOTAL	21437	19190	14145	14600	17072	23130	24040	41466	88520	39687	12425	6304
MEAN	692	640	456	471	610	746	801	1338	2951	1280	401	210
MAX	1530	877	613	512	828	864	1420	2910	3920	2920	568	260
MIN	384	359	350	387	474	672	624	799	2360	496	257	190
AC-FT	42520	38060	28060	28960	33860	45880	47680	82250	175600	78720	24640	12500
CAL YR 1982	TOTAL	291280	MEAN	798	MAX	2190	MIN	262	AC-FT	577800		
WTR YR 1983	TOTAL	322016	MEAN	882	MAX	3920	MIN	190	AC-FT	638700		

RIO GRANDE BASIN

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08269000 RIO PUEBLO DE TAOS NEAR TAOS, NM

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

DRAINAGE AREA.--66.6 mi<sup>2</sup>.

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

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

GAGE.--Water-stage recorder. Concrete control since Nov. 20, 1962. Altitude of gage is 7,380 ft, 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.--38 years (water years 1911-16, 1941-51, 1963-83), 28.9 ft<sup>3</sup>/s, 20,940 acre-ft/yr.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 29	2300	241	1.99	June 1	2100	*474	2.52
May 11	2230	390	2.37				

Minimum discharge, 4.4 ft<sup>3</sup>/s Feb. 11, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	15	10	8.5	8.8	14	28	199	429	108	25	17
2	23	14	10	9.0	8.8	14	26	160	404	99	27	19
3	21	13	6.5	9.0	9.0	14	28	134	333	92	26	16
4	20	12	10	9.0	9.0	15	23	129	299	86	27	16
5	19	13	11	9.0	8.8	14	22	163	279	82	25	15
6	18	13	11	9.0	7.5	14	25	202	267	80	23	14
7	18	12	11	9.0	8.0	13	23	175	257	77	23	14
8	17	13	11	9.0	9.0	14	21	184	254	73	23	14
9	17	14	11	9.3	8.8	14	19	254	254	68	21	14
10	17	15	11	8.5	8.1	16	18	323	258	64	21	13
11	16	15	11	9.7	7.0	21	19	358	253	77	24	13
12	17	14	6.5	9.4	7.5	27	18	359	254	73	24	13
13	16	13	9.4	9.0	9.7	32	19	294	250	65	24	14
14	18	13	12	9.2	9.3	37	17	258	208	50	24	17
15	17	11	8.5	9.0	8.8	35	19	196	175	45	21	15
16	17	13	10	7.5	8.9	28	18	165	164	45	20	13
17	17	13	11	9.5	9.2	25	21	157	166	48	19	13
18	16	13	11	9.6	9.1	24	29	149	179	45	18	12
19	15	12	8.8	9.4	9.9	23	47	137	197	40	18	12
20	15	12	11	9.2	10	20	66	133	202	30	19	12
21	15	12	11	9.1	9.1	20	69	129	193	30	18	12
22	15	12	10	8.8	10	19	70	149	184	35	18	11
23	14	12	11	8.0	10	19	73	180	172	37	19	11
24	14	12	11	8.9	11	18	100	252	165	40	19	11
25	14	11	8.4	8.8	13	17	157	315	171	35	18	11
26	14	11	11	8.8	13	17	198	363	166	30	18	11
27	20	11	10	8.5	13	15	197	382	151	31	18	14
28	18	11	8.8	8.7	13	16	184	359	147	29	19	13
29	15	11	7.0	8.7	---	16	209	369	134	27	19	12
30	15	11	8.0	9.1	---	16	221	370	120	27	17	12
31	15	---	8.5	8.9	---	21	---	394	---	25	17	---
TOTAL	527	377	306.4	277.1	267.3	608	1984	7391	6685	1693	652	404
MEAN	17.0	12.6	9.88	8.94	9.55	19.6	66.1	238	223	54.6	21.0	13.5
MAX	24	15	12	9.7	13	37	221	394	429	108	27	19
MIN	14	11	6.5	7.5	7.0	13	17	129	120	25	17	11
AC-FT	1050	748	608	550	530	1210	3940	14660	13260	3360	1290	801

CAL YR 1982 TOTAL 10870.6 MEAN 29.8 MAX 136 MIN 4.0 AC-FT 21560  
WTR YR 1983 TOTAL 21171.8 MEAN 58.0 MAX 429 MIN 6.5 AC-FT 41990

## RIO GRANDE BASIN

08271000 RIO LUCERO NEAR ARROYO SECO, NM

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

DRAINAGE AREA.--16.6 mi<sup>2</sup>.

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

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

GAGE.--Water-stage recorder. Concrete control since Nov. 21, 1962. Datum of gage is 8,051.44 ft 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.--44 years (water years 1911-15, 1934-51, 1963-83), 21.7 ft<sup>3</sup>/s, 15,720 acre-ft/yr.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 12	0400	92	1.72	June 26	0415	167	*2.22
June 1	1730	*190	2.14				

Minimum discharge, 5.5 ft<sup>3</sup>/s Feb. 10, 11, Mar. 27, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	15	11	6.5	7.0	11	13	42	179	110	36	17
2	24	14	11	7.0	7.0	10	13	36	171	102	36	16
3	23	13	13	7.0	6.5	10	12	30	140	96	36	16
4	22	13	12	7.0	7.0	10	12	29	128	96	35	16
5	21	13	12	7.5	7.0	10	11	33	124	99	33	15
6	21	13	12	7.5	6.5	9.7	12	42	108	98	32	15
7	20	12	13	7.5	6.5	9.5	12	39	96	95	31	14
8	20	13	12	7.5	7.0	9.7	12	42	112	91	30	14
9	19	14	10	8.0	7.3	10	12	54	113	89	29	14
10	19	13	10	7.5	7.2	12	12	68	142	85	28	14
11	19	12	10	7.0	7.5	15	12	82	154	88	28	13
12	19	12	10	7.0	7.5	16	11	90	164	78	28	13
13	18	14	10	7.0	7.8	18	11	80	151	68	29	15
14	18	13	10	7.0	7.5	19	11	68	106	60	27	15
15	18	14	10	7.0	7.7	19	11	57	89	55	25	14
16	18	13	10	7.0	7.9	16	11	48	97	52	25	13
17	17	13	10	7.0	8.3	15	11	42	110	52	24	13
18	17	13	10	7.5	8.4	14	14	39	129	52	23	12
19	16	13	10	7.0	8.8	14	19	36	155	49	22	12
20	16	12	10	7.0	9.0	12	23	35	152	46	22	12
21	15	12	11	7.0	8.8	12	23	34	148	45	21	12
22	15	12	11	7.0	9.1	11	21	38	133	43	20	12
23	15	12	11	7.0	9.4	10	20	51	123	43	20	12
24	15	12	9.9	7.0	10	10	27	82	132	44	20	11
25	15	12	9.3	7.0	11	9.9	40	121	139	43	19	11
26	15	12	9.1	7.0	11	9.6	47	140	154	43	18	11
27	19	12	9.0	7.0	11	9.8	46	141	132	43	18	14
28	16	12	8.7	7.0	11	9.0	40	137	134	41	18	12
29	15	12	8.0	7.0	---	8.9	42	141	121	38	19	11
30	15	11	7.0	7.0	---	9.2	46	162	114	37	17	12
31	15	---	6.5	7.0	---	11	---	175	---	38	17	---
TOTAL	560	381	317.5	220.5	230.7	370.3	607	2214	3950	2019	786	401
MEAN	18.1	12.7	10.2	7.11	8.24	11.9	20.2	71.4	132	65.1	25.4	13.4
MAX	25	15	13	8.0	11	19	47	175	179	110	36	17
MIN	15	11	6.5	6.5	6.5	8.9	11	29	89	37	17	11
AC-FT	1110	756	630	437	458	734	1200	4390	7830	4000	1560	795

CAL YR 1982 TOTAL 8666.3 MEAN 23.7 MAX 90 MIN 3.5 AC-FT 17190  
WTR YR 1983 TOTAL 12057.0 MEAN 33.0 MAX 179 MIN 6.5 AC-FT 23920

## 08276300 RIO PUEBLO DE TAOS BELOW LOS CORDOVAS, NM

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

DRAINAGE AREA.--380 mi<sup>2</sup>.

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

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

GAGE.--Water-stage recorder. Concrete control since July 16, 1963. Altitude of gage is 6,652 ft, from topographic map.

REMARKS.--Records fair. Diversions for irrigation of about 12,000 acres above station, of which about 1,700 acres is irrigated by water from Rio Hondo. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years, 54.0 ft<sup>3</sup>/s, 39,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,380 ft<sup>3</sup>/s Aug. 24, 1957, gage height, 5.80 ft, maximum gage height, 6.00 ft, July 30, 1982, from rating curve extended above 900 ft<sup>3</sup>/s; minimum, 1.9 ft<sup>3</sup>/s July 31, Aug. 1, 1972.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 1	0115	623	3.76	June 1	1045	*846	4.39
May 12	1030	725	3.98				

Minimum discharge, 16 ft<sup>3</sup>/s Feb. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	36	48	37	43	53	82	497	870	247	39	34
2	44	32	46	37	41	51	81	428	855	210	39	38
3	39	33	41	37	38	48	86	376	778	174	37	39
4	38	33	40	36	42	48	71	339	648	173	38	36
5	36	33	44	35	42	45	55	374	578	165	41	35
6	36	36	43	38	32	43	63	430	533	154	39	36
7	35	36	50	42	35	39	60	425	521	150	40	33
8	34	36	49	44	42	38	72	411	488	135	48	33
9	34	38	51	43	43	40	64	476	471	123	38	32
10	34	49	57	35	41	40	59	585	477	112	32	28
11	35	111	56	38	41	42	59	666	460	131	30	27
12	41	52	53	39	40	44	60	704	446	141	32	26
13	39	46	46	38	46	48	65	645	439	115	33	25
14	54	43	51	38	56	53	66	558	400	99	35	25
15	42	41	36	36	63	61	62	491	351	80	30	25
16	39	43	43	32	64	63	56	413	294	69	26	23
17	38	42	49	38	60	62	53	429	284	67	27	23
18	36	50	49	41	51	71	61	389	322	72	27	23
19	36	47	44	41	50	77	90	316	324	60	30	22
20	36	44	45	39	48	65	155	294	323	51	31	21
21	36	43	46	38	47	52	191	267	312	51	30	21
22	34	41	46	38	51	62	204	273	303	55	30	24
23	34	43	57	32	56	69	206	329	283	57	39	26
24	34	42	53	37	60	63	264	414	280	57	36	26
25	32	41	41	38	67	58	400	533	310	55	34	24
26	29	42	48	37	82	53	472	665	320	57	46	23
27	52	44	50	38	63	43	499	769	298	51	34	26
28	43	45	40	39	55	50	476	796	298	48	37	25
29	40	43	30	39	---	46	474	807	276	35	47	25
30	38	45	35	50	---	45	486	798	276	35	32	26
31	38	---	35	46	---	54	---	842	---	41	33	---
TOTAL	1181	1310	1422	1196	1399	1626	5092	15739	12818	3070	1090	830
MEAN	38.1	43.7	45.9	38.6	50.0	52.5	170	508	427	99.0	35.2	27.7
MAX	54	111	57	50	82	77	499	842	870	247	48	39
MIN	29	32	30	32	32	38	53	267	276	35	26	21
AC-FT	2340	2600	2820	2370	2770	3230	10100	31220	25420	6090	2160	1650

CAL YR 1982 TOTAL 18365 MEAN 50.3 MAX 268 MIN 10 AC-FT 36430  
WTR YR 1983 TOTAL 46773 MEAN 128 MAX 870 MIN 21 AC-FT 92770

## RIO GRANDE BASIN

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

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

DRAINAGE AREA.--9,730 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records good. Diversions above station for irrigation of about 620,000 acres in Colorado and 30,000 acres in New Mexico.

AVERAGE DISCHARGE.--58 years, 725 ft<sup>3</sup>/s, 525,300 acre-ft/yr.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1888, about 14,000 ft<sup>3</sup>/s June 19, 1903, from records for Rio Grande at Embudo and estimated inflow. Other floods exceeding 10,000 ft<sup>3</sup>/s occurred June 9, 1905, May 28, 1920, and June 16, 1921, from comparison of records for stations near Lobatos and at Embudo.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 5	0500	1660	5.26	June 3	0415	*5300	7.37
Apr. 28	0045	2040	5.52	June 14	0845	4340	6.91
May 13	0515	2640	5.93	June 30	0800	4290	6.89

Minimum discharge, 216 ft<sup>3</sup>/s Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	452	520	481	562	878	771	1760	4670	3460	557	305
2	1090	428	471	424	561	910	772	1600	5080	3190	626	310
3	1200	411	430	417	550	893	800	1390	5220	3120	591	304
4	1430	494	444	426	566	822	796	1260	4890	2790	684	295
5	1610	731	468	439	559	825	718	1220	4200	2540	598	275
6	1410	747	452	457	525	829	686	1290	3620	2420	598	266
7	1190	739	492	485	536	801	745	1300	3530	2280	605	260
8	1080	763	512	508	557	769	748	1360	3590	2070	625	259
9	959	787	521	514	567	760	736	1450	3620	1850	541	255
10	773	848	590	511	568	737	737	1680	3600	1720	531	248
11	707	993	638	522	571	728	722	1990	3540	1590	554	250
12	679	922	650	525	578	726	696	2370	3450	1510	526	246
13	645	869	647	515	593	746	706	2550	3830	1520	490	240
14	637	838	627	513	635	779	737	2420	4280	1380	493	252
15	593	785	555	522	723	809	735	2150	4110	1320	509	238
16	572	727	427	515	757	842	737	1930	3790	1220	464	233
17	561	731	422	526	728	865	726	1750	3440	1140	459	230
18	538	795	463	532	725	880	717	1630	3000	1100	434	228
19	544	803	483	541	725	858	745	1480	2930	978	422	227
20	562	739	498	543	708	828	824	1380	2970	909	389	222
21	507	715	482	545	710	798	900	1300	3050	859	361	219
22	556	685	503	545	731	795	1000	1310	2960	827	352	227
23	564	661	567	537	756	782	1090	1390	2990	767	341	234
24	510	630	563	551	798	778	1150	1600	2880	772	337	232
25	478	591	509	551	839	776	1330	1970	2970	754	314	225
26	462	574	408	541	865	771	1650	2370	3210	735	338	229
27	486	547	481	536	861	750	1960	2790	3430	744	308	241
28	456	535	492	551	872	739	1860	3120	3830	724	314	243
29	440	532	439	549	---	721	1770	3620	4190	672	328	230
30	491	531	403	568	---	716	1760	3820	4140	639	302	240
31	479	---	419	572	---	725	---	4200	---	608	302	---
TOTAL	23319	20603	15576	15962	18726	24636	29324	61450	111010	46208	14293	7463
MEAN	752	687	502	515	669	795	977	1982	3700	1491	461	249
MAX	1610	993	650	572	872	910	1960	4200	5220	3460	684	310
MIN	440	411	403	417	525	716	686	1220	2880	608	302	219
AC-FT	46250	40870	30890	31660	37140	48870	58160	121900	220200	91650	28350	14800
CAL YR 1982	TOTAL	315736	MEAN	865	MAX	2420	MIN	288	AC-FT	626300		
WTR YR 1983	TOTAL	388570	MEAN	1065	MAX	5220	MIN	219	AC-FT	770700		



RIO GRANDE BASIN  
08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	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 18...	1600	535	255	287	7.9	8.2	11.0	9.7	<10	100	20
DEC 06...	1600	461	260	282	8.3	8.3	3.0	11.6	<10	98	35
FEB 08...	1030	584	230	258	7.4	8.2	2.0	11.8	<10	90	19
APR 25...	1000	1370	215	248	7.8	8.0	9.5	8.9	38	90	14
JUN 06...	--	3580	215	190	7.5	7.8	13.0	7.8	34	75	18
JUL 20...	1900	892	290	311	8.0	8.3	19.0	6.5	14	110	29
AUG 25...	1445	310	--	330	--	8.3	19.0	--	16	120	16

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT 18...	20	30	6.1	17	.8	2.7	80	93	43	5.2	.40
DEC 06...	35	29	6.3	17	.8	2.6	64	100	35	5.1	.40
FEB 08...	19	27	5.5	14	.7	2.5	71	90	33	4.4	.50
APR 25...	14	27	5.6	12	.6	2.6	77	79	33	4.2	.30
JUN 06...	18	23	4.3	8.9	.5	2.3	57	65	28	2.7	.30
JUL 20...	29	32	6.4	21	.9	3.5	77	94	55	5.9	.40
AUG 25...	16	37	7.6	20	.8	3.1	--	108	57	6.5	.60

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, 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, ORTH- DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, TOTAL (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CYANIDE TOTAL (MG/L AS CN) (00720)
OCT 18...	23	176	.10	.13	.080	.52	.70	.080	.040	2.3	<.01
DEC 06...	25	159	.20	.23	<.060	--	1.2	.060	<.010	2.7	<.01
FEB 08...	28	158	.40	.40	.060	.44	.90	.090	.070	1.4	<.01
APR 25...	20	151	.20	.17	.120	2.5	2.8	.310	.040	13	<.01
JUN 06...	17	121	--	--	--	--	--	--	--	7.8	<.01
JUL 20...	19	190	<.10	<.10	.020	1.1	--	.080	.030	3.7	<.01
AUG 25...	26	223	.10	.19	<.010	--	.70	.070	.060	1.9	<.01

RIO GRANDE BASIN  
08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 18...	1600	--	--	0	0	--	--	--	0	--	20
DEC 06...	1600	--	--	0	0	--	--	--	0	--	10
FEB 08...	1030	--	--	0	0	--	--	--	0	--	10
APR 25...	1000	--	--	0	0	--	--	--	20	--	50
JUN 06...	--	--	--	0	0	--	--	--	20	--	90
JUL 20...	1900	--	--	0	0	--	--	--	0	--	30
AUG 25...	1445	2	2	0	<1	1	20	<10	0	4	30

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 18...	--	--	11	--	--	7	10	--	--	10	<0
DEC 06...	--	--	12	--	--	7	7	--	--	30	0
FEB 08...	--	--	19	--	--	8	7	--	--	30	10
APR 25...	--	--	34	--	--	2	3	--	--	70	0
JUN 06...	--	--	16	--	--	3	<1	--	--	60	0
JUL 20...	--	--	8	--	--	6	7	--	--	50	0
AUG 25...	0	<1	6	.0	<.0	10	10	<1	<1	50	10

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
AUG 25...	1445	<2.0	21	390	1	<0	0

DATE	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
AUG 25...	10	10	3300	10	250	.00	30

RIO GRANDE BASIN  
08276500 RIO GRANDE BELOW TAOS JUNCTION BRIDGE, NEAR TAOS, NM -- Continued  
WATER-QUALITY RECORDS

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RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L) AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L) AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L) AS U-NAT) (01516)	GROSS BETA, DIS- SOLVED (PCI/L) AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L) AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L) AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L) AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED AS U) (22703)
AUG 25...	1445	<7.1	1.2	.8	3.7	1.4	3.6	1.3	.04	2.7

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	HEPTA- CHLOR, TOTAL (UG/L) (39410)
APR 25...	1000	--	--	--	--	--	--	--	--	--	--
AUG 25...	1445	<.10	<.01	<.10	<.01	<.01	<.01	<.01	<.01	<.01	<.01

DATE	TIME	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	MIREX, TOTAL (UG/L) (39755)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
APR 25...	--	--	--	--	--	--	--	--	<.01	<.01	<.01	<.01
AUG 25...	<.01	<.01	<.01	<.01	<.10	<.10	<1	--	--	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 18...	4
FEB 08...	2

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 18...	1600	535	11.0	6	8.7
DEC 06...	1600	461	3.0	16	20
FEB 08...	1030	584	2.0	32	50
APR 25...	1000	1370	9.5	475	1760
JUN 06...	--	3580	13.0	286	2760
JUL 20...	1900	892	19.0	30	72
AUG 25...	1445	310	19.0	36	30

## RIO GRANDE BASIN

08279000 EMBUDO CREEK AT DIXON, NM

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

DRAINAGE AREA.--305 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records good. Diversions above station for irrigation of about 6,500 acres, a small part of which is below gage.

AVERAGE DISCHARGE.--52 years (water years 1924-25, 1927-55, 1963-83), 77.4 ft<sup>3</sup>/s, 56,080 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 872 ft<sup>3</sup>/s at 0545 hours June 2, gage height, 4.33 ft, from rating curve extended above 580 ft<sup>3</sup>/s, no other peak above base of 800 ft<sup>3</sup>/s; minimum, 16 ft<sup>3</sup>/s Feb. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	52	46	28	33	43	103	434	811	252	173	62
2	67	51	39	29	32	46	90	369	813	232	163	58
3	66	48	29	30	28	48	92	310	747	213	146	53
4	64	47	30	29	35	49	77	276	693	188	155	53
5	62	49	33	32	34	44	63	312	635	173	142	49
6	60	49	35	34	28	42	74	375	612	162	127	46
7	57	48	35	36	32	43	67	367	595	155	130	70
8	55	48	33	35	34	46	68	399	581	133	131	63
9	53	50	35	34	34	45	62	443	566	117	105	54
10	53	60	35	28	31	48	62	534	562	116	94	42
11	55	70	34	32	30	56	68	586	550	137	93	36
12	58	55	34	33	29	62	64	592	547	334	99	33
13	55	60	35	31	34	66	66	563	563	257	110	30
14	58	55	33	32	35	69	64	544	495	222	162	37
15	59	55	30	32	34	72	62	489	439	189	109	43
16	60	54	31	32	35	63	62	427	405	156	93	36
17	64	53	32	34	36	64	71	404	380	132	86	32
18	59	52	33	35	34	69	94	366	390	137	80	31
19	56	51	34	34	37	64	136	335	410	126	70	29
20	54	50	35	33	35	63	186	332	429	114	65	27
21	53	49	34	34	32	52	209	310	413	108	60	28
22	50	49	33	33	35	63	201	299	403	108	70	28
23	49	48	31	28	37	57	185	325	390	109	74	26
24	47	45	31	33	39	57	212	395	385	117	76	25
25	43	43	25	34	42	60	324	502	460	109	76	25
26	44	46	30	33	43	56	399	590	428	168	72	26
27	64	45	36	32	43	52	398	670	370	200	70	36
28	62	44	31	34	42	58	402	684	349	174	69	38
29	52	43	26	33	---	58	406	736	313	164	68	32
30	54	45	28	34	---	61	435	738	284	163	64	34
31	53	---	36	33	---	88	---	765	---	154	63	---
TOTAL	1758	1514	1022	1004	973	1764	4802	14471	15018	5119	3095	1182
MEAN	56.7	50.5	33.0	32.4	34.8	56.9	160	467	501	165	99.8	39.4
MAX	72	70	46	36	43	88	435	765	813	334	173	70
MIN	43	43	25	28	28	42	62	276	284	108	60	25
AC-FT	3490	3000	2030	1990	1930	3500	9520	28700	29790	10150	6140	2340
CAL YR 1982	TOTAL	23741	MEAN	65.0	MAX	277	MIN	11	AC-FT	47090		
WTR YR 1983	TOTAL	51722	MEAN	142	MAX	813	MIN	25	AC-FT	102600		

RIO GRANDE BASIN  
08279000 EMBUDO CREEK AT DIXON, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)
NOV 23...	1400	49	360	353	8.3	7.8	7.0	6.5	170	4	4
JAN 26...	1248	28	340	--	8.1	--	6.0	6.0	--	--	--
MAR 28...	1240	51	325	335	8.5	8.1	10.0	7.0	150	10	10
MAY 26...	1135	582	175	180	8.6	8.0	23.5	10.0	81	9	9
JUL 27...	1405	198	250	258	7.8	8.1	27.0	19.0	130	7	7

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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)
NOV 23...	56	6.8	7.6	.3	1.0	164	25	4.1	.30	12	211
JAN 26...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	50	6.7	7.9	.3	1.1	143	24	6.8	.20	12	194
MAY 26...	27	3.3	2.6	.1	.9	72	13	1.5	<.10	8.1	100
JUL 27...	42	5.1	4.8	.2	1.4	119	16	2.9	.20	11	155

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 23...	1400	0	0
MAR 28...	1240	0	30
MAY 26...	1135	<0	60
JUL 27...	1405	0	30

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 23...	1400	49	6.5	44	5.8	--
AUG 29...	1000	67	12.5	42	7.6	82

## RIO GRANDE BASIN

08279500 RIO GRANDE AT EMBUDO, NM

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

DRAINAGE AREA.--10,400 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

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

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

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

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres in Colorado and 40,000 acres in New Mexico. Several observations of water temperature were made during the year. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--41 years (water years 1890-1930), 1,238 ft<sup>3</sup>/s, 896,900 acre-ft/yr.  
53 years (water years 1931-83), 785 ft<sup>3</sup>/s, 568,700 acre-ft/yr, subsequent to upstream development.

EXTREMES FOR PERIOD OF RECORD (1889-1903 AND SINCE 1911).--Maximum discharge, 16,200 ft<sup>3</sup>/s June 19, 1903, gage height, about 15.9 ft; minimum daily, 130 ft<sup>3</sup>/s June 30, 1902. A flood of about 14,000 ft<sup>3</sup>/s occurred between May 20 and June 10, 1905, from a comparison of records for Lobatos and Otowi Bridge. Another major flood occurred Sept. 29 or 30, 1904.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 28	0245	2410	5.83	June 3	0700	*5660	9.06
May 13	0745	3100	6.54	June 30	1100	4340	7.76

Minimum discharge, 233 ft<sup>3</sup>/s Sept. 20, 21, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	547	613	460	604	927	899	2150	5080	3650	724	361
2	1180	515	552	470	600	969	893	1940	5510	3300	768	361
3	1250	501	498	480	588	965	913	1650	5560	3240	732	351
4	1430	537	509	483	614	904	897	1490	5260	2930	832	346
5	1670	771	544	493	599	880	820	1470	4650	2660	738	323
6	1510	832	520	508	573	891	762	1610	4080	2540	714	309
7	1290	819	557	533	571	861	859	1610	3940	2400	722	327
8	1180	834	585	560	601	831	846	1680	3970	2190	750	318
9	1080	863	594	564	607	823	829	1820	3990	1930	652	308
10	886	929	662	555	606	804	823	2100	3970	1790	622	288
11	803	1120	710	567	608	806	821	2460	3910	1670	639	279
12	779	1010	710	574	615	809	797	2850	3820	1790	633	276
13	745	966	717	566	633	827	803	2990	4120	1730	597	262
14	733	931	702	559	656	864	834	2870	4510	1570	646	277
15	692	883	613	569	740	892	827	2560	4390	1470	610	283
16	667	818	532	562	801	916	832	2280	4040	1360	545	263
17	660	816	500	573	805	944	834	2080	3720	1240	542	255
18	636	897	508	584	761	969	865	1920	3310	1210	518	249
19	619	896	536	584	781	950	942	1730	3230	1100	482	247
20	657	838	559	582	754	914	1070	1630	3310	999	475	240
21	601	807	542	586	749	870	1160	1530	3390	942	423	237
22	618	775	564	586	774	880	1240	1500	3290	908	413	241
23	646	748	633	570	795	857	1290	1600	3310	855	413	248
24	600	723	630	589	849	856	1370	1850	3200	855	410	247
25	559	681	569	590	915	853	1620	2310	3320	849	399	240
26	540	664	474	583	935	845	1950	2810	3530	882	401	241
27	578	634	527	572	930	818	2280	3300	3600	911	397	269
28	562	615	552	592	932	818	2250	3640	3920	886	377	275
29	527	612	481	587	---	800	2120	4040	4230	817	406	254
30	567	612	480	603	---	795	2160	4260	4240	789	370	261
31	563	---	460	615	---	842	---	4590	---	750	364	---
TOTAL	26038	23194	17633	17299	19996	26980	34606	72320	120400	50213	17314	8436
MEAN	840	773	569	558	714	870	1154	2333	4013	1620	559	281
MAX	1670	1120	717	615	935	969	2280	4590	5560	3650	832	361
MIN	527	501	460	460	571	795	762	1470	3200	750	364	237
AC-FT	51650	46010	34980	34310	39660	53510	68640	143400	238800	99600	34340	16730
CAL YR 1982	TOTAL	336354	MEAN	922	MAX	2580	MIN	302	AC-FT	667200		
WTR YR 1983	TOTAL	434429	MEAN	1190	MAX	5560	MIN	237	AC-FT	861700		

## 08281100 RIO GRANDE ABOVE SAN JUAN PUEBLO, NM

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

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

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

GAGE.--Water-stage recorder. Altitude of gage is 5,630 ft, from topographic map.

REMARKS.--Records good. Diversions above station for irrigation of about 620,000 acres in Colorado and 42,000 acres in New Mexico. Several observations of water temperature were made during the year. San Juan lateral (station 08280100) 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.--20 years, 728 ft<sup>3</sup>/s, 527,400 acre-ft/yr.

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

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 28	0715	2170	3.42	June 3	1130	*5340	5.35
May 13	0930	2780	3.81				

Minimum discharge, 185 ft<sup>3</sup>/s Sept. 19, 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	504	568	434	596	923	916	1940	4690	3420	719	307
2	1210	468	524	460	583	966	915	1820	5020	3070	766	316
3	1260	453	463	453	573	975	933	1600	5250	3030	718	316
4	1390	455	488	454	598	922	928	1460	5080	2810	815	318
5	1660	678	526	458	584	877	846	1430	4600	2570	708	282
6	1590	769	497	477	558	903	731	1540	3970	2440	696	265
7	1400	751	523	500	546	872	899	1570	3770	2330	695	267
8	1250	766	570	534	584	837	852	1620	3790	2170	745	289
9	1160	819	595	544	589	830	839	1730	3800	1950	638	279
10	962	876	650	537	590	810	827	1930	3800	1820	588	254
11	833	1120	725	542	585	814	829	2240	3710	1700	613	231
12	793	988	725	555	595	819	795	2560	3600	1780	600	230
13	759	928	736	548	610	837	795	2690	3790	1730	566	215
14	730	874	711	543	627	879	828	2620	4210	1600	613	210
15	690	825	608	554	703	914	827	2390	4180	1510	581	231
16	661	757	560	549	791	945	828	2150	3840	1410	508	211
17	652	746	484	556	814	975	828	1990	3520	1300	501	208
18	625	844	474	572	753	1020	846	1890	3140	1260	489	203
19	599	855	509	576	774	1000	908	1740	2990	1140	434	196
20	639	801	536	572	751	955	1050	1670	3070	1020	430	195
21	586	764	530	574	742	906	1120	1600	3150	942	381	187
22	589	734	547	578	760	914	1210	1560	3070	894	352	196
23	628	709	616	558	773	887	1250	1630	3090	844	360	201
24	582	685	638	567	831	879	1320	1800	2980	824	367	207
25	528	642	575	573	913	867	1550	2130	3070	833	369	209
26	509	617	483	569	931	864	1830	2520	3240	862	358	201
27	531	597	480	555	932	836	2030	2970	3290	908	361	233
28	525	569	551	573	935	833	2040	3340	3550	908	333	259
29	483	567	503	570	---	819	1900	3720	3820	824	359	244
30	508	565	460	587	---	808	1910	3940	3880	783	331	243
31	516	---	442	607	---	840	---	4180	---	731	315	---
TOTAL	26098	21726	17297	16729	19621	27526	33380	67970	112960	49413	16309	7203
MEAN	842	724	558	540	701	888	1113	2193	3765	1594	526	240
MAX	1660	1120	736	607	935	1020	2040	4180	5250	3420	815	318
MIN	483	453	442	434	546	808	731	1430	2980	731	315	187
AC-FT	51770	43090	34310	33180	38920	54600	66210	134800	224100	98010	32350	14290
(†)	4	---	---	---	---	---	---	7	58	62	52	11
(††)	217	---	---	---	---	---	18	450	314	296	113	68
(†††)	194	115	---	---	---	---	53	208	517	575	168	48

CAL YR 1982 TOTAL 343338 MEAN 941 MAX 2540 MIN 292 AC-FT 681000

WTR YR 1983 TOTAL 416232 MEAN 1140 MAX 5250 MIN 187 AC-FT 825600

(†) Estimated diversion, in acre-feet, by San Juan lateral.

(††) Estimated diversion, in acre-feet, by San Juan Pueblo ditch.

(†††) Estimated diversion, in acre-feet, by Guique ditch.

## RIO GRANDE BASIN

08284100 RIO CHAMA NEAR LA PUENTE, NM

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

DRAINAGE AREA.--480 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder. Concrete control since Nov. 9, 1965. Altitude of gage is 7,083 ft, from river-profile map.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 10,300 acres above station (1962 determination). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years, 327 ft<sup>3</sup>/s, 236,900 acre-ft/yr.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of about 9,000 ft<sup>3</sup>/s occurred Apr. 16, 1937, based on flow of Rio Chama at Los Ojos (Park View) with allowance for tributary inflow. A peak on May 21 or 22, 1926, may have exceeded 10,000 ft<sup>3</sup>/s.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 26	0015	2380	4.64	June 1	0100	*8900	6.20
May 10	2245	3040	4.91				

Minimum discharge, 30 ft<sup>3</sup>/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272	179	132	80	85	135	352	1300	6260	654	136	73
2	217	162	115	80	80	144	299	1100	5150	586	130	76
3	192	140	105	85	80	138	327	937	3720	540	154	69
4	178	138	105	90	80	146	247	1100	3390	520	175	64
5	166	147	110	90	80	139	206	1430	3150	491	212	59
6	155	137	105	90	80	136	211	1570	2970	460	170	53
7	150	135	105	90	80	135	221	1330	2910	414	191	52
8	147	140	110	92	85	153	211	1750	2780	386	152	58
9	142	164	105	92	90	157	201	2230	2590	371	129	63
10	137	163	110	85	85	183	246	2610	2410	347	113	55
11	146	167	110	80	80	222	286	2630	2360	317	133	51
12	156	106	105	80	80	284	263	2350	2280	312	137	47
13	160	124	100	85	85	335	276	2220	2050	283	133	45
14	162	141	105	85	85	369	258	2000	1550	241	140	45
15	157	131	100	85	85	340	234	1660	1450	225	128	41
16	149	134	100	85	85	252	253	1430	1420	200	105	40
17	145	133	105	85	85	255	325	1210	1380	194	89	36
18	137	145	110	90	85	244	525	1090	1380	175	85	34
19	130	144	105	85	90	215	790	1200	1470	160	165	34
20	121	149	110	80	85	210	950	1210	1410	141	158	32
21	119	138	110	82	90	183	962	1100	1260	143	112	35
22	116	140	115	82	100	204	875	1480	1180	154	93	35
23	114	140	120	80	110	192	946	2040	1090	161	92	35
24	113	134	110	80	100	183	1250	2660	1050	166	91	37
25	112	134	100	80	110	178	1660	3650	1290	172	87	38
26	111	127	100	85	110	189	1830	4540	1400	174	97	39
27	486	134	100	85	120	161	1600	5210	1180	170	101	40
28	258	130	95	85	128	190	1410	5200	966	146	161	43
29	193	133	75	85	---	178	1750	5630	854	132	108	43
30	187	132	80	85	---	190	1570	5290	770	128	90	170
31	188	---	80	85	---	316	---	5060	---	125	78	---
TOTAL	5216	4221	3237	2628	2538	6356	20534	74217	63120	8688	3945	1542
MEAN	168	141	104	84.8	90.6	205	684	2394	2104	280	127	51.4
MAX	486	179	132	92	128	369	1830	5630	6260	654	212	170
MIN	111	106	75	80	80	135	201	937	770	125	78	32
AC-FT	10350	8370	6420	5210	5030	12610	40730	147200	125200	17230	7820	3060

CAL YR 1982 TOTAL 185117 MEAN 507 MAX 3870 MIN 45 AC-FT 367200  
WTR YR 1983 TOTAL 196242 MEAN 538 MAX 6260 MIN 32 AC-FT 389200



## RIO GRANDE BASIN

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

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

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

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 7,519.87 ft 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.--13 years, 138 ft<sup>3</sup>/s, 99,980 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft<sup>3</sup>/s June 22, gage height, 7.33 ft; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	36	.00	.00	.00	.00	.08	322	979	852	149	4.3
2	86	1.3	.00	.00	.00	.00	.08	234	912	792	196	1.6
3	76	.56	.00	.00	.00	.00	.08	200	804	832	179	.23
4	68	.44	.00	.00	.00	.00	.02	256	761	881	203	.14
5	77	.44	.00	.00	.00	.00	14	373	839	825	190	.14
6	100	.44	.00	.00	.00	.00	21	381	987	802	276	.23
7	94	.44	.00	.00	.00	.00	23	318	977	750	208	.33
8	84	.44	.00	.00	.00	.00	21	485	972	719	153	.33
9	69	.44	.00	.00	.00	.00	18	657	1010	673	122	.33
10	64	.44	.00	.00	.00	.00	26	812	998	627	111	.33
11	67	.33	.00	.00	.00	.00	34	794	1010	563	113	.33
12	66	.33	.00	.00	.00	.00	43	666	1020	500	105	.23
13	63	.23	.00	.00	.00	.00	39	621	959	413	96	.23
14	60	.23	.00	.00	.00	.00	34	516	782	343	112	.33
15	58	.14	.00	.00	.00	.00	31	435	789	309	91	.33
16	57	.14	.00	.00	.00	.00	38	362	776	331	39	.33
17	51	.14	.00	.00	.00	.00	62	291	712	310	34	.33
18	47	.14	.00	.00	.00	.00	125	235	698	311	28	.23
19	42	.14	.00	.00	.00	.00	209	248	694	320	31	.23
20	37	.14	.00	.00	.00	.00	273	226	688	280	43	.23
21	33	.14	.00	.00	.00	.00	273	251	690	252	16	.23
22	32	.14	.00	.00	.00	.00	230	418	767	227	14	.23
23	31	.08	.00	.00	.00	.00	265	629	1010	218	13	.23
24	25	.08	.00	.00	.00	.00	436	893	1000	216	11	.33
25	17	.08	.00	.00	.00	.00	581	986	1010	282	19	.23
26	21	.08	.00	.00	.00	.00	630	1010	983	235	26	.23
27	169	.08	.00	.00	.00	.00	557	1010	924	181	26	.23
28	70	.02	.00	.00	.00	.00	518	916	906	164	22	.23
29	56	.00	.00	.00	.00	.00	579	842	900	146	23	.33
30	52	.00	.00	.00	.00	.00	452	1000	905	132	16	.33
31	52	---	.00	.00	---	.00	---	976	---	166	6.4	---
TOTAL	1950	43.60	.00	.00	.00	.00	5532.26	17363	26462	13652	2671.4	13.36
MEAN	62.9	1.45	.000	.000	.000	.000	184	560	882	440	86.2	.45
MAX	169	36	.00	.00	.00	.00	630	1010	1020	881	276	4.3
MIN	17	.00	.00	.00	.00	.00	.02	200	688	132	6.4	.14
AC-FT	3870	86	.00	.00	.00	.00	10970	34440	52490	27080	5300	26
CAL YR 1982	TOTAL	66068.33	MEAN	181	MAX	1010	MIN	.00	AC-FT	131000		
WTR YR 1983	TOTAL	67687.62	MEAN	185	MAX	1020	MIN	.00	AC-FT	134300		

## RIO GRANDE BASIN

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

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

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

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

GAGE.--Water-stage recorder. Concrete control since June 6, 1963. Datum of gage is 7,196.29 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 1, 1971, at site 900 ft downstream at lower datum.

REMARKS.--Records represent inflow to Heron Reservoir and since Nov. 17, 1970, include San Juan River water imported through Azotea tunnel (station 08284160).

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--8 years (water years 1963-70), 10.5 ft<sup>3</sup>/s, 7,610 acre-ft/yr, prior to completion of Azotea tunnel.  
13 years (water years 1971-83), 149 ft<sup>3</sup>/s, 108,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft<sup>3</sup>/s Aug. 11, 1967, gage height, 3.88 ft, 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, 1,050 ft<sup>3</sup>/s June 26, gage height, 4.73 ft; minimum, 0.02 ft<sup>3</sup>/s Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	48	1.1	.29	.42	22	154	384	979	786	176	3.1
2	91	7.0	1.2	.24	.42	33	113	323	918	802	210	1.0
3	79	1.4	1.1	.21	.45	49	111	249	807	840	229	.52
4	73	.96	1.1	.21	.45	40	57	290	737	890	241	.34
5	71	.67	1.0	.21	.49	36	33	371	823	835	241	.24
6	100	.52	1.0	.21	.49	34	53	434	981	807	281	.19
7	98	.40	.96	.21	.49	43	64	311	958	769	249	.16
8	86	.36	.96	.21	.52	49	64	429	958	721	210	.21
9	73	.84	.88	.21	.56	64	64	588	998	695	178	.21
10	68	1.8	.98	.21	.56	91	113	813	998	623	162	.18
11	70	2.5	1.8	.21	.59	116	127	824	998	588	144	.18
12	68	1.7	2.0	.21	.63	180	120	669	1010	500	134	.13
13	64	1.2	1.6	.21	.67	176	120	628	986	434	123	.11
14	62	.96	1.7	.21	.76	173	106	509	796	349	113	.11
15	62	.76	1.1	.21	.96	134	84	448	769	315	116	.11
16	60	.67	1.0	.21	1.2	79	98	366	786	311	91	.10
17	55	.56	.76	.21	1.7	70	162	294	711	327	55	.10
18	48	.49	.63	.21	2.1	70	287	249	669	302	37	.10
19	45	.52	.49	.21	2.4	60	438	257	674	315	29	.11
20	38	.91	.38	.23	2.5	51	509	249	664	298	36	.08
21	34	2.1	.34	.29	2.6	38	476	237	669	277	34	.07
22	32	1.7	.30	.32	3.2	48	429	344	752	261	25	.08
23	30	1.4	.29	.38	3.7	43	389	509	1020	245	18	.10
24	27	1.1	.27	.38	4.3	38	425	847	998	249	14	.11
25	18	.96	.29	.42	4.8	49	573	975	1010	273	14	.11
26	16	.88	.30	.42	6.2	68	721	986	1010	286	38	.09
27	149	.76	.32	.42	7.0	38	664	986	935	226	34	.13
28	79	.67	.34	.40	10	36	538	924	896	203	38	.15
29	60	.63	.30	.40	---	45	669	796	884	180	22	.16
30	57	.63	.32	.40	---	72	538	975	901	162	18	18
31	53	---	.34	.42	---	146	---	952	---	188	9.0	---
TOTAL	1989	83.05	25.15	8.58	60.16	2191	8299	17216	26295	14057	3319.0	26.28
MEAN	64.2	2.77	.81	.28	2.15	70.7	277	555	877	453	107	.88
MAX	149	48	2.0	.42	10	180	721	986	1020	890	281	.18
MIN	16	.36	.27	.21	.42	22	33	237	664	162	9.0	.07
AC-FT	3950	165	50	17	119	4350	16460	34150	52160	27880	6580	52

CAL YR 1982 TOTAL 71734.28 MEAN 197 MAX 1060 MIN .06 AC-FT 142300  
WTR YR 1983 TOTAL 73569.22 MEAN 202 MAX 1020 MIN .07 AC-FT 145900

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

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

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

PERIOD OF RECORD.--October and November 1962 (monthly discharge only), December 1962 to current year. No winter records subsequent to 1973. Published as "near Park View" prior to 1976.

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

REMARKS.--Diversion 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, 797 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 97 ft<sup>3</sup>/s Mar. 31, gage height, 2.45 ft, no peak above base of 100 ft<sup>3</sup>/s; no flow July 17, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.06				4.0	27	12	6.7	1.5	.11	.49
2	.03	.06				4.0	20	10	4.2	1.1	.72	1.1
3	.02	.05				4.0	18	8.7	3.2	.84	.68	.96
4	.02	.05				4.0	8.7	7.1	3.0	.57	.30	.64
5	.02	.04				6.4	6.6	6.4	3.0	.36	.20	.30
6	.02	.04				5.9	6.0	5.9	3.0	.22	.20	.24
7	.02	.04				9.4	6.4	5.7	3.0	.11	1.1	.39
8	.02	.05				13	7.4	5.3	3.1	.08	4.8	.48
9	.01	.11				15	10	5.1	3.2	.06	1.1	.54
10	.02	.10				21	19	4.5	3.1	.05	4.5	.39
11	.02	.16				21	17	4.2	3.0	.04	.28	.64
12	.02	.08				44	11	4.0	3.0	.05	.28	.26
13	.04	.06				37	13	4.1	2.7	.05	.28	.22
14	.03	.05				41	11	5.1	2.5	.04	.22	.24
15	.02	.05				30	10	7.1	2.2	.03	.39	.24
16	.02	.05				16	14	5.0	1.8	.02	.22	.14
17	.02	.05				9.0	32	4.7	1.6	.00	.14	.10
18	.02	.10				14	39	4.7	1.5	.01	.12	.07
19	.02	.18				13	31	4.3	1.6	.01	.12	.06
20	.02	.20				8.7	20	5.7	1.4	.00	.10	.04
21	.02	.33				6.2	22	5.7	1.2	.07	.10	.03
22	.02	.39				11	20	4.8	1.0	.78	.09	.02
23	.02	.26				9.2	26	4.5	.96	1.4	.12	.02
24	.02	.20				6.7	41	4.0	1.2	.96	.11	.02
25	.02	.18				7.7	42	3.9	2.5	.57	.10	.03
26	.03	.12				10	29	3.8	6.1	.33	2.8	.04
27	.24	.16				11	18	3.7	4.5	.45	2.8	.05
28	.08	.16				12	13	4.0	2.9	.22	2.9	.08
29	.06	.18				11	11	3.5	2.1	.11	2.5	.16
30	.06	.26				29	10	3.7	1.9	.09	1.2	11
31	.06	---				45	---	4.7	---	.08	.61	---
TOTAL	1.08	3.82				479.2	559.1	165.9	81.16	10.20	29.19	18.99
MEAN	.035	.13				15.5	18.6	5.35	2.71	.33	.94	.63
MAX	.24	.39				45	42	12	6.7	1.5	4.8	11
MIN	.01	.04				4.0	6.0	3.5	.96	.00	.09	.02
AC-FT	2.1	7.6				950	1110	329	161	20	58	38

## RIO GRANDE BASIN

08284510 HERON RESERVOIR NEAR LOS OJOS, NM

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

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

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

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

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

COOPERATION.--Records furnished by Bureau of Reclamation.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 401,100 acre-ft Aug. 2, 3, 7, 15, 16, elevation, 7,186.07 ft; minimum, 318,600 acre-ft Apr. 14, 15, elevation, 7,171.17 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Bureau of Reclamation in 1971)

7,170	312,600
7,180	366,200
7,190	424,700

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	400300	400800	398900	321000	321100	321700	320600	329400	363900	400600	400800	400800
2	400400	400700	398000	320900	321000	321900	320100	330000	365500	400600	401100	400700
3	400400	400700	397000	320900	321000	322000	319700	330400	367000	400700	401100	400500
4	400500	400600	396000	320900	321300	322100	319000	330900	368500	400900	400800	400400
5	400400	400500	395100	320900	321300	321800	318800	331600	370000	400800	400700	400300
6	400300	400500	392600	320900	321300	321500	318800	332200	372000	400500	400700	400300
7	400400	400500	388700	320900	321300	321200	318700	332800	373900	400400	401100	400200
8	400300	400400	384900	320900	321500	321000	318700	333700	375700	400100	400800	400100
9	400100	400500	381200	320800	321400	320900	318700	334900	377400	400000	400500	400100
10	400100	400500	378800	320800	321300	321000	318800	336500	379200	399900	400300	400000
11	400000	400400	377500	320800	321300	321200	318900	337900	381100	399800	400400	400000
12	400100	400300	375900	320800	321300	321600	318900	339100	383200	400100	400700	399800
13	400100	400000	372000	320700	321300	321900	318800	340300	384300	400600	400800	399800
14	400000	399800	366300	320700	321200	322000	318600	341300	385700	400400	401000	399600
15	400100	399700	360900	320800	321200	321800	318600	342100	387200	400400	401100	399500
16	400100	399700	355400	320800	321300	321200	318700	342600	388700	400500	401100	399400
17	400300	399700	349900	320800	321200	320800	319000	343100	390000	400400	400800	399200
18	400300	399800	344300	320900	321200	320800	319700	343500	391400	400500	400600	399100
19	400300	399800	338800	320900	321300	320700	320300	343900	392600	400600	400600	399000
20	400300	399800	333800	320900	321200	320300	320700	344600	393900	400600	400600	398800
21	400300	399800	329300	320900	321300	320300	321100	345000	395200	400500	400500	398600
22	400300	399700	327000	320900	321300	320600	321300	345800	396400	400600	400500	398500
23	400300	399800	326200	320900	321400	320700	321500	346900	398300	400600	400400	398400
24	400300	399700	324800	320900	321400	321000	322100	348600	400100	400700	400400	398400
25	400400	399700	323700	320900	321400	321100	323100	350500	400300	400700	400400	398300
26	400500	399700	322300	320800	321500	321000	324400	352500	400300	400300	400300	398300
27	400700	399700	321700	320800	321500	320900	325400	354600	400300	400100	400500	398300
28	400500	399700	321300	320800	321600	320800	326400	356400	400000	400300	400700	398100
29	400600	399700	321000	320900	---	320900	327800	357900	400100	400100	400800	398300
30	400700	399500	321000	320900	---	320800	328800	359900	400400	400300	400700	398800
31	400700	---	321000	321000	---	320900	---	362000	---	400400	400700	---
MAX	400700	400800	398900	321000	321600	322100	328890	362000	400400	400900	401100	400800
MIN	400000	399500	321000	320700	321000	320300	318600	329400	363900	399800	400300	398100
(†)	7186.00	7185.80	7171.62	7171.63	7171.74	7171.60	7173.11	7179.24	7185.94	7185.95	7186.00	7185.68
(††)	+600	-1200	-78500	0	+600	-700	+79000	+33200	+38400	0	+300	-1900
CAL YR 1982	MAX	401800	MIN	291200	(††)	+26800						
WTR YR 1983	MAX	401100	MIN	318600	(††)	-1300						

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

## RIO GRANDE BASIN

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## 08284520 WILLOW CREEK BELOW HERON DAM, NM

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

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

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

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

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

COOPERATION.--Records furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--12 years, 110 ft<sup>3</sup>/s, 79,700 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,780 ft<sup>3</sup>/s Dec. 18, 19; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	307	.00	.00	.00	333	41	.00	739	.00	.00
2	.00	.00	489	.00	.00	.00	390	41	.00	756	49	.00
3	.00	.00	489	.00	.00	.00	390	41	.00	781	257	.00
4	.00	.00	490	.00	.00	83	389	41	.00	813	363	.00
5	82	.00	489	.00	.00	198	153	41	.00	876	306	.00
6	59	.00	1290	.00	.00	198	90	41	.00	926	266	.00
7	.00	.00	1940	.00	.00	195	129	41	.00	928	266	.00
8	35	.00	1940	.00	.00	197	79	41	59	850	354	.00
9	58	.00	1930	.00	.00	137	61	41	110	742	232	.00
10	58	.00	1200	.00	.00	98	61	41	94	627	26	.00
11	59	.00	732	.00	.00	98	125	41	80	496	.00	.00
12	22	37	727	.00	.00	98	171	45	80	292	.00	.00
13	65	72	1920	.00	.00	98	286	48	38	201	.00	.00
14	40	72	2750	.00	.00	245	224	48	.00	349	2.0	.00
15	.00	32	2740	.00	.00	364	110	48	.00	356	101	.00
16	.00	.00	2740	.00	.00	411	83	49	.00	298	110	.00
17	.00	.00	2750	.00	.00	346	83	49	.00	298	27	.00
18	.00	.00	2780	.00	.00	221	83	33	.00	298	.00	.00
19	.00	.00	2780	.00	.00	203	263	21	.00	299	.00	.00
20	.00	.00	2490	.00	.00	225	383	21	.00	299	.00	.00
21	.00	.00	2220	.00	.00	89	390	21	.00	278	.00	.00
22	.00	.00	1300	.00	.00	.00	349	22	.00	230	.00	.00
23	.00	.00	687	.00	12	.00	347	22	.00	207	.00	.00
24	.00	.00	689	.00	20	.00	347	22	438	184	.00	.00
25	.00	.00	689	.00	20	81	210	9.0	878	234	.00	.00
26	.00	.00	689	.00	20	148	107	.00	1150	391	.00	.00
27	46	.00	308	.00	20	148	111	.00	1070	230	.00	.00
28	32	.00	229	.00	8.1	120	84	.00	875	66	.00	.00
29	.00	.00	202	.00	---	129	25	.00	791	27	.00	.00
30	.00	56	.00	.00	---	207	41	.00	755	.00	.00	.00
31	.00	---	.00	.00	---	246	---	.00	---	.00	.00	---
TOTAL	556.00	269.00	39986.00	.00	100.10	4583.00	5897	909.00	6418.00	13071.00	2359.00	.00
MEAN	17.9	8.97	1290	.000	3.58	148	197	29.3	214	422	76.1	.000
MAX	82	72	2780	.00	20	411	390	49	1150	928	363	.00
MIN	.00	.00	.00	.00	.00	.00	25	.00	.00	.00	.00	.00
AC-FT	1100	534	79310	.00	199	9090	11700	1800	12730	25930	4680	.00
CAL YR 1982	TOTAL	58986.00	MEAN 162	MAX 2780	MIN .00	AC-FT 117000						
WTR YR 1983	TOTAL	74148.10	MEAN 203	MAX 2780	MIN .00	AC-FT 147100						

## RIO GRANDE BASIN

## 08285000 EL VADO RESERVOIR NEAR TIERRA AMARILLA, NM

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

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

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

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

REMARKS.--Reservoir is formed by rockfill dam, steel faced. Storage began in January 1935. Capacity 196,500 acre-ft between gage heights 6,759.0 ft and 6,902.0 ft, top of spillway gate. Dead storage, 1,060 acre-ft below 6,775.0 ft, sill of outlet works. Figures given herein represent total contents. Reservoir is used to impound water for irrigation by Middle Rio Grande Conservancy District and, since December 1972, for storage of contract water from San Juan-Chama Project. Rehabilitation of outlet works, completed in December 1966, increased valve-controlled release from about 1,750 ft<sup>3</sup>/s to about 6,000 ft<sup>3</sup>/s.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 204,900 acre-ft, of which 7,400 acre-ft was uncontrolled storage, June 4, 5, 1948, gage height, 6,904.2 ft; no storage at times prior to December 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 156,300 acre-ft Aug. 8, 16, gage height, 6,889.26 ft; minimum, 105,700 acre-ft Nov. 9, gage height, 6,869.41 ft.

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

6,865	96,490	6,880	130,800
6,870	107,000	6,890	158,500

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106200	105900	106400	127000	127000	127000	127600	127100	132000	134400	153200	147100
2	106200	106000	106800	127000	126900	127000	127400	127200	132900	135100	153400	146100
3	106100	105900	107000	127000	127000	127000	127300	127300	132600	135900	153900	145000
4	106000	105800	106900	127000	127000	127000	127400	127400	132700	136700	154600	143700
5	105800	105900	106900	127000	127000	126900	127700	127500	133200	137600	155300	142800
6	105900	105900	108800	127000	126900	126700	127700	127200	133600	138900	155600	141700
7	105900	106000	112800	127000	126900	126800	127500	126400	133900	140600	156200	140600
8	106000	105900	116700	127000	127000	127000	127400	126900	133900	142200	156300	139300
9	106000	105800	120500	127100	127000	127100	127400	127700	133400	143400	156000	137900
10	106000	105900	123100	127100	127000	127100	127500	127800	133100	144500	155800	136600
11	106100	105800	124500	127000	126900	127100	127600	127200	133700	145300	155900	135200
12	106100	105800	125800	127100	126900	127200	127600	127000	133600	145800	155900	133900
13	106000	105800	127100	127100	126900	127500	127500	127200	133300	146200	156000	132600
14	105900	105800	126900	127100	126900	127400	127400	126500	133100	146700	156000	131200
15	105900	105800	126400	127100	127000	126800	127300	126500	133400	147400	156200	129900
16	105900	105900	126200	127100	127000	126800	127200	127200	133500	148000	156300	129200
17	105900	106000	126200	127200	127000	127300	127200	127500	133500	148600	156100	129100
18	106000	106100	126300	127200	127000	127600	127600	127300	133700	149100	156000	129000
19	105900	105900	126400	127100	127000	127600	127900	127200	133600	149600	156000	129000
20	105800	105900	126300	127000	127000	127600	127700	127300	133400	150100	156100	128900
21	105900	105900	126400	127000	127000	127600	127200	127000	133300	150700	156100	128800
22	105900	105900	126300	127000	127000	127700	127000	127600	133600	151300	155800	128600
23	106000	105900	126400	127000	127000	127700	126800	127800	133600	151800	154800	128500
24	106000	105900	126300	127100	127000	127600	127200	127300	133700	152300	153900	128300
25	106000	105900	126200	127100	127100	127500	127500	127000	134100	152700	153100	128200
26	105900	105800	125900	127100	127200	127500	127400	126800	134200	152900	152300	128000
27	106200	105900	126000	127000	127300	127500	127500	127100	133500	152900	151400	127400
28	106000	105900	126400	127000	127100	127600	127400	127900	133200	152900	150600	126200
29	105800	106000	127000	127000	---	127700	127700	128300	133400	153000	149800	125300
30	105800	106000	127000	127100	---	127600	127400	128800	133900	153000	149100	125200
31	105800	---	127000	127100	---	127700	---	129800	---	153000	148200	---
MAX	106200	106100	127100	127200	127300	127700	127900	129800	134200	153000	156300	147100
MIN	105800	105800	106400	127000	126900	126700	126800	126400	132000	134400	148200	125200
(†)	6869.47	6869.55	6878.49	6878.52	6878.53	6878.76	6878.63	6879.58	6881.17	6888.12	6886.43	6877.79
(††)	-300	+200	+21000	+100	0	+600	-300	+2400	+4100	+19100	-4800	-23000

CAL YR 1982 MAX 127100 MIN 97950 (††) +28070  
WTR YR 1983 MAX 156300 MIN 105800 (††) +19100

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

## 08285500 RIO CHAMA BELOW EL VADO DAM, NM

LOCATION.--Lat 36°34'48", long 106°43'24", Rio Arriba County, Hydrologic Unit 13020102, in Tierra Amarilla Grant, on left bank 1.5 mi downstream from El Vado Dam, 2.8 mi upstream from Rio Nutrias, 13 mi southwest of Tierra Amarilla, and at mile 76.2.

DRAINAGE AREA.--877 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> is probably noncontributing.

PERIOD OF RECORD.--October 1913 to November 1915, April to November 1916, March, April 1920, September 1920 to August 1924, October 1935 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "Chama River" prior to 1935, as "near Tierra Amarilla" 1913-14, 1935-47, as "near El Vado" 1915-16, and as "at El Vado" 1920-24.

REVISED RECORDS.--WSP 1312: 1914, 1949. WSP 1392: 1949.

GAGE.--Water-stage recorder. Datum of gage is 6,696.12 ft National Geodetic Vertical Datum of 1929. Prior to October 1935, at site 1.5 mi upstream at different datum. October 1935 to September 1938 at site 1.1 mi upstream at datum 30.34 ft higher.

REMARKS.--Records good. Flow regulated by El Vado Reservoir (station 08285000) since 1935. Flow affected by release of transmountain water from Heron Reservoir (station 08284510) since May 1971. Diversions for irrigation of about 10,600 acres 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, 324,600 acre-ft/yr, prior to completion of El Vado Dam.  
35 years (water years 1936-70), 373 ft<sup>3</sup>/s, 270,200 acre-ft/yr, prior to release of transmountain water.  
13 years (water years 1971-83), 425 ft<sup>3</sup>/s, 307,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft<sup>3</sup>/s May 22, 1920, gage height, 12 ft, site and datum then in use, from rating curve extended above 3,500 ft<sup>3</sup>/s; no flow Mar. 25, 26, 31, 1955. Maximum discharge since construction of El Vado Dam in 1935, 6,010 ft<sup>3</sup>/s May 17, 1941, gage height, 6.89 ft.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,590 ft<sup>3</sup>/s May 26, gage height, 6.30 ft; minimum, 18 ft<sup>3</sup>/s Dec. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	129	204	82	161	248	669	1350	3840	1160	88	581
2	196	103	320	83	122	166	781	1020	3970	991	109	579
3	196	161	409	84	71	167	779	898	3900	912	125	575
4	211	145	573	86	95	242	562	964	3250	916	121	574
5	223	96	575	86	116	401	205	1320	2860	920	133	574
6	158	96	365	86	116	398	283	1680	2740	682	181	583
7	98	97	55	86	84	302	451	1690	2690	459	176	631
8	128	157	68	86	58	273	340	1420	2830	434	383	693
9	156	207	103	84	93	304	262	1710	2920	429	466	699
10	158	149	104	83	123	298	264	2710	2560	432	164	697
11	159	113	143	84	113	327	348	3220	2180	387	87	696
12	159	144	182	86	104	348	445	2700	2380	322	90	711
13	238	170	1240	86	104	348	539	2370	2230	296	86	711
14	205	170	2860	86	88	737	526	2510	1660	301	86	703
15	116	126	2980	86	74	1030	419	1760	1300	253	101	693
16	116	79	2910	86	94	643	383	1140	1410	179	131	390
17	116	81	2790	86	111	353	384	1080	1360	191	150	47
18	116	119	2780	117	113	376	387	1240	1310	215	130	45
19	116	230	2780	153	113	439	739	1250	1550	195	79	36
20	108	140	2580	119	113	438	1400	1230	1520	143	89	36
21	85	140	2260	86	113	297	1510	1280	1340	140	97	80
22	71	127	1480	86	113	163	1290	1190	1080	135	227	110
23	71	116	763	86	120	199	1300	2010	1110	136	576	113
24	72	125	791	86	130	286	1300	3300	1430	120	501	113
25	120	145	792	86	130	324	1610	3810	1990	196	436	115
26	120	126	791	101	130	345	1880	4260	2490	363	514	116
27	271	107	419	118	130	346	1630	4310	2650	363	582	370
28	408	107	19	106	248	251	1430	4200	2070	203	584	600
29	232	121	20	96	---	256	1580	4360	1590	123	505	532
30	159	149	54	96	---	459	1740	4370	1310	96	432	359
31	159	---	83	118	---	556	---	4040	---	88	498	---
TOTAL	4911	3975	31493	2900	3180	11320	25436	70392	65520	11780	7927	12762
MEAN	158	133	1016	93.5	114	365	848	2271	2184	380	256	425
MAX	408	230	2980	153	248	1030	1880	4370	3970	1160	584	711
MIN	71	79	19	82	58	163	205	898	1080	88	79	36
AC-FT	9740	7880	62470	5750	6310	22450	50450	139600	130000	23370	15720	25310
CAL YR 1982	TOTAL	225542	MEAN 618	MAX 4000	MIN 19	AC-FT 447400						
WTR YR 1983	TOTAL	251596	MEAN 689	MAX 4370	MIN 19	AC-FT 499000						

## RIO GRANDE BASIN

## 08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, NM

LOCATION.--Lat 36°19'06", long 106°35'50", Rio Arriba County, Hydrologic Unit 13020102, on left bank 40 ft downstream from site of former bridge, 7.7 mi downstream from Rio Gallina, 9 mi northwest of Youngsville, 15.6 mi upstream from Abiquiu Dam, 30.3 mi downstream from El Vado Dam, and at mile 47.4.

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

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 6,275 ft, 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 above station.

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

13 years (water years 1971-83), 453 ft<sup>3</sup>/s, 328,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,550 ft<sup>3</sup>/s May 20, 1973, gage height, 8.70 ft; minimum 7.5 ft<sup>3</sup>/s Oct. 17, 18, 1963.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,450 ft<sup>3</sup>/s May 30, gage height, 7.28 ft; minimum, 34 ft<sup>3</sup>/s Dec. 29, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	173	167	124	134	438	669	1610	4530	1210	100	572
2	194	122	288	114	185	318	793	1150	4660	1040	181	569
3	199	117	320	112	87	245	792	959	4720	910	368	567
4	200	215	525	110	72	259	736	973	3910	904	166	563
5	227	116	542	109	105	402	316	1230	3300	904	133	560
6	226	104	544	101	113	400	141	1740	3110	826	197	566
7	110	106	125	98	114	395	434	1750	2990	474	235	599
8	98	107	62	97	73	268	389	1590	3080	426	225	690
9	148	229	86	95	58	346	258	1590	3300	420	656	689
10	159	204	115	98	106	310	256	2620	2980	419	256	689
11	164	141	117	102	123	340	274	3460	2400	410	130	688
12	165	126	186	99	105	377	401	3120	2430	325	106	695
13	165	178	455	99	102	389	466	2420	2540	314	153	700
14	297	183	2780	97	103	492	548	2630	1910	288	102	697
15	132	184	2860	94	80	1220	422	2170	1430	281	101	692
16	120	106	2920	94	73	815	363	1300	1410	204	123	657
17	120	91	2750	96	104	424	366	1100	1520	154	137	113
18	119	99	2760	92	115	350	401	1260	1320	197	174	61
19	120	200	2770	141	121	457	591	1310	1520	198	111	53
20	120	200	2690	174	117	463	1420	1280	1610	160	139	46
21	104	157	2300	100	117	417	1730	1340	1440	125	118	40
22	80	154	1910	86	138	204	1390	1280	1180	133	93	86
23	74	131	789	91	183	197	1380	1590	1080	128	486	110
24	74	125	815	88	235	254	1430	3230	1280	127	592	110
25	74	148	810	90	268	344	1650	4020	1970	118	437	111
26	150	158	806	86	252	365	2150	4440	2370	272	461	110
27	116	121	745	110	236	352	1860	4880	2960	413	582	138
28	428	112	108	117	198	350	1550	4730	2230	271	592	585
29	336	114	44	99	---	192	1650	5030	1720	151	584	592
30	176	149	49	99	---	400	1870	5130	1370	115	478	540
31	174	---	73	100	---	610	---	4900	---	97	445	---
TOTAL	5011	4370	31511	3212	3717	12393	26696	75832	72270	12014	8661	12888
MEAN	162	146	1016	104	133	400	890	2446	2409	388	279	430
MAX	428	229	2920	174	268	1220	2150	5130	4720	1210	656	700
MIN	74	91	44	86	58	192	141	959	1080	97	93	40
AC-FT	9940	8670	62500	6370	7370	24580	52950	150400	143300	23830	17180	25560
CAL YR 1982	TOTAL	227788	MEAN 624	MAX 3750	MIN 44	AC-FT 451800						
WTR YR 1983	TOTAL	268575	MEAN 736	MAX 5130	MIN 40	AC-FT 532700						



RIO GRANDE BASIN  
08286500 RIO CHAMA ABOVE ABIQUIU RESERVOIR, NM -- Continued  
WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to December 1974.

WATER TEMPERATURES: October 1962 to December 1974.

SUSPENDED SEDIMENT DISCHARGES: October 1962 to December 1974.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT							
13...	1050	159	270	11.0	68	29	98
DEC							
13...	1315	179	350	4.0	149	72	92
JAN							
17...	1055	126	479	2.0	245	83	94
FEB							
16...	1100	73	515	3.5	58	11	--
MAR							
24...	1340	239	549	5.0	509	328	99
MAY							
25...	1200	4070	227	15.5	245	2690	91
JUN							
23...	1200	984	187	13.5	38	101	94
JUL							
28...	1300	274	218	13.0	65	48	97
AUG							
24...	1200	608	242	14.5	3050	5010	99
SEP							
27...	1440	114	316	12.0	70	22	97

## RIO GRANDE BASIN

## 08286900 ABIQUIU RESERVOIR NEAR ABIQUIU, NM

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

DRAINAGE AREA.--2,146 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> is probably noncontributing.

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

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

REMARKS.--Reservoir is formed by earthfill dam, completed Feb. 5, 1963. Capacity, 1,212,000 acre-ft between elevations 6,060 ft, invert of outlet tunnel, and 6,350 ft, crest of spillway, based on capacity table effective Jan. 1, 1980. No dead storage. Reservoir is used for flood control and, since March 1976, for recreation. A desilting pool of about 2,000 acre-ft was maintained from May 1968 to 1974, when it was increased to 4,000 acre-ft and continued until December 1975.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 205,300 acre-ft June 22, 1973, elevation, 6,219.93 ft; no storage at times prior to May 1968 and Jan. 11 to Mar. 25, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 175,500 acre-ft June 14, elevation, 6,213.89 ft; minimum, 31,940 acre-ft Nov. 24, elevation 6,159.02 ft.

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	6,200	125,400
6,170	49,900	6,220	199,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32390	32230	32020	82060	82580	81440	80880	86000	132100	164600	106300	105800
2	32420	32200	32260	82160	82850	81390	81020	85160	137300	162300	107200	105800
3	32450	32130	32820	82180	82700	81270	81140	83960	142000	159700	107000	105800
4	32480	32110	33940	82130	82500	81070	81120	82800	146500	157100	106500	105800
5	32480	32090	35120	82040	82250	80930	80700	82300	150500	154600	106500	105800
6	32420	32150	36300	81980	82040	80780	80660	82680	154200	151900	106500	105600
7	32420	32220	36540	81980	81780	81000	80780	83000	157700	148500	106500	105700
8	32420	32180	36640	81980	81640	81140	80560	83270	161500	145000	106600	105800
9	32420	32160	36680	81960	81490	81240	80290	83590	165700	141400	106600	105800
10	32480	32160	36880	81960	81390	81100	80040	85680	168400	137800	106600	105800
11	32580	32120	37050	82010	81460	81020	80220	89200	170300	134400	106600	105700
12	32520	32020	37380	81940	81490	81200	80460	91900	172900	131300	107200	105400
13	32260	32040	37720	81860	81510	81390	80460	93170	174700	127800	107100	105600
14	32250	32060	43180	81840	81540	81270	80560	94830	175500	123300	106900	105600
15	32190	32080	48280	81840	81560	81740	80560	95840	175300	120000	106600	105500
16	32290	32090	53630	81840	81510	81140	80460	94650	175200	115900	106400	105700
17	32380	32130	58660	81860	81560	80630	80340	93300	175100	111800	106400	105400
18	32290	32060	63900	81940	81780	80830	80930	92160	174600	109700	106400	105400
19	32160	32060	69170	82010	81780	81020	81320	91200	173800	108900	106300	105400
20	32150	32320	74280	82040	81740	81270	82060	90260	173200	108100	106300	105300
21	32190	32420	78390	81980	81740	81200	82650	89360	172000	107300	106300	105300
22	32190	32320	81610	81980	81660	81140	82300	88380	170200	106700	106200	105300
23	32200	32120	81810	81940	81580	81100	82010	88080	168100	106800	106200	105300
24	32220	31940	81840	81960	81640	80850	82010	90730	166600	106800	106200	105200
25	32160	31990	81910	81960	81580	80780	82620	94750	166600	106800	106000	105200
26	32160	32120	82060	81760	81490	80680	83920	99800	167400	106600	106000	105200
27	31990	32200	82620	81560	81300	80580	84490	105300	168900	106600	106200	105200
28	32150	32260	82500	81760	81120	80680	84590	110400	168800	106400	106300	105300
29	32230	32180	82110	81910	---	80600	85090	115800	168100	106400	106300	105100
30	32250	32050	82010	82110	---	80660	85980	121500	166500	106300	106100	105100
31	32250	---	81980	82350	---	80880	---	127200	---	106200	105800	---
MAX	32580	32420	82620	82350	82850	81740	85980	127200	175500	164600	107200	105800
MIN	31990	31940	32020	81560	81120	80580	80040	82300	132100	106200	105800	105100
(†)	6159.24	6159.10	6184.77	6184.92	6184.42	6184.32	6186.37	6200.55	6211.54	6193.90	6193.78	6193.49
(††)	-70	-200	+49930	+370	-1230	-240	+5100	+41220	+39300	-60300	-400	-700

CAL YR 1982 MAX 84520 MIN 31940 (††) +46640  
WTR YR 1983 MAX 175500 MIN 31940 (††) +72780

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

## 08287000 RIO CHAMA BELOW ABIQUIU DAM, NM

LOCATION.--Lat 36°14'12", long 106°24'59", in SE¼SE¼ sec.8, T.23 N., R.5 E., Rio Arriba County, Hydrologic Unit 13020102, on right bank 0.8 mi downstream from Abiquiu Dam, 5.9 mi northwest of Abiquiu, and at mile 31.3.

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

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Concrete control since Jan. 25, 1966. Altitude of gage is 6,040 ft, from topographic map. Prior to Jan. 25, 1966, at datum 1.60 ft lower.

REMARKS.--Water-discharge records good. Flow controlled by El Vado Reservoir (station 08285000) 46.4 mi upstream and Abiquiu Reservoir (station 08286900) 0.8 mi upstream. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 54.5 mi upstream. Diversions for irrigation of about 17,600 acres above station. Corps of Engineers gage-height telemeter at station.

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

13 years (water years 1971-83), 475 ft<sup>3</sup>/s, 344,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft<sup>3</sup>/s July 1, 1965, gage height, 6.69 ft, datum then in use; maximum gage height, 7.29 ft Jan. 14, 1967 (backwater from ice); minimum discharge, about 0.5 ft<sup>3</sup>/s Mar. 17, 1966, Jan. 28, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,500 ft<sup>3</sup>/s July 14, gage height, 5.41 ft; minimum, 7.8 ft<sup>3</sup>/s Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	186	222	39	30	306	691	1940	1730	2430	121	595
2	182	166	180	39	30	350	795	1940	1920	2410	269	595
3	182	155	89	62	146	341	797	1930	2010	2400	635	595
4	182	215	64	111	228	373	797	1930	1570	2390	427	595
5	235	156	64	136	230	498	565	1960	1120	2400	127	595
6	256	86	55	113	230	499	220	2040	1130	2430	127	587
7	142	86	47	91	230	305	422	2040	1130	2430	125	579
8	105	137	47	91	179	197	559	2040	1130	2420	156	647
9	135	226	47	91	143	299	419	2040	1230	2400	375	693
10	134	232	47	91	149	406	419	2050	1400	2390	464	693
11	135	172	47	91	111	420	271	2060	1390	2220	180	693
12	196	172	47	104	110	337	313	2070	1400	2010	156	773
13	279	172	142	113	110	337	515	2080	1400	2160	242	755
14	312	172	245	104	98	557	545	2090	1410	2370	242	693
15	194	172	279	91	78	994	504	2100	1510	2470	262	693
16	99	138	279	91	92	1130	466	2090	1600	2460	245	577
17	99	78	174	91	101	744	461	2090	1790	2450	146	226
18	166	134	84	91	79	340	313	2090	1990	1330	161	59
19	184	177	84	91	63	394	480	2090	1980	653	162	46
20	133	127	84	166	133	397	1250	2080	2120	588	96	22
21	102	127	84	149	133	486	1600	2080	2260	552	152	22
22	92	187	227	94	178	291	1790	2090	2310	397	209	51
23	77	230	629	94	211	213	1800	2090	2300	165	400	110
24	77	196	719	94	232	425	1800	2100	2180	145	629	110
25	115	133	719	94	305	429	1850	2100	1970	188	577	110
26	149	120	719	179	332	428	1910	2120	1980	373	482	110
27	201	104	461	212	332	424	1920	2130	2180	441	541	172
28	356	104	167	30	300	348	1920	2150	2370	343	624	486
29	343	157	208	30	---	264	1940	2170	2390	205	637	681
30	186	196	100	30	---	425	1940	2040	2430	173	595	585
31	186	---	39	30	---	550	---	1890	---	175	595	---
TOTAL	5380	4713	6399	2933	4593	13507	29272	63710	53330	45968	10159	13148
MEAN	174	157	206	94.6	164	436	976	2055	1778	1483	328	438
MAX	356	232	719	212	332	1130	1940	2170	2430	2470	637	773
MIN	77	78	39	30	30	197	220	1890	1120	145	96	22
AC-FT	10670	9350	12690	5820	9110	26790	58060	126400	105800	91180	20150	26080
CAL YR 1982 TOTAL	222739		MEAN 610	MAX 2130	MIN 39	AC-FT 441800						
WTR YR 1983 TOTAL	253112		MEAN 693	MAX 2470	MIN 22	AC-FT 502000						

RIO GRANDE BASIN  
08287000 RIO CHAMA BELOW ABIQUIU DAM, NM -- Continued  
WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to December 1974.

WATER TEMPERATURES: October 1962 to December 1974.

SUSPENDED SEDIMENT DISCHARGES: October 1962 to December 1974.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (000095)	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 (70331)
OCT							
13...	1457	314	356	14.0	66	56	99
DEC							
14...	1245	277	407	4.5	25	19	85
JAN							
17...	1415	89	297	4.0	24	5.8	--
FEB							
16...	1400	80	349	4.0	7	1.5	--
MAR							
21...	1230	409	355	7.0	12	13	89
MAY							
25...	1530	2100	296	16.0	30	170	99
JUN							
23...	1500	2260	162	18.0	70	427	84
JUL							
28...	1600	249	198	13.0	81	54	95
AUG							
24...	1500	702	345	14.0	82	155	97
SEP							
28...	1000	432	305	17.0	117	136	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 upstream from bridge on State Highway 96, 2.4 mi south of La Madera, 2.6 mi downstream from confluence of Rio Vallecitos and Rio Tusas, 3.1 mi north of Ojo Caliente, and at mile 19.9.

DRAINAGE AREA.--419 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1932 to current year.

REVISED RECORDS.--WSP 1712: 1959.

GAGE.--Water-stage recorder. Datum of gage is 6,358.84 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 23, 1934, at site about 2.6 mi upstream at different datum. Apr. 23, 1934 to Apr. 21, 1936, at datum 12.58 ft lower and Apr. 22, 1936 to Oct. 26, 1956, at datum 13.84 ft lower, both at site 1,400 ft downstream.

REMARKS.--Records good. Diversion above station for irrigation of about 3,500 acres, 1962 determination. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--51 years, 67.5 ft<sup>3</sup>/s, 48,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,140 ft<sup>3</sup>/s Apr. 21, 1958, gage height, 6.42 ft, from rating curve extended above 1,300 ft<sup>3</sup>/s; maximum gage height, 7.25 ft, from floodmarks, June 19, 1966; minimum discharge, 0.2 ft<sup>3</sup>/s Aug. 17, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Apr. 21, 1958, may have been exceeded by a flood in May 1920, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 26	0530	970	*5.83	May 26	0215	970	5.76
May 10	0130	*1000	5.81				

Minimum discharge, 5.9 ft<sup>3</sup>/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	23	24	21	26	48	143	541	518	30	10	11
2	16	22	21	21	24	53	102	443	401	28	14	11
3	17	21	16	21	23	54	110	315	308	25	18	12
4	16	20	19	21	26	57	89	362	272	21	18	11
5	16	21	22	22	26	52	69	526	238	20	15	11
6	16	20	21	22	23	50	78	610	225	20	13	10
7	15	19	21	23	24	48	70	466	210	20	15	11
8	15	20	24	24	27	52	64	642	198	18	15	10
9	15	23	25	23	26	49	54	739	177	17	15	11
10	15	27	25	22	26	54	63	867	178	16	13	10
11	16	28	25	22	26	71	72	838	162	16	13	10
12	17	23	21	23	26	83	69	669	147	16	13	9.9
13	17	19	20	23	28	94	77	588	140	16	14	11
14	18	21	23	23	29	100	76	484	121	15	16	10
15	19	20	17	23	30	122	67	396	103	15	12	10
16	19	21	19	23	31	84	68	316	95	15	11	9.4
17	20	23	22	23	32	76	80	246	84	14	10	8.4
18	19	25	22	24	31	80	125	239	84	15	10	8.3
19	18	24	20	24	34	67	234	292	80	13	10	7.9
20	16	23	20	24	32	67	349	328	75	13	11	7.3
21	16	23	20	24	30	57	443	322	65	12	11	6.4
22	15	22	21	23	32	68	428	389	57	10	11	6.4
23	15	23	24	23	35	60	490	498	53	11	11	6.6
24	16	22	22	23	37	59	592	615	47	12	12	7.1
25	16	22	20	24	45	61	781	705	50	13	13	8.0
26	16	22	23	24	45	54	843	706	67	12	15	8.0
27	41	23	23	24	45	53	786	612	56	11	16	8.4
28	41	22	19	24	46	59	743	545	47	10	16	8.9
29	28	21	19	24	---	59	804	477	41	9.0	13	8.5
30	25	23	22	26	---	57	714	490	36	8.9	11	9.5
31	23	---	22	26	---	102	---	446	---	10	11	---
TOTAL	588	666	662	717	865	2050	8683	15712	4335	481.9	406	278.0
MEAN	19.0	22.2	21.4	23.1	30.9	66.1	289	507	145	15.5	13.1	9.27
MAX	41	28	25	26	46	122	843	867	518	30	18	12
MIN	15	19	16	21	23	48	54	239	36	8.9	10	6.4
AC-FT	1170	1320	1310	1420	1720	4070	17220	31160	8600	956	805	551
CAL YR 1982	TOTAL	30592.2	MEAN	83.8	MAX	992	MIN	5.8	AC-FT	60680		
WTR YR 1983	TOTAL	35443.9	MEAN	97.1	MAX	867	MIN	6.4	AC-FT	70300		

## 08290000 RIO CHAMA NEAR CHAMITA, NM

LOCATION.--Lat 36°04'26", long 106°06'40", in NE¼NE¼ sec.8, T.21 N., R.8 E., Rio Arriba County, Hydrologic Unit 13020102, in San Juan Pueblo Grant, at downstream end of pier nearest left bank of bridge on U.S. Highway 285, 0.5 mi west of Chamita, 2.5 mi northwest of San Juan Pueblo, and at mile 2.8.

DRAINAGE AREA.--3,144 mi<sup>2</sup>, of which about 100 mi<sup>2</sup> is probably noncontributing.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1912 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as Chama River near Chamita prior to 1928, and Chama River at Chamita 1929-30.

REVISED RECORDS.--WSP 1512: 1913-15, 1934, 1936. WSP 1632: 1929(M). WSP 1732: 1931(M). WSP 1923: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Jan. 1, 1964. Datum of gage is 5.653.61 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 4, 1933, at railroad bridge 2.3 mi downstream at different datums. Oct. 4, 1933 to Mar. 1, 1942, at site 50 ft downstream at datum 0.22 ft higher. Mar. 2, 1942 to Dec. 31, 1963, at site 200 ft downstream, present datum.

REMARKS.--Water-discharge records good. Diversions above station for irrigation of about 27,600 acres. Chamita ditch (station 08289500), on left bank, and Hernandez ditch (station 08289800), on right bank, bypass gage for irrigation of several hundred acres 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 and 29.3 mi upstream respectively. Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510) 83.0 mi upstream. National Weather Service gage- height telemeter at station.

AVERAGE DISCHARGE.--58 years (water years 1913-70), 541 ft<sup>3</sup>/s, 392,000 acre-ft/yr, prior to release of transmountain water.  
13 years (water years 1971-83), 525 ft<sup>3</sup>/s, 380,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft<sup>3</sup>/s May 22, 1920, from rating curve extended above 2,300 ft<sup>3</sup>/s; maximum gage height, 10.45 ft Aug. 22, 1961; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The floods of Sept. 29, 1904, and Oct. 4 or 5, 1911, probably exceeded 15,000 ft<sup>3</sup>/s. Another major flood occurred in 1884, from newspaper accounts.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,140 ft<sup>3</sup>/s July 11, gage height, 6.82 ft; minimum, 32 ft<sup>3</sup>/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	186	205	102	98	322	678	2870	2620	2350	136	536
2	167	185	235	100	92	400	836	2750	2400	2340	436	537
3	181	151	150	130	87	403	845	2600	2460	2330	616	540
4	177	186	109	150	236	380	834	2590	2090	2330	686	536
5	172	200	83	220	257	492	764	2740	1280	2310	164	530
6	266	122	92	181	251	497	324	2910	1250	2350	122	525
7	177	108	90	156	252	456	319	2780	1230	2360	119	522
8	124	106	88	148	261	241	643	2870	1200	2350	120	566
9	124	177	96	146	179	300	451	3040	1200	2350	159	651
10	135	248	94	148	206	396	447	3250	1280	2380	499	618
11	135	206	92	156	165	491	418	3240	1350	2510	271	627
12	135	180	90	154	152	402	264	3070	1340	1960	112	657
13	212	172	87	175	154	405	527	2920	1320	2050	192	724
14	283	170	199	175	157	455	599	2750	1310	2270	206	635
15	288	171	277	158	141	944	561	2650	1340	2420	186	636
16	142	171	267	157	135	1170	496	2530	1490	2410	201	631
17	116	122	278	142	152	1030	505	2400	1560	2410	129	355
18	114	117	137	135	151	420	546	2360	1870	1990	85	99
19	197	195	114	138	129	450	343	2350	1850	630	120	49
20	154	170	116	145	138	449	1400	2410	1940	600	90	39
21	122	142	118	250	178	448	1960	2400	2150	530	70	34
22	108	133	117	154	183	536	2380	2430	2220	444	152	33
23	92	211	445	146	248	206	2480	2530	2200	154	208	48
24	70	217	630	144	256	409	2570	2680	2160	119	550	77
25	68	157	634	146	318	450	2810	2790	1830	133	569	74
26	130	136	644	144	382	452	3000	2880	1850	269	441	79
27	116	128	619	311	379	449	3020	2970	1970	475	453	86
28	291	130	197	157	376	452	2950	2980	2260	435	545	232
29	380	142	289	97	---	299	3080	2850	2240	244	619	576
30	208	189	256	98	---	367	3030	2820	2340	153	549	589
31	186	---	138	103	---	518	---	2560	---	138	544	---
TOTAL	5233	4928	6986	4766	5713	14689	39080	84970	53600	45794	9349	11841
MEAN	169	164	225	154	204	474	1303	2741	1787	1477	302	395
MAX	380	248	644	311	382	1170	3080	3250	2620	2510	686	724
MIN	68	106	83	97	87	206	264	2350	1200	119	70	33
AC-FT	10380	9770	13860	9450	11330	29140	77520	168500	106300	90830	18540	23490
(t)	1300	---	---	---	---	---	547	1350	1300	1420	1220	1390
(tt)	1000	---	---	---	---	---	631	939	218	828	263	822

CAL YR 1982 TOTAL 248920 MEAN 682 MAX 3070 MIN 56 AC-FT 493700  
WTR YR 1983 TOTAL 286949 MEAN 786 MAX 3250 MIN 33 AC-FT 569200

(t) Diversion, in acre-feet, by Chamita ditch.  
(tt) Diversion, in acre-feet, by Hernandez ditch.

RIO GRANDE BASIN  
08290000 RIO CHAMA NEAR CHAMITA, NM -- Continued  
WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1969 to December 1974.

WATER TEMPERATURES: October 1950 to December 1974.

SUSPENDED SEDIMENT DISCHARGES: October 1947 to December 1974.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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							
14...	1410	298	391	15.0	741	596	17
DEC							
14...	1600	202	479	5.0	628	343	17
JAN							
19...	1355	123	503	4.0	663	220	61
FEB							
17...	1500	160	480	10.5	227	98	--
MAR							
29...	1200	278	381	9.0	137	103	24
MAY							
24...	1145	2860	262	13.0	166	1280	66
JUN							
24...	1100	2260	214	18.0	95	580	72
JUL							
25...	1230	120	293	16.0	53	17	94
AUG							
22...	1100	128	261	17.0	47	16	91

RIO GRANDE BASIN  
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 southwest of Alire, and 24 mi 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 downstream from heading located on left bank of Rio Chama, and 4.5 mi 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 downstream from ditch heading located on left bank of Rio Chama, and 1.4 mi 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 downstream from Winfield Morton pump, 0.6 mi downstream from heading located on left bank of Rio Chama, and 1.2 mi west of Abiquiu. PERIOD OF RECORD, April 1972 to 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 downstream from heading located on right bank of Rio Chama, and 0.4 mi 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 downstream from culvert on U.S. Highway 84, 0.4 mi downstream from heading located on right bank of Rio Chama, and 2.5 mi east of Abiquiu. PERIOD OF RECORD, April 1972 to 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 upstream from culvert on U.S. Highway 84, 0.2 mi downstream from heading located on right bank of Rio Chama, and 2.6 mi east of Abiquiu. PERIOD OF RECORD, April 1972 to 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 downstream from heading located on left bank of Quintana ditch (station 08287250), and 2.8 mi east of Abiquiu. PERIOD OF RECORD, April 1972 to 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 downstream from heading located on left bank of Rio Chama, and 2.9 mi 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 upstream from forest boundary, 0.2 mi downstream from culvert on State Highway 96, 0.4 mi downstream from tail of Mariano ditch (station 08287300), 0.9 mi downstream from heading located on left bank of Rio Chama, and 4.4 mi east of Abiquiu. PERIOD OF RECORD, April 1972 to 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 downstream from heading located on right bank of Rio Chama, and 3.5 mi 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 downstream from heading located on left bank of Rio Chama, and 2.9 mi northwest of Medanales. PERIOD OF RECORD, April 1972 to current year.
- 08288100 MANZANARES AND MONTOYA DITCH NEAR MEDANALES, NM.--Lat 36°11'13", long 106°12'35", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank 0.2 mi downstream from heading located on right bank of Rio Chama, and 1.7 mi northeast of Medanales. PERIOD OF RECORD, April 1972 to 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 downstream from tail of Jose V. Martinez ditch (station 08288050), 0.7 mi downstream from heading located on left bank of Rio Chama, and 1.3 mi northwest of Medanales. PERIOD OF RECORD, April 1972 to current year.



## DIVERSIONS FROM RIO CHAMA --Continued

- 08288200 MARTINEZ AND DURANES DITCH (UPPER) NEAR MEDANALES, NM.--Lat 36°10'55", long 106°11'59", Rio Arriba County, in Juan Jose Lobato Grant, totalizing flowmeter and Parshall flume on right bank 300 ft downstream from tail of Manazaneres and Montoya ditch (station 08288100), 0.7 mi downstream from heading located on right bank of Rio Chama, and 1.1 mi northwest of Medanales. PERIOD OF RECORD, April 1972 to 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 downstream from culvert on State Highway 233, 1.4 mi south of Medanales, 2.5 mi downstream from "upper" gage (station 08288200), and 3.2 mi downstream from heading located on right bank of Rio Chama. PERIOD OF RECORD, April 1972 to 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 downstream from heading located on right bank of Rio Chama, 0.5 mi upstream from siphon under Rio del Oso, and 4.1 mi northwest of Hernandez. PERIOD OF RECORD, April 1972 to 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 upstream from flume over Arroyo de la Penita, 0.7 mi downstream from heading located on left bank of Rio Chama, and 1.0 mi northwest of Chamita. PERIOD OF RECORD, March 1936 to April 1941, February 1963 to 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 downstream from heading located on right bank of Rio Chama, 1.1 mi north of Hernandez, and 1.3 mi northwest of Chamita. PERIOD OF RECORD, March 1963 to 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 downstream from heading located on right bank of Rio Chama, and 0.6 mi east of Hernandez. PERIOD OF RECORD, April 1972 to current year.

## DIVERSIONS FROM RIO CHAMA, IN ACRE-FEET, IRRIGATION SEASON 1983

Diversion	APR	MAY	JUN	JUL	AUG	SEP	OCT
08286300 Monastery pump	0	0.8	1.0	1.7	0.9	0.9	0
08287020 Abeyta Trujillo ditch	311	331	351	404	40	16	3.3
08287040 Winfield Morton Pump	0	6.3	11	0	6.8	0	0
08287060 Jose Pablo Gonzales ditch	708	1410	1040	455	344	a540	72
08287150 Gonzales ditch	0	100	a190	62	0	0	0
08287200 La Puente ditch	a330	391	247	177	119	132	30
08287250 Quintana ditch	14	16	40	27	48	14	2.8
08287270 Valentine Martinez ditch	a3.6	8.6	20	16	0	7.9	74
08287300 Mariano ditch	77	361	339	252	25	131	99
08287400 Ferran ditch	14	24	317	236	0	0	0
08287600 Tierra Azul ditch	a800	a600	a750	700	a80	a180	a200
08288050 Jose V. Martinez ditch	93	253	232	202	101	94	70
08288100 Manzaneres and Montoya ditch	27	15	18	24	42	16	18
08288150 Rio de Chama ditch	654	433	560	574	470	638	492
08288200 Martinez and Duranes ditch (upper)	865	819	974	789	600	773	676
08288250 Martinez and Duranes ditch (lower)	273	287	319	544	272	410	205
08288300 Chili ditch	487	479	24	61	22	a400	230
08289500 Chamita ditch	547	1350	1300	1420	1220	1390	215
08289800 Hernandez ditch	631	939	218	828	263	822	691
08290100 Salazar ditch	5.8	394	208	663	167	627	368

a Estimated

## RIO GRANDE BASIN

## 08291000 SANTA CRUZ RIVER AT CUNDIYO, NM

LOCATION.--Lat 35°57'53", long 105°54'14", in SE¼NW¼ sec.17, T.20 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, on left bank 135 ft downstream from bridge on State Highway 4, 200 ft downstream from confluence of Rio Medio and Rio Frijoles, 0.6 mi northwest of Cundiyo, 1.8 mi upstream from Santa Cruz Dam, and at mile 11.9.

DRAINAGE AREA.--86 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only from some periods, published in WSP 1312. Prior to October 1953, published as Rio Santa Cruz at Cundiyo.

REVISED RECORDS.--WSP 1392: 1931(M), 1932-33, 1934-39(M), 1942, 1943(M).

GAGE.--Water-stage recorder. Concrete control since Jan. 3, 1954. Altitude of gage is 6,460 ft, from topographic map. Sept. 1, 1930 to Aug. 12, 1932, water-stage recorder at site about 1 mi downstream at different datum. Aug. 13, 1932 to Oct. 29, 1934, water-stage recorder at site 35 ft upstream at datum 0.42 ft higher. Oct. 30, 1934 to Jan. 2, 1954, water-stage recorder at present site at datum 0.64 ft lower.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 1,000 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--53 years, 29.1 ft<sup>3</sup>/s, 21,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft<sup>3</sup>/s Sept. 24, 1931, gage height, 7.8 ft, site and datum then in use, from rating curve extended above 170 ft<sup>3</sup>/s; minimum, 0.19 ft<sup>3</sup>/s Mar. 13, 1954, result of freezeup.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 26	2215	143	2.51	Aug. 3	1845	109	2.43
May 11	0215	186	2.67	Aug. 6	1645	179	2.68
May 29	2230	299	2.98	Aug. 13	1745	*555	3.55
July 12	0215	164	2.62	Aug. 25	0815	199	2.74
July 26	2200	186	2.70				

Minimum discharge, 3.6 ft<sup>3</sup>/s Dec. 3, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	14	9.6	10	9.8	21	62	119	253	119	71	42
2	25	14	8.7	10	9.0	24	51	102	268	111	75	39
3	24	10	5.5	10	9.8	25	50	86	254	104	89	35
4	23	12	12	10	9.7	27	43	84	259	96	96	34
5	22	14	14	10	10	24	35	100	251	91	91	31
6	21	13	14	11	9.5	21	34	112	255	90	85	32
7	21	13	15	11	10	23	29	112	249	86	84	32
8	20	13	13	11	9.5	24	29	121	241	79	78	39
9	20	14	13	11	9.3	25	26	132	237	75	69	34
10	19	15	13	10	8.9	28	22	167	237	70	67	32
11	20	15	12	10	9.2	35	26	160	241	79	66	31
12	21	11	12	10	9.3	37	24	140	249	107	68	31
13	19	12	14	11	10	41	24	132	249	79	80	29
14	19	11	13	11	10	41	24	126	231	74	74	29
15	18	12	14	11	11	41	24	124	210	69	63	28
16	18	14	17	11	11	34	25	116	204	64	58	26
17	18	13	13	11	12	33	32	116	202	60	54	25
18	17	13	12	11	12	34	51	112	205	58	47	24
19	17	12	12	10	13	33	70	105	211	55	45	23
20	16	12	12	10	14	32	85	98	212	53	43	23
21	16	12	12	10	14	29	86	94	208	55	40	23
22	15	11	12	9.8	15	32	78	98	205	47	44	21
23	15	12	12	10	15	30	72	109	196	45	57	20
24	15	11	11	10	17	30	86	131	188	44	47	20
25	15	10	10	9.8	20	31	110	161	177	42	59	20
26	15	10	14	10	21	26	125	169	167	89	55	20
27	20	10	12	10	22	25	123	158	153	71	56	33
28	16	10	11	9.7	21	26	120	178	144	60	51	25
29	13	9.9	10	9.5	---	27	121	220	135	57	46	23
30	15	9.9	10	10	---	33	124	269	127	60	44	27
31	14	---	10	9.9	---	53	---	256	---	64	42	---
TOTAL	573	362.8	372.8	318.7	352.0	945	1811	4207	6418	2253	1944	851
MEAN	18.5	12.1	12.0	10.3	12.6	30.5	60.4	136	214	72.7	62.7	28.4
MAX	26	15	17	11	22	53	125	269	268	119	96	42
MIN	13	9.9	5.5	9.5	8.9	21	22	84	127	42	40	20
AC-FT	1140	720	739	632	698	1870	3590	8340	12730	4470	3860	1690
CAL YR 1982	TOTAL	8441.8	MEAN 23.1	MAX 100	MIN 5.0	AC-FT	16740					
WTR YR 1983	TOTAL	20408.3	MEAN 55.9	MAX 269	MIN 5.5	AC-FT	40480					

## 08294200 NAMBE FALLS RESERVOIR NEAR NAMBE, NM

LOCATION.--Lat 35°50'46", Long 105°54'17", in NE¼SW¼, sec.29, T.19 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, in Nambé Indian Reservation, 300 ft upstream from Nambé Falls, 2.6 mi upstream from Rio En Medio, 4.4 mi southeast of Nambé Pueblo, and 5.4 mi southeast of Nambé.

DRAINAGE AREA.--34.1 mi<sup>2</sup>.

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

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

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

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

COOPERATION.--Records furnished by Bureau of Reclamation.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,050 acre-ft May 30 to June 5, June 7-15. Maximum elevation, 6,827.10 ft; minimum contents 1,520 acre-ft Oct. 1, elevation, 6,817.10 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Bureau of Reclamation in 1976)

6,815	1,420	6,825	1,930
6,820	1,660	6,830	2,230

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1540	1760	1980	1970	1940	1990	1960	1970	2050	2030	2030	2030
2	1570	1760	1970	1970	1940	1990	1970	1970	2050	2030	2040	2030
3	1600	1760	1960	1970	1940	1980	1980	1970	2050	2030	2040	2030
4	1620	1750	1950	1970	1940	1980	2000	1970	2050	2030	2040	2030
5	1650	1750	1950	1970	1940	1970	2010	1970	2050	2040	2040	2030
6	1680	1740	1950	1970	1950	1970	2010	1990	2040	2040	2040	2030
7	1700	1740	1950	1970	1950	1970	2010	2000	2050	2040	2040	2030
8	1730	1750	1950	1970	1960	1960	2000	2020	2050	2040	2040	2030
9	1740	1770	1950	1980	1960	1960	2000	2030	2050	2030	2040	2030
10	1760	1780	1940	1980	1980	1960	1990	2030	2050	2030	2030	2030
11	1780	1800	1940	1980	1970	1960	1990	2030	2050	2040	2040	2030
12	1780	1810	1940	1970	1980	1960	1970	2040	2050	2040	2040	2030
13	1780	1810	1940	1970	1980	1960	1960	2040	2050	2040	2040	2030
14	1770	1820	1930	1970	1980	1970	1960	2040	2050	2030	2040	2000
15	1770	1830	1930	1960	1980	1970	1960	2030	2050	2030	2040	1970
16	1760	1840	1930	1950	1980	1970	1960	2030	2040	2030	2040	1960
17	1760	1850	1920	1950	1980	1980	1950	2030	2040	2030	2040	1960
18	1760	1870	1920	1940	1980	1980	1960	2030	2040	2030	2040	1960
19	1770	1870	1920	1940	1980	1980	1970	2030	2040	2030	2040	1960
20	1770	1880	1930	1930	1980	1990	1980	2030	2040	2040	2040	1960
21	1780	1890	1930	1930	1980	1990	1980	2030	2040	2030	2040	1960
22	1790	1900	1940	1920	1980	1980	1960	2030	2040	2030	2040	1960
23	1790	1910	1950	1920	1980	1980	1940	2030	2040	2030	2040	1960
24	1800	1920	1960	1910	1980	1970	1930	2030	2040	2030	2040	1960
25	1790	1930	1960	1920	1980	1960	1940	2040	2040	2030	2040	1960
26	1790	1930	1970	1930	1980	1950	1970	2040	2040	2040	2040	1960
27	1790	1940	1970	1930	1980	1940	1980	2040	2040	2030	2040	1960
28	1780	1950	1970	1930	1990	1930	1980	2040	2040	2030	2040	1950
29	1780	1960	1970	1930	---	1930	1970	2040	2040	2030	2030	1950
30	1770	1970	1970	1930	---	1930	1970	2050	2040	2030	2030	1960
31	1770	---	1970	1940	---	1940	---	2050	---	2030	2030	---
MAX	1800	1970	1980	1980	1990	1990	2010	2050	2050	2040	2040	2030
MIN	1540	1740	1920	1910	1940	1930	1930	1970	2040	2030	2030	1950
(↑)	6822.03	6825.65	6825.75	6825.10	6825.97	6825.08	6825.76	6827.00	6826.85	6826.80	6826.73	6825.47
(↑↑)	+250	+200	0	-30	+50	-50	+30	+80	-10	-10	0	-70
CAL YR 1982	MAX	1980	MIN	665	(↑↑)	0						
WTR YR 1983	MAX	2050	MIN	1540	(↑↑)	+440						

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

## RIO GRANDE BASIN

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

LOCATION.--Lat 35°50'46", long 105°54'17", in NE¼SW¼ sec.29, T.19 N., R.10 E., Santa Fe County, Hydrologic Unit 13020101, in Nambe Indian Reservation, in outlet conduits of Nambe Falls Dam, 300 ft upstream from Nambe Falls, 2.6 mi upstream from Rio En Medio, 4.4 mi southeast of Nambe Pueblo and 5.4 mi southeast of Nambe.

DRAINAGE AREA.--34.1 mi<sup>2</sup>.

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

GAGE.--Totalizing flowmeters in each of three outlet conduits in Nambe Falls Dam.

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

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 312 ft<sup>3</sup>/s June 9, 1979, gage height, 1.96 ft at site 1,100 ft downstream (maximum release and spill computed at Nambe Falls Dam, 250 ft<sup>3</sup>/s, June 9, 1979); minimum daily discharge, 0.13 ft<sup>3</sup>/s May 3, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 109 ft<sup>3</sup>/s June 1; minimum daily discharge, 0.53 ft<sup>3</sup>/s Nov. 8-30, Dec. 23-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	8.2	1.5	.60	2.4	4.0	5.1	42	109	69	41	27
2	.67	8.2	5.8	.60	2.4	5.5	5.2	36	106	67	47	25
3	.67	8.2	5.8	1.6	2.4	7.2	5.2	31	101	61	79	22
4	.68	8.2	5.8	2.4	2.4	6.6	5.2	31	101	60	85	21
5	.68	8.2	5.8	2.4	2.4	5.9	5.2	31	99	58	87	20
6	.68	8.2	5.8	1.8	2.4	5.9	5.2	31	96	67	77	19
7	.68	3.5	5.8	1.0	2.4	5.9	7.9	31	89	63	74	17
8	.68	.53	5.8	1.0	2.4	5.9	10	35	89	54	69	22
9	.68	.53	5.8	1.0	2.4	5.9	10	53	89	50	65	17
10	.68	.53	5.8	3.0	2.4	5.9	10	53	87	48	60	16
11	5.2	.53	5.8	4.7	2.4	6.0	13	60	87	58	58	16
12	11	.53	5.8	4.7	2.4	6.0	16	61	87	83	61	16
13	11	.53	5.8	4.7	2.4	6.0	10	54	87	65	63	14
14	11	.53	5.8	5.4	3.1	6.0	6.4	54	85	56	63	30
15	11	.53	5.8	5.9	4.0	6.0	8.1	48	85	51	54	33
16	12	.53	5.8	5.9	4.0	5.9	9.6	47	83	47	50	20
17	12	.53	4.4	5.9	4.0	5.9	9.6	44	83	42	47	13
18	9.9	.53	3.0	5.9	4.0	5.8	9.6	38	87	38	44	13
19	3.1	.53	3.0	5.9	4.0	5.9	9.6	37	89	37	42	11
20	3.1	.53	3.0	5.9	4.0	5.9	13	35	89	38	39	10
21	3.1	.53	3.0	5.9	4.0	5.9	24	35	85	37	35	9.9
22	3.1	.53	1.6	5.9	4.0	8.4	31	39	85	33	39	9.9
23	3.1	.53	.53	5.9	4.0	10	30	45	83	32	46	9.8
24	4.7	.53	.53	3.8	4.0	10	30	50	85	33	41	9.7
25	8.2	.53	.53	.66	4.0	10	27	63	85	29	47	9.7
26	8.2	.53	.53	.66	4.0	10	26	76	81	44	42	9.4
27	8.2	.53	2.2	.66	4.0	10	36	87	79	37	37	13
28	8.2	.53	4.0	1.7	4.0	11	42	89	77	31	34	13
29	8.2	.53	4.0	2.4	---	7.5	42	101	77	31	32	8.4
30	8.2	.53	4.0	2.4	---	5.0	42	104	72	38	27	9.0
31	8.2	---	4.0	2.4	---	5.0	---	104	---	42	25	---
TOTAL	167.46	64.89	126.82	102.68	90.3	210.9	503.9	1645	2637	1499	1610	483.8
MEAN	5.40	2.16	4.09	3.31	3.23	6.80	16.8	53.1	87.9	48.4	51.9	16.1
MAX	12	8.2	5.8	5.9	4.0	11	42	104	109	83	87	33
MIN	.66	.53	.53	.60	2.4	4.0	5.1	31	72	29	25	8.4
AC-FT	332	129	252	204	179	418	999	3260	5230	2970	3190	960
CAL YR 1982 TOTAL	2279.36			MEAN 6.24	MAX 31	MIN .49	AC-FT 4520					
WTR YR 1983 TOTAL	9141.75			MEAN 25.0	MAX 109	MIN .53	AC-FT 18130					

08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM  
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 35°52'29", long 106°08'30", in SW¼SW¼ sec.18, T.19 N., R.8 E., Santa Fe County, Hydrologic Unit 13020101, in San Ildefonso Pueblo Grant, near right bank on downstream end of pier of former railway bridge, 400 ft downstream from bridge on State Highway 4, 1.8 mi southwest of San Ildefonso Pueblo, 2.5 mi downstream from Pojoaque River, 6.8 mi west of Pojoaque, and at mile 1,614.2.

DRAINAGE AREA.--14,300 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1895 to December 1905, June 1909 to current year. Monthly discharge only for some periods, published in WSP 1312. In early reports this record was published as "at Water Tank," as "at Rio Grande," and as "near Buckman."

REVISED RECORDS.--WSP 828: Drainage area. WSP 1512: 1895-99, 1904-6, 1911-12, 1914, 1931(M), 1935. WSP 1712: 1904(M).

GAGE.--Water-stage recorder. Datum of gage is 5,488.48 ft 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 in Colorado and 75,000 acres in New Mexico. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft<sup>3</sup>/s May 23, 1920; maximum gage height, 14.5 ft Sept. 29, 1904, present site and datum; minimum daily discharge, 60 ft<sup>3</sup>/s July 4, 5, 1902.

EXTREMES OUTSIDE PERIOD OF RECORD.--The 1920 flood is greatest since at least 1884 and probably since 1741; information from W. H. Yeo's file on floods.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 13	1215	6090	7.10	June 3	1000	*8760	8.44

Minimum discharge, 254 ft<sup>3</sup>/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1410	769	897	576	735	1310	1790	4840	8200	6180	961	938
2	1330	754	886	627	713	1400	1980	4580	8450	5640	1630	922
3	1400	725	728	624	697	1440	1980	4180	8600	5540	1540	928
4	1520	733	652	638	846	1390	2000	3860	8130	5270	1790	924
5	1780	952	661	721	905	1440	1860	3860	6800	4920	1150	875
6	1780	1030	662	745	893	1520	1300	4110	5970	4760	1040	849
7	1540	960	661	736	867	1480	1300	4060	5670	4640	1010	832
8	1320	951	705	743	912	1150	1610	4170	5570	4440	1040	923
9	1220	1060	762	744	845	1160	1480	4550	5610	4160	945	1030
10	1060	1260	803	726	845	1280	1410	5050	5820	4010	1170	981
11	945	1580	862	735	817	1410	1400	5490	5770	4140	1030	950
12	933	1280	869	759	801	1350	1160	5770	5650	3830	832	954
13	982	1220	868	771	814	1330	1370	5890	5820	3770	793	1060
14	1040	1170	940	761	832	1390	1530	5730	6220	3820	956	935
15	1030	1140	990	761	885	1920	1520	5370	6230	3840	866	950
16	843	1090	973	749	956	2270	1440	4930	6000	3680	773	923
17	784	1030	880	751	998	2220	1420	4580	5670	3550	708	687
18	755	1070	729	770	948	1610	1460	4390	5510	3340	619	424
19	792	1170	713	774	960	1580	1380	4170	5320	1580	578	303
20	840	1140	724	772	924	1540	2300	4120	5370	1800	558	280
21	765	1040	738	868	968	1480	3100	4010	5610	1320	484	266
22	717	1020	743	807	987	1650	3490	3910	5590	1390	490	268
23	761	1060	1090	756	1070	1200	3620	4120	5610	1060	624	275
24	704	1040	1490	763	1140	1360	3740	4420	5510	934	896	337
25	641	951	1420	774	1250	1490	4120	4970	5380	933	1100	341
26	667	859	1360	768	1360	1460	4640	5700	5660	1130	1000	339
27	723	834	1340	891	1370	1420	5020	6400	5710	1480	893	349
28	891	784	894	838	1370	1430	5090	6880	6230	1410	977	455
29	996	772	770	707	----	1260	4960	7250	6530	1160	1080	879
30	848	835	755	712	----	1280	4930	7620	6640	1020	1010	947
31	786	----	656	754	----	1510	----	7690	----	939	972	----
TOTAL	31803	30279	27221	23121	26708	45730	74400	156670	184850	95686	29515	21124
MEAN	1026	1009	878	746	954	1475	2480	5054	6162	3087	952	704
MAX	1780	1580	1490	891	1370	2270	5090	7690	8600	6180	1790	1060
MIN	641	725	652	576	697	1150	1160	3860	5320	933	484	266
AC-FT	63080	60060	53990	45860	52980	90710	147600	310800	366600	189800	58540	41900

GAL YR 1982	TOTAL	599135	MEAN	1641	MAX	5030	MIN	416	AC-FT	1188000
WTR YR 1983	TOTAL	747107	MEAN	2047	MAX	8600	MIN	266	AC-FT	1482000

RIO GRANDE BASIN  
08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued  
WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1946 to current year.

WATER TEMPERATURES: October 1948 to current year.

SUSPENDED SEDIMENT 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, 131 micromhos May 28, 1983.

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, 438 micromhos July 11, minimum daily, 131 micromhos May 28.

WATER TEMPERATURES: Maximum, 25.0°C July 25; minimum, 0.0°C on several days in December and January of most years.

SEDIMENT CONCENTRATIONS: Maximum daily, 6,280 mg/L Aug. 2; minimum daily, 30 mg/L Sept. 22.

SEDIMENT LOADS: Maximum daily, 60,900 tons (55,200 tonnes) July 11; minimum daily, 22 tons (20 tonnes) Sept. 22.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (DEC C) (00020)	TEMPER- ATURE (DEC C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
OCT 01...	1000	1440	238	243	8.6	7.8	18.0	14.0	23	8.7	86	5
NOV 18...	1035	1060	275	275	8.1	8.0	8.5	5.5	16	10.8	100	4
FEB 02...	1400	705	330	311	8.2	8.2	3.0	4.0	3.8	10.1	110	0
APR 01...	1530	1840	280	318	8.3	7.8	10.0	10.0	50	9.5	120	21
JUN 02...	1430	8410	190	179	8.4	7.9	26.5	14.0	150	8.2	70	9
AUG 01...	1445	1070	300	289	7.7	7.9	28.0	23.5	220	7.0	110	12
DATE		HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 01...	5	27	4.6	13	.6	2.3	--	--	82	34	3.6	
NOV 18...	4	32	5.5	15	.7	2.3	--	--	99	37	4.8	
FEB 02...	0	34	6.4	19	.8	2.4	--	--	114	35	6.4	
APR 01...	21	37	6.4	17	.7	2.4	--	--	98	51	5.4	
JUN 02...	9	22	3.7	7.3	.4	2.0	--	--	61	23	2.3	
AUG 01...	12	35	5.4	15	.7	2.6	120	.0	102	39	4.8	

RIO GRANDE BASIN  
08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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)	CYANIDE TOTAL (MG/L AS CN) (00720)
OCT 01...	.30	21	149	155	--	<.10	.090	--	.100	.030	<.01
NOV 18...	.30	21	175	178	--	<.10	<.060	--	.090	<.010	<.01
FEB 02...	.40	25	193	197	--	.29	.090	--	.100	.050	--
APR 01...	.30	19	188	198	.30	<.10	.120	1.3	.200	.030	--
JUN 02...	.20	14	117	112	--	.14	.120	--	.110	.030	<.01
AUG 01...	.40	16	160	178	--	<.10	.020	--	.250	.020	<.01

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
OCT 01...	1000	--	2	2	100	0	--	0	<1	<1
NOV 18...	1035	30	--	2	--	0	0	0	--	<1
FEB 02...	1400	--	--	--	--	--	--	0	--	--
APR 01...	1530	--	--	--	--	--	--	0	--	--
JUN 02...	1430	30	--	1	--	0	0	0	--	<1
AUG 01...	1445	30	--	2	--	0	0	0	--	<1

DATE	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)
OCT 01...	<10	<10	0	0	0	1	1700	40	0
NOV 18...	--	<1	--	0	--	2	--	30	--
FEB 02...	--	--	--	--	--	--	--	10	--
APR 01...	--	--	--	--	--	--	--	--	--
JUN 02...	--	<1	--	0	--	6	--	40	--
AUG 01...	--	<1	--	0	--	6	--	10	--

DATE	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)	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)
OCT 01...	4	--	100	12	.0	.0	3	--	0
NOV 18...	2	20	--	13	--	.0	3	<10	--
FEB 02...	--	--	--	--	--	--	--	--	--
APR 01...	--	--	--	--	--	--	--	--	--
JUN 02...	2	10	--	9	--	.0	2	<10	--
AUG 01...	<1	20	--	4	--	.0	3	<10	--

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, 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)
OCT									
01...	5	<1	<1	0	<1	--	--	20	0
NOV									
18...	2	--	<1	--	<1	240	<6.0	--	0
FEB									
02...	--	--	--	--	--	--	--	--	--
APR									
01...	--	--	--	--	--	--	--	--	--
JUN									
02...	8	--	<1	--	<1	140	<6.0	--	0
AUG									
01...	<1	--	<1	--	<1	300	<6.0	--	0

DATE	TIME	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	
NOV 18...	1035	< 2.0	16	250	3	0	0	
DATE		COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
NOV 18...	< 10	0	650	< 10	120	< .00	0	

DATE	TIME	GROSS	GROSS	GROSS	GROSS	GROSS	GROSS	GROSS	GROSS	RADIUM	URANIUM
		ALPHA,	ALPHA,	ALPHA,	ALPHA,	BETA,	BETA,	BETA,	BETA,	226,	
		DIS-	DIS-	SUSP.	SUSP.	DIS-	SUSP.	DIS-	SUSP.	DIS-	NATURAL
		SOLVED	SOLVED	TOTAL	TOTAL	SOLVED	TOTAL	SOLVED	TOTAL	SOLVED	DIS-
		(UG/L	(PCI/L	(UG/L	(PCI/L	(PCI/L	(PCI/L	(PCI/L	(PCI/L	SOLVED	SOLVED
		AS	AS	AS	AS	AS	AS	AS SR/	AS SR/	METHOD	(UG/L
		U-NAT)	U-NAT)	U-NAT)	U-NAT)	CS-137)	CS-137)	YT-90)	YT-90)	(PCI/L)	AS U)
		(80030)	(01515)	(80040)	(01516)	(03515)	(03516)	(80050)	(80060)	(09511)	(22703)
NOV											
18...	1035	4.0	2.7	1.9	1.3	<2.3	2.4	<2.2	2.3	.07	4.0
AUG											
01...	1445	<4.0	--	18	12	2.8	14	2.7	13	.09	2.2

[illegible]



RIO GRANDE BASIN  
08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	MIREX, TOTAL (UG/L) (39755)
OCT 01...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
JUN 02...	--	--	--	--	--	--	--	--	--	--
DATE	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	
OCT 01...	<.10	<.01	<.10	<1	<.01	--	--	--	--	--
JUN 02...	--	--	--	--	--	.02	<.01	<.01	<.01	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 01...	49	120
NOV 18...	30	260
FEB 02...	K3	K32
APR 01...	K58	170
JUN 02...	220	1800
AUG 01...	600	1300

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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. DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)
OCT 01...	1000	1440	14.0	696	2710	--	--	--	41	91
NOV 11...	0830	1550	6.5	4010	16800	32	37	51	--	--
MAR 15...	0655	1870	9.0	1150	5810	--	--	--	--	--
APR 01...	1530	1840	10.0	707	3510	--	--	--	--	--
MAY 01...	0800	4940	9.0	1020	13600	--	--	--	38	63
15...	0700	5530	9.0	835	12500	--	--	--	--	--
JUN 01...	0650	8020	11.0	1010	21900	11	14	22	46	69
02...	1430	8410	14.0	1030	23400	12	15	25	46	65
07...	0645	5730	13.5	1070	16600	--	--	--	--	--
15...	0645	6270	13.5	643	10900	--	--	--	--	--
JUL 01...	0800	6350	15.0	337	5780	--	--	--	--	--
11...	0640	4440	17.0	13900	167000	41	52	86	98	98
15...	0645	3870	15.5	368	3850	--	--	--	35	53
AUG 01...	0645	975	21.0	128	337	--	--	--	--	--
03...	0645	1900	21.5	6070	31100	49	58	69	86	96
15...	0645	885	20.0	327	781	--	--	--	63	82
SEP 01...	0645	949	19.5	500	1280	--	--	--	49	78

RIO GRANDE BASIN  
08313000 RIO GRANDE AT OTOWI BRIDGE, NEAR SAN ILDEFONSO, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SED. SUSP. FALL DIAM. % FINER THAN (70344)	SED. SUSP. FALL DIAM. % FINER THAN (70345)	SED. SUSP. FALL DIAM. % FINER THAN (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN (70331)	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)
OCT									
01...	100	--	--	--	--	--	--	--	--
NOV									
11...	--	--	--	62	78	87	90	96	98
MAR									
15...	--	--	--	34	--	--	--	--	--
APR									
01...	--	--	--	28	--	--	--	--	--
MAY									
01...	94	97	100	--	--	--	--	--	--
15...	--	--	--	28	--	--	--	--	--
JUN									
01...	93	99	100	--	--	--	--	--	--
02...	89	96	100	--	--	--	--	--	--
07...	--	--	--	46	--	--	--	--	--
15...	--	--	--	32	--	--	--	--	--
JUL									
01...	--	--	--	39	--	--	--	--	--
11...	99	100	--	--	--	--	--	--	--
15...	71	95	100	--	--	--	--	--	--
AUG									
01...	--	--	--	61	72	86	93	99	100
03...	99	99	100	--	--	--	--	--	--
15...	98	100	--	--	--	--	--	--	--
SEP									
01...	98	100	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										215	298	359
2										325	234	341
3										236	256	336
4										231	262	346
5										228	245	350
6										235	240	347
7										226	203	351
8										227	257	346
9										226	283	337
10										232	301	342
11										438	267	329
12										239	257	335
13										236	298	323
14										238	269	318
15										232	244	326
16										238	282	321
17										227	290	343
18										232	288	350
19										267	323	390
20										265	309	407
21										281	315	416
22										290	344	408
23										279	258	403
24										297	302	407
25										326	262	378
26										290	264	371
27										216	314	383
28										294	238	381
29										281	299	341
30										301	296	344
31										293	306	---
MEAN										263	278	358

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), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	286	224	231	370	354	364	352	346	349	356	296	327
2	238	230	235	372	352	362	360	352	356	358	324	341
3	238	228	233	368	346	358	370	350	360	366	304	330
4	230	210	221	370	354	362	376	348	359	372	296	331
5	210	190	200	370	348	358	376	352	362	370	288	331
6	206	192	199	368	332	352	378	362	369	360	294	332
7	212	194	202	330	278	298	378	346	361	348	322	336
8	212	200	207	288	274	282	360	346	352	346	318	334
9	226	204	216	302	278	290	366	356	360	338	318	326
10	244	224	233	298	260	293	364	352	357	332	308	320
11	270	244	254	278	240	272	358	340	349	332	300	315
12	284	268	277	314	278	293	350	330	341	326	296	311
13	306	284	296	280	274	277	344	326	333	324	294	310
14	310	300	305	278	272	276	340	322	331	328	302	314
15	316	306	312	288	278	282	344	326	332	326	294	310
16	318	292	307	296	282	286	346	320	332	322	300	311
17	318	304	311	298	278	288	360	340	348	322	310	315
18	326	312	318	296	246	284	368	340	351	320	310	315
19	336	326	333	308	282	294	358	324	344	318	304	312
20	342	324	333	294	284	288	364	338	349	320	312	316
21	342	328	335	296	278	289	370	342	355	328	316	321
22	350	330	339	300	288	295	366	338	351	318	300	309
23	332	312	323	322	302	314	370	340	353	314	302	309
24	336	326	330	326	320	323	350	334	343	320	300	310
25	338	324	333	332	304	319	334	316	323	316	306	311
26	346	322	335	332	318	324	336	324	329	316	306	311
27	346	322	340	334	322	328	338	324	331	328	300	315
28	388	340	355	338	324	333	334	318	325	310	300	305
29	364	346	357	344	334	339	340	264	314	312	298	305
30	368	344	356	348	340	344	354	276	308	314	306	310
31	360	352	356	---	---	---	358	316	336	314	306	311
MONTH	388	190	290	372	240	312	378	264	344	372	288	318
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	318	314	315	254	244	251	304	292	298	248	228	241
2	316	310	315	260	242	254	304	292	297	258	240	248
3	316	308	314	264	252	259	308	302	304	262	244	254
4	338	304	318	276	264	269	310	304	307	264	252	258
5	310	306	308	294	276	283	312	306	310	268	254	260
6	314	306	309	280	270	274	312	304	308	268	254	262
7	320	308	313	288	272	278	312	304	307	276	260	268
8	320	308	313	278	268	274	336	310	326	270	248	257
9	318	310	314	282	274	280	334	312	325	258	228	240
10	322	312	317	296	280	288	338	324	331	232	212	221
11	318	302	313	292	284	290	336	328	332	230	208	219
12	316	302	311	294	282	290	332	324	326	---	---	230
13	310	294	308	294	286	290	338	326	331	202	188	196
14	312	300	307	294	288	289	334	328	331	206	196	201
15	306	294	300	310	286	296	332	324	327	206	196	201
16	296	262	281	308	280	289	328	320	323	214	196	206
17	274	264	268	292	282	288	322	312	319	226	212	220
18	270	252	266	284	270	277	324	318	321	240	222	232
19	272	252	266	290	276	282	320	282	305	252	238	245
20	276	256	263	296	290	292	338	282	301	252	242	247
21	280	260	270	302	290	296	318	290	306	248	232	240
22	270	248	262	298	292	295	316	298	305	252	232	241
23	270	256	263	294	282	287	312	294	302	248	220	235
24	264	248	259	310	292	301	306	288	297	234	208	221
25	260	248	255	306	300	302	296	272	282	222	198	209
26	260	242	255	304	298	301	286	244	267	206	188	195
27	262	254	259	308	300	303	276	232	256	196	172	185
28	260	250	255	308	304	306	254	218	239	186	170	178
29	---	---	---	312	304	307	240	174	218	216	106	171
30	---	---	---	312	306	308	244	230	237	---	---	170
31	---	---	---	312	300	306	---	---	---	172	166	170
MONTH	338	242	289	312	242	287	338	174	301	276	106	223

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), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	170	158	168									
2	218	150	168									
3	174	132	153									
4	154	138	147									
5	164	154	158									
6	176	150	162									
7	230	166	182									
8	198	170	180									
9	234	164	177									
10	184	166	176									
11	180	166	174									
12	268	168	190									
13	---	---	200									
14	196	168	185									
15	238	174	197									
16	206	180	190									
17	200	178	192									
18	224	198	212									
19	224	208	217									
20	226	208	219									
21	228	188	207									
22	198	178	187									
23	188	178	183									
24	190	176	184									
25	188	178	186									
26	194	188	191									
27	196	186	192									
28	202	192	196									
29	206	188	200									
30	250	198	227									
31	---	---	---									
MONTH	268	132	187									

TEMPERATURE WATER (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	16.0	12.5	15.0	10.5	7.5	9.0	5.5	4.0	5.0	1.0	1.0	1.0
2	15.0	10.5	13.0	9.0	6.0	7.5	5.0	2.5	3.5	1.5	1.0	1.0
3	14.5	11.0	13.0	9.0	5.0	7.0	4.0	1.5	3.0	1.5	1.0	1.0
4	15.0	11.0	13.0	8.0	4.5	6.5	4.5	1.5	3.0	2.0	1.0	1.0
5	15.0	11.5	13.0	8.0	4.5	6.5	4.5	1.5	3.0	2.5	1.0	1.5
6	14.5	10.5	12.5	7.5	4.5	6.0	4.5	1.5	3.0	2.0	1.0	1.0
7	13.5	10.0	12.0	7.5	4.5	6.0	4.0	1.5	3.0	---	---	2.0
8	13.5	10.5	12.0	7.5	5.5	6.5	3.0	2.5	3.0	4.0	.5	2.5
9	12.0	8.0	10.0	9.5	7.0	8.0	3.0	2.5	2.5	3.5	.5	2.0
10	11.5	8.0	10.0	9.0	7.0	8.0	4.5	2.5	4.0	---	---	2.0
11	11.0	8.0	9.5	8.5	6.0	7.0	5.5	3.5	4.5	---	---	2.0
12	11.0	8.5	9.5	6.5	4.0	5.5	6.0	3.5	4.5	4.0	.0	2.0
13	11.5	7.5	9.5	6.0	4.0	5.5	4.0	3.0	3.5	3.5	.0	2.0
14	13.0	9.5	11.5	6.0	3.5	5.0	4.5	2.0	3.0	3.5	.0	2.0
15	13.5	9.0	11.5	5.0	3.0	4.0	3.0	1.0	2.0	4.0	.0	2.0
16	14.0	10.5	12.0	4.5	2.5	3.5	3.5	.5	2.0	---	---	2.0
17	14.5	9.5	12.0	5.0	2.5	4.0	4.0	1.0	2.5	2.5	1.0	2.0
18	14.5	10.0	12.5	6.5	4.5	6.5	4.0	1.0	3.0	5.5	2.0	3.5
19	13.0	9.5	11.5	7.5	5.0	6.0	4.0	1.0	2.5	4.5	1.5	3.0
20	---	---	11.0	7.0	5.5	6.0	4.0	1.0	2.5	3.5	2.0	3.0
21	12.5	8.5	10.5	7.0	4.5	6.0	4.0	1.0	2.5	3.5	2.0	2.5
22	12.5	8.5	10.5	7.5	5.0	6.5	4.0	1.5	3.0	4.0	1.0	2.5
23	12.5	8.0	10.5	6.5	5.0	6.0	4.5	3.5	4.0	4.0	1.0	2.5
24	13.0	8.5	11.0	5.0	3.5	4.0	4.0	3.0	3.5	3.0	1.0	2.0
25	14.0	10.5	12.0	5.5	3.0	4.5	3.5	2.0	2.5	4.0	1.5	3.0
26	---	---	11.5	5.0	3.5	4.5	3.5	2.0	3.0	4.5	1.0	3.0
27	13.0	10.0	11.5	5.0	4.0	4.5	3.5	2.5	3.0	4.0	2.0	3.0
28	10.0	7.0	8.5	6.0	3.5	5.0	2.5	1.0	1.0	4.5	2.0	3.0
29	9.5	5.5	8.0	5.5	4.0	4.5	1.0	1.0	1.0	5.5	1.5	3.5
30	10.5	6.5	8.5	5.5	3.5	5.0	1.0	1.0	1.0	6.5	4.0	5.0
31	9.5	7.0	8.5	---	---	---	1.5	1.0	1.0	5.5	3.5	4.5
MONTH	16.0	5.5	11.0	10.5	2.5	6.0	6.0	.5	3.0	6.5	.0	2.5

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	6.0	3.0	4.5	7.5	4.0	6.0	10.0	7.0	8.5	12.0	8.0	10.0
2	5.5	2.5	3.5	8.0	5.5	7.0	10.5	6.5	8.5	10.0	8.0	9.5
3	3.0	2.0	2.5	7.5	5.0	6.5	10.0	7.0	8.5	12.5	7.0	10.0
4	3.0	1.5	2.0	7.0	5.5	6.0	8.0	4.5	6.0	13.5	9.0	11.5
5	4.5	1.0	3.0	6.0	4.5	5.5	7.5	3.0	5.5	13.5	9.5	11.5
6	4.5	1.0	3.0	8.0	4.0	6.0	8.0	4.5	6.5	13.0	9.5	11.0
7	4.5	1.0	3.0	8.5	5.0	7.0	9.0	4.5	6.5	13.5	8.5	11.0
8	5.0	2.0	3.5	10.0	6.0	8.0	8.0	5.0	6.5	13.5	9.5	11.5
9	6.0	2.5	4.0	10.5	6.5	8.5	10.0	5.0	7.5	14.0	10.5	12.5
10	5.5	2.5	4.0	11.0	6.5	9.0	11.0	6.5	9.0	13.5	9.5	11.5
11	6.5	2.0	4.5	10.5	7.5	9.0	9.5	7.5	8.5	13.0	9.5	11.5
12	6.0	2.0	4.0	11.5	7.5	9.5	9.5	6.5	8.0	12.5	8.5	10.5
13	6.5	2.5	4.5	11.5	7.5	9.5	9.5	6.0	7.5	12.5	9.0	11.0
14	7.0	3.0	5.0	10.0	8.0	9.5	7.5	6.0	7.0	11.5	9.5	10.5
15	7.0	3.5	5.5	10.0	7.0	8.0	10.5	6.0	8.0	13.0	8.5	10.5
16	7.0	3.0	5.5	9.5	5.0	7.5	12.5	7.5	10.0	12.0	9.0	11.0
17	7.5	4.0	6.0	8.5	5.5	7.5	13.0	8.0	10.5	11.5	8.5	10.0
18	7.5	3.5	5.5	7.5	6.0	7.0	13.5	9.5	11.5	13.0	8.5	10.5
19	6.0	4.0	5.0	7.0	5.0	6.0	14.5	9.5	12.0	12.5	9.5	11.0
20	7.0	3.0	5.0	8.5	5.0	6.5	12.0	9.5	11.0	12.5	9.5	11.0
21	7.0	3.0	5.0	7.5	4.0	6.0	12.0	8.5	10.5	14.5	9.5	11.5
22	7.5	3.5	5.5	7.0	5.0	6.0	12.5	8.5	10.5	15.5	11.0	13.0
23	7.5	4.0	6.0	7.5	4.5	6.5	13.0	8.5	11.0	16.0	11.5	14.0
24	8.0	4.0	6.5	9.0	4.5	7.0	13.5	9.0	11.5	16.0	11.5	14.0
25	8.5	5.5	7.0	7.5	5.5	6.5	13.5	9.5	11.5	16.0	11.5	14.0
26	8.5	5.0	7.0	9.0	5.0	6.5	13.0	9.0	11.0	15.5	12.5	14.0
27	9.0	5.5	7.0	8.5	4.0	6.5	13.0	9.0	11.0	15.5	12.0	14.0
28	6.5	5.0	6.0	9.0	6.5	7.5	12.5	9.0	11.0	16.0	12.0	14.0
29	---	---	---	9.5	6.5	8.0	13.0	9.5	11.5	16.0	12.5	14.0
30	---	---	---	11.5	6.0	9.0	12.5	9.0	10.5	15.0	12.0	13.5
31	---	---	---	11.5	7.5	9.5	---	---	---	14.5	11.0	12.5
MONTH	9.0	1.0	5.0	11.5	4.0	7.5	14.5	3.0	9.0	16.0	7.0	12.0
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	14.0	10.5	12.0	18.0	14.5	16.0	23.5	20.0	22.0	24.0	19.0	21.5
2	14.0	11.0	12.5	17.0	14.5	15.5	23.0	19.0	21.0	23.0	19.5	21.5
3	14.0	11.0	12.5	18.5	14.0	16.5	22.5	20.5	21.5	23.5	19.5	21.5
4	14.5	11.5	13									



## 08315500 MCCLURE RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'18", long 105°50'06", in NE¼SW¼, sec.24, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, at McClure Dam on Santa Fe River, 2.1 mi upstream from Nichols Reservoir, 5.8 mi east of Santa Fe, and at mile 37.1.

DRAINAGE AREA.--17.4 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Altitude of gage is 7,788 ft, from topographic map. Prior to Oct. 1, 1947, nonrecording gages at same site and various datums all referred to the Public Service Co. of New Mexico assumed datum, 165.9 ft lower.

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

COOPERATION.--Capacity table furnished by Public Service Co. of New Mexico.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,140 acre-ft June 25, 1960, gage height, 103.7 ft; no contents Jan. 25 to May 8, 1951.

EXTREMES FOR CURRENT YEARS.--Maximum contents, 2,670 acre-ft May 29, gage height, 97.34 ft; minimum, 1,400 acre-ft Dec. 29 to Jan. 3, minimum gage height, 77.30 ft Jan. 1.

Capacity table (gage height, in feet, and contents, in acre-feet)  
(Based on survey by Public Service Co. of New Mexico in 1947)

75	1,280	90	2,160
80	1,550	95	2,500
85	1,840	100	2,860

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2350	1890	1600	1400	1430	1550	2160	2640	2660	2640	2620	2620
2	2370	1870	1590	1400	1430	1560	2200	2640	2660	2630	2630	2620
3	2390	1850	1580	1400	1430	1580	2250	2640	2660	2630	2630	2620
4	2390	1830	1570	1410	1430	1600	2280	2640	2650	2630	2630	2620
5	2380	1810	1560	1410	1430	1620	2300	2640	2650	2630	2630	2620
6	2360	1790	1550	1410	1430	1630	2330	2640	2650	2630	2630	2620
7	2350	1770	1550	1410	1430	1640	2350	2640	2650	2630	2630	2620
8	2330	1760	1540	1410	1430	1650	2360	2640	2650	2630	2630	2620
9	2310	1760	1540	1420	1420	1670	2380	2650	2650	2630	2630	2620
10	2300	1750	1530	1420	1420	1690	2390	2650	2650	2630	2620	2620
11	2280	1750	1520	1420	1420	1710	2400	2650	2650	2640	2620	2620
12	2270	1740	1520	1420	1420	1740	2410	2650	2650	2630	2620	2620
13	2250	1740	1510	1420	1430	1770	2430	2650	2650	2630	2620	2620
14	2240	1730	1500	1420	1430	1800	2450	2640	2650	2630	2620	2600
15	2220	1720	1490	1420	1430	1830	2460	2640	2650	2630	2620	2580
16	2200	1710	1490	1420	1440	1860	2480	2640	2650	2630	2620	2570
17	2180	1710	1480	1420	1440	1880	2500	2640	2650	2630	2620	2550
18	2170	1700	1470	1430	1440	1910	2530	2640	2650	2630	2620	2540
19	2140	1690	1470	1430	1450	1930	2590	2630	2650	2630	2620	2520
20	2130	1690	1460	1430	1460	1940	2640	2630	2650	2630	2620	2500
21	2110	1680	1450	1430	1460	1960	2640	2630	2650	2630	2620	2480
22	2090	1670	1450	1430	1470	1970	2640	2630	2650	2630	2620	2460
23	2070	1660	1440	1430	1480	1980	2640	2640	2640	2620	2620	2450
24	2050	1650	1440	1430	1490	2000	2650	2640	2640	2620	2620	2430
25	2030	1650	1430	1430	1500	2010	2660	2650	2640	2620	2620	2420
26	2010	1640	1420	1430	1510	2020	2650	2660	2640	2620	2620	2400
27	1990	1630	1420	1430	1530	2030	2650	2660	2640	2620	2620	2380
28	1970	1620	1410	1430	1540	2040	2650	2660	2640	2620	2620	2370
29	1950	1620	1400	1430	---	2050	2650	2660	2640	2620	2620	2350
30	1930	1610	1400	1430	---	2070	2650	2660	2640	2620	2620	2340
31	1910	---	1400	1430	---	2110	---	2660	---	2620	2620	---
MAX	2390	1890	1600	1430	1540	2110	2660	2660	2660	2640	2630	2620
MIN	1910	1610	1400	1400	1420	1550	2160	2630	2640	2620	2620	2340
(†)	86.11	80.97	77.32	77.74	79.74	89.20	97.06	97.23	96.89	96.75	96.70	92.67
(††)	-440	-280	-200	+30	+110	+570	+540	+10	-20	-20	0	-280

CAL YR 1982 MAX 2390 MIN 823 (††) +556  
WTR YR 1983 MAX 2660 MIN 1400 (††) 0

(†) 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 downstream from McClure Dam, 5.3 mi east of Santa Fe, and at mile 36.6.

DRAINAGE AREA.--18.2 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1910, January 1913 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1953, published as Santa Fe Creek near Santa Fe.

REVISED RECORDS.--WSP 1512: 1933, 1936-37(M), 1942, drainage area. WSP 1732: 1923, 1925. WDR NM-75-1: 1927.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,718 ft, 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.--70 years, 7.94 ft<sup>3</sup>/s, 5,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft<sup>3</sup>/s Aug. 14, 1921, gage height, 5.17 ft, site and datum then in use, from rating curve extended above 150 ft<sup>3</sup>/s; minimum, 0.05 ft<sup>3</sup>/s Apr. 7, 8, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 1,000 ft<sup>3</sup>/s occurred Aug. 13, 1872, and Sept. 29 or 30, 1904. Without regulation the flood of Sept. 23, 1929, might have exceeded 1,500 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 138 ft<sup>3</sup>/s June 1, gage height, 3.36 ft; minimum, 1.6 ft<sup>3</sup>/s Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	13	5.5	2.5	2.7	3.1	5.0	55	104	21	8.1	5.0
2	1.6	13	5.4	2.5	2.7	3.1	4.5	47	93	19	10	5.0
3	1.6	13	5.6	2.5	2.7	3.2	4.3	37	86	17	16	4.2
4	9.6	13	6.0	2.5	2.7	3.3	4.0	32	81	16	17	3.8
5	13	13	6.0	2.5	2.7	3.3	3.8	34	72	15	16	3.6
6	13	13	6.0	2.5	2.7	3.1	3.8	44	65	16	14	3.5
7	13	13	5.9	2.5	2.7	3.1	3.6	45	58	15	13	3.5
8	13	9.3	6.0	2.5	2.7	3.1	3.5	45	55	13	12	3.9
9	13	5.4	6.0	2.5	2.7	3.1	3.5	57	57	12	10	3.6
10	13	5.5	6.0	2.5	2.7	3.1	3.4	72	60	11	9.4	3.7
11	13	5.4	6.2	2.5	2.7	3.3	3.3	68	64	12	9.3	3.1
12	13	5.4	6.2	2.5	2.7	3.3	3.3	66	69	13	8.7	3.2
13	13	5.4	6.2	2.5	2.7	3.3	3.3	60	69	14	8.4	7.2
14	13	5.4	6.2	2.5	2.7	3.3	3.3	55	62	15	7.6	10
15	13	5.4	6.0	2.5	2.7	3.3	3.3	47	55	13	6.9	10
16	13	5.4	6.0	2.5	2.7	3.3	3.3	41	51	12	6.1	10
17	13	5.4	6.0	2.5	2.7	3.3	3.4	37	49	11	5.8	10
18	13	5.4	6.0	2.5	2.7	3.3	3.7	34	54	11	5.3	10
19	13	5.4	6.0	2.5	2.8	3.3	4.0	31	58	8.9	5.5	10
20	13	5.4	6.0	2.5	2.9	3.3	13	30	56	8.0	5.3	10
21	13	5.4	6.0	2.5	2.9	3.3	45	27	51	8.1	4.5	10
22	13	5.4	6.0	2.5	2.9	3.3	43	26	49	8.1	5.0	10
23	13	5.4	6.0	2.7	2.9	3.3	38	29	43	7.3	7.8	10
24	13	5.4	6.0	2.7	2.9	3.3	40	42	41	6.7	6.6	10
25	13	5.4	6.0	2.7	2.9	3.3	62	61	39	6.6	6.6	10
26	13	5.4	6.0	2.7	2.9	3.3	69	71	34	8.7	5.9	10
27	13	5.7	6.0	2.7	2.9	3.3	67	90	29	6.7	5.4	10
28	13	5.7	6.0	2.7	3.0	3.3	61	94	27	5.8	4.9	10
29	13	5.7	5.2	2.7	---	3.4	58	107	25	5.9	4.7	10
30	13	5.7	3.6	2.7	---	3.8	60	109	23	7.1	4.4	10
31	13	---	2.5	2.7	---	4.7	---	112	---	9.6	4.7	---
TOTAL	365.4	220.4	178.5	79.3	77.6	102.8	626.3	1705	1679	353.5	254.9	223.3
MEAN	11.8	7.35	5.76	2.56	2.77	3.32	20.9	55.0	56.0	11.4	8.22	7.44
MAX	13	13	6.2	2.7	3.0	4.7	69	112	104	21	17	10
MIN	1.6	5.4	2.5	2.5	2.7	3.1	3.3	26	23	5.8	4.4	3.1
AC-FT	725	437	354	157	154	204	1240	3380	3330	701	506	443
CAL YR 1982	TOTAL	2033.60	MEAN	5.57	MAX	13	MIN	.73	AC-FT	4030		
WTR YR 1983	TOTAL	5866.00	MEAN	16.1	MAX	112	MIN	1.6	AC-FT	11640		



## 08316500 NICHOLS RESERVOIR NEAR SANTA FE, NM

LOCATION.--Lat 35°41'24", long 105°52'46", in SE¼NE¼ sec.21, T.17 N., R.10 E., Santa Fe County, Hydrologic Unit 13020201, in Santa Fe National Forest, at Nichols Dam on Santa Fe River, 0.6 mi east of Twomile Reservoir, 3.3 mi east of Santa Fe, and at mile 34.4.

DRAINAGE AREA.--22.8 mi<sup>2</sup>.

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

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

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

COOPERATION.--Survey to compute capacity table furnished by Public Service Co. of New Mexico.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 716 acre-ft June 1, gage height, 167.99 ft; minimum, 237 acre-ft Oct. 4, gage height, 147.28 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)  
(Based on survey by Public Service Co. of New Mexico in 1943)

145	202	160	491
150	279	165	625
155	375	170	776

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277	519	507	551	390	288	431	707	712	694	683	477
2	261	526	507	545	383	289	447	704	709	694	683	458
3	245	532	508	540	379	292	459	702	707	693	693	440
4	238	539	509	535	373	296	466	702	706	693	695	424
5	244	554	509	530	369	299	472	703	705	692	695	405
6	256	562	509	525	364	300	476	705	703	692	694	389
7	265	579	510	518	359	302	478	706	703	691	694	375
8	271	584	511	510	354	309	480	707	702	690	693	365
9	278	582	514	503	350	314	481	708	702	685	692	354
10	290	580	518	497	345	318	482	710	703	675	688	342
11	302	576	522	491	340	322	482	710	704	680	685	333
12	314	571	526	486	335	330	482	709	704	695	679	325
13	325	566	530	482	330	338	483	707	703	695	676	323
14	335	561	532	477	326	345	483	706	702	693	673	324
15	346	556	534	473	322	350	483	703	701	692	664	328
16	356	553	536	468	317	353	483	703	700	692	649	328
17	366	553	537	464	313	358	484	702	702	687	637	327
18	375	551	539	459	310	361	487	701	704	684	622	324
19	388	544	540	454	306	364	496	692	704	684	612	325
20	398	538	543	450	302	366	534	691	704	684	598	332
21	410	534	546	445	299	367	618	689	704	680	584	341
22	419	529	549	440	295	369	700	677	703	679	574	350
23	426	523	552	436	293	369	706	683	701	682	566	353
24	433	518	554	431	291	370	708	704	700	684	555	357
25	439	512	556	426	290	372	711	708	701	686	547	361
26	445	509	559	421	289	373	711	710	701	687	536	366
27	451	506	561	416	288	375	709	712	698	690	528	373
28	460	508	563	411	288	377	708	712	698	686	520	380
29	478	507	564	405	---	380	708	714	699	680	510	388
30	496	507	562	400	---	388	708	714	697	675	502	396
31	510	---	556	395	---	408	---	713	---	678	494	---
MAX	510	584	564	551	390	408	711	714	712	695	695	477
MIN	238	506	507	395	288	288	431	677	697	675	494	323
(†)	160.70	160.60	162.42	155.85	150.47	156.44	167.73	167.91	167.39	166.77	---	155.89
(††)	+214	-3	+49	-161	-107	+120	+300	+5	-16	-19	a184	-98

CAL YR 1982 MAX 584 MIN 232 (††) +181  
WTR YR 1983 MAX 714 MIN 238 (††) +100

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

(††) CHANGE IN CONTENTS, IN ACRE-Feet

NOTE.--No gage height record Aug. 10 to Sept. 13 a -- estimated.

## 08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM

LOCATION.--Lat 35°32'49", long 106°13'41", in NW¼ sec.8, T.15 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201 in Mesita de Juana Lopez Grant, on right bank at foot of La Bajada Hill, 5.0 mi upstream from Cochiti Dam, 6.3 mi east of Pena Blanca, and at mile 7.9.

DRAINAGE AREA.--231 mi<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, from topographic map.

REMARKS.--Water-discharge records good except those for July thru September, which are fair. Surface and ground-water diversions and returns for municipal supply of city of Santa Fe in upper part of basin. Diversions for irrigation of about 400 acres 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 upstream and bypasses gage; ditch flow not included in record.

AVERAGE DISCHARGE.--13 years, 8.96 ft<sup>3</sup>/s, 6,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft<sup>3</sup>/s July 26, 1971, gage height, 9.58 ft, from rating curve extended above 160 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 5.69 ft and 9.58 ft; no flow July 16-18, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 163 ft<sup>3</sup>/s Sept. 13, gage height, 2.19 ft, no peak above base of 300 ft<sup>3</sup>/s, minimum, 1.3 ft<sup>3</sup>/s Sept. 23.

## DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND, OF DITCH, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Oct. 19	0	Feb. 2	0	May 9	1.1	Sept. 12	.34
Nov. 19	0	Mar. 8	0	July 13	0		
Jan. 4	0	Apr. 6	0	Aug. 8	1.1		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	7.6	9.8	13	12	10	13	51	81	17	6.0	7.0
2	6.4	7.7	9.2	11	11	10	12	46	74	16	15	4.3
3	6.9	8.0	8.9	11	11	10	11	40	68	15	7.0	3.3
4	7.0	8.4	8.9	11	12	11	11	33	61	14	6.0	3.5
5	5.4	8.1	8.9	11	11	10	11	28	52	14	6.5	3.0
6	5.3	8.1	8.9	11	11	10	11	25	45	13	11	3.5
7	5.8	8.2	8.8	11	11	10	11	29	47	12	7.1	4.5
8	6.0	8.0	8.9	11	12	9.9	10	31	46	11	5.1	8.6
9	6.1	9.0	9.7	11	12	8.8	10	36	42	11	6.0	5.0
10	6.1	8.4	11	11	12	10	9.0	47	40	10	4.9	4.0
11	6.7	13	10	12	11	10	7.9	52	42	23	4.2	3.9
12	10	7.2	9.6	11	11	10	8.6	54	45	16	3.0	3.9
13	8.8	7.0	9.7	11	11	10	9.2	49	46	14	2.8	17
14	8.1	7.0	9.6	11	11	9.7	11	43	44	11	3.2	4.4
15	7.6	6.9	9.7	11	11	10	11	41	39	9.6	2.9	3.5
16	8.0	6.9	9.4	11	11	10	11	35	37	8.6	2.4	3.5
17	8.2	6.3	9.5	11	11	10	10	30	34	9.8	2.6	3.8
18	7.7	7.1	9.3	11	11	11	9.4	28	32	6.4	2.5	3.7
19	7.1	7.8	9.2	11	11	13	8.2	26	33	5.1	2.5	3.5
20	8.1	8.4	9.3	11	11	12	9.7	38	32	3.4	2.7	2.6
21	8.0	8.1	9.7	11	11	11	9.0	32	30	7.2	3.6	2.3
22	7.8	8.2	9.9	11	11	14	9.9	26	27	5.1	3.5	2.2
23	8.0	8.3	11	11	11	13	15	23	23	4.4	3.6	1.6
24	7.9	8.3	10	11	10	12	31	21	20	4.1	4.1	3.1
25	7.3	8.3	9.8	11	11	14	45	20	25	3.0	7.8	2.7
26	7.3	8.4	9.6	11	11	11	59	45	20	7.2	6.6	3.1
27	8.0	9.4	10	11	11	11	59	55	22	6.0	5.3	4.1
28	7.4	9.1	10	11	10	10	54	61	21	5.7	3.7	4.3
29	7.4	9.4	10	11	---	10	51	66	20	4.1	3.5	4.2
30	7.6	9.2	12	11	---	11	51	73	18	7.4	3.5	4.1
31	7.7	---	13	12	---	9.9	---	80	---	11	10	---
TOTAL	226.3	245.8	303.3	345	311	332.3	588.9	1264	1166	305.1	158.6	128.2
MEAN	7.30	8.19	9.78	11.1	11.1	10.7	19.6	40.8	38.9	9.84	5.12	4.27
MAX	10	13	13	13	12	14	59	80	81	23	15	17
MIN	5.3	6.3	8.8	11	10	8.8	7.9	20	18	3.0	2.4	1.6
AC-FT	449	488	602	684	617	659	1170	2510	2310	605	315	254

CAL YR 1982 TOTAL 2781.4 MEAN 7.62 MAX 90 MIN 1.1 AC-FT 5520  
WTR YR 1983 TOTAL 5374.5 MEAN 14.7 MAX 81 MIN 1.6 AC-FT 10660

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

RIO GRANDE BASIN  
08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM --- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 19...	1300	170	70
MAR 08...	1325	160	40
MAY 09...	1430	0	20
JUL 13...	1200	0	30

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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...	1300	5.8	10.5	28	.44	92
MAR 08...	1325	7.9	15.0	112	2.4	35
MAY 09...	1430	40	17.5	2140	231	70
JUL 13...	1200	13	22.5	732	26	68

## 08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM

LOCATION.--Lat 35°37'01", long 106°18'58", in NW¼SW¼ sec.16, T.16 N., R.6 E., Sandoval County, Hydrologic Unit 13020201, in Pueblo de Cochiti Grant, in control tower at Cochiti Dam, 1.7 mi northeast of Cochiti Pueblo, and at mile 1,588.1.

DRAINAGE AREA.--14,900 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup>, in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

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

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

REMARKS.--Lake is formed by an earthfill dam on Rio Grande and Santa Fe River. Storage began on Nov. 12, 1973. Capacity, based on capacity table effective Jan. 1, 1982, 505,700 acre-ft between elevations 5,247.0 ft and 5,450.0 ft, crest of service spillway. Dead storage 732 acre-ft below elevation 5,255.0 ft, invert of outlet structure. Lake was created primarily for flood and sediment control. A 50,000 acre-ft permanent pool is authorized for recreational purposes.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 184,400 acre-ft June 21, 1979, elevation, 5,387.99 ft; no storage prior to Nov. 12, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 78,660 acre-ft June 5, elevation, 5,348.73 ft; minimum, 41,390 acre-ft Oct. 8, elevation, 5,322.28 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Corps of Engineers in 1981)

5,320	39,040	5,340	64,250
5,330	50,310	5,350	80,970

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41780	42040	42060	42640	42530	42540	42960	49630	67350	49340	46080	46320
2	41640	42020	41880	42820	42500	42810	43510	49460	71470	47940	47180	46330
3	41830	41900	41880	42880	42550	42910	43680	48570	75260	46740	46720	46330
4	41980	41810	41810	42830	42640	42710	43600	47120	78070	46000	46750	46320
5	42040	41940	41840	42830	42620	42580	43730	45670	78570	45160	46440	46240
6	41970	42270	41980	42770	42530	42600	43680	44680	77570	44840	46260	46190
7	41610	42330	41980	42690	42480	42450	43780	43860	76120	44630	46120	46170
8	41480	42060	41950	42820	42620	42430	44040	43470	74650	44360	46120	46220
9	41620	41880	41960	42920	42710	42710	43850	43790	73170	44070	46000	46390
10	41700	41970	41860	42850	42650	42930	43600	44580	71870	44080	46050	46520
11	41780	42020	41940	42760	42560	42930	43710	45690	70460	44590	46180	46560
12	41960	41670	41970	42730	42450	42710	43700	46680	68970	44030	46000	46310
13	41980	41720	41830	42770	42510	42540	43760	47950	67650	43940	46100	46040
14	41930	41760	41770	42780	42620	42650	43830	48870	67060	44420	46410	45910
15	41880	41820	41900	42730	42640	42600	43740	49240	66220	44390	46180	46030
16	41820	41800	41940	42730	42640	42630	43760	48640	64870	44170	45960	46140
17	41770	41870	41830	42740	42580	42650	43900	47420	62960	44200	46030	46080
18	41800	42110	41670	42800	42550	42230	43880	46170	60920	44910	46070	46030
19	41800	42120	41810	42820	42630	42300	43610	45150	58570	44370	46140	45990
20	41940	41940	42080	42780	42540	42380	43850	44520	56400	45520	46320	46060
21	41930	41790	42000	42840	42570	42460	44670	44300	54860	46330	46340	46070
22	41840	41770	41910	42860	42560	42880	45180	43460	53630	46840	46450	46060
23	41960	41820	41970	42780	42630	42740	45380	43000	52880	46780	46520	46080
24	41880	41920	42430	42730	42670	42660	45770	43020	52000	46560	46240	46200
25	41810	41920	42530	42780	42620	42800	46530	44030	50930	46390	46200	46350
26	41850	41870	42620	42820	42630	42720	47200	46080	50450	46460	46200	46420
27	41900	41910	42690	42730	42590	42580	47880	48440	49480	46640	46190	46270
28	41950	41870	42800	42760	42480	42670	48590	51580	49100	46320	46400	46170
29	42060	41850	42650	42730	---	42550	49050	54980	49270	46240	46490	46060
30	41800	41970	42720	42650	---	42540	49440	59130	49720	46270	46300	45940
31	41830	---	42680	42650	---	42700	---	62800	---	46170	46220	---
MAX	42060	42330	42800	42920	42710	42930	49440	62800	78570	49340	47180	46560
MIN	41480	41670	41670	42640	42450	42230	42960	43000	49100	43940	45960	45910
(†)	5322.70	5322.83	5323.49	5323.46	5323.31	5323.51	5329.31	5339.04	5329.53	5326.59	5326.64	5326.40
(††)	-150	+140	+710	-30	-170	+220	+6740	+13360	-13080	-3550	+50	-280

CAL YR 1982 MAX 48690 MIN 39920 (††) +2140  
WTR YR 1983 MAX 78570 MIN 41480 (††) +3960

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

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 1982 TO SEPTEMBER 1983

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	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)
AUG								
30...	1511	15.0	17	--	--	--	22.5	6.8
30...	1512	10.0	17	--	--	--	23.0	7.1
30...	1513	5.00	17	309	7.6	29.5	23.5	7.3
30...	1514	1.00	17	--	--	--	24.0	7.7

08313412 - COCHITI LAKE AT SITE C (LAT 35°38'57" LONG 106°18'39")  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	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)
AUG								
30...	1431	50.0	55	--	--	--	23.5	4.8
30...	1432	45.0	55	--	--	--	23.0	5.3
30...	1433	40.0	55	--	--	--	23.0	5.5
30...	1434	35.0	55	--	--	--	23.0	4.9
30...	1435	30.0	55	--	--	--	23.0	5.2
30...	1436	25.0	55	--	--	--	23.0	4.7
30...	1437	20.0	55	--	--	--	23.0	4.8
30...	1438	15.0	55	--	--	--	23.5	5.7
30...	1439	10.0	55	--	--	--	24.0	5.5
30...	1440	5.00	55	297	7.8	29.0	25.0	6.0
30...	1441	1.00	55	--	--	--	25.5	6.3

08317298 - COCHITI LAKE AT SITE B (LAT 35°37'06" LONG 106°18'39")  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	RESER- VOIR DEPTH (FEET) (72025)	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)
AUG								
30...	1351	30.0	33	--	--	--	23.0	4.6
30...	1352	25.0	33	--	--	--	23.0	4.8
30...	1353	20.0	33	--	--	--	23.0	4.9
30...	1354	15.0	33	--	--	--	23.0	5.2
30...	1355	10.0	33	--	--	--	23.5	5.4
30...	1356	5.00	33	296	7.6	29.0	25.0	5.9

08317300 - COCHITI LAKE AT SITE A (LAT 35°38'11" LONG 106°19'05")  
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SAMPLING DEPTH (FEET) (00003)	RESERVOIR DEPTH (FEET) (72025)	SPECIFIC	SPECIFIC	PH (STANDARD ARD UNITS) (00400)	PH LAB (STANDARD ARD UNITS) (00403)	TEMPERATURE, AIR (DEG C) (00020)	TEMPERATURE (DEG C) (00010)	OXYGEN,	OXYGEN
				CONDUCTANCE (UMHOS) (00095)	DUCTANCE (UMHOS) (90095)					Demand, Chemical (HIGH LEVEL) (MG/L) (00340)	Demand, Chemical (HIGH LEVEL) (MG/L) (00340)
AUG											
30...	1200	75.0	80	303	310	7.6	7.9	27.0	19.5	.1	18
30...	1201	70.0	80	--	--	--	--	--	21.0	.2	--
30...	1202	65.0	80	--	--	--	--	--	22.0	1.1	--
30...	1203	60.0	80	--	--	--	--	--	22.0	1.8	--
30...	1204	55.0	80	--	--	--	--	--	22.0	2.8	--
30...	1205	50.0	80	--	--	--	--	--	22.0	2.9	--
30...	1206	45.0	80	--	--	--	--	--	22.5	3.9	--
30...	1207	40.0	80	--	--	--	--	--	23.0	3.4	--
30...	1208	35.0	80	--	--	--	--	--	23.0	4.5	--
30...	1209	30.0	80	--	--	--	--	--	23.0	4.8	--
30...	1210	25.0	80	--	--	--	--	--	23.0	5.1	--
30...	1211	20.0	80	--	--	--	--	--	23.0	5.4	--
30...	1212	15.0	80	--	--	--	--	--	23.5	5.4	--
30...	1213	10.0	80	--	--	--	--	--	23.5	5.6	--
30...	1214	5.00	80	--	--	--	--	--	23.5	5.8	--

[illegible][illegible]

RIO GRANDE BASIN  
08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM -- Continued  
WATER-QUALITY RECORDS

08317300 - COCHITI LAKE AT SITE A (LAT 35°38'11" LONG 106°19'05")  
TRACE ELEMENT ANALYSES. WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ARSENIC	ARSENIC	BORON,	CADMIUM	CADMIUM	CHRO-	CHRO-	COPPER,	COPPER,
		TOTAL	DIS-	DIS-	TOTAL	DIS-	M-IUM,	M-IUM,	TOTAL	DIS-
		(UG/L	SOLVED	SOLVED	RECOV-	SOLVED	RECOV-	SOLVED	RECOV-	SOLVED
		AS AS	AS AS	AS B)	AS CD)	AS CD)	AS CR)	AS CR)	AS CU)	AS CU)
		(01002)	(01000)	(01020)	(01027)	(01025)	(01034)	(01030)	(01042)	(01040)
AUG 30...	1200	3	3	0	<1	<1	<10	<10	0	1
		IRON,	LEAD,	MERCURY			SELE-	SELE-	ZINC,	ZINC,
		DIS-	TOTAL	TOTAL	MERCURY	DIS-	N-IUM,	N-IUM,	TOTAL	DIS-
		SOLVED	RECOV-	RECOV-	SOLVED	SOLVED	SOLVED	SOLVED	RECOV-	SOLVED
		(UG/L	ERABLE	ERABLE	(UG/L	(UG/L	(UG/L	(UG/L	ERABLE	(UG/L
DATE		AS FE)	AS PB)	AS PB)	AS HG)	AS HG)	AS SE)	AS SE)	AS ZN)	AS ZN)
		(01046)	(01051)	(01049)	(71900)	(71890)	(01147)	(01145)	(01092)	(01090)
AUG 30...		10	0	<1	.5	.0	<1	<1	40	0

## CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	
AUG 30....	1200	3.0	130	1200	600	7	0	0	
DATE		COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)	
AUG 30...	20	10	3200	30	550	.00	30		

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS	GROSS	GROSS	GROSS	GROSS	GROSS	GROSS	RADIUM	URANIUM
		ALPHA,	ALPHA,	ALPHA,	BETA,	BETA,	BETA,	BETA,	226,	
		DIS-	DIS-	DIS-	SUSP.	SUSP.	SUSP.	SUSP.	DIS-	NATURAL
		SOLVED	TOTAL	TOTAL	SOLVED	TOTAL	SOLVED	TOTAL	SOLVED,	DIS-
		(UG/L	(UG/L	(PCI/L	(PCI/L	(PCI/L	(PCI/L	(PCI/L	RADON	SOLVED
		AS	AS	AS	AS	AS	AS SR/	AS SR/	METHOD	(UG/L
		U-NAT)	U-NAT)	U-NAT)	CS-137)	CS-137)	YT-90)	YT-90)	(PCI/L)	AS U)
		(80030)	(80040)	(01516)	(03515)	(03516)	(80050)	(80060)	(09511)	(22703)
AUG										
30...	1200	<6.6	1.7	1.2	6.4	3.2	6.2	3.1	.70	2.4

## PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]



RIO GRANDE BASIN  
08317300 COCHITI LAKE NEAR COCHITI PUEBLO, NM -- Continued  
WATER-QUALITY RECORDS

08317300 - COCHITI LAKE AT SITE A (LAT 35°38'11" LONG 106°19'05")  
PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	MIREX, TOTAL (UG/L) (39755)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)
AUG 30...	<.01	<.01	<.01	<.10	<.01	<.10	<1	<.01

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, O.7 UM-MF (COLS./ 100 ML) (31623)	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML) (31673)
AUG 30...	<1	26

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)
AUG 30...	1200	19.5	49

## RIO GRANDE BASIN

08317400 RIO GRANDE BELOW COCHITI DAM, NM

LOCATION.---Lat 35°37'05", long 106°19'24", in SW¼NE¼ sec.17, T.16 N., R.6 E., Sandoval County, Hydrologic Unit 13020201, in Pueblo de Cochiti Grant, on right bank 320 ft upstream from bridge on State Highway 22, 700 ft downstream from Cochiti Dam, 1.4 mi northeast of Cochiti Pueblo, and at mile 1,587.6.

DRAINAGE AREA.---14,900 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

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

GAGE.---Water-stage recorder. Datum of gage is 5,226.08 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Nov. 14, 1973, at site 2.4 mi downstream at altitude 5,210 ft, from topographic map. Nov. 14, 1973 to Jan. 8, 1976, at site 320 ft downstream at datum 1.79 ft lower.

REMARKS.---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 in Colorado and about 81,000 acres in New Mexico. Cochiti eastside main canal, on left bank, and Sili main canal, on right bank, head at Cochiti Dam and bypass gage for irrigation of about 6,000 acres below station; see tabulation below for monthly and yearly diversion.

EXTREMES FOR PERIOD OF RECORD.---Maximum discharge 10,300 ft<sup>3</sup>/s July 26, 1971, gage height, 7.90 ft, site and datum then in use, from rating curve extended above 2,600 ft<sup>3</sup>/s; minimum, 0.51 ft<sup>3</sup>/s Aug. 3-5, 1977, Aug. 27-28, 1978, 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 at a nearby site upstream from mouth of Santa Fe River. The flood of May 23, 1920, probably exceeded 23,400 ft<sup>3</sup>/s, and is likely the highest since 1905.

EXTREMES FOR CURRENT YEAR.---Maximum discharge, 6,730 ft<sup>3</sup>/s June 15, gage height, 5.95 ft; minimum, 69 ft<sup>3</sup>/s Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1380	490	918	600	807	1290	1510	4670	5330	6270	711	706
2	1190	578	986	530	729	1220	1640	4650	5850	6220	986	702
3	1080	610	839	623	700	1380	1840	4630	6170	5910	1460	703
4	1200	539	756	675	768	1480	1970	4570	6240	5410	1460	700
5	1480	644	673	704	919	1450	1770	4520	6270	5040	1250	702
6	1600	853	651	805	946	1490	1430	4480	6290	4570	940	654
7	1530	906	715	850	876	1540	1160	4450	6250	4430	886	614
8	1230	1040	772	727	830	1220	1250	4190	6230	4230	849	645
9	940	1090	822	757	832	995	1470	4230	6290	3980	844	702
10	887	1130	900	800	858	1120	1360	4420	6440	3670	838	701
11	761	1520	845	800	880	1360	1180	4780	6390	3600	840	724
12	727	1430	917	772	852	1450	1100	5030	6400	3780	778	842
13	770	1190	986	754	782	1380	1120	5080	6380	3470	549	930
14	873	1120	992	771	775	1320	1350	5120	6360	3270	575	803
15	874	1080	990	790	877	1760	1440	5140	6590	3550	790	687
16	774	1080	949	751	938	2150	1320	5140	6670	3500	700	666
17	659	982	909	754	1000	2150	1240	5100	6630	3230	504	604
18	602	920	862	754	962	1850	1370	4860	6560	2840	430	362
19	599	1090	643	780	930	1430	1470	4490	6480	1820	360	162
20	602	1220	620	790	951	1400	1800	4230	6330	949	300	75
21	635	1090	775	790	940	1360	2550	3850	6250	790	291	80
22	555	1010	790	819	971	1330	3130	4070	6090	905	262	82
23	516	973	891	816	1000	1300	3420	4040	5760	967	364	84
24	574	980	1190	772	1100	1250	3400	4040	5750	857	709	84
25	513	979	1340	745	1230	1330	3570	4060	5710	828	904	92
26	443	918	1300	767	1300	1430	4190	4290	5670	834	856	141
27	504	861	1260	865	1370	1390	4560	4800	6050	1130	718	233
28	578	860	991	883	1390	1300	4720	4900	6230	1380	607	294
29	732	817	660	736	---	1310	4710	5010	6230	1030	786	578
30	820	781	638	761	---	1180	4690	5130	6250	850	897	736
31	596	---	759	780	---	1260	---	5220	---	834	761	---
TOTAL	26224	28781	27339	23521	26513	43875	67730	143190	186140	90144	23205	15088
MEAN	846	959	882	759	947	1415	2258	4619	6205	2908	749	503
MAX	1600	1520	1340	883	1390	2150	4720	5220	6670	6270	1460	930
MIN	443	490	620	530	700	995	1100	3850	5330	790	262	75
AC-FT	52020	57090	54230	46650	52590	87030	134300	284000	369200	178800	46030	29930
(†)	7470	1210	0	0	0	0	5280	8120	8140	8210	7530	7140
(††)	3660	625	4.4	0	0	2170	4100	4450	4290	4300	4380	4150
CAL YR 1982	TOTAL	545013	MEAN	1493	MAX	5120	MIN	327	AC-FT	1081000	(†) 58830	(††) 32830
WTR YR 1983	TOTAL	701750	MEAN	1923	MAX	6670	MIN	75	AC-FT	1392000	(†) 53100	(††) 32120

(†) Diversion, in acre-feet, by Cochiti eastside main canal at head.

(††) Diversion, in acre-feet, by Sili main canal at head.

RIO GRANDE BASIN  
08317400 RIO GRANDE BELOW COCHITI DAM, NM -- Continued  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--Water years 1972 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURES: July 1971 to September, 1982.

SUSPENDED SEDIMENT DISCHARGE: July 1974 to current year.

INSTRUMENTATION.--Continuous 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, 462 micromhos Sept. 12; minimum daily, 203 micromhos June 6.

SEDIMENT CONCENTRATIONS: Maximum daily, 164 mg/L May 31; minimum daily, 4 mg/L on several days during winter months.

SEDIMENT LOADS: Maximum daily, 2310 tons (2100 tonnes) May 31; minimum daily, 5.5 tons (5.0 tonnes) Sept. 22.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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. 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									
20...	1200	584	12.5	36	57	56	74	88	100
APR									
14...	1115	1280	8.0	12	41	98	--	--	--
MAY									
10...	1540	4610	13.0	74	921	91	--	--	--
JUL									
13...	1445	6270	19.0	53	897	97	98	100	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	298	336	331	---	367	---	370	321	225	267	321	405
2	294	333	332	---	441	---	371	305	221	265	319	388
3	292	341	330	---	449	---	369	302	217	270	323	368
4	273	344	329	341	455	---	364	297	208	271	281	362
5	274	350	330	417	442	---	364	294	205	271	317	355
6	281	355	331	420	428	---	369	294	203	275	321	357
7	291	350	336	432	424	---	365	294	207	317	317	351
8	291	352	335	416	439	---	348	290	208	279	316	349
9	273	346	333	402	425	317	358	287	205	270	316	349
10	273	353	331	398	412	413	357	279	207	264	---	448
11	281	347	335	405	412	415	355	408	216	262	---	449
12	257	346	316	399	409	414	351	379	204	268	---	462
13	255	343	331	389	407	417	350	392	207	311	---	452
14	258	335	337	383	402	407	318	343	307	329	---	438
15	259	333	336	380	393	401	433	319	311	346	---	438
16	268	327	334	378	388	405	441	306	318	332	---	451
17	258	322	352	372	376	412	460	318	302	315	---	443
18	269	314	352	369	---	396	433	305	289	322	389	438
19	271	315	352	369	380	391	405	295	289	322	386	449
20	269	319	354	365	375	389	403	297	299	312	400	---
21	311	322	356	357	365	383	407	313	298	307	385	---
22	312	306	355	363	359	377	402	315	288	311	371	---
23	316	328	352	360	355	375	388	305	283	310	382	---
24	323	329	355	365	347	383	378	305	281	301	390	---
25	325	---	352	350	343	381	379	305	278	301	422	---
26	325	317	353	340	338	372	376	297	268	307	372	---
27	327	323	353	340	---	369	355	284	271	317	370	---
28	314	326	---	344	---	371	344	265	276	318	372	---
29	322	328	352	353	---	373	338	253	274	314	375	---
30	334	329	---	340	---	369	326	239	273	318	370	---
31	339	---	---	341	---	368	---	230	---	328	374	---
MEAN	291	333	341	375	397	387	376	304	255	300	356	408
WTR YR 1983	MEAN	339		MAX	462	MIN	203					

RIO GRANDE BASIN  
08317400 RIO GRANDE BELOW COCHITI DAM, NM -- Continued  
WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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												
1	24	89	13	17	18	45	6	9.7	5	11	17	59
2	25	80	5	7.8	13	35	6	8.6	18	35	18	59
3	21	61	4	6.6	16	36	7	12	19	36	18	67
4	19	62	17	25	24	49	8	15	12	25	17	68
5	19	76	7	12	18	33	9	17	12	30	17	67
NOVEMBER												
6	23	99	6	14	33	58	13	28	11	28	16	64
7	13	54	11	27	37	71	11	25	53	125	16	67
8	19	63	8	22	27	56	9	18	14	31	15	49
9	16	41	5	15	16	36	6	12	6	13	13	35
10	17	41	4	12	19	46	8	17	12	28	12	36
DECEMBER												
11	16	33	8	33	26	59	9	19	12	29	14	51
12	12	24	7	27	39	97	7	15	26	60	4	16
13	13	27	9	29	24	64	8	16	4	8.4	13	48
14	7	16	12	36	37	99	5	10	6	13	17	61
15	18	42	10	29	32	86	6	13	6	14	15	71
JANUARY												
16	14	29	15	44	7	18	5	10	11	28	11	64
17	12	21	16	42	7	17	6	12	11	30	14	81
18	12	20	21	52	6	14	9	18	9	23	18	90
19	9	15	10	29	4	6.9	7	15	11	28	25	97
20	24	39	10	33	5	8.4	21	45	11	28	16	60
FEBRUARY												
21	10	17	7	21	6	13	6	13	9	23	43	158
22	13	19	9	25	5	11	13	29	14	37	19	68
23	13	18	13	34	11	26	6	13	7	19	11	39
24	21	33	14	37	5	16	7	15	10	30	14	47
25	20	28	18	48	6	22	9	18	12	40	10	36
MARCH												
26	19	23	21	52	8	28	7	14	16	56	13	50
27	7	9.5	14	33	4	14	8	19	16	59	16	60
28	7	11	18	42	5	13	7	17	17	64	14	49
29	6	12	13	29	6	11	10	20	---	---	35	124
30	13	29	27	57	5	8.6	12	25	---	---	24	76
31	9	14	---	---	5	10	59	124	---	---	11	37
TOTAL	---	1145.5	---	890.4	---	1106.9	---	642.3	---	951.4	---	1954

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)
APRIL												
1	43	175	80	1010	94	1350	41	694	33	63	34	65
2	41	182	79	992	91	1440	36	605	27	72	23	44
3	17	84	71	888	104	1730	50	798	31	122	22	42
4	21	112	74	913	99	1670	39	570	45	177	20	38
5	14	67	65	793	83	1410	39	531	34	115	20	38
MAY												
6	21	81	65	786	86	1460	42	518	44	112	26	46
7	22	69	61	733	70	1180	38	455	37	89	23	38
8	24	81	70	792	69	1160	55	628	34	78	23	40
9	18	71	57	651	60	1020	37	398	43	98	18	34
10	10	37	66	788	61	1060	50	495	43	97	17	32
JUNE												
11	23	73	70	903	83	1430	31	301	44	100	24	47
12	27	80	89	1210	53	916	52	531	40	84	31	70
13	15	45	87	1190	59	1020	55	515	35	52	27	68
14	14	51	95	1310	56	962	47	415	35	54	33	72
15	18	70	91	1260	68	1190	67	642	38	81	25	46
JULY												
16	21	75	82	1140	49	882	41	387	30	57	38	68
17	29	97	77	1060	51	913	42	366	30	41	30	49
18	24	89	78	1020	47	832	83	636	81	94	36	35
19	18	71	70	849	45	787	39	192	32	31	32	14
20	20	97	63	720	45	769	43	110	28	23	30	6.1
AUGUST												
21	24	165	57	593	41	692	32	68	20	16	30	6.5
22	15	127	66	725	41	674	70	171	24	17	25	5.5
23	83	766	72	785	46	715	33	86	33	32	25	5.7
24	43	395	88	960	45	699	26	60	36	69	25	5.7
25	46	443	84	921	43	663	30	67	45	110	35	8.7
SEPTEMBER												
26	56	634	64	741	42	643	24	54	24	55	40	15
27	78	960	53	687	39	637	44	134	26	50	45	28
28	99	1260	55	728	68	1140	37	138	25	41	45	36
29	111	1410	61	825	46	774	32	89	22	47	50	78
30	87	1100	103	1430	45	759	46	106	24	58	60	119
31	---	---	164	2310	---	---	75	169	60	123	---	---
TOTAL	---	8967	---	29713	---	30577	---	10929	---	2258	---	1200.2
TOTAL LOAD FOR YEAR: 90334.7 TONS.												

## RIO GRANDE BASIN

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## 08317900 GALISTEO RESERVOIR NEAR CERRILLOS, NM

LOCATION.--Lat 35°27'44", long 106°12'30", in NW 1/4 sec.9 T.14 N., R.7 E., Santa Fe County, Hydrologic Unit 13020201, in Mesita de Juana Lopez Grant, at Galisteo Dam on Galisteo Creek, 5.0 mi northwest of Cerrillos, and at mile 11.8.

DRAINAGE AREA.--596 mi<sup>2</sup>.

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

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

REMARKS.--Reservoir is formed by an earthfill dam, completed Oct. 11, 1970. Capacity, 88,990 acre-ft between elevations 5,496.0 ft, sill of ungated outlet conduit, and 5,608.0 ft, crest of uncontrolled spillway. No dead storage. Reservoir is used for flood control.

COOPERATION.--Records furnished by Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 187 acre-ft Aug. 2, elevation, 5,507.30 ft; 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
5,501	2	5,505	69
5,502	9	5,506	109
5,503	21	5,508	244

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	166
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	---	0	0	0	0	0	0	0
30	0	0	0	0	---	0	0	0	0	0	0	0
31	0	---	0	0	---	0	---	0	---	0	0	---
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	166
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
(↑)	---	---	---	---	---	---	---	---	---	---	---	---
(↑↑)	---	---	---	---	---	---	---	---	---	---	---	---

CAL YR 1982 MAX 709 MIN .00 (↑↑) 0  
WTR YR 1983 MAX 166 MIN .00 (↑↑) 0

(↑) ELEVATION, IN FEET, AT END OF MONTH  
(↑↑) CHANGE IN CONTENTS, AT END OF MONTH

## 08317950 GALISTEO CREEK BELOW GALISTEO DAM, NM

LOCATION.--Lat 35°27'53", long 106°12'49", in NE¼NE¼ sec.8, T.14 N., R.7 E., Santa Fe County, Hydrologic Unit: 13020201, in Mesita de Juana Lopez Grant, on right bank 0.4 mi downstream from Galisteo Dam, 5.3 mi northwest of Cerrillos, and at mile 11.4.

DRAINAGE AREA.--597 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Altitude of gage is 5,450 ft, from topographic map. Prior to Dec. 21, 1981, at site 1,200 ft downstream at different datum.

REMARKS.--Records poor. Flow regulated by Galisteo Reservoir 0.4 mi upstream. Diversions for irrigation of about 50 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 6.42 ft<sup>3</sup>/s, 4,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft<sup>3</sup>/s July 27, 1971, gage height, 7.00 ft; maximum gage height, 7.33 ft July 20, 1971; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 835 ft<sup>3</sup>/s Aug. 2, gage height, 5.26 ft; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.52	.46	.02	4.9	.99	10	1.3	.00	.00	.12	2.5
2	.00	.56	.43	.02	4.0	1.0	7.6	1.7	.00	.00	104	5.0
3	.00	.90	.38	.05	3.5	1.2	6.8	1.7	.00	.00	2.5	.21
4	.00	.43	.38	.15	2.5	1.9	6.4	1.3	.00	.00	.13	.00
5	.00	.31	.30	.30	2.5	2.0	6.2	1.1	.00	.00	.00	.00
6	.00	.38	.28	.40	3.3	1.8	6.6	.59	.00	.00	.00	.00
7	.00	.42	.24	.70	3.8	1.7	5.6	.39	.00	.00	.00	21
8	.00	.48	.24	.80	3.4	1.5	5.0	.71	.00	.00	.00	1.1
9	.00	.83	.26	1.2	3.4	1.7	4.3	.72	.00	.00	.00	.00
10	.00	1.0	.32	.77	3.9	2.0	4.0	.66	.00	.00	.00	.00
11	.00	2.0	.17	.99	3.9	2.3	3.6	.52	.00	60	.00	.00
12	3.8	1.1	.13	.84	3.6	2.6	3.3	.58	.00	6.2	.00	.00
13	2.0	.82	.17	.61	3.3	2.8	3.0	1.0	.00	1.4	.00	12
14	.50	.71	.12	.30	3.2	3.3	3.3	.84	.00	2.5	.00	83
15	.30	.58	.08	.61	2.5	3.7	3.1	.84	.00	5.9	.00	1.2
16	.30	.81	.09	.96	2.4	4.7	2.8	.55	.00	3.4	.00	.05
17	.30	.84	.15	.98	2.0	4.9	2.6	.00	.00	1.4	.00	.00
18	.30	1.3	.13	1.1	1.9	5.4	2.1	.00	.00	51	.00	.00
19	.29	.92	.06	1.5	2.0	5.3	1.2	.00	.00	1.6	.00	.00
20	.00	.77	.09	1.5	1.7	6.0	1.2	.40	.00	.31	.00	.00
21	.27	.68	.15	2.0	1.5	5.6	1.2	.60	.00	.22	.00	.00
22	.26	.63	.17	2.7	1.2	7.0	1.3	.00	.00	5.6	.46	.00
23	.29	.56	.20	2.6	1.5	7.3	1.6	.00	.00	.42	1.9	.00
24	.26	.38	.13	3.0	1.3	7.2	1.9	.00	.00	2.7	14	.00
25	.26	.60	.12	3.6	1.3	6.6	1.7	.00	.00	46	2.0	.00
26	.24	.53	.13	2.7	1.3	5.8	1.4	.00	.00	20	1.5	.00
27	.63	.68	.13	3.4	1.1	5.5	1.6	.00	.00	.13	2.6	.62
28	.49	.56	.09	3.1	.96	6.1	1.6	.00	.00	.00	28	1.0
29	.39	.49	.01	2.3	---	6.4	1.5	.00	.00	.00	12	.00
30	.45	.40	.02	4.7	---	8.5	1.4	.00	.00	39	2.2	.00
31	.44	---	.02	5.4	---	11	---	.00	---	30	.00	---
TOTAL	11.77	21.19	5.65	49.30	71.86	133.79	103.9	15.50	.00	277.78	171.41	127.68
MEAN	.38	.71	.18	1.59	2.57	4.32	3.46	.50	.000	8.96	5.53	4.26
MAX	3.8	2.0	.46	5.4	4.9	11	10	1.7	.00	60	104	83
MIN	.00	.31	.01	.02	.96	.99	1.2	.00	.00	.00	.00	.00
AC-FT	23	42	11	98	143	265	206	31	.00	551	340	253
CAL YR 1982	TOTAL	2459.88	MEAN	6.74	MAX	602	MIN	.00	AC-FT	4880		
WTR YR 1983	TOTAL	989.83	MEAN	2.71	MAX	104	MIN	.00	AC-FT	1960		

08319000 RIO GRANDE AT SAN FELIPE, NM  
(Surveillance network station)

LOCATION.--Lat 35°26'39", long 106°26'23", in SW¼NW¼ sec.17, T.14 N., R.5 E., Sandoval County, Hydrologic Unit 13020201, in San Felipe Grant, on right bank 200 ft downstream from Tonque Arroyo, 1,700 ft upstream from steel highway bridge, 0.8 mi upstream from San Felipe Pueblo, 11 mi northeast of Bernalillo, and at mile 1,572.7.

DRAINAGE AREA.--16,100 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1926-30, WSP 1392: 1937(M), WSP 1512: 1931-32, 1933(M), 1934-36, 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 5,115.73 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 27, 1957, at site 1,800 ft downstream at datum 5.35 ft lower, except period May 16, 1945 to Sept. 30, 1946 when it was 5.94 ft lower than present datum.

REMARKS.--Water-discharge records good. Flow completely regulated since November 1973 by Cochiti Dam (station 08317300) 17 mi upstream. Prior to November 1973 some regulation of flow by El Vado Reservoir (station 08285000) and Abiquiu Reservoir (station 08286900). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions for irrigation of about 705,000 acres 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, 995,500 acre-ft/yr prior to closure of Cochiti Dam.  
10 years (water years 1974-83), 1,358 ft<sup>3</sup>/s, 983,900 acre-ft/yr since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,300 ft<sup>3</sup>/s June 26, 1937, gage height, 11.13 ft site and datum then in use, from rating curve extended above 15,000 ft<sup>3</sup>/s; minimum, 32 ft<sup>3</sup>/s July 7, 1934.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,100 ft<sup>3</sup>/s at 0200 hours June 16, gage height, 6.78 ft; minimum daily, 201 ft<sup>3</sup>/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	700	876	698	865	1420	1600	4970	5620	6680	1100	892
2	1420	820	1050	490	787	1320	1770	5010	5920	6630	1300	840
3	1230	764	868	591	724	1440	1850	5010	6230	6440	1520	830
4	1420	713	741	667	762	1590	2140	4990	6330	5940	1540	820
5	1600	694	683	678	945	1580	1930	4930	6460	5640	1460	820
6	1770	931	606	792	996	1560	1670	4910	6530	5200	1100	845
7	1750	932	657	866	956	1670	1260	4870	6530	4940	1060	838
8	1530	1070	730	785	872	1420	1370	4740	6520	4870	1010	838
9	1260	1160	757	735	872	1070	1640	4570	6540	4520	1010	833
10	1110	1190	881	821	884	1150	1630	4830	6760	4250	1000	836
11	1070	1510	841	819	910	1400	1370	5070	6720	4080	1000	844
12	942	1650	851	802	892	1540	1230	5350	6710	4300	979	917
13	885	1310	977	772	825	1510	1170	5400	6710	4050	784	1020
14	968	1240	977	777	780	1420	1410	5450	6640	3740	737	1020
15	1090	1170	975	814	869	1670	1550	5470	6890	4010	882	824
16	1050	1160	972	781	964	2230	1460	5490	6990	4140	911	784
17	976	1100	970	773	1040	2250	1300	5480	6970	3850	700	767
18	881	996	941	772	1040	2130	1370	5370	6920	3700	600	557
19	810	1080	738	785	952	1640	1510	4950	6860	2560	500	420
20	780	1340	548	815	1010	1590	1660	4780	6730	1660	400	220
21	760	1200	781	818	976	1550	2420	4450	6670	1450	320	210
22	720	1100	814	843	1020	1510	2890	4550	6530	1200	280	205
23	705	1030	872	865	1040	1480	3280	4500	6190	1300	240	201
24	770	1030	1180	806	1150	1410	3330	4490	6220	1150	500	208
25	690	1030	1420	769	1270	1460	3460	4490	6190	1200	1050	210
26	550	982	1400	777	1380	1570	4040	4570	6170	1300	1060	243
27	600	892	1380	852	1450	1580	4500	5140	6400	1400	920	313
28	680	886	1190	1010	1500	1450	4780	5220	6720	1500	853	391
29	790	858	692	745	---	1450	4850	5320	6680	1600	886	584
30	900	793	668	810	---	1360	4920	5410	6670	1350	1010	897
31	820	---	725	810	---	1340	---	5530	---	1200	953	---
TOTAL	32087	31331	27761	24138	27731	47760	69360	155310	196020	105850	27665	19227
MEAN	1035	1044	896	779	990	1541	2312	5010	6534	3415	892	641
MAX	1770	1650	1420	1010	1500	2250	4920	5530	6990	6680	1540	1020
MIN	550	694	548	490	724	1070	1170	4450	5620	1150	240	201
AC-FT	63640	62150	55060	47880	55000	94730	137600	308100	388800	210000	54870	38140
(†)	3860	532	0	0	0	0	2320	3990	3840	4030	3700	3490

CAL YR 1982 TOTAL 587332 MEAN 1609 MAX 5070 MIN 337 AC-FT 1165000  
WTR YR 1983 TOTAL 764240 MEAN 2094 MAX 6990 MIN 201 AC-FT 1516000

(†) MONTHLY DIVERSION, IN ACRE-FT, OF COCHITI EASTSIDE CANAL; RECORDS OF THIS FLOW FURNISHED BY MIDDLE RIO GRANDE CONSERVANCY DISTRICT.

RIO GRANDE BASIN  
08319000 RIO GRANDE AT SAN FELIPE, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CACO3) (00902)
NOV 16...	1215	1210	310	329	8.1	8.2	5.0	7.5	10.6	13	120	13
JAN 04...	1345	696	335	--	8.1	--	4.0	3.0	12.1	< 10	--	--
FEB 28...	1300	1540	280	309	8.4	8.1	12.0	8.0	12.5	21	110	4
MAY 03...	1045	5260	280	282	8.0	7.8	14.0	11.5	9.8	19	110	29
JUL 13...	0930	4200	245	254	8.1	8.4	22.5	19.0	7.8	21	88	8
SEP 09...	1330	810	330	--	8.3	--	26.5	23.5	7.9	24	--	--

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 16...	13	39	6.0	18	.7	2.7	--	--	--	109	50
JAN 04...	--	--	--	--	--	--	--	--	--	--	--
FEB 28...	4	35	6.3	18	.8	2.5	130	2.0	--	107	40
MAY 03...	29	34	6.4	14	.6	2.2	100	.0	90	83	49
JUL 13...	8	27	5.0	14	.7	2.4	98	.0	80	80	42
SEP 09...	--	--	--	--	--	--	140	.0	120	--	--

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 16...	5.7	.40	20	207	<.10	<.10	.070	.73	.040	.030	2.6
JAN 04...	--	--	--	--	<.10	<.10	.100	.40	.060	.010	2.5
FEB 28...	6.0	.40	22	198	<.10	<.10	.100	.80	.140	.040	2.6
MAY 03...	3.8	.20	17	176	<.10	<.10	.130	.77	.130	.040	6.1
JUL 13...	3.9	.20	16	159	<.10	<.10	.120	.48	.070	.030	4.6
SEP 09...	--	--	--	--	<.10	<.10	.060	.44	.050	.030	4.0



RIO GRANDE BASIN  
08319000 RIO GRANDE AT SAN FELIPE, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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...	1215	2	2	0	<1	<1	<10	<10	0	1
FEB 28...	1300	--	--	0	--	--	--	--	--	--
MAY 03...	1045	--	--	0	--	--	--	--	--	--
JUL 13...	0930	2	1	0	<1	<1	<10	<10	0	3

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 16...	10	0	5	.5	.0	1	<1	20	20
FEB 28...	0	--	--	--	--	--	--	--	--
MAY 03...	10	--	--	--	--	--	--	--	--
JUL 13...	40	0	1	<.0	.0	<1	<1	20	0

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM TOTAL FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, TOTAL FM BOT- TOM MA- TERIAL (UG/G AS CD) (01029)
NOV 16...	1215	<2.0	1.8	290	1	0	0

DATE	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
NOV 16...	<10	0	550	<10	100	.00	0

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L U-NAT) (80030)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	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 AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 16...	1215	5.4	3.7	<.9	<2.6	1.1	<2.5	1.0	.13	4.0

RIO GRANDE BASIN  
08319000 RIO GRANDE AT SAN FELIFE, NM -- Continued  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
FEB 28...	1300	--	--	--	--	--	--	--	--	--
SEP 09...	1330	<.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)	MIREX, TOTAL (UG/L) (39755)
FEB 28...	--	--	--	--	--	--	--	--	--	--
SEP 09...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

DATE	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
FEB 28...	--	--	--	--	--	<.01	<.01	<.01	<.01
SEP 09...	<.10	<.01	<.10	< 1	<.01	--	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 16...	21	140
JAN 04...	K0	K12
FEB 28...	K5	K18
MAY 03...	240	180
JUL 13...	160	460
SEP 09...	190	460

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 16...	1215	1210	7.5	55	180	21
JAN 04...	1345	696	3.0	10	19	49
FEB 28...	1300	1540	8.0	80	333	26
MAY 03...	1045	5260	11.5	291	4130	31
JUL 13...	0930	4200	19.0	138	1560	48
SEP 09...	1330	810	23.5	64	140	86

## 08319945 REDONDO CREEK NEAR JEMEZ SPRINGS, NM

LOCATION.--Lat 35°52'34", long 106°37'50", in SW¼ sec.16, T.19 N., R.3 E, Sandoval County, Hydrologic Unit 13020202, on left bank 0.1 mi upstream from Sulphur Creek, 0.7 mi northeast of intersection of State Highways 7 and 126, and 8.0 mi northeast of Jemez Springs.

DRAINAGE AREA.--12.1 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1981 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,755 ft from topographic map.

REMARKS.--Records good except those above 10 ft<sup>3</sup>/s, which are fair and those for winter months, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18 ft<sup>3</sup>/s Apr. 25, 1983, gage height, 2.22 ft; minimum daily, 0.18 ft<sup>3</sup>/s Jan. 4, 1982, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18 ft<sup>3</sup>/s at 1945 hours Apr. 25, gage height, 2.22 ft; minimum daily, 0.30 ft<sup>3</sup>/s Jan. 1, Feb. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.64	.50	.30	.30	.40	2.4	13	5.0	2.7	2.2	2.5
2	.98	.62	.50	.35	.35	.40	2.4	10	5.0	2.7	5.3	1.9
3	.95	.60	.70	.40	.35	.44	2.3	8.7	5.4	2.5	6.2	1.9
4	.94	.64	.90	.40	.35	.46	2.0	8.5	5.8	2.4	3.0	1.9
5	.89	.68	1.2	.40	.35	.43	2.2	9.2	6.0	2.2	2.6	1.8
6	.84	.67	.80	.40	.36	.41	1.9	9.8	6.0	2.2	2.3	1.8
7	.85	.61	.80	.40	.38	.53	1.7	10	5.9	2.2	2.8	1.9
8	.84	.55	.80	.40	.40	.68	1.5	11	5.8	2.1	2.5	2.0
9	.81	2.7	.80	.38	.38	.79	1.6	12	6.0	2.0	2.8	1.9
10	.84	1.5	.80	.35	.35	1.1	1.7	13	5.9	1.9	2.1	2.4
11	.80	1.6	.77	.40	.35	1.3	1.6	13	5.6	2.8	2.0	1.9
12	1.0	.74	.66	.40	.35	1.7	2.2	13	5.4	2.3	2.1	1.6
13	.88	.71	.60	.35	.35	1.8	2.2	11	5.3	2.1	3.5	1.4
14	.83	.65	.55	.35	.35	1.8	2.0	11	5.3	2.0	2.5	1.4
15	.80	.48	.50	.35	.40	1.6	2.2	10	5.1	1.8	2.1	1.2
16	.78	.54	.50	.35	.35	1.5	2.7	8.6	5.0	1.6	2.1	1.1
17	.74	.50	.50	.35	.35	1.4	3.8	7.9	4.8	2.1	2.0	1.1
18	.72	.79	.55	.35	.35	1.2	5.1	7.1	4.7	2.3	2.0	1.1
19	.68	.94	.55	.35	.35	1.2	7.1	6.7	4.5	1.8	1.9	1.0
20	.67	.78	.55	.35	.35	1.3	7.5	7.7	4.3	1.8	1.9	1.0
21	.65	.72	.55	.35	.36	1.4	7.3	6.1	4.1	1.9	1.9	.98
22	.61	.66	.60	.35	.37	1.4	7.1	5.7	4.1	1.8	1.9	.99
23	.58	.59	.60	.35	.38	1.4	6.6	5.7	4.0	1.9	1.9	.99
24	.57	.57	.50	.35	.39	1.3	7.6	5.7	4.1	2.2	1.9	.98
25	.55	.50	.45	.40	.40	1.3	11	5.9	4.2	2.0	2.8	.94
26	.56	.55	.45	.40	.40	1.3	15	6.2	4.0	2.6	3.7	.97
27	1.2	.58	.45	.40	.40	1.3	11	6.1	4.5	2.0	2.1	1.8
28	.64	.64	.45	.40	.40	1.2	9.9	6.0	3.8	1.7	2.0	1.2
29	.62	.67	.45	.40	---	.88	10	5.8	3.2	1.5	2.1	1.3
30	.64	.55	.40	.40	---	1.5	13	4.6	2.9	1.6	2.0	1.6
31	.61	---	.35	.35	---	2.4	---	4.8	---	2.4	1.9	---
TOTAL	24.17	22.97	18.78	11.53	10.22	35.82	154.6	263.8	145.7	65.1	78.1	44.55
MEAN	.78	.77	.61	.37	.37	1.16	5.15	8.51	4.86	2.10	2.52	1.49
MAX	1.2	2.7	1.2	.40	.40	2.4	15	13	6.0	2.8	6.2	2.5
MIN	.55	.48	.35	.30	.30	.40	1.5	4.6	2.9	1.5	1.9	.94
AC-FT	48	46	37	23	20	71	307	523	289	129	155	88

CAL YR 1982 TOTAL 455.12 MEAN 1.25 MAX 6.7 MIN .18 AC-FT 903  
WTR YR 1983 TOTAL 875.34 MEAN 2.40 MAX 15 MIN .30 AC-FT 1740

NOTE: No gage-height record Dec. 13 to March 2.

## RIO GRANDE BASIN

08319950 SULPHUR CREEK NR JEMEZ SPRINGS, NM

LOCATION.--Lat 35°52'14", long 106°38'17", in NE¼ sec.20, T.19 N., R.3 E., Sandoval County, Hydrologic Unit 13020202, on left bank 300 ft downstream from culvert under State Highway 4, 0.2 mi north at intersection of State Highways 4 and 126, 0.4 mi upstream from San Antonio Creek, and 7.5 mi northeast of Jemez Springs, NM.

DRAINAGE AREA.--38.0 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1981 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,650 ft from topographic map.

REMARKS.--Records good except those for winter months, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130 ft<sup>3</sup>/s Apr. 25, 1983, gage height, 2.86 ft; minimum daily, 0.04 ft<sup>3</sup>/s July 27, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 130 ft<sup>3</sup>/s at 1930 hours Apr. 25, gage height, 2.86 ft; minimum, 0.13 ft<sup>3</sup>/s Nov. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.81	1.0	1.4	2.2	3.0	9.4	38	8.0	3.1	2.8	3.2
2	.76	.70	.80	1.4	2.4	3.1	9.3	27	7.0	3.1	6.6	2.1
3	.84	.76	.70	1.0	2.2	3.0	9.7	20	7.0	3.2	11	1.8
4	.84	.68	.70	.90	3.5	3.0	8.6	19	7.0	3.4	4.6	1.7
5	.83	.62	.70	.80	3.5	2.8	9.1	20	6.5	3.1	3.8	1.4
6	.82	.66	.80	.70	3.0	2.7	7.8	22	6.5	3.1	3.0	1.4
7	.83	.60	.80	.70	2.6	3.1	7.1	22	6.0	3.2	3.5	1.3
8	.81	.64	.80	.80	2.4	3.6	6.2	23	6.0	3.0	3.3	1.9
9	.78	3.5	.90	.80	2.0	4.0	6.1	27	5.6	2.9	3.2	1.6
10	.80	3.6	1.0	.90	2.0	4.7	6.2	31	5.8	2.8	2.6	2.0
11	.82	3.1	1.0	.80	2.0	5.7	6.4	31	5.8	2.8	2.6	1.8
12	1.1	2.2	.80	.80	2.2	6.4	6.0	29	5.8	2.6	2.8	1.5
13	1.1	1.6	.80	.70	2.0	6.7	5.6	26	5.6	2.4	3.7	1.4
14	1.0	1.2	.90	.70	2.2	6.7	5.0	23	5.6	2.6	3.2	1.4
15	.91	.88	.80	.68	2.0	6.2	4.9	21	5.4	2.6	2.5	1.3
16	.87	.70	.80	.70	2.0	5.9	5.3	17	5.4	2.4	2.3	1.3
17	.83	.60	.70	.72	2.0	5.9	6.7	15	5.4	2.4	2.5	1.3
18	.78	.71	.70	.74	2.0	5.2	11	14	5.2	2.3	2.2	1.2
19	.71	1.0	.70	.74	2.2	5.2	22	14	5.2	2.2	2.2	1.2
20	.68	1.1	.80	.80	2.4	5.2	28	14	5.0	2.2	2.1	1.2
21	.67	1.1	.80	.90	2.6	5.7	25	13	5.0	2.2	2.0	1.3
22	.66	.97	.90	.90	2.6	4.5	23	13	5.0	2.1	1.9	1.3
23	.69	.96	.90	1.0	2.8	4.4	26	13	4.8	2.2	2.0	1.3
24	.67	.87	1.8	1.0	2.4	4.8	43	12	4.8	2.6	2.0	1.4
25	.68	.80	1.0	1.2	2.2	4.4	62	14	5.0	2.8	3.5	1.4
26	.70	.79	1.0	1.2	2.6	4.0	56	14	5.0	3.2	4.5	1.4
27	1.8	.76	1.0	1.6	2.8	4.3	58	14	4.8	2.3	2.3	2.5
28	1.1	.80	1.0	1.8	3.0	3.9	55	13	4.6	2.0	2.2	1.8
29	.79	.80	3.0	2.0	---	3.8	59	13	3.7	1.9	2.1	1.8
30	.81	.80	1.2	2.8	---	5.6	48	10	3.2	1.9	2.1	2.2
31	.80	---	1.2	3.0	---	9.0	---	9.0	---	2.6	1.9	---
TOTAL	26.58	34.31	30.00	34.18	67.8	146.5	635.4	591.0	165.7	81.2	97.0	48.4
MEAN	.86	1.14	.97	1.10	2.42	4.73	21.2	19.1	5.52	2.62	3.13	1.61
MAX	1.8	3.6	3.0	3.0	3.5	9.0	62	38	8.0	3.4	11	3.2
MIN	.66	.60	.70	.68	2.0	2.7	4.9	9.0	3.2	1.9	1.9	1.2
AC-FT	53	68	60	68	134	291	1260	1170	329	161	192	96

CAL YR 1982 TOTAL 734.12 MEAN 2.01 MAX 19 MIN .05 AC-FT 1460  
WTR YR 1983 TOTAL 1958.07 MEAN 5.36 MAX 62 MIN .60 AC-FT 3880

NOTE: No gage-height record Nov. 28 to March 2.

## RIO GRANDE BASIN

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08321500 JEMEZ RIVER BELOW EAST FORK, NEAR JEMEZ SPRINGS, NM

LOCATION.--Lat 35°49'39", long 106°38'52", in NW¼ sec.5, T.18 N., R.3 E., Sandoval County, Hydrologic Unit 13020202, on left bank 0.4 mi downstream from East Fork and boundary of Santa Fe National Forest, 5.3 mi northeast of Jemez Springs, and at mile 43.0.

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

PERIOD OF RECORD.--July 1949 to October 1950 (gaged separately 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 above mean sea level. Prior to May 1951, at sites 3,000 ft upstream, at different datums and on separate channels.

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

AVERAGE DISCHARGE.--21 years (water years 1950, 1959-76, 1982-83), 29.5 ft<sup>3</sup>/s, 21,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 2,500 ft<sup>3</sup>/s Apr. 21, 1958, gage height, 7.35 ft, from rating curve extended above 1,100 ft<sup>3</sup>/s on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.91 ft<sup>3</sup>/s Jan. 24, 1969, result of freezeup.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 2	1330	129	2.06	Sept. 1	1415	105	1.91
Apr. 26	0145	*1170	4.41				

Minimum discharge, 9.0 ft<sup>3</sup>/s Feb. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	19	19	17	19	20	88	250	79	23	27	34
2	18	19	17	18	18	22	96	187	72	22	47	27
3	18	18	17	18	15	22	115	146	64	22	68	25
4	17	18	21	18	16	24	103	121	61	21	58	21
5	17	18	23	19	17	22	80	119	56	20	43	20
6	16	18	21	19	16	19	83	126	55	19	35	19
7	16	18	21	20	18	18	79	125	59	20	29	18
8	16	19	23	21	16	22	75	132	54	21	30	21
9	16	34	24	20	18	23	70	143	51	20	31	22
10	16	46	22	18	16	27	74	163	49	20	26	22
11	17	55	22	18	16	33	83	165	46	27	27	23
12	19	34	20	18	16	38	78	157	43	26	29	44
13	19	28	20	18	18	42	76	148	40	25	54	31
14	19	24	20	19	18	47	74	136	39	24	74	24
15	18	21	22	18	17	51	69	138	39	23	57	22
16	18	22	19	17	18	52	77	123	37	22	37	19
17	18	22	19	18	19	50	106	107	36	22	33	18
18	17	26	19	18	18	49	174	101	35	25	31	18
19	17	32	19	19	19	44	311	93	33	24	29	18
20	17	35	19	19	18	40	519	98	32	22	27	17
21	17	29	20	19	17	39	589	126	30	23	26	17
22	17	28	21	19	19	35	540	98	30	24	25	17
23	17	25	23	18	19	42	524	84	29	23	27	18
24	17	24	21	18	20	37	638	82	30	24	27	18
25	17	21	20	19	21	34	767	85	31	28	30	18
26	17	25	22	18	20	35	721	91	30	30	43	20
27	26	24	21	19	20	32	555	95	30	30	36	25
28	31	23	18	19	20	35	464	93	34	27	33	25
29	21	25	15	18	---	31	388	92	28	24	28	23
30	20	24	16	19	---	32	312	86	25	24	25	25
31	20	---	17	19	---	55	---	82	---	25	23	---
TOTAL	568	774	621	575	502	1072	7928	3792	1277	730	1115	669
MEAN	18.3	25.8	20.0	18.5	17.9	34.6	264	122	42.6	23.5	36.0	22.3
MAX	31	55	24	21	21	55	767	250	79	30	74	44
MIN	16	18	15	17	15	18	69	82	25	19	23	17
AC-FT	1130	1540	1230	1140	996	2130	15730	7520	2530	1450	2210	1330
CAL YR 1982	TOTAL	13407	MEAN 36.7	MAX 610	MIN 10	AC-FT	26590					
WTR YR 1983	TOTAL	19623	MEAN 53.8	MAX 767	MIN 15	AC-FT	38920					

## RIO GRANDE BASIN

## 08323000 RIO GUADALUPE AT BOX CANYON, NEAR JEMEZ, NM

LOCATION.--Lat 35°43'52", long 106°45'44", Sandoval County, Hydrologic Unit 13020202, in Canon de San Diego Grant, on left bank at downstream end of Guadalupe Box Canyon, 4.8 mi upstream from mouth, 5 mi southwest of Jemez Springs, and 7 mi north of Jemez.

DRAINAGE AREA.--235 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1938 to September 1942, August 1949 to September 1950, (monthly discharge only for November, December 1938 and August 1949 published in WSP 1312), May 1951 to September 1957 (irrigation seasons only), May 1958 to September 1976, July 1981 to current year. Prior to 1951 published as "08323500 Rio Guadalupe near Jemez Springs".

REVISED RECORDS.--WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,015.5 ft above mean sea level. Prior to 1951 at site 2.4 mi downstream at lower datums.

REMARKS.--Records good except those for winter months and August, which are poor. Flow regulated to some extent since October 1958 by San Gregorio Reservoir on Clear Creek, 24 mi upstream (capacity, 345 acre-ft), and by transmountain diversion into Rio Puerco Basin for irrigation of about 300 acres in vicinity of Cuba. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years (water years 1939-42, 1950, 1959-76, 1982-1983), 44.8 ft<sup>3</sup>/s, 32,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,190 ft<sup>3</sup>/s May 13 or 14, 1941, gage height, 8.4 ft from floodmarks, site and datum in use June 1941 to September 1942, from rating curve extended above 1,000 ft<sup>3</sup>/s; minimum, 2.8 ft<sup>3</sup>/s Dec. 9, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 770 ft<sup>3</sup>/s at 2300 hours April 25, gage height, 6.40 ft, no other peak above base of 100 ft<sup>3</sup>/s; minimum daily discharge, 8.6 ft<sup>3</sup>/s Oct. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	15	18	16	15	34	124	510	483	50	49	26
2	11	13	15	17	14	37	114	422	450	45	177	32
3	10	12	12	16	13	36	118	380	345	41	70	23
4	9.9	11	16	17	13	40	103	410	302	39	55	20
5	9.7	11	16	16	14	38	86	450	270	36	75	20
6	9.3	11	15	15	14	32	75	470	250	34	50	19
7	9.1	11	16	15	14	31	72	445	241	36	46	18
8	8.7	11	16	14	15	33	69	500	239	34	42	18
9	8.6	15	17	13	15	42	66	540	230	32	39	19
10	8.6	19	18	14	14	48	69	555	200	30	29	20
11	8.8	19	17	13	14	65	82	626	190	29	25	20
12	10	15	16	13	15	80	78	618	186	29	24	19
13	12	13	15	13	16	92	84	530	186	34	23	19
14	11	14	14	13	17	95	82	448	150	32	49	18
15	10	12	13	13	16	93	74	386	124	29	37	18
16	11	12	14	13	17	78	78	343	114	27	28	16
17	12	13	15	12	18	72	100	320	108	25	22	15
18	11	17	15	12	18	67	158	283	112	24	22	13
19	10	17	16	12	20	61	239	279	117	24	22	13
20	9.7	18	16	12	20	57	311	289	108	25	22	13
21	9.5	17	15	13	19	52	326	264	99	24	21	12
22	9.2	16	15	12	22	55	287	281	92	44	21	12
23	9.1	15	17	13	24	52	308	336	86	35	21	12
24	9.0	15	16	13	26	48	395	387	80	35	20	12
25	9.0	14	15	13	29	50	550	450	114	32	20	12
26	9.1	16	15	13	29	46	610	464	84	32	55	12
27	25	16	16	13	30	43	618	461	75	31	45	15
28	31	15	15	13	31	47	550	478	75	24	35	15
29	18	16	13	13	---	49	590	490	65	21	27	15
30	16	17	14	14	---	55	578	490	54	21	23	17
31	15	---	17	14	---	99	---	503	---	20	19	---
TOTAL	362.3	436	478	423	522	1727	6994	13408	5229	974	1213	513
MEAN	11.7	14.5	15.4	13.6	18.6	55.7	233	433	174	31.4	39.1	17.1
MAX	31	19	18	17	31	99	618	626	483	50	177	32
MIN	8.6	11	12	12	13	31	66	264	54	20	19	12
AC-FT	719	865	948	839	1040	3430	13870	26590	10370	1930	2410	1020

CAL YR 1982 TOTAL 14151.4 MEAN 38.8 MAX 226 MIN 4.0 AC-FT 28070  
WTR YR 1983 TOTAL 32279.3 MEAN 88.4 MAX 626 MIN 8.6 AC-FT 64030

NOTE: No gage-height record July 31 to Sept. 13.

## 08324000 JEMEZ RIVER NEAR JEMEZ, NM

LOCATION.--Lat 35°39'42", long 106°44'34", Sandoval County, Hydrologic Unit 13020202, in Canon de San Diego Grant, on left bank 0.7 mi downstream from Rio Guadalupe, 3.5 mi north of Jemez, and at mile 29.5.

DRAINAGE AREA.--470 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1936 to May 1941, August 1949 to October 1950, May 1951 to September 1952 (irrigation seasons only), March 1953 to current year. Monthly discharge only for some periods, published in WSP 1732. Published as Jemez Creek near Jemez, 1936-41.

REVISED RECORDS.--WSP 1712: Drainage area. WSP 1923, 1957-58.

GAGE.--Water-stage recorder. Concrete control since Dec. 6, 1965. Datum of gage is 5,622.3 ft National Geodetic Vertical Datum of 1929. June 22, 1936 to Mar. 11, 1937, at site 60 ft upstream at datum 0.50 ft higher. Mar. 12, 1937, to July 8, 1938, at present site at datum 0.7 ft higher. July 9, 1938, to May 6, 1941, at site 60 ft upstream at datum 0.70 ft higher.

REMARKS.--Records good except those for winter months, which are poor. Diversions for irrigation of about 300 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years (water years 1937-40, 1950, 1954-83), 71.7 ft<sup>3</sup>/s, 51,950 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft<sup>3</sup>/s Apr. 21, 1958, from rating curve extended above 2,200 ft<sup>3</sup>/s on basis of contracted-opening measurement; maximum gage height, 8.6 ft, May 6, 1941, present datum; minimum, 1.2 ft<sup>3</sup>/s July 25, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1890 occurred between May 6 and 15, 1941, after gage was destroyed (discharge probably exceeded 6,000 ft<sup>3</sup>/s), from information by local residents.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 26	0300	*1900	7.98	Aug. 2	2115	1120	6.62

Minimum discharge, 8.8 ft<sup>3</sup>/s Jan. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	31	39	31	37	51	234	899	562	64	76	60
2	31	30	30	33	34	56	223	780	508	53	224	59
3	30	28	24	31	30	56	253	639	409	47	138	48
4	28	26	31	32	38	66	232	629	363	42	113	41
5	24	26	35	33	37	63	184	661	326	43	118	37
6	24	27	32	34	35	53	180	673	305	40	85	29
7	23	27	31	35	36	49	164	640	300	39	75	27
8	22	27	34	35	37	57	156	692	293	34	72	32
9	24	37	38	33	36	64	143	732	280	30	70	36
10	24	59	40	31	32	76	149	765	258	27	55	36
11	23	64	37	32	32	114	174	771	241	34	52	43
12	25	49	33	31	32	138	173	738	236	41	53	50
13	27	40	32	31	35	160	171	671	239	42	77	50
14	30	38	38	31	37	173	167	584	203	53	123	40
15	29	31	22	31	34	174	151	524	175	49	94	35
16	28	34	30	32	35	150	159	466	164	41	65	30
17	28	32	33	32	38	145	202	427	155	38	55	27
18	27	41	31	35	36	142	314	384	156	41	53	26
19	26	43	29	34	40	121	492	372	158	41	49	24
20	26	47	31	35	37	113	755	387	146	39	45	23
21	25	43	32	36	36	95	874	390	128	34	41	22
22	24	40	34	32	41	103	880	379	121	61	35	21
23	25	38	40	31	41	101	945	420	115	53	38	20
24	24	36	37	33	44	96	1090	469	113	61	45	22
25	24	32	30	36	49	93	1280	530	157	62	50	22
26	24	37	38	33	48	90	1280	555	126	64	93	23
27	36	37	35	35	50	82	1060	556	112	65	85	30
28	62	33	25	35	50	93	998	571	117	49	67	33
29	40	38	24	35	---	89	1030	582	89	40	62	35
30	33	37	31	37	---	94	966	576	76	33	52	36
31	32	---	35	39	---	163	---	585	---	42	42	---
TOTAL	881	1108	1011	1034	1067	3120	15079	18047	6631	1402	2302	1017
MEAN	28.4	36.9	32.6	33.4	38.1	101	503	582	221	45.2	74.3	33.9
MAX	62	64	40	39	50	174	1280	899	562	65	224	60
MIN	22	26	22	31	30	49	143	372	76	27	35	20
AC-FT	1750	2200	2010	2050	2120	6190	29910	35800	13150	2780	4570	2020
CAL YR 1982	TOTAL	25436	MEAN	69.7	MAX	530	MIN	14	AC-FT	50450		
WTR YR 1983	TOTAL	52699	MEAN	144	MAX	1280	MIN	20	AC-FT	104500		

RIO GRANDE BASIN  
08324000 JEMEZ RIVER NEAR JEMEZ, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)
NOV											
10...	1230	59	350	370	7.9	7.9	15.0	9.5	24	91	0
JAN											
19...	1145	33	475	538	8.3	8.0	12.0	4.0	<10	--	--
MAR											
03...	1330	52	370	410	8.6	8.4	17.0	7.0	30	110	0
MAY											
10...	0945	780	140	191	8.0	8.1	--	8.0	36	--	--
26...	1145	561	130	168	7.8	7.8	26.0	10.5	28	58	0
JUL											
19...	1200	42	--	512	8.4	8.3	29.5	21.0	20	150	0
SEP											
14...	1145	41	460	--	8.2	--	26.0	19.0	26	--	--

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV										
10...	0	31	3.4	35	1.7	6.8	112	19	39	.80
JAN										
19...	--	--	--	--	--	--	--	--	--	--
MAR										
03...	0	39	4.2	36	1.5	5.8	128	20	40	.70
MAY										
10...	--	--	--	--	--	--	76	--	--	--
26...	0	20	1.9	8.2	.5	2.4	62	4.0	7.7	.10
JUL										
19...	0	49	5.6	47	1.8	8.5	176	12	54	.80
SEP										
14...	--	--	--	--	--	--	--	--	--	--

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)
NOV										
10...	39	242	<.10	<.10	.100	.90	--	.080	<.010	4.1
JAN										
19...	--	--	<.10	<.10	.100	.30	--	.050	.080	--
MAR										
03...	33	256	<.10	<.10	.120	.48	--	.060	.020	4.8
MAY										
10...	--	--	<.10	--	.140	1.5	--	.100	--	14
26...	16	99	.10	<.10	.120	.88	1.1	.370	.290	9.7
JUL										
19...	33	316	<.10	<.10	.120	1.1	--	.050	.050	3.5
SEP										
14...	--	--	<.10	<.10	.080	.72	--	.080	.040	4.1



RIO GRANDE BASIN  
08324000 JEMEZ RIVER NEAR JEMEZ, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 10...	1230	32	31	330	< 1	< 1	10	< 10	0	1
MAR 03...	1330	--	--	320	--	--	--	--	--	--
MAY 26...	1145	--	--	0	--	--	--	--	--	--
JUL 19...	1200	--	--	460	--	--	--	--	--	--

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 10...	80	0	2	.0	.0	< 1	< 1	30	0	
MAR 03...	120	--	--	--	--	--	--	--	--	--
MAY 26...	90	--	--	--	--	--	--	--	--	--
JUL 19...	30	--	--	--	--	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	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)
NOV 10...	1230	8.0	5.4	14	9.5	7.1	4.9	6.8	4.7	1.8	1.9

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 10...	1230	59	9.5	87	14	94
MAY 03...	1415	628	12.0	228	387	92
JUL 19...	1200	42	21.0	15	1.7	100

## 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 upstream from mouth, and 6 mi north of Bernalillo.

DRAINAGE AREA.--1,034 mi<sup>2</sup>.

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

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

REMARKS.--Reservoir is formed by earthfill dam, completed October 19, 1953. Capacity, 176,200 acre-ft, from capacity table adapted June 1, 1975, between elevations 5,125.0 ft sill of outlet gates and 5,252.3 ft operating deck of spillway. Maximum controlled capacity, 106,100 acre-ft at elevation 5,232.0 ft (floor of spillway which is located about 0.8 mi south of dam). Capacity by original survey was 189,100 acre-ft. Original plan for reservoir operation was to desilt all flow above 30 ft<sup>3</sup>/s by storage for one day before releasing to Rio Grande, and for possible detention during flood stage on Rio Grande.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 71,220 acre-ft June 8, 1958, elevation, 5,213.36 ft; no storage most of time prior to March 1979.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,830 acre-ft Apr. 27, elevation, 5,172.60 ft; minimum contents, 727 acre-ft June 22, elevation, 5,154.54 ft.

## 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 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2010	2130	2050	1850	2630	2080	2230	6650	6180	2560	2580	2500
2	2040	2080	1970	1850	2720	2100	2540	6190	6240	2490	3270	2480
3	2060	2040	1920	1860	2670	2100	2880	5430	5960	2430	3650	2500
4	2090	2000	1900	1890	2590	2110	3140	4770	5570	2370	2940	2520
5	2100	1990	1870	1920	2590	2120	3410	4450	5190	2360	2480	2540
6	2110	2000	1860	1980	2580	2120	3610	4170	4830	2370	2530	2530
7	2090	2000	1870	2040	2510	2080	3820	3930	4370	2390	2580	2520
8	2050	2000	1860	2070	2430	2010	3900	3700	3910	2390	2590	2520
9	2000	2010	1910	2090	2220	1960	3820	3580	3540	2390	2580	2520
10	1950	2110	1980	2080	2040	1940	3750	3550	3340	2400	2510	2520
11	1910	2230	2060	2070	1990	2200	3700	3750	3130	2410	2440	2530
12	1920	2180	2140	2060	1990	2090	3690	4200	2920	2430	2420	2580
13	1960	2020	2120	2050	1980	2190	3730	4440	2710	2460	2400	2650
14	1990	1870	2020	2030	1980	2350	3740	4500	2470	2480	2390	2720
15	2020	1830	1960	2010	1980	2560	3730	4570	2310	2490	2400	2710
16	2050	1860	1960	1990	1980	2560	3710	4520	2300	2500	2400	2640
17	2090	1890	1970	2010	1970	2410	3710	4310	2300	2500	2380	2560
18	2100	1940	1970	2030	1970	2250	3860	4010	2240	2500	2350	2480
19	2060	1960	1980	2030	1960	2080	4270	3800	2200	2380	2330	2440
20	2030	1970	1980	2030	1950	1920	4930	3790	1890	2310	2340	2420
21	2030	1970	1990	2030	1940	1810	5680	3750	1190	2310	2340	2410
22	2040	1970	2020	2020	1950	1880	5970	3710	727	2320	2340	2400
23	2020	1950	2040	2020	1970	1930	5970	3710	935	2330	2350	2390
24	2010	1950	2060	2030	2000	1910	5980	3800	1220	2340	2350	2380
25	2000	1980	2090	2040	2020	1920	6580	4000	1530	2480	2370	2370
26	2000	2010	2120	2040	2030	1920	7420	4300	1880	2680	2440	2370
27	2020	2050	2120	2090	2040	1920	7830	4630	2180	2690	2530	2430
28	2050	2090	2010	2170	2060	1940	7530	4920	2380	2610	2620	2550
29	2080	2120	1880	2260	---	1960	7290	5240	2530	2560	2700	2560
30	2110	2110	1860	2360	---	1970	6960	5580	2590	2580	2690	2570
31	2140	---	1860	2500	---	2020	---	5920	---	2600	2570	---
MAX	2140	2230	2140	2500	2720	2560	7830	6650	6240	2690	3650	2720
MIN	1910	1830	1860	1850	1940	1810	2230	3550	727	2310	2330	2370
(†)	5160.54	5160.42	5159.55	5161.71	5160.26	5160.11	5171.27	5169.54	5161.98	5162.00	5161.92	5161.92
(††)	+150	-30	-250	+640	-440	-40	+4940	-1040	-3330	+10	-30	0
CAL YR 1982	MAX 3470	MIN 1450	(††) +20									
WTR YR 1983	MAX 7830	MIN 727	(††) +580									

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

(††) CHANGE IN CONTENTS, IN ACRE-FEET

## 08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, NM

LOCATION.--Lat 35°23'24", long 106°32'03", in NE¼ sec.5, T.13 N., R.4 E., Sandoval County, Hydrologic Unit 13020202, on right bank 0.8 mi downstream from Jemez Canyon Dam, 2.0 mi upstream from mouth, and 6 mi north of Bernalillo.

DRAINAGE AREA.--1,038 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1936 to January 1938, March 1943 to current year. Published as "Jemez Creek" prior to 1948, and as "near Bernalillo" prior to 1954.

REVISED RECORDS.--WSP 1178: 1949. WSP 1212: 1950. WSP 1512: 1936, 1943, 1945, 1947-48, 1949(M), 1950. WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,095.60 ft National Geodetic Vertical Datum of 1929, from Corps of Engineers bench mark. Prior to Apr. 24, 1951, at site 0.8 mi upstream at datum 24.51 ft higher. Apr. 24, 1951, to June 25, 1958, at site 37 ft upstream at datum 4.40 ft above present datum. Supplementary water-stage recorder at gages on Jemez Canyon Dam at datum 5,125.00 ft above 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 above station.

AVERAGE DISCHARGE.--41 years (water years 1937, 1944-83), 57.5 ft<sup>3</sup>/s, 41,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft<sup>3</sup>/s Aug. 29, 1943, gage height, 5.62 ft, site and datum then in use, from rating curve extended above 3,000 ft<sup>3</sup>/s; no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in 1900 was probably less than 16,000 ft<sup>3</sup>/s, but highest observed outside period of record.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,380 ft<sup>3</sup>/s Apr. 28; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	31	73	18	.00	38	82	1260	357	43	25	45
2	2.1	40	73	18	.00	46	83	1260	519	42	90	14
3	2.2	39	51	18	46	58	84	1250	603	41	299	.84
4	2.1	39	41	18	66	58	89	1070	596	40	401	.75
5	2.1	26	41	18	49	57	94	851	593	17	249	.75
6	2.1	18	32	18	49	57	94	837	588	.00	43	.75
7	12	18	28	24	76	69	95	823	581	.60	42	.58
8	23	18	24	37	96	77	130	816	572	.90	42	.59
9	22	18	36	37	149	77	188	815	491	.90	42	.53
10	22	18	38	36	151	77	186	814	349	.90	64	.45
11	22	18	23	36	54	77	184	725	341	.90	69	.45
12	12	81	23	36	31	77	182	570	337	.90	40	.45
13	1.2	126	23	36	31	77	179	573	331	.90	39	.35
14	1.2	123	66	35	31	78	175	573	327	.75	40	.30
15	1.2	61	51	35	31	79	173	571	260	.75	41	24
16	1.0	20	24	35	31	144	172	568	120	.75	41	38
17	1.0	20	24	35	31	214	171	563	120	.75	27	28
18	11	20	24	35	31	209	171	560	120	.75	18	28
19	30	34	24	35	31	206	232	472	120	45	9.1	16
20	30	42	24	35	30	204	358	347	210	24	1.7	.63
21	25	42	23	35	30	158	528	345	360	.30	1.9	.60
22	18	42	23	35	28	72	844	344	265	.30	1.9	.60
23	18	42	23	35	24	78	1030	341	1.3	.15	1.8	.60
24	18	33	23	35	24	113	1040	341	.46	.15	1.5	.60
25	18	27	23	35	31	82	1040	341	.59	8.0	1.4	.60
26	18	28	23	35	38	82	1060	344	.13	9.7	1.3	.50
27	8.6	28	45	15	38	81	1210	346	.04	45	1.2	.45
28	9.0	28	64	.00	38	81	1380	348	.04	63	1.1	.26
29	18	28	40	.00	---	81	1300	350	.00	42	.95	17
30	18	52	18	.00	---	81	1280	353	24	18	23	26
31	18	---	18	.00	---	81	---	355	---	17	58	---
TOTAL	388.9	1160	1066	820.00	1265.00	2969	13834	19126	8186.56	465.35	1716.85	247.63
MEAN	12.5	38.7	34.4	26.5	45.2	95.8	461	617	273	15.0	55.4	8.25
MAX	30	126	73	37	151	214	1380	1260	603	63	401	45
MIN	1.0	18	18	.00	.00	38	82	341	.00	.00	.95	.26
AC-FT	771	2300	2110	1630	2510	5890	27440	37940	16240	923	3410	491

CAL YR 1982 TOTAL 23208.87 MEAN 63.6 MAX 662 MIN .00 AC-FT 46030  
WTR YR 1983 TOTAL 51245.29 MEAN 140 MAX 1380 MIN .00 AC-FT 101600

RIO GRANDE BASIN  
08329000 JEMEZ RIVER BELOW JEMEZ CANYON DAM, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 01...	1300	43	1400	1420	8.3	8.1	16.0	7.0
MAR 04...	0930	56	1250	1450	8.5	8.4	6.0	9.0
MAY 03...	1415	1300	360	351	8.0	7.9	22.0	12.0
JUL 19...	1400	70	970	1050	8.4	8.2	37.0	24.5

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)
NOV 01...	300	123	123	100	11	170	4.5	11	--
MAR 04...	200	10	10	63	9.4	220	7.1	11	--
MAY 03...	110	18	18	37	3.8	29	1.3	3.6	110
JUL 19...	190	36	36	62	8.5	150	4.9	8.0	--

DATE	CAR- BONATE IT-FLD (MG/L AS C03) (99445)	ALKA- LINEITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINEITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
NOV 01...	--	--	173	310	160	1.0	26	894
MAR 04...	--	--	186	200	200	1.2	32	849
MAY 03...	.0	90	81	59	20	.30	21	228
JUL 19...	--	--	154	210	120	.70	23	675

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 01...	1300	900	0
MAR 04...	0930	1000	10
MAY 03...	1415	110	30
JUL 19...	1400	620	30

## RIO GRANDE BASIN

175

08329700 CAMPUS WASH AT ALBUQUERQUE, NM

LOCATION.--Lat 35°05'40", long 106°37'22", in SE¼ sec.16, T.10 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on right bank 100 ft west of southwest corner of University of New Mexico North Golf Course, 200 ft downstream from Baretas Stormwater Pumping Station outfall, 600 ft downstream from Tucker Road bridge, and 1,500 ft northeast of intersection of Lomas and University Blvds. in Albuquerque.

PERIOD OF RECORD.--April 1982 to current year (no winter records).

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 5,140 ft, from topographic map.

REMARKS.--Records good. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 686 ft<sup>3</sup>/s July 31, 1982, gage height, 3.20 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 163 ft<sup>3</sup>/s at 0200 hours Sept. 8, gage height, 1.40 ft; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.57			.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00			.00	.00	.00	.00	.00	3.9	.00
3	.00	.00	---			.49	.00	.00	.00	.00	.00	.00
4	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
5	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
6	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
7	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
8	.00	.00	---			.00	.00	.00	.00	.00	.00	12
9	.00	1.3	---			.00	.00	.00	.00	.00	.00	.00
10	.00	2.8	---			.00	.00	.00	.00	.00	.00	.00
11	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
12	1.1	.00	---			.00	.00	.00	.00	.00	.00	.00
13	.00	.00	---			.00	.00	.00	.00	.00	.00	3.3
14	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
15	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
16	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
17	.00	.77	---			.00	.00	.00	.00	.00	.00	.00
18	.00	2.1	---			1.9	.76	.00	.00	.00	.00	.00
19	.00	.00	---			.91	.00	.00	.00	.00	.00	.00
20	.00	.00	---			.00	.00	2.0	.00	2.4	.00	.00
21	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
22	.00	.00	---			.00	.00	.00	.00	1.4	.00	.00
23	.00	.00	---			.00	.00	.00	1.5	.00	.00	.00
24	.00	.00	---			.00	.00	.00	3.2	.00	.00	.00
25	.00	.00	---			.00	.00	.00	1.5	.00	6.2	.00
26	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
27	.00	.00	---			.00	.00	.00	.00	1.2	.00	6.1
28	.00	.00	---			.00	.00	2.3	.00	.00	.00	.00
29	.00	.00	---			.00	.00	2.3	.00	.00	.00	.00
30	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
31	.00	---	---			.00	---	.00	---	5.2	.00	---
TOTAL	1.10	6.97	---			3.30	.76	6.60	6.20	10.20	10.10	21.40
MEAN	.035	.23	---			.11	.025	.21	.21	.33	.33	.71
MAX	1.1	2.8	---			1.9	.76	2.3	3.2	5.2	6.2	12
MIN	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
AC-FT	2.2	14	---			6.5	1.5	13	12	20	20	42

## 08329835 NORTH FLOODWAY CHANNEL AT ALBUQUERQUE, NM

LOCATION.--Lat 35°07'03", long 106°36'42", in SE¼ sec.3, T.10 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on right bank of concrete lined drainage channel, 300 ft downstream (north) of bridge on Candelaria Blvd. NE and 3,000 ft downstream from confluence of Campus Wash and Embudo Arroyo in Albuquerque.

PERIOD OF RECORD.--May 1982 to current year (no winter records).

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 5,110 ft from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,230 ft<sup>3</sup>/s July 31, 1982, gage height, 11.20 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 831 ft<sup>3</sup>/s at 1400 hours June 24, gage height, 3.77 ft; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	19			.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00			.00	.00	.00	.00	.00	13	.00
3	.00	.00	---			8.2	.00	.00	.00	.00	.00	.00
4	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
5	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
6	.00	.00	---			.00	.00	.00	.00	10	.00	.00
7	.00	.00	---			.00	.00	.00	.00	.00	.00	21
8	.00	.00	---			.00	.00	.00	.00	.00	.00	70
9	.00	12	---			.00	.00	.00	.00	.00	.00	.00
10	.00	26	---			.00	.00	.00	.00	.00	.00	.00
11	.00	24	---			.00	.00	.00	.00	15	.00	18
12	8.4	.00	---			.00	.00	.00	.00	.00	.00	.00
13	.00	.00	---			.00	.00	.00	.00	.00	.00	11
14	.00	.00	---			5.0	8.4	.00	.00	.00	7.0	.00
15	.00	.00	---			12	.00	.00	.00	.00	.00	4.4
16	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
17	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
18	.00	48	---			15	.00	.00	.00	.00	9.3	.00
19	.00	.00	---			22	.00	7.2	.00	.00	.00	.00
20	.00	.00	---			.00	.00	9.5	.00	19	.00	.00
21	.00	.00	---			.00	.00	.00	.00	11	.00	.00
22	.00	.00	---			.00	.00	.00	.00	8.2	.00	.00
23	.00	.00	---			.00	.00	.00	37	.00	.00	.00
24	.00	.00	---			.00	.00	.00	54	.00	.00	.00
25	.00	.00	---			.00	.00	.00	17	.00	21	.00
26	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
27	.00	.00	---			.00	.00	.00	.00	7.2	.00	67
28	.00	.00	---			.00	.00	7.6	.00	.00	.00	.00
29	.00	.00	---			.00	.00	13	.00	.00	14	.00
30	.00	.00	---			.00	.00	9.0	.00	38	.00	.00
31	.00	---	---			.00	---	.00	---	70	.00	---
TOTAL	8.40	110.00	---			62.20	8.40	46.30	108.00	178.40	64.30	191.40
MEAN	.27	3.67	---			2.01	.28	1.49	3.60	5.75	2.07	6.38
MAX	8.4	48	---			22	8.4	13	54	70	21	70
MIN	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
AC-FT	17	218	---			123	17	92	214	354	128	380

## RIO GRANDE BASIN

177

## 08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM

LOCATION.--Lat 35°11'58", long 106°35'53", Bernalillo County, Hydrologic Unit 13020203, in Elena Gallegos Grant, on left bank 0.5 mi upstream from Edith Blvd., 1.1 mi upstream from mouth, and 1.2 mi northeast of Alameda.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1968 to current year (no winter records).

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 5,015 ft, from Corps of Engineers plan and profile map.

REMARKS.--Water-discharge records good except those below 25 ft<sup>3</sup>/s, which are fair. Floodway channel intercepts flow of numerous arroyos in northeast Albuquerque and discharges into the Rio Grande at a point 1.6 mi north of Alameda.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft<sup>3</sup>/s Aug. 14, 1980, gage height, 10.4 ft from rating curve extended above 2,900 ft<sup>3</sup>/s; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,290 ft<sup>3</sup>/s at 1500 hours June 24, gage height, 2.60 ft; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	20			.00	.00	.00	.00	.00	.00	.00
2	.00	.00	---			.00	.00	.00	.00	.00	30	.00
3	.00	.00	---			20	.00	.00	.00	.00	.00	.00
4	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
5	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
6	.00	.00	---			.00	.00	.00	.00	20	.00	.00
7	.00	.00	---			.00	.00	.00	.00	.00	.00	43
8	.00	.00	---			.00	.00	.00	.00	.00	.00	150
9	.00	30	---			.00	.00	.00	.00	.00	.00	.00
10	.00	50	---			.00	.00	.00	.00	.00	.00	.00
11	.00	50	---			.00	.00	.00	.00	30	.00	62
12	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
13	.00	.00	---			.00	.00	.00	.00	.00	.00	18
14	.00	.00	---			.00	20	.00	.00	.00	18	21
15	.00	.00	---			38	.00	.00	.00	.00	.00	16
16	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
17	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
18	.00	100	---			22	.00	.00	.00	.00	27	.00
19	.00	.00	---			41	.00	15	.00	.00	.00	.00
20	.00	.00	---			.00	.00	20	.00	40	.00	.00
21	.00	.00	---			.00	.00	.00	.00	18	.00	.00
22	.00	.00	---			.00	.00	.00	.00	19	.00	.00
23	.00	.00	---			.00	.00	.00	40	.00	.00	.00
24	.00	.00	---			.00	.00	.00	89	.00	.00	.00
25	.00	.00	---			.00	.00	.00	.00	.00	64	.00
26	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
27	.00	.00	---			.00	.00	.00	.00	15	.00	132
28	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
29	.00	.00	---			.00	.00	32	.00	.00	18	.00
30	.00	.00	---			.00	.00	27	.00	80	10	.00
31	.00	---	---			.00	---	.00	---	150	.00	---
TOTAL	.00	230.00	---			121.00	20.00	94.00	129.00	372.00	167.00	442.00
MEAN	.000	7.67	---			3.90	.67	3.03	4.30	12.0	5.39	14.7
MAX	.00	100	---			41	20	32	89	150	64	150
MIN	.00	.00	---			.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	456	---			240	40	186	256	738	331	877

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1982 to current year.

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (000095)	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)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	HARD- NESS (MG/L AS CaCO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3) (00902)
NOV											
10...	1755	340	372	362	7.6	7.7	--	280	--	140	0
11...	0135	450	312	--	7.7	--	--	--	--	--	--
11...	0150	370	328	--	7.6	--	--	--	--	--	--
18...	0120	300	382	364	7.6	7.6	--	160	--	150	9
18...	0250	380	248	--	7.5	--	--	--	--	--	--
18...	0305	310	238	--	7.7	--	--	--	--	--	--
DEC											
10...	1320	390	348	338	7.6	7.5	--	--	--	140	8
10...	1350	420	308	--	7.5	--	--	--	--	--	--
10...	1420	350	317	--	7.6	--	--	--	--	--	--
JUN											
02...	1345	E1.5	500	444	9.8	9.9	27.0	29	--	140	25
13...	1200	E1.0	440	439	9.5	9.2	--	--	--	160	76
23...	1845	538	460	473	7.6	7.4	--	1500	--	150	6
23...	1850	944	450	442	7.0	6.9	--	1300	26	110	13
23...	1905	930	255	--	7.2	--	--	560	--	--	--
23...	1920	776	243	--	7.1	--	--	--	--	--	--
23...	1935	680	249	--	7.1	--	--	350	--	--	--
23...	2005	560	255	--	7.1	--	--	320	--	--	--
23...	2020	461	378	413	7.0	6.9	--	490	26	120	20
24...	1520	728	--	197	7.4	7.3	--	350	27	73	7
24...	1525	1350	167	--	7.4	--	--	290	--	--	--
24...	1540	1350	--	123	7.6	7.4	--	250	27	50	5
24...	1550	1110	168	--	7.6	--	--	240	--	--	--
24...	1640	776	172	--	7.6	--	--	210	--	--	--
24...	1740	584	345	369	7.2	7.2	--	280	24	97	4
26...	1525	E1.0	897	873	9.5	9.4	--	--	--	370	298
JUL											
06...	2145	208	270	204	7.3	7.1	--	380	--	73	8
20...	1835	300	469	448	7.6	7.0	--	710	--	120	19
20...	1840	620	--	--	7.1	--	--	--	--	--	--
20...	1855	505	--	--	7.2	--	--	--	--	--	--
20...	1910	350	--	--	7.2	--	--	--	--	--	--
29...	1425	505	--	--	7.7	--	--	--	--	--	--
29...	1440	400	148	133	8.2	7.3	--	260	--	35	0
30...	0600	300	467	451	7.4	7.4	--	350	--	120	34
30...	0605	800	--	--	7.5	--	--	--	--	--	--
30...	0620	740	156	127	7.6	7.1	--	290	--	52	2
30...	0635	620	--	--	7.5	--	--	--	--	--	--
30...	0650	400	--	--	7.5	--	--	--	--	--	--
31...	0425	1000	146	136	8.2	7.5	--	230	--	43	0
31...	0430	2040	--	--	8.2	--	--	--	--	--	--



[illegible]

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

## CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	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)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L) AS C) (00689)
NOV											
10...	208	1.1	--	--	--	4.2	7.50	--	75	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
18...	211	1.6	--	--	--	4.3	2.30	--	48	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
DEC											
10...	192	.40	--	--	--	2.1	3.30	--	61	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
02...	310	<.10	<.10	.170	.83	--	.370	.170	9.1	--	--
13...	316	<.10	<.10	.090	1.1	--	.130	.010	26	--	--
23...	304	<.10	.35	2.10	65	--	17.0	.480	300	--	--
23...	185	.30	.75	1.30	7.3	8.9	5.40	.290	170	--	--
23...	--	<.10	<.10	.780	14	--	4.70	.240	140	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	<.10	<.10	.510	11	--	2.50	.180	41	--	--
23...	--	<.10	<.10	.580	9.4	--	2.40	.190	98	--	--
23...	170	.20	.20	.550	10	11	2.30	.200	130	--	--
24...	117	.50	.46	.350	8.0	8.8	3.60	.130	86	--	--
24...	--	.10	.11	.640	8.0	8.7	2.50	.130	72	--	--
24...	74	.60	.56	.490	4.5	5.6	2.20	.140	52	--	--
24...	--	.20	.16	.600	5.9	6.7	1.70	.130	63	--	--
24...	--	.50	.29	.450	12	13	1.90	.130	46	--	--
24...	159	<.10	<.10	.220	6.2	--	1.70	.190	78	--	--
26...	709	<.10	<.10	.120	.98	--	.180	.080	16	--	--
JUL											
06...	119	.70	.69	.220	12	13	.220	.100	> 80	19	> 16
20...	290	.10	.14	.910	20	21	6.40	.130	140	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
29...	76	.50	.51	.300	8.3	9.1	.490	.130	74	--	--
30...	264	.30	.26	.200	9.3	9.8	.330	.050	85	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	78	.60	.56	.410	7.5	8.5	2.40	.160	85	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
31...	77	.60	.58	.070	4.9	5.6	2.60	.050	64	--	--
31...	--	--	--	--	--	--	--	--	--	--	--

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	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)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
JUL 31...	0431	2040	135	137	8.2	8.1	230	--	54	0
AUG 02...	1030	72	203	--	7.3	--	--	--	--	--
SEP 07...	2005	700	450	--	7.0	--	670	61	--	--
07...	2010	1090	380	--	6.8	--	710	61	--	--
07...	2040	700	280	--	7.2	--	290	59	--	--
08...	0150	790	320	--	7.2	--	250	48	--	--
08...	0210	1510	230	--	7.3	--	180	36	--	--
08...	0310	1230	190	--	7.5	--	120	23	--	--
08...	0410	580	170	--	7.6	--	80	17	--	--

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM 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)
JUL 31...	0	19	1.6	5.0	.3	1.9	54	9.7	3.7	.20
AUG 02...	--	--	--	--	--	--	--	--	--	--
SEP 07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--

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)
JUL 31...	5.8	80	.50	.53	.100	8.8	9.4	4.30	.070	53
AUG 02...	--	--	--	--	--	--	--	--	--	--
SEP 07...	--	--	<.10	<.10	1.40	18	--	8.90	.080	--
07...	--	--	.30	<.10	1.10	16	17	6.30	.070	--
07...	--	--	<.10	<.10	.450	11	--	.590	.030	--
08...	--	--	<.10	<.10	.540	9.0	--	.490	.060	--
08...	--	--	.30	<.10	.430	5.1	5.8	1.30	.110	--
08...	--	--	.20	.24	.460	2.9	3.6	1.00	.160	--
08...	--	--	.20	.15	.180	1.9	2.3	.870	.090	--

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV										
10...	--	110000	20	900	--	3800	2.0	--	750	1100
11...	--	--	--	830	--	--	--	--	--	--
11...	--	--	--	1000	--	--	--	--	--	--
18...	--	49000	30	600	--	1500	1.0	--	340	570
18...	--	--	--	280	--	--	--	--	--	--
18...	--	--	--	290	--	--	--	--	--	--
DEC										
10...	--	64000	0	700	--	2200	1.0	--	560	620
10...	--	--	--	610	--	--	--	--	--	--
10...	--	--	--	600	--	--	--	--	--	--
JUN										
02...	--	--	20	0	--	--	--	--	--	--
13...	11	--	80	0	3	--	--	--	--	--
23...	3	--	90	8100	7	--	1.5	.0	--	--
23...	7	--	80	3500	7	--	1.0	.0	--	--
23...	4	--	--	1500	10	--	--	--	--	--
23...	3	--	--	1100	9	--	--	--	--	--
23...	2	--	--	850	7	--	--	--	--	--
23...	6	--	100	1100	6	--	1.0	.0	--	--
24...	6	--	40	0	7	--	.5	.0	--	--
24...	9	--	--	1500	4	--	--	--	--	--
24...	9	--	20	1000	6	--	.5	.0	--	--
24...	7	--	--	800	5	--	--	--	--	--
24...	9	--	--	570	4	--	--	--	--	--
24...	1	--	150	0	5	--	.5	.0	--	--
26...	10	--	0	< 0	< 1	--	--	--	--	--
JUL										
06...	10	--	30	750	< 1	--	--	--	--	--
20...	8	--	20	1800	3	--	--	--	--	--
29...	10	--	20	430	9	--	--	--	--	--
30...	11	--	20	960	< 1	--	--	--	--	--
30...	19	--	30	930	4	--	--	--	--	--
31...	11	--	40	510	< 1	--	.5	.0	--	--
31...	9	--	10	600	1	--	--	--	--	--
SEP										
07...	< 1	--	--	1500	4	--	--	--	--	--
07...	2	--	--	1600	5	--	--	--	--	--
07...	3	--	--	720	< 1	--	--	--	--	--
08...	8	--	--	630	1	--	--	--	--	--
08...	11	--	--	500	3	--	--	--	--	--
08...	8	--	--	270	7	--	--	--	--	--
08...	5	--	--	130	3	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	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)
JUN										
23...	1920	< 8.8	190	130	< 4.0	120	< 3.4	97	.20	.51

RIO GRANDE BASIN  
08329900 NORTH FLOODWAY CHANNEL NEAR ALAMEDA, NM -- Continued  
WATER-QUALITY RECORDS

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUN			
23...	1845	9300	660000
23...	1850	9300	720000
23...	2020	26000	930000
24...	1520	65000	260000
24...	1540	440000	EO
24...	1740	80000	--
SEP			
07...	2005	K30000	380000
07...	2010	70000	630000
07...	2040	44000	K170000
08...	0150	45000	240000
08...	0210	36000	K100000
08...	0310	200000	450000
08...	0410	K240000	K650000

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV						
10...	1755	340	--	6100	5600	83
10...	1810	340	--	3570	3280	--
10...	2150	300	--	8130	6590	--
10...	2205	340	--	12000	11000	--
11...	0105	390	--	1400	1470	--
11...	0120	430	--	1310	1520	--
11...	0135	450	--	2400	2920	73
11...	0150	370	--	3930	3930	86
18...	0120	300	--	2190	1770	86
18...	0135	320	--	3490	3020	--
18...	0150	300	--	1420	1150	--
18...	0220	320	--	1200	1040	--
18...	0235	370	--	1880	1880	--
18...	0250	380	--	1370	1410	73
18...	0305	310	--	1940	1620	72
18...	1350	420	--	1810	2050	63
DEC						
10...	1320	390	--	3260	3430	90
10...	1335	420	--	2290	2600	--
10...	1405	370	--	1810	1810	--
10...	1420	350	--	1560	1470	72
JUN						
02...	1345	E1.5	27.0	38	--	--
23...	1845	538	--	14900	21600	75
23...	1850	944	--	6960	17700	65
23...	1905	930	--	4090	10300	73
23...	1920	776	--	3560	7460	--
23...	1935	680	--	2190	4020	77
23...	1950	632	--	2080	3550	--
23...	2005	560	--	1770	2680	77
23...	2020	461	--	1680	2090	86
23...	2035	400	--	1840	1990	--
24...	1520	728	--	5090	10000	64
24...	1525	1350	--	3610	13200	56
24...	1540	1350	--	2450	8930	71
24...	1550	1110	--	1870	5600	79
24...	1610	902	--	1720	4190	--
24...	1625	776	--	1730	3620	--
24...	1640	776	--	1360	2850	88
24...	1655	800	--	1600	3460	--

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	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 .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
JUN												
24...	1710	764	1370	2830	--	--	--	--	--	--	--	--
24...	1725	680	1840	3380	--	--	--	--	--	--	--	--
24...	1740	584	993	1570	--	--	--	--	--	--	--	84
24...	1755	494	931	1240	--	--	--	--	--	--	--	--
24...	1810	430	650	755	--	--	--	--	--	--	--	--
JUL												
06...	2130	184	12500	6210	--	--	--	--	--	--	--	--
06...	2145	208	9120	5120	--	--	--	--	--	--	--	--
06...	2200	271	4490	3290	--	--	--	--	--	--	--	--
06...	2215	271	5860	4290	--	--	--	--	--	--	--	--
20...	1835	300	6020	4880	--	--	--	--	--	--	--	87
20...	1840	620	7410	12400	--	--	--	--	--	--	--	--
20...	1855	505	2950	4020	--	--	--	--	--	--	--	--
20...	1910	350	2410	2280	--	--	--	--	--	--	--	--
29...	1425	505	9180	12500	--	--	--	--	--	--	--	--
29...	1440	400	4570	4940	--	--	--	--	--	--	--	96
30...	0600	300	4340	3520	--	--	--	--	--	--	--	60
30...	0605	800	4470	9660	--	--	--	--	--	--	--	--
30...	0620	740	2690	5370	--	--	--	--	--	--	--	60
30...	0635	620	1800	3010	--	--	--	--	--	--	--	--
30...	0650	400	1180	1270	--	--	--	--	--	--	--	--
31...	0425	1000	7020	19000	--	--	--	--	--	--	--	84
31...	0430	2040	5080	28000	18	29	48	87	95	99	100	--
31...	0431	2040	4950	27300	--	--	--	--	--	--	--	90
AUG												
02...	1030	72	274	53	--	--	--	--	--	--	--	86
SEP												
07...	2005	700	10000	18900	--	--	--	--	--	--	--	69
07...	2010	1090	11000	32400	--	--	--	--	--	--	--	52
07...	2040	700	5260	9940	--	--	--	--	--	--	--	77
08...	0150	790	5480	11700	--	--	--	--	--	--	--	81
08...	0210	1510	2340	9540	--	--	--	--	--	--	--	58
08...	0310	1230	1190	3950	--	--	--	--	--	--	--	60
08...	0410	580	664	1040	--	--	--	--	--	--	--	88

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.

DRAINAGE AREA.--17,440 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1946(M).

GAGE.--Water-stage recorder. Datum of gages is 4,946.16 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 18, 1947, at various sites at datum about 2.00 ft higher; Sept. 18, 1947, to Apr. 12, 1959, at site 550 ft to the left of present site; Apr. 13, 1959, to June 29, 1960, at site 150 ft to right of present site. Supplemental water-stage recorders at sites 75 ft and 150 ft to right of present site used at various times since 1964.

REMARKS.--Water-discharge records good. Flow completely regulated since November 1973 by Cochiti Dam (station 08317300) 50 mi upstream. Possible regulation by operation of reservoirs on Rio Chama and by flood-and-silt-detention reservoirs on Galisteo Creek and Jemez River (stations 08285000, 08286900, 08317900, 08328500). Since May 1971 flow affected by release of transmountain water from Heron Reservoir (station 08284510). Diversions above station for irrigation of about 718,000 acres, 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, 773,800 acre-ft/yr prior to closure of Cochiti Dam.

10 years (water years 1974-83), 1,232 ft<sup>3</sup>/s, 892,600 acre-ft/yr since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft<sup>3</sup>/s Apr. 24, 1942, from rating curve extended above 13,900 ft<sup>3</sup>/s; maximum gage height, 7.82 ft Aug. 10, 1967; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,700 ft<sup>3</sup>/s at 1630 hours June 10, gage height, 7.95 ft; minimum daily, 12 ft<sup>3</sup>/s Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	592	899	772	845	1490	1190	5250	5580	5570	667	411
2	1160	447	1050	584	813	1390	1310	4970	6120	5430	653	376
3	983	541	1080	590	745	1380	1380	4690	7000	5530	894	347
4	951	578	900	638	804	1610	1670	4720	6690	5250	1380	341
5	1080	510	819	680	851	1680	1580	4740	6080	5020	1350	331
6	888	557	745	715	951	1590	1430	4780	5660	4490	908	343
7	652	684	713	808	973	1700	1090	4730	4960	4120	628	323
8	614	748	772	868	945	1690	970	5010	5360	4480	579	368
9	880	1160	835	784	909	1310	1160	4570	6040	3740	482	349
10	834	1290	939	808	931	1130	1480	4910	6970	3790	476	357
11	782	1470	990	851	893	1260	1280	4940	7210	3380	484	391
12	721	1800	926	851	851	1500	1040	5040	7330	3740	469	390
13	709	1600	1010	835	823	1570	1040	4890	7150	4000	427	410
14	688	1450	1110	820	760	1500	1190	5410	6790	3100	336	470
15	775	1350	1090	822	759	1440	1340	5480	6950	3080	305	439
16	765	1230	1080	832	855	2110	1390	5720	6930	3500	388	348
17	662	1200	1050	828	914	2650	1230	5890	6840	3100	357	326
18	560	1170	1050	867	979	2780	1170	6080	6590	2890	261	296
19	486	1050	982	819	963	2140	1270	4800	6300	2120	177	206
20	499	1280	765	846	957	1770	1370	4180	5950	1320	140	123
21	481	1350	716	880	996	1760	2030	3530	6300	693	110	41
22	493	1220	886	865	1000	1640	3200	3710	6060	586	90	20
23	433	1120	918	896	1020	1480	4810	4240	5120	643	57	17
24	341	1090	1050	886	1050	1460	4390	4280	5210	643	68	17
25	380	1070	1380	849	1140	1320	4090	4560	5190	700	230	18
26	354	1080	1520	821	1300	1290	4500	5000	5200	716	391	12
27	274	1010	1480	845	1370	1330	5010	5700	5120	655	435	16
28	272	961	1440	904	1450	1260	5800	6060	5550	588	369	28
29	410	965	1090	906	---	1180	5710	6210	5540	1050	341	42
30	606	918	751	804	---	1140	5430	6100	5600	829	420	26
31	744	---	856	874	---	1010	---	5910	---	769	498	---
TOTAL	20647	31491	30892	25148	26847	48560	70550	156100	183390	85792	14370	7182
MEAN	666	1050	997	811	959	1566	2352	5035	6113	2767	464	239
MAX	1170	1800	1520	906	1450	2780	5800	6210	7330	5570	1380	470
MIN	272	447	713	584	745	1010	970	3530	4960	586	57	12
AC-FT	40950	62460	61270	49880	53250	96320	139900	309600	363800	170200	28500	14250
(t)	13170	4510	1360	1730	1890	3560	11390	17390	17140	17990	17450	16120

CAL YR 1982 TOTAL 542816 MEAN 1487 MAX 4630 MIN 100 AC-FT 1077000 (t) 89020  
WTR YR 1983 TOTAL 700969 MEAN 1920 MAX 7330 MIN 12 AC-FT 1390000 (t) 123700

(t) 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 THE ENTIRE FLOW IN VALLEY CROSS-SECTION.



RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

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 determinations were made bi-weekly when needed.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,840 micromhos Oct. 12, 1974; minimum daily 115 micromhos 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, 861 micromhos Aug. 4; minimum daily, 219 micromhos June 7.

WATER TEMPERATURES: Maximum, 26.0°C Sept. 12, minimum, 0.0°C Jan. 3.

SEDIMENT CONCENTRATIONS: Maximum daily, 10,000 mg/l Aug. 4; minimum daily, 40 mg/l September 30.

SEDIMENT LOADS: Maximum daily, 37,300 tons (33,800 tonnes) Aug. 4; minimum daily, 2.1 tons (1.9 tonnes) Sept. 23.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 AS CACO3) (00902)
NOV 08...	1415	799	370	378	8.1	8.0	17.5	12.5	15	130	18
FEB 28...	0900	1390	360	361	8.1	8.1	12.0	7.0	--	130	5
MAY 02...	1200	4970	300	313	8.0	7.9	13.0	12.5	--	110	14
JUL 11...	1000	3550	240	254	8.1	8.2	26.0	22.0	22	91	19

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 08...	18	43	6.7	23	.9	3.1	--	--	--	117	64
FEB 28...	5	40	6.7	25	1.0	2.8	150	.0	--	118	56
MAY 02...	14	35	6.1	18	.8	2.5	120	.0	100	86	54
JUL 11...	19	28	5.1	14	.7	2.4	88	.0	72	80	42

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L AS (70301)	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)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 08...	9.1	.40	21	241	<.10	<.10	.120	.68	.090	.020	2.6
FEB 28...	13	.40	22	240	--	--	--	--	--	--	--
MAY 02...	7.8	.20	18	201	--	--	--	--	--	--	--
JUL 11...	4.0	.20	16	155	<.10	<.10	.110	.79	.060	.030	4.8

DATE	TIME	ARSENIC		BORON,	CADMIUM		CHRO-	CHRO-	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, DIS- SOLVED (UG/L AS CR) (01030)	TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	DIS- SOLVED (UG/L AS CU) (01040)
NOV 08...	1415	3	3	0	< 1	< 1	10	< 10	0	1
FEB 28...	0900	--	--	0	--	--	--	--	--	--
MAY 02...	1200	--	--	0	--	--	--	--	--	--
JUL 11...	1000	--	--	0	--	--	--	--	--	--

[illegible][illegible]

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)
FEB 28...	0900	--	--	--	--	--	--	--	--	--
JUL 11...	1000	< .10	< .01	< .10	< .01	< .01	< .01	< .01	< .01	< .01

[illegible]

RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
FEB 28...	--	--	--	--	--	.01	<.01	<.01	<.01
JUL 11...	<.10	<.01	<.10	< 1	<.01	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV										
01...	1000	577	7.5	152	237	--	--	--	--	--
08...	1415	799	12.5	223	481	--	--	--	--	--
29...	1145	940	9.0	578	1470	--	--	--	--	--
JAN										
03...	1000	512	.0	277	383	--	--	--	--	--
FEB										
01...	1230	791	6.0	38	81	--	--	--	--	--
28...	0900	1390	7.0	324	1220	--	--	--	47	55
APR										
02...	0900	1460	8.0	411	1620	--	--	--	--	--
28...	1300	6440	12.0	2410	41900	7	8	11	28	45
MAY										
02...	1200	4970	12.5	943	12700	--	--	--	36	59
JUN										
01...	1200	5460	13.0	524	7720	--	--	--	43	57
13...	1600	6900	15.0	1490	27800	--	--	--	--	--
JUL										
11...	1000	3550	22.0	299	2870	--	--	--	32	46
29...	0900	722	17.0	606	1180	--	--	--	--	--
AUG										
15...	1015	304	23.5	234	192	--	--	--	--	--
SEP										
12...	1430	409	26.0	273	301	--	--	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM (70336)
NOV									
01...	--	--	--	57	72	84	95	100	--
08...	--	--	--	40	51	75	98	100	--
29...	--	--	--	17	25	43	77	98	100
JAN									
03...	--	--	--	19	31	62	93	97	100
FEB									
01...	--	--	--	72	81	96	99	100	--
28...	82	100	--	--	--	--	--	--	--
APR									
02...	--	--	--	60	--	--	--	--	--
28...	70	96	100	--	--	--	--	--	--
MAY									
02...	84	98	100	--	--	--	--	--	--
JUN									
01...	73	97	100	--	--	--	--	--	--
13...	--	--	--	15	--	--	--	--	--
JUL									
11...	79	100	--	--	--	--	--	--	--
29...	--	--	--	96	--	--	--	--	--
AUG									
15...	--	--	--	93	95	98	100	--	--
SEP									
12...	--	--	--	94	95	99	100	--	--

RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (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)
OCT								
04...	1040	990	--	--	0	0	21	88
NOV								
01...	1000	577	152	237	0	0	12	78
08...	1415	799	223	481	0	0	13	59
29...	1145	940	578	1470	3	3	36	96
JAN								
03...	1000	512	277	383	0	0	15	82
FEB								
01...	1230	791	38	81	0	1	52	98
28...	0900	1390	324	1220	0	0	12	79
APR								
28...	1300	6440	2410	41900	0	0	10	55
MAY								
02...	1200	4970	943	12700	0	0	15	68
JUN								
01...	1200	5460	524	7720	1	1	7	39
13...	1600	6900	1490	27800	0	0	8	50
JUL								
11...	1000	3550	299	2870	1	6	49	81
AUG								
15...	1015	304	234	192	0	0	10	64
SEP								
12...	1430	409	273	301	1	1	21	66

DATE	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	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							
04...	--	98	100	--	--	--	--
NOV							
01...	--	92	97	99	100	--	--
08...	--	72	76	79	82	90	100
29...	100	--	--	--	--	--	--
JAN							
03...	--	97	99	100	--	--	--
FEB							
01...	100	--	--	--	--	--	--
28...	--	90	96	99	100	--	--
APR							
28...	--	78	92	95	98	100	--
MAY							
02...	--	96	96	99	99	100	--
JUN							
01...	--	50	54	58	66	81	100
13...	--	68	75	82	90	96	100
JUL							
11...	--	95	98	99	100	--	--
AUG							
15...	--	84	93	97	99	100	--
SEP							
12...	--	86	96	99	100	--	--

RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

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TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SEDI- MENT, DISCH, SUSP. + BED MA- TERIAL (T/DAY) (80156)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (FPS) (00055)
NOV									
01...	1000	577	7.5	152	237	349	215	1.5	1.80
08...	1415	799	12.5	223	481	777	235	1.6	2.10
29...	1145	940	9.0	578	1470	1950	72.0	4.1	3.20
JAN									
03...	1000	512	.0	277	383	677	205	1.4	1.90
FEB									
01...	1230	791	6.0	38	81	286	195	1.8	2.30
28...	0900	1390	7.0	324	1220	2900	72.0	3.9	5.00
JUN									
01...	1200	5460	13.0	524	7720	15300	370	3.1	4.70
13...	1600	6900	15.0	1490	27800	45000	400	3.7	4.60
JUL									
11...	1000	3550	22.0	299	2870	5370	360	3.0	3.20
AUG									
15...	1015	304	23.5	234	192	245	152	1.2	1.70
SEP									
12...	1430	409	26.0	273	301	423	175	1.2	1.90

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	349	385	403	---	376	364	428	354	241	272	362	428
2	369	415	446	432	382	371	407	349	238	268	363	425
3	---	437	436	433	385	378	402	344	238	263	464	389
4	336	432	428	425	---	377	400	336	228	262	861	385
5	336	434	437	411	---	380	390	331	229	268	783	---
6	325	449	436	402	426	374	382	330	227	297	548	386
7	318	414	443	405	431	380	390	---	219	285	437	392
8	321	414	429	417	456	379	403	---	227	269	407	369
9	531	416	428	424	479	393	---	---	229	277	415	399
10	408	412	407	432	569	412	408	332	227	272	403	386
11	---	408	407	425	580	417	411	330	231	275	403	344
12	---	408	---	418	430	394	431	322	232	278	435	379
13	---	---	470	423	427	387	437	309	235	283	401	390
14	---	466	488	424	427	383	434	297	237	283	409	---
15	388	473	462	423	432	388	427	293	---	284	426	470
16	375	416	462	429	427	383	421	299	---	278	---	406
17	363	402	431	393	---	392	423	277	---	282	396	450
18	360	385	428	388	---	395	432	278	---	281	---	437
19	373	400	428	---	---	402	420	276	---	291	---	446
20	399	---	446	---	---	412	438	276	257	317	422	463
21	403	410	464	---	409	417	450	284	259	312	---	443
22	388	409	451	---	---	397	415	291	261	311	419	442
23	390	410	440	413	---	378	411	301	257	312	422	447
24	404	---	436	410	---	375	---	299	254	315	400	---
25	402	---	409	417	---	376	398	---	253	311	---	---
26	392	---	357	412	382	391	394	---	252	319	371	---
27	414	---	372	424	385	394	388	---	254	354	366	---
28	421	---	395	408	379	394	379	264	249	371	390	438
29	386	409	423	386	---	406	382	261	251	365	380	426
30	402	413	---	386	---	405	366	244	250	319	397	427
31	446	---	---	373	---	425	---	244	---	338	368	---
MEAN	385	418	431	413	432	391	410	301	241	297	440	415
WTR YR 1983	MEAN	379	MAX	861	MIN	219						

RIO GRANDE BASIN  
08330000 RIO GRANDE AT ALBUQUERQUE, NM -- Continued  
WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	11.0	7.0	---	6.0	8.0	9.0	11.0	13.0	14.0	16.0	16.0
2	14.0	11.0	8.0	1.0	8.0	8.0	8.0	10.0	12.0	15.0	16.0	17.0
3	---	10.0	7.0	.0	7.0	9.0	8.0	11.0	13.0	14.0	16.0	17.0
4	18.0	11.0	8.0	2.0	---	9.0	7.0	11.0	14.0	15.0	17.0	16.0
5	13.0	10.0	7.0	2.0	---	8.0	7.0	10.0	14.0	15.0	16.0	---
6	14.0	10.0	7.0	3.0	6.0	8.0	7.0	11.0	13.0	15.0	17.0	16.0
7	13.0	11.0	7.0	4.0	7.0	10.0	7.0	---	13.0	15.0	17.0	16.0
8	14.0	10.0	6.0	4.0	7.0	9.0	7.0	---	14.0	15.0	16.0	17.0
9	15.0	9.0	6.0	3.0	7.0	9.0	---	---	14.0	15.0	17.0	16.0
10	15.0	9.0	6.0	4.0	8.0	9.0	8.0	11.0	14.0	15.0	17.0	16.0
11	---	9.0	7.0	4.0	7.0	9.0	9.0	11.0	13.0	16.0	16.0	17.0
12	---	10.0	---	4.0	8.0	10.0	9.0	11.0	14.0	15.0	17.0	16.0
13	---	---	7.0	6.0	7.0	9.0	9.0	12.0	13.0	15.0	16.0	16.0
14	---	9.0	6.0	5.0	7.0	10.0	9.0	12.0	14.0	15.0	17.0	---
15	13.0	9.0	7.0	5.0	8.0	8.0	9.0	12.0	---	16.0	23.5	16.0
16	13.0	8.0	6.0	6.0	8.0	8.0	9.0	11.0	---	16.0	---	16.0
17	14.0	8.0	6.0	6.0	---	8.0	10.0	11.0	---	16.0	17.0	15.0
18	14.0	8.0	7.0	5.0	---	7.0	10.0	12.0	---	16.0	---	16.0
19	13.0	9.0	8.0	---	---	7.0	10.0	12.0	---	16.0	---	16.0
20	13.0	---	6.0	---	---	7.0	10.0	11.0	14.0	17.0	17.0	15.0
21	12.0	8.0	7.0	---	8.0	8.0	10.0	12.0	15.0	17.0	---	14.0
22	13.0	9.0	6.0	---	---	8.0	10.0	12.0	15.0	16.0	17.0	14.0
23	13.0	8.0	8.0	6.0	---	7.0	9.0	11.0	14.0	17.0	16.0	14.0
24	13.0	---	6.0	5.0	---	7.0	---	12.0	14.0	17.0	16.0	---
25	15.0	---	7.0	5.0	---	7.0	10.0	---	15.0	16.0	---	---
26	12.0	---	6.0	6.0	9.0	9.0	10.0	---	15.0	16.0	17.0	---
27	11.0	---	6.0	6.0	7.0	8.0	10.0	---	14.0	16.0	17.0	---
28	12.0	---	6.0	7.0	9.0	9.0	9.0	11.0	15.0	16.0	16.0	13.0
29	11.0	8.0	1.0	6.0	---	9.0	10.0	12.0	15.0	17.0	17.0	14.0
30	12.0	7.0	---	7.0	---	9.0	10.0	11.0	15.0	16.0	16.0	13.0
31	11.0	---	---	7.0	---	9.0	---	12.0	---	16.0	17.0	---
MEAN	13.5	9.0	6.5	4.5	7.5	8.5	9.0	11.5	14.0	15.5	17.0	15.5
WTR YR 1983	MEAN	11.0	MAX	23.5	MIN	.0						

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	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)
1	206	651	184	294	234	568	500	1060	220	502	365	1470
2	109	341	250	302	299	848	520	828	403	885	206	773
3	305	810	226	330	288	840	304	484	273	549	422	1570
4	501	1290	157	245	311	756	664	1140	350	760	338	1470
5	463	1350	165	227	983	2170	569	1040	450	1030	307	1390
6	545	1310	259	390	339	682	509	983	522	1340	317	1360
7	393	692	644	1190	233	449	442	964	473	1240	297	1360
8	318	527	183	370	201	419	261	612	791	2020	323	1470
9	72	171	525	1640	249	566	406	859	878	2150	345	1220
10	294	662	270	940	377	956	722	1580	746	1880	272	830
11	100	211	1000	3970	381	1030	376	864	918	2210	188	640
12	90	175	1120	5440	442	1110	559	1280	139	319	296	1200
13	80	153	770	3330	502	1380	558	1260	134	298	247	1050
14	75	139	421	1650	458	1380	503	1110	86	176	315	1280
15	75	157	367	1340	415	1250	227	504	68	139	211	820
16	80	165	528	1750	247	727	250	562	215	496	623	3550
17	94	168	377	1220	362	1060	374	836	215	531	788	5640
18	85	129	428	1350	285	823	418	978	220	582	646	4850
19	105	138	213	604	296	815	420	929	220	572	316	1830
20	287	387	275	950	160	343	425	971	220	568	351	1680
21	273	355	337	1230	237	480	430	1020	222	597	305	1450
22	79	105	342	1130	499	1240	435	1020	250	675	238	1050
23	99	116	317	959	304	786	440	1060	270	744	215	859
24	71	65	320	942	1390	4130	406	971	280	794	183	721
25	203	208	340	982	509	1980	685	1570	300	923	260	927
26	670	640	345	1010	473	2010	365	809	307	1080	169	589
27	224	166	355	968	459	1910	307	700	290	1070	174	625
28	187	137	370	960	472	1910	426	1040	307	1200	253	861
29	1510	1670	374	974	336	1050	465	1140	---	---	191	609
30	657	1070	304	753	400	875	855	1860	---	---	210	646
31	305	613	---	---	450	904	321	757	---	---	227	619
TOTAL	---	14771	---	37440	---	35447	---	30791	---	25330	---	44409

[illegible]

## RIO GRANDE BASIN

08330600 TIJERAS ARROYO NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'04", long 106°39'18", in SW¼SW¼ sec.17, T.9 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on right bank 875 ft downstream from highway bridge on Broadway Boulevard SE, 1,760 ft upstream from South Diversion Channel, 0.5 mi downstream from highway bridge on Interstate Highway 25, and 3 mi south of Albuquerque.

DRAINAGE AREA.--133 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1951 to September 1968, (annual maximum only), August 1974 to current year (no winter records).

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 4,961 ft, 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 June 24, 1967, (gage height not determined); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 340 ft<sup>3</sup>/s at 1430 hours July 29, gage height, 1.50 ft; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00				---	.00	.00	.00	.00	.00	.00
2	.00	.00				---	.00	.00	.00	.00	.00	.00
3	.00	.00				.00	.00	.00	.00	.00	.00	.00
4	.00	.00				.00	.00	.00	.00	.00	.00	.00
5	.00	.00				.00	.00	.00	.00	.00	.00	.00
6	.00	.00				.00	.00	.00	.00	.00	.00	.00
7	.00	.00				.00	.00	.00	.00	.00	.00	.00
8	.00	.00				.00	.00	.00	.00	.00	.00	.00
9	.00	.00				.00	.00	.00	.00	.00	.00	.00
10	.00	.00				.00	.00	.00	.00	.00	.00	.00
11	.00	.00				.00	.00	.00	.00	1.0	.00	.00
12	.00	.00				.00	6.1	.00	.00	.00	.00	.00
13	.00	.00				.00	.00	.00	.00	.00	.00	.00
14	.00	.00				.00	.00	.00	.00	.00	.00	12
15	.00	.00				.00	.00	.00	.00	.00	.00	6.6
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	.00
19	.00	.00				6.3	.00	.00	.00	.00	.00	.00
20	.00	.00				1.5	.00	5.8	.00	.00	.00	.00
21	.00	.00				.00	.00	.00	.00	.00	.00	.00
22	.00	.00				.00	.00	.00	.00	.00	.00	.00
23	.00	.00				1.9	.00	.00	.00	.00	.00	.00
24	.00	.00				.00	.00	.00	11	.00	.00	.00
25	.00	.00				.00	.00	.00	2.9	6.7	.00	.00
26	.00	.00				.00	.00	.00	.00	.00	.00	.00
27	1.6	.00				.00	.00	.00	.00	.00	5.6	3.3
28	.00	.00				.00	.00	.00	.00	.00	.00	.00
29	.00	.00				.00	.00	.00	.00	14	.00	.00
30	.00	---				.00	.00	.00	.00	.00	6.8	.00
31	.00	---				.00	---	.00	---	.00	.00	---
TOTAL	1.60	---				---	6.10	5.80	13.90	21.70	12.40	21.90
MEAN	.052	---				---	.20	.19	.46	.70	.40	.73
MAX	1.6	---				---	6.1	5.8	11	14	6.8	12
MIN	.00	---				---	.00	.00	.00	.00	.00	.00
AC-FT	3.2	---				---	12	12	28	43	25	43



## 08330800 TIJERAS ARROYO BELOW SOUTH DIVERSION CHANNEL INLET NEAR ALBUQUERQUE, NM

LOCATION.--Lat 35°00'09", long 106°39'41", in SW¼SE¼ sec.18, T.9 N., R.3 E., Bernalillo County, Hydrologic Unit 13020203, on left bank 260 ft upstream from highway bridge on State Highway 47, 500 ft downstream from South Diversion Channel inlet, 1.0 mi downstream from highway bridge on Interstate Highway 27 and 2.5 mi south of Albuquerque.

PERIOD OF RECORD.--July 1974 to current year (no winter records).

GAGE.--Water-stage recorder and concrete lined channel. Altitude of gage is 4,933 ft, 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 upstream from the Rio Grande.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft<sup>3</sup>/s Aug. 19, 1976, gage height, (not determined); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 340 ft<sup>3</sup>/s at 1500 hours July 29, gage height, 1.50 ft; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00				----	.00	.00	.00	.00	.00	.00
2	.00	.00				----	.00	.00	.00	.00	.00	.00
3	.00	.00				----	.00	.00	.00	.00	.00	.00
4	.00	.00				----	.00	.00	.00	.00	.00	.00
5	.00	.00				----	.00	.00	.00	.00	.00	.00
6	.00	.00				----	.00	.00	.00	.00	.00	.00
7	.00	.00				----	.00	.00	.00	.00	.00	.00
8	.00	.00				----	.00	.00	.00	.00	.00	.00
9	.00	.00				----	.00	.00	.00	.00	.00	.00
10	.00	.00				----	.00	.00	.00	.00	.00	.00
11	.00	.00				----	.00	.00	.00	1.0	.00	.00
12	.00	.00				----	10	.00	.00	.00	.00	.00
13	.00	.00				----	.00	.00	.00	.00	.00	7.3
14	.00	.00				1.5	.00	.00	.00	.00	.00	22
15	.00	.00				2.7	.00	.00	.00	.00	.00	13
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	.00
19	.00	.00				4.4	.00	.00	.00	.00	.00	.00
20	.00	.00				2.9	.00	8.0	.00	.00	.00	.00
21	.00	.00				.00	.00	.00	.00	.00	.00	.00
22	.00	.00				2.0	.00	.00	.00	.00	.00	.00
23	.00	.00				3.0	.00	.00	.00	.00	1.7	.00
24	.00	.00				.00	.00	.00	12	.00	2.0	.00
25	.00	.00				.00	.00	.00	7.0	6.2	.00	.00
26	.00	.00				.00	.00	.00	.00	.00	.00	.00
27	5.0	.00				.00	.00	.00	.00	.00	2.8	5.0
28	2.0	.00				.00	.00	1.5	.00	.00	.00	.00
29	.00	.00				.00	.00	2.7	.00	14	1.1	.00
30	.00	.00				.00	.00	.00	.00	.00	6.2	.00
31	.00	---				.00	---	.00	---	1.8	.00	---
TOTAL	7.00	.00				----	10.00	12.20	19.00	23.00	13.80	47.30
MEAN	.23	.000				----	.33	.39	.63	.74	.45	1.58
MAX	5.0	.00				----	10	8.0	12	14	6.2	22
MIN	.00	.00				----	.00	.00	.00	.00	.00	.00
AC-FT	14	.00				----	20	24	38	46	27	94

RIO GRANDE BASIN  
08331000 RIO GRANDE AT ISLETA, NM  
(Surveillance station)  
WATER-QUALITY RECORDS

LOCATION.--Lat 34°54'21", long 106°41'04", in NE¼NE¼SW¼ sec.24, T. 08 N., R. 02 E., Valencia County, Hydrologic Unit 13020203, 50 feet (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 1982 TO SEPTEMBER 1983

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 08...	1030	906	400	415	7.7	7.5	17.5	11.0	8.0	20	140	15
JAN 03...	1330	677	455	--	7.8	--	5.0	4.0	10.3	10	--	--
MAR 01...	1430	1400	360	380	7.9	8.1	17.0	12.0	8.3	30	130	4
MAY 02...	1500	5200	335	333	7.9	7.7	14.0	13.0	8.3	29	120	17
JUL 12...	0915	2380	260	272	8.1	8.0	18.5	20.0	6.5	21	93	12
SEP 12...	1030	595	420	--	8.0	--	23.0	22.0	5.4	38	--	--

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 08...	15	44	6.7	28	1.1	3.9	--	--	--	123	67	13
JAN 03...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 01...	4	40	6.6	27	1.1	3.2	150	.0	--	116	53	14
MAY 02...	17	36	6.1	20	.8	3.0	120	.0	100	89	56	13
JUL 12...	12	29	5.1	16	.8	2.7	100	.0	82	84	42	5.4
SEP 12...	--	--	--	--	--	--	180	.0	150	--	--	--

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, 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)
NOV 08...	.40	24	262	.40	.35	.810	1.2	2.4	.500	.400	4.3
JAN 03...	--	--	--	.20	.20	1.20	1.1	2.5	.530	.430	3.3
MAR 01...	.40	23	242	.40	.38	.370	1.0	1.8	.350	.190	3.5
MAY 02...	.30	18	212	.20	.19	.280	.92	1.4	.390	.100	9.6
JUL 12...	.30	17	167	.20	.21	.230	.77	1.2	.190	.150	4.8
SEP 12...	--	--	--	.50	.48	1.60	1.5	3.6	1.10	.750	7.6

RIO GRANDE BASIN  
08331000 RIO GRANDE AT ISLETA, NM -- Continued  
(Surveillance station)  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 08...	1030	4	4	0	< 1	< 1	< 10	< 10	0	3
MAR 01...	1430	--	--	0	--	--	--	--	--	--
MAY 02...	1500	--	--	0	--	--	--	--	--	--
JUL 12...	0915	2	2	0	< 1	< 1	< 10	< 10	30	4

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL SOLVED (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 08...	0	0	2	.0	.0	< 1	< 1	30	0
MAR 01...	0	--	--	--	--	--	--	--	--
MAY 02...	20	--	--	--	--	--	--	--	--
JUL 12...	10	0	1	.0	.0	< 1	< 1	40	0

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01029)
NOV 08...	1030	< 2.0	2.2	160	1	0	0

DATE	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS SR) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
NOV 08...	< 10	0	550	< 10	50	.00	0

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90) (80060)	RADIUM 226, DIS- SOLVED (PCI/L METHOD (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 08...	1030	< 6.2	3.1	2.1	4.8	3.1	4.6	3.0	.10	2.3

RIO GRANDE BASIN  
08331000 RIO GRANDE AT ISLETA, NM -- Continued  
(Surveillance station)  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)
MAR 01...	1430	--	--	--	--	--	--	--	--	--
SEP 12...	1030	<.10	<.01	<.10	<.01	<.01	<.01	.09	<.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)	MIREX, TOTAL (UG/L) (39755)
MAR 01...	--	--	--	--	--	--	--	--	--	--
SEP 12...	<.01	<.01	<.01	<.01	.01	.03	<.01	<.01	<.01	<.01

DATE	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
MAR 01...	--	--	--	--	--	.02	<.01	<.01	<.01
SEP 12...	<.10	<.01	<.10	<1	<.01	--	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 08...	K50	300
JAN 03...	K0	K20
MAR 01...	K3	1700
MAY 02...	K80	490
JUL 12...	120	360
SEP 12...	190	1600

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 08...	1030	906	11.0	258	631	30
JAN 03...	1330	677	4.0	206	377	21
MAR 01...	1430	1400	12.0	540	2040	32
MAY 02...	1500	5200	13.0	1110	15600	40
JUL 12...	0915	2380	20.0	405	2600	27
SEP 12...	1030	595	22.0	158	254	98

## 08331990 RIO GRANDE CONVEYANCE CHANNEL NEAR BERNARDO, NM

LOCATION.--Lat 34°24'52", long 106°48'11", Socorro County, Hydrologic Unit 13020203, in Sevilleta or Belen Grant, 0.2 mi south of U.S. Highway 60, 1.8 mi east of Bernardo, about 3 mi upstream from floodway, and 4 mi upstream from Rio Puerco.

PERIOD OF RECORD.--June 1936 to September 1937, October 1964 to current year. July 1943 to September 1964, included in composite flow of "Rio Grande near Bernardo". October 1960 to September 1964, monthly acre-feet published in WSP 1923 (daily records available in district files). Beginning October 1952, flow in conveyance channel represents controlled diversion from Rio Grande. Prior to October 1952, records called "San Francisco Riverside drain near Bernardo", are not equivalent.

GAGE.--Water-stage recorder with concrete control. Datum of gage is 4,720.00 ft National Geodetic Vertical Datum of 1929. Prior to October 1964, 0.2 mi 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. For combined monthly flow in acre-ft of this channel, floodway, Bernardo interior drain and Lower San Juan Riverside drain, see tabulation below daily table for station 08332010. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,220 ft<sup>3</sup>/s-Apr. 22, 1958; no flow many days most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	3.7	6.5	9.0	5.8	6.3	4.3	5.4	13	11	5.9	3.5
2	4.7	3.3	6.1	9.8	5.1	7.1	3.8	5.2	12	12	5.9	3.6
3	4.7	3.4	5.8	9.3	5.7	7.2	4.3	6.0	11	9.7	7.1	4.3
4	4.0	3.4	6.4	9.0	6.1	7.1	4.3	7.3	9.3	11	11	3.5
5	3.7	3.4	5.9	8.5	5.9	6.9	4.3	7.0	11	8.0	7.0	2.9
6	3.4	3.8	5.5	9.0	5.7	6.7	4.5	6.6	10	9.3	5.7	2.9
7	3.3	3.7	5.4	6.4	5.7	6.7	4.5	6.5	11	6.9	5.6	2.5
8	3.4	3.8	5.7	2.6	6.3	6.6	4.6	5.4	12	6.1	5.5	2.3
9	4.7	3.7	6.4	3.1	6.3	6.5	4.5	4.4	14	6.2	4.8	1.9
10	4.7	3.8	7.3	2.8	6.0	6.5	4.0	4.2	13	5.6	4.7	2.6
11	4.2	3.9	8.8	2.7	5.8	14	4.2	3.9	12	5.6	4.5	2.8
12	4.0	4.2	8.0	5.7	6.1	29	4.1	4.0	12	8.2	4.4	2.8
13	4.0	5.3	7.6	4.0	6.2	29	4.0	3.7	12	6.6	5.0	2.8
14	4.3	6.3	6.9	3.6	6.2	30	3.7	3.8	13	5.3	4.4	2.8
15	4.6	5.4	8.1	3.6	4.9	24	3.9	4.1	12	4.9	4.5	2.8
16	4.5	6.0	8.3	3.2	4.9	7.9	3.7	4.0	12	5.2	4.2	2.8
17	3.8	6.0	8.6	3.7	4.8	7.9	3.5	3.8	8.8	5.2	4.2	2.8
18	3.6	5.9	8.6	4.0	4.8	8.6	3.4	5.1	8.1	5.3	3.9	2.8
19	3.4	5.3	9.0	3.5	5.4	8.2	4.0	4.6	7.5	5.5	3.2	2.8
20	3.4	5.4	9.4	4.3	5.3	6.6	5.0	4.0	7.5	4.3	3.6	2.8
21	3.8	5.2	8.8	4.1	5.3	6.8	3.8	4.3	7.2	3.9	3.2	2.8
22	3.4	6.0	9.2	4.4	5.3	7.0	3.6	3.9	11	3.7	2.9	2.8
23	3.4	6.6	9.2	4.4	5.3	6.1	4.1	3.7	12	3.4	4.8	2.8
24	3.3	6.0	9.4	4.1	5.7	5.4	5.8	4.1	13	3.4	3.7	2.8
25	3.0	5.3	8.1	4.1	5.8	5.2	6.6	4.2	12	3.2	2.9	2.8
26	3.6	5.2	9.9	4.5	5.8	5.2	6.6	4.4	12	4.4	3.8	2.8
27	3.2	5.9	11	4.5	5.8	5.3	6.4	4.6	11	7.4	5.1	2.8
28	3.1	5.9	11	4.5	5.7	5.3	6.5	4.8	11	6.3	3.3	2.8
29	3.2	5.8	12	4.3	---	4.8	6.5	4.7	10	5.9	3.2	2.8
30	3.2	5.9	12	5.1	---	4.6	5.9	5.6	9.7	6.5	3.5	2.8
31	3.4	---	11	6.5	---	4.7	---	15	---	6.5	3.6	---
TOTAL	117.7	147.5	255.9	158.3	157.7	293.2	138.4	158.3	330.1	196.5	145.1	86.0
MEAN	3.80	4.92	8.25	5.11	5.63	9.46	4.61	5.11	11.0	6.34	4.68	2.87
MAX	4.7	6.6	12	9.8	6.3	30	6.6	15	14	12	11	4.3
MIN	3.0	3.3	5.4	2.6	4.8	4.6	3.4	3.7	7.2	3.2	2.9	1.9
AC-FT	233	293	508	314	313	582	275	314	655	390	288	171

CAL YR 1982 TOTAL 1982.68 MEAN 5.43 MAX 23 MIN .54 AC-FT 3930  
WTR YR 1983 TOTAL 2184.70 MEAN 5.99 MAX 30 MIN 1.9 AC-FT 4330

## RIO GRANDE BASIN

## 08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM

LOCATION.--Lat 34°25'01", long 106°48'00", Socorro County, Hydrologic Unit 13020203, in Belen or Sevilleta Grant, on downstream side of bridge on U.S. Highway 60, 5 mi downstream from heading of conveyance channel, 2 mi east of Bernardo, and at mile 1,487.2.

DRAINAGE AREA.--19,230 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1936 to January 1939, October 1941 to current year. Monthly discharge only October 1942 to June 1943 published in WSP 1312, and October 1960 to September 1964, published in WSP 1923 (daily records available in district files). Published as "Rio Grande near Bernardo" prior to October 1964. Prior to October 1952, flow of Bernardo interior drain was included only when it carried river overflow, the entire flow has been included from October 1952 to September 1964. Flow in the conveyance channel, formerly San Francisco Riverside drain, has been included in record prior to October 1964.

GAGE.--Water-stage recorder. Datum of gage is 4,722.55 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor. Since November 1973 flow completely regulated by Cochiti Dam (station 08317300) 100 mi upstream. Floodway is 1 of 4 channels (stations 08331990, 08332030, and 08332050) carrying flow in valley cross section. For combined monthly flow in acre-ft of floodway, conveyance channel, Bernardo interior drain and Lower San Juan Riverside drain see tabulation below. Diversions for irrigation of about 740,000 acres above station.

AVERAGE DISCHARGE.--19 years (water years 1937-38, 1942-58), 1,125 ft<sup>3</sup>/s, 815,100 acre-ft/yr. Includes flow of floodway, conveyance channel, and Bernardo interior drain.  
15 years (water years 1959-73) 898 ft<sup>3</sup>/s, 605,600 acre-ft/yr, includes flow of floodway, conveyance channel, Bernardo interior drain, and lower San Juan Riverside drain prior to closure of Cochiti Dam.  
10 years (water years 1974-83) 1,198 ft<sup>3</sup>/s, 868,000 acre-ft/yr, includes flow of floodway, conveyance channel, Bernardo interior drain, and lower San Juan Riverside drain since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD (1936-39 AND SINCE 1941).--Maximum discharge, 21,000 ft<sup>3</sup>/s Apr. 25, 1942, gage height, 6.90 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 8,290 ft<sup>3</sup>/s June 11; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2130	1040	1030	598	1050	1440	880	5250	6850	4280	895	50
2	2160	983	946	722	1070	1420	983	5100	5620	4560	742	74
3	2180	678	1060	668	997	1250	1130	4790	6320	5370	578	45
4	2180	689	1170	560	956	1130	1410	4660	6070	5300	741	18
5	2200	768	936	607	956	1320	1760	4510	5520	4350	1670	7.2
6	1540	768	790	711	970	1420	1520	4620	5430	4010	1740	3.1
7	1060	744	733	722	1100	1370	1340	4700	6500	3250	1410	.00
8	1200	918	629	804	1160	1480	956	4880	7540	2960	562	4.0
9	1210	943	690	930	1160	1540	661	4610	7340	3130	423	63
10	1060	1200	816	956	1080	1220	707	4830	7350	2730	248	52
11	913	1250	918	816	1120	892	947	4920	8290	2640	191	42
12	699	1460	1010	854	1110	892	911	5010	7840	2240	167	42
13	516	1780	828	892	1060	1190	664	4910	7160	2230	160	52
14	542	1520	867	892	1030	1350	588	5310	6250	2150	164	63
15	525	1420	1040	867	957	1350	621	5390	5560	1690	144	63
16	534	1340	1080	841	889	1280	709	5600	5720	1650	94	137
17	647	1280	1040	816	929	1660	723	5840	5180	1940	64	137
18	579	1270	983	854	1010	2160	752	6000	4820	1800	91	77
19	542	1210	997	983	1060	2320	562	4990	4870	1860	70	63
20	316	1060	943	970	1030	1780	576	4270	4920	1450	46	52
21	291	1240	689	1040	937	1520	820	3600	4350	1190	27	27
22	297	1370	500	943	993	1420	1310	3970	4320	544	15	17
23	251	1220	711	997	985	1250	2390	4200	4220	358	12	11
24	226	1090	792	1020	1030	1160	3190	3960	3840	275	11	12
25	177	1040	854	1020	1030	1220	3400	3640	4030	310	9.0	16
26	152	1020	1170	1020	1160	1170	3390	3640	3760	259	7.9	16
27	279	1020	1240	1050	1300	1110	4050	4110	3500	290	6.6	13
28	262	1060	1200	1080	1380	1220	4820	5080	3620	271	17	6.4
29	212	1030	1250	1020	---	1170	4750	5030	4000	290	48	15
30	257	1020	867	956	---	970	4920	5360	4120	985	40	14
31	387	---	607	983	---	828	---	5590	---	1040	25	---
TOTAL	25524	33431	28386	27192	29509	41502	51440	148370	164910	65402	10418.5	1191.70
MEAN	823	1114	916	877	1054	1339	1715	4786	5497	2110	336	39.7
MAX	2200	1780	1250	1080	1380	2320	4920	6000	8290	5370	1740	137
MIN	152	678	500	560	889	828	562	3600	3500	259	6.6	.00
AC-FT	50630	66310	56300	53940	58530	82320	102000	294300	327100	129700	20670	2360
(†)	68450	72680	62660	59820	64320	94490	114200	312800	344800	146400	37510	17250

CAL YR 1982 TOTAL 466509.00 MEAN 1278 MAX 5250 MIN .00 AC-FT 925300 (†) MEAN 1425 AC-FT 1032000  
WTR YR 1983 TOTAL 627276.20 MEAN 1719 MAX 8290 MIN .00 AC-FT 1244000 (†) MEAN 1927 AC-FT 1395000

(†) 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

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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 1983): 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, 1979 and 1983.

SEDIMENT CONCENTRATIONS (Water Years 1975-1983): Maximum daily, 21,400 mg/l Aug. 11, 1979; minimum daily, no flow on many days of most years.

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, 771 micromhos Sept. 22; minimum daily, 250 micromhos July 5.

WATER TEMPERATURES: Maximum, 32.0°C Aug. 21; minimum, 0.0°C, Jan. 2.

SEDIMENT CONCENTRATIONS: Maximum daily, 4,200 mg/l Aug. 5; minimum daily, 23 mg/l Aug. 27.

SEDIMENT LOADS: Maximum daily, 18,900 tons (17,100 tonnes) Aug. 5; minimum daily, 0 tons (0 tonnes) on Sept. 7.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH (MG/L) (00340)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)
NOV 05...	1100	793	520	533	8.1	7.9	10.0	9.0	--	25	170	19
MAR 01...	1100	1400	420	441	8.1	8.1	16.0	11.0	--	--	140	0
MAY 06...	1130	5430	320	322	8.0	8.1	21.5	14.5	--	--	120	19
JUL 05...	1030	4420	250	281	8.1	8.2	26.0	19.0	7.2	180	98	15

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 05...	19	53	8.3	42	1.5	4.5	--	--	--	148	95	21
MAR 01...	0	43	6.9	33	1.3	3.5	170	.0	--	127	67	17
MAY 06...	19	37	6.1	20	.8	2.9	120	.0	100	91	55	8.7
JUL 05...	15	31	5.1	16	.7	2.7	100	1.0	80	87	40	6.1

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 05...	.50	26	340	.70	.68	.190	1.3	2.2	.510	.350	5.2
MAR 01...	.50	23	278	--	--	--	--	--	--	--	--
MAY 06...	.30	18	207	--	--	--	--	--	--	--	--
JUL 05...	.30	17	170	.30	.27	.140	.96	1.4	.170	.120	5.5

RIO GRANDE BASIN  
08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ARSENIC	ARSENIC	BORON,	CADMIUM	CADMIUM	CHRO-	CHRO-	COPPER,	COPPER,
		TOTAL	DIS-	DIS-	TOTAL	DIS-	TOTAL	MIUM,	TOTAL	DIS-
		(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
		AS AS)	AS AS)	AS B)	AS CD)	AS CD)	AS CR)	AS CR)	AS CU)	AS CU)
		(01002)	(01000)	(01020)	(01027)	(01025)	(01034)	(01030)	(01042)	(01040)
NOV										
05...	1100	6	5	110	<1	<1	10	<10	0	1
MAR										
01...	1100	--	--	0	--	--	--	--	--	--
MAY										
06...	1130	--	--	0	--	--	--	--	--	--
JUL										
05...	1030	--	--	0	--	--	--	--	--	--

DATE	TIME	IRON,	LEAD,	LEAD,	MERCURY	MERCURY	SELE-	SELE-	ZINC,	ZINC,
		DIS-	TOTAL	DIS-	TOTAL	DIS-	NIUM,	NIUM,	TOTAL	DIS-
		SOLVED	RECOV-	SOLVED	RECOV-	SOLVED	TOTAL	SOLVED	RECOV-	SOLVED
		(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
		AS FE)	AS PB)	AS PB)	AS HG)	AS HG)	AS SE)	AS SE)	AS ZN)	AS ZN)
		(01046)	(01051)	(01049)	(71900)	(71890)	(01147)	(01145)	(01092)	(01090)

NOV										
05...	10	0	1	.0	.0	<1	<1	30	0	
MAR										
01...	0	--	--	--	--	--	--	--	--	--
MAY										
06...	30	--	--	--	--	--	--	--	--	--
JUL										
05...	10	--	--	--	--	--	--	--	--	--

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	2,4-D,	2, 4-DP	2,4,5-T	SILVEX,
		TOTAL	TOTAL	TOTAL	TOTAL
		(UG/L)	(UG/L)	(UG/L)	(UG/L)
		(39730)	(82183)	(39740)	(39760)
MAR					
01...	1100	.01	<.01	<.01	<.01

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-	TEMPER-	SEDI-	SEDI-	SED.	SED.	SED.	SED.
		FLOW,	ATURE	MENT,	DIS-	SUSP.	SUSP.	SUSP.	SUSP.
		INSTAN-	(DEG C)	SUS-	CHARGE,	FALL	FALL	FALL	FALL
		TANEOUS		PENDE	SUS-	DIAM.	DIAM.	DIAM.	DIAM.
		(CFS)		D	PENDE	% FINER	% FINER	% FINER	% FINER
		(00061)	(00010)	(80154)	(80155)	.002 MM	.004 MM	.016 MM	.062 MM
		(00061)	(00010)	(80154)	(80155)	(70337)	(70338)	(70340)	(70342)
OCT									
08...	1100	1200	14.0	471	1530	34	41	63	--
NOV									
05...	1100	793	9.0	419	897	14	18	28	42
19...	1030	1230	10.0	552	1830	14	21	30	54
DEC									
17...	1115	1020	4.0	666	1830	--	--	--	33
JAN									
05...	1400	609	5.0	331	544	--	--	--	40
FEB									
11...	1800	1120	9.0	300	907	--	--	--	--
14...	1045	1030	6.5	304	845	--	--	--	51
23...	1730	985	10.0	577	1530	--	--	--	--
MAR									
01...	1100	1400	11.0	886	3350	--	--	--	45
18...	1015	2210	10.5	1010	6030	--	--	--	80
APR									
08...	1115	952	9.0	472	1210	--	--	--	45
29...	1730	4750	19.0	865	11100	--	--	--	--
MAY									
06...	1130	5430	14.5	1520	22300	7	10	12	38
19...	1300	4890	15.0	577	7620	--	--	--	67
JUN									
03...	1515	6200	17.0	491	8220	--	--	--	71
16...	1430	5600	19.0	311	4700	--	--	--	--
JUL									
05...	1030	4420	19.0	1180	14100	--	--	--	24
21...	1100	1140	24.5	666	2050	--	--	--	73
AUG									
18...	1115	121	24.5	133	43	--	--	--	--
SEP									
09...	1800	63	29.0	2100	357	52	69	97	--
17...	0900	137	18.0	2200	814	65	84	97	--
22...	1230	18	22.0	67	3.3	--	--	--	--



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 1982 TO SEPTEMBER 1983

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. 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)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70334)
OCT								
08...	--	--	--	--	93	97	98	100
NOV								
05...	52	88	100	--	--	--	--	--
19...	66	97	100	--	--	--	--	--
DEC								
17...	49	94	100	--	--	--	--	--
JAN								
05...	55	95	100	--	--	--	--	--
FEB								
11...	--	--	--	--	96	--	--	--
14...	69	100	--	--	--	--	--	--
23...	--	--	--	--	100	--	--	--
MAR								
01...	61	93	100	--	--	--	--	--
18...	88	98	100	--	--	--	--	--
APR								
08...	72	98	100	--	--	--	--	--
29...	--	--	--	--	97	--	--	--
MAY								
06...	58	95	99	100	--	--	--	--
19...	83	97	98	100	--	--	--	--
JUN								
03...	89	99	100	--	--	--	--	--
16...	--	--	--	--	81	95	100	--
JUL								
05...	41	90	100	--	--	--	--	--
21...	84	99	100	--	--	--	--	--
AUG								
18...	--	--	--	--	35	43	80	100
SEP								
09...	--	--	--	--	100	--	--	--
17...	--	--	--	--	100	--	--	--
22...	--	--	--	--	94	95	98	100

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (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							
08...	1100	1200	471	1530	0	2	34
NOV							
05...	1100	793	419	897	0	0	48
19...	1030	1230	552	1830	0	1	65
DEC							
17...	1115	1020	666	1830	0	1	54
JAN							
05...	1400	609	331	544	1	3	56
FEB							
14...	1045	1030	304	845	0	3	82
MAR							
01...	1100	1400	886	3350	1	2	52
18...	1015	2210	1010	6030	1	5	63
APR							
08...	1115	952	472	1210	1	5	66
MAY							
06...	1130	5430	1520	22300	1	2	56
19...	1300	4890	577	7620	1	4	62
JUN							
03...	1515	6200	491	8220	0	2	71
16...	1430	5600	311	4700	1	14	63
JUL							
05...	1030	4420	1180	14100	1	2	58
21...	1100	1140	666	2050	4	19	93
AUG							
18...	1115	121	133	43	2	12	83
SEP							
22...	1230	18	67	3.3	0	1	64

RIO GRANDE BASIN  
08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT							
08...	88	--	--	97	98	99	100
NOV							
05...	97	100	--	--	--	--	--
19...	96	100	--	--	--	--	--
DEC							
17...	98	100	--	--	--	--	--
JAN							
05...	97	100	--	--	--	--	--
FEB							
14...	98	100	--	--	--	--	--
MAR							
01...	96	100	--	--	--	--	--
18...	99	100	--	--	--	--	--
APR							
08...	98	100	--	--	--	--	--
MAY							
06...	96	100	--	--	--	--	--
19...	92	96	100	--	--	--	--
JUN							
03...	97	100	--	--	--	--	--
16...	93	98	100	--	--	--	--
JUL							
05...	92	100	--	--	--	--	--
21...	100	--	--	--	--	--	--
AUG							
18...	99	100	--	--	--	--	--
SEP							
22...	97	100	--	--	--	--	--

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SEDI- MENT, DISCH, SUSP. + BED MA- TERIAL (T/DAY) (80156)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (FPS) (00055)
OCT									
08...	1100	1200	14.0	471	1530	2030	240	2.1	2.40
NOV									
19...	1030	1230	10.0	552	1830	2230	270	2.6	1.70
DEC									
17...	1115	1020	4.0	666	1830	2890	300	1.6	2.10
FEB									
14...	1045	1030	6.5	304	845	1890	360	1.4	2.10
MAR									
01...	1100	1400	11.0	886	3350	4940	500	1.4	2.00
18...	1015	2210	10.5	1010	6030	9010	514	1.6	2.70
APR									
08...	1115	952	9.0	472	1210	1840	370	1.4	1.80
MAY									
06...	1130	5430	14.5	1520	22300	38000	500	2.3	4.70
19...	1300	4890	15.0	577	7620	16100	510	2.0	4.70
JUN									
03...	1515	6200	17.0	491	8220	18200	505	2.3	5.40
16...	1430	5600	19.0	311	4700	7900	525	2.7	4.00
JUL									
05...	1030	4420	19.0	1180	14100	22600	275	3.2	5.00
21...	1100	1140	24.5	666	2050	2460	270	1.8	2.40
SEP									
22...	1230	18	22.0	67	3.3	6.1	29.0	.52	1.20

RIO GRANDE BASIN  
08332010 RIO GRANDE FLOODWAY NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	443	564	526	546	504	478	486	406	288	297	444	598
2	442	554	536	556	511	462	497	482	280	309	432	554
3	436	557	550	565	513	511	478	437	285	308	455	584
4	435	587	535	566	509	493	462	367	279	298	454	625
5	455	595	545	567	515	508	458	366	281	287	687	---
6	395	591	544	553	566	487	499	351	277	285	716	---
7	433	604	570	553	557	496	462	352	278	284	628	---
8	423	579	569	548	548	493	462	361	278	295	504	---
9	426	563	558	536	536	479	487	338	261	289	468	623
10	441	531	540	551	572	509	497	360	286	302	493	635
11	479	528	534	555	579	534	490	361	275	292	503	653
12	502	505	518	545	616	541	485	354	281	298	534	653
13	509	494	528	543	591	529	520	355	292	336	535	636
14	517	516	532	546	554	491	548	343	286	323	562	623
15	522	498	531	548	504	496	549	332	285	315	555	627
16	501	527	540	544	528	498	524	340	285	316	556	566
17	484	535	548	522	533	496	513	328	279	314	559	573
18	505	510	531	531	513	471	512	321	274	311	587	602
19	465	509	528	531	515	472	536	326	284	325	573	627
20	491	522	525	526	518	497	546	317	285	326	590	643
21	529	513	545	557	520	497	502	335	300	350	609	631
22	534	501	572	552	497	500	502	333	323	390	581	771
23	530	517	551	543	521	516	483	337	320	414	---	708
24	542	520	540	535	510	461	457	336	301	410	---	690
25	533	524	551	532	493	451	454	342	304	420	---	690
26	549	516	511	538	482	472	442	346	314	443	---	661
27	558	518	494	544	501	464	430	342	306	421	---	664
28	614	515	487	544	481	458	415	324	299	452	---	---
29	620	526	498	512	---	463	424	323	291	441	477	709
30	673	528	548	509	---	472	411	310	302	431	595	752
31	625	---	536	513	---	471	---	293	---	428	608	---
MEAN	504	535	536	542	528	489	484	349	289	345	548	644
WTR YR 1983	MEAN	479	MAX	771	MIN	261						

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	14.0	9.0	4.0	6.0	13.0	13.0	14.0	20.0	24.0	27.0	29.0
2	19.0	9.0	9.0	.0	7.0	13.0	15.0	14.0	21.0	23.5	27.0	29.0
3	19.0	8.0	8.0	5.0	6.0	12.0	13.0	16.0	21.0	23.0	27.0	30.0
4	19.0	13.0	8.0	6.0	3.0	11.0	6.0	19.0	17.0	25.0	27.0	30.0
5	20.0	12.0	5.0	8.0	7.0	11.0	5.0	18.0	21.0	25.0	28.0	---
6	19.0	8.0	9.0	8.0	7.0	11.0	8.0	16.0	20.0	26.0	29.0	---
7	18.0	13.0	6.0	8.0	8.0	12.0	8.0	16.0	20.0	27.0	25.0	---
8	16.0	11.0	5.0	6.0	8.0	14.0	9.0	17.0	21.0	26.0	28.0	---
9	18.0	11.0	5.0	6.0	9.0	16.0	14.0	19.0	25.0	23.0	28.0	29.0
10	14.0	10.0	7.0	7.0	7.0	17.0	15.0	19.0	22.0	26.0	28.0	29.0
11	15.0	8.0	4.0	8.0	9.0	15.0	14.0	17.0	16.0	24.0	28.0	29.0
12	13.0	9.0	5.0	8.0	8.0	16.0	11.0	18.0	22.0	23.0	28.0	27.0
13	14.0	5.0	8.0	9.0	10.0	11.0	9.0	18.0	21.0	25.0	29.0	28.0
14	17.0	9.0	7.0	8.0	9.0	14.0	13.0	18.0	22.0	24.0	27.0	26.0
15	16.0	10.0	6.0	6.0	10.0	13.0	16.0	18.0	20.0	24.0	29.0	28.0
16	14.0	9.0	7.0	8.0	12.0	13.0	17.0	18.0	23.0	23.0	28.0	25.0
17	15.0	9.0	8.0	5.0	11.0	12.0	19.0	16.0	22.0	26.0	29.0	18.0
18	19.0	10.0	6.0	7.0	8.0	11.0	19.0	16.0	16.0	29.0	28.0	25.0
19	16.0	11.0	5.0	9.0	8.0	10.0	19.0	15.0	24.0	28.0	29.0	26.0
20	15.0	10.0	6.0	5.0	8.0	9.0	15.0	14.0	23.0	26.0	30.0	24.0
21	16.0	11.0	8.0	4.0	12.0	10.0	14.0	16.0	25.0	26.0	32.0	21.0
22	18.0	11.0	8.0	3.0	14.0	10.0	16.0	16.0	24.0	28.0	23.0	25.0
23	16.0	10.0	7.0	5.0	10.0	10.0	16.0	21.0	21.0	27.0	---	22.0
24	18.0	8.0	5.0	6.0	10.0	11.0	19.0	21.0	18.0	30.0	---	25.0
25	19.0	9.0	4.0	8.0	13.0	9.0	19.0	20.0	18.0	28.0	---	26.0
26	17.0	6.0	4.0	5.0	14.0	10.0	18.0	20.0	23.0	25.0	---	27.0
27	15.0	7.0	6.0	8.0	14.0	11.0	21.0	24.0	21.0	25.0	---	21.0
28	14.0	6.0	4.0	8.0	12.0	15.0	18.0	17.0	24.0	28.0	---	---
29	14.0	10.0	3.0	8.0	---	16.0	19.0	22.0	26.0	22.0	27.0	16.0
30	15.0	9.0	4.0	7.0	---	16.0	13.0	18.0	23.0	29.0	30.0	15.0
31	12.0	---	3.0	5.0	---	17.0	---	19.0	---	28.0	30.0	---
MEAN	16.5	9.5	6.0	6.5	9.5	12.5	14.5	17.5	21.5	25.5	28.0	25.0
WTR YR 1983	MEAN	16.0	MAX	32.0	MIN	.0						

DAY	MEAN CONCENTRATION (MG/L) (T/DAY)		MEAN CONCENTRATION (MG/L) (T/DAY)		MEAN CONCENTRATION (MG/L) (T/DAY)		MEAN CONCENTRATION (MG/L) (T/DAY)		MEAN CONCENTRATION (MG/L) (T/DAY)		MEAN CONCENTRATION (MG/L) (T/DAY)	
	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)
OCTOBER												
1	367	2110	253	710	171	476	166	268	151	428	860	3340
2	332	1940	295	783	171	437	160	312	193	558	638	2450
3	298	1750	366	670	221	633	171	308	179	482	350	1180
4	264	1550	162	301	199	629	145	219	232	599	318	970
5	250	1490	293	608	204	516	237	388	196	506	710	2530
6	415	1730	150	311	178	380	128	246	191	500	738	2830
7	402	1150	129	259	117	232	159	310	233	692	713	2640
8	433	1400	181	449	78	132	183	397	236	739	730	2920
9	398	1300	239	609	102	190	204	512	222	695	485	2020
10	262	750	367	1190	149	328	173	447	299	872	487	1600
11	191	471	400	1350	168	416	158	348	319	965	390	939
12	131	247	348	1370	182	496	180	415	271	812	395	951
13	96	134	544	2610	162	362	153	368	266	761	390	1250
14	132	193	557	2290	200	468	162	390	232	645	250	911
15	108	153	363	1390	225	632	153	358	192	496	343	1250
16	75	108	280	1010	232	677	135	307	211	506	298	1030
17	123	215	235	812	382	1070	171	377	221	554	455	2040
18	121	189	300	1030	200	531	195	450	223	608	890	5190
19	86	126	418	1370	167	450	171	454	213	610	825	5170
20	93	79	221	633	172	438	172	450	234	651	545	2620
21	99	78	302	1010	163	303	150	421	245	620	285	1170
22	92	74	318	1180	131	177	150	382	188	504	335	1280
23	78	53	303	998	170	326	148	398	450	1200	323	1090
24	74	45	258	759	162	346	152	419	710	1970	317	993
25	67	32	242	680	177	408	164	452	335	932	231	761
26	56	23	177	487	362	1140	133	366	460	1440	235	742
27	104	78	215	592	422	1410	154	437	1540	5410	223	668
28	81	57	212	607	295	956	158	461	1070	3990	282	929
29	75	43	181	503	291	982	141	388	---	---	250	790
30	93	65	202	556	222	520	188	485	---	---	185	485
31	105	110	---	---	195	320	141	374	---	---	290	648
TOTAL	---	17743	---	27127	---	16381	---	11907	---	28745	---	53387
APRIL												
1	300	713	835	12300	837	15500	199	2300	530	1280	230	31
2	270	717	866	13900	1130	17100	422	5200	1020	2040	322	64
3	225	686	1000	17400	710	12100</						

## 08332050 BERNARDO INTERIOR DRAIN NEAR BERNARDO, NM

LOCATION.--Lat 34°24'56", long 106°49'15", Socorro County, Hydrologic Unit 13020203, on right bank 110 ft upstream from bridge on U.S. Highway 60, and 1.0 mi east of Bernardo.

PERIOD OF RECORD.--June 1936 to May 1937, October 1943 to current year. Monthly discharge only June 1936 to May 1937, published in WSP 828. October 1943 to September 1960 included in composite records for station 08332000 "Rio Grande near Bernardo". October 1960 to September 1964 monthly acre-ft published in WSP 1923. Daily records available in district files beginning October 1943.

GAGE.--Water-stage recorder. Altitude of gage is 4,714 ft from topographic map. June 4, 1936 to May 17, 1937, nonrecording gage 300 ft downstream and Oct. 1, 1943 to Jan. 12, 1978, water-stage recorder at site 150 ft downstream at different datum.

REMARKS.--Records good. This drain is 1 of 4 channels (stations 08331990, 08332010, and 08332030) carrying flow in valley cross section. For combined monthly flow in acre-ft of this drain, conveyance channel, floodway, and Lower San Juan Riverside drain see tabulation below daily table for station 08332010. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 208 ft<sup>3</sup>/s May 5, 1983; no flow at times. Prior to 1952, drain was subject to overflow from floodway.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	50	35	35	37	37	40	62	132	139	161	133
2	120	47	34	35	37	38	40	56	131	144	147	125
3	146	45	34	35	37	38	45	53	129	138	146	122
4	136	45	35	35	38	37	52	169	125	140	147	115
5	124	44	35	34	37	37	50	208	131	128	166	82
6	135	42	34	34	37	37	50	135	138	122	165	103
7	145	41	34	34	38	40	52	130	122	118	168	102
8	163	40	34	34	38	59	56	144	120	100	146	133
9	159	40	35	35	38	54	62	130	133	118	128	160
10	172	39	36	34	37	50	61	134	143	120	155	165
11	148	39	36	34	37	50	62	141	135	126	133	160
12	140	38	36	34	37	53	70	136	138	114	140	161
13	156	38	36	35	37	55	70	136	113	126	126	170
14	145	37	35	34	37	54	77	130	124	134	142	145
15	138	36	35	34	37	61	62	128	128	126	149	163
16	126	35	36	35	37	70	56	133	118	120	127	136
17	153	34	35	36	37	68	62	126	127	135	121	128
18	144	33	35	36	37	78	54	126	126	128	136	144
19	141	33	35	36	37	86	50	140	112	120	120	144
20	136	34	35	37	37	73	60	136	108	120	107	141
21	159	34	35	38	37	76	48	118	102	108	96	125
22	126	34	34	37	37	84	61	132	100	105	81	112
23	135	33	35	37	37	76	65	136	106	98	99	107
24	174	34	35	37	37	71	64	130	102	97	136	93
25	176	34	35	36	37	80	58	121	132	104	160	110
26	177	35	36	36	37	79	54	127	161	102	152	116
27	173	35	36	36	37	79	50	125	154	101	164	104
28	148	35	36	36	37	74	49	136	146	113	171	124
29	158	35	36	36	---	62	49	147	147	106	164	123
30	77	35	35	36	---	59	55	136	143	150	149	138
31	70	---	35	37	---	55	---	140	---	174	130	---
TOTAL	4455	1134	1088	1098	1040	1870	1684	4001	3826	3774	4332	3884
MEAN	144	37.8	35.1	35.4	37.1	60.3	56.1	129	128	122	140	129
MAX	177	50	36	38	38	86	77	208	161	174	171	170
MIN	70	33	34	34	37	37	40	53	100	97	81	82
AC-FT	8840	2250	2160	2180	2060	3710	3340	7940	7590	7490	8590	7700

CAL YR 1982 TOTAL 22799 MEAN 62.5 MAX 183 MIN 21 AC-FT 45220  
WTR YR 1983 TOTAL 32186 MEAN 88.2 MAX 208 MIN 33 AC-FT 63840

## RIO GRANDE BASIN

08334000 RIO PUERCO ABOVE ARROYO CHICO, NEAR GUADALUPE, NM

LOCATION.--Lat 35°38'08", long 107°09'56", in SW¼ sec.21, T.16 N., R.3 W., Sandoval County, Hydrologic Unit 13020204, on right bank 1.6 mi upstream from Arroyo Chico, 5.5 mi northeast of village of Guadalupe, and at mile 106.8.

DRAINAGE AREA.--420 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,949 ft National Geodetic Vertical Datum of 1929. Prior to July 14, 1966 at datum 1.01 ft higher.

REMARKS.--Records poor. Diversions for irrigation of about 3,700 acres above station in past years, but present diversion negligible. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 13.1 ft<sup>3</sup>/s, 9,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,940 ft<sup>3</sup>/s July 29, 1967, gage height, 13.53 ft, from rating curve extended above 1,300 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 7.75 ft and 10.60 ft; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1943, probably exceeded 5,000 ft<sup>3</sup>/s based on records for stations above and below.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 658 ft<sup>3</sup>/s June 25, gage height, 4.18 ft, no peak above base of 1,000 ft<sup>3</sup>/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	5.0	2.0	3.0	8.4	14	37	153	29	18	.00
2	.00	.00	3.0	2.5	3.0	10	16	28	151	25	200	.00
3	.00	.00	2.0	2.0	4.0	5.0	19	26	142	21	57	.00
4	.00	.00	2.0	1.8	3.0	23	18	31	105	19	8.4	.00
5	.00	.00	3.0	1.5	5.0	12	10	37	101	16	8.2	.00
6	.00	.00	6.0	1.0	7.0	6.0	9.6	48	95	14	4.6	.00
7	.00	.00	4.0	2.0	4.6	16	12	52	88	10	10	.00
8	.00	.00	3.0	3.0	4.6	7.6	6.8	56	98	6.4	14	.00
9	.00	1.1	4.0	2.5	3.6	3.6	3.9	65	57	3.9	3.9	.00
10	.00	1.0	12	2.1	3.9	4.6	3.2	114	46	2.2	1.6	.00
11	.00	1.0	8.0	1.8	3.2	8.0	2.5	112	39	2.2	1.2	.00
12	.00	1.0	4.0	1.5	3.2	7.2	3.6	109	36	2.0	.40	4.0
13	.00	1.0	5.6	1.4	3.2	7.2	7.6	107	41	1.4	.40	.00
14	.00	2.0	3.9	1.3	4.2	8.4	6.0	101	29	1.4	76	.00
15	.00	3.0	4.0	1.2	6.0	8.8	4.2	75	52	1.2	7.3	.00
16	.00	2.0	4.0	1.1	7.6	8.8	2.5	60	66	.60	1.7	.00
17	.00	4.0	3.0	1.1	5.0	11	3.6	48	63	.80	.28	.00
18	.00	5.0	2.0	1.0	4.0	11	7.6	52	60	.60	.10	.00
19	.00	4.0	2.0	.80	4.0	8.4	14	57	63	.60	.00	.00
20	.00	3.0	1.0	.50	4.0	6.8	15	56	57	.60	.00	.00
21	.00	3.0	.60	.60	9.0	8.0	11	55	58	.40	.00	.00
22	.00	5.0	2.2	.70	10	14	11	61	60	3.3	.00	.00
23	.00	4.0	3.6	1.0	13	16	8.4	62	61	5.0	.00	.00
24	.00	3.0	3.0	1.0	38	17	9.0	72	79	4.2	.00	.00
25	.00	2.0	3.0	2.0	67	19	18	91	177	15	.00	.00
26	.00	5.0	2.0	2.0	28	21	26	133	82	17	.00	.00
27	.00	6.0	3.0	2.0	15	19	33	147	23	16	.00	.00
28	.00	3.0	2.0	3.0	4.2	18	30	154	23	2.8	.00	.00
29	.00	5.0	1.8	3.9	---	17	29	165	37	.00	.68	.00
30	.00	4.0	1.6	6.0	---	17	35	183	31	.00	.80	5.8
31	.00	---	1.3	6.4	---	13	---	177	---	.00	.00	---
TOTAL	.00	68.10	105.60	60.70	270.3	360.8	389.5	2571	2173	221.60	414.56	9.80
MEAN	.000	2.27	3.41	1.96	9.65	11.6	13.0	82.9	72.4	7.15	13.4	.33
MAX	.00	6.0	12	6.4	67	23	35	183	177	29	200	5.8
MIN	.00	.00	.60	.50	3.0	3.6	2.5	26	23	.00	.00	.00
AC-FT	.00	135	209	120	536	716	773	5100	4310	440	822	19

CAL YR 1982 TOTAL 3306.40 MEAN 9.06 MAX 410 MIN .00 AC-FT 6560  
WTR YR 1983 TOTAL 6644.96 MEAN 18.2 MAX 200 MIN .00 AC-FT 13180

NOTE: No gage-height record Nov. 11 to Dec. 12.

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

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 current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since August 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 190,000 mg/l Aug. 2, 1983; 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 tons (0 tonnes) on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 190,000 mg/l Aug. 2; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 109,000 tons (98,900 tonnes) Aug. 2; minimum daily, 0 tons (0 tonnes) on many days.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
DEC									
13...	1130	5.0	1260	.0	8940	121	74	84	89
MAR									
23...	1115	15	1350	1.0	36100	1460	36	42	56
APR									
26...	0550	17	1190	--	21400	982	33	38	53
26...	1130	20	1050	11.0	48300	2610	38	40	57
26...	1250	20	1140	11.0	45900	2480	--	--	--
26...	1550	41	1240	--	92400	10200	32	33	44
26...	2050	41	1330	--	41400	4580	--	--	--
26...	2350	26	1330	--	21500	1510	--	--	--
27...	0250	28	1310	--	63300	4790	31	35	50
27...	1150	37	1240	--	81700	8160	--	--	--
27...	1450	32	1190	--	21200	1830	--	--	--
27...	1750	40	1160	--	39800	4300	--	--	--
27...	2050	29	1170	--	19600	1530	--	--	--
MAY									
13...	1300	181	1050	14.5	59400	29000	29	32	46
19...	1400	112	1120	13.0	24000	7260	--	--	--
25...	1450	153	968	--	50800	21000	--	--	--
JUN									
02...	1340	282	1100	15.0	81000	61700	33	37	57
02...	1349	282	1260	15.0	79800	60800	--	--	--
02...	1351	282	1080	15.0	75900	57800	--	--	--
03...	1145	195	1260	--	103000	54200	--	--	--
03...	1545	195	1260	--	110000	57900	--	--	--
04...	1245	144	1260	--	108000	42000	26	29	44
04...	1545	150	1260	--	109000	44100	--	--	--
15...	1113	61	1010	17.0	33100	5450	36	45	56
15...	1121	61	853	17.0	34300	5650	--	--	--
15...	1830	62	1770	--	31000	5190	--	--	--
16...	1230	71	1660	--	31900	6120	--	--	--
AUG									
05...	1200	5.3	--	27.0	47600	681	--	--	--
05...	1206	5.3	1520	27.0	51300	734	63	77	94

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 1982 TO SEPTEMBER 1983

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN (70333)	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)	SED. SUSP. FALL DIAM. % FINER THAN (70346)
DEC								
13...	97	98	100	--	--	--	--	--
MAR								
23...	--	--	--	77	93	99	100	--
APR								
26...	--	--	--	72	84	95	99	100
26...	--	--	--	88	98	100	--	--
26...	87	--	--	--	--	--	--	--
26...	--	--	--	71	88	98	99	100
26...	88	--	--	--	--	--	--	--
26...	77	--	--	--	--	--	--	--
27...	--	--	--	80	95	99	100	--
27...	66	--	--	--	--	--	--	--
27...	68	--	--	--	--	--	--	--
27...	82	--	--	--	--	--	--	--
27...	69	--	--	--	--	--	--	--
MAY								
13...	--	--	--	85	96	100	--	--
19...	84	--	--	--	--	--	--	--
25...	76	--	--	--	--	--	--	--
JUN								
02...	--	--	--	76	91	98	100	--
02...	73	--	--	--	--	--	--	--
02...	74	--	--	--	--	--	--	--
03...	72	--	--	--	--	--	--	--
03...	69	--	--	--	--	--	--	--
04...	--	--	--	75	95	99	100	--
04...	70	--	--	--	--	--	--	--
15...	--	--	--	80	94	98	99	100
15...	77	--	--	--	--	--	--	--
15...	81	--	--	--	--	--	--	--
16...	80	--	--	--	--	--	--	--
AUG								
05...	99	--	--	--	--	--	--	--
05...	--	--	--	99	100	--	--	--



SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983			
MEAN	MEAN	MEAN	MEAN

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	43200	1630	56600	5650	77100	31900	22400	1750	50500	4570	0	.00
2	37100	1600	53000	4010	78100	31800	21800	1470	190000	109000	0	.00
3	36700	1880	45200	3170	91000	34900	21900	1240	165000	25400	0	.00
4	37200	1810	38200	3200	92200	26100	12200	626	75100	1700	0	.00
5	37700	1020	41300	4130	89300	24400	8000	346	51200	1130	0	.00
MAY												
6	37500	972	44300	5740	80200	20600	14600	552	37500	466	0	.00
7	36900	1200	49000	6880	74200	17600	9700	262	39900	1080	0	.00
8	36900	677	47200	7140	67000	17700	7900	137	42500	1610	0	.00
9	37000	390	46100	8090	60200	9260	7000	74	32000	337	0	.00
10	37500	324	56600	17400	54200	6730	6200	37	27000	117	0	.00
JUNE												
11	37400	252	55500	16800	51000	5370	5900	35	28000	91	0	.00
12	37700	366	63000	18500	43100	4190	5400	29	32500	35	34700	624
13	37400	767	61000	17600	51800	5730	5000	19	32000	35	0	.00
14	38700	627	50100	13700	45100	3530	5100	19	90900	11300	0	.00
15	36700	416	40300	8160	31200	4380	5100	17	79000	1560	0	.00
JULY												
16	35600	240	25300	4100	31800	5670	4300	7.0	60000	275	0	.00
17	37100	361	22200	2880	33800	5750	4000	8.6	42000	32	0	.00
18	38900	798	24300	3410	33000	5350	4000	6.5	27000	7.3	0	.00
19	39600	1500	24000	3690	30900	5260	4600	7.5	0	.0	0	.00
20	37800	1530	25800	3900	27400	4220	4900	7.9	0	.0	0	.00
AUGUST												
21	35200	1050	24100	3580	24300	3810	4700	5.1	0	.0	0	.00
22	34900	1040	27800	4580	22100	3580	4000	36	0	.0	0	.00
23	31100	705	30300	5070	20200	3330	12300	166	0	.0	0	.00
24	26900	654	35000	6800	48600	14300	10400	118	0	.0	0	.00
25	40200	1950	48800	12000	171000	104000	18600	753	0	.0	0	.00
SEPTEMBER												
26	47500	3330	57200	20500	67000	14800	18800	1190	0	.0	0	.00
27	52300	4660	60200	23900	43900	2730	26000	1120	0	.0	0	.00
28	24300	1970	64000	26600	30800	1910	17900	135	0	.0	0	.00
29	45600	3570	66300	29500	19900	1990	0	.00	5300	9.7	0	.00
30	60700	5740	71000	35100	20100	1680	0	.00	9200	20	37200	836
31	---	---	74300	35500	---	---	0	.00	0	.0	---	---
TOTAL	---	43029	---	361280	---	422570	---	10173.60	---	158775.0	---	1460.00
TOTAL LOAD FOR YEAR: 1085790.70 TONS.												

## RIO GRANDE BASIN

08340500 ARROYO CHICO NEAR GUADALUPE, NM

LOCATION.--Lat 35°35'33", long 107°11'19", in NE¼ sec.30, T.16 N., R.3 W., Sandoval County, Hydrologic Unit 13020205, on left bank 0.2 mi upstream from mouth, 4.1 mi northwest of Guadalupe, and 5.5 mi southwest of Cabezón.

DRAINAGE AREA.--1,390 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1282: 1944-50.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,921 ft National Geodetic Vertical Datum of 1929. Prior to June 21, 1968 at site 500 ft upstream at datum 2.00 ft higher.

REMARKS.--Water-discharge records poor. Diversions for irrigation of about 100 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--40 years, 21.0 ft<sup>3</sup>/s, 15,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft<sup>3</sup>/s Sept. 12, 1972, gage height, 17.5 ft from floodmarks, from rating curve extended above 2,900 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 11.6 ft and 14.8 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,500 ft<sup>3</sup>/s at 0600 hours June 25, gage height, 6.66 ft, no other peak above base of 2,500 ft<sup>3</sup>/s; minimum, 0.65 ft<sup>3</sup>/s Nov. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	5.4	11	5.0	7.2	22	10	13	27	3.6	48	30
2	1.6	4.0	9.0	5.0	7.0	20	10	11	5.7	2.0	96	14
3	1.6	3.0	8.0	4.0	8.2	22	10	11	5.4	2.6	109	5.0
4	2.2	3.3	8.0	4.0	6.0	15	11	11	5.7	3.7	36	3.0
5	2.4	2.8	9.0	4.0	9.8	10	38	8.2	5.3	4.3	35	1.3
6	1.7	3.3	10	3.0	15	10	26	6.4	6.2	1.9	7.4	1.6
7	2.2	4.4	9.0	4.0	7.0	9.0	10	5.0	5.1	5.9	5.6	1.6
8	2.4	5.7	8.0	4.4	6.0	9.0	11	4.0	5.4	6.8	5.3	48
9	1.6	6.8	9.0	5.4	5.5	9.0	11	3.0	6.0	1.6	3.7	39
10	1.9	6.8	19	7.2	5.0	8.0	10	2.8	6.7	1.7	3.2	4.0
11	3.3	6.4	10	5.4	4.3	8.0	10	4.3	5.0	3.9	4.3	224
12	4.7	3.6	6.0	5.0	4.5	7.0	10	4.4	4.0	44	15	42
13	6.8	4.1	7.7	4.5	5.0	8.0	9.0	6.0	4.0	55	65	12
14	5.7	5.0	4.7	4.4	7.0	6.0	9.0	7.8	3.0	13	89	59
15	4.7	4.1	6.4	4.2	8.0	8.0	6.0	6.7	4.5	4.5	31	24
16	4.1	5.4	1.6	4.0	6.0	7.0	5.0	4.6	3.5	2.9	7.7	13
17	6.0	9.2	1.3	3.5	6.0	6.0	5.0	3.5	3.3	2.6	3.6	4.0
18	5.0	11	9.8	3.3	8.2	6.0	6.0	6.3	2.2	76	2.6	2.2
19	4.4	9.8	7.7	2.8	9.2	5.0	17	8.4	1.5	64	2.1	3.0
20	4.7	9.2	6.0	2.2	9.0	6.0	77	11	1.4	5.9	1.9	2.3
21	4.4	9.8	10	2.3	38	6.0	77	11	1.3	4.3	3.9	2.0
22	5.4	11	11	2.5	67	6.0	60	8.2	1.7	4.1	4.0	3.0
23	5.0	10	9.0	3.0	83	10	36	7.0	2.0	13	5.1	3.6
24	5.0	7.0	9.0	3.3	106	11	26	6.0	170	10	5.4	8.3
25	4.5	5.0	8.0	5.0	112	20	26	6.0	821	106	9.7	18
26	4.5	11	7.0	6.0	78	18	25	5.0	115	294	106	16
27	4.0	12	8.0	7.2	27	15	26	4.0	38	48	35	41
28	4.0	7.0	7.0	9.2	12	14	14	4.0	30	7.3	86	74
29	4.5	10	6.0	12	---	13	11	5.0	16	5.0	13	90
30	5.0	8.7	5.0	10	---	13	9.2	5.0	11	60	25	233
31	8.7	---	4.0	7.2	---	11	---	6.0	---	154	30	---
TOTAL	123.9	204.8	245.2	153.0	666.9	338.0	611.2	205.6	1316.9	1011.6	894.5	1021.9
MEAN	4.00	6.83	7.91	4.94	23.8	10.9	20.4	6.63	43.9	32.6	28.9	34.1
MAX	8.7	12	19	12	112	22	77	13	821	294	109	233
MIN	1.6	2.8	1.3	2.2	4.3	5.0	5.0	2.8	1.3	1.6	1.9	1.3
AC-FT	246	406	486	303	1320	670	1210	408	2610	2010	1770	2030

CAL YR 1982 TOTAL 4408.27 MEAN 12.1 MAX 352 MIN .00 AC-FT 8740  
WTR YR 1983 TOTAL 6793.50 MEAN 18.6 MAX 821 MIN 1.3 AC-FT 13470

RIO GRANDE BASIN  
08340500 ARROYO CHICO NEAR GUADALUPE, NM -- Continued  
WATER-QUALITY RECORDS

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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 tons (0 tonnes) on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily 171,000 mg/l Sept. 30; minimum daily, 820 mg/l May 31.

SEDIMENT LOADS: Maximum daily, 122,000 tons (111,000 tonnes) Sept. 30; minimum daily, 4.7 tons (4.3 tonnes) on June 21.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- 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)
NOV									
04...	1130	3.0	2430	7.5	995	8.1	45	74	81
DEC									
13...	1320	6.9	1910	.0	3670	68	63	71	84
JAN									
20...	1200	1.8	1640	.0	2560	12	69	76	79
MAR									
23...	1215	5.0	1780	2.0	1670	23	70	76	86
APR									
12...	1330	4.7	2250	7.0	2490	32	--	--	--
12...	1331	4.7	2270	7.0	2620	33	--	--	--
12...	1340	4.7	2280	7.0	2440	31	--	--	--
19...	1045	6.0	2270	11.5	2150	35	--	84	93
19...	1100	6.0	2330	11.5	1660	27	80	91	97
19...	1102	6.0	2320	11.5	1910	31	--	--	--
26...	1425	31	1300	15.5	9330	781	72	78	86
26...	1430	31	1520	15.5	17800	1490	--	--	--
27...	0245	27	1630	--	5720	417	--	--	--
27...	0310	26	1660	--	2380	167	--	--	--
27...	0345	23	1650	--	9530	592	--	--	--
27...	0500	19	1630	--	1380	71	--	--	--
27...	0530	17	1620	--	9120	419	--	--	--
MAY									
13...	1000	5.3	2350	12.0	3170	45	64	78	85
13...	1043	5.3	2450	12.0	3120	45	--	--	--
13...	1045	5.3	2880	12.0	3150	45	--	--	--
20...	0410	12	2920	--	1020	33	--	--	--
20...	1230	10	3000	--	2860	77	--	--	--
JUN									
02...	1000	5.3	1980	13.5	17500	250	--	--	--
02...	1014	5.3	3000	13.5	5400	77	--	--	--
02...	1017	5.3	2540	13.5	6500	93	81	90	96
15...	1309	3.2	2790	25.5	4590	40	42	47	51
15...	1315	3.2	1720	25.5	33800	292	--	--	--
15...	1316	3.2	2580	25.5	13200	114	--	--	--
JUL									
15...	1130	4.1	5190	20.0	13400	148	91	98	99
15...	1200	4.1	2020	20.0	42000	465	--	--	--
22...	1230	3.9	1850	20.0	4480	47	--	--	--
27...	1100	43	1160	22.5	23300	2710	--	--	--
AUG									
04...	1230	31	1070	27.5	23200	1940	--	--	--

RIO GRANDE BASIN  
08340500 ARROYO CHICO NEAR GUADALUPE, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
NOV									
04...	85	90	98	99	100	--	--	--	--
DEC									
13...	--	--	--	--	--	89	93	100	--
JAN									
20...	87	93	99	99	100	--	--	--	--
MAR									
23...	94	98	100	--	--	--	--	--	--
APR									
12...	95	--	--	--	--	--	--	--	--
12...	90	--	--	--	--	--	--	--	--
12...	91	--	--	--	--	--	--	--	--
19...	97	99	99	100	--	--	--	--	--
19...	98	99	99	100	--	--	--	--	--
19...	98	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	95	99	100	--
26...	100	--	--	--	--	--	--	--	--
27...	100	--	--	--	--	--	--	--	--
27...	96	--	--	--	--	--	--	--	--
27...	99	--	--	--	--	--	--	--	--
27...	96	--	--	--	--	--	--	--	--
27...	99	--	--	--	--	--	--	--	--
MAY									
13...	--	--	--	--	--	92	98	100	--
13...	100	--	--	--	--	--	--	--	--
13...	100	--	--	--	--	--	--	--	--
20...	97	--	--	--	--	--	--	--	--
20...	99	--	--	--	--	--	--	--	--
JUN									
02...	98	--	--	--	--	--	--	--	--
02...	100	--	--	--	--	--	--	--	--
02...	99	100	--	--	--	--	--	--	--
15...	--	--	--	--	--	66	88	99	100
15...	77	--	--	--	--	--	--	--	--
15...	100	--	--	--	--	--	--	--	--
JUL									
15...	99	100	--	--	--	--	--	--	--
15...	94	--	--	--	--	--	--	--	--
22...	96	--	--	--	--	--	--	--	--
27...	97	--	--	--	--	--	--	--	--
AUG									
04...	91	--	--	--	--	--	--	--	--

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)
AUG									
04...	1240	31	1060	27.5	22200	1860	68	79	87
SEP									
11...	0930	704	1720	--	178000	338000	--	--	--
13...	1308	6.6	1610	24.0	8280	148	78	87	91

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SED. SUSP. 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)
AUG								
04...	--	--	--	--	--	91	96	100
SEP								
11...	75	--	--	--	--	--	--	--
13...	94	96	98	99	100	--	--	--

RIO GRANDE BASIN  
08340500 ARROYO CHICO NEAR GUADALUPE, NM -- Continued  
WATER-QUALITY RECORDS

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SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)	MEAN CONCEN- TRATION	LOADS (T/DAY)
	(MG/L)		(MG/L)		(MG/L)		(MG/L)		(MG/L)		(MG/L)	
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2710	14	3750	55	3750	111	1870	25	4110	80	3760	223
2	2520	11	2570	28	3610	88	1520	21	3800	72	3890	210
3	2450	11	1540	12	3200	69	1210	13	3810	84	3770	224
4	2610	16	2300	20	3080	67	1120	12	3750	61	3890	158
5	2610	17	4730	36	3090	75	1080	12	3930	104	3820	103
6	2300	11	4240	38	3420	92	1020	8.3	3970	161	3670	99
7	2280	14	4160	49	3510	85	960	10	3990	75	3590	87
8	2400	16	4150	64	3060	66	1240	15	4120	78	3550	86
9	2500	11	4080	75	3020	73	1880	27	4210	80	3230	78
10	2560	13	3950	73	4110	211	2310	45	4300	81	2900	63
11	2600	23	3700	64	3990	108	2200	32	4210	68	2560	55
12	2420	31	3510	34	3700	60	3040	53	4200	57	2180	41
13	2620	48	3630	40	3690	77	3240	63	4200	57	1960	42
14	2980	46	3510	47	3710	47	3430	63	4110	67	1820	29
15	2830	36	3780	42	3720	64	3600	75	3890	63	1800	39
16	2620	29	3730	54	3370	15	3450	60	3620	59	1710	32
17	2850	46	3780	94	3480	12	2920	32	3720	60	1680	27
18	3000	40	3900	116	4080	108	3250	44	4010	89	1720	28
19	2800	33	3870	102	4110	85	3200	43	4050	101	1820	25
20	2750	35	3590	89	4230	69	3070	45	4010	97	1920	31
21	3120	37	3600	95	4340	117	4530	281	3780	388	1780	29
22	3000	44	3570	106	4220	125	3840	102	4200	760	1700	28
23	2620	35	3580	97	4500	109	4010	62	4890	1100	2300	62
24	2250	30	3460	65	4010	97	3880	35	4720	1350	2900	7.8
25	1950	21	3780	51	3700	80	4030	174	4660	1410	3120	168
26	1790	19	4270	127	3210	61	4080	96	4420	931	3150	153
27	1690	14	3740	121	3000	65	4030	78	3550	259	3000	121
28	1510	12	3590	68	2890	55	4170	104	3620	117	3030	115
29	1400	11	3580	97	2900	47	4200	136	---	---	2920	102
30	3030	34	3630	85	2600	35	4260	115	---	---	3000	105
31	4700	110	---	---	2230	24	4010	78	---	---	2950	88
TOTAL	---	868	---	2044	---	2397	---	1959.3	---	7909	---	2658.8

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	2980	80	7620	267	7580	818	14600	142	36800	4770	37200	3010
2	2740	74	7390	219	9750	150	14300	77	36400	10600	30600	1160
3	2750	74	7150	212	8020	117	13400	94	45800	12800	24200	327
4	2780	83	6930	206	5600	86	12700	127	25500	2480	19600	159
5	3540	363	6320	140	5500	79	11400	132	21300	2010	14800	52
6	3320	233	5840	101	5630	94	10200	52	20000	400	10000	43
7	2960	80	5650	76	5640	78	9200	147	18900	286	6400	28
8	3170	94	5230	56	5630	82	8300	152	17300	248	47400	13200
9	3150	94	4310	35	5610	91	7900	34	14700	147	97500	10300
10	3070	83	3820	29	5020	91	7200	33	12100	105	77000	832
11	2790	75	3910	45	4720	64	6100	64	11400	132	95200	79400
12	2500	67	3710	44	4770	52	15400	1830	21700	879	50200	5690
13	1820	44	3140	51	4750	51	15700	2330	33400	5860	13000	421
14	1950	47	2810	59	4750	38	14600	512	40600	9760	91000	15500
15	2440	40	2510	45	7600	92	13600	165	32400	2710	44000	2850
16	2220	30	2190	27	6840	65	10800	85	28900	601	32400	1140
17	2080	28	1820	17	4420	39	9200	65	26800	260	24800	268
18	1890	31	1790	30	2560	15	11300	6300	23300	164	18400	109
19	2050	94	1280	29	1690	6.8	18100	2340	20200	115	13000	105
20	3680	765	2400	71	1390	5.3	8300	132	17300	89	9200	57
21	5200	1080	2990	89	1350	4.7	5630	65	14700	155	7700	42
22	7700	1250	2610	58	1700	7.8	4580	51	11700	126	7200	58
23	4400	428	2220	42	1780	9.6	5480	192	8200	113	6600	64
24	6500	456	1780	29	4020	26800	4550	123	15000	219	6000	134
25	10400	730	1530	25	22400	62300	23800	5000	33000	864	5200	253
26	12600	850	1560	21	15500	4810	51700	31900	67100	42700	4200	181
27	7890	554	1390	15	15000	1540	24700	3200	107000	10100	30300	4480
28	8090	306	1150	12	15400	1250	18000	355	129000	23600	68700	16200
29	7800	232	1180	16	15400	665	13600	184	77000	2700	105000	22400
30	8030	199	1140	15	15200	451	28200	3860	54000	3650	171000	122000
31	---	---	820	13	---	---	45300	15000	47000	3810	---	---
TOTAL	---	8564	---	2094	---	99952.2	---	74743	---	142453	---	300463
TOTAL LOAD FOR YEAR:		646105.3		TONS.								

## RIO GRANDE BASIN

08341400 BLUEWATER LAKE NEAR BLUEWATER, NM

LOCATION.--Lat 35°17'31", long 108°06'40", in SE¼ sec.9, T.12 N., R.12 W., Cibola County, Hydrologic Unit 13020207, at left end of Bluewater Dam on Bluewater Creek, and 9.5 mi west of Bluewater.

DRAINAGE AREA.--201 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1927 to December 1950 (monthend contents only, published in WSP 1732), April 1958 to current year (month end contents only).

GAGE.--Water-stage recorder. Datum of gage is 7,345.57 ft National Geodetic Vertical Datum of 1929. July 1958 to January 1961, nonrecording gage at nearby site, same datum. Gage heights have been converted to sea-level elevations.

REMARKS.--Reservoir is formed by concrete arch dam. Storage began in 1927. Capacity, 38,500 acre-ft survey of 1945 at elevation 7,402.6 ft crest of uncontrolled siphon spillway which is vented to avoid drawdown below crest, and 44,200 acre-ft at elevation 7,405.6 ft crest of ungated spillway over dam. Capacity table used through 1944 showed a capacity of 50,300 acre-ft at crest of ungated spillway over dam, and that used from 1945-50, 43,500 acre-ft. Tables used prior to 1958 are not available and no adjustments are made for changes in tables. Dead storage, 3.4 acre-ft at elevation 7,345.4 ft sill of lower outlet tube. Lake not usually drawn below conservation pool level elevation, 7,365.36 ft, below which ownership is by State Game and Fish Department. Above this level, water is owned and used by Bluewater-Toltec Irrigation Co. Figures given herein represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents determined, 47,100 acre-ft Apr. 30, 1941. Contents may have been greater on Apr. 28, 1941 when peak discharge of 800 ft<sup>3</sup>/s occurred at station 8 mi downstream; no storage at times prior to 1947.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 41,670 acre-ft Apr. 28-30, elevation, 7,404.3 ft; minimum, 15,660 acre-ft Jan. 15, 16, elevation, 7,385.6 ft.

## MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 .....	7387.3	17370	-----
Oct. 31 .....	7386.5	16540	- 830
Nov. 30 .....	7386.0	16040	- 500
Dec. 31 .....	7385.7	15760	- 280
CAL YR 1982 .....			+ 1030
Jan. 31 .....	7385.8	15850	+ 90
Feb. 28 .....	7386.7	16750	+ 900
Mar. 31 .....	7396.5	28840	+ 12090
Apr. 30 .....	7404.1	41290	+ 12450
May 31 .....	7402.9	39060	- 2230
June 30 .....	7401.4	36380	- 2680
July 31 .....	7400.0	34010	- 2370
Aug. 31 .....	7398.8	32170	- 1840
Sept. 30 .....	7397.5	30260	- 1910
WTR YR 1983 .....			+ 12890

## 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 south of old U.S. Highway 66, and at mile 67.8.

DRAINAGE AREA.--1,020 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1912 to February 1914, June 1914, October 1914 to February 1915, May 1915 to June 1921, September 1921 to June 1923, October 1923 to May 1926, September to December 1926, May 1949 to September 1966, June 1968 to current year. Monthly discharge only for some periods published in WSP 1312. Prior to October 1967, published as "Bluewater Creek at Grants".

REVISED RECORDS.--WSP 1512: 1913-14. WSP 1712: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,468.34 ft 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 upstream. Diversions and groundwater withdrawals for irrigation of about 4,500 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--42 years (water years 1913, 1915-20, 1922, 1924-25, 1950-66, 1968-83), 3.24 ft<sup>3</sup>/s, 2,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1950-66 AND SINCE 1968).--Maximum discharge recorded, 1,760 ft<sup>3</sup>/s Aug. 28, 1952, gage height, 5.35 ft, from rating curve extended above 300 ft<sup>3</sup>/s on basis of velocity-area studies; no flow for long periods.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood observed occurred Sept. 6 or 7, 1909, when Bluewater Dam washed out. A flood in July 1919 probably exceeded the one in 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 183 ft<sup>3</sup>/s at 1200 hours Apr. 28, gage height, 3.40 ft, no peak above base of 200 ft<sup>3</sup>/s; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	90	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	71	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	59	.00	.00	.06	.00
4	.00	.00	.00	.00	.00	.00	.00	52	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	44	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	41	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	39	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	37	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	37	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	33	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	99	31	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	124	29	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	126	25	.00	.00	.00	.12
14	.00	.00	.00	.00	.00	.00	20	22	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	9.7	21	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	8.5	18	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	7.6	14	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	7.0	11	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	4.6	9.4	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	76	7.6	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	100	5.2	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	104	.95	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	113	.00	.00	.60	.00	.00
24	.00	.00	.00	.00	.00	.00	132	.00	.00	.10	.00	.00
25	.00	.00	.00	.00	.00	.00	151	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	158	.09	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	169	.49	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	179	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	178	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	169	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	3.3	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	1937.40	697.73	.00	4.00	.06	.12
MEAN	.000	.000	.000	.000	.000	.000	64.6	22.5	.000	.13	.002	.004
MAX	.00	.00	.00	.00	.00	.00	179	90	.00	3.3	.06	.12
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	3840	1380	.00	7.9	.1	.2

CAL YR 1982 TOTAL 34.46 MEAN .094 MAX 11 MIN .00 AC-FT 68  
WTR YR 1983 TOTAL 2639.31 MEAN 7.23 MAX 179 MIN .00 AC-FT 5240

## RIO GRANDE BASIN

08343100 GRANTS CANYON AT GRANTS, NM

LOCATION.--Lat 35°09'39", long 107°50'15", in NE¼ sec.25, T.11 N., R.10 W., Cibola County, Hydrologic Unit 13020207, on upstream side of culvert under Roosevelt Avenue, in Grants, 0.2 mi east of intersection of Roosevelt and First Avenue, and 1.1 mi upstream from confluence with Rio San Jose (formerly Bluewater Creek).

DRAINAGE AREA.--13.0 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder and culvert control. Altitude of gage is 6,450 ft, from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--22 years, 0.142 ft<sup>3</sup>/s, 103 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft<sup>3</sup>/s Aug. 26, 1963, gage height, 5.10 ft, from rating curve extended above 220 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 3.17 ft, 5.10 ft, and 5.38 ft; maximum gage height, 5.38 ft Sept. 8, 1967; no flow for most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 114 ft<sup>3</sup>/s at 1630 hours July 26, gage height, 1.32 ft, no peak above base of 175 ft<sup>3</sup>/s; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.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	.10	.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	2.6	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.20
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	7.2	.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	5.9	.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	1.2	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.1	.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	9.8	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.02	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	21.02	9.90	.30
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.68	.32	.010
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.8	7.2	.20
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	42	20	.6

CAL YR 1982 TOTAL 11.18 MEAN .031 MAX 11 MIN .00 AC-FT 22  
WTR YR 1983 TOTAL 31.22 MEAN .086 MAX 9.8 MIN .00 AC-FT 62



## 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 southeast of Grants, and at mile 57.4.

DRAINAGE AREA.--2,300 mi<sup>2</sup>, approximately, of which 1,130 mi<sup>2</sup> does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1936 to current year. Prior to October 1955, published as "San Jose River 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow slightly regulated by Bluewater Lake (station 08341400), 34 mi upstream. Diversions and ground-water withdrawal for irrigation of about 5,100 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 6.78 ft<sup>3</sup>/s, 4,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft<sup>3</sup>/s Sept. 20, 1963, gage height, 4.87 ft, from rating curve extended above 450 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 3.19 ft and 4.87 ft; minimum, 1.9 ft<sup>3</sup>/s Feb. 21, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood probably occurred Sept. 6 or 7, 1909, following destruction of Bluewater dam. The peak of Sept. 20, 1963 may have been exceeded by those of July 1919, August and September 1929, and August 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 202 ft<sup>3</sup>/s at 2130 hours Apr. 28, gage height, 2.82 ft, no other peak above base of 100 ft<sup>3</sup>/s; minimum daily, 3.3 ft<sup>3</sup>/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	4.1	5.5	4.7	5.7	4.7	4.6	155	5.1	5.8	25	5.4
2	3.3	3.9	5.8	4.5	5.2	4.8	4.3	72	5.0	5.8	8.1	7.1
3	3.4	3.9	5.9	4.3	5.0	4.9	4.5	60	5.0	5.6	7.7	5.5
4	3.6	4.0	5.4	4.5	5.2	4.9	4.5	52	5.0	5.6	6.0	5.0
5	3.6	4.1	5.4	4.7	5.2	4.9	4.6	45	5.0	5.4	5.2	4.9
6	3.6	4.2	5.3	5.2	5.2	4.8	5.2	39	5.0	5.1	5.1	4.7
7	3.7	4.1	5.2	5.6	4.9	4.7	4.7	37	5.0	5.1	5.2	4.7
8	3.6	4.1	5.0	5.9	4.9	4.8	4.5	36	5.0	4.8	5.3	6.6
9	3.6	4.4	5.2	5.6	5.0	4.9	4.3	35	5.0	4.5	5.4	5.7
10	3.7	4.6	5.9	5.2	4.9	4.9	4.3	34	5.0	4.4	5.4	5.3
11	3.8	4.6	5.8	5.3	4.7	4.9	5.0	32	4.8	4.4	5.4	5.0
12	4.0	4.2	5.6	5.3	4.5	5.0	100	29	4.9	4.4	5.6	5.0
13	4.1	4.3	5.4	5.3	4.6	4.9	136	29	4.8	4.4	6.4	4.9
14	4.4	4.3	5.2	5.2	4.5	4.9	100	26	4.9	4.4	6.7	5.0
15	4.3	4.6	5.0	5.2	4.5	4.8	22	24	5.0	4.4	5.9	4.7
16	4.4	4.6	5.1	5.3	4.5	4.8	13	23	5.0	4.4	5.6	4.4
17	4.4	4.8	5.2	5.2	4.4	4.8	12	19	5.0	4.3	5.6	4.4
18	4.4	5.0	5.3	5.8	4.4	4.8	12	15	5.0	4.5	5.7	4.4
19	4.3	4.8	5.1	5.6	4.5	4.8	12	13	5.0	4.5	6.0	4.5
20	4.1	4.8	5.0	5.4	4.2	4.8	13	16	5.1	4.6	6.9	4.4
21	4.2	4.7	5.1	4.8	4.4	4.7	94	13	5.1	4.6	5.8	4.4
22	4.2	4.7	5.2	5.1	4.6	4.8	107	9.2	5.0	4.7	5.3	4.5
23	4.3	4.7	5.4	5.2	4.6	4.7	112	7.2	5.2	4.8	5.2	4.6
24	4.3	4.4	5.4	4.9	4.6	4.7	125	6.6	5.4	5.1	5.1	5.8
25	4.3	4.9	5.1	5.4	4.7	5.1	143	6.3	5.5	5.8	5.1	9.8
26	4.2	5.2	4.9	4.9	4.7	5.4	159	6.0	5.6	6.5	7.2	5.8
27	4.2	5.4	4.9	4.8	5.0	4.9	170	5.7	5.5	11	7.2	5.7
28	4.0	5.2	4.7	4.9	4.8	4.8	186	5.6	5.6	10	5.6	7.6
29	4.0	5.0	4.3	4.9	---	4.7	195	5.4	5.6	6.0	8.4	5.6
30	4.1	5.2	4.2	5.4	---	4.7	189	5.3	5.8	6.9	9.6	6.3
31	4.1	---	4.3	5.4	---	4.7	---	5.2	---	18	6.3	---
TOTAL	123.8	136.8	160.8	159.5	133.4	150.0	1950.5	866.5	153.9	179.8	209.0	161.7
MEAN	3.99	4.56	5.19	5.15	4.76	4.84	65.0	28.0	5.13	5.80	6.74	5.39
MAX	4.4	5.4	5.9	5.9	5.7	5.4	195	155	5.8	18	25	9.8
MIN	3.3	3.9	4.2	4.3	4.2	4.7	4.3	5.2	4.8	4.3	5.1	4.4
AC-FT	246	271	319	316	265	298	3870	1720	305	357	415	321

CAL YR 1982 TOTAL 1935.5 MEAN 5.30 MAX 19 MIN 3.3 AC-FT 3840  
WTR YR 1983 TOTAL 4385.7 MEAN 12.0 MAX 195 MIN 3.3 AC-FT 8700

## 08349800 RIO PAGUATE BELOW JACKPILE MINE NEAR LAGUNA, NM

LOCATION.--Lat 35°07'09", long 107°19'58", in SW¼SE¼ sec.2, T.10 N., R.5 W., Cibola County, Hydrologic Unit 13020207, in Pagate Purchase Grant, near right bank on downstream end of bridge piling of the Atchison, Topeka and Santa Fe Railway Co. bridge, 1.4 mi downstream from Rio Moquino, 4.2 mi upstream from Pagate Reservoir, 5.0 mi southeast of Pagate and 26 mi east of Grants.

DRAINAGE AREA.--107 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Altitude of gage is 5,820 ft, 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.--7 years, 1.59 ft<sup>3</sup>/s, 1,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,520 ft<sup>3</sup>/s Aug. 16, 1982, gage height, 11.8 ft, from floodmarks, from rating curve extended above 20 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 8.60 ft and contracted-opening measurement at gage height 10.19 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 993 ft<sup>3</sup>/s at 1900 hours Aug. 12, gage height, 6.46 ft; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.60	.69	.50	1.5	4.3	6.6	6.3	.63	.22	.13	.14
2	.30	.66	.58	.60	1.5	4.4	4.2	5.2	.59	.19	.19	.09
3	.30	.72	.61	.50	1.6	4.5	4.2	4.4	.60	.18	.27	.04
4	.20	.80	.79	.50	2.2	5.1	4.5	3.9	.60	.16	.07	.04
5	.14	.90	.66	1.0	2.5	5.0	3.8	3.6	.62	.16	.02	.00
6	.13	.63	.61	1.3	2.5	5.0	3.4	3.4	.60	.16	.00	.00
7	.15	.66	.70	1.5	2.3	5.3	3.4	3.3	.69	.14	.00	.00
8	.17	.69	.86	1.5	2.2	5.6	3.4	3.3	.65	.11	.01	.18
9	.19	.84	.88	1.2	2.4	5.4	3.5	3.3	.58	.08	.00	.14
10	.23	.76	1.1	2.0	2.1	5.9	3.6	3.1	.52	.07	.03	.05
11	.31	.85	1.1	2.3	2.4	6.6	5.7	2.8	.60	.33	1.9	.00
12	.35	.72	.90	2.7	2.2	8.9	10	2.7	.49	.36	29	.00
13	.39	.83	.85	2.5	2.4	5.5	4.7	2.3	.48	.22	3.4	.00
14	.46	.81	.86	2.5	2.5	6.6	3.7	2.4	.49	.17	.13	.00
15	.48	.85	1.3	2.1	2.5	5.7	3.7	2.3	.59	.18	.10	.00
16	.45	.89	1.1	2.0	2.9	1.4	3.8	2.2	.56	.03	.01	.00
17	.02	1.0	1.2	1.6	2.7	1.2	4.7	2.0	.55	.02	.03	.00
18	.01	.97	1.1	1.6	2.3	1.1	13	1.6	.45	.10	.76	.00
19	.00	.92	1.4	1.5	2.6	1.2	28	1.4	.54	.07	.68	.00
20	.00	.92	1.4	2.3	2.6	1.1	28	1.5	.48	.10	.20	.00
21	.07	1.0	1.5	3.5	2.7	1.2	18	1.3	.45	.13	.14	.00
22	.14	.99	1.1	4.0	2.8	1.3	18	1.0	.45	.00	.15	.00
23	.15	1.1	1.2	4.3	2.8	1.4	19	1.0	.46	.02	.12	.52
24	.16	1.1	1.4	4.5	3.0	1.5	22	.93	.51	.04	.12	.27
25	.19	1.3	1.2	4.5	3.5	1.5	27	.85	.62	.02	.13	.02
26	.23	1.3	.76	4.7	3.6	1.7	22	.87	.57	.02	.11	.00
27	.29	.58	.70	4.5	3.7	1.6	12	.76	.56	.13	.11	.18
28	.27	.57	.60	4.2	3.6	1.7	10	.72	.53	.13	.42	.31
29	.35	.58	.50	2.9	---	1.8	8.2	.63	.46	.04	.39	.05
30	.44	.55	.40	1.7	---	1.7	7.1	.65	.31	.27	.17	.04
31	.55	---	.50	1.7	---	2.4	---	.61	---	.23	.34	---
TOTAL	7.52	25.09	28.55	72.20	71.6	107.6	309.2	70.32	16.23	4.08	39.13	2.07
MEAN	.24	.84	.92	2.33	2.56	3.47	10.3	2.27	.54	.13	1.26	.069
MAX	.55	1.3	1.5	4.7	3.7	8.9	28	6.3	.69	.36	.29	.52
MIN	.00	.55	.40	.50	1.5	1.1	3.4	.61	.31	.00	.00	.00
AC-FT	15	50	57	143	142	213	613	139	32	8.1	78	4.1

CAL YR 1982 TOTAL 1111.48 MEAN 3.05 MAX 250 MIN .00 AC-FT 2200  
WTR YR 1983 TOTAL 753.59 MEAN 2.06 MAX 29 MIN .00 AC-FT 1490

## 08351500 RIO SAN JOSE AT CORREO, NM

LOCATION.--Lat 34°58'03", long 107°10'10", in NE¼ sec.32, T.9 N., R.3 W., Cibola County, Hydrologic Unit 13020207, on left bank 0.3 mi downstream from State Highway 6, 1.2 mi northeast of Correo, and 13 mi upstream from mouth.

DRAINAGE AREA.--3,660 mi<sup>2</sup>, approximately, of which about 1,130 mi<sup>2</sup> does not contribute directly to surface runoff.

PERIOD OF RECORD.--April 1943 to current year. Prior to October 1955, published as "San Jose River at Correo".

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,474.88 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1958 to Sept. 30, 1975, water-stage recorder at site 1 mi upstream at datum 17.55 ft higher.

REMARKS.--Records good except those for winter months, which are poor. Flow regulated to some extent since 1927 by Bluewater Lake (station 08341400) 79 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--40 years, 11.2 ft<sup>3</sup>/s, 8,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,150 ft<sup>3</sup>/s Aug. 11, 1955; maximum gage height, 20.7 ft, Aug. 22, 1958, backwater from dam (present datum); no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood which probably occurred Aug. 21, 1935, reached a stage of 15.4 ft, from floodmarks, (discharge, about 11,000 ft<sup>3</sup>/s), but was probably exceeded by the flood of Sept. 23, 1929 (discharge not determined), based on study of records for Rio Puerco at Rio Puerco.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 159 ft<sup>3</sup>/s at 1445 hours May 1, gage height, 2.30 ft; no peak above base of 800 ft<sup>3</sup>/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.2	4.6	3.0	12	9.3	7.3	146	.00	.00	.00	.00
2	1.0	2.1	4.5	3.0	12	9.4	12	142	.00	.00	.00	.00
3	.50	2.2	4.2	3.0	11	9.5	11	102	.00	.00	2.6	.00
4	.20	2.2	4.0	2.5	11	10	9.6	70	.05	.00	.17	.00
5	.00	3.1	3.9	2.5	10	10	12	58	1.2	.00	.43	.00
6	.00	3.9	4.0	3.0	12	8.9	11	50	1.6	.00	10	.00
7	.00	3.9	4.5	3.5	12	8.4	11	42	3.7	.00	2.9	.00
8	.00	3.8	4.4	4.0	22	8.2	10	37	3.2	.00	.73	.00
9	.00	4.1	4.2	4.5	31	7.9	9.6	36	.29	.00	.00	4.5
10	.00	4.3	4.6	4.5	33	7.9	8.6	31	.00	.00	.00	2.0
11	.00	4.5	5.4	6.0	25	7.8	7.6	27	.00	.00	.00	7.6
12	.00	4.2	5.6	6.0	18	8.0	8.6	24	.00	.00	.00	3.3
13	.00	4.1	5.7	7.0	16	9.3	13	23	.00	.00	.00	1.1
14	.00	3.9	5.4	8.0	15	10	50	22	.00	.00	.00	.49
15	.00	3.9	4.7	8.0	15	21	90	22	.00	.00	.00	.14
16	.00	4.0	4.5	10	14	19	50	20	.00	.00	.00	.93
17	.00	4.2	4.5	12	13	12	30	18	.00	.00	.00	.35
18	.00	4.5	4.5	11	12	11	30	16	.00	.00	.00	.01
19	.00	4.3	4.5	9.0	11	11	30	15	.00	.00	.00	.00
20	.00	4.3	4.4	8.0	11	10	30	13	.00	.00	.00	.00
21	.00	4.2	4.5	7.0	9.9	9.7	30	12	.00	.00	.00	.00
22	.00	4.1	4.5	7.3	9.7	9.9	27	10	.00	.00	.00	.00
23	.00	4.1	4.6	7.8	9.9	9.7	75	9.9	.00	.00	.00	.00
24	.00	4.1	4.5	8.2	9.8	9.5	97	7.6	.00	.00	.00	.04
25	.00	4.0	4.0	8.7	10	9.3	101	5.0	.00	.00	.00	3.2
26	.00	4.0	4.0	9.2	12	9.1	109	3.8	.00	.00	.00	8.7
27	.36	4.3	4.0	9.7	11	8.9	118	2.0	.00	.35	.00	18
28	.89	4.3	4.0	10	9.6	8.7	124	.86	.00	.00	.00	23
29	1.4	4.5	3.5	10	---	8.5	133	.32	.00	.00	.00	14
30	1.6	4.3	3.5	12	---	8.4	142	.19	.00	.00	.00	34
31	2.1	---	3.5	12	---	7.3	---	.02	---	.00	.00	---
TOTAL	10.05	115.6	136.7	220.4	397.9	307.6	1397.3	965.69	10.04	.35	16.83	121.36
MEAN	.32	3.85	4.41	7.11	14.2	9.92	46.6	31.2	.33	.011	.54	4.05
MAX	2.1	4.5	5.7	12	33	21	142	146	3.7	.35	10	34
MIN	.00	2.1	3.5	2.5	9.6	7.3	7.3	.02	.00	.00	.00	.00
AC-FT	20	229	271	437	789	610	2770	1920	20	.7	33	241

CAL YR 1982 TOTAL 3705.40 MEAN 10.2 MAX 541 MIN .00 AC-FT 7350  
WTR YR 1983 TOTAL 3699.82 MEAN 10.1 MAX 146 MIN .00 AC-FT 7340

## RIO GRANDE BASIN

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 upstream from Interstate Highway 25, 1.2 mi southwest of Bernardo, 3 mi upstream from mouth, and 18 mi south of Belen.

DRAINAGE AREA.--7,350 mi<sup>2</sup>, approximately, of which at least 1,130 mi<sup>2</sup> does not contribute directly to surface runoff.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1939 to current year. Fragmentary gage height record and footnotes concerning no flow for the period September 1910 to August 1914, published in WSP 358 and 388, are in error and should not be used.

REVISED RECORDS.--WSP 1512: 1941-42, 1944-45, 1946(P), 1947-49. WSP 1632: 1957. WSP 1732: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 4,722.34 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 24, 1969, at datum 3.10 ft higher.

REMARKS.--Water-discharge records fair. Diversions for irrigation of about 11,500 acres above station (includes 3,700 acres irrigated wholly or partly from wells).

AVERAGE DISCHARGE.--43 years (water years 1941-83), 45.5 ft<sup>3</sup>/s, 32,960 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft<sup>3</sup>/s Sept. 23, 1941, from rating curve extended above 7,800 ft<sup>3</sup>/s; maximum gage height, 16.9 ft present datum, Aug. 12, 1955; no flow for extended periods.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since about 1880 occurred Sept. 23, 1929, from information by local residents (discharge, about 35,000 ft<sup>3</sup>/s, estimated on basis of peak at Rio Puerco). Another flood occurred Aug. 12, 1929 (discharge, 30,600 ft<sup>3</sup>/s, by slope-area method, from reports of State Engineer).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft<sup>3</sup>/s June 26, gage height, 10.00 ft, no peak above base of 2,000 ft<sup>3</sup>/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	8.5	42	14	195	136	1.0	50	1.0
2	.00	.00	.00	.00	9.6	33	13	203	147	.50	127	.15
3	.00	.00	.00	.00	15	30	12	208	165	.30	90	.00
4	.00	.00	.00	.00	16	36	16	199	154	.10	458	.00
5	.00	.00	.00	.00	13	20	16	190	140	.08	200	.00
6	.00	.00	.00	.00	9.3	13	16	150	100	.00	10	.00
7	.00	.00	.00	.00	7.6	16	16	100	80	.00	.20	.00
8	.00	.00	.00	.00	8.9	15	26	80	60	.00	.00	1.7
9	.00	.00	.00	.00	11	14	22	60	40	.00	.00	4.9
10	.00	.00	.00	.00	10	20	20	53	31	.00	.00	6.0
11	.00	.00	.00	.00	15	19	22	49	28	.00	.00	8.0
12	.00	.00	.00	.00	13	18	25	68	24	.00	.00	9.6
13	.00	.00	.00	.00	13	17	35	92	18	.00	.00	48
14	.00	.00	.00	.00	14	16	60	92	12	.00	.00	25
15	.00	.00	.00	.00	12	14	90	93	6.0	.00	.00	5.0
16	.00	.00	.00	.00	10	16	82	90	3.0	.00	.00	1.0
17	.00	.00	.00	.00	9.6	17	68	60	2.0	.00	1.0	.00
18	.00	.00	.00	.00	8.5	15	41	40	1.0	.00	.08	.00
19	.00	.00	.00	.00	7.9	16	40	30	.30	.00	.00	.00
20	.00	.00	.00	2.0	9.0	14	45	22	.17	.00	.00	.00
21	.00	.00	.00	4.0	12	14	52	25	.00	.00	.00	.00
22	.00	.00	.00	10	11	18	63	26	.00	.00	.00	.00
23	.00	.00	.00	.00	10	22	82	25	1.5	.00	.00	.00
24	.00	.00	.00	.00	35	21	103	17	11	.00	.00	.00
25	.00	.00	.00	.00	40	17	109	20	21	.00	.00	.00
26	.00	.00	.00	.00	45	21	107	25	200	.00	.00	.00
27	.00	.00	.00	.00	65	20	129	29	15	.00	.00	.05
28	.00	.00	.00	.00	90	22	169	60	10	198	.00	.03
29	.00	.00	.00	.00	---	18	184	78	7.0	150	7.3	.01
30	.00	.00	.00	.00	---	16	188	107	2.0	80	20	24
31	.00	---	.00	11	---	16	---	130	---	60	8.2	---
TOTAL	.00	.00	.00	27.00	528.9	606	1865	2616	1414.97	489.98	971.78	134.44
MEAN	.000	.000*	.000	.87	18.9	19.5	62.2	84.4	47.2	15.8	31.3	4.48
MAX	.00	.00	.00	11	90	42	188	208	200	198	458	48
MIN	.00	.00	.00	.00	7.6	13	12	17	.00	.00	.00	.00
AC-FT	.00	.00	.00	54	1050	1200	3700	5190	2810	972	1930	267
CAL YR 1982	TOTAL	14116.70	MEAN	38.7	MAX	1540	MIN	.00	AC-FT	28000		
WTR YR 1983	TOTAL	8654.07	MEAN	23.7	MAX	458	MIN	.00	AC-FT	17170		

RIO GRANDE BASIN  
08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1956 to current year.

WATER TEMPERATURES: October 1964 to current year.

SUSPENDED SEDIMENT 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, 3,870 micromhos Aug. 3; minimum daily, 825 micromhos Sept. 9.

WATER TEMPERATURES: Maximum, 29.5°C Aug. 2; minimum, 2.0°C, Jan. 22, Feb. 4.

SEDIMENT CONCENTRATIONS: Maximum daily, 198,000 mg/l Aug. 4; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 267,000 tons (242,000 tonnes) Aug. 4; minimum daily, 0 tons (0 tonnes) on many days.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)
MAR 01...	0930	78	1740	1860	8.2	7.4	14.0	8.0	410	281	281
AUG 02...	1400	66	2500	2450	7.7	7.5	31.5	29.5	720	620	620

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
MAR 01...	120	27	250	5.6	5.4	130	770	55	.80	9.9	1320
AUG 02...	220	41	280	4.7	9.7	99	980	170	.80	11	1770

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
MAR 01...	0930	130	950
AUG 02...	1400	370	30

RIO GRANDE BASIN  
08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	TEMPER- ATURE (DEG C) (000010)	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)
FEB												
05...	1330	13	6.0	25800	906	67	84	88	100	--	--	--
13...	1400	13	9.0	16100	565	64	87	96	100	--	--	--
21...	1400	15	11.0	44900	1820	--	--	--	--	--	--	100
27...	1600	103	13.0	102000	28400	51	58	83	96	99	100	--
MAR												
01...	0930	78	8.0	73200	15400	--	--	--	--	--	--	96
02...	1730	34	11.0	58400	5360	--	--	--	--	--	--	97
08...	1800	10	13.0	62400	1680	--	--	--	--	--	--	100
18...	1400	17	13.0	39800	1830	77	86	99	--	--	--	100
27...	1830	11	10.0	44300	1320	--	--	--	--	--	--	100
APR												
08...	1300	28	10.0	65400	4940	69	78	95	--	--	--	100
16...	1530	73	16.0	34400	6780	--	--	--	--	--	--	99
27...	1800	122	20.0	31500	10400	--	--	--	--	--	--	99
MAY												
01...	1230	167	13.0	37700	17000	--	--	--	--	--	--	98
02...	1135	193	13.0	35200	18300	--	--	--	--	--	--	99
03...	1245	198	13.0	41000	21900	46	54	72	97	100	--	--
10...	0930	59	13.5	44600	7100	--	--	--	--	--	--	97
20...	1245	27	15.0	48100	3510	66	79	94	99	100	--	--
31...	1830	139	17.0	138000	51800	48	56	69	94	100	--	--
JUN												
03...	1400	170	17.0	135000	62000	37	42	58	92	100	--	--
20...	1015	5.0	18.5	86700	1170	87	98	100	--	--	--	--
26...	1530	8.0	22.0	145000	3130	50	59	73	94	100	--	--
AUG												
02...	1400	66	29.5	67200	12000	--	--	--	--	--	--	100
04...	1800	293	26.0	163000	129000	49	52	74	93	99	100	--
18...	1500	10	28.0	139000	3750	71	86	100	--	--	--	--
SEP												
08...	1045	10	23.0	1150	31	83	98	100	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	2740	1720	2570	1250	1810	2020	2300	---
2				---	3210	1910	2630	1240	1770	2120	3020	---
3				---	3210	1910	2660	1210	1730	2240	3870	---
4				---	2310	1910	2970	1210	1800	---	2340	---
5				---	2380	1920	2690	1360	1790	---	2160	---
6				---	2450	1920	2630	1400	1770	---	2140	---
7				---	---	1880	2500	1430	1770	---	---	---
8				---	3740	1860	2490	1530	1800	---	---	2330
9				---	2700	1840	2290	1640	1930	---	---	825
10				---	2580	1990	2480	1680	1920	---	---	---
11				---	2520	2270	2600	1720	1940	---	---	---
12				---	1900	2600	2600	1730	1930	---	---	2460
13				---	2150	2160	2740	1750	1960	---	---	2870
14				---	2160	2400	2910	1710	2010	---	---	1990
15				---	2130	2700	3100	1720	2030	---	---	1930
16				---	2530	2690	1940	1700	1990	---	---	2000
17				---	2680	2680	1530	1680	1990	---	---	---
18				---	---	2550	1520	1710	2010	---	3010	---
19				---	2840	2400	1520	1830	---	---	---	---
20				1680	---	2460	1680	1800	2400	---	---	---
21				2550	2800	2470	2070	1930	---	---	---	---
22				2490	2570	2550	2090	1940	---	---	---	---
23				2370	2360	2360	2340	1980	---	---	---	---
24				---	2570	2340	1970	1990	2320	---	---	---
25				---	2110	2380	1490	2240	1250	---	---	---
26				---	2020	2510	1300	2260	2300	---	---	---
27				---	1910	2300	1320	2300	2000	---	---	---
28				---	1640	2360	1400	2090	2020	2620	---	2270
29				---	---	2320	1410	1930	1970	2090	3660	1620
30				---	---	2430	1340	1830	1940	2080	2970	---
31				2590	---	2450	---	2030	---	---	2570	---
MEAN				2340	2490	2270	2160	1740	1930	2200	2800	2030
WTR YR 1983	MEAN	2150		MAX	3870		MIN	825				

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

RIO GRANDE BASIN  
08353000 RIO PUERCO NEAR BERNARDO, NM -- Continued  
WATER-QUALITY RECORDS

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TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	5.0	12.0	12.0	13.0	19.0	23.0	28.0	---
2				---	5.0	11.0	14.0	13.0	20.0	24.0	26.0	---
3				---	5.0	11.0	12.0	17.0	20.0	25.5	26.0	---
4				---	2.0	10.0	5.0	18.0	16.0	---	26.0	---
5				---	6.0	10.0	4.0	17.0	20.0	---	27.0	---
6				---	6.0	10.0	7.0	15.0	19.0	---	28.0	---
7				---	---	11.0	7.0	15.0	19.0	---	---	---
8				---	7.0	13.0	8.0	16.0	20.0	---	---	23.0
9				---	8.0	15.0	13.0	18.0	24.0	---	---	28.0
10				---	6.0	16.0	14.0	18.0	21.0	---	---	---
11				---	8.0	14.0	13.0	16.0	15.0	---	---	---
12				---	7.0	15.0	10.0	17.0	21.0	---	---	26.0
13				---	9.0	10.0	8.0	17.0	20.0	---	---	27.0
14				---	8.0	13.0	12.0	17.0	21.0	---	---	25.0
15				---	9.0	12.0	15.0	17.0	19.0	---	---	27.0
16				---	11.0	12.0	16.0	17.0	22.0	---	---	24.0
17				---	10.0	11.0	18.0	15.0	21.0	---	---	---
18				---	---	10.0	18.0	15.0	15.0	---	27.0	---
19				---	7.0	9.0	18.0	14.0	---	---	---	---
20				4.0	---	8.0	16.0	13.0	18.5	---	---	---
21				3.0	11.0	10.0	13.0	15.0	---	---	---	---
22				2.0	13.0	9.0	15.0	15.0	---	---	---	---
23				3.0	9.0	9.0	15.0	20.0	---	---	---	---
24				---	9.0	10.0	18.0	20.0	17.0	---	---	---
25				---	12.0	8.0	18.0	19.0	17.0	---	---	---
26				---	13.0	9.0	17.0	19.0	22.0	---	---	---
27				---	13.0	10.0	20.0	23.0	20.0	---	---	---
28				---	11.0	14.0	17.0	17.0	23.0	27.0	---	19.0
29				---	---	15.0	18.0	21.0	25.0	25.0	26.0	15.0
30				---	---	15.0	12.0	17.0	22.0	28.0	29.0	---
31				4.0	---	16.0	---	19.0	---	---	29.0	---
MEAN				3.0	8.5	11.5	13.5	17.0	20.0	25.5	27.0	24.0
WTR YR 1983	MEAN	15.5		MAX	29.0		MIN	2.0				

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

DAY	MEAN		MEAN		MEAN		MEAN		MEAN		MEAN	
	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)	CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	0	.00	0	.00	0	.00	0	.00	2070	48	69500	788
2	0	.00	0	.00	0	.00	0	.00	8300	215	60000	5350
3	0	.00	0	.00	0	.00	0	.00	9900	401	57500	4660
4	0	.00	0	.00	0	.00	0	.00	16200	700	57500	5590
5	0	.00	0	.00	0	.00	0	.00	24800	870	56000	3020
6	0	.00	0	.00	0	.00	0	.00	18200	457	63000	2210
7	0	.00	0	.00	0	.00	0	.00	9500	195	69000	2980
8	0	.00	0	.00	0	.00	0	.00	4000	96	65400	2650
9	0	.00	0	.00	0	.00	0	.00	8300	247	61000	2310
10	0	.00	0	.00	0	.00	0	.00	19100	516	62100	3350
11	0	.00	0	.00	0	.00	0	.00	19600	794	60500	3100
12	0	.00	0	.00	0	.00	0	.00	18600	653	61000	2960
13	0	.00	0	.00	0	.00	0	.00	16300	572	60800	2790
14	0	.00	0	.00	0	.00	0	.00	18500	699	55800	2410
15	0	.00	0	.00	0	.00	0	.00	17200	557	52000	1970
16	0	.00	0	.00	0	.00	0	.00	16200	437	61200	2640
17	0	.00	0	.00	0	.00	0	.00	13200	342	52500	2410
18	0	.00	0	.00	0	.00	0	.00	14000	321	40800	1650
19	0	.00	0	.00	0	.00	0	.00	12000	256	37500	1620
20	0	.00	0	.00	0	.00	1070	5.8	41000	996	40000	1510
21	0	.00	0	.00	0	.00	750	8.1	57000	1850	41000	1550
22	0	.00	0	.00	0	.00	302	8.2	56500	1680	40600	1970
23	0	.00	0	.00	0	.00	0	.00	53000	1430	43400	2580
24	0	.00	0	.00	0	.00	0	.00	56000	5290	43200	2450
25	0	.00	0	.00	0	.00	0	.00	96500	10400	39000	1790
26	0	.00	0	.00	0	.00	0	.00	121000	14700	37800	2140
27	0	.00	0	.00	0	.00	0	.00	114000	20000	42800	2310
28	0	.00	0	.00	0	.00	0	.00	86800	21100	41300	2450
29	0	.00	0	.00	0	.00	0	.00	---	---	43000	2090
30	0	.00	0	.00	0	.00	0	.00	---	---	45800	1980
31	0	.00	---	---	0	.00	1610	48	---	---	39900	1720
TOTAL	---	0.00	---	0.00	---	0.00	---	70.10	---	85822	---	86090

[illegible]



## 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 upstream from bridge on Interstate Highway 25, 3.1 mi upstream from mouth, 2.9 mi north of San Acacia, and 15 mi north of Socorro.

DRAINAGE AREA.--1,380 mi<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, from topographic map. Prior to Sept. 14, 1966, at site 1.7 mi downstream at different datum.

REMARKS.--Water-discharge records poor. Diversions for irrigation of about 100 acres above station.

AVERAGE DISCHARGE.--36 years, 14.4 ft<sup>3</sup>/s, 10,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,200 ft<sup>3</sup>/s July 31, 1965, gage height, 5.54 ft, from floodmarks, present site and datum, from rating curve extended above 900 ft<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, by slope-area method), from reports of State Engineer.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,550 ft<sup>3</sup>/s Aug. 3, gage height, 2.60 ft; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	100	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.0	.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	4.0
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	150
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	20
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	20
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	30
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	40
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.0
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	50	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	10	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	172.00	279.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	5.55	9.30
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	100	150
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	341	553

CAL YR 1982 TOTAL 8726.60 MEAN 23.9 MAX 2900 MIN .00 AC-FT 17310  
WTR YR 1983 TOTAL 451.00 MEAN 1.24 MAX 150 MIN .00 AC-FT 895

RIO GRANDE BASIN  
08354000 RIO SALADO NEAR SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

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

REMARKS.--Samples are collected when flow is observed on this ephemeral stream.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

		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)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	
AUG 03...	0940	E500	950	925	7.9	7.8	23.0	19.5	180	87	87	
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)	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)
AUG 03...	55	11	130	4.4	4.5	96	290	51	.90	12	612	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
AUG 03...	0940	260	20

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
AUG 03...	0940	E500	19.5	73200	--	50	58	79	95	99	100	--
SEP 08...	1315	4.0	33.0	67100	725	--	--	--	--	--	--	99

## 08354500 SOCORRO MAIN CANAL NORTH AT SAN ACACIA, NM

LOCATION.--Lat 34°15'17", long 106°53'43", in SE¼NW¼ sec.1, T.1 S., R.1 W., Socorro County, Hydrologic Unit 13020203, on right bank at San Acacia, and 0.5 mi downstream from point of diversion.

PERIOD OF RECORD.--April 1936 to September 1964 (monthly discharge only), October 1964 to current year.

REVISED RECORDS.--WSP 1242: 1951.

GAGE.--Water-stage recorder. Datum of gage is 4,660.16 ft National Geodetic Vertical Datum of 1929. Prior to Mar. 8, 1958, at site 300 ft upstream (in old channel) at datum 0.42 ft lower.

REMARKS.--Records fair. This canal is 1 of 3 channels (stations 08354800, 08354900) carrying flow in valley cross section. For combined monthly flow in acre-ft of this canal, conveyance channel, and floodway, see tabulation below daily table for 08354900. Canal diverts water from right bank of Rio Grande for irrigation of about 8,000 acres. Alamillo Acequia and 3 other smaller ditches divert water from canal above station for irrigation of about 400 acres. Discharge records collected at the canal heading from October 1964 to September 1965 indicate that 7,770 acre-ft or 9% of the initial canal flow was diverted before reaching the regular gaging station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 274 ft<sup>3</sup>/s June 22, 1980; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	.00	.00	.00	.00	.00	121	139	198	220	132	164
2	125	.00	.00	.00	.00	.00	107	129	197	200	139	169
3	115	.00	.00	.00	.00	.00	82	120	202	220	131	163
4	123	.00	.00	.00	.00	.00	100	138	194	240	127	139
5	132	.00	.00	.00	.00	.00	101	146	192	250	133	83
6	134	.00	.00	.00	.00	.00	64	142	194	250	136	118
7	135	.00	.00	.00	.00	.00	89	129	198	228	149	143
8	136	.00	.00	.00	.00	.00	70	120	198	240	153	103
9	139	.00	.00	.00	.00	.00	88	120	212	228	153	97
10	136	.00	.00	.00	.00	.00	97	125	219	242	140	95
11	137	.00	.00	.00	.00	.00	102	146	230	242	154	97
12	128	.00	.00	.00	.00	.00	132	154	233	217	153	97
13	114	.00	.00	.00	.00	.00	132	158	222	223	180	116
14	119	.00	.00	.00	.00	.00	137	159	228	231	169	98
15	120	.00	.00	.00	.00	.00	139	159	236	190	168	90
16	119	.00	.00	.00	.00	18	129	162	248	203	176	94
17	115	.00	.00	.00	.00	53	135	158	234	200	166	106
18	118	.00	.00	.00	.00	56	147	158	227	190	185	103
19	116	.00	.00	.00	.00	58	160	144	240	182	191	102
20	118	.00	.00	.00	.00	62	160	158	234	162	176	100
21	120	.00	.00	.00	.00	64	168	160	235	159	172	99
22	118	.00	.00	.00	.00	62	162	138	243	170	144	103
23	118	.00	.00	.00	.00	71	161	173	238	165	157	120
24	117	.00	.00	.00	.00	71	160	185	240	163	186	108
25	120	.00	.00	.00	.00	92	164	193	193	184	151	113
26	119	.00	.00	.00	.00	112	136	190	110	172	143	112
27	114	.00	.00	.00	.00	100	128	190	150	198	143	83
28	103	.00	.00	.00	.00	102	122	188	220	176	129	69
29	93	.00	.00	.00	---	99	135	187	180	133	132	39
30	95	.00	.00	.00	---	102	152	182	230	109	142	39
31	92	---	.00	.00	---	100	---	190	---	107	130	---
TOTAL	3711	.00	.00	.00	.00	1222.00	3780	4840	6375	6094	4740	3162
MEAN	120	.000	.000	.000	.000	39.4	126	156	213	197	153	105
MAX	139	.00	.00	.00	.00	112	168	193	248	250	191	169
MIN	92	.00	.00	.00	.00	.00	64	120	110	107	127	39
AC-FT	7360	.00	.00	.00	.00	2420	7500	9600	12640	12090	9400	6270
CAL YR 1982 TOTAL	29100.00					MEAN 79.7	MAX 191	MIN .00	AC-FT 57720			
WTR YR 1983 TOTAL	33924.00					MEAN 92.9	MAX 250	MIN .00	AC-FT 67290			

## 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 upstream from railway crossing, 0.5 mi south of San Acacia, and 1.2 mi downstream from San Acacia diversion dam.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to September 1964 included in composite flow of station "08355000 Rio Grande at San Acacia," October 1960 to September 1964 (monthly discharge published in WSP 1923 with records for station 08355000), October 1964 to current year. Daily records 1958-64 are available in files at district office.

GAGE.--Water-stage recorder. Datum of gage is 4,652.5 ft 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. For combined monthly flow in acre-ft of this channel, floodway, and Socorro main canal north see tabulation below daily table for station 08354900.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,950 ft<sup>3</sup>/s May 12, 13, 1966; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.7	3.6	3.6	3.1	3.0	18	3.9	2.6	3.2	.53	.53
2	3.6	3.8	3.6	3.4	3.1	3.1	18	3.9	2.6	2.9	.67	.53
3	3.6	3.8	3.4	3.3	3.1	3.1	18	3.4	2.7	2.9	.80	.53
4	3.6	3.7	3.6	3.3	3.4	3.1	16	3.1	3.0	3.1	.76	.53
5	3.6	3.7	4.0	3.2	3.3	3.0	14	3.1	3.1	3.0	.79	.53
6	3.3	3.7	3.9	3.2	3.3	3.0	12	3.2	2.8	3.0	.94	.53
7	3.6	3.7	3.6	3.2	3.6	3.3	11	2.9	2.8	2.2	.98	.64
8	3.6	3.9	3.9	3.1	3.6	3.2	10	2.9	2.8	2.0	.87	.70
9	3.5	4.1	3.9	3.1	3.8	3.3	9.8	2.6	2.6	2.1	.72	.70
10	3.4	4.0	3.9	3.1	3.8	3.3	10	2.4	2.6	2.0	.72	.75
11	3.4	4.1	3.9	3.1	3.6	9.8	10	2.5	2.6	2.0	.68	.70
12	3.3	4.2	3.9	3.1	3.9	15	10	2.6	2.5	2.0	.62	.75
13	3.4	4.2	3.9	3.1	3.9	6.2	9.0	2.7	2.6	1.7	.67	.75
14	3.2	4.2	3.9	3.1	4.1	6.5	9.1	2.6	2.3	1.8	.73	.88
15	3.6	3.9	3.9	3.1	3.8	6.4	8.5	2.4	2.3	1.7	.73	.75
16	3.4	3.9	3.9	3.1	3.5	5.7	8.8	2.4	2.6	1.7	1.1	.75
17	3.4	3.8	3.9	3.2	3.6	5.5	9.5	2.3	2.7	1.8	.76	.75
18	3.4	3.8	3.9	3.3	3.3	8.2	9.7	2.3	2.8	1.7	.90	.75
19	3.7	3.6	3.9	3.3	3.3	7.0	9.2	2.2	2.7	1.6	1.9	.88
20	3.3	3.6	3.9	3.4	3.3	6.3	9.0	2.1	2.8	1.5	2.1	.88
21	3.3	3.9	3.9	3.3	3.3	5.3	8.8	2.2	2.5	1.3	2.2	.81
22	3.3	3.9	3.9	3.2	3.3	5.9	8.9	2.1	2.2	1.0	2.0	.88
23	3.4	3.8	3.9	3.0	3.3	12	9.7	2.0	2.4	.88	2.0	.83
24	3.4	3.6	3.9	2.8	3.0	16	8.7	1.9	2.5	.59	2.2	.93
25	3.4	3.6	3.8	2.9	3.1	16	8.3	1.9	2.6	.64	.89	.89
26	3.3	3.6	3.9	2.9	3.2	17	7.8	2.0	2.6	.59	.52	.88
27	3.4	3.6	3.9	2.8	3.2	15	5.8	2.1	2.7	.54	.67	.99
28	3.4	3.8	3.9	2.9	3.2	16	4.3	2.4	2.6	.48	.75	1.1
29	3.4	3.6	3.9	2.8	---	16	4.2	2.5	2.9	.43	.74	.91
30	3.3	3.6	3.8	3.0	---	17	4.0	2.5	3.3	.53	.60	.81
31	3.4	---	3.6	3.1	---	17	---	2.5	---	.59	.53	---
TOTAL	106.5	114.4	118.8	97.0	96.0	261.2	300.1	79.6	79.8	51.47	31.07	22.84
MEAN	3.44	3.81	3.83	3.13	3.43	8.43	10.0	2.57	2.66	1.66	1.00	.76
MAX	3.7	4.2	4.0	3.6	4.1	17	18	3.9	3.3	3.2	2.2	1.1
MIN	3.2	3.6	3.4	2.8	3.0	3.0	4.0	1.9	2.2	.43	.52	.53
AC-FT	211	227	236	192	190	518	595	158	158	102	62	45
CAL YR 1982	TOTAL	1359.77	MEAN 3.73	MAX 9.5	MIN .17	AC-FT 2700						
WTR YR 1983	TOTAL	1358.78	MEAN 3.72	MAX 18	MIN .43	AC-FT 2700						

RIO GRANDE BASIN  
08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

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LOCATION.--Samples collected about 100 ft (30 m) downstream from discharge station.

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to current year.

WATER TEMPERATURES: May 1959 to current year.

SUSPENDED SEDIMENT 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, 995 micromhos Oct. 1; minimum daily, 280 micromhos July 6.

WATER TEMPERATURES: Maximum, 25.0°C on many days during July and August; minimum 9.0°C on several days during February.

SEDIMENT CONCENTRATIONS: Maximum daily, 781 mg/l July 29; minimum daily, 8 mg/l Oct. 22, Feb. 19, 25-26.

SEDIMENT LOADS: Maximum daily, 23 tons (21 tonnes) Apr. 1; minimum daily, 0 tons (0 tonnes) Oct. 21-22.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, 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)
JUL 06...	1030	3.0	280	299	8.2	8.0	28.5	21.5	10.0	29	100	12
DATE		HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (90410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
JUL 06...	12	32	5.3	19	.9	2.8	110	.0	90	91	46	7.2
DATE		FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS (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, ORTHO, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUL 06...	.30	18	185	.20	.22	.110	1.1	1.4	.140	.120	6.0	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, TOTAL RECOV- ERABLE (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
JUL 06...	1030	3	3	0	<1	<1	10	<10	20	4
DATE		IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, 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)
JUL 06...	30	0	<1	.5	.0	<1	<1	720	20	

RIO GRANDE BASIN  
08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML) (31673)
DATE		
JUL 06...	80	500

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	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)
APR 04...	1430	16	14.0	448	19	97	98	98	98	100
JUL 30...	1430	.26	25.0	567	.40	99	99	100	--	--
AUG 19...	1430	1.9	25.0	448	2.3	99	99	100	--	--
25...	1430	.89	24.0	665	1.6	100	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	995	805	851	794	848	788	634	788	837	773	766	783
2	745	788	848	805	848	782	632	788	834	771	765	764
3	829	795	848	809	844	787	634	788	742	775	767	777
4	842	788	844	809	845	781	630	802	784	772	757	784
5	828	797	849	812	843	786	634	846	788	774	742	771
6	861	794	850	802	843	780	579	851	786	770	744	773
7	876	802	844	806	844	787	615	857	795	775	646	725
8	830	806	844	802	844	779	619	855	792	762	708	816
9	877	807	843	807	841	784	623	862	798	764	699	790
10	876	804	841	807	842	779	625	886	792	761	709	786
11	881	807	842	811	837	787	629	895	799	765	661	810
12	876	803	835	817	837	783	632	905	796	762	686	789
13	886	810	851	818	835	641	632	901	800	765	572	826
14	882	745	851	819	836	670	631	895	778	754	689	827
15	861	813	851	819	835	684	633	898	784	758	692	853
16	856	831	856	816	834	682	633	756	776	754	675	857
17	861	845	853	816	759	690	633	836	784	756	665	860
18	854	840	848	762	782	687	571	836	777	754	692	638
19	858	831	847	834	794	667	610	841	784	757	772	709
20	847	831	846	844	793	662	617	837	744	762	735	800
21	849	836	862	848	798	666	618	842	795	752	734	816
22	845	832	864	849	798	663	617	827	788	771	731	806
23	851	845	868	852	797	667	663	832	794	773	791	809
24	845	837	862	851	783	662	662	821	790	774	812	848
25	851	851	843	851	788	585	666	825	796	774	730	830
26	846	847	840	851	784	644	662	820	730	731	778	836
27	801	854	835	853	790	660	667	826	770	726	811	808
28	798	851	831	850	784	659	768	828	775	740	819	808
29	799	848	838	853	---	664	783	835	779	742	756	806
30	799	843	837	850	---	662	784	832	777	742	804	796
31	802	---	724	849	---	637	---	836	---	754	797	---
MEAN	849	820	843	825	818	708	645	840	785	760	732	797
WTR YR 1983	MEAN	785		MAX	995	MIN	571					

RIO GRANDE BASIN  
08354800 RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

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TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	15.0	14.0	12.0	10.0	13.0	14.0	14.0	15.0	22.0	25.0	24.0
2	24.0	14.0	14.0	12.0	9.0	13.0	14.0	14.0	15.0	22.0	25.0	24.0
3	24.0	14.0	14.0	12.0	9.0	13.0	14.0	14.0	15.0	22.0	25.0	24.0
4	24.0	14.0	14.0	13.0	9.0	13.0	14.0	15.0	15.0	22.0	25.0	24.0
5	24.0	14.0	14.0	13.0	9.0	13.0	14.0	15.0	15.0	22.0	25.0	24.0
6	24.0	14.0	14.0	14.0	9.0	13.0	14.0	15.0	15.0	22.0	25.0	24.0
7	24.0	14.0	14.0	14.0	9.0	13.0	14.0	15.0	15.0	22.0	25.0	24.0
8	24.0	14.0	14.0	14.0	9.0	13.0	14.0	15.0	16.0	22.0	25.0	24.0
9	23.0	14.0	14.0	14.0	9.0	13.0	14.0	15.0	16.0	23.0	25.0	24.0
10	23.0	14.0	14.0	14.0	9.0	13.0	14.0	15.0	16.0	25.0	25.0	22.0
11	23.0	14.0	14.0	14.0	9.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
12	23.0	14.0	14.0	14.0	9.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
13	23.0	14.0	14.0	14.0	9.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
14	23.0	14.0	14.0	14.0	10.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
15	22.0	14.0	14.0	14.0	11.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
16	22.0	14.0	14.0	14.0	11.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
17	18.0	14.0	14.0	14.0	11.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
18	19.0	14.0	14.0	12.0	11.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
19	18.0	14.0	14.0	12.0	12.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
20	16.0	14.0	14.0	12.0	12.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
21	16.0	14.0	14.0	12.0	12.0	12.0	14.0	15.0	16.0	25.0	25.0	23.0
22	16.0	14.0	14.0	12.0	12.0	12.0	14.0	15.0	16.0	25.0	25.0	23.0
23	16.0	14.0	14.0	12.0	12.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
24	16.0	14.0	14.0	12.0	12.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
25	16.0	14.0	13.0	12.0	12.0	14.0	14.0	15.0	16.0	25.0	24.0	23.0
26	16.0	14.0	13.0	12.0	12.0	14.0	14.0	15.0	22.0	25.0	24.0	23.0
27	16.0	14.0	13.0	12.0	12.0	14.0	14.0	15.0	22.0	25.0	24.0	23.0
28	16.0	14.0	13.0	12.0	12.0	14.0	14.0	15.0	22.0	25.0	24.0	23.0
29	15.0	14.0	13.0	12.0	---	14.0	14.0	15.0	22.0	25.0	24.0	22.0
30	15.0	14.0	13.0	12.0	---	14.0	14.0	15.0	22.0	25.0	24.0	20.0
31	15.0	---	12.0	12.0	---	14.0	---	15.0	---	25.0	24.0	---
MEAN	20.0	14.0	13.5	13.0	10.5	13.5	14.0	15.0	17.0	24.0	25.0	23.0
WTR YR 1983	MEAN	17.0	MAX	25.0	MIN	9.0						

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	27	.26	14	.14	31	.30	28	.27	15	.13	15	.12
2	15	.15	19	.19	19	.18	27	.25	13	.11	11	.09
3	16	.16	19	.19	19	.17	32	.29	13	.11	13	.11
4	18	.17	17	.17	17	.17	35	.31	15	.14	11	.09
5	18	.17	18	.18	16	.17	28	.24	19	.17	11	.09
6	21	.19	19	.19	19	.20	30	.26	14	.12	10	.08
7	21	.20	28	.28	31	.30	26	.22	14	.14	17	.15
8	13	.13	38	.40	30	.32	28	.23	12	.12	16	.14
9	14	.13	37	.41	32	.34	25	.21	14	.14	11	.10
10	21	.19	18	.19	40	.42	38	.32	15	.15	11	.10
11	16	.15	14	.15	44	.46	26	.22	18	.17	11	.29
12	13	.12	14	.16	35	.37	24	.20	12	.13	15	.61
13	15	.14	15	.17	21	.22	25	.21	14	.15	52	.87
14	14	.12	23	.26	25	.26	22	.18	16	.18	62	1.1
15	17	.17	21	.22	22	.23	24	.20	15	.15	54	.93
16	17	.16	24	.25	20	.21	26	.22	14	.13	55	.85
17	13	.12	20	.21	17	.18	27	.23	14	.14	59	.88
18	20	.18	21	.22	19	.20	19	.17	10	.09	60	1.3
19	13	.13	14	.14	27	.28	14	.12	8	.07	103	1.9
20	11	.10	15	.15	32	.34	12	.11	9	.08	99	1.7
21	9	.00	17	.18	35	.37	17	.15	10	.09	98	1.4
22	8	.00	11	.12	30	.32	15	.13	10	.09	102	1.6
23	11	.10	17	.17	30	.32	14	.11	11	.10	140	4.5
24	11	.10	19	.18	36	.38	22	.17	10	.08	136	5.9
25	13	.12	29	.28	23	.24	13	.10	8	.07	264	11
26	12	.11	21	.20	24	.25	13	.10	8	.07	247	11
27	12	.11	20	.19	17	.18	23	.17	9	.08	234	9.5
28	13	.12	16	.16	18	.19	23	.18	9	.08	237	10
29	14	.13	18	.17	22	.23	26	.20	---	---	235	10
30	20	.18	9	.09	19	.19	35	.28	---	---	240	11
31	16	.15	---	---	42	.41	20	.17	---	---	422	19
TOTAL	---	4.26	---	6.01	---	8.40	---	6.22	---	3.28	---	106.40

DAY	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS
	CONCENTRATION (MG/L)		CONCENTRATION (MG/L)		CONCENTRATION (MG/L)		CONCENTRATION (MG/L)		CONCENTRATION (MG/L)		CONCENTRATION (MG/L)	
		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER
1	463	23	64	.67	40	.28	101	.87	364	.52	428	.61
2	449	22	52	.55	36	.25	93	.73	338	.61	314	.45
3	454	22	65	.60	76	.55	95	.74	387	.84	265	.38
4	448	19	43	.36	91	.74	97	.81	263	.54	209	.30
5	463	18	40	.33	82	.69	100	.81	216	.46	282	.40
6	161	5.2	33	.29	81	.61	97	.79	195	.49	196	.28
7	100	3.0	37	.29	81	.61	107	.64	420	1.1	178	.31
8	99	2.7	40	.31	156	1.2	108	.58	292	.69	221	.42
9	100	2.6	54	.38	102	.72	102	.58	383	.74	210	.40
10	95	2.6	41	.27	67	.47	105	.57	364	.71	250	.51
11	98	2.6	36	.24	62	.44	125	.68	435	.80	121	.23
12	95	2.6	37	.26	51	.34	136	.73	250	.42	98	.20
13	91	2.2	45	.33	52	.37	138	.63	138	.25	168	.34
14	91	2.2	51	.36	75	.47	143	.69	270	.53	244	.58
15	92	2.1	52	.34	92	.57	173	.79	205	.40	357	.72
16	86	2.0	42	.27	86	.60	147	.67	272	.81	214	.43
17	96	2.5	48	.30	76	.55	133	.65	475	.97	240	.49
18	314	8.2	42	.26	71	.54	181	.83	710	1.7	290	.59
19	314	7.8	32	.19	85	.62	312	1.3	513	2.6	278	.66
20	312	7.6	34	.19	143	1.1	358	1.4	555	3.1	568	1.3
21	304	7.2	36	.21	248	1.7	222	.78	520	3.1	338	.74
22	308	7.4	36	.20	138	.82	243	.66	552	3.0	256	.61
23	397	10	36	.19	103	.67	191	.38	535	2.9	260	.58
24	418	9.8	37	.19	97	.65	174	.30	382	2.3	162	.41
25	411	9.2	46	.24	95	.67	442	.73	593	1.4	323	.78
26	418	8.8	47	.25	85	.60	580	.78	530	.74	407	.97
27	395	6.2	53	.30	89	.65	407	.51	307	.56	274	.73
28	95	1.1	53	.34	115	.81	575	.54	332	.67	219	.63
29	56	.64	50	.34	142	1.1	781	.55	499	1.0	313	.77
30	62	.67	42	.28	142	1.3	610	.58	475	.77	286	.63
31	---	---	41	.28	---	---	572	.63	512	.73	---	---
TOTAL	---	220.91	---	9.61	---	20.69	---	21.93	---	35.45	---	16.47
TOTAL LOAD FOR YEAR:		459.63	TONS.									



RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM  
(Surveillance network)

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LOCATION.--Lat 34°15'23", long 106°53'18", Socorro County, Hydrologic Unit 13020203, in Sevilleta Grant, on right bank 0.2 mi below San Acacia diversion dam; 0.3 mi east of San Acacia, 2 mi downstream from Rio Salado, and at mile 1,472.6.

DRAINAGE AREA.--26,770 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, Co.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1936 to September 1958 (prior to construction of conveyance channel), October 1958 to September 1964 (flow in conveyance channel included), October 1964 to current year. Prior to October 1964 published as "08355000 Rio Grande at San Acacia" and records are not equivalent.

REVISED RECORDS.--WSP 1242: 1951. WSP 1732: 1958(M). WRD 1969: 1967.

GAGE.--Water-stage recorder. Datum of gage is 4,654.50 ft National Geodetic Vertical Datum of 1929. Aug. 19, 1965 to Aug. 15, 1967 at same site at datum 1.89 ft higher. Prior to Mar. 19, 1953, at several sites 0.1 mi upstream at different datums. Mar. 19, 1953 to Aug. 19, 1965, at site 0.4 mi downstream at datum 3.60 ft higher. Floodway is bypassed by Socorro main canal north and since Oct. 1958, by conveyance channel.

REMARKS.--Water-discharge records poor. Floodway is 1 of 3 channels (stations 08354500, 08354800) carrying flow in valley cross section. For combined monthly flow in acre-ft of floodway, conveyance channel, and Socorro main canal north see tabulation below. Normal plan is for floodway to carry flow when combined capacities of conveyance channel (about 2,000 ft<sup>3</sup>/s) and Socorro main canal north (about 200 ft<sup>3</sup>/s) is exceeded, during periods of silt sluicing, and when river silt load is excessive. Diversions above station for irrigation of about 760,000 acres; this includes Socorro main canal north which bypasses station and irrigates about 8,000 acres.

AVERAGE DISCHARGE.--22 years (water years 1937-58), 1,192 ft<sup>3</sup>/s, 863,000 acre-ft/yr, prior to construction of conveyance channel; does not include Socorro main canal north.  
15 years (water years 1959-73), 911 ft<sup>3</sup>/s, 660,000 acre-ft/yr, combined flow of floodway, conveyance channel and Socorro main canal north prior to closure of Cochiti Dam.  
10 years (water years 1974-83), 1,202 ft<sup>3</sup>/s, 870,800 acre-ft/yr, combined flow of floodway, conveyance channel, and Socorro main canal north since closure of Cochiti Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft<sup>3</sup>/s Aug. 5, 1936, gage height, 10.75 ft, site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,750 ft<sup>3</sup>/s June 26, gage height, 6.62 ft; minimum daily, 18 ft<sup>3</sup>/s Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	1190	1100	897	1120	1820	1210	5610	5390	5230	802	165
2	1280	1130	1010	884	1120	1880	1490	5550	5350	4960	974	184
3	1140	983	1040	901	1080	1780	1730	5330	5620	4990	1260	159
4	1020	933	1210	735	1110	1690	2120	4970	5900	4820	1070	193
5	837	1150	1040	716	1170	1630	2190	5170	5880	4230	1320	105
6	857	1190	898	746	1180	1760	2000	4910	5830	4000	1390	113
7	1030	1020	877	718	1250	1610	1730	4360	5760	3500	1310	61
8	1220	1220	851	819	1200	1640	1450	4190	5580	3290	843	117
9	1190	1310	917	843	1190	1720	897	4310	5440	3570	726	442
10	1090	1430	995	783	1130	1510	950	4130	5350	3120	369	140
11	897	1550	980	743	1130	1220	1320	4450	5300	3200	160	174
12	739	1610	1070	936	1120	1300	1540	4490	5200	2940	140	275
13	753	1850	936	1020	1120	1350	964	4660	5370	3360	221	137
14	772	1720	962	966	1120	1420	877	4680	5280	3410	366	311
15	722	1500	1180	903	1040	1360	945	4890	5270	2880	258	199
16	674	1490	1080	959	1090	1320	1170	4980	5510	2880	226	235
17	738	1470	1120	1070	1200	1440	1230	4890	5530	3200	146	332
18	688	1450	1190	1130	1310	1830	1220	4990	5440	2870	90	305
19	653	1490	1170	1130	1280	2060	872	4720	5340	2700	138	260
20	482	1400	1180	1090	1250	1630	762	4630	5290	2140	102	214
21	444	1410	1050	1080	1270	1430	1030	4850	5110	1370	34	209
22	516	1600	996	1130	1340	1590	1800	4460	5180	594	20	119
23	524	1470	1150	1140	1340	1390	4010	4580	5100	260	18	132
24	465	1420	1180	1100	1370	1450	4260	4240	5100	238	77	76
25	525	1360	1170	1130	1450	1470	4070	4300	5520	250	88	81
26	492	1450	1340	1030	1740	1490	4160	4290	5890	165	73	88
27	526	1410	1400	1000	1640	1500	4730	4280	5600	175	39	143
28	619	1410	1310	975	1720	1570	4840	4840	5360	102	88	409
29	507	1300	1300	1020	---	1620	4860	5050	5590	35	172	143
30	603	1200	1140	1280	---	1270	5060	5080	5500	280	506	157
31	736	---	920	1190	---	1260	---	5110	---	979	195	---
TOTAL	24109	41116	33762	30064	35080	48010	65487	146990	163580	75738	13221	5678
MEAN	778	1371	1089	970	1253	1549	2183	4742	5453	2443	426	189
MAX	1370	1850	1400	1280	1740	2060	5060	5610	5900	5230	1390	442
MIN	444	933	851	716	1040	1220	762	4130	5100	35	18	61
AC-FT	47820	81550	66970	59630	69580	95230	129900	291600	324500	150200	26220	11260
(†)	55390	81780	67210	59820	69770	98170	138000	301400	337300	162400	35670	17580

CAL YR 1982 TOTAL 508314.2 MEAN 1393 MAX 5040 MIN 4.2 AC-FT 1008000 (†) MEAN 1476 AC-FT 1069000  
WTR YR 1983 TOTAL 682835.0 MEAN 1871 MAX 5900 MIN 18 AC-FT 1354000 (†) MEAN 1976 AC-FT 1424000  
(†) COMBINED FLOW, IN ACRE-FT, AND MEAN, IN CUBIC FEET PER SECOND, OF FLOODWAY, CONVEYANCE CHANNEL, AND SOCORRO MAIN CANAL NORTH.

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

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, 1,400 micromhos Aug. 31; minimum daily, 274 micromhos June 23.

WATER TEMPERATURES: Maximum, 29.0°C Sept. 6; minimum 2.0°C on Jan. 5.

SEDIMENT CONCENTRATIONS: Maximum daily, 81,000 mg/l Sept. 28; minimum daily, 92 mg/l Aug. 17.

SEDIMENT LOADS: Maximum daily, 198,000 tons (180,000 tonnes) June 27; minimum daily, 13 tons (12 tonnes) Aug. 21.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	
NOV 04...	1015	862	610	640	8.2	8.3	10.0	8.0	9.6	29	180	18	
JAN 05...	1000	724	550	--	8.0	--	2.5	2.0	11.8	14	--	--	
MAR 03...	1145	1670	510	534	8.2	8.0	15.0	10.0	9.1	59	160	0	
MAY 05...	1115	5240	360	367	8.0	8.0	23.5	15.5	8.3	48	130	3	
JUL 06...	1030	4260	280	299	8.2	8.0	28.5	21.5	10.0	29	100	20	
SEP 06...	1030	28	650	--	8.4	--	26.0	19.0	12.2	32	--	--	
DATE		HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 04...	18	55	10	59	2.0	4.6	--	--	--	161	110	34	
JAN 05...	--	--	--	--	--	--	--	--	--	--	--	--	
MAR 03...	0	48	8.8	48	1.7	3.9	220	.0	--	131	94	27	
MAY 05...	3	39	7.0	25	1.0	3.2	150	.0	120	96	70	16	
JUL 06...	20	32	5.3	19	.9	2.8	100	.0	90	91	46	7.2	
SEP 06...	--	--	--	--	--	--	190	10	170	--	--	--	

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTH- DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 04...	.50	26	397	.60	.61	.070	1.6	2.3	.890	.270	6.0
JAN 05...	--	--	--	.50	.42	.320	.78	1.6	.560	.350	4.3
MAR 03...	.50	23	362	.70	.69	.110	2.2	3.0	.900	.220	12
MAY 05...	.30	18	253	.30	.33	.230	1.7	2.2	.490	.090	15
JUL 06...	.30	18	180	.20	.22	.110	1.1	1.4	.140	.120	6.0
SEP 06...	--	--	--	.50	.45	.050	1.1	1.6	.250	.150	4.2

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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...	1015	6	5	130	<1	<1	10	<10	20	2
MAR 03...	1145	--	--	100	--	--	--	--	--	--
MAY 05...	1115	--	--	0	--	--	--	--	--	--
JUL 06...	1030	3	3	0	<1	<1	10	<10	20	4

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 04...	0	0	<1	.0	.0	1	<1	70	0
MAR 03...	20	--	--	--	--	--	--	--	--
MAY 05...	30	--	--	--	--	--	--	--	--
JUL 06...	30	0	<1	.5	.0	<1	<1	720	20

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	
NOV 04...	1015	<2.0	2.0	360	2	0	0	
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 04...	<10	0	700	<10	90	.00	0	

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 04...	1015	< 11	52	42	5.9	33	5.6	32	.08	4.6

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN, TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)
MAR 03...	1145	--	--	--	--	--	--	--	--	--
SEP 06...	1030	< .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)	MIREX, TOTAL (UG/L) (39755)
MAR 03...	--	--	--	--	--	--	--	--	--	--
SEP 06...	< .01	< .01	< .01	< .01	< .01	< .01	< .01	< .01	< .01	< .01

DATE	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION TOTAL (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
MAR 03...	--	--	--	--	--	.02	< .01	< .01	< .01
SEP 06...	< .10	< .01	< .10	< 1	< .01	--	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 04...	260	910
JAN 05...	K12	230
MAR 03...	220	950
MAY 05...	220	570
JUL 06...	80	500
SEP 06...	230	510

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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									
20...	0930	554	11.0	738	1100	--	--	--	45
NOV									
04...	1015	862	8.0	2990	6960	5	5	7	21
17...	0945	1490	6.5	1370	5510	3	5	15	36
DEC									
08...	1030	817	3.0	700	1540	12	14	19	37
JAN									
05...	1000	724	2.0	1060	2070	--	--	--	18
FEB									
15...	1030	1020	7.0	420	1160	--	--	--	72
MAR									
03...	1145	1670	10.0	2990	13500	36	42	56	70
17...	1130	1250	10.0	2630	8880	38	42	49	56
23...	1400	305	13.0	3040	2500	--	--	--	--
APR									
06...	1245	1970	7.0	762	4050	35	44	59	--
21...	0930	768	13.0	775	1610	--	--	--	45
23...	1400	1540	14.0	3590	14900	--	--	--	--
MAY									
01...	1400	1240	14.0	3340	11200	--	--	--	--
05...	1115	5240	15.5	3230	45700	22	26	34	55
18...	1130	5080	14.0	1510	20700	26	30	46	77
JUN									
02...	1000	5380	17.0	3790	55100	49	58	70	94
17...	1230	5620	20.0	1060	16100	32	37	48	76
JUL									
06...	1030	4260	21.5	1850	21300	--	--	--	25
20...	1000	2120	24.0	812	4650	45	62	73	--
AUG									
03...	1115	2200	23.5	36900	219000	55	67	81	94
17...	1115	162	27.0	79	35	--	--	--	--
30...	1230	239	23.0	63200	40800	56	68	90	99
SEP									
06...	1030	28	19.0	303	23	--	--	--	--
20...	1000	250	21.0	1670	1130	34	42	58	77
27...	1110	1400	18.0	694	2620	--	--	--	67

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.	SED. SUSP. SIEVE DIAM.
	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
DATE	.125 MM (70343)	.250 MM (70344)	.500 MM (70345)	1.00 MM (70346)	.062 MM (70331)	.125 MM (70332)	.250 MM (70333)	.500 MM (70334)	1.00 MM (70335)
OCT									
20...	83	100	--	--	--	--	--	--	--
NOV									
04...	69	98	100	--	--	--	--	--	--
17...	69	95	100	--	--	--	--	--	--
DEC									
08...	75	100	--	--	--	--	--	--	--
JAN									
05...	47	98	100	--	--	--	--	--	--
FEB									
15...	88	99	100	--	--	--	--	--	--
MAR									
03...	80	97	100	--	--	--	--	--	--
17...	57	77	99	100	--	--	--	--	--
23...	--	--	--	--	58	--	--	--	--
APR									
06...	--	--	--	--	93	98	100	--	--
21...	48	68	97	100	--	--	--	--	--
23...	--	--	--	--	97	--	--	--	--
MAY									
01...	--	--	--	--	83	--	--	--	--
05...	81	97	100	--	--	--	--	--	--
18...	93	99	100	--	--	--	--	--	--
JUN									
02...	98	100	--	--	--	--	--	--	--
17...	92	99	100	--	--	--	--	--	--
JUL									
06...	56	96	100	--	--	--	--	--	--
20...	--	--	--	--	89	97	100	--	--
AUG									
03...	97	99	100	--	--	--	--	--	--
17...	--	--	--	--	57	60	81	98	100
30...	100	--	--	--	--	--	--	--	--
SEP									
06...	--	--	--	--	89	99	100	--	--
20...	87	98	100	--	--	--	--	--	--
27...	84	98	99	100	--	--	--	--	--

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

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PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (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)
OCT								
20...	0930	554	738	1100	1	11	85	100
NOV								
04...	1015	862	2990	6960	1	12	78	100
17...	0945	1490	1370	5510	1	19	91	100
DEC								
08...	1030	817	700	1540	1	8	81	100
JAN								
05...	1000	724	1060	2070	1	8	73	98
FEB								
15...	1030	1020	420	1160	1	7	88	100
MAR								
03...	1145	1670	2990	13500	1	4	60	94
17...	1130	1250	2630	8880	0	1	70	100
APR								
06...	1245	1970	762	4050	27	53	89	100
21...	0930	768	775	1610	0	0	32	74
MAY								
05...	1115	5240	3230	45700	1	4	43	79
18...	1130	5080	1510	20700	33	58	94	100
JUN								
02...	1000	5380	3790	55100	11	23	81	99
17...	1230	5620	1060	16100	1	10	90	100
JUL								
06...	1030	4260	1850	21300	1	5	73	98
20...	1000	2120	812	4650	2	12	72	100
AUG								
17...	1115	162	79	35	2	3	54	93
SEP								
06...	1030	28	303	23	2	13	79	99
20...	1000	250	1670	1130	2	7	81	98

DATE	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)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
OCT								
20...	--	--	--	--	--	--	--	--
NOV								
04...	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
DEC								
08...	--	--	--	--	--	--	--	--
JAN								
05...	100	--	--	--	--	--	--	--
FEB								
15...	--	--	--	--	--	--	--	--
MAR								
03...	100	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
APR								
06...	--	--	--	--	--	--	--	--
21...	--	--	93	99	100	--	--	--
MAY								
05...	--	--	87	91	94	96	97	100
18...	--	--	--	--	--	--	--	--
JUN								
02...	100	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
JUL								
06...	100	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
AUG								
17...	96	98	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
SEP								
06...	100	--	--	--	--	--	--	--
20...	100	--	--	--	--	--	--	--

RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	TEMPER- ATURE (DEG C) (000010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SEDI- MENT, DISCH, BED MA- TERIAL (T/DAY) (80156)	STREAM WIDTH (FT) (000004)	STREAM DEPTH, MEAN (FT) (000064)	STREAM VELOC- ITY, MEAN (FPS) (000055)
OCT									
20...	0930	554	11.0	738	1100	2260	140	1.1	3.60
NOV									
04...	1015	862	8.0	2990	6960	11800	148	1.4	4.10
17...	0945	1490	6.5	1370	5510	6490	158	2.0	4.70
DEC									
08...	1030	817	3.0	700	1540	3420	128	1.7	3.80
JAN									
05...	1000	724	2.0	1060	2070	4620	138	1.5	3.60
FEB									
15...	1030	1020	7.0	420	1160	1310	190	3.3	1.60
MAR									
03...	1145	1670	10.0	2990	13500	18900	205	1.9	4.30
17...	1130	1250	10.0	2630	8880	12600	208	1.7	3.60
APR									
06...	1245	1970	7.0	762	4050	4800	210	3.2	2.90
21...	0930	768	13.0	775	1610	2070	200	1.9	2.00
MAY									
18...	1130	5080	14.0	1510	20700	24500	200	4.4	5.80
JUN									
02...	1000	5380	17.0	3790	55100	57100	201	5.7	4.70
17...	1230	5620	20.0	1060	16100	19200	202	4.7	5.90
JUL									
06...	1030	4260	21.5	1850	21300	31400	200	3.9	5.40
20...	1000	2120	24.0	812	4650	6250	199	2.4	4.40
AUG									
17...	1115	162	27.0	79	35	91	84.0	1.1	1.80
SEP									
06...	1030	28	19.0	303	23	34	52.0	.60	.90
20...	1000	250	21.0	1670	1130	2020	133	.75	2.50

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	586	678	646	1040	1070	786	550	442	373	308	500	979
2	453	881	630	1040	1060	776	547	444	370	309	496	746
3	487	870	692	1050	1050	781	553	444	327	307	1220	715
4	489	893	642	1040	965	783	548	---	330	306	1280	683
5	422	917	680	1050	975	786	493	422	333	306	945	737
6	467	907	672	939	960	688	526	424	332	307	834	739
7	480	977	754	924	978	683	536	424	335	318	700	753
8	476	870	755	925	965	676	539	426	295	325	661	702
9	528	862	756	919	1000	683	542	424	291	329	573	861
10	523	907	727	919	1030	672	542	428	289	325	579	737
11	532	914	754	932	1030	674	550	433	289	325	593	710
12	529	903	746	814	1020	591	551	431	288	323	590	942
13	532	671	790	844	1020	682	549	432	290	326	582	832
14	529	588	769	756	1020	692	548	431	287	342	703	950
15	572	642	747	804	1010	699	549	432	289	343	658	869
16	571	647	768	852	990	697	549	339	285	342	623	760
17	571	646	784	773	1040	693	498	351	293	345	641	647
18	589	650	751	901	1040	522	529	353	286	343	674	646
19	569	642	932	1000	1050	512	539	357	288	345	717	657
20	584	636	940	1020	1040	504	540	354	324	372	673	667
21	703	641	945	1030	1050	505	541	358	281	380	686	678
22	714	651	939	1020	1070	505	540	365	275	517	669	696
23	715	651	941	1020	1080	507	548	366	274	531	748	724
24	708	653	937	945	1080	470	549	363	275	535	1010	725
25	718	661	850	940	1090	556	550	366	276	537	784	752
26	715	639	838	931	1090	562	548	374	485	650	788	803
27	658	638	844	933	1090	568	550	367	495	687	801	840
28	668	660	840	944	825	567	447	370	337	929	803	927
29	673	665	853	1070	---	573	442	372	321	946	1270	833
30	672	671	854	1080	---	551	439	371	316	602	1270	811
31	674	---	949	1070	---	555	---	372	---	576	1400	---
MEAN	584	741	798	952	1020	629	531	395	318	433	789	771
WTR YR 1983	MEAN	662	MAX	1400	MIN	274						



RIO GRANDE BASIN  
08354900 RIO GRANDE FLOODWAY AT SAN ACACIA, NM -- Continued  
WATER-QUALITY RECORDS

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TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ONCE-DAILY												
1	24.0	15.0	12.0	10.0	7.0	13.0	14.0	14.0	15.0	20.0	25.0	24.0
2	24.0	14.0	13.0	10.0	7.0	13.0	14.0	14.0	15.0	22.0	25.0	24.0
3	24.0	14.0	13.0	10.0	7.0	13.0	14.0	14.0	15.0	22.0	25.0	24.0
4	24.0	14.0	13.0	10.0	7.0	13.0	14.0	15.0	15.0	22.0	25.0	24.0
5	24.0	14.0	13.0	10.0	7.0	13.0	14.0	15.0	15.0	22.0	25.0	24.0
6	24.0	14.0	12.0	14.0	7.0	13.0	14.0	15.0	15.0	22.0	25.0	29.0
7	24.0	14.0	12.0	14.0	7.0	13.0	14.0	15.0	15.0	22.0	25.0	24.0
8	24.0	14.0	13.0	14.0	8.0	13.0	14.0	15.0	16.0	22.0	25.0	24.0
9	23.0	14.0	12.0	14.0	9.0	13.0	14.0	15.0	16.0	23.0	25.0	24.0
10	23.0	14.0	12.0	14.0	9.0	13.0	14.0	15.0	16.0	25.0	25.0	22.0
11	23.0	14.0	13.0	14.0	9.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
12	23.0	14.0	13.0	14.0	9.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
13	23.0	14.0	13.0	14.0	9.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
14	23.0	14.0	13.0	14.0	10.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
15	22.0	14.0	13.0	14.0	11.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
16	22.0	14.0	13.0	14.0	11.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
17	18.0	14.0	13.0	14.0	11.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
18	19.0	14.0	13.0	8.0	11.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
19	18.0	14.0	12.0	8.0	12.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
20	16.0	14.0	12.0	9.0	12.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
21	16.0	14.0	12.0	9.0	12.0	12.0	14.0	15.0	16.0	25.0	25.0	23.0
22	16.0	14.0	12.0	9.0	12.0	12.0	14.0	15.0	16.0	25.0	25.0	23.0
23	16.0	14.0	12.0	9.0	12.0	13.0	14.0	15.0	16.0	25.0	25.0	23.0
24	16.0	14.0	12.0	9.0	12.0	14.0	14.0	15.0	16.0	25.0	25.0	23.0
25	16.0	14.0	12.0	9.0	12.0	14.0	14.0	15.0	16.0	25.0	24.0	23.0
26	16.0	14.0	12.0	8.0	12.0	14.0	14.0	15.0	16.0	25.0	24.0	23.0
27	16.0	14.0	12.0	8.0	12.0	14.0	14.0	15.0	18.0	25.0	24.0	23.0
28	16.0	14.0	10.0	8.0	12.0	14.0	14.0	15.0	18.0	25.0	24.0	23.0
29	15.0	14.0	10.0	8.0	---	14.0	14.0	15.0	20.0	25.0	24.0	20.0
30	15.0	14.0	10.0	8.0	---	14.0	14.0	15.0	20.0	25.0	24.0	20.0
31	15.0	---	10.0	8.0	---	14.0	---	15.0	---	25.0	24.0	---
MEAN	20.0	14.0	12.0	11.0	10.0	13.5	14.0	15.0	16.0	24.0	25.0	23.0
WTR YR 1983	MEAN	16.5		MAX	29.0		MIN	7.0				

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	1880	6950	415	1330	1060	3150	480	1160	1930	5840	2630	12900
2	2050	7080	1080	3300	1350	3680	553	1320	1870	5650	2600	13200
3	1940	5970	1560	4140	1770	4970	602	1460	2310	6740	2870	13800
4	1800	4960	2170	5470	1420	4640	692	1370	730	2190	2860	13100
5	2060	4660	1480	4600	1680	4720	871	1680	385	1220	2800	12300
6	1990	4600	1460	4690	1760	4270	455	916	515	1640	1530	7270
7	2100	5840	1320	3640	1600	3790	347	673	501	1690	1380	6000
8	1930	6360	3600	11900	1280	2940	315	697	422	1370	1360	6020
9	1630	5240	4300	15200	1570	3890	324	737	474	1520	1440	6690
10	1700	5000	2090	8070	1720	4620	334	706	428	1310	1360	5540
11	1740	4210	1860	7780	1570	4150	338	678	569	1740	1410	4640
12	1650	3290	1700	7390	1310	3780	320	809	528	1600	1100	3860
13	1680	3420	1860	9290	650	1640	301	829	556	1680	980	3570
14	1700	3540	1680	7800	528	1370	310	809	574	1740	961	3680
15	1120	2180	1580	6400	574	1830	328	800	454	1270	890	3270
16	810	1470	1780	7160	509	1480	293	759	255	750	850	3030
17	855	1700	1460	5790	540	1630	355	1030	223	723	1370	5560
18	895	1660	1510	5910	540	1740	346	1060	239	845	2070	10200
19	860	1520	1980	7970	327	1030	314	958	241	833	2250	12500
20	820	1070	1880	7110	289	921	324	954	241	813	2120	9330
21	510	611	1990	7580	288	816	321	936	264	905	2270	8760
22	432	602	2170	9370	275	740	308	940	545	1970	2340	10000
23	424	600	1720	6830	260	807	330	1020	612	2210	2850	10700
24	411	516	1950	7480	293	933	925	2750	600	2220	1640	6420
25	398	564	2280	8370	580	1830	880	2680	592	2320	1520	6030
26	412	547	2400	9400	604	2190	755	2100	592	2780	1430	5750
27	425	604	2030	7730	450	1700	875	2360	670	2970	1420	5750
28	409	684	1630	6210	515	1820	910	2400	2180	10100	1410	5980
29	408	559	1730	6070	462	1620	2010	5540	---	---	1390	6080
30	403	656	1780	5770	480	1480	3300	11400	---	---	990	3390
31	399	793	---	---	543	1350	1960	6300	---	---	766	2610
TOTAL	---	87456	---	209750	---	75527	---	57831	---	66639	---	227930

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		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	720	2350	3380	51200	2000	29100	960	13600	1420	3070	19500	8690
2	777	3130	3260	48900	2710	39100	930	12500	1280	3370	8580	4260
3	748	3490	3250	46800	3690	56000	920	12400	36200	123000	4150	1780
4	694	3970	2740	36800	4050	64500	850	11100	25200	72800	1130	589
5	464	2740	2940	41000	3880	61600	850	9710	28900	103000	815	231
6	572	3090	2800	37100	3920	61700	1190	12900	15300	57400	580	177
7	324	1510	2680	31500	3810	59300	670	6330	4800	17000	410	68
8	295	1150	2700	30500	3420	51500	490	4350	1850	4210	7080	2540
9	305	739	2580	30000	3410	50100	500	4820	1700	3330	49400	64100
10	300	769	2290	25500	3580	51700	520	4380	1520	1510	12200	4610
11	300	1070	2280	27400	3480	49800	480	4150	980	423	5600	2630
12	295	1230	2200	26700	3250	45600	530	4210	510	193	26600	21000
13	300	781	2380	29900	3450	50000	552	5010	255	152	17800	6580
14	310	734	2290	28900	2060	29400	715	6580	212	209	39100	36500
15	305	778	2200	29000	1660	23600	880	6840	2610	1310	19700	10600
16	295	932	2180	29300	1580	23500	775	6030	112	68	9200	5840
17	580	1930	2290	30200	1460	21800	748	6460	92	36	5870	5260
18	722	2380	2290	30900	1820	26700	805	6240	98	24	3100	2550
19	722	1700	2210	28200	1680	24200	870	6340	2230	408	2580	1810
20	718	1480	2260	28300	900	12900	900	5200	950	262	1820	1050
21	732	2040	2150	28200	710	9800	3050	4650	147	13	1320	745
22	1550	10200	1640	19700	760	10600	8410	13500	284	15	1400	450
23	3940	42700	1680	20800	790	10900	8350	5860	672	33	445	159
24	3720	42800	1430	16400	720	9910	7990	5130	30700	5580	775	159
25	3600	39600	1480	17200	790	11800	9300	6280	20300	4820	475	104
26	3540	39800	1400	16200	8970	152000	11500	5120	2170	428	680	162
27	3590	45800	1340	15500	13100	198000	12300	5810	628	66	880	340
28	3490	45600	1860	24300	2320	33600	18600	5120	21500	7680	81000	99600
29	3390	44500	1910	26000	1940	29300	15900	1500	58400	34400	12000	4630
30	3440	47000	1950	26700	1790	26600	8800	6650	76300	104000	900	382
31	---	---	1950	26900	---	---	7000	18500	46400	24400	---	---
TOTAL	---	395993	---	906000	---	1324610	---	227270				

08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM  
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 33°41'15", long 106°59'40", Socorro County, Hydrologic Unit 13020203, in Pedro Armendaris Grant No. 34, on right bank 0.4 mi northwest of Atchison, Topeka and Santa Fe Railway Co. bridge over floodway channel, 1.0 mi southwest of former site of San Marcial, 3.5 mi downstream from railroad bridge near Tiffany siding, and 51 mi downstream from heading at San Acacia.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to September 1959, October 1969 to current year. Prior to October 1964 monthly discharge only published with record for Rio Grande at San Marcial (station 08358500).

GAGE.--Water-stage recorder. Datum of gage is 4,454.00 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 29, 1958, at datum 4.19 ft 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. Conveyance channel is 1 of 2 channels (station 08358400) carrying flow in valley cross section. For combined monthly flow in acre-ft of this channel and floodway see tabulation below daily table for station 08358400.

EXTREMES FOR PERIOD OF RECORD (SINCE 1954).--Maximum daily discharge, 2,200 ft<sup>3</sup>/s May 14, 1966; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218	135	4.9	2.4	2.8	2.3	2.5	270	486	400	227	130
2	218	133	4.9	2.4	2.8	2.3	2.5	278	460	420	196	128
3	219	115	4.6	2.4	2.8	2.5	2.4	267	458	449	210	132
4	220	91	4.6	2.4	3.4	2.6	2.7	259	448	439	236	138
5	217	75	4.3	2.4	3.0	2.6	2.5	275	469	404	222	161
6	211	60	4.3	2.3	3.2	2.6	2.6	294	483	392	221	138
7	205	48	4.3	2.5	3.2	2.5	2.5	297	471	383	224	136
8	199	37	4.1	2.8	3.2	2.4	2.7	298	446	361	233	158
9	198	22	4.9	2.9	3.0	2.2	2.6	297	429	332	223	167
10	203	15	4.9	2.6	2.9	2.3	2.3	288	433	361	223	163
11	214	12	4.9	1.7	2.8	2.3	2.2	263	413	342	220	157
12	222	8.9	4.6	1.8	2.7	2.3	2.3	261	412	347	214	153
13	225	7.7	5.2	1.7	2.7	2.4	2.5	286	426	343	203	146
14	226	8.2	6.3	1.9	2.7	2.5	2.4	316	415	336	205	168
15	226	8.5	7.8	2.2	2.6	2.5	2.4	343	411	333	232	199
16	231	8.0	6.5	2.3	2.6	2.5	2.5	341	440	288	216	193
17	235	7.8	4.9	2.4	2.6	2.5	2.7	334	454	298	207	187
18	236	7.5	4.3	2.5	2.6	2.5	2.7	332	469	308	196	195
19	219	6.8	3.6	2.6	2.4	2.8	2.7	335	462	261	210	198
20	190	6.4	3.4	3.1	2.5	2.6	2.7	350	484	240	204	185
21	174	6.2	2.5	2.9	2.4	2.6	2.8	364	466	259	211	180
22	161	6.2	2.5	2.6	2.5	2.5	3.7	378	452	221	209	185
23	153	6.7	2.5	2.6	2.3	2.6	47	385	460	225	192	178
24	150	6.6	2.5	2.6	2.4	2.5	108	386	468	217	191	170
25	147	6.2	2.3	2.7	2.5	2.8	145	404	483	220	209	195
26	143	5.8	2.3	2.7	2.4	2.3	254	400	471	235	214	197
27	143	5.8	2.5	2.8	2.5	2.4	290	397	480	236	211	208
28	138	5.5	2.5	2.5	2.4	2.4	292	370	431	255	203	212
29	136	5.3	2.5	2.6	---	2.4	284	392	415	239	199	208
30	137	5.2	2.6	2.7	---	2.4	274	450	417	234	174	218
31	136	---	2.7	2.9	---	2.3	---	442	---	228	140	---
TOTAL	5950	872.3	124.7	76.9	75.9	76.4	1750.9	10352	13512	9606	6475	5183
MEAN	192	29.1	4.02	2.48	2.71	2.46	58.4	334	450	310	209	173
MAX	236	135	7.8	3.1	3.4	2.8	292	450	486	449	236	218
MIN	136	5.2	2.3	1.7	2.3	2.2	2.2	259	411	217	140	128
AC-FT	11800	1730	247	153	151	152	3470	20530	26800	19050	12840	10280

CAL YR 1982 TOTAL 55899.0 MEAN 153 MAX 263 MIN 2.3 AC-FT 110900  
WTR YR 1983 TOTAL 54055.1 MEAN 148 MAX 486 MIN 1.7 AC-FT 107200

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, 1,600 micromhos Mar. 29; minimum daily, 321 micromhos July 12.

WATER TEMPERATURES: Maximum, 34.0°C July 5, 7, 12; minimum, 4.0°C Dec. 26, 28.

SEDIMENT CONCENTRATIONS: Maximum daily, 6,450 mg/l Sept. 28; minimum daily, 14 mg/l Jan. 9.

SEDIMENT LOADS: Maximum daily, 3,470 tons (3,150 tonnes) Sept. 28; minimum daily, .10 tons (.09 tonnes) Jan. 12.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	TEMPER- ATURE (DEG C) (000010)	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. 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 29...	1855	136	12.0	802	294	54	58	67	94	98	100	--
MAR 29...	1815	2.7	11.0	291	2.1	--	--	--	87	--	--	--
MAY 19...	1800	410	21.0	322	356	--	--	--	94	--	--	--
JUL 29...	1455	412	24.0	2410	2680	39	45	78	93	96	99	100
JUL 23...	1845	236	24.0	618	394	--	--	--	96	99	100	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	964	1550	---	---	1500	1560	1060	831	707	895	1150
2	---	1260	1540	1500	1310	1420	962	1060	827	---	892	1140
3	---	982	1500	1530	1440	1490	1040	1080	831	---	892	1120
4	---	1340	1500	1510	1470	1500	1050	1060	834	---	895	---
5	---	1460	1510	1540	1550	1500	1060	1080	838	700	895	1110
6	1000	1280	1520	1520	1450	1510	1060	1060	831	762	---	1110
7	1130	1530	1270	1530	1430	1500	1070	977	837	773	---	1110
8	1170	1480	1370	1530	1420	1500	1110	965	834	778	---	1020
9	1410	1480	1390	1550	1420	1490	1120	971	---	780	---	1100
10	1160	1520	1390	1520	1400	1530	1120	966	---	807	---	1110
11	1420	1500	1420	1520	1460	1460	1120	969	---	356	---	1020
12	1440	1520	1400	---	1450	1460	1120	966	690	321	---	1010
13	1450	1490	1420	---	1500	1440	1120	946	---	763	---	1010
14	1440	1510	1410	---	1470	1490	---	945	756	800	---	1000
15	1450	1450	1430	---	1470	1540	---	950	779	806	991	1010
16	1440	1470	1410	---	1440	1500	---	940	778	808	1000	1010
17	1460	1500	1400	---	1460	1510	---	950	782	---	1030	---
18	1460	1480	1360	---	1510	1490	1120	942	778	---	1020	---
19	1460	1510	1430	---	1520	1530	1130	969	787	---	1010	---
20	1460	1380	1410	---	1480	1540	1060	---	770	---	1000	1000
21	1290	1460	1440	---	1500	1380	1070	837	775	---	1030	1010
22	1330	1500	1400	---	1470	1500	1060	887	769	897	1040	1060
23	1360	1540	1440	---	1560	1480	1070	896	773	886	1050	1070
24	1380	1520	1440	---	1570	1490	1060	898	768	874	1040	1070
25	1390	1520	---	---	1500	1510	1120	903	770	902	1130	1070
26	1370	1510	1410	---	1550	1520	1070	903	750	905	1070	1070
27	1380	1510	1510	---	1490	1520	864	908	754	925	1060	1070
28	1390	1520	1500	---	1320	1540	1030	904	748	889	1020	1100
29	997	1480	1520	---	---	1600	1050	836	754	883	1120	1110
30	966	1480	1480	---	---	1560	1060	830	740	891	1140	1110
31	963	---	---	---	---	1530	---	---	---	897	1140	---
MEAN	1310	1440	1440	1530	1470	1500	1090	954	784	787	1020	1070
WTR YR 1983	MEAN	1200		MAX	1600		MIN	321				

RIO GRANDE BASIN  
08358300 RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

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TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	14.0	10.0	---	---	11.0	9.0	19.0	24.0	30.0	26.0	27.0
2	---	16.0	12.0	5.0	10.0	11.5	17.5	20.0	23.0	---	28.0	28.0
3	---	17.5	10.0	5.0	10.0	11.5	16.0	20.0	20.0	---	24.0	27.0
4	---	18.0	10.0	6.0	10.5	11.5	15.0	20.0	23.0	---	26.0	---
5	---	13.0	10.0	5.5	9.0	12.5	12.0	22.0	24.0	34.0	26.0	29.0
6	14.0	12.5	10.0	6.0	13.0	12.5	15.0	20.0	25.0	32.0	---	27.0
7	13.0	14.0	9.0	8.0	12.0	12.0	16.0	21.0	25.0	34.0	---	27.0
8	12.5	14.0	7.0	7.0	11.0	12.0	16.0	20.0	24.0	32.0	---	28.0
9	11.5	15.0	5.0	7.0	11.0	11.0	14.0	21.0	25.0	30.0	---	25.0
10	14.0	12.0	6.0	7.0	9.0	12.0	15.5	22.0	---	31.0	---	27.0
11	14.5	13.0	8.0	6.5	12.0	12.0	14.0	21.0	---	33.0	---	26.0
12	12.0	11.0	8.0	---	10.0	10.0	16.0	22.0	24.0	34.0	---	27.0
13	11.0	13.0	5.0	---	10.0	11.0	15.0	20.0	---	32.0	---	27.0
14	11.0	14.0	5.0	---	11.0	11.0	---	22.0	25.0	30.0	---	28.0
15	11.5	13.0	6.0	---	10.0	10.0	---	21.0	29.0	31.0	27.0	27.0
16	12.0	11.0	5.0	---	11.0	9.0	---	21.0	28.0	30.0	26.0	29.0
17	12.0	13.0	5.0	---	9.0	12.0	---	22.0	26.0	---	27.0	---
18	11.5	13.0	6.0	---	10.0	11.0	12.0	21.0	27.0	---	27.0	---
19	12.0	12.0	5.0	---	10.0	10.0	15.0	21.0	25.0	---	31.0	---
20	12.0	15.5	5.0	---	10.0	9.0	17.0	---	28.0	---	22.0	28.0
21	13.0	13.0	5.0	---	12.0	12.0	16.0	20.0	27.0	---	28.0	29.0
22	14.0	11.0	5.0	---	14.0	12.5	15.0	22.0	29.0	28.0	28.0	28.0
23	15.5	13.0	5.0	---	11.0	10.0	15.0	23.0	29.0	24.0	26.0	26.0
24	15.0	11.0	4.5	---	13.0	11.0	13.0	21.0	25.0	26.0	29.0	28.0
25	15.5	10.0	---	---	15.0	12.0	12.0	21.0	27.0	22.0	28.0	28.0
26	13.0	10.0	4.0	---	14.0	11.0	13.0	21.0	28.0	25.0	29.0	29.0
27	15.0	11.0	5.0	---	13.5	11.0	16.0	21.0	29.0	26.0	28.0	30.0
28	14.0	13.0	4.0	---	12.0	12.5	16.0	23.0	29.0	25.0	24.0	29.0
29	12.0	8.0	5.0	---	---	11.0	15.0	24.0	32.0	29.0	27.0	28.0
30	12.0	10.0	5.0	---	---	11.0	16.0	23.0	30.0	27.0	26.0	29.0
31	16.0	---	---	---	---	11.0	---	---	---	25.0	28.0	---
MEAN	13.0	13.0	6.5	6.5	11.0	11.0	14.5	21.0	26.5	29.0	27.0	27.5
WTR YR 1983	MEAN	17.5	MAX	34.0	MIN	4.0						

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	136	80	914	333	52	.69	32	.22	65	.47	269	1.7
2	134	79	836	300	101	1.3	35	.24	67	.49	262	1.6
3	133	79	152	47	36	.45	34	.23	77	.56	213	1.4
4	137	81	77	19	47	.58	33	.22	75	.71	250	1.8
5	121	71	88	18	52	.60	36	.23	39	.32	290	2.0
6	145	83	104	17	238	2.8	28	.17	72	.62	266	1.9
7	651	360	74	9.6	72	.84	26	.18	56	.54	216	1.5
8	227	122	69	7.3	80	.89	24	.19	76	.68	178	1.2
9	126	67	78	6.9	81	1.1	14	.11	74	.60	252	1.5
10	118	65	89	7.0	92	1.2	24	.17	74	.60	187	1.2
11	89	51	84	5.9	83	1.1	28	.13	112	.91	191	1.2
12	106	64	75	3.4	61	.76	22	.10	98	.74	184	1.1
13	114	69	90	1.9	65	.91	26	.12	83	.63	188	1.2
14	109	67	74	1.6	87	1.5	28	.14	186	1.4	150	1.0
15	134	82	69	1.6	97	2.0	30	.18	171	1.2	100	.68
16	96	60	92	2.0	123	2.7	32	.20	183	1.3	49	.33
17	126	80	88	1.9	128	2.6	34	.22	224	1.6	63	.44
18	353	225	82	1.7	130	2.7	36	.24	146	1.0	75	.53
19	350	207	89	1.6	145	2.9	38	.25	149	1.0	115	.90
20	302	155	87	1.5	123	1.3	40	.33	157	1.1	318	2.2
21	295	139	74	1.2	134	.90	42	.32	186	1.2	213	1.4
22	252	110	53	.89	160	1.1	44	.30	166	1.1	379	2.4
23	333	138	40	.72	95	.64	46	.31	164	1.0	259	1.7
24	313	127	44	.78	120	.81	48	.32	177	1.1	145	.94
25	176	70	142	2.4	89	.55	50	.34	179	1.2	204	1.5
26	288	111	59	.92	27	.17	52	.37	169	1.1	156	.97
27	441	170	26	.41	37	.25	54	.39	163	1.1	130	.84
28	358	133	54	.80	37	.25	56	.36	226	1.5	275	1.9
29	752	276	46	.66	43	.29	58	.39	---	---	317	2.1
30	628	232	60	.84	50	.35	61	.43	---	---	224	1.5
31	683	251	---	---	33	.24	63	.48	---	---	149	.89
TOTAL	---	3904	---	797.52	---	34.47	---	7.88	---	25.77	---	41.52

DAY	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS	MEAN	LOADS
	CONCENTRATION (MG/L)		CONCENTRATION (MG/L)		CONCENTRATION (MG/L)		CONCENTRATION (MG/L)		CONCENTRATION (MG/L)		CONCENTRATION (MG/L)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	126	.78	132	91	496	648	223	246	406	263	701	301
2	124	.77	137	98	499	624	237	273	355	203	360	136
3	93	.55	220	151	448	559	219	267	372	228	370	134
4	111	.78	140	94	274	334	246	294	351	233	343	130
5	111	.69	58	41	223	284	272	301	355	223	463	201
6	122	.79	108	82	296	391	320	343	334	207	577	215
7	102	.69	305	234	206	265	355	372	311	195	479	176
8	96	.65	313	243	189	232	364	362	303	195	1170	499
9	96	.65	324	251	496	592	301	276	275	169	730	327
10	87	.54	273	206	474	571	270	268	300	184	1270	552
11	106	.63	371	258	423	488	374	350	323	194	1970	824
12	85	.53	366	255	356	409	366	348	340	198	3530	1440
13	86	.58	298	225	268	321	225	211	337	188	2140	832
14	86	.56	320	270	230	269	222	204	294	164	2520	1120
15	100	.65	426	390	232	269	179	162	237	145	1630	832
16	105	.77	341	313	216	265	210	165	224	128	1270	634
17	114	.92	296	265	271	342	206	166	217	120	1080	525
18	131	.99	265	238	220	286	214	179	182	96	870	437
19	68	.55	311	281	178	227	238	169	158	88	640	323
20	81	.66	290	274	243	323	248	166	180	98	290	139
21	118	.99	315	310	254	327	257	181	318	178	170	78
22	96	1.2	287	292	271	337	220	136	373	205	514	247
23	112	16	248	256	253	320	590	371	355	184	632	292
24	100	31	270	281	251	323	255	156	314	162	204	91
25	103	41	293	320	250	330	136	84	637	349	530	266
26	166	108	289	312	241	311	156	102	404	226	492	250
27	231	170	285	307	233	304	165	109	342	188	648	343
28	129	95	1010	1020	216	255	406	287	681	362	6450	3470
29	134	97	1620	1730	204	234	609	406	535	280	5350	2850
30	129	91	550	668	245	280	565	374	362	171	1500	830
31	---	---	431	516	---	---	494	319	467	203	---	---
TOTAL	---	664.92	---	10272	---	10720	---	7647	---	6027	---	18494
TOTAL LOAD FOR YEAR:		58636.08	TONS.									

08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM  
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 33°40'50", long 106°59'30", Socorro County, Hydrologic Unit 13020203, in Pedro Armendaris Grant No. 33, on pier of the Atchison, Topeka, and Santa Fe Railway Co. bridge, 1.1 mi downstream from former site of San Marcial, 18.5 mi southwest of San Antonio, and at mile 1,425.2.

DRAINAGE AREA.--27,700 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year. Records collected at this site January 1895 to September 1964 represented total flow of the river and were published as Rio Grande at San Marcial (station 08358500). Records of daily discharge for floodway only April 1950 to September 1964 are available in files of district office.

GAGE.--Water-stage recorder. Datum of gage is 4,455.19 ft 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) is exceeded. Combined monthly discharge in acre-ft is given at end of each year table. Diversion for irrigation of about 775,000 acres above station (includes about 13,800 acre-ft diverted from conveyance channel, as based on weekly measurements, data furnished by Bureau of Reclamation).

AVERAGE DISCHARGE.--19 years (water years 1965-83), 572 ft<sup>3</sup>/s, 414,400 acre-ft/yr.

Total flow of river.--88 years (water years 1895-1983), 1,236 ft<sup>3</sup>/s, 895,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, since January 1895 about 50,000 ft<sup>3</sup>/s Oct. 11, 1904; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,620 ft<sup>3</sup>/s June 7, gage height, 17.58 ft; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	385	506	1080	733	776	1460	982	4400	4810	4830	909	48
2	589	1150	1220	831	875	1480	1020	4410	4820	4820	520	45
3	710	986	883	885	987	1470	1230	4630	4770	4700	1060	65
4	769	854	1040	779	1080	1340	1340	4490	5030	4700	927	35
5	726	858	1230	654	1050	1270	1660	4450	5060	4360	1010	60
6	607	940	1060	720	1040	1640	2050	4430	5190	3900	1220	42
7	615	835	983	811	1000	1690	1690	4430	5350	3280	982	19
8	942	713	904	809	1190	1490	1440	4290	5320	2800	814	14
9	1120	886	909	892	1180	1440	1090	4190	5170	2810	442	38
10	1280	981	954	1090	1160	1450	785	3820	5190	2400	386	29
11	1010	1410	1090	1110	1120	1120	869	3920	5070	1980	145	11
12	727	1360	1110	1010	1140	923	1010	3830	5020	2000	88	17
13	550	1410	1130	1040	1200	1090	901	4100	4930	1900	58	51
14	387	1790	1020	1070	1170	1390	751	4090	4790	1800	34	126
15	350	1290	967	1110	1110	1630	694	4210	4710	1850	38	72
16	316	1360	1130	1000	1030	1410	633	4350	4710	1900	45	69
17	397	1270	1120	839	898	1090	650	4300	4920	1900	26	54
18	503	1230	1110	969	910	1940	750	4470	4930	1850	15	61
19	415	1380	1060	884	1050	2270	900	4540	4720	1900	8.1	50
20	374	1380	1020	1170	1060	2500	774	4530	4700	1790	4.2	45
21	249	1200	996	1180	1090	1730	715	4200	4610	1120	1.0	40
22	235	1430	744	1040	1000	1550	898	3860	4550	582	.00	28
23	252	1510	666	1000	1070	1720	1270	3860	4590	253	.00	14
24	237	1330	795	904	1080	1540	2240	3660	4380	129	.00	7.8
25	294	1300	919	900	1130	1460	2510	3360	4680	97	.00	3.6
26	247	1230	1000	918	1350	1400	2750	3510	4750	80	2.9	.05
27	201	1290	1350	913	1450	1300	2980	3450	4990	90	7.4	.10
28	193	1250	1390	889	1510	1240	3630	3850	4870	134	.48	5.2
29	320	1250	1350	885	---	1340	4120	4140	4860	480	.00	45
30	247	1120	1390	850	---	1220	4260	4470	4960	313	41	3.5
31	259	---	891	1080	---	893	---	4650	---	645	76	---
TOTAL	15506	35499	32511	28965	30706	45486	46592	128890	146450	61393	8860.08	1098.25
MEAN	500	1183	1049	934	1097	1467	1553	4158	4882	1980	286	36.6
MAX	1280	1790	1390	1180	1510	2500	4260	4650	5350	4830	1220	126
MIN	193	506	666	654	776	893	633	3360	4380	80	.00	.05
AC-FT	30760	70410	64490	57450	60910	90220	92420	255700	290500	121800	17570	2180
(†)	42560	72140	64740	57600	61060	90370	95890	276200	317300	140800	30410	12460
CAL YR 1982 TOTAL	408430.00			MEAN 1119		MAX 4520	MIN .00	AC-FT 810100	(†) MEAN 1272		AC-FT 921000	
WTR YR 1983 TOTAL	581956.33			MEAN 1594		MAX 5350	MIN .00	AC-FT 1154000	(†) MEAN 1742		AC-FT 1262000	

(†) 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 determinations were made bi-weekly when needed.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,730 micromhos Apr. 8, 1953; minimum daily, 277 micromhos June 12, 1983.

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, 1,450 micromhos Mar. 10; minimum daily, 277 micromhos June 12.

WATER TEMPERATURES: Maximum, 34.0°C July 12-13; minimum, 1.0°C on Dec. 29.

SEDIMENT CONCENTRATIONS: Maximum daily, 33,100 mg/l Sept. 17; minimum daily, no flow on Aug. 22-25, 29.

SEDIMENT LOADS: Maximum daily, 64,200 tons (58,200 tonnes) Aug. 3; minimum daily, 0 tons (0 tonnes) Aug. 22-25, 29.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)
NOV 03...	1045	980	700	744	8.0	8.2	8.0	10.0	500	9.6	200
MAR 02...	1045	1650	650	652	8.2	8.1	14.5	9.0	2800	9.1	180
MAY 04...	1230	4460	410	407	8.1	7.9	23.5	15.5	1700	8.6	130
SEP 02...	1100	44	875	951	8.0	7.8	29.0	25.0	41000	5.6	230

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
NOV 03...	38	38	63	11	74	2.4	4.8	--	--	--	166
MAR 02...	0	0	54	10	67	2.3	4.3	290	.0	--	249
MAY 04...	0	0	41	7.5	31	1.2	3.5	220	.0	180	99
SEP 02...	91	91	69	14	99	3.0	5.4	170	.0	140	132

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 CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CYANIDE TOTAL (MG/L AS CN) (00720)
NOV 03...	140	45	.50	25	474	464	.36	<.060	.470	.160	<.01
MAR 02...	130	39	.60	22	413	471	.58	.110	2.00	.170	<.01
MAY 04...	81	14	.40	19	260	306	.33	.080	.510	.080	<.01
SEP 02...	280	37	1.0	16	603	605	1.3	.110	22.0	.030	<.01



RIO GRANDE BASIN  
08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 03...	1045	20	4	0	0	<1	<1	0	1	0	<1
MAR 02...	1045	20	4	0	0	<1	<1	0	5	30	<1
MAY 04...	1230	10	5	0	0	<1	<1	0	1	0	1
SEP 02...	1100	50	<1	0	0	<1	<1	0	4	0	1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	80	28	.0	4	10	6	<1	<1	710	<6.0	0
MAR 02...	0	4	.0	4	10	3	1	<1	570	<6.0	0
MAY 04...	40	2	.0	3	<10	1	1	<1	410	<6.0	0
SEP 02...	40	3	.0	--	20	2	1	<1	0	<6.0	0

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

		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 CR) (01029)
NOV 03...	1045	< 2.0	2.0	310	2	0	0
		</					

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90) (80060)	RADIUM 226, DIS- SOLVED (PCI/L AS SR/ METHOD (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 03...	1045	<10	95	65	<5.8	69	<5.6	66	.11	4.6
MAY 04...	1230	<7.9	<140	--	5.5	120	5.3	110	.10	2.9

RIO GRANDE BASIN  
08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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...	1230	--	--	--	--	--	--	--	--	--
SEP 02...	1100	<.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 THION, TOTAL (UG/L) (39790)	MIREX, TOTAL (UG/L) (39755)
MAY 04...	--	--	--	--	--	--	--	--	--	--
SEP 02...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

DATE	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
MAY 04...	--	--	--	--	--	.01	<.01	<.01	<.01
SEP 02...	<.10	<.01	<.10	<1	<.01	--	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 03...	K1300	6800
MAR 02...	480	3400
MAY 04...	K200	K500
SEP 02...	8600	47000

RIO GRANDE BASIN  
08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT								
19...	1000	403	13.0	1120	1220	39	47	70
NOV								
03...	1045	980	10.0	2280	6030	17	20	33
16...	1430	1390	10.0	2360	8860	14	16	28
DEC								
07...	1030	900	8.5	1220	2960	14	17	25
JAN								
06...	1045	732	2.5	1440	2850	11	14	19
17...	0800	883	8.0	638	1520	--	--	--
FEB								
08...	1800	1290	11.0	2070	7210	--	--	--
16...	1100	1010	10.0	1400	3820	16	18	26
21...	1900	1080	11.0	8550	24900	--	--	--
MAR								
02...	1045	1650	9.0	8480	37800	39	51	54
04...	1040	1200	11.0	3230	10500	--	--	--
16...	0930	1480	9.0	1330	5310	27	32	44
21...	1840	1500	11.0	2540	10300	--	--	--
APR								
05...	1045	1610	5.0	1660	7220	28	35	50
19...	1230	968	14.0	529	1380	57	66	94
MAY								
04...	1230	4460	15.5	7360	88600	20	27	35
17...	1045	4290	15.0	4200	48600	35	40	53
19...	1840	6880	21.0	709	13200	--	--	--
31...	1000	4650	18.0	4540	57000	40	46	62
JUN								
09...	1850	3200	26.0	470	4060	--	--	--
14...	1000	4750	16.5	5650	72500	15	18	23
JUL								
07...	1130	3110	24.5	5390	45300	5	6	9
19...	1030	1970	25.0	1020	5430	20	24	39
AUG								
16...	1030	43	27.0	609	71	70	85	97
SEP								
02...	1100	44	25.0	55400	6580	75	86	99
21...	1355	40	23.5	4480	484	73	93	98

RIO GRANDE BASIN  
08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	SED. SUSP. FALL DIAM. % FINER THAN (70331)	SED. SUSP. FALL DIAM. % FINER THAN (70332)	SED. SUSP. FALL DIAM. % FINER THAN (70333)	SED. SUSP. FALL DIAM. % FINER THAN (70334)
OCT 19...	--	--	--	--	93	97	99	100
NOV 03...	69	92	100	--	--	--	--	--
16...	69	87	100	--	--	--	--	--
DEC 07...	62	89	100	--	--	--	--	--
JAN 06...	44	82	100	--	--	--	--	--
17...	--	--	--	--	87	97	99	100
FEB 08...	--	--	--	--	100	--	--	--
16...	67	89	99	100	--	--	--	--
21...	--	--	--	--	100	--	--	--
MAR 02...	77	95	100	--	--	--	--	--
04...	--	--	--	--	95	--	--	--
16...	83	97	100	--	--	--	--	--
21...	--	--	--	--	75	--	--	--
APR 05...	82	97	100	--	--	--	--	--
19...	--	--	--	--	98	100	--	--
MAY 04...	64	90	100	--	--	--	--	--
17...	84	95	99	100	--	--	--	--
19...	--	--	--	--	99	--	--	--
31...	87	95	100	--	--	--	--	--
JUN 09...	--	--	--	--	100	--	--	--
14...	49	83	98	100	--	--	--	--
JUL 07...	32	78	98	100	--	--	--	--
19...	77	93	100	--	--	--	--	--
AUG 16...	--	--	--	--	99	100	--	--
SEP 02...	--	--	--	--	100	--	--	--
21...	--	--	--	--	100	--	--	--

PARTICLE SIZE OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	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)
OCT 19...	1000	403	1120	1220	1	15	79	99	100
NOV 03...	1045	980	2280	6030	5	35	95	100	--
16...	1430	1390	2360	8860	10	17	86	100	--
DEC 07...	1030	900	1220	2960	7	51	97	100	--
JAN 06...	1045	732	1440	2850	2	21	88	100	--
17...	0800	883	638	1520	2	18	91	100	--
FEB 16...	1100	1010	1400	3820	2	7	68	98	100
MAR 02...	1045	1650	8480	37800	4	35	97	100	--
16...	0930	1480	1330	5310	1	7	73	99	100
APR 05...	1045	1610	1660	7220	1	18	96	100	--
19...	1230	968	529	1380	13	67	99	100	--
MAY 04...	1230	4460	7360	88600	4	23	90	100	--
17...	1045	4290	4200	48600	3	26	92	100	--
31...	1000	4650	4540	57000	3	32	92	99	100
JUN 14...	1000	4750	5650	72500	4	36	96	100	--
JUL 07...	1130	3110	5390	45300	5	35	95	100	--
19...	1030	1970	1020	5430	69	99	100	--	--
AUG 16...	1030	43	609	71	1	41	96	100	--
SEP 02...	1100	44	55400	6580	5	35	95	100	--
21...	1355	40	4480	484	2	20	83	100	--

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08358400 RIO GRANDE FLOODWAY AT SAN MARCIAL, NM -- Continued  
WATER-QUALITY RECORDS

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TOTAL SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SEDI- MENT, DISCH, SUSP. + BED MA- TERIAL (T/DAY) (80156)	STREAM WIDTH (FT) (00004)	STREAM DEPTH, MEAN (FT) (00064)	STREAM VELOC- ITY, MEAN (FPS) (00055)
OCT									
19...	1000	403	13.0	1120	1220	1560	162	1.1	2.40
NOV									
03...	1045	980	10.0	2280	6030	7950	199	1.4	3.40
16...	1430	1390	10.0	2360	8860	13100	212	1.6	4.10
DEC									
07...	1030	900	8.5	1220	2960	4240	165	1.6	3.30
JAN									
06...	1045	732	2.5	1440	2850	4020	162	1.4	3.30
17...	0800	883	8.0	638	1520	2400	169	1.4	3.60
FEB									
16...	1100	1010	10.0	1400	3820	5940	156	1.7	3.80
MAR									
02...	1045	1650	9.0	8480	37800	41500	208	1.9	4.20
16...	0930	1480	9.0	1330	5310	7830	204	1.7	4.30
APR									
05...	1045	1610	5.0	1660	7220	9560	206	1.8	4.30
19...	1230	968	14.0	529	1380	2000	210	1.5	3.00
MAY									
04...	1230	4460	15.5	7360	88600	94900	210	3.5	6.00
17...	1045	4290	15.0	4200	48600	53900	322	2.6	5.10
31...	1000	4650	18.0	4540	57000	61700	325	2.8	5.10
JUN									
14...	1000	4750	16.5	5650	72500	74800	335	3.0	4.70
JUL									
07...	1130	3110	24.5	5390	45300	47300	208	3.1	4.80
19...	1030	1970	25.0	1020	5430	8530	208	2.3	4.20
AUG									
16...	1030	43	27.0	609	71	173	52.0	.71	1.20
SEP									
02...	1100	44	25.0	55400	6580	7600	46.0	.91	1.00
21...	1355	40	23.5	4480	484	756	34.0	1.2	1.00

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	967	878	---	---	858	892	411	410	356	753	669
2	---	960	875	891	918	856	572	412	409	---	757	720
3	---	962	871	892	937	862	634	413	345	---	759	696
4	---	963	872	890	947	858	637	418	338	---	760	688
5	---	781	869	896	954	865	642	427	334	341	762	823
6	523	831	874	899	950	878	637	428	333	345	---	832
7	624	846	983	908	960	885	650	427	333	343	---	842
8	627	855	1040	908	957	864	648	425	329	346	---	693
9	671	859	1050	904	961	960	650	426	345	348	---	686
10	635	867	1050	904	957	1450	498	424	---	348	---	682
11	633	871	1060	900	958	997	634	428	---	347	---	683
12	628	871	1050	---	955	967	643	462	277	345	---	683
13	635	874	1060	---	965	973	645	375	---	344	---	685
14	636	873	1060	---	931	961	---	369	293	305	---	685
15	635	875	1060	---	933	705	---	371	295	320	---	683
16	633	875	1060	---	928	669	---	367	292	494	657	825
17	638	878	1050	925	931	683	---	371	297	---	---	---
18	633	877	1050	---	927	662	648	369	300	---	---	---
19	634	877	1050	---	930	664	683	370	309	359	---	---
20	629	875	1060	---	927	661	652	---	314	---	---	610
21	1250	882	1060	---	931	753	653	375	314	---	---	655
22	859	885	1050	---	931	841	497	388	312	551	---	---
23	833	890	1060	---	947	858	486	390	315	530	---	---
24	831	890	1060	---	927	865	480	390	311	524	---	---
25	836	879	---	---	937	871	485	394	315	522	---	1130
26	952	883	847	---	932	871	481	393	306	571	---	1180
27	835	881	876	---	934	884	388	397	310	574	---	1240
28	949	880	884	---	810	885	403	421	307	577	---	1200
29	965	878	887	---	---	886	409	365	309	579	---	1240
30	1210	883	885	---	---	885	415	370	318	532	---	1240
31	989	---	---	---	---	889	---	388	---	742	---	---
MEAN	766	882	984	902	936	863	579	399	321	443	741	836

WTR YR 1983      MEAN      714      MAX      1450      MIN      277

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

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WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	14.0	10.0	---	---	10.0	10.0	18.0	23.0	30.0	25.0	28.0
2	---	14.5	10.0	6.0	10.5	10.0	18.0	19.0	23.0	---	28.0	28.0
3	---	19.0	9.0	7.0	10.0	10.0	17.0	19.0	21.0	---	22.0	27.0
4	---	19.0	10.0	6.0	9.0	11.0	15.0	16.0	23.0	---	25.0	27.0
5	---	15.0	8.0	6.0	9.0	13.0	14.0	21.0	25.5	32.0	27.0	30.0
6	13.5	13.0	10.0	8.0	13.0	11.0	16.5	20.0	25.0	32.0	---	28.0
7	12.0	14.0	10.0	10.0	12.5	12.5	17.0	21.0	26.0	33.0	---	27.0
8	13.0	15.5	6.0	8.0	11.0	11.0	16.0	18.0	25.0	32.0	---	25.0
9	11.0	16.0	5.0	8.0	12.0	10.0	16.0	22.0	26.0	31.0	---	29.0
10	13.0	12.0	5.0	6.0	9.0	14.0	15.0	21.0	---	33.0	---	28.0
11	13.0	13.5	7.0	8.0	11.0	14.0	15.0	21.0	---	32.0	---	29.0
12	12.0	12.0	5.0	---	9.0	12.0	14.0	22.0	28.0	34.0	---	27.0
13	10.0	14.0	5.0	---	10.0	12.5	16.0	20.0	---	34.0	---	27.0
14	10.0	16.0	5.0	---	10.0	12.0	---	21.0	26.0	32.0	---	26.0
15	11.0	14.0	6.5	---	11.5	12.0	---	22.0	27.0	33.0	---	27.0
16	13.0	10.0	5.0	---	10.0	10.0	---	23.0	28.0	32.0	27.0	29.0
17	14.0	12.5	6.0	8.0	10.0	14.0	---	21.0	29.0	---	---	---
18	12.0	14.0	5.0	---	11.0	11.0	14.0	20.0	20.0	---	---	---
19	12.0	12.0	5.0	---	10.0	12.0	18.0	21.0	26.0	25.0	---	---
20	11.0	15.0	6.5	---	11.0	10.0	17.0	---	27.0	---	---	29.0
21	14.0	14.0	4.5	---	11.0	11.0	17.0	21.0	26.0	---	---	30.0
22	15.0	12.0	6.0	---	12.0	10.0	14.0	22.0	28.0	30.0	---	---
23	14.0	12.0	5.0	---	12.0	10.0	13.0	24.0	29.0	26.0	---	---
24	14.0	10.0	5.0	---	11.0	10.0	14.0	21.0	25.0	24.0	---	---
25	15.0	9.0	---	---	13.0	11.0	12.0	22.0	28.0	30.0	---	29.0
26	14.0	10.0	5.0	---	12.0	10.0	12.0	21.0	27.0	26.5	---	29.0
27	16.0	11.5	5.0	---	12.0	10.0	18.0	22.0	29.0	26.0	---	28.0
28	13.0	12.0	4.0	---	13.5	11.0	15.0	21.0	27.0	26.0	---	29.0
29	13.0	9.0	1.0	---	---	12.0	15.0	24.0	30.0	29.0	---	29.0
30	14.0	10.0	6.0	---	---	11.0	15.0	21.0	31.0	28.0	---	28.0
31	17.0	---	---	---	---	10.0	---	18.0	---	28.0	---	---
MEAN	13.0	13.0	6.0	7.5	11.0	11.0	15.0	21.0	26.0	30.0	25.5	28.0
WTR YR 1983	MEAN	17.0	MAX	34.0	MIN	1.0						

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	2360	2450	600	820	1520	4430	590	1170	793	1660	2250	8870
2	1200	1910	1280	3970	1630	5370	840	1880	855	2020	4440	17700
3	1480	2840	1700	4530	1410	3360	610	1460	919	2450	3400	13500
4	2050	4260	990	2280	1580	4440	578	1220	780	2270	3250	11800
5	1810	3550	755	1750	1550	5150	767	1350	790	2240	3260	11200
6	1280	2100	1050	2660	1450	4150	1160	2260	810	2270	4490	19900
7	925	1540	990	2230	1060	2810	922	2020	1090	2940	3600	16400
8	1100	2800	1010	1940	450	1100	960	2100	1400	4500	2760	11100
9	975	2950	885	2120	229	562	729	1760	1200	3820	998	3880
10	998	3450	900	2380	109	281	630	1850	1270	3980	753	2950
11	990	2700	749	2850	178	524	895	2680	1010	3050	995	3010
12	1020	2000	775	2850	223	668	940	2560	1550	4770	1150	2870
13	945	1400	800	3050	135	412	933	2620	2480	8040	1180	3470
14	1300	1360	903	4360	191	526	920	2660	4970	15700	1000	3750
15	1110	1050	751	2620	183	478	915	2740	4330	13000	2610	11500
16	1130	964	1580	5800	77	235	749	2020	3370	9370	2250	8570
17	898	963	1060	3630	69	209	645	1460	6390	15500	3060	9010
18	1220	1660	712	2360	111	333	800	2090	6250	15400	3180	16700
19	1090	1220	900	3350	75	215	780	1860	6340	18000	2650	16200
20	1030	1040	940	3500	74	204	910	2870	6320	18100	3800	25700
21	585	393	750	2430	65	175	892	2840	8180	24100	2650	12400
22	1250	793	1890	7300	81	163	822	2310	7850	21200	3850	16100
23	1820	1240	1600	6520	89	160	770	2080	6280	18100	4550	21100
24	1760	1130	1520	5460	60	129	727	1770	5850	17100	2540	10600
25	1230	976	945	3320	122	303	685	1660	6520	19900	1520	5990
26	1000	667	1250	4150	582	1570	790	1960	6110	22300	1410	5330
27	1140	619	2000	6970	902	3290	845	2080	5670	22200	824	2890
28	735	383	2130	7190	670	2510	768	1840	4560	18600	1100	3680
29	875	756	2080	7020	580	2110	841	2010	---	---	827	2990
30	545	363	1330	4020	570	2140	870	2000	---	---	550	1810
31	575	402	---	---	553	1330	920	2680	---	---	660	1590
TOTAL	---	49929	---	113430	---	49337	---	63860	---	312580	---	302560

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	1100	2920	3320	39400	1590	20600	790	10300	14900	35900	5000	648
2	2410	6640	2340	27900	550	7160	760	9890	8400	11800	9990	1210
3	4850	16100	3380	42300	500	6440	752	9540	17200	64200	1790	314
4	5150	18600	3800	46100	500	6790	775	9830	16700	41300	1760	166
5	3550	15900	1260	15100	523	7150	799	9410	17200	46900	11600	1880
6	5900	32700	647	7740	543	7610	775	8160	17000	56000	18600	2110
7	5240	23900	742	8880	600	8670	2590	22900	10200	27000	22500	1150
8	4650	18100	552	6390	549	7890	1140	8620	6500	14300	16400	620
9	4420	13000	503	5690	475	6630	675	5120	5470	6530	10100	1040
10	2600	5510	638	6580	503	7050	810	5250	4750	4950	10200	799
11	4190	9830	688	7280	610	8350	775	4140	3000	1170	11000	327
12	5550	15100	1540	15900	800	10800	753	4070	1400	333	12300	565
13	5630	13700	1180	13100	2100	28000	770	3950	1130	177	11900	1640
14	5510	11200	858	9470	3120	40400	798	3880	901	83	12000	4080
15	4880	9140	747	8490	1120	14200	725	3620	700	72	10300	2000
16	4120	7040	818	9610	780	9920	551	2830	610	74	19500	3630
17	3350	5880	2100	24400	875	11600	479	2460	600	42	33100	4830
18	2560	5180	830	10000	845	11200	775	3870	548	22	24600	4050
19	3150	7650	840	10300	775	9880	1020	4680	502	11	21000	2840
20	4800	10000	1020	12500	745	9450	1100	5320	452	5.1	19800	2410
21	3630	7010	2010	22800	750	9340	1050	3180	403	1.1	9900	1070
22	4200	10200	2690	28000	800	9830	970	1520	0	.0	6470	489
23	5060	18000	2540	26500	775	9600	7810	5340	0	.0	5000	189
24	6930	43300	3030	29900	774	9150	12400	4320	0	.0	3750	79
25	6250	42400	2290	20800	760	9600	10500	2750	0	.0	2900	28
26	4970	36900	2480	23500	750	9620	2000	432	488	15	2100	.28
27	3350	27000	2150	20000	708	9540	903	219	850	17	1800	.49
28	2650	26000	1800	18700	698	9180	1250	1050	475	.6	7000	98
29	2460	27400	1150	12900	685	8990	6250	8100	0	.0	12300	1490
30	3460	39800	1430	17300	750	10000	8750	7390	2880	2010	9400	89
31	---	---	3610	45300	---	---	9500	16500	6780	1390	---	---
TOTAL	---	526100	---	592830	---	334640	---	188641	---	314302.8	---	39841.77
TOTAL LOAD FOR YEAR: 2888051.57 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 west of Elephant Butte, 4 mi northeast of Truth or Consequences (Hot Springs) and at mile 1,383.2.

DRAINAGE AREA.--29,445 mi<sup>2</sup>, approximately including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--March 1915 to December 1939 (monthend contents only published in WSP 1312), January 1940 to September 1965 (monthend contents only), October 1965 to current year.

REVISED RECORDS.--WSP 1442: 1954(m). WSP 1632: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.3 ft 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 survey of 1980 at gage height 4,407.0 ft crest of spillway. Capacity by original survey was 2,638,900 acre-ft. No adjustment made for decrease in capacity due to sedimentation between effective dates of capacity tables. No dead storage. No storage allocated to flood control. Water is used for power development and irrigation on Rio Grande Project of Bureau of Reclamation. A 50,000 acre-ft 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 June 16-18, 1942, gage height, 4,409.19 ft; minimum daily contents after initial filling, 9,900 acre-ft Aug. 6, 1954, gage height, 4,258.03 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 1,359,000 acre-feet July 18-20, gage height, 4,383.60 ft; minimum daily contents, 801,100 acre-ft Oct. 1, gage height, 4,358.63 ft.

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

4,340	509.9	4,370	1,027.6
4,350	655.0	4,380	1,264.3
4,360	826.2	4,390	1,540.7

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	801100	827000	885400	918300	943200	935500	1012000	973000	1097000	1300000	1339000	1269000
2	802400	827700	885800	919700	943400	938500	1009000	977000	1103000	1307000	1336000	1267000
3	804200	830100	886200	920100	944400	940800	1007000	983300	1109000	1314000	1335000	1264000
4	803800	831600	888000	920500	945900	944000	1004000	988400	1115000	1322000	1334000	1263000
5	806900	833100	889900	920700	947700	946900	1002000	993700	1122000	1327000	1334000	1260000
6	807800	834800	890700	920700	949400	949400	1000000	999000	1130000	1332000	1333000	1258000
7	808600	836500	891900	920500	949800	952000	999200	1003000	1137000	1336000	1333000	1256000
8	809800	837800	891500	921900	951000	955300	997700	1007000	1145000	1339000	1331000	1253000
9	811100	839300	892500	923700	952000	958000	996000	1011000	1152000	1343000	1330000	1250000
10	812100	839500	893500	923900	953700	961100	993300	1015000	1160000	1345000	1326000	1247000
11	813700	841500	895200	924100	954300	963400	990900	1018000	1167000	1348000	1323000	1244000
12	815100	843600	896800	924300	956800	965900	987300	1021000	1174000	1348000	1321000	1241000
13	815500	846400	897600	924700	958700	967800	985000	1025000	1182000	1350000	1319000	1239000
14	816600	849300	898400	924900	959500	970300	982300	1028000	1187000	1352000	1316000	1240000
15	817500	852500	898600	926300	957800	972400	997700	1033000	1194000	1354000	1312000	1240000
16	818800	854200	899200	928200	956000	974700	976600	1038000	1201000	1356000	1310000	1237000
17	819600	856500	900200	929400	953900	977000	973900	1042000	1209000	1358000	1307000	1236000
18	820700	858800	902100	929600	950800	979300	970700	1046000	1216000	1359000	1302000	1234000
19	822000	861300	903700	930400	947900	983100	968000	1051000	1223000	1359000	1300000	1235000
20	822300	863200	904700	931800	945900	987300	964300	1056000	1229000	1359000	1297000	1235000
21	822900	865300	904900	932400	943800	990900	962000	1060000	1236000	1358000	1294000	1235000
22	823300	867400	904900	934200	941800	993300	959300	1066000	1244000	1356000	1291000	1235000
23	823800	871100	904900	936100	940200	996400	957200	1069000	1249000	1355000	1289000	1236000
24	824400	871200	906100	936700	938300	999800	956200	1072000	1254000	1353000	1287000	1236000
25	825100	873200	909100	937100	936700	1002000	957800	1075000	1260000	1350000	1285000	1236000
26	826000	876700	909300	937100	935100	1004000	959900	1077000	1267000	1347000	1282000	1236000
27	826400	877800	910300	937700	933400	1006000	961800	1080000	1274000	1344000	1280000	1236000
28	826200	880000	911500	938100	932600	1009000	962600	1083000	1280000	1342000	1277000	1236000
29	826200	882300	912500	938900	---	1011000	964900	1086000	1287000	1342000	1275000	1236000
30	826600	882300	915100	941600	---	1013000	968400	1090000	1294000	1340000	1273000	1236000
31	826800	---	916700	942200	---	1016000	---	1092000	---	1337000	1272000	---
MAX	826800	882300	916700	942200	959500	1016000	1012000	1092000	1294000	1359000	1339000	1269000
MIN	801100	827000	885400	918300	932600	935500	956200	973000	1097000	1300000	1272000	1234000
(↑)	4360.03	4362.95	4364.69	4365.95	4365.48	4369.45	4367.22	4372.90	4381.14	4382.79	4380.29	4378.90
(↑↑)	+27000	+55500	+34400	+25500	-9600	+83400	-47600	+123600	+202000	+43000	-65000	-36000
CAL YR 1982	MAX	916700	MIN	725200	(↑↑)	+191400						
WTR YR 1983	MAX	1359000	MIN	801100	(↑↑)	+436200						

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

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



## RIO GRANDE BASIN

259

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 downstream from dam, 1.5 mi upstream from Cuchillo Negro River, and at mile 1,382.2.

DRAINAGE AREA.--29,450 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1915 to current year. Monthly or annual discharge only for some periods, published in WSP 1732. Figures of daily discharge, published in WSP 458 for October to December 1916, are unreliable.

REVISED RECORDS.--WSP 1562: 1920. WSP 1632: Drainage area. WSP 1732: 1917, 1920. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4,241.09 ft National Geodetic Vertical Datum of 1929. Prior to Mar. 24, 1980 at datum 1.0 ft higher. See WSP 1732 for history of changes prior to Apr. 24, 1942.

REMARKS.--Water-discharge records good except those for March, July and August, which are fair. Flow regulated by Elephant Butte Reservoir (station 08360500). Diversion for irrigation of about 800,000 acres above station.

AVERAGE DISCHARGE.--68 years, 967 ft<sup>3</sup>/s, 700,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8,220 ft<sup>3</sup>/s May 22, 1942; no flow at times prior to 1929, Mar. 2-4, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,210 ft<sup>3</sup>/s May 2; minimum daily, 0.24 ft<sup>3</sup>/s Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	13	13	18	645	22	2150	2200	1450	1350	1300	963
2	19	13	593	18	647	20	2170	2210	1430	1350	1300	975
3	19	13	622	608	653	18	2140	2190	1410	1350	1290	973
4	18	13	38	625	653	21	2160	2130	1400	1350	1330	976
5	13	13	14	624	43	18	2180	1790	1400	1360	1330	972
6	13	13	598	630	23	17	2190	2060	1390	1360	1340	971
7	13	13	626	634	626	16	2180	2060	1380	1370	1350	977
8	13	13	619	42	647	15	2160	2080	1370	1400	1340	1240
9	12	13	624	20	649	15	2170	2070	1370	1520	1340	1310
10	12	13	632	617	649	17	2180	2090	1370	1470	1250	1270
11	13	13	32	636	649	18	2180	2090	1360	1120	1260	1270
12	14	12	17	633	38	18	2180	2110	1360	1250	1280	1300
13	15	12	602	636	25	18	2020	2100	1350	1250	1300	1280
14	13	12	627	637	640	10	2190	2120	1340	1300	1330	820
15	13	12	627	48	1900	4.7	2190	2130	1330	1300	1340	811
16	12	267	624	23	1920	6.8	2190	2130	1330	1340	1350	816
17	12	425	627	618	1950	18	2190	2140	1340	1320	1350	824
18	11	14	34	649	1950	18	2150	2140	1340	1310	1370	827
19	11	13	18	646	1950	18	2130	2150	1340	1320	1360	33
20	12	13	597	649	1960	18	2130	2150	1350	1310	1370	5.4
21	11	12	640	653	1960	18	2130	2160	1340	1300	1360	2.5
22	11	12	634	47	1960	17	2140	2140	1350	1280	1330	1.4
23	12	12	643	23	1950	18	2150	2160	1350	1290	1490	.82
24	13	12	35	619	1960	17	2150	1980	1350	1280	1400	1.3
25	13	12	18	647	1970	16	2160	2180	1350	1300	1390	.95
26	13	11	16	648	1980	16	2160	2190	1350	1300	1390	.24
27	14	11	607	649	1990	16	1830	2190	1350	1280	1360	.49
28	14	11	631	655	1980	16	2200	2200	1350	1300	1350	.45
29	13	11	635	48	---	16	2170	2200	1350	1300	1350	.59
30	13	12	641	24	---	21	2190	2200	1350	1290	946	.85
31	14	---	35	621	---	18	---	2170	---	1310	969	---
TOTAL	418	1039	12719	13645	33967	515.5	64510	65910	40900	40930	40815	18622.99
MEAN	13.5	34.6	410	440	1213	16.6	2150	2126	1363	1320	1317	621
MAX	19	425	643	655	1990	22	2200	2210	1450	1520	1490	1310
MIN	11	11	13	18	23	4.7	1830	1790	1330	1120	946	.24
AC-FT	829	2060	25230	27060	67370	1020	128000	130700	81130	81180	80960	36940

CAL YR 1982 TOTAL 312054.80 MEAN 855 MAX 2160 MIN 4.8 AC-FT 619000  
WTR YR 1983 TOTAL 333991.49 MEAN 915 MAX 2210 MIN .24 AC-FT 662500

## RIO GRANDE BASIN

## 08362000 CABALLO RESERVOIR NEAR ARREY, NM

LOCATION.--Lat 32°53'47", long 107°17'30", in SE&SW¼ sec.19, T.16 S., R.4 W., Sierra County, Hydrologic Unit 13030101, in control tower of Caballo Dam on Rio Grande, 0.5 mi downstream from mouth of Apache Canyon, 0.9 mi upstream from Bojarquez Bridge, 2 mi upstream from Percha diversion dam, 3.5 mi northeast of Arrey, 5.2 mi south of Caballo, and at mile 1,356.6.

DRAINAGE AREA.--30,700 mi<sup>2</sup>, approximately; including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--February 1938 to September 1965 (monthend contents only), October 1965 to current year.

REVISED RECORDS.--WSP 978: 1942. WSP 1632: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 43.3 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam, completed Sept. 19, 1938. Storage began Feb. 8, 1938. Capacity by 1981 survey, 331,500 acre-ft between gage heights 4,104 ft bottom of tunnel entrance of gates and 4,182 ft gage height above which spillway gates operate automatically. Capacity by original survey was 345,900 acre-ft. No dead storage. Storage held for flood control, 100,000 acre-ft. Water released from Elephant Butte Reservoir for power development is stored in Caballo Reservoir and released for irrigation on Rio Grande project for Bureau of Reclamation.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 347,000 acre-ft Mar. 4, 1942, gage height, 4,182.06 ft; minimum daily contents, 118 acre-ft, Oct. 14, 1938, gage height, 4,108.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 149,200 acre-ft May 31, gage height 4,162.50 ft; minimum daily contents, 34,450 acre-ft Sept. 30, gage height, 4,140.24 ft.

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

Oct. 1 to Dec. 31  
(Based on survey by USBR in 1958)

Jan. 1 to Sept. 30  
(Based on survey by USBR in 1981)

4,130	14,700	4,150	80,760	4,140	33,770	4,160	131,200
4,140	40,310	4,160	141,700	4,150	71,800	4,170	209,400

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37150	39400	43700	62010	88640	136800	57670	117500	148600	121600	83680	57300
2	37210	39530	44420	62010	89760	135200	59190	118100	147500	120300	82770	56100
3	37310	39500	45720	62630	90770	133300	60910	119200	146700	119000	81650	55160
4	37400	39530	46340	63830	91450	131700	62630	121000	146100	117700	80390	54040
5	37530	39590	46450	64920	91500	129600	63830	121700	145500	115800	79090	53320
6	37620	39660	47140	66160	90880	128200	66160	123100	144800	114100	77900	52190
7	37590	39690	48510	67410	90940	126600	69680	124800	144100	112600	76980	50880
8	37680	39780	49880	67830	91790	124100	73470	126400	143700	110700	75770	49900
9	37710	39870	51390	68160	92410	121400	77340	127900	143500	109800	74260	49750
10	37680	39970	52940	68540	92980	119000	81180	128900	143100	108600	72780	49450
11	37710	40220	53510	69770	93730	116100	85240	129500	142600	107600	71800	49710
12	38060	40220	53620	70970	94190	113000	88200	130200	142100	107100	71410	50580
13	37900	40280	54420	72290	94300	109600	90320	131900	142000	106300	70680	51570
14	37930	40310	55680	73270	95170	106300	92410	132600	141200	105100	70200	52340
15	38120	40310	56870	73760	98100	103400	93730	133300	140400	104800	69720	52110
16	38220	40310	58170	74010	101900	100100	94650	134200	139500	103900	69150	51990
17	38250	41950	59440	74860	105300	96800	95750	135200	138400	102500	68540	52110
18	38430	42350	60060	75920	108500	93840	96980	136000	137500	101900	68020	52070
19	38500	42510	60100	77340	112400	91450	98220	137100	136700	100200	67550	51680
20	38590	42580	60850	78930	115800	88760	99400	138200	136000	98390	67130	49940
21	38650	42610	61760	80020	119400	85950	101000	139200	134700	96630	66760	48010
22	38680	42740	63230	80550	122800	83030	102600	140300	133300	95230	66390	45820
23	38780	42900	64740	80600	126300	79710	104300	141100	130900	93790	65010	43490
24	38940	42970	65390	81340	129800	76020	106100	141800	129800	92240	63470	40760
25	39030	43070	65520	82660	132000	73420	108000	142900	128600	90880	62940	38230
26	39060	43560	65690	83890	133700	70350	109300	143800	127700	89260	62230	36170
27	39310	43430	66380	84910	135600	67740	109900	145500	126100	88420	61740	35170
28	39180	43460	67790	86330	137500	65150	111300	146200	125200	86990	61570	34710
29	39150	43530	68730	86660	---	62630	113200	147500	124100	85730	61260	34620
30	39220	43560	70340	86770	---	60310	115800	148900	123200	85130	60650	34450
31	39340	---	70790	87540	---	57540	---	149200	---	84100	58760	---
MAX	39340	43560	70790	87540	137500	136800	115800	149200	148600	121600	83680	57300
MIN	37150	39400	43700	62010	88640	57540	57670	117500	123200	84100	58760	34450
(†)	4139.69	4140.99	4147.89	4153.03	4160.89	4146.85	4157.73	4162.50	4158.84	4152.40	4147.14	4140.24
(††)	+2370	+4220	+27230	+25530	+49960	-79960	+58260	+33400	-26000	-39100	-25340	-24310

CAL YR 1982 MAX 109600 MIN 29020 (††) -37810  
WTR YR 1983 MAX 149200 MIN 34450 (††) +3610 \*

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

(††) CHANGE IN CONTENTS, IN ACRE-FEET

\* COMPUTED ON BASIS OF REVISED CAPACITY TABLE PUT INTO USE JAN. 1, 1983

## 08362500 RIO GRANDE BELOW CABALLO DAM, NM

LOCATION.--Lat 32°53'05", long 107°17'31", in NE¼SW¼ sec.30, T.16 S., R.4 W., Sierra County, Hydrologic Unit 13030102, on left bank 2,000 ft upstream from Interstate Highway 25, 4,200 ft downstream from Caballo Dam, 1.2 mi downstream from Apache Canyon, 1.3 mi upstream from Percha diversion dam, 3 mi northeast of Arrey, 5 mi south of Caballo, and at mile 1,355.6.

DRAINAGE AREA.--30,700 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

PERIOD OF RECORD.--January 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,140.9 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1938, at datum 7.0 ft higher, Oct. 7-12, 1938, at datum 6.0 ft higher, and Oct. 13, 1938, to Dec. 31, 1945, at datum 5.0 ft higher than present datum.

REMARKS.--Flow regulated by Caballo Reservoir (station 08362000) capacity, 344,000 acre-ft, 1958 survey and Elephant Butte Reservoir (station 08360500) capacity, 2,109,000 acre-ft, 1974 survey. Diversions for irrigation of about 800,000 acres 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.--45 years, 849 ft<sup>3</sup>/s, 615,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,650 ft<sup>3</sup>/s May 20, 1942; minimum daily, 0.1 ft<sup>3</sup>/s Oct. 31 to Nov. 14, 1954, Nov. 7 to Dec. 31, 1955, Feb. 15-29, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,220 ft<sup>3</sup>/s July 7; minimum daily, 1.0 ft<sup>3</sup>/s Dec. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	1.2	1.1	1.2	1.5	897	1340	1200	1800	1970	1630	1940
2	2.2	1.2	1.0	1.2	1.5	894	1320	1240	1790	2020	1770	1610
3	1.6	1.2	1.0	1.1	232	894	1330	1220	1660	1910	1910	1430
4	1.1	1.3	1.0	1.1	410	834	1320	1420	1570	1850	1920	1430
5	1.1	1.3	1.1	1.1	363	811	1290	1430	1570	2000	1860	1430
6	1.1	1.3	1.1	1.2	360	776	950	1350	1560	2170	1800	1540
7	1.1	1.3	1.1	1.2	360	1030	700	1280	1600	2220	1800	1660
8	1.1	1.3	1.2	1.2	352	1290	345	1290	1610	2040	1790	1570
9	1.1	1.3	1.2	1.2	344	1310	117	1290	1520	1870	2020	1420
10	1.1	1.3	1.2	1.2	344	1300	117	1490	1440	1860	2110	1370
11	1.1	1.4	1.2	1.2	208	1470	117	1660	1450	1840	1970	1320
12	1.1	1.4	1.3	1.3	4.0	1660	554	1570	1460	1880	1600	1230
13	1.1	1.5	1.3	1.3	2.5	1690	906	1540	1450	1770	1620	1080
14	1.1	1.6	1.3	1.3	2.2	1690	945	1540	1600	1740	1610	1050
15	1.1	1.6	1.4	1.3	2.2	1670	1310	1550	1790	1740	1610	1050
16	1.1	1.6	1.4	1.3	2.2	1660	1660	1550	1760	1730	1600	924
17	1.1	1.7	1.4	1.3	2.2	1680	1670	1480	1720	1730	1580	814
18	1.1	1.8	1.4	1.3	2.2	1490	1680	1450	1700	1730	1600	847
19	1.1	1.8	1.5	1.4	2.2	1340	1470	1450	1730	1900	1570	855
20	1.2	1.7	1.5	1.4	2.2	1440	1440	1510	1720	2040	1550	912
21	1.2	1.7	1.5	1.4	2.2	1430	1440	1580	1930	2140	1550	1110
22	1.2	1.6	1.6	1.4	2.2	1600	1350	1570	2180	2130	1540	1190
23	1.2	1.6	1.6	1.4	2.2	1710	1260	1570	2150	2030	1880	1390
24	1.2	1.5	1.5	1.5	2.2	1700	1270	1540	2060	1950	2120	1580
25	1.2	1.5	1.5	1.5	439	1650	1280	1560	1850	1840	1950	1440
26	1.2	1.4	1.4	1.5	901	1550	1460	1540	1820	1870	1620	1100
27	1.2	1.3	1.4	1.5	901	1450	1590	1460	1810	1880	1490	731
28	1.2	1.2	1.4	1.5	901	1440	1590	1340	1800	2070	1500	114
29	1.2	1.2	1.3	1.5	---	1420	1140	1330	1800	1800	1500	59
30	1.2	1.1	1.3	1.5	---	1420	770	1290	1910	1610	1700	148
31	1.2	---	1.2	1.5	---	1420	---	1530	---	1610	1850	---
TOTAL	38.6	42.9	40.4	41.0	6148.7	42616	33731	44820	51810	58940	53620	34344
MEAN	1.25	1.43	1.30	1.32	220	1375	1124	1446	1727	1901	1730	1145
MAX	2.8	1.8	1.6	1.5	901	1710	1680	1660	2180	2220	2120	1940
MIN	1.1	1.1	1.0	1.1	1.5	776	117	1200	1440	1610	1490	59
AC-FT	77	85	80	81	12200	84530	66910	88900	102800	116900	106400	68120
(†)	0	0	0	0	0	298	0	76	198	352	254	47

CAL YR 1982 TOTAL 324621.2 MEAN 889 MAX 2240 MIN 1.0 AC-FT 643900  
WTR YR 1983 TOTAL 326192.6 MEAN 894 MAX 2220 MIN 1.0 AC-FT 647000

(†) DIVERSION, IN ACRE-FEET, 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 upstream from American Dam, 5.6 mi upstream from Santa Fe Street-Juarez Avenue Bridge between El Paso and Cd. Juarez, Chihuahua, and at mile 1,249.

DRAINAGE AREA.--32,207 mi<sup>2</sup>, approximately, including 2,940 mi<sup>2</sup> in closed basin in San Luis Valley, CO.

## 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 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.--46 years (water years 1938-83), 499 ft<sup>3</sup>/s, 361,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft<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 Sept. 3, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft<sup>3</sup>/s Aug. 26, gage height, 5.10 ft; minimum, 59.2 ft<sup>3</sup>/s Jan. 11.

REVISIONS.--Revised figures of discharge for the water year 1982, superseding those published in the report for 1982 are given herein.

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					283.0	644	659	561	587	645	934	954
2					300.0	649	651	574	567	757	899	878
3					309.0	669	638	570	558	762	1020	700
4					321.0	647	692	643	668	740	899	630
5					290.0	430	699	691	685	765	829	595
6					215.0	432	703	558	710	770	830	602
7					190.0	415	583	547	718	720	812	604
8					177.0	388	591	516	732	669	858	600
9					166.0	388	519	512	728	614	791	520
10					165.0	357	516	532	709	572	702	464
11					156.0	403	541	532	602	648	566	603
12					150.0	545	634	522	616	844	517	702
13					143.0	563	639	512	659	840	989	778
14					117.0	603	642	629	664	814	970	708
15					96.0	633	646	642	667	749	732	609
16					93.0	648	648	650	673	687	781	526
17					89.0	658	635	724	657	664	840	524
18					86.4	622	638	740	661	676	829	507
19					82.7	488	670	734	672	640	833	720
20					78.2	635	662	732	687	668	924	1310
21					74.4	697	672	669	685	762	936	628
22					72.2	672	689	664	699	796	987	395
23					70.2	720	714	750	700	859	975	332
24					69.4	711	745	800	574	887	975	298
25					69.2	684	774	831	617	874	956	234
26					66.3	708	575	810	579	799	942	236
27					64.7	698	443	608	527	781	948	252
28					194.0	732	430	773	644	766	905	210
29					---	761	462	800	700	934	886	170
30					---	720	506	756	631	1160	932	438
31					---	629	---	614	---	1090	986	---
TOTAL	5645	3255.6	2426.3	2143.0	4187.7	18549	18616	20196	19576	23952	26983	16727
MEAN	182	109	78.3	69.1	150	598	621	651	653	773	870	558
MAX	278	133	97	130	321	761	774	831	732	1160	1020	1310
MIN	132	91	67	46	64	357	430	512	527	572	517	170
AC-FT	11197	6457	4813	4251	8306	36792	36925	40059	38829	47509	53521	33178
CAL YR 1981	TOTAL	168053.3	MEAN	460	MAX	1440	MIN	47	AC-FT	333300		
WTR YR 1982	TOTAL	162256.6	MEAN	445	MAX	1310	MIN	46	AC-FT	321800		

## RIO GRANDE BASIN

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## RIO GRANDE AT EL PASO, TX -- Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	356	120	246.0	102.0	87.9	559	574	613	523	644	882	740
2	236	118	131.0	114.0	88.4	636	609	374	471	754	853	837
3	246	116	105.0	112.0	82.6	642	585	422	584	838	848	828
4	224	108	93.8	119.0	96.1	672	550	668	607	913	853	810
5	168	107	92.5	114.0	101.0	697	522	554	593	833	911	717
6	211	108	93.8	94.0	101.0	663	679	622	583	813	899	699
7	247	111	98.9	97.5	257.0	628	923	630	610	832	887	668
8	237	120	109.0	102.0	325.0	607	608	608	634	892	808	641
9	223	166	159.0	94.9	330.0	574	432	610	634	945	811	619
10	209	199	166.0	88.5	328.0	572	477	635	637	928	788	708
11	206	136	295.0	59.2	341.0	431	333	576	626	825	866	778
12	209	146	264.0	66.7	331.0	414	248	592	603	868	995	687
13	208	142	171.0	69.8	319.0	464	222	730	619	868	1030	774
14	199	137	125.0	69.5	266.0	663	219	689	632	861	905	678
15	193	132	124.0	70.1	172.0	759	210	630	631	858	926	572
16	190	126	122.0	71.1	137.0	644	213	612	612	833	914	570
17	187	120	125.0	72.0	124.0	590	316	671	670	870	889	541
18	184	121	129.0	76.8	108.0	499	648	671	681	850	849	520
19	173	126	132.0	77.9	101.0	495	721	648	705	877	838	388
20	170	120	135.0	80.6	93.5	510	666	559	703	851	873	362
21	168	117	132.0	82.3	89.2	431	615	566	694	861	846	364
22	167	116	129.0	83.4	87.4	509	519	582	706	832	779	325
23	168	109	115.0	84.3	84.9	520	522	621	709	887	822	357
24	169	107	106.0	84.5	84.0	508	548	651	732	960	796	420
25	166	119	98.6	85.3	83.8	563	530	657	781	1010	887	609
26	160	114	107.0	82.1	83.7	540	527	629	813	992	1090	698
27	154	117	90.8	82.8	79.7	551	547	598	805	982	1040	642
28	149	121	80.4	82.5	250.0	526	592	597	762	1010	934	570
29	136	114	93.4	82.0	----	439	683	613	695	853	826	796
30	126	114	87.5	85.3	----	450	667	578	679	978	768	808
31	122	----	108.0	88.3	----	483	----	581	----	939	767	----
TOTAL	5961	3727	4064.7	2674.4	4632.2	17239	15505	18787	19734	27257	27180	18726
MEAN	192	124	131	86.3	165	556	517	606	658	879	877	624
MAX	356	199	295	119	341	759	923	730	813	1010	1090	837
MIN	122	107	80.4	59	79	414	210	374	471	644	767	325
AC-FT	11824	7392	8062	5305	9188	34194	30754	37264	39142	54064	53912	37143
CAL YR 1982 TOTAL	164682.4			MEAN 451	MAX 1310	MIN 46	AC-FT 326600					
WTR YR 1983 TOTAL	165487.3			MEAN 453	MAX 1090	MIN 59	AC-FT 328200					

RIO GRANDE BASIN  
08364000 RIO GRANDE AT EL PASO, TX -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1930 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1978 to 1981.

WATER TEMPERATURES: January 1978 to 1981.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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										
22...	1410	133	2080	2100	8.2	8.2	--	18.5	--	--
NOV										
03...	0930	106	2020	2180	8.4	8.2	10.0	10.5	14	9.6
17...	1030	116	2100	2150	8.2	8.5	--	11.0	--	--
DEC										
20...	1600	111	2210	2310	8.1	8.2	--	11.0	--	--
JAN										
05...	1000	100	2100	2190	8.0	8.2	.0	4.5	14	11.7
17...	0930	92	2330	2410	8.2	8.2	--	9.0	--	--
FEB										
14...	0915	250	1360	1440	8.0	8.0	--	9.0	--	--
MAR										
02...	0900	520	920	1030	7.8	8.1	14.0	11.5	230	8.8
15...	1530	620	939	958	7.8	8.0	--	13.5	--	--
APR										
19...	1540	700	1000	997	8.1	8.4	--	18.5	--	--
MAY										
04...	0800	700	1100	1050	8.0	8.0	20.5	16.0	65	7.8
17...	1530	720	1040	1030	8.1	8.2	--	19.0	--	--
JUN										
14...	0915	680	1110	1100	7.9	8.1	--	19.0	--	--
JUL										
01...	0900	680	1300	1220	8.1	8.3	24.0	23.0	60	6.8
20...	0945	840	1100	1070	7.9	8.1	--	22.0	--	--
AUG										
17...	1515	880	1130	1100	8.1	8.1	--	28.0	--	--
SEP										
01...	0900	720	1250	1160	8.1	7.7	26.0	24.0	50	7.4
19...	1010	440	1530	1540	8.1	8.2	--	22.0	--	--

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LILITY FIELD (MG/L AS CACO3) (00410)	ALKA- LILITY LAB (MG/L AS CACO3) (90410)
OCT										
22...	450	193	193	130	31	300	6.4	11	260	--
NOV										
03...	460	177	177	130	32	300	6.3	11	--	282
17...	510	235	235	150	34	300	6.0	11	280	--
DEC										
20...	490	216	216	140	33	320	6.6	11	270	--
JAN										
05...	460	209	209	130	32	300	6.3	11	--	248
17...	510	235	235	150	34	340	6.8	11	280	--
FEB										
14...	300	98	98	86	20	180	4.7	7.0	200	--
MAR										
02...	250	80	80	74	16	130	3.7	6.8	--	171
15...	240	77	77	70	15	110	3.2	6.7	160	--
APR										
19...	250	77	77	74	15	120	3.5	7.1	170	--
MAY										
04...	280	93	93	82	17	140	3.8	7.1	--	183
17...	250	72	72	76	15	120	3.4	7.0	180	--
JUN										
14...	280	90	90	84	17	130	3.5	7.4	190	--
JUL										
01...	300	90	90	87	19	160	4.2	8.0	--	207
20...	260	73	73	77	17	130	3.6	8.1	190	--
AUG										
17...	260	95	95	78	17	140	3.9	7.7	170	--
SEP										
01...	310	112	112	92	20	160	4.1	6.7	--	202
19...	370	144	144	110	24	200	4.7	8.9	230	--

RIO GRANDE BASIN  
08364000 RIO GRANDE AT EL PASO, TX -- Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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										
22...	490	240	--	27	--	1380	--	--	--	--
NOV										
03...	500	250	.70	28	1440	1420	.38	.080	.120	.090
17...	510	250	--	28	--	1450	--	--	--	--
DEC										
20...	530	280	--	17	--	1490	--	--	--	--
JAN										
05...	510	260	.80	26	1490	1420	.40	.160	.200	.100
17...	550	290	--	25	--	1570	--	--	--	--
FEB										
14...	280	160	--	21	--	874	--	--	--	--
MAR										
02...	200	110	.70	19	683	660	.32	.140	.670	.120
15...	190	92	--	18	--	598	--	--	--	--
APR										
19...	210	99	--	14	--	641	--	--	--	--
MAY										
04...	250	120	.60	16	800	744	.11	.090	.290	.070
17...	200	97	--	14	--	637	--	--	--	--
JUN										
14...	220	100	--	16	--	688	--	--	--	--
JUL										
01...	280	130	.70	18	824	828	.26	<.060	.310	.060
20...	240	100	--	17	--	703	--	--	--	--
AUG										
17...	260	110	--	18	--	733	--	--	--	--
SEP										
01...	290	140	.60	20	844	852	.13	.060	.290	.070
19...	350	170	--	23	--	1020	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV											
03...	0930	20	4	<100	<10	2	<1	0	4	110	<2
MAY											
04...	0800	20	4	0	0	<1	<1	0	2	10	1
JUL											
01...	0900	30	4	0	0	<1	<1	0	4	0	4
SEP											
01...	0900	20	4	0	0	<1	<1	0	2	0	2

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV										
03...	230	30	.5	10	<2	<1	<2	1800	2.5	20
MAY										
04...	120	12	1.0	10	3	<1	<1	990	<6.0	60
JUL										
01...	130	9	.0	10	1	1	<1	1100	<6.0	10
SEP										
01...	130	4	1.0	<10	2	<1	<1	1100	<6.0	0

RIO GRANDE BASIN  
08364000 RIO GRANDE AT EL PASO, TX -- Continued  
WATER-QUALITY RECORDS

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 03...	500	520
JAN 05...	190	520
MAR 02...	1500	2400
MAY 04...	320	380
JUL 01...	1200	920
SEP 01...	3500	940

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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...	0930	106	10.5	97	28	44
JAN 05...	1000	100	4.5	24	6.5	70
MAR 02...	0900	520	11.5	472	663	91
MAY 04...	0800	700	16.0	277	524	84
JUL 01...	0900	680	23.0	121	222	95
SEP 01...	0900	720	24.0	125	243	97



RIO GRANDE BASIN  
08370500 RIO GRANDE BELOW OLD FORT QUITMAN, TX  
(National stream-quality accounting network)  
WATER-QUALITY RECORDS

LOCATION.--Lat 31°05'05", long 105°36'25", Hudspeth County, Hydrologic Unit 13040201, at gaging station on the rectified channel of the Rio Grande, 1.5 mi (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.

WATER TEMPERATURES: October 1974 to 1981.

REMARKS.--Records of discharge for water year 1980 are given in International Boundary and Water Commission Water Bulletins Nos. 49 and 50.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 04...	1000	142	4200	4140	8.3	8.1	10.0	10.0	40	9.6
JAN 06...	1400	148	3800	3850	8.4	8.2	3.0	4.0	18	11.4
MAR 03...	1000	32	6600	6750	7.6	8.1	10.5	11.0	4.5	8.6
MAY 05...	0900	46	5100	5290	8.3	8.0	27.0	16.0	55	8.6
JUL 02...	0900	19	6800	6620	8.0	7.9	29.0	24.0	6.6	9.2
SEP 02...	0900	52	5000	5520	8.0	8.2	30.5	24.0	100	8.2

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM 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 CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 04...	740	468	468	210	52	640	11	12	275	760
JAN 06...	730	455	455	210	51	550	9.2	13	280	650
MAR 03...	1200	897	897	310	96	1000	13	13	274	1100
MAY 05...	940	675	675	260	70	810	12	12	264	890
JUL 02...	1200	919	919	320	90	1000	13	13	257	1100
SEP 02...	950	727	727	260	72	860	13	12	220	910

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 04...	830	.80	28	2680	2700	1.9	.130	.940	.760
JAN 06...	780	.80	29	2430	2460	1.0	6.00	1.80	1.70
MAR 03...	1400	.80	24	4440	4110	<.10	.090	.190	.100
MAY 05...	1100	.80	21	3300	3320	.27	.170	.490	.150
JUL 02...	1600	.80	23	4380	4310	<.10	.090	.120	.020
SEP 02...	1300	.80	28	3660	3580	<.10	.060	.280	.010

RIO GRANDE BASIN  
08370500 RIO GRANDE BELOW OLD FORT QUITMAN, TX -- Continued  
(National stream-quality accounting network)  
WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 04...	1000	10	11	<100	<10	<2	<1	0	4	50	<2
MAY 05...	0900	30	7	--	<10	<1	<1	0	1	30	2
JUL 02...	0900	--	7	100	<10	1	2	0	3	30	3
SEP 02...	0900	20	6	100	--	3	<1	0	4	50	2

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 04...	280	20	.0	12	6	1	<2	3300	11	20
MAY 05...	280	40	.5	14	6	1	<1	--	15	10
JUL 02...	370	90	.0	19	4	1	<1	4900	22	20
SEP 02...	--	10	.5	14	5	<1	<1	60	20	30

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 04...	80	260
JAN 06...	930	510
MAR 03...	100	90
MAY 05...	140	140
JUL 02...	100	240
SEP 02...	210	550

## INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 04...	1000	142	10.0	102	39	62
JAN 06...	1400	148	4.0	87	35	33
MAR 03...	1000	32	11.0	41	3.5	68
MAY 05...	0900	46	16.0	140	17	79
JUL 02...	0900	19	24.0	39	2.0	51
SEP 02...	0900	52	24.0	190	27	97

08377900 RIO MORA NEAR TERRERO, NM  
(Hydrologic bench-mark station)

LOCATION.--Lat 35°46'38", long 105°39'27", in E½ NE¼ sec.22, T.18 N., R.12 E., San Miguel County, Hydrologic Unit 13060001, in Santa Fe National Forest, on left bank 450 ft upstream from bridge on State Highway 63, 600 ft upstream from mouth, and 2.6 mi north of Terrero.

DRAINAGE AREA.--53.2 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,890 ft, 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.--20 years, 29.8 ft<sup>3</sup>/s, 21,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft<sup>3</sup>/s June 8, 1979, gage height, 4.15 ft; minimum determined, 0.90 ft<sup>3</sup>/s Jan. 12-14, 1964, but may have been less during periods of ice effect.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since 1886 probably occurred Sept. 29, 1904 (based on statement for Pecos River near Pecos and history of that flood period).

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 29	2100	140	2.22	July 12	0245	140	2.22
May 11	2215	248	2.65	July 26	0530	110	2.07
June 1	2230	*418	3.11	Aug. 2	2015	155	2.30

Minimum discharge, 4.7 ft<sup>3</sup>/s Feb. 10, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	14	9.3	7.5	6.4	11	25	124	375	64	77	33
2	43	14	9.1	7.5	6.3	11	24	104	373	58	102	30
3	38	12	9.0	8.0	5.9	11	24	89	349	54	100	28
4	36	15	9.5	8.0	6.3	11	19	88	325	49	100	26
5	33	15	10	8.0	6.5	10	15	107	295	46	87	25
6	31	14	10	8.0	6.5	10	13	127	282	46	78	23
7	29	13	10	8.5	6.2	9.9	10	127	278	42	73	25
8	28	13	9.5	9.0	6.1	11	11	141	275	37	67	27
9	27	15	10	9.0	6.0	11	12	173	264	37	59	23
10	26	14	10	8.6	5.7	13	13	219	250	35	55	24
11	26	16	9.5	8.6	5.8	17	14	229	244	46	54	22
12	25	15	9.5	8.2	5.9	18	14	227	248	91	50	21
13	23	15	10	8.1	6.2	19	14	215	241	78	53	22
14	24	14	9.5	8.1	6.5	21	14	201	214	77	73	22
15	23	14	10	8.0	6.8	20	14	168	189	67	58	21
16	24	14	10	8.2	7.2	18	14	150	173	60	52	19
17	23	14	9.7	8.9	7.8	17	17	143	160	56	49	18
18	21	14	10	9.5	8.0	15	27	130	155	58	45	17
19	20	13	10	9.1	8.7	13	43	122	150	53	43	16
20	19	13	10	8.5	8.5	11	55	116	143	53	39	16
21	19	12	10	8.3	9.0	10	55	107	134	59	36	15
22	17	12	10	7.7	9.5	10	57	110	125	53	42	14
23	17	12	10	7.5	9.4	10	55	120	118	49	49	14
24	16	12	9.0	7.2	9.6	11	69	158	113	58	46	14
25	16	12	8.5	7.2	9.9	11	101	216	113	61	39	14
26	16	11	9.0	7.2	10	11	116	277	102	86	35	14
27	19	11	9.0	7.1	11	11	120	300	93	71	35	15
28	15	10	8.5	7.0	11	11	122	298	85	65	33	14
29	14	10	8.0	6.7	---	12	124	307	77	63	32	13
30	15	11	8.0	6.7	---	14	131	351	70	65	30	15
31	15	---	8.0	6.4	---	21	---	370	---	62	30	---
TOTAL	746	394	292.6	246.3	212.7	409.9	1342	5614	6013	1799	1721	600
MEAN	24.1	13.1	9.44	7.95	7.60	13.2	44.7	181	200	58.0	55.5	20.0
MAX	48	16	10	9.5	11	21	131	370	375	91	102	33
MIN	14	10	8.0	6.4	5.7	9.9	10	88	70	35	30	13
AC-FT	1480	781	580	489	422	813	2660	11140	11930	3570	3410	1190
CAL YR 1982	TOTAL	13166.5	MEAN	36.1	MAX	172	MIN	5.9	AC-FT	26120		
WTR YR 1983	TOTAL	19390.5	MEAN	53.1	MAX	375	MIN	5.7	AC-FT	38460		

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 1982 TO SEPTEMBER 1983

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 22...	1300	12	100	104	8.4	8.0	5.0	.5	.50	10.9
JAN 19...	1445	8.9	112	120	7.4	7.6	7.5	.5	1.0	12.3
MAY 26...	1130	280	74	71	7.9	7.9	13.0	5.0	12	9.6
JUL 27...	1130	64	76	77	7.5	7.5	24.5	13.5	2.0	9.7

	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM 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)
NOV 22...	47	2	2	16	1.8	1.3	.0	.6	45	9.0
JAN 19...	56	7	7	19	2.0	1.7	.1	.6	49	11
MAY 26...	32	4	4	11	1.1	1.0	.0	.7	28	9.0
JUL 27...	35	4	4	12	1.2	1.3	.1	2.7	31	9.0

DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P) (00671)
NOV 22...		.7	.20	5.9	62	63	<.10	.070	.020	<.010
JAN 19...		.6	.20	6.4	70	71	.10	<.060	.010	<.010
MAY 26...		.9	<.10	5.9	49	47	<.10	.080	.030	<.010
JUL 27...		3.5	<.10	5.5	59	54	<.10	.060	.020	<.010

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 22...	1300	10	<1	0	0	<1	<1	0	1	0	2
MAY 26...	1130	200	<1	0	0	<1	<1	0	4	100	7

DATE	TIME	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 22...		0	2	.0	<10	<1	<1	<1	40	<6.0	0
MAY 26...		0	3	.0	<10	5	<1	<1	20	<6.0	20

RIO GRANDE BASIN  
08377900 RIO MORA NEAR TERRERO, NM -- Continued  
WATER-QUALITY RECORDS

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
NOV 22...	1300	1.5	1.0	<.4	1.0	<.4	.9	<.4	.04	.17

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 22...	K0	K8
JAN 19...	K1	20
MAY 26...	K18	72
JUL 27...	5	220

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 22...	1300	12	.5	3	.10	--
JAN 19...	1445	8.9	.5	1	.02	--
MAY 26...	1130	280	5.0	28	21	73
JUL 27...	1130	64	13.5	8	1.4	76

## RIO GRANDE BASIN

08378500 PECOS RIVER NEAR PECOS, NM

LOCATION.--Lat 35°42'30", long 105°40'55", in NE¼NE¼ sec.17, T.17 N., R.12 E., San Miguel County, Hydrologic Unit 13060001, in Santa Fe National Forest, on left bank 30 ft downstream from bridge on private road, 270 ft upstream from Indian Creek, 2.4 mi downstream from Holy Ghost Creek, 9.0 mi north of Pecos, and at mile 896.6.

DRAINAGE AREA.--189 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1919 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "near Cowles" 1919-25, "at Irvins Ranch" 1926-29, and as "at Irvins Ranch near Pecos" 1930-39.

REVISED RECORDS.--WSP 898: Drainage area. WSP 1312: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 7,502.94 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1977, at site 30 ft upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 75 acres, 1959 determination, above station. Several observations of water temperature were made during the year. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--64 years, 98.1 ft<sup>3</sup>/s, 71,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 4,500 ft<sup>3</sup>/s Sept. 21 or 22, 1929, gage height, 6.2 ft, from floodmark, from rating curve extended above 1,600 ft<sup>3</sup>/s; minimum, 2.0 ft<sup>3</sup>/s Mar. 19, 1971, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1904, was greatest since 1886, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 310 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 30	0030	469	3.02	July 26	0600	358	2.87
May 11	2030	744	3.47	Aug. 1	2245	458	3.07
June 1	2230	*1280	4.09	Aug. 2	2030	437	3.03
July 12	0415	565	3.25	Aug. 3	2000	406	2.97

Minimum discharge, 21 ft<sup>3</sup>/s Feb. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	58	44	35	30	44	96	416	1120	303	214	121
2	128	58	44	35	28	45	87	351	1100	284	297	106
3	120	52	41	35	28	45	91	292	1010	262	294	95
4	114	65	46	35	30	46	79	285	909	248	290	91
5	107	62	52	40	30	43	71	343	827	238	253	85
6	102	57	50	40	28	42	77	407	799	237	223	80
7	97	56	50	45	33	42	66	404	776	223	211	82
8	95	56	48	50	33	44	63	445	757	205	197	95
9	91	62	53	50	30	45	60	525	729	199	178	81
10	88	59	54	38	32	50	60	633	728	189	167	80
11	90	69	50	45	32	61	63	674	752	226	166	80
12	88	56	50	45	32	66	62	665	781	371	156	79
13	84	60	52	45	32	71	60	623	763	279	155	81
14	86	56	45	45	32	77	60	572	654	255	186	80
15	85	57	48	45	30	75	57	489	594	224	152	77
16	86	56	49	45	32	68	59	442	568	201	140	68
17	84	53	50	50	33	65	69	418	552	193	133	65
18	79	54	42	50	34	63	97	378	549	193	124	62
19	74	53	48	45	35	60	137	363	535	178	118	60
20	71	50	48	45	35	58	173	340	520	171	114	58
21	69	49	42	40	37	61	179	315	505	185	106	56
22	67	48	42	45	38	55	187	330	490	170	121	54
23	65	47	41	40	37	58	181	366	475	156	156	53
24	64	45	44	45	38	51	219	474	460	167	142	52
25	63	46	40	45	40	49	322	605	445	167	121	51
26	61	45	45	40	40	46	384	775	430	242	113	52
27	80	44	45	40	41	49	402	852	410	192	116	62
28	65	43	40	40	42	48	413	862	378	172	117	54
29	59	44	38	43	---	50	411	940	347	168	108	52
30	62	46	38	33	---	55	436	1010	325	175	102	58
31	60	---	38	29	---	79	---	1080	---	171	108	---
TOTAL	2623	1606	1417	1303	942	1711	4721	16674	19288	6644	5078	2170
MEAN	84.6	53.5	45.7	42.0	33.6	55.2	157	538	643	214	164	72.3
MAX	139	69	54	50	42	79	436	1080	1120	371	297	121
MIN	59	43	38	29	28	42	57	285	325	156	102	51
AC-FT	5200	3190	2810	2580	1870	3390	9360	33070	38260	13180	10070	4300
CAL YR 1982	TOTAL	40262	MEAN 110	MAX 459	MIN 18	AC-FT 79860						
WTR YR 1983	TOTAL	64177	MEAN 176	MAX 1120	MIN 28	AC-FT 127300						

## 08379500 PECOS RIVER NEAR ANTON CHICO, NM

LOCATION.--Lat 35°10'44", long 105°06'30", Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 2.1 mi upstream from Canon Blanco, 2.3 mi southeast of Anton Chico, 9.7 mi downstream from Tecolote Creek, and at mile 808.0.

DRAINAGE AREA.--1,050 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--April 1910 to May 1916, October 1916 to September 1924, August to December 1925, January 1927 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1342: 1951(M), 1952-53. WSP 1512: 1912-14, 1931, 1933(M), 1935-36(M), 1938(P), 1939- 40, 41-42(P), 1945(M), 1946(P), 1949(P). WSP 1712: 1942(P).

GAGE.--Water-stage recorder. Altitude of gage is 5,130 ft from river-profile map. See WSP 1732 for history of changes prior to June 21, 1951.

REMARKS.--Records good. Diversions above station for irrigation of about 4,900 acres, 1959 determination, above and below station. Acequia del Bodo Juan Paiz (see table below) diverts water about 8 mi 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 downstream.

AVERAGE DISCHARGE.--70 years (1910-15, 1916-24, 1926-83), 129 ft<sup>3</sup>/s, 93,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,300 ft<sup>3</sup>/s June 1, 1937, gage height, 20.34 ft, from floodmarks, at site and datum then in use, by slope-area measurement; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since 1879 occurred Sept. 29, 1904, discharge about 73,000 ft<sup>3</sup>/s, from information by a local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,270 ft<sup>3</sup>/s July 18, gage height, 6.86 ft, no peak above base of 3,000 ft<sup>3</sup>/s; minimum, 2.6 ft<sup>3</sup>/s Feb. 6.

Discharge measurements, in cubic feet per second, of Acequia del Bodo Juan Paiz,  
Water Year October 1982 to September 1983

Jan. 12	0	Apr. 21	50	July 20	29
Feb. 16	0	May 18	30	Aug. 10	27
Mar. 18	0	June 15	0	Sept. 15	47

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	29	11	74	45	74	201	637	1050	269	212	50
2	138	28	12	82	42	77	282	598	1060	242	270	92
3	121	27	20	71	39	80	268	510	1030	223	285	65
4	109	25	17	82	31	86	259	431	957	212	374	50
5	102	20	8.7	103	27	92	224	412	883	185	281	38
6	93	26	11	87	32	92	181	484	839	171	240	34
7	86	25	11	57	39	85	188	547	814	163	202	33
8	75	21	9.2	60	48	81	167	551	797	161	173	141
9	72	19	19	55	48	81	156	600	768	148	142	65
10	70	21	20	44	44	83	134	698	797	126	124	54
11	68	27	27	37	41	85	106	771	745	127	111	47
12	82	31	52	47	37	95	105	793	772	190	130	44
13	70	36	43	50	37	114	106	781	799	423	126	43
14	64	26	36	45	38	122	104	745	748	322	155	274
15	58	27	35	40	42	137	103	697	678	251	166	72
16	58	22	37	40	46	152	95	603	639	227	114	34
17	57	24	41	41	43	141	93	524	591	181	69	19
18	51	24	47	48	47	138	117	483	538	606	63	13
19	47	18	45	49	48	136	172	441	517	221	56	6.4
20	41	22	37	44	50	135	235	418	526	200	55	5.1
21	38	18	22	43	55	121	323	418	512	192	40	6.9
22	37	17	22	43	54	117	352	410	500	180	33	6.4
23	36	15	21	39	53	134	359	379	490	165	33	6.1
24	35	15	20	40	58	121	341	422	488	153	89	8.5
25	35	17	23	41	61	129	403	561	467	155	90	12
26	33	11	20	44	69	145	546	726	440	155	69	5.3
27	32	18	23	39	69	125	611	828	405	196	84	4.0
28	31	16	27	41	71	120	622	862	371	165	63	3.8
29	38	12	65	43	---	135	624	863	329	157	63	6.3
30	30	11	44	40	---	145	624	915	296	170	51	12
31	30	---	60	45	---	150	---	991	---	208	50	---
TOTAL	1991	648	885.9	1614	1314	3528	8101	19099	19846	6544	4013	1250.8
MEAN	64.2	21.6	28.6	52.1	46.9	114	270	616	662	211	129	41.7
MAX	154	36	65	103	71	152	624	991	1060	606	374	274
MIN	30	11	8.7	37	27	74	93	379	296	126	33	3.8
AC-FT	3950	1290	1760	3200	2610	7000	16070	37880	39360	12980	7960	2480

CAL YR 1982	TOTAL	39390.0	MEAN 108	MAX 805	MIN 1.3	AC-FT 78130
WTR YR 1983	TOTAL	68834.7	MEAN 189	MAX 1060	MIN 3.8	AC-FT 136500

## RIO GRANDE BASIN

## 08380500 GALLINAS CREEK NEAR MONTEZUMA, NM

LOCATION.--Lat 35°39'07", long 105°19'06", San Miguel County, Hydrologic Unit 13060001, in Las Vegas Grant, on left bank 2.4 mi west of Montezuma, 6.9 mi northwest of Las Vegas, and at mile 74.4.

DRAINAGE AREA.--84 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--March to September 1915, June 1916 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1964, published as Gallinas River near Montezuma.

REVISED RECORDS.--WSP 898: Drainage area. WSP 1562: 1951(P), 1952(M), 1955(P), 1957. WSP 1632: 1931-32, 1933(M), 1934, 1935(M), 1938, 1939-40(M), 1941-42, 1945, 1949-50(M).

GAGE.--Water-stage recorder. Altitude of gage is 6,875 ft, from topographic map. Prior to Sept. 21, 1934, at different datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 80 acres, 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--67 years, 19.2 ft<sup>3</sup>/s, 13,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,120 ft<sup>3</sup>/s Aug. 2, 1966, gage height, 9.7 ft, from floodmarks, from rating curve extended above 500 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 5.25 ft, 8.25 ft, and 9.7 ft; minimum, 0.20 ft<sup>3</sup>/s, Oct. 6-9, 1922, Sept. 21, Oct. 9-14, 1956, Dec. 13, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--The greatest flood since about 1900 occurred the night of Sept. 29, 1904 (discharge not determined), from information by local residents and G. B. Monk's report on floods.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 124 ft<sup>3</sup>/s Apr. 26, gage height, 2.07 ft, no peak above base of 200 ft<sup>3</sup>/s; minimum, 2.6 ft<sup>3</sup>/s Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	7.0	7.3	6.0	6.5	17	85	97	110	15	16	17
2	18	7.4	5.8	6.5	6.0	19	66	85	106	14	18	17
3	16	6.9	5.5	6.5	6.0	20	62	72	94	13	17	13
4	15	7.4	6.0	7.0	6.5	21	51	68	82	12	15	11
5	13	7.9	6.5	7.0	6.5	19	45	70	75	12	14	9.9
6	12	7.4	7.0	7.0	7.0	18	44	76	86	11	13	9.3
7	11	7.7	7.0	7.5	7.5	16	39	76	77	16	12	7.9
8	11	7.7	6.7	8.0	8.0	17	34	75	71	12	12	10
9	10	8.9	7.3	8.0	8.0	16	33	86	69	11	11	7.8
10	10	11	7.5	7.5	7.5	16	36	105	66	10	10	6.9
11	10	15	7.0	8.0	8.0	18	40	110	63	11	11	7.4
12	12	12	7.0	8.0	9.0	21	37	108	60	23	12	6.1
13	11	11	7.5	8.0	9.6	24	35	97	58	22	11	5.9
14	12	10	7.0	8.0	10	26	35	90	53	17	14	8.1
15	12	8.5	7.0	8.0	11	29	33	80	46	15	11	7.0
16	12	9.6	8.0	8.0	12	27	34	69	42	13	9.1	6.4
17	12	9.1	9.0	8.5	13	26	37	64	39	12	8.3	5.2
18	11	8.9	9.0	8.5	14	27	45	60	36	12	7.6	4.5
19	9.3	8.4	8.5	8.0	15	24	59	57	34	11	7.4	4.3
20	8.8	8.4	9.0	7.0	14	22	77	56	31	11	8.1	4.3
21	8.7	7.3	8.5	6.5	14	20	83	54	29	9.9	6.8	4.2
22	8.3	8.0	8.6	7.0	14	24	87	51	27	12	6.4	4.1
23	8.1	7.5	8.1	7.0	13	22	86	50	26	13	7.8	3.9
24	7.7	6.5	7.5	7.0	13	23	85	55	25	11	8.4	3.7
25	7.6	7.5	7.0	7.5	15	27	105	68	25	11	7.6	3.7
26	6.5	7.8	7.5	7.0	16	26	120	85	23	9.6	7.1	3.8
27	7.7	7.1	7.5	7.0	16	27	117	94	21	10	14	4.2
28	9.2	6.8	7.0	7.1	16	34	112	93	20	10	11	4.3
29	7.5	6.4	6.5	6.7	----	39	103	97	18	8.7	10	3.6
30	7.5	7.2	6.5	6.9	----	49	103	106	16	12	8.4	4.0
31	7.3	----	6.5	6.9	----	81	----	114	----	12	10	----
TOTAL	334.2	252.3	226.8	227.6	302.1	795	1928	2468	1528	392.2	335.0	208.5
MEAN	10.8	8.41	7.32	7.34	10.8	25.6	64.3	79.6	50.9	12.7	10.8	6.95
MAX	22	15	9.0	8.5	16	81	120	114	110	23	18	17
MIN	6.5	6.4	5.5	6.0	6.0	16	33	50	16	8.7	6.4	3.6
AC-FT	663	500	450	451	599	1580	3820	4900	3030	778	664	414

CAL YR 1982 TOTAL 4786.9 MEAN 13.1 MAX 86 MIN 1.2 AC-FT 9490  
WTR YR 1983 TOTAL 8997.7 MEAN 24.7 MAX 120 MIN 3.6 AC-FT 17850



## 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 south of San Miguel-Guadalupe County line, 2.4 mi upstream from mouth, 5.8 mi northwest of Colonias, and 9.0 mi east of Dilia. Mouth at Pecos River mile 789.2.

DRAINAGE AREA.--610 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,944 ft from topographic map.

REMARKS.--Records good. Diversions for irrigation of about 7,000 acres, 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 15.9 ft<sup>3</sup>/s, 11,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft<sup>3</sup>/s July 11, 1982, gage height, 19.67 ft, from rating curve extended above 1,900 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 8.64 ft, 12.74 ft, 16.65 ft, and 27.2 ft; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about June 1, 1937, reached a stage of about 27.2 ft; discharge determined as 26,700 ft<sup>3</sup>/s by slope-area measurement made in 1951. A flood of about the same magnitude occurred Sept. 29-30, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 867 ft<sup>3</sup>/s July 13, gage height, 5.95 ft, no peak above base of 1,700 ft<sup>3</sup>/s; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	2.5	4.6	1.6	4.8	8.4	7.3	.05	.37	.00	6.6	.00
2	9.7	3.1	4.4	1.9	5.0	6.6	7.1	.00	8.9	.00	7.8	.00
3	11	3.3	4.1	2.1	5.0	5.8	6.1	.00	5.8	.00	6.1	.00
4	6.8	3.8	3.3	2.2	5.8	5.5	6.0	.00	1.4	.00	10	.00
5	4.7	5.0	2.9	2.6	4.9	4.9	6.0	.00	.51	.00	2.6	.00
6	3.1	6.2	2.7	3.9	4.7	4.3	5.2	.00	.16	.00	.56	.00
7	2.9	6.2	2.5	4.9	4.7	3.9	5.9	.00	.04	.00	.14	.00
8	2.2	5.6	2.5	4.5	4.6	3.8	7.6	.00	.00	.00	.01	.00
9	2.5	5.0	2.7	4.1	6.0	3.6	8.6	.00	3.3	.00	.00	.00
10	2.9	3.1	4.3	3.3	6.0	3.3	8.4	.00	3.1	.00	.00	.00
11	3.3	2.6	5.6	2.5	6.4	3.3	7.4	.00	8.9	.00	.00	.00
12	5.9	2.2	5.5	2.4	6.4	2.8	6.2	.00	5.5	12	.00	.00
13	11	2.2	4.5	2.2	5.6	2.3	6.0	.00	1.8	131	.00	2.9
14	14	2.3	5.0	2.0	5.9	2.2	6.2	.00	.37	18	.00	3.3
15	10	2.5	4.5	2.1	5.2	1.8	6.6	.00	3.1	4.5	.00	.75
16	9.3	2.2	4.0	1.5	5.6	4.0	7.0	.00	1.7	.84	.00	.08
17	8.9	1.9	3.9	1.7	7.2	5.4	7.1	.00	1.3	.18	.00	.00
18	5.6	2.9	3.8	1.8	7.7	6.2	6.3	.00	.41	73	.00	.00
19	4.1	3.3	3.1	1.7	14	8.0	4.5	.00	.04	47	.00	.00
20	3.3	3.2	5.0	2.1	11	7.8	3.4	.00	.00	17	.00	.00
21	3.3	3.0	5.0	2.8	9.2	9.7	4.8	.00	.00	7.3	.00	.00
22	3.3	2.7	3.9	3.3	8.2	13	8.5	.00	.00	3.2	.00	.00
23	3.3	2.4	3.1	2.8	6.8	14	9.6	.00	.00	1.9	.00	.00
24	2.9	2.1	3.2	3.0	6.3	18	10	2.6	.00	7.0	.00	.00
25	2.6	2.2	3.3	2.2	5.9	18	8.6	1.1	.00	1.9	.00	.00
26	2.6	2.4	3.1	2.6	6.5	22	5.5	.35	.00	.93	.00	.00
27	2.2	3.9	4.6	2.9	6.3	21	3.4	.04	.00	.95	.00	.00
28	2.0	4.7	5.0	3.1	9.0	15	1.9	.00	.00	.15	.00	.00
29	1.7	4.9	3.4	3.0	---	11	1.2	.00	.00	.00	.00	1.2
30	1.9	4.5	2.3	3.1	---	9.3	.36	.00	.00	25	.00	.00
31	2.2	---	2.5	3.8	---	8.2	---	.00	---	3.7	.00	---
TOTAL	161.2	101.9	118.3	83.7	184.7	253.1	182.76	4.14	46.70	355.55	33.81	8.23
MEAN	5.20	3.40	3.82	2.70	6.60	8.16	6.09	.13	1.56	11.5	1.09	.27
MAX	14	6.2	5.6	4.9	14	22	10	2.6	8.9	131	10	3.3
MIN	1.7	1.9	2.3	1.5	4.6	1.8	.36	.00	.00	.00	.00	.00
AC-FT	320	202	235	166	366	502	363	8.2	93	705	67	16

CAL YR 1982 TOTAL 7724.99 MEAN 21.2 MAX 1550 MIN .00 AC-FT 15320  
WTR YR 1983 TOTAL 1534.09 MEAN 4.20 MAX 131 MIN .00 AC-FT 3040

## RIO GRANDE BASIN

08382600 PECOS RIVER ABOVE CANON DEL UTA NEAR COLONIAS, NM

LOCATION.--Lat 35°05'29", long 104°48'00", in T.10 N., R.20 E., Guadalupe County, Hydrologic Unit 13060001, in Anton Chico Grant, on right bank 0.4 mi upstream from Canon del Uta, 2.9 mi southeast of Colonias, and at mile 775.8.

DRAINAGE AREA.--2,330 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,800 ft, from U.S. Corps of Engineers plans.

REMARKS.--Records fair. Diversions and ground-water withdrawals for irrigation for about 11,800 acres, 1959 determination, above station. Several observation of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years, 69.8 ft<sup>3</sup>/s, 50,570 acre ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 12,400 ft<sup>3</sup>/s June 20, 1982, gage height 10.36 ft, from rating curve extended above 1,200 ft<sup>3</sup>/s on basis of discharges transferred from station 5 mi downstream using the relation between peak gage heights at the two stations; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,360 ft<sup>3</sup>/s May 29, gage height, 7.90 ft, no peak above base of 3,000 ft<sup>3</sup>/s; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	.80	.84	.18	.00	.00	92	528	886	91	166	9.6
2	110	.71	.84	.18	.00	.00	159	539	941	74	106	9.1
3	97	.71	.78	.18	.00	.00	169	440	959	61	135	8.3
4	95	.71	.78	.18	.00	.09	192	328	905	56	201	9.6
5	88	.78	.71	.18	.00	1.4	160	260	872	47	151	9.1
6	53	.78	.71	.22	.00	2.4	118	291	808	29	124	9.6
7	42	.78	.64	.09	.00	3.2	111	411	735	19	121	9.1
8	30	.78	.52	.04	.00	3.0	104	432	667	17	90	7.8
9	20	.78	.64	.04	.00	2.0	105	428	649	16	70	19
10	18	.78	.78	.14	.00	1.0	88	525	629	6.9	38	15
11	15	.78	.58	.04	.00	1.0	66	660	573	6.0	18	9.1
12	12	.78	.58	.04	.00	3.0	56	698	568	5.2	12	8.3
13	22	.78	.71	.04	.00	10	56	767	617	207	24	8.7
14	15	.78	.52	.01	.00	30	52	646	587	238	34	31
15	13	.78	.45	.02	.00	50	52	585	447	131	58	71
16	11	.78	.45	.04	.00	70	47	452	390	121	50	11
17	9.6	.78	.40	.14	.00	78	39	372	340	55	13	3.8
18	9.6	.78	.36	.14	.00	73	34	351	289	373	8.3	3.5
19	7.4	.78	.36	.04	.00	74	36	342	254	188	8.3	3.3
20	5.1	.78	.36	.24	.00	75	94	305	280	65	8.3	3.1
21	3.5	.78	.36	.09	.00	75	177	280	294	38	8.3	3.1
22	3.8	.78	.36	.01	.00	59	230	277	265	30	7.8	3.1
23	3.8	.78	.36	.07	.00	51	265	232	265	45	7.4	3.5
24	3.1	.78	.36	.00	.00	60	246	220	263	50	7.4	3.5
25	2.4	.78	.27	.00	.00	59	220	317	239	42	7.8	3.5
26	1.8	.78	.22	.00	.00	62	365	563	215	31	7.4	3.5
27	1.7	.90	.32	.00	.00	75	476	766	198	31	7.4	3.1
28	1.7	.84	.27	.00	.00	58	500	864	172	55	14	3.1
29	1.4	.84	.22	.00	---	54	545	915	147	43	11	3.5
30	1.2	.84	.27	.00	---	67	475	966	110	41	9.6	3.5
31	1.0	---	.22	.02	---	76	---	882	---	109	9.6	---
TOTAL	800.1	23.51	15.24	2.37	.00	1173.09	5329	15642	14564	2321.1	1533.6	292.4
MEAN	25.8	.78	.49	.076	.000	37.8	178	505	485	74.9	49.5	9.75
MAX	110	.90	.84	.24	.00	78	545	966	959	373	201	71
MIN	1.0	.71	.22	.00	.00	.00	34	220	110	5.2	7.4	3.1
AC-FT	1590	47	30	4.7	.00	2330	10570	31030	28890	4600	3040	580
CAL YR 1982	TOTAL	20680.60	MEAN	56.7	MAX	1060	MIN	.00	AC-FT	41020		
WTR YR 1983	TOTAL	41696.41	MEAN	114	MAX	966	MIN	.00	AC-FT	82700		

## 08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°03'35", long 104°45'41", in NE¼SE¼SE¼ sec.25, T.10 N., R.20 E., Guadalupe County, Hydrologic Unit 13060001, at south boundary Preston Beck Grant, on left bank, 1.6 mi upstream from River Ranch, 5.8 miles southeast of Colonias, 9.1 miles northwest of Santa Rosa, and at mile 770.8.

DRAINAGE AREA.--2,340 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--February 1976 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder. Altitude of gage is 4,760 ft, from surveys by U.S. Corps of Engineers.

REMARKS.--Records fair. Diversions and ground-water withdrawals for irrigation of about 11,800 acres, 1959 determination, above station. Several observation of water temperature were made during the year.

AVERAGE DISCHARGE.--7 years, 88.6 ft<sup>3</sup>/s, 64,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft<sup>3</sup>/s June 21, 1982, gage height 14.50 ft from manometer gage, 15.33 ft from floodmark, from rating curve extended above 1,500 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum 3.0 ft<sup>3</sup>/s Jan. 30, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,730 ft<sup>3</sup>/s July 18, gage height 7.13 ft, no peak above base of 3,000 ft<sup>3</sup>/s; minimum, 3.9 ft<sup>3</sup>/s Nov. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	15	13	14	16	14	82	543	1030	143	271	23
2	113	16	14	13	16	13	198	511	1020	118	174	24
3	92	16	14	12	16	13	234	410	1010	95	216	27
4	71	16	14	12	18	13	218	337	907	77	306	27
5	58	16	14	12	16	19	203	273	852	63	290	26
6	56	16	14	13	16	25	151	316	817	42	209	25
7	45	16	15	14	15	27	136	415	781	35	163	27
8	33	17	15	14	15	24	129	448	718	26	124	27
9	24	17	15	14	15	19	103	438	715	27	90	45
10	14	17	15	15	16	18	87	536	728	21	70	33
11	14	17	15	14	16	17	58	679	672	20	47	27
12	14	16	14	15	15	17	46	733	659	21	35	26
13	29	17	14	15	15	19	49	700	725	226	42	28
14	35	17	14	15	15	31	55	662	691	285	43	44
15	26	17	14	15	15	45	56	620	600	156	67	163
16	24	17	14	15	14	75	49	500	450	119	83	43
17	20	16	14	15	14	89	38	416	400	89	44	25
18	19	17	14	15	14	81	31	390	360	495	27	22
19	16	16	14	15	14	83	38	357	320	288	28	22
20	15	16	14	15	14	85	73	340	300	115	27	22
21	15	16	13	15	15	84	201	320	320	68	25	23
22	14	16	13	15	14	70	276	304	300	49	24	23
23	14	16	13	15	13	62	314	272	295	79	26	23
24	14	16	13	15	14	72	298	263	290	70	26	23
25	15	16	13	15	14	67	269	353	280	77	26	22
26	15	16	14	15	14	74	393	569	270	54	24	22
27	14	17	14	15	14	87	536	770	250	58	27	22
28	14	15	14	15	13	69	550	831	230	104	34	22
29	14	14	14	15	---	58	552	869	212	75	27	22
30	14	13	14	15	---	65	522	888	169	58	25	22
31	15	---	14	17	---	71	---	958	---	178	24	---
TOTAL	1006	483	433	449	416	1506	5945	16021	16371	3331	2644	930
MEAN	32.5	16.1	14.0	14.5	14.9	48.6	198	517	546	107	85.3	31.0
MAX	130	17	15	17	18	89	552	958	1030	495	306	163
MIN	14	13	13	12	13	13	31	263	169	20	24	22
AC-FT	2000	958	859	891	825	2990	11790	31780	32470	6610	5240	1840
CAL YR 1982	TOTAL	36069.3	MEAN	98.8	MAX	1570	MIN	5.8	AC-FT	71540		
WTR YR 1983	TOTAL	49535.0	MEAN	136	MAX	1030	MIN	12	AC-FT	98250		

RIO GRANDE BASIN  
08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM -- Continued  
WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976, 1981 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 05...	0900	16	800	907	8.1	8.1	11.5	9.0	--	--	530
DEC 09...	1330	15	900	--	7.8	--	.0	8.0	--	< 10	--
FEB 14...	1600	14	1000	982	8.0	7.9	12.0	14.0	8.2	--	540
MAY 17...	1100	432	205	242	7.7	8.0	14.5	13.0	--	--	100
JUL 13...	1750	403	--	264	--	7.7	35.5	23.5	--	90	120

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM 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- LINEITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 05...	408	408	180	19	9.2	.2	1.6	121	390	4.1	.30
DEC 09...	--	--	--	--	--	--	--	--	--	--	--
FEB 14...	411	411	180	21	10	.2	1.5	126	440	5.4	.30
MAY 17...	28	28	36	3.4	2.8	.1	.8	76	39	2.6	.20
JUL 13...	26	26	40	5.0	7.0	.3	1.5	95	35	3.9	.20

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, 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 05...	9.7	687	.20	.19	<.060	--	.50	.010	<.010	--
DEC 09...	--	--	--	--	--	--	--	--	--	.8
FEB 14...	11	745	--	--	--	--	--	--	--	--
MAY 17...	8.1	139	--	--	--	--	--	--	--	--
JUL 13...	7.8	158	.20	.18	.070	5.4	5.7	.050	.040	39

RIO GRANDE BASIN  
08382650 PECOS RIVER ABOVE SANTA ROSA LAKE, NM -- Continued  
WATER QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 05...	0900	1	1	0	<1	<1	<10	<10	0	2
FEB 14...	1600	--	--	0	--	--	--	--	--	--
MAY 17...	1100	--	--	0	--	--	--	--	--	--
JUL 13...	1750	--	--	0	--	--	--	--	--	--

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 05...	20	20	0	1	.0	.0	1	2	20	20
FEB 14...	30	--	--	--	--	--	--	--	--	--
MAY 17...	30	--	--	--	--	--	--	--	--	--
JUL 13...	90	--	--	--	--	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 05...	0900	<17	<.4	<8.1	<.4	<7.7	<.4	.05	1.7

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 05...	0900	16	9.0	26	1.1	--
DEC 09...	1330	15	8.0	33	1.3	--
FEB 14...	1600	14	14.0	54	2.0	49
MAY 17...	1100	432	13.0	910	1060	50
JUL 13...	1750	403	23.5	2840	3090	99
SEP 14...	1200	26	23.0	32	2.2	80

## 08382730 LOS ESTEROS CREEK ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°05'42", long 104°39'49", Guadalupe County, Hydrologic Unit 13060001 in Preston-Beck Grant, on left bank, 3.7 mi upstream from mouth, 4.9 mi north-northeast of Santa Rosa Dam, and 10.4 mi north-northeast of Santa Rosa. Mouth at Pecos River mile 763.0.

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

PERIOD OF RECORD.--July 1973 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,767 ft, 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.--10 years, 1.35 ft<sup>3</sup>/s, 978 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft<sup>3</sup>/s July 24, 1976, gage height 9.3 ft from rating curve extended above 70 ft<sup>3</sup>/s on basis of velocity-area studies, and slope-area measurements at gage heights 6.5 ft and 9.3 ft; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood of unknown date reached a discharge of about 6,800 ft<sup>3</sup>/s, gage height 11.6 ft, from floodmarks, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 275 ft<sup>3</sup>/s at 2145 hours Aug. 2, gage height, 3.92 ft, from rating curve extended as explained above, no other peak above base of 100 ft<sup>3</sup>/s; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	.00	.00	.00	.04	.00	.00	.00	.00	.00	.90	.00
2	.63	.00	.00	.00	.05	.00	.00	.00	.00	.00	14	.00
3	.09	.00	.00	.00	.07	.00	.00	.00	.00	.00	6.0	.00
4	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.01	.00
5	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.02	.00	.00	.00	.00	3.8	.00	.00
13	.00	.00	.00	.00	.02	.00	.00	.00	.00	.24	.00	.00
14	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.02	.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	.00	.00	.00	.00	.00	.00	.09	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.04	.00	.00	.00	.00	.00	.03	.00	.00
26	.00	.00	.00	.03	.00	.00	.00	.90	.00	.12	.00	.00
27	.00	.00	.00	.02	.00	.00	.00	.30	.00	.00	.00	.00
28	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	2.9	.00	---
TOTAL	16.72	.00	.00	.18	.76	.00	.00	.90	.00	7.09	21.01	.00
MEAN	.54	.000	.000	.006	.027	.000	.000	.029	.000	.23	.68	.000
MAX	16	.00	.00	.04	.09	.00	.00	.90	.00	3.8	14	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	33	.00	.00	.4	1.5	.00	.00	1.8	.00	14	42	.00

CAL YR 1982 TOTAL 368.98 MEAN 1.01 MAX 94 MIN .00 AC-FT 732  
WTR YR 1983 TOTAL 46.66 MEAN .13 MAX 16 MIN .00 AC-FT 93

## 08382760 LOS ESTEROS CREEK TRIBUTARY ABOVE SANTA ROSA LAKE, NM

LOCATION.--Lat 35°05'35", long 104°40'20", Preston-Beck Grant, Guadalupe County, Hydrologic Unit 13060001, 0.5 mi west-southwest of Los Esteros Creek gage, 0.8 mi above confluence with Los Esteros Creek, 4.6 mi north-northeast of Santa Rosa Dam, and 10.2 mi north-northeast of Santa Rosa.

DRAINAGE AREA.--13.7 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1973 to current year. Prior to October 1979, published as "above Los Esteros Reservoir."

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,758 ft, 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.--10 years, 0.37 ft<sup>3</sup>/s, 268 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft<sup>3</sup>/s Aug. 29, 1977, gage height, 7.80 ft from rating curve extended above 0.5 ft<sup>3</sup>/s on basis of velocity-area studies, and slope-area measurement at gage height 7.80 ft; no flow most of the time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9.4 ft<sup>3</sup>/s May 26, gage height, 1.14 ft, from rating curve extended as explained above, no peak above base of 80 ft<sup>3</sup>/s; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.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	.12	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.10	.00	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00
MEAN	.003	.000	.000	.000	.000	.000	.000	.004	.000	.000	.000	.000
MAX	.10	.00	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.2	.00	.00	.00	.00	.00	.00	.2	.00	.00	.00	.00
CAL YR 1982	TOTAL	116.09	MEAN	.32	MAX	97	MIN	.00	AC-FT	230		
WTR YR 1983	TOTAL	0.22	MEAN	.001	MAX	.12	MIN	.00	AC-FT	.40		

## 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 7.0 mi north of Santa Rosa, and at mile 757.2.

DRAINAGE AREA.--2,430 mi<sup>2</sup>, approximately.

PERIOD OF RECORDS.--April 1980 to current year.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--All record prior to May 13, 1983 is questionable. Lake is formed by earth and rockfill dam on Pecos River. Storage began on Apr. 22, 1980. Capacity 447,100 acre-ft between elevations 4,630.0 ft, invert of outlet structure, and 4,797.0 ft, crest of spillway. No dead storage. Lake was created primarily for flood, irrigation, and sediment control.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 79,450 acre-ft June 9, 1983, elevation 4,738.43 ft; no storage for many days July-Sept., 1980 and June-Aug. 1981.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 79,450 acre-ft; June 9, elevation 4,738.43 ft, minimum 6,930 acre-ft Sept. 12, elevation 4691.72 ft.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30140	31670	32360	33160	34250	35130	36130	50580	68180	69760	40960	24100
2	30340	31670	32390	33170	34270	35150	36400	51410	69960	67870	41280	21850
3	30590	31670	32400	33190	34290	35150	36680	51690	71650	66020	41720	20160
4	30700	31680	32420	33220	34340	35150	39200	50460	73250	64810	42180	18580
5	30860	31680	32440	33240	34430	35150	39640	49060	74870	63020	42530	17100
6	30970	31700	32470	33240	34510	35150	39930	47060	76250	61110	42770	15470
7	31040	31720	32490	33280	34550	35150	40230	46480	77730	59210	43020	13840
8	31050	31730	32500	33310	34580	35150	40480	47520	78950	57010	43240	12170
9	31050	31760	32550	33380	34600	35220	40700	48160	79450	54910	43470	10580
10	31070	31800	32600	33390	34640	35290	40900	49620	79010	53100	43640	9000
11	31090	31810	32650	33390	34650	35310	41000	51060	78380	51250	43760	7690
12	31100	31830	32700	33410	34670	35320	41080	52580	77920	49600	43840	6930
13	31170	31830	32740	33430	34710	35360	41180	48790	77230	48190	43930	6990
14	31210	31860	32770	33460	34720	35380	41320	50010	76400	46820	44010	7060
15	31280	31880	32790	33510	34760	35480	41420	51270	75390	45170	44050	7320
16	31330	31890	32790	33560	34800	35650	41520	52250	74690	43510	44090	7560
17	31380	31940	32820	33580	34810	35840	41620	53030	73760	41920	44180	7820
18	31390	31990	32850	33600	34830	36010	41700	53800	72600	41040	44220	8090
19	31410	32010	32890	33600	34830	36170	41740	54400	71120	39510	44240	8220
20	31420	32020	32900	33620	34850	36310	41800	55030	69410	38850	44280	8260
21	31440	32040	32920	33700	34860	36440	42200	55620	69300	39160	44320	8300
22	31460	32060	32970	33790	34880	36570	42690	56210	69960	39310	43160	8340
23	31490	32070	33010	33870	34900	36700	43330	56680	70950	39430	41560	8390
24	31520	32090	33010	33920	34940	36860	43970	57210	71620	39540	39640	8430
25	31540	32110	33010	33940	34950	37010	44470	57890	72480	39680	37440	8480
26	31550	32140	33020	33990	34970	37160	45300	58880	72770	39740	35290	8530
27	31570	32190	33070	34050	35010	37310	45810	60200	73370	39780	33010	8590
28	31570	32240	33090	34060	35020	37380	47320	61580	73790	39900	30850	8640
29	31580	32260	33110	34100	---	37570	48450	62330	73340	40070	29260	8680
30	31620	32290	33120	34130	---	37700	49190	63080	71650	40310	27360	8730
31	31650	---	33140	34220	---	37870	---	65860	---	40560	25660	---
MAX	31650	32290	33140	34220	35020	37870	49190	65860	79450	69760	44320	24100
MIN	30140	31670	32360	33160	34250	35130	36130	46480	68180	38850	25660	6930
(+)	+2340	+640	+850	+1080	+800	+2850	+11320	+16670	+5790	-31090	-14900	-16930
CAL YR 1982	MAX	54540	MIN	16400	(+)	-4320						
WTR YR 1983	MAX	79450	MIN	6930	(+)	-20580						

(+) CHANGE IN CONTENTS IN ACRE-FEET.

NOTE.-- ON MAY 13 AN ERROR WAS DISCOVERED IN LAKE ELEVATION. A CORRECTION WAS MADE AT 2400 HOURS ON MAY 12 FROM STORAGE OF 52,580 TO 47,500. RECORD PRIOR TO MAY 13 IS QUESTIONABLE.



## RIO GRANDE BASIN

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08382810 SANTA ROSA LAKE NEAR SANTA ROSA, NM -- Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4717.20	4718.16	4718.58	4719.06	4719.70	4720.20	4721.84	4727.80	4734.67	4735.22	4723.30	4712.93
2	4717.33	4718.16	4718.60	4719.07	4719.71	4720.21	4721.98	4728.16	4735.29	4734.56	4723.46	4711.10
3	4717.49	4718.16	4718.61	4719.08	4719.72	4720.21	4722.13	4728.28	4735.87	4733.90	4723.68	4709.63
4	4717.56	4718.17	4718.62	4719.10	4719.75	4720.21	4722.40	4727.75	4736.41	4733.46	4723.91	4708.16
5	4717.66	4718.17	4718.63	4719.11	4719.80	4720.21	4722.63	4727.13	4736.95	4732.80	4724.08	4706.69
6	4717.73	4718.18	4718.65	4719.11	4719.85	4720.21	4722.78	4726.23	4737.40	4732.08	4724.20	4704.97
7	4717.77	4718.19	4718.66	4719.13	4719.87	4720.21	4722.93	4725.96	4737.88	4731.35	4724.32	4703.10
8	4717.78	4718.20	4718.67	4719.15	4719.89	4720.21	4723.06	4726.44	4738.27	4730.48	4724.43	4701.01
9	4717.78	4718.22	4718.70	4719.19	4719.90	4720.25	4723.17	4726.73	4738.43	4729.63	4724.54	4698.76
10	4717.79	4718.24	4718.73	4719.20	4719.92	4720.29	4723.27	4727.38	4738.29	4728.88	4724.62	4696.12
11	4717.80	4718.25	4718.76	4719.20	4719.93	4720.30	4723.32	4728.01	4738.09	4728.09	4724.68	4693.48
12	4717.81	4718.26	4718.79	4719.21	4719.94	4720.31	4723.36	4728.66	4737.94	4727.37	4724.72	4691.72
13	4717.85	4718.26	4718.81	4719.22	4719.96	4720.33	4723.41	4727.01	4737.72	4726.74	4724.76	4691.87
14	4717.88	4718.28	4718.83	4719.24	4719.97	4720.34	4723.48	4727.55	4737.45	4726.12	4724.80	4692.04
15	4717.92	4718.29	4718.84	4719.27	4719.99	4720.40	4723.53	4728.10	4737.12	4725.35	4724.82	4692.64
16	4717.95	4718.30	4718.84	4719.30	4720.01	4720.49	4723.58	4728.52	4736.89	4724.56	4724.84	4693.20
17	4717.98	4718.33	4718.86	4719.31	4720.02	4720.60	4723.63	4728.85	4736.58	4723.78	4724.88	4693.77
18	4717.99	4718.36	4718.88	4719.32	4720.03	4720.69	4723.67	4729.17	4736.19	4723.34	4724.90	4694.34
19	4718.00	4718.37	4718.90	4719.32	4720.03	4720.78	4723.69	4729.42	4735.69	4722.56	4724.91	4694.60
20	4718.01	4718.38	4718.91	4719.33	4720.04	4720.86	4723.72	4729.68	4735.10	4722.22	4724.93	4694.70
21	4718.02	4718.39	4718.92	4719.38	4720.05	4720.93	4723.92	4729.92	4735.06	4722.38	4724.95	4694.76
22	4718.03	4718.40	4718.95	4719.43	4720.06	4721.00	4724.16	4730.16	4735.29	4722.46	4724.39	4694.85
23	4718.05	4718.41	4718.97	4719.48	4720.07	4721.07	4724.47	4730.35	4735.63	4722.52	4723.60	4694.95
24	4718.07	4718.42	4718.97	4719.51	4720.09	4721.16	4724.78	4730.56	4735.86	4722.58	4722.63	4695.04
25	4718.08	4718.43	4718.97	4719.52	4720.10	4721.24	4725.02	4730.83	4736.15	4722.65	4721.47	4695.13
26	4718.09	4718.45	4718.98	4719.55	4720.11	4721.32	4725.41	4731.22	4736.25	4722.68	4720.29	4695.23
27	4718.10	4718.48	4719.01	4719.58	4720.13	4721.40	4725.65	4731.73	4736.45	4722.70	4718.97	4695.35
28	4718.10	4718.51	4719.02	4719.59	4720.14	4721.44	4726.35	4732.26	4736.59	4722.76	4717.65	4695.45
29	4718.11	4718.52	4719.03	4719.61	---	4721.54	4726.86	4732.54	4736.44	4722.85	4716.63	4695.51
30	4718.13	4718.54	4719.04	4719.63	---	4721.61	4727.19	4732.82	4735.87	4722.97	4715.34	4695.62
31	4718.15	---	4719.05	4719.68	---	4721.70	---	4733.84	---	4723.10	4714.12	---
MEAN	4717.88	4718.32	4718.83	4719.32	4719.96	4720.70	4723.85	4729.13	4736.59	4726.52	4722.87	4697.89
MAX	4718.15	4718.54	4719.05	4719.68	4720.14	4721.70	4727.19	4733.84	4738.43	4735.22	4724.95	4712.93
MIN	4717.20	4718.16	4718.58	4719.06	4719.70	4720.20	4721.84	4725.96	4734.67	4722.22	4714.12	4691.72

WTR YR 1983 MEAN 4721.02 MAX 4738.43 MIN 4691.72

NOTE.-- ON MAY 13 AN ERROR WAS DISCOVERED IN LAKE ELEVATION. A CORRECTION WAS MADE AT 2400 HOURS ON MAY 12 FROM ELEVATION 4728.66 TO 4726.43. RECORD PRIOR TO MAY 13 IS QUESTIONABLE.

## RIO GRANDE BASIN

08382830 PECOS RIVER BELOW SANTA ROSA DAM, NM

LOCATION.--Lat 35°01'27", long 104°41'20", Guadalupe County, Hydrologic Unit 13060001, in Jose Perea Grant, on right bank, 0.2 mi downstream from Santa Rosa Dam, 5.7 mi north of Santa Rosa, and at mile 757.0.

DRAINAGE AREA.--2,430 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder. Altitude 4,640 ft from topographic map. Prior to Oct. 31, 1980, at datum about 1.2 ft higher. Prior to Mar. 26, 1982, 195 ft upstream at datum 2.36 ft higher.

REMARKS.--Records good. Flow completely regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions and groundwater withdrawals for irrigation of about 12,000 acres 1959 determination, above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft<sup>3</sup>/s June 26, 1980, gage height about 5.77 ft, present datum; no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,160 ft<sup>3</sup>/s Aug. 27; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	.16	.17	.08	.09	.04	.23	.13	.66	910	1.2	832
2	.30	.16	.17	.08	.10	.04	.04	.15	.66	907	1.2	817
3	.26	.13	.13	.08	.08	.04	.01	296	.66	905	1.2	801
4	.21	.16	.13	.08	.04	.04	.00	899	.66	895	.99	789
5	.16	.16	.13	.04	.08	.00	.00	1000	.65	895	.08	774
6	.18	.16	.13	.04	.08	.00	.00	1010	.59	892	.08	764
7	.16	.16	.13	.04	.24	.00	.00	813	.68	890	.15	750
8	.16	.16	.13	.04	.11	.00	.00	.37	.68	885	.17	733
9	.12	.16	.08	.04	.06	.00	.00	.36	291	883	.17	720
10	.14	.16	.08	.04	.04	.00	.00	.36	820	879	.24	703
11	.10	.21	.08	.04	.04	.00	.00	.43	855	875	.26	536
12	.11	.21	.08	.04	.04	.00	.04	.46	739	869	.26	.74
13	.38	.21	.08	.04	.04	.00	.08	.46	850	867	.30	.16
14	.41	.21	.08	.04	.04	.00	.08	.46	963	865	.36	.17
15	.44	.21	.08	.04	.07	.01	.08	.46	967	883	.36	.07
16	.41	.21	.08	.06	.06	.00	.08	.46	965	901	.36	.00
17	.41	.21	.08	.04	.04	.00	.08	.42	952	918	.65	.00
18	.36	.21	.08	.04	.04	.00	.12	.41	952	930	.66	.00
19	.36	.21	.08	.04	.04	.04	.08	.41	952	955	.69	.00
20	.31	.21	.08	.09	.04	.04	.08	.41	949	361	.74	.00
21	.31	.21	.08	.05	.04	.04	.08	.41	347	1.4	.74	.00
22	.31	.21	.08	.64	.06	.19	.08	.41	2.3	1.4	530	.00
23	.26	.21	.08	.08	.08	.29	.10	.41	2.3	1.3	1020	.00
24	.26	.17	.08	.08	.04	.26	.13	.54	2.3	1.3	980	.00
25	.21	.17	.08	.04	.04	.31	.13	.59	2.3	1.3	956	.00
26	.21	.17	.08	.02	.04	.26	.13	.58	2.3	1.3	1040	.00
27	.16	.17	.08	.04	.04	.24	.13	.58	2.3	1.3	1160	.00
28	.16	.17	.08	.04	.04	.21	.13	.63	2.3	1.3	1120	.00
29	.16	.17	.08	.04	---	.26	.13	.74	487	1.4	1090	.00
30	.13	.17	.08	.04	---	.26	.13	.67	913	1.6	1010	.00
31	.18	---	.08	.10	---	.31	---	.66	---	1.4	859	---
TOTAL	7.71	5.49	2.96	2.20	1.75	2.88	2.17	4029.97	12023.34	17380.0	9775.86	8220.14
MEAN	.25	.18	.095	.071	.063	.093	.072	130	401	561	315	274
MAX	.44	.21	.17	.64	.24	.31	.23	1010	967	955	1160	832
MIN	.10	.13	.08	.02	.04	.00	.00	.13	.59	1.3	.08	.00
AC-FT	15	11	5.9	4.4	3.5	5.7	4.3	7990	23850	34470	19390	16300
CAL YR 1982	TOTAL	35752.68	MEAN	98.0	MAX	1260	MIN	.00	AC-FT	70920		
WTR YR 1983	TOTAL	51454.47	MEAN	141	MAX	1160	MIN	.00	AC-FT	102100		

## 08383000 PECOS RIVER AT SANTA ROSA, NM

LOCATION.--Lat 34°56'36", long 104°41'55", in NW¼SE¼ sec.3, T.8 N., R.21 E., Guadalupe County, Hydrologic Unit 13060001, on left bank, 0.4 mi downstream from bridge on U.S. Highway I-40, 0.6 mi upstream from bridge on U.S. Highway I-40 (Business) in Santa Rosa, 1.9 mi upstream from El Rito Creek, and at mile 748.4.

DRAINAGE AREA.--2,650 mi<sup>2</sup>, approximately (contributing area).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1903 to December 1905 (gage heights only), January to December 1906, February 1910 to July 1911, September 1912 to December 1924, March to May 1927, July 1927, January 1928 to current year. Monthly discharge only for some periods, published in WSP 1312. Figures of daily discharge for Apr. 5-20, May 4-7, 11, Aug. 13, 16-18, 24, Sept. 7-9, 11, 13, 19, 21, 23, 25, 27, Oct. 1-31, Nov. 3, 4, 9, 11, 20, 22, 1910, and Feb. 1 to Mar. 31, June 1 to July 31, 1911, published in WSP 358 are unreliable and should not be used.

REVISED RECORDS.--WSP 1512: 1913-15. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and partial concrete control. Datum of gage is 4,537.56 ft National Geodetic Vertical Datum of 1929. For history of changes prior to Sept. 13, 1967, see WSP 2123.

REMARKS.--Records good. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions for irrigation of about 12,000 acres, 1959 determination, above station.

AVERAGE DISCHARGE.--63 years (1906, 1913-24, 1928-79), 135 ft<sup>3</sup>/s, 97,810 acre-ft/yr prior to completion of Santa Rosa Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft<sup>3</sup>/s June 2, 1937, gage height, 25.7 ft, site and datum then in use, from rating curve extended above 32,000 ft<sup>3</sup>/s; minimum 0.28 ft<sup>3</sup>/s Jan. 7, 1971. The flood of June 2, 1937, is the greatest since about 1886. Flood of Sept. 30, 1904, reached a stage of 24.7 ft, site and datum then in use, discharge, 45,000 ft<sup>3</sup>/s, by Kutter's formula. Flood of June 9, 1903, reached a stage of 21.1 ft, same site and datum as in 1904, discharge, 34,000 ft<sup>3</sup>/s, by comparison with 1904 flood. Since completion of Santa Rosa Dam in 1980, maximum discharge 7,050 ft<sup>3</sup>/s Aug. 11, 1981, gage height, 6.56 ft; minimum daily, 3.3 ft<sup>3</sup>/s Feb. 28, 1980, and Feb. 11-20, Dec. 14-18, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,160 ft<sup>3</sup>/s Aug. 26, gage height, 2.72 ft; minimum daily discharge, 3.3 ft<sup>3</sup>/s Dec. 14-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	5.3	4.7	5.3	5.3	4.7	4.6	4.2	6.6	910	6.6	855
2	11	5.3	4.2	5.3	4.7	4.7	4.7	4.2	6.6	940	6.0	855
3	8.1	5.1	4.2	4.8	4.7	4.7	4.5	196	6.6	910	5.9	837
4	7.3	4.7	4.2	4.7	4.7	4.6	5.6	924	6.6	910	5.9	810
5	6.6	4.7	4.2	4.7	4.7	4.7	5.1	1010	6.6	910	5.3	810
6	6.6	4.7	4.2	4.7	4.7	4.5	4.7	1030	7.4	891	5.9	801
7	7.3	4.7	3.7	4.7	4.7	4.2	4.7	956	7.0	891	5.9	792
8	6.9	4.7	3.7	4.7	4.7	4.2	4.7	48	5.9	891	6.5	765
9	6.6	4.7	4.2	4.7	4.7	4.2	4.7	19	183	900	5.2	747
10	7.2	4.7	4.6	4.7	4.7	4.2	4.7	13	810	930	5.5	720
11	8.1	5.1	4.3	4.7	4.7	4.2	4.7	8.4	889	930	5.3	703
12	9.5	4.7	4.2	4.7	4.6	4.2	4.4	7.3	747	950	5.9	398
13	10	4.2	3.8	4.7	4.2	4.2	4.7	7.3	804	950	5.7	17
14	10	4.2	3.3	4.7	4.2	4.3	4.7	7.3	970	990	5.3	11
15	10	4.2	3.3	4.7	4.5	5.3	4.7	7.0	990	980	4.8	7.3
16	10	4.2	3.3	4.7	4.7	5.5	4.7	6.4	980	980	4.7	6.5
17	10	4.2	3.3	4.7	4.7	5.3	4.7	6.3	970	990	4.7	5.9
18	8.4	4.2	3.3	4.7	4.4	5.3	4.5	5.9	970	960	4.7	5.9
19	6.6	4.2	3.7	4.7	4.8	5.3	4.6	5.9	960	930	4.7	5.7
20	6.6	4.2	3.7	6.0	5.3	5.2	4.7	6.6	970	490	4.7	5.3
21	6.6	4.2	3.7	6.5	5.3	4.7	4.7	7.1	523	22	4.4	4.9
22	6.6	4.2	3.8	5.9	5.3	4.5	4.6	6.6	24	13	443	4.2
23	6.6	4.2	3.8	5.3	5.3	4.2	4.7	6.6	16	10	970	4.7
24	6.1	4.2	3.7	5.3	5.3	4.5	4.7	6.5	14	10	960	4.7
25	5.3	4.2	3.7	5.0	5.3	4.7	4.3	6.1	14	10	930	4.5
26	5.3	4.2	3.7	4.7	5.3	4.7	4.8	6.6	11	9.1	987	4.0
27	5.3	4.7	4.5	4.7	5.1	4.7	4.2	6.6	11	9.1	1130	3.7
28	5.3	5.3	4.7	4.5	4.7	4.7	4.2	6.6	12	9.1	1090	3.7
29	5.3	5.3	4.7	4.2	---	4.7	4.2	6.6	312	7.4	1080	4.2
30	5.3	4.7	4.9	3.7	---	4.6	4.0	6.6	910	8.7	1010	4.2
31	5.3	---	5.3	5.1	---	4.2	---	6.6	---	7.3	864	---
TOTAL	249.8	137.2	124.6	151.5	135.3	143.7	138.8	4345.3	12143.3	18348.7	9577.6	9200.4
MEAN	8.06	4.57	4.02	4.89	4.83	4.64	4.63	140	405	592	309	307
MAX	30	5.3	5.3	6.5	5.3	5.5	5.6	1030	990	990	1130	855
MIN	5.3	4.2	3.3	3.7	4.2	4.2	4.0	4.2	5.9	7.3	4.4	3.7
AC-FT	495	272	247	301	268	285	275	8620	24090	36390	19000	18250
CAL YR 1982 TOTAL	37356.5			MEAN 102	MAX 1240	MIN 3.0	AC-FT 74100					
WTR YR 1983 TOTAL	54696.2			MEAN 150	MAX 1130	MIN 3.3	AC-FT 108500					

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, 3,170 micromhos Oct. 21, 1982; 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, Nov. 14, 1982, Aug. 19, Sept. 18, 1983.

SEDIMENT LOADS: Maximum daily, 344,000 tons (312,000 tonnes) July 30, 1971; minimum daily, 0 tons (0 tonnes) June 17, Nov. 14, 1982, Aug. 19, Sept. 18, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,170 micromhos Oct. 21; minimum daily, 294 micromhos July 13.

WATER TEMPERATURES: Maximum, 32.0°C July 24, Aug. 15; minimum, 1.5°C Dec. 29.

SEDIMENT CONCENTRATIONS: Maximum daily, 220 mg/l Oct. 7; minimum daily, 0 mg/l Nov. 14, Aug. 19, Sept. 18.

SEDIMENT LOADS: Maximum daily, 416 tons (377 tonnes) May 4; minimum daily, 0 tons (0 tonnes) Nov. 14, Aug. 19, Sept. 18.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L CAC03) (95902)
NOV 03...	1530	5.2	2400	2580	8.1	7.8	8.5	15.0	--	1700	1580	1580
FEB 15...	1300	4.9	2550	2620	7.7	7.9	20.0	15.0	9.9	1700	1600	1600
MAY 17...	1600	5.9	2500	2560	8.0	7.9	18.5	20.0	--	1600	1510	1510
JUL 13...	1200	928	--	294	--	8.4	22.5	20.0	--	160	60	60

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SI02) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
NOV 03...	570	72	58	.6	2.3	141	1500	63	.60	15	2370
FEB 15...	570	74	50	.5	2.1	135	1500	71	.60	14	2360
MAY 17...	550	67	54	.6	2.5	139	1500	64	.60	14	2340
JUL 13...	54	7.0	6.7	.2	1.6	104	73	3.3	.20	8.2	216

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 03...	1530	100	40
FEB 15...	1300	0	30
MAY 17...	1600	100	30
JUL 13...	1200	0	10

RIO GRANDE BASIN  
08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM (70335)
OCT 01...	0725	33	16.0	105	9.4	74	81	88	92	100
DEC 10...	0930	4.7	6.0	29	.37	62	--	--	--	--
FEB 15...	1300	4.9	15.0	7	.09	60	--	--	--	--
MAY 17...	1600	5.9	20.0	16	.25	85	--	--	--	--
JUL 13...	1200	928	20.0	33	.83	46	57	74	95	100
SEP 13...	1045	13	23.5	22	.77	64	95	98	100	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1520	3050	2760	2800	2650	3050	3000	2970	2660	376	2510	450
2	2330	3050	2790	2820	2680	3040	3030	2930	2740	374	2500	453
3	2630	3040	2810	2840	2720	3070	2890	2920	2790	375	2540	454
4	2730	3050	2810	2840	2600	3050	2850	1040	2790	372	2580	458
5	2800	3060	2840	2840	2630	3090	2960	645	2870	376	2640	462
6	2830	3050	2840	2590	2640	3080	3030	631	2830	365	2640	462
7	2830	3080	2860	2740	2680	3120	2980	630	2810	366	2670	468
8	2860	3050	2840	2750	2710	3070	2920	1070	2850	362	2670	488
9	2950	3080	2830	2780	2730	3090	2930	1240	2840	364	2720	507
10	2920	3050	2560	2820	2740	3080	2940	1250	837	374	2700	517
11	2740	3050	2630	2840	2600	3120	2970	2200	492	375	2720	518
12	2980	3040	2670	2810	2660	3110	2850	2420	467	370	2670	526
13	3000	3050	2700	2850	2690	3130	2930	2550	456	375	2730	1420
14	3020	3050	2720	2870	2700	3120	2910	2610	436	369	2690	1700
15	3070	3060	2730	2870	2730	3160	2880	2680	430	370	2770	2040
16	3090	2520	2760	2870	2730	3100	2870	2680	421	370	2770	2200
17	3090	2770	2770	2890	2740	3140	2940	2770	407	369	2800	2370
18	3110	2760	2780	2870	2730	3130	2940	2780	406	372	2790	2290
19	3160	2790	2800	2890	2770	2710	2960	2840	405	384	2810	2520
20	3160	2800	2820	2840	2740	2860	2880	2810	404	386	2400	2620
21	3170	2810	2800	2710	2760	2870	2940	2850	404	1320	2680	2670
22	3160	2810	2820	2760	2740	2950	2900	2840	1440	1790	2740	2660
23	3140	2820	2830	2790	2780	2750	2920	2860	1900	1660	539	2710
24	3130	2830	2820	2810	2760	2860	2890	2910	2070	1580	459	2670
25	3160	2830	2830	2830	2790	2900	2930	2930	2230	1790	430	2820
26	3160	2840	2820	2630	2770	2930	2910	2940	2380	2370	421	2780
27	2760	2830	2780	2720	2650	2910	2940	3000	2470	2230	422	2740
28	2980	2830	2820	2720	2970	2910	2920	2910	2480	2420	429	2760
29	3010	2840	2830	2760	---	2940	2940	3000	2100	2490	432	2770
30	3030	2770	2840	2750	---	2980	2970	2980	396	2530	434	2790
31	3050	---	2790	2620	---	2980	---	2950	---	2540	445	---
MEAN	2920	2920	2780	2790	2720	3010	2930	2380	1610	973	2020	1680
WTR YR 1983	MEAN	2390	MAX	3170	MIN	362						

RIO GRANDE BASIN  
08383000 PECOS RIVER AT SANTA ROSA, NM -- Continued  
WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	10.0	8.0	7.0	6.0	8.0	8.0	17.0	13.0	21.0	21.0	23.0
2	12.0	9.0	4.0	7.5	6.0	10.0	15.0	20.0	16.0	21.0	23.0	22.0
3	15.0	5.5	4.0	3.0	5.0	8.0	8.5	11.0	21.0	19.0	20.0	23.0
4	13.0	11.0	4.0	5.0	4.0	9.0	3.0	10.0	15.0	22.0	20.0	25.0
5	14.0	8.0	7.0	7.0	5.0	7.0	7.0	11.0	20.0	21.0	21.0	23.0
6	12.0	8.5	5.0	5.0	4.0	7.0	6.0	11.0	13.0	18.0	20.0	23.0
7	11.5	16.0	5.0	10.0	3.0	8.0	6.0	11.0	15.0	21.0	22.0	23.0
8	12.0	8.0	4.0	6.0	5.5	8.0	11.0	10.0	17.0	18.5	19.0	22.0
9	8.0	14.0	5.0	6.0	5.0	19.0	7.0	12.0	16.0	18.0	20.0	22.0
10	10.0	7.0	5.0	3.0	5.0	8.0	20.0	11.0	15.0	20.0	21.0	23.0
11	10.0	3.0	6.0	5.5	4.0	19.0	10.0	22.0	16.0	19.0	20.0	24.0
12	11.0	12.0	5.0	4.0	4.0	11.0	9.0	12.0	16.5	18.0	20.0	22.0
13	8.0	5.5	3.5	5.0	8.0	14.0	20.0	12.5	16.0	19.0	30.0	19.0
14	10.0	8.5	5.0	3.5	5.5	11.0	10.0	10.0	15.0	19.0	22.0	19.0
15	12.0	5.0	3.0	4.0	6.0	10.0	11.0	13.0	15.0	18.0	32.0	19.0
16	10.5	6.5	5.0	5.5	6.0	9.0	10.0	14.0	17.0	20.0	20.0	18.0
17	13.0	6.0	6.0	5.0	7.0	8.0	10.0	10.0	19.0	20.0	19.0	17.0
18	11.0	9.0	5.0	7.0	6.0	7.0	10.0	11.5	17.0	20.0	20.0	20.0
19	12.0	8.0	7.0	5.0	7.0	5.0	17.0	13.5	19.0	22.0	20.0	18.0
20	9.0	8.0	5.0	8.0	9.0	7.0	17.0	13.5	18.0	22.5	21.0	14.0
21	8.0	9.0	6.0	4.0	5.0	5.0	12.0	12.0	17.0	20.0	20.5	11.0
22	8.5	8.0	7.0	2.0	6.0	7.0	10.0	14.0	20.0	19.0	19.0	12.0
23	8.0	7.0	7.0	6.0	8.0	6.0	10.5	13.0	18.0	30.0	21.0	21.0
24	10.0	5.0	6.0	4.0	6.5	11.0	15.0	15.0	18.0	32.0	22.0	21.0
25	11.5	4.0	4.0	9.0	9.0	8.0	12.0	17.0	19.0	19.0	23.0	24.0
26	10.0	6.0	7.0	5.0	10.0	5.0	10.0	15.0	16.0	28.0	20.0	23.0
27	11.0	9.0	6.0	5.5	9.0	12.0	24.0	23.0	18.0	30.0	22.0	17.0
28	7.0	8.5	4.0	10.0	10.0	9.5	10.0	17.0	16.0	20.0	25.0	16.0
29	7.0	6.0	1.5	5.5	---	10.0	8.0	18.0	17.0	19.0	22.0	18.0
30	8.5	6.0	4.0	9.0	---	12.0	17.0	21.0	16.0	20.0	23.0	18.0
31	10.0	---	3.0	5.0	---	21.0	---	11.0	---	19.0	23.0	---
MEAN	10.5	8.0	5.0	5.5	6.0	9.5	11.5	14.0	17.0	21.0	21.5	20.0
WTR YR 1983	MEAN	12.5	MAX	32.0	MIN	1.5						

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	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)
1	83	6.7	4	.06	16	.20	22	.31	19	.27	22	.28
2	15	.45	47	.67	13	.15	17	.24	12	.15	17	.22
3	10	.22	12	.17	15	.17	31	.40	9	.11	29	.37
4	33	.65	6	.08	41	.46	20	.25	15	.19	16	.20
5	50	.89	3	.04	108	1.2	13	.16	19	.24	19	.24
6	63	1.2	3	.04	20	.23	21	.27	20	.25	25	.30
7	220	4.3	35	.44	10	.10	26	.33	26	.33	35	.40
8	16	.30	27	.34	22	.22	14	.18	15	.19	21	.24
9	33	.59	42	.53	54	.61	45	.57	8	.10	31	.35
10	210	4.1	6	.08	46	.57	40	.51	10	.13	22	.25
11	38	.83	4	.06	50	.58	11	.14	36	.46	21	.24
12	10	.26	19	.24	39	.44	12	.15	19	.24	11	.12
13	9	.24	4	.05	46	.47	8	.10	30	.34	9	.10
14	9	.24	0	.00	25	.22	7	.09	29	.33	7	.08
15	9	.24	5	.06	21	.19	18	.23	7	.09	29	.41
16	7	.19	14	.16	22	.20	12	.15	13	.16	7	.10
17	5	.14	21	.24	26	.23	43	.55	15	.19	4	.06
18	6	.14	23	.26	22	.20	11	.14	11	.13	5	.07
19	2	.04	14	.16	28	.28	6	.08	14	.18	5	.07
20	4	.07	12	.14	19	.19	6	.10	13	.19	5	.07
21	4	.07	24	.27	21	.21	18	.32	18	.26	5	.06
22	5	.09	17	.19	9	.09	15	.24	11	.16	7	.09
23	5	.09	19	.22	13	.13	13	.19	11	.16	9	.10
24	4	.07	12	.14	23	.23	12	.17	3	.04	42	.51
25	11	.16	19	.22	18	.18	15	.20	4	.06	7	.09
26	3	.04	18	.20	16	.16	8	.10	3	.04	8	.10
27	11	.16	20	.25	17	.21	15	.19	17	.23	10	.13
28	20	.29	20	.29	16	.20	34	.41	19	.24	8	.10
29	6	.09	34	.49	12	.15	13	.15	---	---	12	.15
30	5	.07	27	.34	25	.33	10	.10	---	---	9	.11
31	5	.07	---	---	25	.36	24	.33	---	---	5	.06
TOTAL	---	22.99	---	6.43	---	9.16	---	7.35	---	5.46	---	5.67

[illegible]

## RIO GRANDE BASIN

08383500 PECOS RIVER NEAR PUERTO DE LUNA, NM  
(Surveillance network station)

LOCATION.--Lat 34°43'48", long 104°31'28", in NE¼SE¼NW¼ sec.20, T.6 N., R.23 E., Guadalupe County, Hydrologic Unit 13060001, on left bank 9.0 mi southeast of Puerto de Luna, 17.5 mi upstream from Sumner Dam, and at mile 719.5.

DRAINAGE AREA.--3,970 mi<sup>2</sup>, approximately (contributing area).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to current year.

REVISED RECORDS.--WSP 1512: 1939.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,311.34 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 15, 1954, at datum 1 ft higher.

REMARKS.--Records good. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980. Diversions for irrigation of about 12,500 acres, 1959 determination, above station. Discharge represents inflow to Lake Sumner.

AVERAGE DISCHARGE.--41 years (1939-79), 209 ft<sup>3</sup>/s, 151,400 acre-ft/yr, prior to completion of Santa Rosa Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,600 ft<sup>3</sup>/s Sept. 1, 1942, gage height, 17.00 ft, from rating curve extended above 7,400 ft<sup>3</sup>/s on basis of flow "at Santa Rosa"; minimum, 11 ft<sup>3</sup>/s Jan. 31, 1951. Since completion of Santa Rosa Dam in 1980, maximum discharge 10,900 ft<sup>3</sup>/s June 10, 1982, gage height, 7.44 ft; minimum, 45 ft<sup>3</sup>/s June 9, 1982 and Aug. 19, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1886 occurred June 2, 1937, when peak at Santa Rosa was 55,200 ft<sup>3</sup>/s and peak inflow to Lake Sumner was about 75,000 ft<sup>3</sup>/s. Flood of July 24, 1895, was reported as "highest in 10 years." Other major floods occurred on June 9, 1903, Sept. 30, 1904, and May 1, 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,930 ft<sup>3</sup>/s July 10, gage height, 4.11 ft; minimum, 45 ft<sup>3</sup>/s Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	555	76	83	85	99	82	83	63	84	1040	70	977
2	128	74	81	85	94	83	85	63	81	1070	68	954
3	93	75	81	85	96	83	85	65	76	1070	65	945
4	85	75	81	85	103	85	88	664	65	1070	61	952
5	82	75	81	85	94	84	89	1030	64	1060	58	942
6	79	74	81	85	90	83	87	1090	65	1060	60	943
7	79	74	80	86	87	82	85	1100	71	1060	63	943
8	74	77	80	87	93	84	86	507	69	1060	67	952
9	68	77	85	85	88	84	86	101	67	1070	63	935
10	75	77	90	83	85	84	85	89	596	1240	63	926
11	75	79	91	84	85	83	81	85	978	1120	62	916
12	88	76	86	85	85	84	80	77	850	1120	66	856
13	84	77	84	85	83	83	82	73	857	1070	65	198
14	80	78	85	85	82	84	85	71	1070	1140	65	151
15	78	78	82	84	82	82	84	73	1100	1080	63	97
16	78	78	82	81	82	89	82	73	1110	1070	58	76
17	77	79	82	84	82	84	77	67	1110	1040	53	71
18	75	81	81	89	82	85	75	64	1110	1040	51	68
19	73	78	80	87	79	90	69	66	1110	1030	48	65
20	71	77	83	93	80	87	68	72	1100	951	50	63
21	75	77	82	102	80	87	69	79	1010	212	50	64
22	76	78	82	96	83	85	65	69	204	108	48	65
23	77	77	82	93	83	84	68	70	105	91	900	65
24	77	78	81	92	83	83	66	68	97	82	994	64
25	75	79	82	89	83	84	66	71	98	77	1010	72
26	76	81	87	89	83	84	61	71	81	76	1030	68
27	76	105	89	87	83	83	58	135	75	69	1200	64
28	75	92	90	86	83	84	60	90	77	68	1190	63
29	74	96	87	84	---	85	61	76	71	70	1160	63
30	74	86	85	86	---	85	63	80	874	69	1140	66
31	75	---	85	98	---	84	---	81	---	99	989	---
TOTAL	2927	2384	2591	2710	2412	2613	2279	6383	14325	22482	10930	12684
MEAN	94.4	79.5	83.6	87.4	86.1	84.3	76.0	206	478	725	353	423
MAX	555	105	91	102	103	90	89	1100	1110	1240	1200	977
MIN	68	74	80	81	79	82	58	63	64	68	48	63
AC-FT	5810	4730	5140	5380	4780	5180	4520	12660	28410	44590	21680	25160
CAL YR 1982	TOTAL	69853	MEAN	191	MAX	1510	MIN	47	AC-FT	138600		
WTR YR 1983	TOTAL	84720	MEAN	232	MAX	1240	MIN	48	AC-FT	168000		



RIO GRANDE BASIN  
08383500 PECOS RIVER PUERTO NEAR DE LUNA, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1937-66, 1972 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CAC03) (00900)
NOV 05...	1330	76	2800	2950	8.2	7.8	22.0	13.0	--	--	1800
DEC 07...	1400	80	3000	--	7.9	--	7.0	8.0	11.3	<10	--
FEB 17...	1300	85	2800	2940	8.3	7.7	15.0	13.0	9.5	<10	1700
MAY 16...	1300	77	2830	2870	7.9	7.8	19.5	21.0	12.0	10	1700
JUL 14...	1540	1000	530	581	--	8.1	30.0	23.5	8.2	22	270
SEP 16...	0945	78	2310	--	--	--	23.5	19.0	7.6	14	--

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 05...	1690	1690	600	72	100	1.1	2.2	108	1600	160	.70
DEC 07...	--	--	--	--	--	--	--	--	--	--	--
FEB 17...	1630	1630	580	69	98	1.1	2.2	101	1600	150	.60
MAY 16...	1620	1620	580	71	100	1.1	2.7	120	1500	150	.60
JUL 14...	162	162	90	11	12	.3	1.6	108	180	14	.30
SEP 16...	--	--	--	--	--	--	--	--	--	--	--

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, ORTH- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 05...	14	2610	<.10	.10	.080	.42	--	.020	<.010	--
DEC 07...	--	--	<.10	<.10	.140	.26	--	.280	.020	2.6
FEB 17...	13	2570	<.10	<.10	.060	.44	--	.030	<.020	9.5
MAY 16...	13	2490	<.10	<.10	.200	.50	--	.020	.020	1.1
JUL 14...	8.6	382	<.10	<.10	.060	.54	--	.110	.020	3.8
SEP 16...	--	--	.20	.22	.160	.84	1.2	.180	<.010	3.7

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 05...	1330	1	1	120	3	2	10	10	0	2
FEB 17...	1300	--	--	110	--	--	--	--	--	--
MAY 16...	1300	--	--	110	--	--	--	--	--	--
JUL 14...	1540	1	1	0	1	<1	<10	<10	0	2



RIO GRANDE BASIN  
08383500 PECOS RIVER PUERTO NEAR DE LUNA, NM -- Continued  
WATER-QUALITY RECORDS

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APRENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
FEB 17...	--	--	--	--	--	<.01	<.01	<.01	<.01
SEP 16...	<.10	<.01	<.10	<1	<.01	--	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
DEC 07...	70	K8
FEB 17...	170	K2
MAY 16...	0	200
JUL 14...	21	85
SEP 16...	480	620

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 05...	1330	76	13.0	18	3.7	82
DEC 07...	1400	80	8.0	37	8.0	85
FEB 17...	1300	85	13.0	70	16	40
MAY 16...	1300	77	21.0	110	23	38
JUL 14...	1540	1000	23.5	186	502	57
SEP 16...	0945	78	19.0	299	63	97

## RIO GRANDE BASIN

## 08384000 LAKE SUMNER NEAR FORT SUMNER, NM

LOCATION.--Lat 34°36'30", long 104°23'04", in SE&SW¼ sec.34, T.5 N., R.24 E., DeBaca County, Hydrologic Unit 13060001, near center of dam on Pecos River, 5.0 mi northeast of Guadalupe, 12.2 mi northwest of Fort Sumner, and at mile 702.0.

DRAINAGE AREA.--4,390 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--December 1938 to September 1965 (month end elevations and contents), October 1965 to current year. Month end elevations September 1937 to November 1938 published in reports of Pecos River Commission. Elevations and contents May 27, 1937 to June 10, 1937 in WSP 842. Prior to October 1974, published as "Alamogordo Reservoir".

REVISED RECORDS.--WSP 1732: 1939-54 (contents). WSP 1923: 1939-53(M) (m).

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, nonrecording gage below.

REMARKS.--Reservoir is formed by earthfill dam, completed and storage began in August 1937. Capacity, 101,600 acre-ft between elevation 4,200.0 ft sill of outlet gate and elevation 4,275.0 ft, normal operating level. No dead storage. Reservoir is used to store water for irrigation.

COOPERATION.--Elevation record and capacity table (dated November 1973) furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 138,300 acre-ft May 23-30, June 1-10, July 21, Sept. 22, 23, 30, Oct. 12, Nov. 4, 5, 30, Dec. 23, 24, 1941, elevation, 4,275.00 ft; maximum elevation 4,276.10 ft June 3, Sept. 8, 1958; no storage July 28 to Aug. 2, 1951, elevation 4,200.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 38,900 acre-ft Mar. 12-21 and Apr. 17-19, gage height, 4,256.20 ft; minimum, 4,190 acre-ft Aug. 23, gage height, 4,229.00 ft.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP.
1	11810	17950	22920	27820	33260	37260	38200	37260	5700	22120	6090	12790
2	16950	18080	23080	28010	33260	37500	37960	37030	5640	21650	6020	13000
3	17820	18490	23080	28200	33470	37730	37960	35440	5580	21350	6020	13100
4	17950	18620	23410	28200	33690	37730	37960	33470	5450	21040	5830	13200
5	18080	18760	23570	28390	33690	37730	37730	32620	5390	20740	5640	13310
6	18360	19030	23740	28580	33900	37960	37500	32620	5270	20450	5580	13410
7	18490	19170	23900	28780	33900	37960	37730	31990	5150	20300	5510	13410
8	18490	19310	24070	28970	34340	38200	37730	31570	5090	19730	5510	13520
9	18490	19450	24240	29160	34560	38430	37730	30550	4910	19310	5390	13620
10	18490	19590	24410	29160	34780	38670	37960	28390	4910	19030	5330	13620
11	18490	19730	24580	29360	34780	38670	38200	26340	6360	19310	5210	13620
12	18490	19870	24760	29560	35000	38900	38200	24410	8680	18890	5150	13620
13	18490	20010	24930	29750	35220	38900	38430	22280	10360	18760	5210	13310
14	18490	20160	25100	29950	35220	38900	38430	19870	12100	18360	5090	11810
15	18490	20300	25280	30150	35440	38900	38670	17950	13940	18490	4970	10270
16	18620	20450	25450	30350	35670	38900	38670	15860	16100	17820	4910	8680
17	18620	20600	25450	30550	35670	38900	38900	13940	17950	17320	4850	6990
18	18760	20750	25630	30550	35890	38900	38900	11710	20010	16950	4800	5830
19	18760	20890	25630	30550	35890	38900	38900	9280	21650	16820	4680	5760
20	18620	21040	25810	30760	36120	38900	38670	7130	23570	16460	4570	5760
21	18620	21190	25980	30960	36120	38900	38430	5830	23740	15630	4460	5700
22	18490	21350	26160	31160	36350	38670	38200	5830	26710	13840	4240	5640
23	18490	21500	26340	31370	36570	38670	38200	5830	26890	11340	4190	5640
24	18490	21650	26520	31570	36570	38670	38200	5830	26890	8980	6090	5580
25	18490	21650	26710	31780	36800	38670	37960	5830	26710	6560	8530	5580
26	18620	21810	26890	31990	37030	38430	37960	5830	26710	5890	9210	5580
27	18620	21960	26890	32200	37030	38430	37730	5830	26710	5830	9520	5580
28	18490	22280	27080	32410	37260	38430	37730	5830	25280	5760	10360	5580
29	18360	22440	27260	32620	---	38430	37500	5760	23740	5700	11250	5510
30	18360	22760	27450	32620	---	38430	37260	5760	22280	6090	12000	5510
31	18080	---	27630	32830	---	38200	---	5760	---	6090	12790	---
MAX	18760	22760	27630	32830	37260	38900	38900	37260	26890	22120	12790	13620
MIN	11810	17950	22920	27820	33260	37260	37260	5760	4910	5700	4190	5510
(†)	+6370	+4680	+4870	+5200	+4430	+940	-940	-31500	+16520	-16190	+6700	-7280
CAL YR 1982	MAX	48360	MIN	2840	(†)	-12720						
WTR YR 1983	MAX	38900	MIN	4190	(†)	-6200						

(†) CHANGE IN CONTENTS IN ACRE-FEET.

## 08384000 LAKE SUMNER NEAR FORT SUMNER, NM -- Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4239.40	4244.90	4248.20	4251.00	4253.70	4255.50	4255.90	4255.50	4231.60	4247.70	4232.20	4240.40
2	4244.10	4245.00	4248.30	4251.10	4253.70	4255.60	4255.80	4255.40	4231.50	4247.40	4232.10	4240.60
3	4244.80	4245.20	4248.30	4251.20	4253.80	4255.70	4255.80	4254.70	4231.40	4247.20	4232.10	4240.70
4	4244.90	4245.30	4248.50	4251.20	4253.90	4255.70	4255.80	4253.80	4231.20	4247.00	4231.80	4240.80
5	4245.00	4245.40	4248.60	4251.30	4253.90	4255.70	4255.70	4253.40	4231.10	4246.80	4231.50	4240.90
6	4245.10	4245.60	4248.70	4251.40	4254.00	4255.80	4255.60	4253.40	4230.90	4246.60	4231.40	4241.00
7	4245.20	4245.70	4248.80	4251.50	4254.00	4255.80	4255.70	4253.10	4230.70	4246.50	4231.30	4241.00
8	4245.20	4245.80	4248.90	4251.60	4254.20	4255.90	4255.70	4252.90	4230.60	4246.10	4231.30	4241.10
9	4245.20	4245.90	4249.00	4251.70	4254.30	4256.00	4255.70	4252.40	4230.30	4245.80	4231.10	4241.20
10	4245.20	4246.00	4249.10	4251.70	4254.40	4256.10	4255.80	4251.30	4230.30	4245.60	4231.00	4241.20
11	4245.20	4246.10	4249.20	4251.80	4254.40	4256.10	4255.90	4250.20	4232.60	4245.80	4230.80	4241.20
12	4245.20	4246.20	4249.30	4251.90	4254.50	4256.20	4255.90	4249.10	4233.70	4245.50	4230.70	4241.20
13	4245.20	4246.30	4249.40	4252.00	4254.60	4256.20	4256.00	4247.80	4237.80	4245.40	4230.80	4240.90
14	4245.20	4246.40	4249.50	4252.10	4254.60	4256.20	4256.00	4246.20	4239.70	4245.10	4230.60	4239.40
15	4245.20	4246.50	4249.60	4252.20	4254.70	4256.20	4256.10	4244.90	4241.50	4245.20	4230.40	4237.70
16	4245.30	4246.60	4249.70	4252.30	4254.80	4256.20	4256.10	4243.20	4243.40	4244.80	4230.30	4235.70
17	4245.30	4246.70	4249.70	4252.40	4254.80	4256.20	4256.20	4241.50	4244.90	4244.40	4230.20	4233.50
18	4245.40	4246.80	4249.80	4252.40	4254.90	4256.20	4256.20	4239.30	4246.30	4244.10	4230.10	4231.80
19	4245.40	4246.90	4249.80	4252.40	4254.90	4256.20	4256.20	4236.50	4247.40	4244.00	4229.90	4231.70
20	4245.30	4247.00	4249.90	4252.50	4255.00	4256.20	4256.10	4233.70	4248.60	4243.70	4229.70	4231.70
21	4245.30	4247.10	4250.00	4252.60	4255.00	4256.20	4256.00	4231.80	4248.70	4243.00	4229.50	4231.60
22	4245.20	4247.20	4250.10	4252.70	4255.10	4256.10	4255.90	4231.80	4250.40	4241.40	4229.10	4231.50
23	4245.20	4247.30	4250.20	4252.80	4255.20	4256.10	4255.90	4231.80	4250.50	4238.90	4229.00	4231.50
24	4245.20	4247.40	4250.30	4252.90	4255.20	4256.10	4255.90	4231.80	4250.50	4236.10	4232.20	4231.40
25	4245.20	4247.40	4250.40	4253.00	4255.30	4256.10	4255.80	4231.80	4250.40	4232.90	4235.50	4231.40
26	4245.30	4247.50	4250.50	4253.10	4255.40	4256.00	4255.80	4231.80	4250.40	4231.90	4236.40	4231.40
27	4245.30	4247.60	4250.50	4253.20	4255.40	4256.00	4255.70	4231.80	4250.40	4231.80	4236.80	4231.40
28	4245.20	4247.80	4250.60	4253.30	4255.50	4256.00	4255.70	4231.80	4249.60	4231.70	4237.80	4231.40
29	4245.10	4247.90	4250.70	4253.40	---	4256.00	4255.60	4231.70	4248.70	4231.60	4238.80	4231.30
30	4245.10	4248.10	4250.80	4253.40	---	4256.00	4255.50	4231.70	4247.80	4232.20	4239.60	4231.30
31	4245.00	---	4250.90	4253.50	---	4255.90	---	4231.70	---	4232.20	4240.40	---
MEAN	4244.96	4246.52	4249.59	4252.25	4254.61	4256.01	4255.87	4242.51	4240.83	4241.88	4232.40	4236.26
MAX	4245.40	4248.10	4250.90	4253.50	4255.50	4256.20	4256.20	4255.50	4250.50	4247.70	4240.40	4241.20
MIN	4239.40	4244.90	4248.20	4251.00	4253.70	4255.50	4255.50	4231.70	4230.30	4231.60	4229.00	4231.30
CAL YR 1982	MEAN	4245.96	MAX	4259.90	MIN	4226.10						
WTR YR 1983	MEAN	4246.09	MAX	4256.20	MIN	4229.00						

## 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 downstream from Sumner Dam, 2.9 mi upstream from Salado Creek, 4.6 mi northeast of Guadalupe, 12.2 mi northwest of Fort Sumner, and at mile 701.7.

## WATER-DISCHARGE RECORDS

DRAINAGE AREA.--4,390 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--October 1912 to April 1926, August 1926 to current year. Monthly discharge only for some periods, published in WSP 1312. October 1944 to September 1974, published as "below Alamogordo Dam." Prior to October 1944, published as "near Guadalupe."

REVISED RECORDS.--WSP 1512: 1932. WSP 1632: 1942. WSP 1712: 1944.

GAGE.--Water-stage recorder and Parshall flume, with concrete control above top of flume. Datum of gage is 4,142.67 ft Bureau of Reclamation datum. Prior to Sept. 10, 1936, at site 1.5 mi upstream at different datum. Sept. 14, 1936, to Mar. 8, 1941, and June 11, to Sept. 21, 1941, at site 0.2 mi downstream at different datums.

REMARKS.--Records good. Flow completely regulated by Santa Rosa Lake (station 08382810) beginning April 1980 and Lake Sumner (station 08484000) 0.3 mi upstream beginning August 1937. Diversion for irrigation of about 12,500 acres, 1959 determination, above station.

AVERAGE DISCHARGE.--23 years (1913-25, 1927-36), 236 ft<sup>3</sup>/s, 171,000 acre-ft/yr, prior to completion of Sumner Dam. 47 years (1937-83), 202 ft<sup>3</sup>/s, 146,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft<sup>3</sup>/s Sept. 1, 1942, by computation of flow over spillway and through outlet gates of Sumner Dam by Bureau of Reclamation; maximum gage height, 13.58 ft Sept. 22, 1941, no flow at times.

Flood of June 2, 1937, about 75,000 ft<sup>3</sup>/s at site 1.5 mi upstream, from peak inflow to Lake Sumner.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,240 ft<sup>3</sup>/s July 9-11; minimum daily, 0.28 ft<sup>3</sup>/s Nov. 16 and Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	4.0	.45	.45	.61	.84	96	99	99	1200	94	757
2	9.0	1.0	.43	.45	.64	.84	96	480	99	1210	94	768
3	59	.82	.33	.45	.64	.84	96	1020	99	1210	96	757
4	21	1.0	.37	.45	.65	.95	98	1020	99	1210	104	768
5	1.0	6.5	.45	.45	.64	1.1	99	1030	99	1220	94	768
6	1.1	.44	.45	.45	.64	1.0	83	1030	101	1230	94	768
7	22	.45	.41	.45	.64	1.0	75	1030	98	1230	94	779
8	59	.52	.42	.52	.66	1.0	76	1040	99	1230	94	790
9	58	.52	.45	.54	.64	1.0	44	1040	100	1240	94	790
10	58	.52	.45	.48	.64	1.0	.83	1040	99	1240	94	790
11	73	.37	.45	.48	.64	1.1	.84	1040	99	1240	94	790
12	83	.35	.44	.45	.64	1.1	.88	1030	98	1230	94	790
13	83	.40	.45	.50	.64	1.1	.97	1030	102	1230	94	768
14	82	.45	.45	.49	.64	1.1	1.0	1030	99	1230	94	768
15	82	.40	.45	.55	.64	62	1.0	1030	100	1230	94	757
16	82	.28	.45	.55	.64	92	1.0	1050	100	1220	94	702
17	83	.34	.45	.56	.63	92	65	1040	100	1210	94	527
18	82	.43	.42	.64	.64	92	99	1020	97	1180	94	160
19	82	.50	.45	.59	.69	92	99	1010	96	1170	95	76
20	82	.61	.45	.69	.63	92	99	812	97	1160	95	80
21	82	.53	.45	.63	.64	95	99	98	99	1150	94	80
22	83	.43	.45	.64	.64	97	98	97	99	1130	97	80
23	82	.31	.45	.59	.64	96	99	97	94	1130	100	80
24	83	.32	.35	.64	.64	96	99	98	85	1120	100	80
25	83	.37	.28	.57	.66	96	99	97	101	652	523	81
26	83	.40	.39	.57	.80	96	99	97	104	94	735	80
27	83	.54	.57	.64	.76	96	99	98	583	95	735	81
28	93	.45	.45	.60	.85	96	99	97	808	95	746	81
29	100	.45	.46	.58	---	96	100	89	846	95	757	81
30	100	.45	.46	.64	---	96	100	91	932	95	757	81
31	100	---	.45	.69	---	96	---	98	---	94	757	---
TOTAL	2075.5	24.15	13.43	16.98	18.46	1591.97	2122.52	19978	5731	30070	7295	13958
MEAN	67.0	.81	.43	.55	.66	51.4	70.8	644	191	970	235	465
MAX	100	6.5	.57	.69	.85	97	100	1050	932	1240	757	790
MIN	1.0	.28	.28	.45	.61	.84	.83	89	85	94	94	76
AC-FT	4120	48	27	34	37	3160	4210	39630	11370	59640	14470	27690
CAL YR 1982	TOTAL	74688.76	MEAN	205	MAX	1210	MIN	.28	AC-FT	148100		
WTR YR 1983	TOTAL	82895.01	MEAN	227	MAX	1240	MIN	.28	AC-FT	164400		

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 1982 TO SEPTEMBER 1983

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)
NOV 03...	1100	.45	1640	1660	8.9	8.0	17.0	8.0	75	--	870
FEB 17...	1530	.64	2350	2310	8.0	7.9	15.0	13.0	30	10.1	1400
MAY 19...	1200	1010	2100	2180	--	8.0	22.5	16.0	12	9.4	1200
SEP 23...	1615	80	1650	1540	8.1	7.9	26.5	17.0	39	9.4	840

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
NOV 03...	765	765	280	40	59	.9	2.5	--	--	104
FEB 17...	1250	1250	430	70	82	1.0	2.8	--	--	119
MAY 19...	1130	1130	410	52	75	1.0	2.8	--	--	114
SEP 23...	768	768	280	35	47	.7	2.5	93	.0	117

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)
NOV 03...	750	69	.50	10	1340	1280	.17	.120	.100	.030
FEB 17...	1200	120	.50	12	2030	1990	<.10	.140	.030	<.020
MAY 19...	1100	100	.60	10	1880	1820	<.10	.190	.020	.010
SEP 23...	710	60	.40	11	1280	1190	<.10	.190	.030	<.010

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 03...	1100	30	2	120	0	<1	<1	0	1	20	1
FEB 17...	1530	500	1	100	<10	1	<1	0	3	220	5
MAY 19...	1200	10	1	100	<10	<1	<1	0	2	20	2
SEP 23...	1615	--	1	140	0	<1	<1	0	2	0	1

RIO GRANDE BASIN  
08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued  
WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (011130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	40	110	.0	<10	<1	<1	<1	3600	<6.0	70
FEB 17...	30	80	.0	3	6	2	<1	4800	2.5	10
MAY 19...	30	40	15	2	1	1	<1	4900	3.6	20
SEP 23...	--	46	.0	<10	4	<1	<1	--	--	--

## MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
------	---	---

NOV 03...	K11	K17
FEB 17...	41	K0
MAY 19...	11	2
SEP 23...	5	52

## INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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. 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												
03...	0915	60	1240	17.5	3390	549	--	--	--	99	--	--
03...	1500	58	1240	17.5	882	138	--	--	--	99	--	--
04...	0800	58	1220	17.5	296	46	--	--	--	--	--	--
08...	0845	58	1620	17.0	188	29	--	--	--	--	--	--
08...	1500	58	1640	17.0	199	31	--	--	--	--	--	--
11...	0900	58	1540	17.0	105	16	--	--	--	--	--	--
11...	1100	82	1560	17.0	111	25	--	--	--	--	--	--
12...	1520	84	1550	16.0	95	22	--	--	--	--	--	--
13...	1700	82	1380	16.0	102	23	--	--	--	--	--	--
14...	1115	82	1570	14.5	123	27	--	--	--	--	--	--
14...	1300	82	1370	16.0	96	21	--	--	--	--	--	--
14...	1500	82	1580	14.5	134	30	--	--	--	--	--	--
15...	0800	82	1630	14.5	121	27	--	--	--	--	--	--
15...	1200	82	1670	14.5	140	31	--	--	--	--	--	--
NOV												
03...	1100	.45	1640	8.0	172	.21	--	--	--	93	--	--
FEB												
17...	1530	.64	2350	13.0	52	.09	--	--	--	89	--	--
MAR												
15...	1000	100	2430	9.0	129	35	--	--	--	100	--	--
16...	1000	92	2580	9.0	31	7.7	--	--	--	--	--	--
23...	0900	95	2700	9.0	29	7.4	--	--	--	--	--	--
31...	0911	96	2700	10.0	16	4.1	--	--	--	--	--	--
APR												
08...	1115	76	2740	9.0	25	5.1	--	--	--	--	--	--
18...	1530	99	2760	10.0	28	7.5	--	--	--	--	--	--
26...	1110	100	2800	12.0	25	6.8	--	--	--	--	--	--
MAY												
02...	0710	99	2860	13.0	45	12	--	--	--	--	--	--
02...	1400	638	2910	13.0	459	791	61	75	86	94	97	100
03...	1900	1030	2900	14.0	29	81	--	--	--	--	--	--
11...	1630	1050	2750	16.0	13	37	--	--	--	--	--	--
16...	1900	1050	2410	16.0	29	82	--	--	--	--	--	--
18...	1430	1050	2390	16.0	21	60	--	--	--	--	--	--
19...	1200	1010	2100	16.0	29	79	--	--	--	86	--	--
19...	1330	1010	2430	16.0	20	55	--	--	--	--	--	--
20...	1130	970	2410	16.0	30	79	--	--	--	--	--	--
21...	0900	97	2460	14.0	50	13	--	--	--	--	--	--
23...	0930	97	2570	16.0	34	8.9	--	--	--	--	--	--
23...	1300	97	2570	16.0	33	8.6	--	--	--	--	--	--



RIO GRANDE BASIN  
08384500 PECOS RIVER BELOW SUMNER DAM, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
MAY							
24...	1300	98	2330	16.0	53	14	--
25...	0730	98	2410	17.0	40	11	--
26...	0730	97	2430	17.5	19	5.0	--
26...	1400	98	2430	18.0	37	9.8	--
30...	1320	91	2540	20.0	38	9.3	--
30...	1710	98	2570	20.0	27	7.1	--
JUN							
03...	1220	99	2680	20.0	50	13	--
03...	1530	99	2680	20.0	30	8.0	--
04...	0745	98	2720	18.0	38	10	--
05...	0800	99	2800	19.0	47	13	--
06...	1730	98	2820	19.0	55	15	100
08...	1510	100	2800	20.0	55	15	--
13...	1340	100	2600	18.0	64	17	--
15...	0745	100	2590	20.0	49	13	--
15...	1500	100	2030	20.5	48	13	--
16...	1130	97	2220	21.0	50	13	--
17...	0900	101	1700	20.0	51	14	--
17...	1000	107	1680	20.5	43	12	--
22...	0820	100	1410	20.0	25	6.8	--
27...	0730	108	1260	20.5	53	15	--
27...	1730	888	1170	20.5	58	139	--
27...	1930	860	947	21.0	39	91	--
29...	0800	846	915	21.0	73	167	--
29...	1900	860	1010	21.5	30	70	--
30...	1600	1230	968	21.5	34	113	--
JUL							
06...	0940	1230	874	21.5	33	110	--
07...	1830	1230	846	21.5	37	123	--
08...	0800	1230	840	21.5	78	259	--
09...	0830	1230	807	21.5	28	93	--
11...	0915	1260	743	21.5	11	37	--
14...	1100	1260	691	22.0	29	99	--
14...	1530	1200	688	22.0	25	81	--
15...	0700	1230	676	21.5	19	63	--
16...	1500	1200	659	22.0	32	104	--
17...	0800	1200	655	21.5	26	84	--
18...	0700	1160	655	21.5	25	78	--
23...	0900	1130	681	24.0	38	116	--
24...	0730	1130	748	24.0	39	119	--
25...	0800	1110	804	24.0	39	117	--
25...	1130	1110	797	25.0	43	129	--
25...	1700	94	852	25.0	98	25	--
26...	1100	95	1170	25.5	170	44	99
29...	1500	94	1270	24.5	91	23	--
31...	1730	94	1280	24.5	99	25	--
AUG							
01...	0730	94	1440	24.0	98	25	--
01...	1115	95	1490	24.0	112	29	--
01...	1730	94	1670	24.0	114	29	--
02...	1400	102	1620	24.0	120	33	--
05...	1720	94	1720	25.0	147	37	--
06...	0850	94	1620	25.0	95	24	--
06...	1620	95	1630	25.5	117	30	--
07...	1440	95	1790	25.5	155	40	--
08...	0700	94	1660	24.5	98	25	--
08...	1245	94	1640	25.5	115	29	--
11...	0910	94	1750	24.0	102	26	--
11...	1230	94	1750	25.0	128	32	--
11...	1600	95	1780	25.0	130	33	--
12...	0820	94	2010	24.5	59	15	--
12...	1045	94	2010	25.0	68	17	--
12...	1500	94	1990	25.0	115	29	--
13...	0900	95	2010	24.5	54	14	--
13...	1200	95	1980	25.5	97	25	--
14...	0730	94	1940	24.0	138	35	--
14...	1330	95	1950	25.5	129	33	--
15...	0653	94	2010	24.0	40	10	--
15...	0930	94	1970	25.0	121	31	--
18...	1520	94	2020	25.0	50	13	--
18...	1810	94	2030	24.5	92	23	--
18...	2000	94	2060	24.5	82	21	--
19...	0700	95	2220	24.0	71	18	--
19...	0920	95	2220	24.5	86	22	--
19...	1130	95	2210	25.0	43	11	--
20...	0900	95	2060	24.0	37	9.5	--
20...	1840	97	2050	25.0	77	20	--
21...	0730	94	2090	24.0	31	7.9	--
22...	0800	94	2120	24.0	42	11	--
22...	1000	97	2110	29.5	50	13	--

RIO GRANDE BASIN  
08384500 PECOS RIVER, BELOW SUMNER DAM, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
AUG							
22...	1300	99	2130	25.0	187	50	100
25...	0715	100	2120	24.0	36	9.7	--
25...	0830	724	2230	24.0	66	129	--
25...	1400	735	2210	25.0	27	54	--
26...	0700	724	1980	24.0	24	47	--
26...	1130	735	1830	25.0	28	56	--
26...	1520	735	1720	25.0	55	109	--
SEP							
02...	0800	757	823	24.0	51	104	--
03...	0915	757	753	24.0	37	76	--
05...	0840	757	744	24.0	31	63	--
05...	1000	757	735	24.5	36	74	--
06...	0810	757	740	24.0	29	59	--
06...	1215	779	735	25.5	36	76	--
07...	0930	779	750	24.0	41	86	--
07...	1630	779	747	24.0	37	78	--
08...	0700	779	750	23.5	32	67	--
08...	1300	768	746	25.0	39	81	--
09...	0715	779	757	23.0	28	59	--
09...	1530	804	753	24.5	38	82	--
15...	0715	757	807	24.0	39	80	--
15...	1220	757	809	25.0	30	61	--
15...	1745	757	880	25.0	62	127	--
16...	0645	746	990	24.0	45	91	--
16...	1030	746	961	25.0	52	105	--
16...	1415	713	994	25.0	58	112	--
16...	1615	713	880	23.5	88	169	99
17...	0700	575	933	24.0	46	71	--
17...	1030	518	918	25.0	58	81	--
17...	1400	518	1120	25.0	79	110	--
18...	0800	73	1080	24.0	76	15	--
18...	1045	75	1100	25.0	97	20	--
18...	1830	76	1330	25.0	128	26	--
22...	0800	80	1290	17.5	70	15	--
22...	1120	80	1380	18.0	93	20	--
22...	1430	80	1520	18.0	119	26	--
23...	0950	80	1680	16.0	89	19	--
23...	1615	80	1650	17.0	97	21	99
23...	1630	80	1700	16.0	89	19	--
24...	0830	80	1700	16.0	82	18	--

LOCATION.--Lat 34°30'30", long 104°16'40", in SE¼SW¼SW¼ sec.1, T.3 N., R.25 E., DeBaca County, Hydrologic Unit 13060003, on right bank of concrete canal, 200 ft downstream from diversion dam on Pecos River, 3.0 mi northwest of Fort Sumner, and at Pecos River mile 684.8.

GAGE.--Water-stage recorder. Datum of gage is 4,034.7 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to March 1954 at site 2.4 mi downstream at different datum. April 1954 to March 1965 at site 1.1 mi downstream at datum 1.7 ft lower.

AVERAGE DISCHARGE.--32 years (1940-42, 1955-83), 49.5 ft<sup>3</sup>/s, 35,860 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 174 ft<sup>3</sup>/s July 22, 1941; no flow many days each year.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	73	.00	.00	.00	.00	88	88	95	111	98	90
2	2.4	28	.00	.00	.00	.00	88	91	94	111	98	90
3	18	6.0	.00	.00	.00	.00	88	96	94	110	97	90
4	49	.12	.00	.00	.00	.00	89	97	94	107	98	91
5	17	.00	.00	.00	.00	.00	88	99	94	105	95	91
6	9.1	.00	.00	.00	.00	.00	88	98	94	105	94	91
7	7.2	.00	.00	.00	.00	.00	88	100	94	106	95	91
8	23	.00	.00	.00	.00	.00	87	101	93	106	95	91
9	45	.00	.00	.00	.00	.00	59	101	93	106	95	90
10	51	.00	.00	.00	.00	.00	2.4	99	93	106	94	89
11	63	.00	.00	.00	.00	.00	2.1	98	92	106	94	90
12	81	.00	.00	.00	.00	.00	1.9	98	92	107	94	90
13	83	.00	.00	.00	.00	.00	1.8	97	91	106	92	90
14	78	.00	.00	.00	.00	.00	1.8	98	89	106	92	90
15	70	.00	.00	.00	.00	.00	1.6	101	92	106	91	90
16	70	.00	.00	.00	.00	47	1.4	103	90	106	90	89
17	70	.00	.00	.00	.00	83	1.4	103	90	106	90	85
18	70	.00	.00	.00	.00	91	49	101	90	106	86	82
19	70	.00	.00	.00	.00	91	85	99	88	105	85	77
20	70	.00	.00	.00	.00	90	87	100	88	105	86	79
21	70	.00	.00	.00	.00	90	87	69	89	105	87	77
22	70	.00	.00	.00	.00	90	87	91	90	105	90	76
23	70	.00	.00	.00	.00	90	89	92	90	104	92	76
24	74	.00	.00	.00	.00	90	90	92	77	104	92	76
25	75	.00	.00	.00	.00	90	90	91	85	99	97	74
26	74	.00	.00	.00	.00	90	89	88	87	100	92	71
27	74	.00	.00	.00	.00	90	88	85	97	99	92	68
28	74	.00	.00	.00	.00	90	88	83	98	98	92	61
29	75	.00	.00	.00	---	90	88	85	105	99	92	61
30	75	.00	.00	.00	---	90	88	88	105	105	91	57
31	78	---	.00	.00	---	90	---	94	---	99	90	---
TOTAL	1787.7	107.12	.00	.00	.00	1392.00	1882.4	2926	2763	3249	2866	2463
MEAN	57.7	3.57	.000	.000	.000	44.9	62.7	94.4	92.1	105	92.5	82.1
MAX	83	73	.00	.00	.00	91	90	103	105	111	98	91
MIN	2.4	.00	.00	.00	.00	.00	1.4	69	77	98	85	57
AC-FT	3550	212	.00	.00	.00	2760	3730	5800	5480	6440	5680	4890
CAL YR 1982	TOTAL	20192.02	MEAN	55.3	MAX	125	MIN	.00	AC-FT	40050		
WTR YR 1983	TOTAL	19436.22	MEAN	53.2	MAX	111	MIN	.00	AC-FT	38550		

## RIO GRANDE BASIN

08386000 PECOS RIVER NEAR ACME, NM  
(Surveillance network station)

LOCATION.--Lat 33°32'10", long 104°22'34", in SW¼NW¼ sec.14, T.9 S., R.25 E., Chaves County, Hydrologic Unit 13060007, on right bank 3.0 mi downstream from U.S. Highway 70, 3.7 mi downstream from Salt Creek, 4.7 mi southwest of Acme, 14 mi northeast of Roswell, and at mile 585.3.

DRAINAGE AREA.--11,380 mi<sup>2</sup>, approximately (contributing area).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1921 to June 1923, July 1937 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Altitude of gage is 3,507 ft, from topographic map. Prior to Nov. 1, 1938, at site on highway bridge 3 mi upstream at various datums. Since Oct. 25, 1963, supplemental water-stage recorder at site opposite base gage at same datum.

REMARKS.--Records fair except those below 10 ft<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, 1959 determination, above station.

AVERAGE DISCHARGE.--46 years (1938-83), 181 ft<sup>3</sup>/s, 131,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft<sup>3</sup>/s Sept. 23, 1941, gage height, 13.71 ft, from rating curve extended above 27,000 ft<sup>3</sup>/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of May 28, 1937, reached a discharge of 53,000 ft<sup>3</sup>/s, gage height, 14.82 ft, from floodmarks, site and datum then in use, by slope-area method, but may have been exceeded by the flood of Oct. 1, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,480 ft<sup>3</sup>/s July 15, gage height, 5.83 ft, no peak above base of 2,500 ft<sup>3</sup>/s; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	26	28	21	15	7.7	13	5.0	97	413	91	540
2	513	27	23	22	17	7.2	11	4.3	45	516	132	514
3	251	33	20	17	18	6.9	9.3	3.7	32	775	75	505
4	135	34	17	19	20	6.3	8.5	3.7	43	790	50	498
5	102	33	17	24	21	4.6	13	550	34	789	39	487
6	76	27	16	22	20	2.9	19	700	34	810	31	516
7	68	23	15	22	18	2.1	26	760	30	868	28	575
8	53	23	16	24	16	1.4	32	800	29	860	26	838
9	33	21	19	24	16	.95	31	840	23	858	22	629
10	26	20	24	20	14	1.1	30	862	24	859	20	510
11	22	20	32	18	13	1.1	27	923	38	874	18	672
12	33	17	34	16	12	1.2	32	912	47	876	28	655
13	50	16	34	15	12	1.2	36	811	21	919	19	632
14	51	14	31	14	12	1.3	28	870	14	906	16	619
15	48	13	27	13	11	1.2	22	875	12	958	12	650
16	53	13	24	14	11	.87	19	870	10	877	9.6	635
17	58	13	23	14	10	.80	16	896	14	890	5.4	638
18	57	13	21	16	9.7	.75	12	903	18	927	3.3	647
19	49	13	19	17	9.0	1.7	9.2	887	8.4	890	1.6	532
20	43	12	17	19	7.9	3.7	7.8	876	5.6	872	.76	423
21	40	12	17	25	7.4	6.2	6.4	906	3.6	849	.00	142
22	44	12	16	24	7.4	14	4.4	743	.64	823	.00	104
23	51	11	15	22	7.5	14	7.2	278	.00	870	.00	87
24	57	12	14	21	7.7	13	8.4	148	.00	848	11	79
25	61	16	13	20	7.8	11	6.1	99	.00	855	8.3	71
26	55	18	13	18	9.6	11	4.8	77	.00	826	5.5	62
27	50	26	13	17	10	12	7.1	62	.00	581	2.7	58
28	41	28	19	17	9.6	12	6.7	58	.00	255	94	54
29	36	31	23	15	---	13	5.3	46	.00	170	397	51
30	30	30	21	15	---	14	6.2	51	114	133	505	189
31	25	---	20	15	---	16	---	66	---	98	533	---
TOTAL	2451	607	641	580	349.6	191.17	464.4	15885.7	697.24	22835	2184.16	12612
MEAN	79.1	20.2	20.7	18.7	12.5	6.17	15.5	512	23.2	737	70.5	420
MAX	513	34	34	25	21	16	36	923	114	958	533	838
MIN	22	11	13	13	7.4	.75	4.4	3.7	.00	98	.00	51
AC-FT	4860	1200	1270	1150	693	379	921	31510	1380	45290	4330	25020
CAL YR 1982	TOTAL	53618.93	MEAN	147	MAX	1370	MIN	.00	AC-FT	106400		
WTR YR 1983	TOTAL	59498.27	MEAN	163	MAX	958	MIN	.00	AC-FT	118000		

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

RIO GRANDE BASIN  
08386000 PECOS RIVER NEAR ACME, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SILICA, DIS- SOLVED (MG/L AS SI02) (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 06...	--	--	--	--	--	--	--	--	--	--
NOV 08...	11	2190	.20	.15	<.060	--	.70	.040	<.010	2.0
DEC 13...	--	--	.20	<.10	.090	.81	1.1	.300	.020	1.9
JAN 24...	--	--	--	--	--	--	--	--	--	--
FEB 22...	7.3	3450	<.10	<.10	.070	.53	--	.020	.020	2.6
MAR 31...	--	--	--	--	--	--	--	--	--	--
MAY 24...	11	1930	<.10	<.10	.420	.28	--	.100	.010	3.6
JUN 22...	--	--	--	--	--	--	--	--	--	--
JUL 15...	12	--	<.10	<.10	.050	.65	--	.300	.010	4.8
AUG 15...	--	--	--	--	--	--	--	--	--	--
SEP 19...	--	--	<.10	<.10	.030	1.3	--	.190	<.010	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 08...	1145	1	1	200	1	1	10	10	0	2
FEB 22...	1500	--	--	320	--	--	--	--	--	--
MAY 24...	1230	1	1	110	<1	1	10	<10	0	7
JUL 15...	1000	3	1	0	<1	<1	10	<10	10	--

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 08...	40	0	2	.0	.0	1	1	20	30
FEB 22...	40	--	--	--	--	--	--	--	--
MAY 24...	30	0	2	.5	.0	1	1	70	10
JUL 15...	350	0	--	.0	.0	1	1	40	30

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	NITRO- GEN, NO2+NO3 TOT. IN BOT. MAT. (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM TOTAL FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01029)
DEC 13...	1130	<2.0	4.2	190	1	0	0

RIO GRANDE BASIN  
08386000 PECOS RIVER NEAR ACME, NM -- Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
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DEC 13...	< 10	0	500	< 10	120	.00	0
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RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	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 DIS- SOLVED, EXTRAC- TION (UG/L) (80020)
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NOV 08...	1145	< 50	1.9	1.3	< 23	4.8	< 22	4.6	.08	6.7
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PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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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FEB 22...	1500	--	--	--	--	--	--	--	--	--
SEP 19...	1500	< .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)	MIREX, TOTAL (UG/L) (39755)
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FEB 22...	--	--	--	--	--	--	--	--	--	--
SEP 19...	< .01	< .01	< .01	< .01	< .01	< .01	< .01	< .01	< .01	< .01

DATE	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION TOTAL (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
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FEB 22...	--	--	--	--	--	< .01	< .01	< .01	< .01
SEP 19...	< .10	< .01	< .10	< 1	< .01	--	--	--	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
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DEC 13...	1130	34	4.5	71	6.5	81
FEB 22...	1500	7.1	17.0	718	14	5
MAY 24...	1230	155	24.0	1130	473	38
JUL 15...	1000	938	23.0	864	2190	62
SEP 19...	1500	494	27.0	451	602	69

## 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 below point of diversion; 0.7 mi east of Hollywood and junction of U.S. Highway 70 and State Highway 37. Point of diversion at Rio Ruidoso mile 24.5.

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. Altitude of gage is 6,430 ft, from Topographic Division. Prior to Mar. 20, 1962, at site 315 ft downstream at datum 12.79 ft lower.

REMARKS.--Records poor. Ditch is for diversion of water from Rio Ruidoso 1.0 mi upstream for irrigation below station 08387000.

AVERAGE DISCHARGE.--23 years, 0.39 ft<sup>3</sup>/s, 283 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6.6 ft<sup>3</sup>/s June 15, 1961; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 0.83 ft<sup>3</sup>/s Sept. 12; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.31	.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	.61	.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	.11
9	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.00	.34
10	.00	.00	.00	.00	.00	.00	.01	.00	.00	.80	.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	.83
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	.01	.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	.30	.00	.00
23	.00	.00	.13	.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	.13	.00	.00	.00	.15	.00	.00	1.11	.92	1.28
MEAN	.000	.000	.004	.000	.000	.000	.005	.000	.000	.036	.030	.043
MAX	.00	.00	.13	.00	.00	.00	.14	.00	.00	.80	.61	.83
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.3	.00	.00	.00	.3	.00	.00	2.2	1.8	2.5

CAL YR 1982 TOTAL 11.59 MEAN .032 MAX 2.0 MIN .00 AC-FT 23  
WTR YR 1983 TOTAL 3.59 MEAN .010 MAX .83 MIN .00 AC-FT 7.1



## 08387000 RIO RUIDOSO AT HOLLYWOOD, NM

LOCATION.--Lat 33°19'43", long 105°36'34", in SW¼SE¼NE¼ sec.30, T.11 S., R.14 E., Lincoln County, Hydrologic Unit 13060008, on right upstream bridge abutment on road leading to Ruidoso Downs Race Track, 0.2 mi north of U.S. Highway 70, 1.1 mi east of the Hollywood Post Office, 1.2 mi downstream from the Ruidoso sewage disposal plant, 1.8 mi downstream from Gavilan Canyon, 2.8 mi downstream from Carrizo Creek, and at mile 23.4.

DRAINAGE AREA.--120 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 6,365.42 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1961, at datum 0.30 ft higher. Oct. 14, 1961, to Mar. 8, 1962, at datum 0.60 ft higher. Mar. 9, 1962, to June 18, 1965, at datum 1.0 ft higher.

REMARKS.--Records good. Figures of discharge do not include F. Herrera ditch-S. (station 08386900), which diverts from right bank 1.5 mi upstream and bypasses station for irrigation of 75 acres, 1959 determination. Village of Ruidoso diverts from right bank 7.0 mi upstream for municipal use and returns a portion of this water as effluent from sewage disposal plant downstream from the gage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years (1954-1981), 14.9 ft<sup>3</sup>/s, 10,800 acre-ft/yr, for period when sewage disposal plant effluent was discharged upstream from gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,340 ft<sup>3</sup>/s June 17, 1965, gage height, 10.05 ft present datum, from rating curve extended above 110 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 0.30 ft<sup>3</sup>/s Jan 1, 1962, May 8-9, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Sept. 29, 1941, is probably the highest since at least 1904 (discharge not determined).

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 28	0830	*156	2.55	July 10	1500	136	2.44

Minimum discharge, 4.8 ft<sup>3</sup>/s July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	7.5	10	7.1	9.5	22	41	117	75	11	16	8.7
2	22	7.9	9.0	9.6	9.4	24	44	107	71	10	9.5	8.5
3	21	8.7	7.8	8.0	9.6	25	45	92	60	9.6	9.4	8.4
4	19	8.4	8.0	7.2	9.5	30	47	68	49	9.5	9.0	8.3
5	18	8.2	8.6	5.7	11	30	46	84	43	9.4	8.2	8.2
6	18	7.8	8.1	6.1	10	25	43	93	40	8.9	8.0	8.6
7	16	7.6	8.1	6.0	10	23	37	94	36	8.5	7.7	9.3
8	15	7.5	8.0	6.2	11	23	34	100	34	8.0	7.5	13
9	15	7.6	8.6	6.1	11	24	35	100	33	7.9	7.1	17
10	14	7.6	13	6.3	10	28	40	111	31	15	7.2	13
11	14	7.4	11	7.6	10	35	46	107	29	11	7.2	11
12	14	7.5	9.4	9.8	10	43	44	97	28	10	7.2	17
13	13	7.5	9.5	10	11	49	40	89	26	10	7.0	17
14	12	7.9	9.8	10	12	51	35	82	24	8.9	6.9	15
15	12	7.1	8.2	11	12	55	33	70	25	8.5	6.9	15
16	11	7.1	10	11	12	47	34	65	24	7.9	6.8	15
17	11	7.2	9.8	11	14	39	44	64	22	10	6.7	14
18	10	8.4	9.4	14	15	34	59	59	21	8.4	6.9	13
19	10	8.3	9.8	12	17	38	75	55	19	7.7	6.9	13
20	9.6	8.1	10	12	18	30	93	53	18	7.3	7.0	13
21	9.3	8.0	9.9	11	17	27	103	51	18	7.5	6.8	13
22	9.2	8.0	9.8	11	17	26	104	52	18	13	6.9	12
23	9.1	7.9	13	13	18	25	97	59	18	9.9	7.7	12
24	8.8	7.7	9.3	11	19	23	100	67	18	8.1	8.6	12
25	8.4	7.7	7.8	10	22	25	126	78	17	7.0	14	12
26	8.2	8.1	9.0	9.7	24	24	141	78	15	7.3	9.2	12
27	7.8	9.2	8.8	9.7	22	22	138	76	15	7.4	8.7	15
28	7.9	10	9.3	10	22	21	139	68	13	7.6	8.3	13
29	7.7	9.7	11	9.6	---	22	130	69	13	7.3	8.4	13
30	7.7	9.1	7.4	10	---	24	121	74	12	7.0	9.0	16
31	7.6	---	7.2	11	---	30	---	79	---	6.9	9.1	---
TOTAL	392.3	240.7	288.6	292.7	393.0	944	2114	2458	865	276.5	255.8	376.0
MEAN	12.7	8.02	9.31	9.44	14.0	30.5	70.5	79.3	28.8	8.92	8.25	12.5
MAX	26	10	13	14	24	55	141	117	75	15	16	17
MIN	7.6	7.1	7.2	5.7	9.4	21	33	51	12	6.9	6.7	8.2
AC-FT	778	477	572	581	780	1870	4190	4880	1720	548	507	746
CAL YR 1982 TOTAL	5201.6											
WTR YR 1983 TOTAL	8896.6											
MEAN 14.3												
MAX 83												
MIN 2.3												
AC-FT 10320												
MEAN 24.4												
MAX 141												
MIN 5.7												
AC-FT 17650												

CAL YR 1982 TOTAL 5201.6 MEAN 14.3 MAX 83 MIN 2.3 AC-FT 10320  
WTR YR 1983 TOTAL 8896.6 MEAN 24.4 MAX 141 MIN 5.7 AC-FT 17650

## RIO GRANDE BASIN

08390500 RIO HONDO AT DIAMOND A RANCH, NEAR ROSWELL, NM

LOCATION.--33°20'57", long 104°51'05", in NE¼NE¼ sec.20, T.11 S, R.21 E., Chaves County, Hydrologic Unit 13060008, on right bank 15 ft downstream from county road bridge at Diamond A Ranch, 1.3 mi south of U.S. Highway 70-380, 13 mi upstream from Two Rivers Reservoir, 21 mi upstream from mouth of Rocky Arroyo, 18 mi west of Roswell, and at mile 44.7.

DRAINAGE AREA.--947 mi<sup>2</sup>, contributing area.

PERIOD OF RECORD.--May 1908 to August 1909, May 1939 to current year. Monthly discharge only for 1908-9, published in Technical Report No. 7, State of New Mexico, State Engineer Office, Streamflow and Reservoir Content 1888-1954.

REVISED RECORDS.--WSP 1392: Drainage area. WSP 1512: 1939-40(P), 1941, 1942-43(P), 1946(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,190 ft, 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, 1959 determination. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years (1939-83) 21.1 ft<sup>3</sup>/s, 15,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,800 ft<sup>3</sup>/s June 18, 1965, gage height, 26.40 ft, from rating curve extended above 3,100 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; maximum gage height 28.78 ft, Sept. 22, 1941; no flow most of the time.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood on June 1, 1937, reached a discharge of 24,900 ft<sup>3</sup>/s at Riverside about 13 mi upstream. Other major floods occurred Oct. 31, 1901, Sept. 29, 30, 1904 and July 25, 1905.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,300 ft<sup>3</sup>/s at 0400 hours Oct. 1, gage height 24.76 ft, no other peak above base of 1,000 ft<sup>3</sup>/s; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	781	.00	.00	7.5	.00	.00	.00	161	70	.00	.00	.00
2	79	.00	.00	11	.14	.00	.00	166	58	.00	.00	.00
3	54	.00	.00	11	.04	.00	2.3	148	50	.00	.00	.00
4	45	.00	.00	6.9	1.4	.00	11	114	41	.00	.00	.00
5	33	.00	.00	6.4	3.9	.00	24	82	32	.00	.00	.00
6	24	.00	.00	6.3	4.0	.49	38	87	27	.00	.00	.00
7	22	.00	.00	5.7	2.1	1.8	50	94	24	.00	.00	.00
8	19	.00	.00	5.2	.15	.54	48	101	19	.00	.00	.00
9	15	.00	.00	.00	.00	.01	42	114	12	.00	.00	.00
10	14	.00	1.6	1.6	.00	.00	40	117	9.8	.00	.00	.00
11	14	.00	3.0	4.3	.00	.00	38	112	8.3	.00	.00	.00
12	13	.00	2.8	3.1	.00	.00	46	104	6.6	.00	.00	.00
13	11	.00	2.7	.00	.00	.00	43	99	3.5	.00	.00	.00
14	9.8	.00	2.3	.00	.00	2.0	40	89	.00	.00	.00	.00
15	8.4	.00	2.2	1.2	.00	4.7	38	85	.00	.00	.00	.00
16	7.5	.00	1.7	3.8	.00	4.8	31	70	.00	.00	.00	.00
17	7.5	.00	1.2	3.9	.00	6.1	26	62	.00	.00	.00	.00
18	7.1	.00	5.6	3.8	.00	6.3	22	58	.00	.00	.00	.00
19	4.0	.00	5.6	3.7	.00	5.9	23	45	.00	.00	.00	.00
20	.00	.00	5.6	4.0	.00	9.6	49	43	.00	.00	.00	.00
21	.00	.00	5.6	5.0	.00	8.5	89	40	.00	.00	.00	.00
22	.00	.00	5.6	4.8	.00	5.8	105	32	.00	.00	.00	.00
23	.00	.00	5.4	4.8	.00	3.4	113	30	.00	.00	.00	.00
24	.00	.00	3.9	2.2	.00	2.6	102	24	.00	.00	.00	.00
25	.00	1.6	4.7	.64	.00	2.4	99	28	.00	.00	26	.00
26	.00	2.0	7.5	.57	.00	2.1	123	37	.00	.00	1.8	.00
27	.00	2.0	7.6	.42	.00	3.5	179	52	.00	.00	.00	.00
28	.00	2.1	6.7	.41	.00	3.5	182	49	.00	.00	.00	.00
29	.00	1.1	8.2	.41	---	1.2	180	48	.00	.00	.00	.00
30	.00	.00	8.5	.58	---	.00	171	50	.00	.00	.00	70
31	1.3	---	7.6	.10	---	.00	---	57	---	.00	.00	---
TOTAL	1169.60	8.80	105.60	109.33	11.73	75.24	1954.30	2398	361.20	.00	27.80	70.00
MEAN	37.7	.29	3.41	3.53	.42	2.43	65.1	77.4	12.0	.000	.90	2.33
MAX	781	2.1	8.5	11	4.0	9.6	182	166	70	.00	26	70
MIN	.00	.00	.00	.00	.00	.00	.00	24	.00	.00	.00	.00
AC-FT	2320	17	209	217	23	149	3880	4760	716	.00	55	139
CAL YR 1982 TOTAL	3088.14			MEAN 8.46	MAX 781	MIN .00	AC-FT 6130					
WTR YR 1983 TOTAL	6291.60			MEAN 17.2	MAX 781	MIN .00	AC-FT 12480					

## 08390600 TWO RIVERS RESERVOIR NEAR ROSWELL, NM

LOCATION.--08390610 Rio Hondo Reservoir: Lat 33°17'55", long 104°43'20", in SW¼SE¼NE¼ sec.4, T.12 S., R.22 E., Chaves County, Hydrologic Unit 13060008, near center of Diamond A Dam on Rio Hondo, 13 mi southwest of Roswell at mile 33.4; 08390620 Rocky Arroyo Reservoir: Lat 33°16'20", long 104°43'20", in NW¼SE¼NE¼ sec.16, T.12 S., R.22 E., at left end of Rocky Dam on Rocky Arroyo, and 14 mi southwest of Roswell.

DRAINAGE AREA.--1,027 mi<sup>2</sup>; Rio Hondo, 963 mi<sup>2</sup>; Rocky Arroyo, 64 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1963 to current year (prior to October 1965 month end contents only). Prior to October 1966 contents at 0800 hours.

GAGE.--Water-stage recorder. Datum of gage 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 the pools of the two reservoirs combine to form Two Rivers Reservoir with a total capacity of 166,200 acre-ft at elevation 4,032.0 ft, crest of ungated spillway. Capacity of Rio Hondo Reservoir, 181 acre-ft between elevations 3,957.0 ft, sill of outlet gate, and 3,980.0. Capacity of Rocky Arroyo Reservoir, 13,410 acre-ft between elevations 3,945.0, sill of outlet gate, and 3,980.0 ft. No dead storage in Rio Hondo Reservoir or Rocky Arroyo Reservoir. Primary objective of project is flood control. Outlet conduits in Rocky Dam have fixed openings. Figures given 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 July 29, 1965, elevation, 3,985.7; no storage most of time.

Rocky Arroyo Reservoir: maximum contents at 0800 hours, 6,090 acre-ft June 18, 1965, elevation 3,979.7 ft; 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.

## RIO GRANDE BASIN

08390800 RIO HONDO BELOW DIAMOND A DAM, NEAR ROSWELL, NM

LOCATION.--Lat 33°18'05", long 104°43'12", in NE¼SE¼NE¼ sec.4, T.12 S., R.22 E., Chaves County, Hydrologic Unit 13060008, on left bank, 500 ft downstream from outlet conduit of Diamond A Dam (Two Rivers Reservoir), 13 mi southwest of Roswell, and at mile 33.3. Mouth at Pecos River mile 566.0.

DRAINAGE AREA.--963 mi<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 National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good. Diversions and ground-water withdrawals for irrigation of about 6,500 acres, 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.--20 years, 8.83 ft<sup>3</sup>/s, 6,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 659 ft<sup>3</sup>/s July 29, 1965, gage height, 4.91 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 212 ft<sup>3</sup>/s Oct. 2, gage height, 3.17 ft; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	.00	.00	1.8	.00	.00	.00	124	63	.00	.00	.00
2	149	.00	.00	4.1	.00	.00	.00	116	59	.00	.00	.00
3	51	.00	.00	3.3	.00	.00	.00	115	49	.00	.00	.00
4	40	.00	.00	3.2	.00	.00	.00	93	36	.00	.00	.00
5	32	.00	.00	2.5	.00	.00	12	67	27	.00	.00	.00
6	22	.00	.00	2.2	.00	.00	34	65	19	.00	.00	.00
7	19	.00	.00	1.1	.00	.00	45	72	11	.00	.00	.00
8	17	.00	.00	.34	.00	.00	47	76	7.4	.00	.00	.00
9	13	.00	.00	.00	.00	.00	37	86	2.4	.00	.00	.00
10	12	.00	.00	.00	.00	.00	32	92	1.4	.00	.00	.00
11	12	.00	.00	.00	.00	.00	28	98	.00	.00	.00	.00
12	11	.00	.00	.00	.00	.00	40	92	.00	.00	.00	.00
13	9.8	.00	.00	.00	.00	.00	46	89	.00	.00	.00	.00
14	8.6	.00	.00	.00	.00	.00	37	82	.00	.00	.00	.00
15	7.0	.00	.00	.00	.00	.00	35	79	.00	.00	.00	.00
16	4.4	.00	.00	.00	.00	.00	28	68	.00	.00	.00	.00
17	4.4	.00	.00	.00	.00	.31	23	57	.00	.00	.00	.00
18	3.7	.00	.00	.00	.00	.89	18	54	.00	.00	.00	.00
19	2.8	.00	.00	.00	.00	.68	17	42	.00	.00	.00	.00
20	.27	.00	.00	.00	.00	.28	40	38	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	2.3	86	35	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.34	96	30	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	91	25	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	83	20	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	80	22	.00	.00	1.4	.00
26	.00	.00	.00	.00	.00	.00	83	27	.00	.00	.32	.00
27	.00	.00	1.3	.00	.00	.00	140	43	.00	.00	.00	.00
28	.00	.00	1.4	.00	.00	.00	141	44	.00	.00	.00	.00
29	.00	.00	1.6	.00	---	.00	135	42	.00	.00	.00	.00
30	.00	.00	2.2	.00	---	.00	131	41	.00	.00	.00	31
31	.00	---	2.0	.00	---	.00	---	50	---	.00	.00	---
TOTAL	585.97	.00	8.50	18.54	.00	4.80	1585.00	1984	273.94	.00	1.72	31.00
MEAN	18.9	.000	.27	.60	.000	.15	52.8	64.0	9.13	.000	.055	1.03
MAX	167	.00	2.2	4.1	.00	2.3	141	124	63	.00	1.4	31
MIN	.00	.00	.00	.00	.00	.00	.00	20	.00	.00	.00	.00
AC-FT	1160	.00	17	37	.00	9.5	3140	3940	543	.00	3.4	61

CAL YR 1982 TOTAL 1670.41 MEAN 4.58 MAX 167 MIN .00 AC-FT 3310  
WTR YR 1983 TOTAL 4493.47 MEAN 12.3 MAX 167 MIN .00 AC-FT 8910

## RIO GRANDE BASIN

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08393500 RIO HONDO AT ROSWELL, NM

LOCATION.--Lat 33°22'19", long 104°32'42", in NE&SE& sec.7, T.11 S., R.24 E., Chaves County, Hydrologic Unit 13060008, on left bank, 0.3 mi upstream from Sunset Ave. bridge in Roswell, 6.3 mi downstream from Rocky Arroyo and 11.7 mi upstream from mouth.

DRAINAGE AREA.--1,070 mi<sup>2</sup>, approximately, contributing area.

PERIOD OF RECORD.--February 1981 to current year. Records for June 1903 to February 1906, published in WSP 358, are unreliable and should not be used.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Altitude of gage is 3,615 ft, from topographic map.

REMARKS.--Records fair. 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 PERIOD OF RECORD.--Maximum discharge, 355 ft<sup>3</sup>/s May 3, 1981, gage height 7.5 ft, from floodmarks, from rating curve extended above 110 ft<sup>3</sup>/s; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 234 ft<sup>3</sup>/s, Oct. 1, gage height 6.11 ft, from floodmarks, from rating curve extended above 110 ft<sup>3</sup>/s; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	.00	.00	.00	.00	.00	.00	84	32	.00	.00	.00
2	170	.00	.00	.00	.00	.00	.00	89	46	.00	.00	.00
3	56	.00	.00	.00	.00	.00	.00	83	28	.00	.00	.00
4	38	.00	.00	.00	.00	.00	.00	63	14	.00	.00	.00
5	26	.00	.00	.00	.00	.00	.00	48	19	.00	.00	.00
6	15	.00	.00	.00	.00	.00	63	43	12	.00	.00	.00
7	12	.00	.00	.00	.00	.00	36	48	2.7	.00	.00	.00
8	9.8	.00	.00	.00	.00	.00	18	58	.00	.00	.00	.00
9	6.3	.00	.00	.00	.00	.00	18	65	.00	.00	.00	.00
10	4.3	.00	.00	.00	.00	.00	10	71	.00	.00	.00	.00
11	4.0	.00	.00	.00	.00	.00	2.3	85	.00	.00	.00	.00
12	3.3	.00	.00	.00	.00	.00	.15	80	.00	.00	.00	.00
13	2.0	.00	.00	.00	.00	.00	.00	77	.00	.00	.00	.00
14	1.0	.00	.00	.00	.00	.00	5.0	73	.00	.00	.00	.00
15	.62	.00	.00	.00	.00	.00	11	76	.00	.00	.00	.00
16	.08	.00	.00	.00	.00	.00	9.1	69	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	3.1	49	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.03	40	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	31	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	22	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	15	20	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	31	15	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	47	9.9	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	42	2.2	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	42	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	37	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	82	.84	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	98	5.8	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	93	4.3	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	97	2.4	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	8.9	.00	.00	.00	.00
TOTAL	493.40	.00	.00	.00	.00	.00	759.68	1323.34	153.70	.00	.00	22.00
MEAN	15.9	.000	.000	.000	.000	.000	25.3	42.7	5.12	.000	.000	.73
MAX	170	.00	.00	.00	.00	.00	98	89	46	.00	.00	22
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	979	.00	.00	.00	.00	.00	1510	2620	305	.00	.00	44
CAL YR 1982	TOTAL	1391.48	MEAN	3.81	MAX	170	MIN	.00	AC-FT	2760		
WTR YR 1983	TOTAL	2752.12	MEAN	7.54	MAX	170	MIN	.00	AC-FT	5460		

## RIO GRANDE BASIN

08394100 PECOS RIVER NEAR HAGERMAN, NM

LOCATION.--Lat 33°10'08", long 104°18'24", in SE¼SW¼SE¼ sec.23, T.13 S., R.26 E., Chaves County, Hydrologic Unit 13060007, on left bank 3.4 mi upstream from Rio Felix, 4.9 mi north of Hagerman, and at mile 544.6.

DRAINAGE AREA.--13,630 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--February 1968 to current year (operated as a low-flow station only).

GAGE.--Water-stage recorder. Altitude of gage is 3,390 ft, from topographic map.

REMARKS.--Records fair except those above 1,000 ft<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 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 Sept. 11, 1969; no flow at times in 1971, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge determined, 1,060 ft<sup>3</sup>/s July 16; minimum, 4.4 ft<sup>3</sup>/s part of each day June 21, 22, 30, and July 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	45	58	49	48	35	25	27	75	71	120	470
2	380	42	54	49	48	35	26	27	80	307	100	540
3	555	43	52	53	49	33	26	24	76	638	90	537
4	201	47	48	48	52	30	24	27	60	826	78	547
5	147	51	44	47	57	33	25	98	54	863	64	540
6	108	51	42	49	59	27	29	639	46	870	53	570
7	83	49	43	55	57	25	35	805	44	864	45	589
8	74	44	47	56	55	25	44	876	42	894	38	707
9	66	42	53	57	54	25	54	904	40	915	34	964
10	52	41	67	56	52	24	55	967	34	901	29	780
11	46	40	71	54	50	23	51	934	29	934	26	729
12	44	37	67	51	47	23	48	971	31	933	28	721
13	43	36	69	49	46	25	45	990	40	971	27	649
14	55	35	69	48	47	25	53	993	32	946	33	597
15	60	33	66	46	41	25	54	1040	24	974	22	596
16	59	33	61	44	38	24	46	981	18	1060	20	566
17	58	33	59	43	35	24	39	960	13	968	16	536
18	62	32	57	44	35	22	35	988	11	933	15	511
19	64	31	54	45	36	21	31	977	14	966	14	440
20	59	31	52	50	34	21	27	918	13	956	13	343
21	54	30	50	55	34	21	25	892	8.9	952	12	193
22	52	30	49	60	33	21	23	887	8.3	962	12	137
23	52	30	48	61	32	22	20	516	7.3	987	12	123
24	56	31	47	58	33	29	18	334	34	948	12	98
25	63	33	44	57	33	30	18	200	14	944	12	89
26	65	37	46	55	33	28	19	130	9.9	998	12	81
27	66	50	47	52	34	25	17	110	8.1	873	13	69
28	61	60	54	51	34	24	16	102	6.8	476	12	63
29	56	65	49	48	---	24	21	79	6.2	280	117	58
30	52	58	48	49	---	24	28	71	5.0	180	427	55
31	50	---	50	49	---	24	---	70	---	150	435	---
TOTAL	2958	1220	1665	1588	1206	797	977	17537	884.5	24540	1941	12898
MEAN	95.4	40.7	53.7	51.2	43.1	25.7	32.6	566	29.5	792	62.6	430
MAX	555	65	71	61	59	35	55	1040	80	1060	435	964
MIN	43	30	42	43	32	21	16	24	5.0	71	12	55
AC-FT	5870	2420	3300	3150	2390	1580	1940	34780	1750	48680	3850	25580
CAL YR 1982	TOTAL	61075.2	MEAN	167	MAX	1670	MIN	1.7	AC-FT	121100		
WTR YR 1983	TOTAL	68211.5	MEAN	187	MAX	1060	MIN	5.0	AC-FT	135300		

## 08394500 RIO FELIX AT OLD HIGHWAY BRIDGE, NEAR HAGERMAN, NM

LOCATION.--Lat 33°07'30", long 104°20'40", in SW¼SW¼SE¼ 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 upstream from alternate U.S. Highway 285, 1.3 mi northwest of Hagerman, and 2.7 mi upstream from mouth. Mouth at Pecos River mile 541.4.

DRAINAGE AREA.--932 mi<sup>2</sup>, contributing area.

PERIOD OF RECORD.--April 1939 to current year. March 1932 to April 1939 at site 1 mi downstream; records for periods of low flow not equivalent, owing to inflow between sites.

REVISED RECORDS.--WSP 928: 1940(M). WSP 1562: 1939-40, 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 3,403.40 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Diversions for irrigation of about 350 acres, 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years, 13.9 ft<sup>3</sup>/s, 10,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,000 ft<sup>3</sup>/s Oct. 7, 1954, gage height, 27.5 ft, from floodmarks, from rating curve extended above 12,000 ft<sup>3</sup>/s on basis of slope-area measurement at point 5.5 mi upstream from gage (adjusted for channel storage); no flow for many periods. Flood in 1954 is the highest since 1894 (information from local residents).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 1, 1904, is probably second highest since 1894; another major flood occurred in April 1915.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 161 ft<sup>3</sup>/s Oct. 3, gage height, 5.85 ft, no peak above base of 500 ft<sup>3</sup>/s; no flow most of time.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

## MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	.00	4.5	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	140	.00	4.7	.00	.00	.00	.00	.00	4.2	.00	.00	.00
3	138	.00	4.5	.00	.00	.00	.00	.00	.83	.00	.00	.00
4	78	1.8	3.3	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	52	2.7	3.0	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	37	2.1	2.3	.00	.00	.00	.21	.00	.00	.00	.00	.00
7	17	2.3	.02	.00	.00	.00	6.2	.00	.00	.00	.00	.00
8	6.2	2.3	.00	.00	.00	.00	8.5	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	5.6	.00	.00	.00	.00	.00
10	.11	.68	.00	.00	.00	.00	4.7	.00	.00	.00	.00	.00
11	.06	3.0	.00	.00	.00	.00	2.7	.00	.00	.00	.00	.00
12	.00	3.4	.00	.00	.00	.00	.00	.63	.00	.00	.00	.00
13	.00	1.4	.00	.00	.00	.00	.00	3.0	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	11	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	13	.00	.00	.00	.00
16	.00	2.8	.00	.00	.00	.00	.00	12	.00	.00	.00	.00
17	.00	3.1	.00	.00	.00	.00	.00	22	.00	.00	.00	.00
18	.00	2.7	.00	.00	.00	.00	.00	7.8	.00	.00	.00	.00
19	.00	3.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	3.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	2.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	2.4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	2.3	.00	.00	.35	.00	.00	.00	.00	.00	.00	.00
24	.00	2.6	.00	.00	3.6	.00	.00	.00	24	.00	.00	.00
25	.00	2.8	.00	.00	2.1	.00	.00	.00	9.4	.00	.00	.00
26	.00	5.2	.00	.00	.00	.00	.00	.00	.89	.00	.00	.00
27	.00	11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	14	.00	.00	1.6	.00	.00	.00	.00	.00	.00	.00
29	.02	8.0	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.74	5.4	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	525.13	90.68	22.32	.00	7.65	.00	27.91	69.43	39.32	.00	.00	.00
MEAN	16.9	3.02	.72	.000	.27	.000	.93	2.24	1.31	.000	.000	.000
MAX	140	14	4.7	.00	3.6	.00	8.5	22	24	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1040	180	44	.00	15	.00	55	138	78	.00	.00	.00

CAL YR 1982 TOTAL 1313.57 MEAN 3.60 MAX 140 MIN .00 AC-FT 2610  
WTR YR 1983 TOTAL 782.44 MEAN 2.14 MAX 140 MIN .00 AC-FT 1550

## 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 upstream from county bridge, 2.5 mi east of Lake Arthur, 7 mi upstream from Cottonwood Creek, 11 mi northeast of Artesia, and at mile 522.0.

DRAINAGE AREA.--14,760 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--August 1938 to current year.

GAGE.--Water-stage recorder and rock control. Datum of gage is 3,327.07 ft 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, 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 228 ft<sup>3</sup>/s, 165,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft<sup>3</sup>/s Sept. 24, 1941, gage height, 21.90 ft, from rating curve extended above 16,100 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 21.77 ft; no flow at times in 1947, 1953-4, 1962, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1937, reached a stage of 21.77 ft, discharge, 51,500 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 961 ft<sup>3</sup>/s July 16, gage height, 4.73 ft; minimum, 3.0 ft<sup>3</sup>/s June 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	65	75	62	57	39	24	21	73	13	153	393
2	335	61	74	59	56	39	23	21	79	205	86	380
3	666	58	71	59	54	39	24	24	79	431	67	455
4	331	51	67	62	54	39	27	22	50	702	60	482
5	252	51	62	58	54	38	31	24	41	696	50	470
6	204	51	58	55	57	36	34	393	37	687	40	493
7	160	51	57	57	58	35	43	618	31	704	30	486
8	136	52	56	62	58	33	48	675	28	721	27	511
9	100	51	61	63	58	32	58	717	26	724	20	775
10	94	50	64	63	58	31	64	779	21	737	12	613
11	89	50	78	63	57	30	59	768	12	747	15	589
12	82	50	76	62	56	29	51	797	13	766	18	652
13	76	50	74	61	55	29	43	820	20	783	17	629
14	70	49	76	58	54	29	44	831	20	799	15	577
15	69	48	74	56	53	28	53	874	12	807	20	574
16	71	47	70	54	51	25	50	852	11	859	9.5	579
17	73	46	67	53	48	23	33	800	11	775	6.8	576
18	75	45	65	52	45	23	25	801	10	774	6.2	579
19	79	45	63	52	43	23	16	833	9.3	767	4.3	564
20	80	45	61	52	43	23	13	794	13	758	4.4	506
21	81	45	58	56	41	24	14	786	7.6	751	4.1	353
22	77	45	57	60	40	24	16	799	4.8	739	3.7	212
23	76	44	56	63	39	23	15	590	3.7	731	3.6	179
24	74	44	56	66	38	23	21	270	16	732	6.0	138
25	73	44	54	66	38	25	20	208	42	732	8.0	101
26	73	43	57	64	38	30	13	139	14	737	7.7	87
27	78	45	55	62	38	32	13	111	14	747	7.3	69
28	83	47	56	61	38	33	14	109	13	481	10	59
29	76	67	61	61	---	33	11	96	12	256	10	54
30	72	83	58	58	---	30	15	73	13	195	230	51
31	73	---	61	57	---	27	---	71	---	156	357	---
TOTAL	3965	1523	1978	1837	1379	927	915	14716	736.4	19712	1308.6	12186
MEAN	128	50.8	63.8	59.3	49.3	29.9	30.5	475	24.5	636	42.2	406
MAX	666	83	78	66	58	39	64	874	79	859	357	775
MIN	69	43	54	52	38	23	11	21	3.7	13	3.6	51
AC-FT	7860	3020	3920	3640	2740	1840	1810	29190	1460	39100	2600	24170

CAL YR 1982 TOTAL 57356.6 MEAN 157 MAX 1180 MIN 3.3 AC-FT 113800  
WTR YR 1983 TOTAL 61183.0 MEAN 168 MAX 874 MIN 3.6 AC-FT 121400



LOCATION.--Lat 32°50'27", long 104°19'23", in NW¼NW¼ sec.18, T.17 S., R.27 E., Eddy County, Hydrologic Unit 13060007, on left bank 250 ft upstream from bridge on State Highway 83, 4.3 mi east of Artesia, 7.0 mi upstream from Rio Penasco, 17 mi upstream from McMillan Dam, and at mile 503.9.

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 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 downstream at same datum.

REMARKS.--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, 1959 determination, above station.

AVERAGE DISCHARGE.--47 years, (1937-83), 243 ft<sup>3</sup>/s, 176,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge probably occurred May 30, 1937, when a discharge of 51,500 ft<sup>3</sup>/s was measured by slope-area method at a point 15 mi upstream, gage height, 14.7 ft, site and datum then in use; no flow at times in 1934, 1946-47, 1953-54, 1957, 1964-65.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1893 occurred Oct. 2, 1904, discharge not determined; the peak inflow to Lake McMillan, which includes Rio Penasco and Fourmile Draw, was estimated at 82,000 ft<sup>3</sup>/s. The second highest flood occurred July 25, 1905, discharge below Rio Penasco, 50,300 ft<sup>3</sup>/s, based on gain in storage and spill from Lake McMillan. The floods in August 1893 and October 1904 damaged McMillan Dam and washed out Avalon Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 895 ft<sup>3</sup>/s May 16, gage height, 6.59 ft, no peak above base of 2,000 ft<sup>3</sup>/s; minimum, 0.17 ft<sup>3</sup>/s Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	71	73	63	61	45	26	14	74	7.9	98	363
2	202	66	68	62	60	48	22	20	77	50	96	405
3	645	62	69	59	59	47	24	21	75	24.2	92	440
4	429	59	66	65	58	46	29	24	68	591	90	492
5	231	51	62	64	60	42	32	23	45	630	76	458
6	193	58	58	64	62	38	33	189	38	716	56	487
7	157	57	57	64	68	40	44	544	34	730	33	518
8	129	61	55	65	68	37	47	637	31	740	26	521
9	113	55	56	68	66	35	53	685	28	760	26	746
10	97	49	61	68	65	34	64	721	26	750	19	727
11	88	49	62	69	62	34	69	729	22	742	13	656
12	74	51	73	69	61	34	68	750	16	760	10	690
13	69	53	73	69	60	34	58	798	13	780	11	685
14	62	52	72	65	58	34	51	825	15	803	11	622
15	62	51	74	62	57	34	50	872	18	792	10	614
16	78	46	74	61	56	31	58	873	17	860	12	614
17	77	44	68	60	51	27	56	822	15	843	8.0	607
18	77	46	67	59	48	28	39	816	14	837	5.8	595
19	78	47	64	58	46	27	31	839	12	819	5.7	600
20	81	47	62	58	46	27	23	794	11	806	5.4	527
21	81	47	60	61	45	27	20	802	11	818	4.7	424
22	78	47	58	64	45	29	19	796	15	802	5.3	219
23	74	45	58	65	45	25	21	715	11	832	5.5	166
24	72	44	58	69	45	23	21	313	9.0	815	4.7	135
25	70	43	56	70	46	24	23	203	9.0	821	5.1	100
26	72	43	56	70	46	29	23	153	10	829	6.7	88
27	75	50	59	70	44	32	15	109	20	839	8.1	76
28	78	57	57	69	43	33	15	92	10	720	7.4	74
29	78	64	57	66	---	34	15	81	13	500	5.6	74
30	73	77	65	63	---	31	12	71	10	202	65	75
31	71	---	61	61	---	30	---	69	---	119	302	---
TOTAL	3837	1592	1959	2000	1531	1039	1061	14400	767.0	20555.9	1124.0	12798
MEAN	124	53.1	63.2	64.5	54.7	33.5	35.4	465	25.6	663	36.3	427
MAX	645	77	74	70	68	48	69	873	77	860	302	746
MIN	62	43	55	58	43	23	12	14	9.0	7.9	4.7	74
AC-FT	7610	3160	3890	3970	3040	2060	2100	28560	1520	40770	2230	25380
CAL YR 1982	TOTAL	58454.3	MEAN	160	MAX	1240	MIN	1.3	AC-FT	115900		
WTR YR 1983	TOTAL	62663.9	MEAN	172	MAX	873	MIN	4.7	AC-FT	124300		

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, 18,500 micromhos Aug. 27; minimum daily, 960 micromhos July 19, 22-24.

WATER TEMPERATURES: Maximum, 32.0°C June 18; minimum, 0.0°C Jan. 3-4.

SEDIMENT CONCENTRATIONS: Maximum daily, 5,730 mg/l Oct. 3; minimum daily, 5 mg/l Dec. 25, Jan. 19, 29-30, Mar. 1.

SEDIMENT LOADS: Maximum daily, 9,980 tons (9,050 tonnes) Oct. 3; minimum daily, .18 tons (.16 tonnes) Aug. 24.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)
NOV 17...	1030	44	8400	8180	8.3	7.9	22.0	13.0	11.5	18	2300	2140
JAN 05...	1100	E64	7700	--	8.2	--	5.0	.5	--	37	--	--
MAR 02...	1130	48	9800	10100	8.2	7.7	30.0	14.0	14.2	410	2500	2330
MAY 10...	1315	734	2900	3040	8.4	7.8	30.0	19.5	7.7	61	1700	1540
JUN 29...	0850	13	10100	10000	8.0	7.1	26.0	22.5	15.2	110	2300	2210
AUG 31...	1130	295	3220	--	8.0	--	29.0	25.0	6.2	49	--	--

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 17...	2140	580	210	1000	9.3	9.5	210	.0	168	1900	1900
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
MAR 02...	2330	580	250	1400	13	11	--	--	149	2000	2500
MAY 10...	1540	540	80	140	1.6	4.2	150	8.4	104	1600	210
JUN 29...	2210	550	220	1500	14	21	83	.0	78	1800	2600
AUG 31...	--	--	--	--	--	--	230	.0	--	--	--

RIO GRANDE BASIN  
08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued  
WATER-QUALITY RECORDS

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTH, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 17...	.70	14	5720	1.2	.47	.310	1.2	2.7	.200	.060	--
JAN 05...	--	--	--	1.1	1.1	1.50	.90	3.5	.250	.180	3.6
MAR 02...	.90	8.8	6840	<.10	.10	.560	.94	--	.200	.090	6.6
MAY 10...	.70	10	2680	.40	.11	.420	.88	1.7	.960	.020	16
JUN 29...	.60	1.9	6740	<.10	<.10	.170	1.4	--	.240	.060	7.3
AUG 31...	--	--	--	.20	.21	.200	2.0	2.4	1.10	.010	7.3

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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...	1030	1	1	520	1	1	10	10	0	1
MAR 02...	1130	--	--	600	--	--	--	--	--	--
MAY 10...	1315	--	--	140	--	--	--	--	--	--
JUN 29...	0850	2	1	650	<1	<1	10	20	0	4

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 17...	50	0	1	.0	.0	2	2	30	50
MAR 02...	70	--	--	--	--	--	--	--	--
MAY 10...	190	--	--	--	--	--	--	--	--
JUN 29...	60	0	<1	.0	.0	2	2	80	30

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CD) (01029)
NOV 17...	1030	<2.0	7.6	90	1	0	0
DATE		COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
NOV 17...		<10	0	500	<10	250	.00

RIO GRANDE BASIN  
08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued  
WATER-QUALITY RECORDS

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 17...	1030	< 170	< .4	< 87	1.3	< 84	1.3	.10	11

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)
MAR 02...	1130	--	--	--	--	--	--	--	--	--
AUG 31...	1130	< .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)	MIREX, TOTAL (UG/L) (39755)
MAR 02...	--	--	--	--	--	--	--	--	--	--
AUG 31...	< .01	< .01	< .01	< .01	< .01	< .01	< .01	< .01	< .01	< .01

DATE	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
MAR 02...	--	--	--	--	--	.01	< .01	< .01	< .01
AUG 31...	< .10	< .01	< .10	< 1	< .01	--	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 17...	600	1200
JAN 05...	0	1500
MAR 02...	K1200	K0
MAY 10...	1800	1500
JUN 29...	64	350
AUG 31...	11000	2100

RIO GRANDE BASIN  
08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT								
04...	0900	461	19.0	4760	5920	44	60	90
05...	1038	230	21.0	3590	2230	--	--	--
09...	0833	119	18.0	768	247	--	--	--
NOV								
04...	1130	59	--	83	13	--	--	--
17...	1030	44	13.0	64	7.6	--	--	--
DEC								
02...	1240	66	7.0	92	16	--	--	--
JAN								
05...	1100	E64	.5	117	--	--	--	--
MAR								
02...	1130	48	14.0	29	3.8	--	--	--
MAY								
07...	1028	533	18.0	3440	4950	39	50	79
09...	1943	690	20.5	2850	5310	26	34	56
10...	1315	734	19.5	2800	5550	28	35	53
10...	1320	734	19.5	2890	5730	--	--	--
13...	1112	805	19.0	2620	5690	20	29	44
16...	1108	890	19.0	2110	5070	22	31	49
26...	1100	146	21.5	393	155	--	--	--
JUN								
02...	1035	72	21.0	58	11	--	--	--
29...	0850	13	22.5	12	.42	--	--	--
JUL								
07...	2004	E730	25.5	2650	--	28	34	57
16...	1708	E860	28.0	2130	--	18	23	34
20...	1211	E806	26.0	2090	--	23	32	48
27...	1852	E839	29.0	1200	--	--	--	--
AUG								
31...	1130	295	25.0	1480	1180	27	41	67
SEP								
01...	1533	348	29.0	1270	1190	34	50	79
02...	0815	403	26.0	1390	1510	34	50	76
05...	1721	464	28.5	1170	1470	35	48	69
16...	1533	614	25.5	2510	4160	44	51	62

DATE	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70334)
OCT								
04...	--	--	--	--	98	100	--	--
05...	--	--	--	--	99	--	--	--
09...	--	--	--	--	99	--	--	--
NOV								
04...	--	--	--	--	68	83	94	100
17...	--	--	--	--	65	--	--	--
DEC								
02...	--	--	--	--	65	78	92	100
JAN								
05...	--	--	--	--	62	75	94	100
MAR								
02...	--	--	--	--	62	--	--	--
MAY								
07...	--	--	--	--	94	99	100	--
09...	85	99	100	--	--	--	--	--
10...	78	91	99	100	--	--	--	--
10...	77	91	100	--	--	--	--	--
13...	80	99	100	--	--	--	--	--
16...	86	99	100	--	--	--	--	--
26...	--	--	--	--	97	100	--	--
JUN								
02...	--	--	--	--	68	86	100	--
29...	--	--	--	--	96	99	100	--
JUL								
07...	91	100	--	--	--	--	--	--
16...	77	99	100	--	--	--	--	--
20...	69	90	99	100	--	--	--	--
27...	--	--	--	--	95	100	--	--
AUG								
31...	86	94	100	--	--	--	--	--
SEP								
01...	--	--	--	--	97	100	--	--
02...	--	--	--	--	97	100	--	--
05...	--	--	--	--	92	99	100	--
16...	--	--	--	--	95	100	--	--

RIO GRANDE BASIN  
08396500 PECOS RIVER NEAR ARTESIA, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5000	6070	7160	8520	8540	10200	12100	14500	4830	13200	1890	2940
2	3990	6180	6900	8230	8530	10100	12500	14400	5190	13300	2180	2830
3	1940	6230	6830	8660	8720	9890	13200	13300	5330	13400	2720	2300
4	1530	6720	6900	8430	8700	10300	10900	11900	5060	13700	3070	1590
5	1680	6800	6830	8450	8700	10400	10900	10700	4810	17600	2900	1520
6	1860	7190	6890	8260	8580	10400	9950	11000	6070	16600	3180	1120
7	1980	7140	7200	8410	8550	10800	10200	4020	6470	15300	3940	1090
8	2270	6760	7330	8290	8280	10900	9120	3670	6470	1280	4680	1060
9	2710	6880	7540	8580	8430	11200	9470	3090	6960	1250	5660	1100
10	2740	6890	8230	8110	8410	11300	9890	3040	7950	1170	5140	1160
11	4060	7210	7160	8050	8360	11300	9710	2920	8160	1150	5970	1050
12	4630	7380	7460	8050	8580	11400	9640	2920	8890	1150	6770	997
13	5280	7310	7480	7950	8740	11500	8460	2890	9920	1130	9500	1010
14	5480	7560	7450	8080	8790	11700	8440	2850	11900	1100	8820	981
15	5890	7670	7330	7940	8800	11600	8800	2940	10500	1060	8660	1050
16	5590	7670	6970	7960	9000	11700	8660	2870	10300	1060	9000	1070
17	5380	7790	6940	8550	9490	12100	8270	2690	9260	1170	9020	1090
18	5280	7870	7080	8530	9770	12400	8620	2630	11700	1010	8110	1090
19	5220	7900	7300	8780	9840	12400	9310	2450	12800	960	9160	1110
20	5210	8320	7550	8870	9970	12400	9470	2430	13000	980	8950	1080
21	4940	8360	7810	8740	9920	12700	10800	2420	13500	970	8860	1110
22	5110	8370	7990	8300	9890	12100	11500	2400	14200	960	9730	1300
23	5280	8280	8150	8430	9970	12100	12700	2430	13800	960	11200	1430
24	5530	8180	8320	8430	10100	12700	13200	2740	11700	960	11000	1910
25	5500	8050	8460	8120	9820	13400	13100	2790	12200	1030	11100	2030
26	5490	7800	8500	8050	9950	13200	12100	2850	6250	1010	15400	2780
27	5280	7570	8360	8140	10000	12500	12800	2960	5640	1080	18500	3020
28	5310	7540	8340	8140	9950	10900	14700	3080	6990	1470	18000	3410
29	5400	7620	8310	8240	---	10900	14600	3180	10900	1530	13800	3680
30	5380	7120	8210	8330	---	10900	15100	4270	11400	1650	14200	4350
31	5670	---	8610	8430	---	11300	---	4570	---	1730	12900	---
MEAN	4410	7410	7600	8320	9160	11500	10900	4870	9070	4220	8520	1740
WTR YR 1983	MEAN	7300		MAX	18500		MIN	960				

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	17.5	10.0	.5	8.0	18.0	12.0	17.0	19.0	30.0	24.0	29.0
2	22.0	14.0	9.5	3.0	9.0	18.0	14.0	20.5	25.0	28.0	30.0	26.0
3	19.0	13.0	5.0	.0	9.5	18.5	19.5	15.0	25.0	30.5	30.5	26.0
4	19.0	10.0	9.0	.0	7.0	13.5	7.5	20.5	27.5	28.5	29.5	26.5
5	21.0	13.5	9.0	3.5	6.5	12.0	8.0	20.0	20.0	25.0	26.0	28.5
6	23.0	15.0	6.0	5.5	8.5	10.0	5.0	21.0	23.0	25.0	23.5	24.5
7	19.0	11.0	10.0	4.5	8.0	14.5	7.0	18.0	27.5	25.5	30.0	27.0
8	21.0	12.0	6.0	6.5	12.5	19.0	8.0	21.0	27.0	26.0	28.5	27.0
9	18.0	17.5	7.0	8.5	9.0	18.0	16.0	20.5	22.0	26.5	25.5	25.0
10	19.0	15.5	5.0	9.0	9.0	21.0	15.5	21.0	21.0	27.0	24.5	25.0
11	18.0	14.0	5.0	9.5	14.0	12.5	15.0	21.0	31.0	27.0	31.0	27.0
12	15.0	13.0	5.0	8.0	9.0	19.0	20.5	19.5	29.0	27.5	25.0	26.0
13	15.5	12.5	9.0	6.5	14.0	21.0	15.0	19.0	28.5	27.5	30.0	24.0
14	13.0	9.5	5.0	9.5	10.0	21.0	11.0	18.5	22.5	25.0	26.0	25.0
15	20.5	8.0	8.0	8.5	15.0	17.0	20.5	18.0	24.5	27.0	29.0	24.5
16	16.0	9.0	5.0	11.0	11.0	16.0	22.0	19.0	30.0	28.0	26.5	25.5
17	15.5	8.5	6.0	9.5	12.0	10.0	15.0	21.0	28.0	25.5	30.0	23.0
18	17.0	12.0	7.5	10.0	12.5	18.0	22.0	20.0	32.0	26.0	30.5	25.0
19	21.5	13.0	7.5	11.0	15.0	12.0	15.0	17.0	31.0	28.0	30.0	24.0
20	16.0	15.0	6.5	11.0	13.0	10.5	23.0	19.0	29.0	25.0	28.0	26.0
21	18.5	14.5	7.0	9.0	13.0	11.0	15.5	18.0	27.0	27.0	29.0	22.0
22	13.0	12.5	7.5	7.0	10.0	17.0	15.0	18.5	27.5	28.0	26.5	20.0
23	18.0	7.5	7.0	9.0	13.0	14.5	15.0	20.5	24.0	26.0	25.0	17.5
24	16.0	8.5	10.5	5.5	13.0	12.0	23.5	24.0	23.0	26.5	25.0	22.0
25	15.5	7.0	6.5	11.0	12.0	14.5	18.0	21.0	21.5	27.5	31.0	20.0
26	15.0	5.0	9.0	9.0	10.5	16.0	18.0	24.5	27.0	25.5	27.0	25.0
27	17.0	4.5	4.0	7.5	13.0	11.0	26.0	20.5	23.0	29.0	30.5	25.0
28	15.0	6.5	4.0	12.0	11.5	15.0	25.0	25.0	21.0	28.0	26.0	27.0
29	18.0	9.0	3.0	10.0	---	20.0	23.0	23.0	31.0	29.5	25.0	23.0
30	17.0	11.0	3.0	8.0	---	21.5	18.5	25.0	29.0	29.5	29.0	22.5
31	16.5	---	2.0	11.0	---	23.0	---	19.5	---	27.5	27.0	---
MEAN	18.0	11.5	6.5	7.5	11.0	16.0	16.5	20.0	26.0	27.0	27.5	24.5
WTR YR 1983	MEAN	17.5		MAX	32.0		MIN	.0				

DAY	MEAN CONCENTRATION (MG/L) (T/DAY)		MEAN CONCENTRATION (MG/L) (T/DAY)		MEAN CONCENTRATION (MG/L) (T/DAY)		MEAN CONCENTRATION (MG/L) (T/DAY)		MEAN CONCENTRATION (MG/L) (T/DAY)		MEAN CONCENTRATION (MG/L) (T/DAY)		
	LOADS	LOADS	LOADS	LOADS	LOADS	LOADS	LOADS	LOADS	LOADS	LOADS	LOADS	LOADS	
	OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	55	11	46	8.8	17	3.4	18	3.1	16	2.6	5	.61	
2	995	926	43	7.7	52	9.5	19	3.2	24	3.9	18	2.3	
3	5730	9980	47	7.9	12	2.2	35	5.6	15	2.4	7	.89	
4	4700	5440	55	8.8	8	1.4	28	4.9	16	2.5	8	.99	
5	3600	2250	30	4.1	8	1.3	67	12	16	2.6	13	1.5	
6	2950	1540	55	8.6	7	1.1	19	3.3	17	2.8	9	.92	
7	2050	869	45	6.9	7	1.1	13	2.2	17	3.1	7	.76	
8	1140	397	43	7.1	9	1.3	11	1.9	18	3.3	12	1.2	
9	800	244	46	6.8	8	1.2	10	1.8	15	2.7	14	1.3	
10	790	207	30	4.0	8	1.3	11	2.0	14	2.5	9	.83	
11	360	86	32	4.2	11	1.8	9	1.7	17	2.8	11	1.0	
12	137	27	26	3.6	10	2.0	9	1.7	16	2.6	10	.92	
13	93	17	21	3.0	30	5.9	8	1.5	16	2.6	19	1.7	
14	51	8.5	24	3.4	9	1.7	7	1.2	14	2.2	22	2.0	
15	49	8.2	26	3.6	15	3.0	11	1.8	15	2.3	12	1.1	
16	50	11	23	2.9	7	1.4	114	19	15	2.3	16	1.3	
17	34	7.1	35	4.2	8	1.5	7	1.1	17	2.3	17	1.2	
18	42	8.7	28	3.5	7	1.3	6	.96	15	1.9	26	2.0	
19	43	9.1	19	2.4	8	1.4	5	.78	17	2.1	18	1.3	
20	31	6.8	11	1.4	8	1.3	7	1.1	19	2.4	11	.80	
21	26	5.7	17	2.2	8	1.3	8	1.3	17	2.1	13	.95	
22	34	7.2	12	1.5	7	1.1	7	1.2	15	1.8	14	1.1	
23	35	7.0	13	1.6	8	1.3	9	1.6	13	1.6	15	1.0	
24	36	7.0	8	.95	18	2.8	8	1.5	16	1.9	13	.81	
25	46	8.7	11	1.3	5	.76	27	5.1	13	1.6	14	.91	
26	51	9.9	22	2.6	8	1.2	10	1.9	15	1.9	24	1.9	
27	62	13	24	3.2	6	.96	9	1.7	14	1.7	16	1.4	
28	70	15	18	2.8	9	1.4	8	1.5	13	1.5	13	1.2	
29	49	10	25	4.3	12	1.8	5	.89	---	---	19	1.7	
30	54	11	24	5.0	11	1.9	5	.85	---	---	12	1.0	
31	55	11	---	---	17	2.8	6	.99	---	---	15	1.2	
TOTAL	---	22158.9	---	128.35	---	62.42	---	89.37	---	66.0	---	37.79	

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)	
	LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)	
APRIL MAY JUNE JULY AUGUST SEPTEMBER												
1	14	.98	35	1.3	41	8.2	17	.4	213	56	1290	1260
2	9	.53	30	1.6	60	12	304	76	100	26	1430	1560
3	21	1.4	33	1.9	46	9.3	710	464	130	32	1460	1730
4	11	.86	29	1.9	38	7.0	2730	4360	162	39	1490	1980
5	15	1.3	26	1.6	33	4.0	2880	5130	99	20	1270	1570
6	34	3.0	578	606	28	2.9	3170	6130	64	9.7	1100	1450
7	7	.83	3400	4990	37	3.4	2880	5680	39	3.5	1140	1590
8	6	.76	3850	6620	36	3.0	2310	4620	48	3.4	1850	2600
9	10	1.4	3050	5640	32	2.4	2500	5130	41	2.9	1450	2920
10	9	1.6	2810	5470	52	3.7	2330	4720	28	1.4	2600	5100
11	11	2.0	2700	5310	36	2.1	1540	3090	32	1.1	3150	5580
12	26	4.8	2020	4090	37	1.6	1840	3780	43	1.2	2850	5310
13	10	1.6	2560	5520	53	1.9	1830	3850	30	.89	3130	5790
14	10	1.4	2460	5480	31	1.3	2180	4730	27	.80	2490	4180
15	13	1.8	2450	5770	33	1.6	2140	4580	24	.65	3250	5390
16	14	2.2	2120	5000	50	2.3	2090	4850	14	.45	2720	4510
17	13	2.0	2030	4510	31	1.3	2180	4960	19	.41	1300	2130
18	19	2.0	2320	5110	46	1.7	2000	4520	27	.42	1960	3150
19	25	2.1	2100	4760	31	1.0	2150	4750	30	.46	1980	3210
20	16	.99	1710	3670	27	.80	2110	4590	27	.39	1800	2560
21	15	.81	1470	3180	25	.74	2140	4730	88	1.1	1560	1790
22	17	.87	1550	3330	21	.85	2210	4790	25	.36	1160	686
23	16	.91	1950	3760	19	.56	2310	5190	22	.33	575	258
24	36	2.0	1050	887	33	.80	2050	4510	14	.18	340	124
25	27	1.7	550	301	14	.34	2310	5130	23	.32	250	67
26	29	1.8	460	190	29	.78	1950	4360	43	.78	260	62
27	42	1.7	395	116	21	1.1	1320	2990	53	1.2	61	13
28	41	1.7	388	96	23	.62	770	1500	19	.38	41	8.2
29	36	1.5	230	50	20	.70	650	877	18	.27	41	8.2
30	54	1.7	105	20	24	.65	520	284	385	150	45	9.1
31	---	---	49	9.1	---	---	310	100	1450	1180	---	---
TOTAL	---	48.24	---	84493.4	---	78.64	---	114471.4	---	1535.59	---	66595.5
TOTAL LOAD FOR YEAR: 289765.60 TONS.												





## 08399500 PECOS RIVER (KAISER CHANNEL) NEAR LAKEWOOD, NM

LOCATION.--Lat 32°41'22", long 104°17'53", in NW¼SE¼ sec.5, T.19 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on left bank 3.0 mi upstream from high-water line of Lake McMillan, 6.0 mi northeast of Lakewood, 7.0 mi northeast of gates in McMillan Dam, 12 mi southeast of Artesia, and at mile 492.1.

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1954, published as Kaiser Lake-McMillan Channel near Lakewood.

GAGE.--Water-stage recorder. Datum of gage is 3,268.53 ft National Geodetic Vertical Survey of 1929 (Bureau of Reclamation bench mark). Prior to Mar. 23, 1955, at site 3.0 mi downstream at datum 7.83 ft lower. Mar. 23, 1955, to Sept. 30, 1963, at present site at datum 2.00 ft higher.

REMARKS.--Records good. Flow regulated by Santa Rosa Lake (station 08382810) since April 1980, by Lake Sumner (station 08384000) since August 1937, and by Two Rivers Reservoir (station 08390600) since July 1963. Diversions and ground-water withdrawals for irrigation of about 170,000 acres, 1959 determination, above station. Above about 1,500 ft<sup>3</sup>/s flow will begin bypassing station and, depending on the magnitude and duration of flow, may reach Lake McMillan (station 08400500). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 149 ft<sup>3</sup>/s, 108,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,920 ft<sup>3</sup>/s July 12, 1960; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 826 ft<sup>3</sup>/s July 16; no flow Aug. 20-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	63	66	69	60	43	25	13	69	5.3	88	342
2	126	58	68	66	60	45	21	18	68	5.6	79	390
3	707	55	68	66	59	44	20	20	68	134	75	414
4	522	51	68	64	58	42	24	22	68	469	73	490
5	245	46	67	62	62	40	30	24	48	637	68	434
6	190	48	61	62	64	37	32	150	39	690	46	426
7	147	51	58	60	66	38	36	500	36	711	31	447
8	118	54	55	60	69	35	43	620	32	725	22	487
9	101	51	56	64	68	35	45	670	28	736	27	626
10	90	47	60	65	66	33	51	700	27	735	17	663
11	81	45	62	65	62	33	66	710	21	742	11	600
12	75	44	72	66	58	33	68	730	13	748	6.2	679
13	67	49	77	66	56	32	64	778	9.4	769	7.9	606
14	60	50	73	61	56	31	54	781	14	798	9.2	553
15	58	48	73	58	55	32	54	803	16	773	6.4	550
16	74	43	74	56	54	30	56	805	15	826	10	550
17	76	42	73	55	50	28	50	728	9.1	790	6.1	540
18	76	43	67	55	48	27	36	729	8.2	778	1.7	520
19	76	44	67	55	45	27	28	773	6.1	749	.27	490
20	75	45	64	56	44	27	22	758	4.6	745	.00	400
21	76	45	63	59	45	26	20	723	4.6	753	.00	310
22	70	45	61	62	44	29	19	716	7.0	749	.00	187
23	66	45	61	66	44	26	20	682	3.6	778	.00	117
24	65	42	58	71	45	23	20	316	3.3	800	.00	94
25	63	45	55	72	45	22	22	163	3.3	777	.00	73
26	65	46	57	69	47	24	23	156	33	788	.00	63
27	69	47	59	67	44	29	14	119	14	815	.00	56
28	71	52	59	65	41	31	14	96	6.4	657	.00	51
29	72	61	59	64	---	32	14	83	8.3	238	.00	43
30	66	70	62	62	---	30	13	75	5.8	116	4.3	47
31	64	---	63	60	---	27	---	69	---	90	254	---
TOTAL	3786	1475	1986	1948	1515	991	1004	13530	688.7	19126.9	843.07	11248
MEAN	122	49.2	64.1	62.8	54.1	32.0	33.5	436	23.0	617	27.2	375
MAX	707	70	77	72	69	45	68	805	69	826	254	679
MIN	58	42	55	55	41	22	13	13	3.3	5.3	.00	43
AC-FT	7510	2930	3940	3860	3010	1970	1990	26840	1370	37940	1670	22310

CAL YR 1982 TOTAL 54346.01 MEAN 149 MAX 1130 MIN .00 AC-FT 107800  
WTR YR 1983 TOTAL 58141.67 MEAN 159 MAX 826 MIN .00 AC-FT 115300

## RIO GRANDE BASIN

08400000 FOURMILE DRAW NEAR LAKEWOOD, NM

LOCATION.--Lat 32°40'20", long 104°22'07", in SW¼NW¼SE¼ sec.10, T.19 S., R.26 E., Eddy County, Hydrologic Unit 13060011, in left side of channel 360 ft downstream from ford on Lakewood-Dayton road, 1.9 mi downstream from U.S. Highway 285, 2.8 mi north of Lakewood, 3.8 mi upstream from mouth, and 11.5 mi south of Artesia. Mouth at Pecos River mile 490.6.

DRAINAGE AREA.--265 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WRD 1968: 1967.

GAGE.--Water-stage recorder. Datum of gage is 3,299.14 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1951, to June 19, 1962, at site 1.8 mi upstream at datum 30.61 ft higher. June 19, 1962, to Oct. 12, 1966, at site 410 ft upstream at datum 6.08 ft higher.

REMARKS.--Records good. No surface diversions above station.

AVERAGE DISCHARGE.--32 years, 3.43 ft<sup>3</sup>/s, 2,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,300 ft<sup>3</sup>/s Aug. 23, 1966, gage height, 19.9 ft, from floodmarks present datum, from rating curve extended above 5,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow most of time.

The flood of Aug. 23, 1966, (information from local resident) is believed to be the greatest since at least 1920.

EXTREMES FOR CURRENT YEAR.--No flow during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1982 TOTAL 6.33 MEAN .017 MAX 1.4 MIN .00 AC-FT 13  
WTR YR 1983 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00

## 08400500 LAKE MCMILLAN NEAR LAKEWOOD, NM

LOCATION.--Lat 32°35'42", long 104°20'49", in NE¼NE¼ sec.11, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, near outlet gates of McMillan Dam on Pecos River, 3.4 mi southeast of Lakewood, and at mile 484.3.

DRAINAGE AREA.--16,990 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--January 1939 to September 1965 (month end gage heights and contents), October 1965 to current year. Month end gage heights January 1918 to December 1938 in files of Pecos River Commission.

GAGE.--Nonrecording gage. Datum of gage is 3,241.6 ft 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 between gage heights 0.0 ft (sill of outlet gate) and 24.9 ft, crest of spillway No. 2. Flashboards in spillway No. 2 may be used to increase this capacity. Maximum capacity without spill, 33,620 acre-ft at gage height 26.1 ft crest of spillway No. 1. No dead storage. No storage allocated to flood control. Figures given herein represent usable contents. Gage heights may be affected by variable drawdown due to flow through gates. Water is used for irrigation by Carlsbad Irrigation District.

COOPERATION.--Gage-height record and capacity table (based on August 1964 survey) furnished by Carlsbad Irrigation District.

EXTREMES FOR PERIOD OF RECORD (SINCE 1938).--Maximum contents observed, 68,500 acre-ft Sept. 26, 1941, gage height, 29.95 ft; no storage for periods in 1944-54, 1957, 1964, 1965, 1974, 1976, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 22,520 acre-ft Feb. 8 to Mar. 4, gage height, 23.90 ft; minimum, 2,320 acre-ft July 3, gage height 16.95 ft.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19900	15660	17310	20320	22060	22520	17880	5520	17120	3810	21840	5960
2	19900	15660	17500	20530	22060	22520	17120	5080	16740	3020	21400	6200
3	20110	15840	17500	20530	22290	22520	16560	4540	16380	2320	20960	6200
4	21400	15840	17690	20530	22290	22520	16200	4120	16020	2400	20530	6200
5	21620	15840	17690	20530	22290	22290	15660	3610	15840	2930	20110	6310
6	21400	16020	17880	20530	22290	22290	15480	3220	15660	3610	19900	6660
7	20740	16020	17880	20530	22290	22290	15660	3020	15300	4220	19690	6880
8	20740	16020	17880	20530	22520	22290	15840	3810	14960	4860	19080	7360
9	20530	16020	18280	20530	22520	22290	15840	4540	14450	5410	18480	7960
10	20320	16200	18480	21180	22520	22290	15840	5520	13940	6200	17880	9110
11	20110	16200	18480	21180	22520	22060	16020	6540	13780	6770	17310	9630
12	19900	16200	18680	21180	22520	22060	16020	7480	13140	7480	16740	10320
13	19900	16200	18680	21400	22520	22060	15840	8330	12820	7840	16020	11310
14	19690	16380	18680	21400	22520	22060	15480	9500	12360	8720	15660	11910
15	19280	16380	19080	21400	22520	22060	14960	10040	11760	9900	14960	12510
16	18680	16380	19080	21400	22520	21840	14280	11160	11160	10740	14620	13140
17	18080	16380	19280	21400	22520	21620	13780	12510	10600	11760	14110	13620
18	17500	16380	19280	21620	22520	21620	13140	13460	10040	12660	13460	14110
19	17120	16560	19280	21620	22520	21620	12510	14110	9630	13620	12660	14620
20	16740	16560	19480	21620	22520	21620	12060	15660	9370	14450	11760	15300
21	16380	16560	19480	21620	22520	21400	11160	16930	8850	15130	10740	15480
22	16020	16560	19480	21840	22520	21400	10460	18080	8200	16020	10040	15840
23	15480	16560	19480	21840	22520	21400	9760	19280	7600	16740	9500	15840
24	15480	16560	19690	21840	22520	21400	8980	19690	7000	17500	8850	15660
25	15480	16740	19690	21840	22520	21180	8200	19480	6660	18280	8330	15480
26	15660	16740	19690	22060	22520	20740	7600	18880	6310	19080	7840	15300
27	15660	16930	19690	22060	22520	20320	7000	18680	5960	20110	7240	14620
28	15300	16930	19900	22060	22520	19900	6770	18480	5410	20960	6880	14280
29	15300	17120	19900	22060	---	19280	6420	18280	4970	22060	6540	14110
30	15480	17120	19900	22060	---	18680	5960	17880	4330	22060	6200	13940
31	15480	---	20110	22060	---	18080	---	17500	---	22060	5850	---
MAX	21620	17120	20110	22060	22520	22520	17880	19690	17120	22060	21840	15840
MIN	15300	15660	17310	20320	22060	18080	5960	3020	4330	2320	5850	5960
(†)	-4210	+1640	+2990	+1950	+460	-4440	-12120	+11540	+13170	+17730	-16210	+8090
CAL YR 1982	MAX 23440	MIN 543	(†) +5660									
WTR YR 1983	MAX 22520	MIN 2320	(†) -5750									

(†) CHANGE IN CONTENTS IN ACRE-FEET.

## RIO GRANDE BASIN

08400500 LAKE MCMILLAN NEAR LAKEWOOD,NM -- Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.30	22.20	22.65	23.40	23.80	23.90	22.80	18.55	22.60	17.75	23.75	18.75
2	23.30	22.20	22.70	23.45	23.80	23.90	22.60	18.35	22.50	17.35	23.65	18.85
3	23.35	22.25	22.70	23.45	23.85	23.90	22.45	18.10	22.40	16.95	23.55	18.85
4	23.65	22.25	22.75	23.45	23.85	23.90	22.35	17.90	22.30	17.00	23.45	18.85
5	23.70	22.25	22.75	23.45	23.85	23.85	22.20	17.65	22.25	17.30	23.35	18.90
6	23.65	22.30	22.80	23.45	23.85	23.85	22.15	17.45	22.20	17.65	23.30	19.05
7	23.50	22.30	22.80	23.45	23.85	23.85	22.20	17.35	22.10	17.95	23.25	19.15
8	23.50	22.30	22.80	23.45	23.90	23.85	22.25	17.75	22.00	18.25	23.10	19.35
9	23.45	22.30	22.90	23.45	23.90	23.85	22.25	18.10	21.85	18.50	22.95	19.60
10	23.40	22.35	22.95	23.60	23.90	23.85	22.25	18.55	21.70	18.85	22.80	20.05
11	23.35	22.35	22.95	23.60	23.90	23.80	22.30	19.00	21.65	19.10	22.65	20.25
12	23.30	22.35	23.00	23.60	23.90	23.80	22.30	19.40	21.45	19.40	22.50	20.50
13	23.30	22.35	23.00	23.65	23.90	23.80	22.25	19.75	21.35	19.55	22.30	20.85
14	23.25	22.40	23.00	23.65	23.90	23.80	22.15	20.20	21.20	19.90	22.20	21.05
15	23.15	22.40	23.10	23.65	23.90	23.80	22.00	20.40	21.00	20.35	22.00	21.25
16	23.00	22.40	23.10	23.65	23.90	23.75	21.80	20.80	20.80	20.65	21.90	21.45
17	22.85	22.40	23.15	23.65	23.90	23.70	21.65	21.25	20.60	21.00	21.75	21.60
18	22.70	22.40	23.15	23.70	23.90	23.70	21.45	21.55	20.40	21.30	21.55	21.75
19	22.60	22.45	23.15	23.70	23.90	23.70	21.25	21.75	20.25	21.60	21.30	21.90
20	22.50	22.45	23.20	23.70	23.90	23.70	21.10	22.20	20.15	21.85	21.00	22.10
21	22.40	22.45	23.20	23.70	23.90	23.65	20.80	22.55	19.95	22.05	20.65	22.15
22	22.30	22.45	23.20	23.75	23.90	23.65	20.55	22.85	19.70	22.30	20.40	22.25
23	22.15	22.45	23.20	23.75	23.90	23.65	20.30	23.15	19.45	22.50	20.20	22.25
24	22.15	22.45	23.25	23.75	23.90	23.65	20.00	23.25	19.20	22.70	19.95	22.20
25	22.15	22.50	23.25	23.75	23.90	23.60	19.70	23.20	19.05	22.90	19.75	22.15
26	22.20	22.50	23.25	23.80	23.90	23.50	19.45	23.05	18.90	23.10	19.55	22.10
27	22.20	22.55	23.25	23.80	23.90	23.40	19.20	23.00	18.75	23.35	19.30	21.90
28	22.10	22.55	23.30	23.80	23.90	23.30	19.10	22.95	18.50	23.55	19.15	21.80
29	22.10	22.60	23.30	23.80	---	23.15	18.95	22.90	18.30	23.80	19.00	21.75
30	22.15	22.60	23.30	23.80	---	23.00	18.75	22.80	18.00	23.80	18.85	21.70
31	22.15	---	23.35	23.80	---	22.85	---	22.70	---	23.80	18.70	---
MEAN	22.87	22.39	23.05	23.63	23.88	23.67	21.29	20.60	20.69	20.52	21.54	20.81
MAX	23.70	22.60	23.35	23.80	23.90	23.90	22.80	23.25	22.60	23.80	23.75	22.25
MIN	22.10	22.20	22.65	23.40	23.80	22.85	18.75	17.35	18.00	16.95	18.70	18.75
CAL YR 1982	MEAN 21.72		MAX 24.10		MIN 15.65							
WTR YR 1983	MEAN 22.07		MAX 23.90		MIN 16.95							

## 08401000 PECOS RIVER BELOW MCMILLAN DAM, NM

LOCATION.--Lat 32°35'40", long 104°20'59", in NW¼NE¼ sec.11, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on left bank 700 ft downstream from gates in McMillan Dam, 3.4 mi southeast of Lakewood, and at mile 484.1.

DRAINAGE AREA.--16,990 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--January 1906 to March 1908, January 1909 to December 1911, August 1939 to December 1940, December 1946 to current year (January 1906, and January 1910 to December 1911, gage heights and discharge measurements only). Published as "near Lakewood" 1906-11, and as "below McMillan Dam, near Lakewood" 1939-40.

REVISED RECORDS.--WSP 1512: 1909.

GAGE.--Water-stage recorder and rock control. Datum of gage is 3,238.21 ft 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, 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years (1907, 1940, 1948-83), 96.5 ft<sup>3</sup>/s, 69,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft<sup>3</sup>/s Aug. 23, 1966, includes flow of spillways; no flow many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 2, 1904, may have reached 60,000 ft<sup>3</sup>/s. The flood of Aug. 3, 1893, damaged McMillan Dam, then under construction, and destroyed Avalon Dam; this flood was described as "highest in 50 years" at Carlsbad.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 531 ft<sup>3</sup>/s July 13, gage height, 4.07 ft; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	.39	.00	.00	.00	.00	176	187	126	285	176	163
2	1.9	.44	.00	.00	.00	.00	138	217	138	299	177	269
3	.82	.41	.00	.00	.00	.00	141	206	140	252	177	269
4	69	.37	.00	.00	.00	.00	218	178	120	230	153	270
5	121	.37	.00	.00	.00	.00	139	175	109	232	139	269
6	195	.37	.00	.00	.08	.00	29	166	110	234	139	268
7	173	.36	.00	.00	.00	.00	.72	118	110	258	156	227
8	102	.34	.00	.00	.00	.00	.34	105	178	273	218	117
9	103	.27	.00	.00	.00	.00	.33	98	210	275	217	138
10	103	.25	.00	.00	.00	.00	.42	71	190	277	216	181
11	104	.22	.00	.00	.00	.00	.37	100	112	279	215	214
12	76	.20	.00	.00	.00	.00	34	204	113	343	213	216
13	62	.15	.00	.00	.00	.00	154	206	145	438	205	218
14	128	.03	.00	.00	.00	.00	189	188	181	91	174	217
15	181	.00	.00	.00	.00	.00	254	98	262	244	173	258
16	244	.00	.00	.00	.00	.00	254	117	262	273	172	259
17	249	.00	.00	.00	.00	.00	254	188	242	275	208	260
18	193	.00	.00	.00	.00	.00	253	189	145	277	277	260
19	169	.00	.00	.00	.00	.00	252	188	96	279	342	221
20	170	.00	.00	.00	.00	.00	277	170	176	319	340	203
21	170	.00	.09	.00	.00	.00	289	101	261	340	337	179
22	171	.00	.03	.00	.00	.00	296	121	283	342	288	168
23	135	.00	.00	.00	.00	.00	323	280	295	344	261	168
24	.77	.00	.00	.00	.00	.00	321	356	268	347	260	169
25	.71	.00	.00	.00	.00	105	299	357	159	349	229	178
26	33	.00	.00	.00	.00	150	247	225	157	300	216	228
27	157	.00	.00	.00	.00	146	178	145	186	267	174	260
28	55	.00	.00	.00	.00	243	143	145	199	65	136	280
29	.38	.00	.00	.00	---	262	167	142	225	71	136	190
30	.37	.00	.00	.00	---	229	177	143	257	129	136	5.0
31	.37	---	.00	.00	---	215	---	140	---	158	135	---
TOTAL	3173.02	4.17	.12	.00	.08	1350.00	5204.18	5324	5455	8145	6395	6322.0
MEAN	102	.14	.004	.000	.003	43.5	173	172	182	263	206	211
MAX	249	.44	.09	.00	.08	262	323	357	295	438	342	280
MIN	.37	.00	.00	.00	.00	.00	.33	71	96	65	135	5.0
AC-FT	6290	8.3	.2	.00	.2	2680	10320	10560	10820	16160	12680	12540

CAL YR 1982 TOTAL 31344.41 MEAN 85.9 MAX 392 MIN .00 AC-FT 62170  
WTR YR 1983 TOTAL 41372.57 MEAN 113 MAX 438 MIN .00 AC-FT 82060

## RIO GRANDE BASIN

08401100 PECOS RIVER ABOVE SEVEN RIVERS, NEAR LAKEWOOD, NM

LOCATION.--Lat 32°34'42", long 104°22'42", in NE¼NE¼NE¼ sec.16, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank, 0.5 mi upstream from mouth of Seven Rivers, 2.6 mi downstream from Lake McMillan, and 3.6 mi south of Lakewood, and at mile 481.4.

DRAINAGE AREA.--17,000 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--May 1974 to current year (operated as a low-flow station only).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,213.52 ft 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, 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 Oct. 26, 1974; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 453 ft<sup>3</sup>/s July 13; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	.00	.00	.00	.00	.00	175	177	137	261	143	150
2	2.0	.00	.00	.00	.00	.00	137	210	150	277	144	263
3	.08	.00	.00	.00	.00	.00	131	202	150	236	145	263
4	64	.00	.00	.00	.00	.00	219	171	130	210	122	264
5	131	.00	.00	.00	.00	.00	145	169	110	212	106	265
6	221	.00	.00	.00	.00	.00	35	161	109	215	106	265
7	200	.00	.00	.00	.00	.00	.02	112	109	235	123	219
8	112	.00	.00	.00	.00	.00	.00	99	174	246	193	111
9	112	.00	.00	.00	.00	.00	.00	95	214	249	191	118
10	112	.00	.00	.00	.00	.00	.00	64	198	252	191	165
11	112	.00	.00	.00	.00	.00	.00	90	106	254	191	203
12	85	.00	.00	.00	.00	.00	15	209	106	310	191	204
13	66	.00	.00	.00	.00	.00	151	210	129	453	185	205
14	131	.00	.00	.00	.00	.00	183	197	164	66	151	213
15	191	.00	.00	.00	.00	.00	256	98	252	220	153	244
16	268	.00	.00	.00	.00	.00	256	114	252	251	150	245
17	273	.00	.00	.00	.00	.00	256	196	237	254	183	245
18	214	.00	.00	.00	.00	.00	256	198	138	256	251	245
19	179	.00	.00	.00	.00	.00	255	200	76	257	324	209
20	179	.00	.00	.00	.00	.00	272	183	150	298	323	187
21	179	.00	.00	.00	.00	.00	288	102	242	324	320	164
22	179	.00	.00	.00	.00	.00	293	121	261	319	272	150
23	155	.00	.00	.00	.00	.00	324	298	280	321	241	150
24	1.6	.00	.00	.00	.00	.00	322	392	261	324	241	150
25	.00	.00	.00	.00	.00	80	303	392	140	326	213	158
26	19	.00	.00	.00	.00	148	245	255	140	280	200	229
27	165	.00	.00	.00	.00	135	178	155	166	243	165	251
28	71	.00	.00	.00	.00	241	136	155	178	71	122	275
29	.24	.00	.00	.00	---	268	160	156	200	43	121	173
30	.00	.00	.00	.00	---	229	170	155	231	101	120	1.6
31	.00	---	.00	.00	---	218	---	154	---	125	119	---
TOTAL	3426.72	.00	.00	.00	.00	1319.00	5161.02	5490	5190	7489	5700	5984.6
MEAN	111	.000	.000	.000	.000	42.5	172	177	173	242	184	199
MAX	273	.00	.00	.00	.00	268	324	392	280	453	324	275
MIN	.00	.00	.00	.00	.00	.00	.00	64	76	43	106	1.6
AC-FT	6800	.00	.00	.00	.00	2620	10240	10890	10290	14850	11310	11870
CAL YR 1982	TOTAL	31361.95	MEAN	85.9	MAX	385	MIN	.00	AC-FT	62210		
WTR YR 1983	TOTAL	39760.34	MEAN	109	MAX	453	MIN	.00	AC-FT	78860		

## RIO GRANDE BASIN

329

08401200 SOUTH SEVEN RIVERS NEAR LAKEWOOD, NM

LOCATION.--Lat 32°35'19", long 104°25'17", in SE&SE&NW¼ sec.7, T.20 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on downstream side of center pier of bridge on U.S. Highway 285, 0.4 mi south of Seven Rivers, 2.6 mi upstream from mouth, and 4.0 mi southwest of Lakewood. Mouth at Pecos River mile 480.9.

DRAINAGE AREA.--220 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,276 ft, from topographic map. Prior to July 8, 1965, at site 400 ft upstream at datum 0.52 ft higher.

REMARKS.--Records good. No surface diversions above station, ground-water withdrawals for 240 acres, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 3.98 ft<sup>3</sup>/s, 2,880 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft<sup>3</sup>/s May 30, 1965, gage height, 20.0 ft, from floodmarks, present site and datum, from rating curve extended above 5,700 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 18.15 ft and 20.0 ft; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1941, about 30,000 ft<sup>3</sup>/s, gage height, 22.8 ft, from old debris on left bank, former site and datum, from rating curve extended above 5,700 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 21.8 ft. Probable date of flood, Oct. 7, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35.8 ft<sup>3</sup>/s Sept. 28, gage height, 5.75 ft, no peak above base of 450 ft<sup>3</sup>/s; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.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	.81
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	1.2
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.01
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.067
MAX	.00	.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	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.0
CAL YR 1982	TOTAL	208.00	MEAN	.57	MAX	155	MIN	.00	AC-FT	413		
WTR YR 1983	TOTAL	2.01	MEAN	.006	MAX	1.2	MIN	.00	AC-FT	4.0		





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 1982 TO SEPTEMBER 1983

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)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 04...	1100	35	4800	5030	7.5	7.6	26.0	19.0	2000	1830	1830	560
DEC 01...	1000	27	--	5190	--	8.0	7.0	13.5	2000	1910	1910	570
MAR 02...	1600	34	5200	5220	8.0	7.9	27.0	20.0	2100	1980	1980	600
JUN 30...	1440	270	4200	4320	7.7	7.2	40.0	26.0	1900	1830	1830	580
AUG 30...	1430	153	2170	2260	8.1	7.4	31.0	29.0	850	776	776	250

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 IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINEITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00540)	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 04...	140	490	5.0	5.3	--	--	146	1600	850	1.0	17	3750
DEC 01...	140	510	5.2	5.3	--	--	92	1800	900	.90	17	4000
MAR 02...	150	490	4.8	5.4	--	--	139	1700	890	1.0	17	3940
JUN 30...	110	350	3.6	6.6	93	.0	73	1800	580	.80	12	3490
AUG 30...	54	180	2.8	4.2	88	.0	76	790	300	.60	17	1640

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 04...	1100	290	60
DEC 01...	1000	280	30
MAR 02...	1600	280	40
JUN 30...	1440	270	50
AUG 30...	1430	150	30

## RIO GRANDE BASIN

08401900 ROCKY ARROYO AT HIGHWAY BRIDGE, NEAR CARLSBAD, NM

LOCATION.--Lat 32°30'23", long 104°22'28", in SE¼SE¼ sec.3, T.21 S., R.25 E., Eddy County, Hydrologic Unit 13060011, at downstream end of bridge pier nearest left bank on U.S. Highway 285, 2.1 mi upstream from mouth and 10 mi northwest of Carlsbad. Mouth at Pecos River mile 475.2.

DRAINAGE AREA.--285 mi, approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,250 ft, from topographic map.

REMARKS.--Records good. Diversions for irrigation of 220 acres, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 7.71 ft<sup>3</sup>/s, 5,590 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,600 ft<sup>3</sup>/s Aug. 23, 1966, gage height, 15.35 ft, from rating curve extended above 8,500 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Since about 1941 the maximum discharge probably occurred Oct. 7, 1954, discharge 63,600 ft<sup>3</sup>/s, gage height, 19.2 ft, from highwater marks on downstream end of bridge pier, by slope-area measurement at site 5 mi upstream.

EXTREMES FOR CURRENT YEAR.--No flow during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CAL YR 1982	TOTAL	238.10	MEAN	.65	MAX	208	MIN	.00	AC-FT	472		
WTR YR 1983	TOTAL	0.00	MEAN	.000	MAX		MIN	.00	AC-FT	.00		

LOCATION.--Lat 32°30'40", long 104°19'58", in lot 14, sec.6, T.21 S., R.26 E., Eddy County, Hydrologic Unit 130600011, on right bank at damsite 3 of Carlsbad project of Bureau of Reclamation, about 1 mi upstream from flow line of Lake Avalon. 1.3 mi downstream from Rocky Arroyo. 8.0 mi northwest of Carlsbad, and at mile 473.8.

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 Bureau of Reclamation datum. Prior to Aug. 10, 1944, at site 1,000 ft downstream, at datum 1.00 ft higher. Aug. 10, 1944, to Dec. 31, 1966, at present site at datum 1.00 ft 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, 1959 determination, above station. Discharge represents inflow to Lake Avalon. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--40 years (1940, 1945-83), 155 ft<sup>3</sup>/s, 112,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,000 ft<sup>3</sup>/s Aug. 23, 1966, gage height, 21.32 ft, present datum, from floodmark, from rating curve extended above 25,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 19.53 ft; minimum, 4.3 ft/s Aug. 5, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peaks which probably exceeded 40,000 ft<sup>3</sup>/s occurred in Aug. 1893, Oct. 2, 1904, July 25, 1905, Apr. 17, 1915, Aug. 7, 1916, and May 30, 1937, based primarily on records for station "at Carlsbad." Peak of May 22, 1941, was estimated at 60,000 ft<sup>3</sup>/s. Floods of 1893 and 1904 originated above McMillan Dam and contributed to the two failures of Avalon Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 933 ft<sup>3</sup>/s Sept. 9, stage height, 3.84 ft; minimum, 17 ft<sup>3</sup>/s Mar. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	38	30	37	31	28	191	190	170	282	181	136
2	41	38	32	31	31	30	166	230	174	305	183	269
3	40	38	33	31	30	31	125	231	176	273	185	279
4	72	38	33	31	31	30	225	192	167	229	169	284
5	147	38	32	31	31	26	190	187	141	232	142	290
6	255	37	32	31	31	28	82	182	139	232	140	286
7	253	35	32	31	31	28	33	149	139	246	139	258
8	148	35	32	31	31	29	29	117	183	267	206	175
9	145	34	33	31	31	29	27	117	248	273	222	123
10	148	34	33	31	31	29	28	86	250	278	219	180
11	150	33	33	31	31	29	27	80	145	281	220	221
12	134	33	33	31	31	29	27	216	132	298	222	235
13	107	33	32	31	32	29	134	231	150	533	222	234
14	158	33	31	31	32	26	174	233	182	108	194	242
15	230	32	32	30	32	24	276	127	283	229	181	280
16	315	32	32	30	32	25	275	115	290	279	180	283
17	325	32	32	30	33	25	277	202	291	282	185	284
18	281	32	31	30	32	25	273	212	190	287	255	286
19	232	31	31	30	32	24	277	215	111	290	329	264
20	228	32	32	30	32	24	294	216	159	318	357	231
21	219	33	32	31	32	24	319	130	267	361	354	216
22	225	33	32	31	32	23	319	123	291	367	344	193
23	225	34	31	31	32	23	360	276	317	366	274	193
24	130	35	30	30	32	22	354	420	327	370	268	194
25	42	36	32	31	33	46	347	428	185	372	264	196
26	42	37	36	31	32	160	270	336	167	339	226	264
27	162	36	33	31	32	131	220	188	180	293	225	307
28	149	32	33	29	30	235	155	186	204	181	144	348
29	45	31	33	29	---	286	167	185	219	50	139	353
30	40	30	33	30	---	245	190	181	252	137	137	79
31	38	---	37	31	---	238	---	184	---	148	135	---
TOTAL	4786	1025	1003	955	883	1981	5831	6165	6129	8506	6641	7183
MEAN	154	34.2	32.4	30.8	31.5	63.9	194	199	204	274	214	239
MAX	325	38	37	37	33	286	360	428	327	533	357	353
MIN	38	30	30	29	30	22	27	80	111	50	135	79
AC-FT	9490	2030	1990	1890	1750	3930	11570	12230	12160	16870	13170	14250
CAL YR 1982	TOTAL	41611	MEAN	114	MAX	487	MIN	18	AC-FT	82540		
WTR YR 1983	TOTAL	51088	MEAN	140	MAX	533	MIN	22	AC-FT	101300		

## RIO GRANDE BASIN

## 08403500 CARLSBAD MAIN CANAL AT HEAD, NEAR CARLSBAD, NM

LOCATION.--Lat 32°29'25", long 104°15'08", in NW¼SW¼SW¼ sec.12, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank 220 ft downstream from headgates in Avalon Dam, and 3.3 mi, north of Carlsbad. Pecos River mile 467.2.

PERIOD OF RECORD.--July 1939 to current year (monthly discharge only July 1939 to September 1965). January 1941 to March 1951 published in WSP 1732.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,156.50 ft Bureau of Reclamation datum. Prior to March 1951 at site 20 ft upstream at datum 0.9 ft higher.

REMARKS.--Records good. Carlsbad main canal diverts water from Lake Avalon (station 08403800) for irrigation of about 25,000 acres in the Carlsbad Irrigation District. About 1,600 acres are irrigated on the left bank, most of it upstream from gaging station 08405200. The remaining acreage (most of which is downstream from station 08405200) is on the right bank. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years, 104 ft<sup>3</sup>/s, 75,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 526 ft<sup>3</sup>/s Sept. 15, 16, 1946; no flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	33	.40	.27	.00	.00	198	124	141	259	176	242
2	46	20	.40	.19	.00	.00	163	187	148	203	165	259
3	49	.21	.40	.11	.20	.00	134	203	162	167	154	233
4	118	.29	.40	.20	.24	.00	261	184	136	174	125	211
5	128	.40	.40	.24	.20	.00	126	175	103	242	135	223
6	179	.40	.40	.20	.20	.00	60	144	161	266	129	222
7	185	.40	.40	.01	.20	.00	17	94	169	272	145	251
8	131	.40	.20	.00	.03	.00	.00	76	185	266	187	254
9	111	.40	.20	.00	.00	.00	.00	100	205	212	222	236
10	121	.40	.20	.00	.00	.00	.00	118	175	217	217	249
11	138	.49	.20	.00	.00	.00	63	140	141	287	225	205
12	135	.60	.20	.00	.00	.00	158	179	134	328	252	195
13	155	.60	.13	.00	.00	.00	190	180	173	315	214	225
14	220	.60	.00	.00	.00	.00	225	158	194	296	138	274
15	224	.60	.00	.51	.00	.00	263	166	241	264	165	266
16	234	.60	.00	.20	.00	.00	262	184	258	238	212	236
17	207	.60	.00	.20	.00	.00	193	182	236	207	252	187
18	221	.60	.00	.03	.00	.00	244	185	148	232	299	169
19	231	.60	.00	.00	.00	.00	303	201	90	284	334	194
20	203	.60	.00	.00	.00	.00	323	184	213	305	314	201
21	197	.60	.00	.00	.00	56	315	167	301	344	227	177
22	188	.60	.11	.00	.00	153	303	175	350	319	313	253
23	147	.60	.20	.00	.00	245	311	212	306	283	250	264
24	106	.60	.20	.00	.00	272	248	212	242	270	211	235
25	149	.60	.10	.00	.00	286	223	236	179	272	170	196
26	207	.60	.27	.00	.00	245	262	236	148	269	181	268
27	257	.58	.00	.00	.00	217	274	239	147	256	167	284
28	228	.40	.00	.00	.00	301	274	258	185	203	124	264
29	140	.40	.00	.00	---	263	205	245	250	184	137	163
30	40	.40	.01	.00	---	253	165	235	297	115	191	47
31	32	---	.42	.00	---	232	---	197	---	130	200	---
TOTAL	4812	67.17	5.24	2.16	1.07	2523.00	5763.00	5576	5818	7679	6231	6683
MEAN	155	2.24	.17	.070	.038	81.4	192	180	194	248	201	223
MAX	257	33	.42	.51	.24	301	323	258	350	344	334	284
MIN	32	.21	.00	.00	.00	.00	.00	76	90	115	124	47
AC-FT	9540	133	10	4.3	2.1	5000	11430	11060	11540	15230	12360	13260

CAL YR 1982 TOTAL 36371.41 MEAN 99.6 MAX 334 MIN .00 AC-FT 72140  
WTR YR 1983 TOTAL 45160.64 MEAN 124 MAX 350 MIN .00 AC-FT 89580

## RIO GRANDE BASIN

335

08403800 LAKE AVALON NEAR CARLSBAD, NM

LOCATION.--Lat 32°29'27", long 104°15'05", in NW¼SW¼ sec.12, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on headwall at outlet gate of dam on Pecos River, 3.3 mi north of Carlsbad, and at mile 467.2.

DRAINAGE AREA.--18,070 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--January 1939 to September 1965 (month end gage heights and contents). October 1965 to current year. Month end gage heights January 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 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 between gage heights 0.0 (sill of outlet gates) and 20.4 ft, crest of spillway No. 2. No dead storage. No storage allocated to flood control. Figures given herein represent usable contents. Water is used by Carlsbad Irrigation District.

COOPERATION.--Gage-height record and capacity table based on August 1964 survey 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 May 22, 1941, gage height, 25.0 ft; no storage at times when natural flow was passing through reservoir.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,120 acre-ft Mar. 2-5 and 15-19, gage height, 19.00 ft; no storage Oct. 30, 31, and Nov. 1, 2.

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	975	0	1410	2220	2830	3030	919	686	946	532	975	1060
2	975	0	1440	2220	2830	3120	864	760	975	616	975	891
3	919	24	1440	2250	2830	3120	864	811	975	811	1000	946
4	811	63	1470	2250	2830	3120	837	811	1000	919	1030	1000
5	760	123	1470	2250	2870	3120	811	837	1000	946	1090	1090
6	811	165	1470	2250	2870	3070	975	837	1030	864	1060	1210
7	975	423	1510	2250	2870	3070	1000	919	975	785	1060	1280
8	975	423	1510	2250	2870	3070	1030	1030	864	710	1030	1240
9	1000	457	1610	2400	2870	3070	1090	1000	864	811	1090	975
10	1000	493	1610	2400	2870	3070	1150	975	919	864	1030	760
11	975	532	1640	2440	2870	3070	1150	891	975	946	975	710
12	1030	573	1680	2440	2870	3070	975	811	946	811	975	760
13	1030	616	1680	2480	2870	3070	710	864	919	864	919	785
14	919	662	1710	2480	2870	3070	662	919	864	1030	946	785
15	760	710	1710	2520	2870	3120	573	919	864	616	975	735
16	811	760	1750	2520	2910	3120	594	919	891	662	975	735
17	864	811	1780	2560	2910	3120	662	785	919	710	864	919
18	1030	864	1820	2560	2910	3120	785	811	919	811	760	1060
19	1000	891	1850	2600	2950	3120	785	811	919	811	686	1150
20	1000	919	1850	2600	2950	3070	735	837	919	811	686	1210
21	1030	946	1890	2630	2950	3070	616	837	811	811	864	1280
22	1030	975	1890	2630	2990	2910	594	811	710	785	975	1150
23	1030	1000	1920	2670	2990	2480	616	760	573	864	975	1030
24	1030	1030	1960	2670	2990	2070	662	919	616	975	1030	975
25	1000	1090	2030	2710	2990	1540	864	1240	686	1150	1150	919
26	811	1150	2070	2710	3030	1150	975	1540	710	1280	1240	760
27	493	1210	2100	2750	3030	1030	975	1540	710	1280	1310	760
28	407	1280	2100	2750	3030	864	837	1210	760	1370	1280	735
29	268	1340	2140	2750	---	837	639	1150	735	1150	1340	1030
30	0	1340	2180	2790	---	864	594	1090	616	975	1280	1210
31	0	---	2220	2790	---	864	---	1030	---	975	1210	---
MAX	1030	1340	2220	2790	3030	3120	1150	1540	1030	1370	1340	1280
MIN	.00	.00	1410	2220	2830	837	573	686	573	532	686	710
(+)	-710	+1340	+880	+570	+240	-2166	-270	+436	-414	+359	+235	00
CAL YR 1982	MAX	3160	MIN	.00	(+)	+	510					
WTR YR 1983	MAX	3120	MIN	.00	(+)	+	500					

(+) 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 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.00	*4.82	16.70	17.85	18.65	18.90	15.90	15.45	15.95	15.10	16.00	16.15
2	16.00	*4.82	16.75	17.85	18.65	19.00	15.80	15.60	16.00	15.30	16.00	15.85
3	15.90	11.00	16.75	17.90	18.65	19.00	15.80	15.70	16.00	15.70	16.05	15.95
4	15.70	12.00	16.80	17.90	18.65	19.00	15.75	15.70	16.05	15.90	16.10	16.05
5	15.60	13.00	16.80	17.90	18.70	19.00	15.70	15.75	16.05	15.95	16.20	16.20
6	15.70	13.50	16.80	17.90	18.70	18.95	16.00	15.75	16.10	15.80	16.15	16.40
7	16.00	14.80	16.85	17.90	18.70	18.95	16.05	15.90	16.00	15.65	16.15	16.50
8	16.00	14.80	16.85	17.90	18.70	18.95	16.10	16.10	15.80	15.50	16.10	16.45
9	16.05	14.90	17.00	18.10	18.70	18.95	16.20	16.05	15.80	15.70	16.20	16.00
10	16.05	15.00	17.00	18.10	18.70	18.95	16.30	16.00	15.90	15.80	16.10	15.60
11	16.00	15.10	17.05	18.15	18.70	18.95	16.30	15.85	16.00	15.95	16.00	15.50
12	16.10	15.20	17.10	18.15	18.70	18.95	16.00	15.70	15.95	15.70	16.00	15.60
13	16.10	15.30	17.10	18.20	18.70	18.95	15.50	15.80	15.90	15.80	15.90	15.65
14	15.90	15.40	17.15	18.20	18.70	18.95	15.40	15.90	15.80	16.10	15.95	15.65
15	15.60	15.50	17.15	18.25	18.70	19.00	15.20	15.90	15.80	15.30	16.00	15.55
16	15.70	15.60	17.20	18.25	18.75	19.00	15.25	15.90	15.85	15.40	16.00	15.55
17	15.80	15.70	17.25	18.30	18.75	19.00	15.40	15.65	15.90	15.50	15.80	15.90
18	16.10	15.80	17.30	18.30	18.75	19.00	15.65	15.70	15.90	15.70	15.60	16.15
19	16.05	15.85	17.35	18.35	18.80	19.00	15.65	15.70	15.90	15.70	15.45	16.30
20	16.05	15.90	17.35	18.35	18.80	18.95	15.55	15.75	15.90	15.70	15.45	16.40
21	16.10	15.95	17.40	18.40	18.80	18.95	15.30	15.75	15.70	15.70	15.80	16.50
22	16.10	16.00	17.40	18.40	18.85	18.75	15.25	15.70	15.50	15.65	16.00	16.30
23	16.10	16.05	17.45	18.45	18.85	18.20	15.30	15.60	15.20	15.80	16.00	16.10
24	16.10	16.10	17.50	18.45	18.85	17.65	15.40	15.90	15.30	16.00	16.10	16.00
25	16.05	16.20	17.60	18.50	18.85	16.90	15.80	16.45	15.45	16.30	16.30	15.90
26	15.70	16.30	17.65	18.50	18.90	16.30	16.00	16.90	15.50	16.50	16.45	15.60
27	15.00	16.40	17.70	18.55	18.90	16.10	16.00	16.90	15.50	16.50	16.55	15.60
28	14.75	16.50	17.70	18.55	18.90	15.80	15.75	16.40	15.60	16.65	16.50	15.55
29	14.20	16.60	17.75	18.55	---	15.75	15.35	16.30	15.55	16.30	16.60	16.10
30	*4.82	16.60	17.80	18.60	---	15.80	15.25	16.20	15.30	16.00	16.50	16.40
31	*4.82	---	17.85	18.60	---	15.80	---	16.10	---	16.00	16.40	---
MEAN	14.79	14.24	17.23	18.24	18.75	18.24	15.70	15.94	15.77	15.83	16.08	15.98
MAX	16.10	16.60	17.85	18.60	18.90	19.00	16.30	16.90	16.10	16.65	16.60	16.50
MIN	*4.82	*4.82	16.70	17.85	18.65	15.75	15.20	15.45	15.20	15.10	15.45	15.50

CAL YR 1982 MEAN 16.44 MAX 19.05 MIN \*4.82  
WTR YR 1983 MEAN 16.39 MAX 19.00 MIN \*4.82  
\* LESS THAN

LOCATION.--Lat 32°28'55", long 104°15'47", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.14, T.21 S., R.26 E., Eddy County, Hydrologic Unit 13060011, on right bank 4,800 ft below Avalon Dam, 4.5 mi northwest of Carlsbad, and at mile 466.3.

PERIOD OF RECORD.--January 1906 to March 1907, (published as "at Avalon"), June 1951 to current year.

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, 1959 determination. Station bypassed by Carlsbad main canal (station 08403500).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,500  $\text{ft}^3/\text{s}$  Aug. 23, 1966, gage height, 26.4 ft, from floodmarks, from rating curve extended above 33,000  $\text{ft}^3/\text{s}$  on basis of computation of peak flow over Tansill Dam 5.8 mi downstream; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 2, 1904, caused in part, by failure of Avalon Dam, probably exceeded 90,000 ft<sup>3</sup>/s and is probably the greatest flood since 1842. A major flood occurred Aug. 3, 1893, and was described as "greatest in 50 years"; it damaged McMillan Dam, then under construction, and washed out the original Avalon Dam. Another major flood occurred Aug. 7, 1916, discharge 70,000 ft<sup>3</sup>/s at site 6.5 mi downstream.

EXTREMES FOR CURRENT YEAR.--No flow during year.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CAL YR 1982	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00		
WTR YR 1983	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00		

RIO GRANDE BASIN  
08405000 PECOS RIVER AT CARLSBAD, NM  
WATER-QUALITY RECORDS

LOCATION.--Lat 32°24'42", long 104°13'17", in SE&NE&NE& 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, 4,790 micromhos Sept. 26; minimum daily, 2,660 micromhos Feb. 26.

WATER TEMPERATURES: Maximum, 31.0°C on Aug. 21, 28, Sept. 4, 11; minimum, 4.0°C Dec. 29-31, Jan. 1-3, 6.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT								
06...	1330	8.3	3440	3510	8.2	8.1	25.0	23.0
28...	1600	12	3300	3410	8.0	8.1	19.0	17.0
DEC								
01...	1330	12	3000	3100	--	7.9	7.0	10.0
JAN								
13...	1430	14	2760	2870	8.1	7.8	15.0	8.0
FEB								
03...	1500	17	2800	2930	7.9	7.8	9.5	9.0
MAR								
04...	1100	1.6	--	3940	--	7.9	--	--
APR								
07...	1000	26	3240	3330	8.0	8.0	5.0	8.0
MAY								
12...	1430	8.5	3200	3210	8.1	7.9	30.5	24.5
JUN								
01...	1430	7.7	3450	3480	--	7.9	25.0	23.0
JUL								
07...	1530	.73	4050	3950	7.6	7.5	38.0	32.0
AUG								
01...	1715	2.1	4500	4020	8.1	7.7	33.5	31.0
30...	1145	3.5	4200	4280	8.0	7.6	28.0	30.5



RIO GRANDE BASIN  
08405000 PECOS RIVER AT CARLSBAD, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM 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)
OCT									
06...	--	1400	1250	1250	350	120	330	4.0	5.0
28...	--	1300	1180	1180	330	120	310	3.8	4.7
DEC									
01...	--	1100	979	979	290	100	290	3.9	4.7
JAN									
13...	--	1100	909	909	270	96	260	3.6	4.4
FEB									
03...	--	1100	940	940	280	100	250	3.4	3.7
MAR									
04...	--	1500	1350	1350	340	150	360	4.2	4.3
APR									
07...	--	1100	923	923	250	110	290	4.0	4.4
MAY									
12...	9.6	1100	990	990	290	100	310	4.1	4.8
JUN									
01...	--	1200	1080	1080	300	110	340	4.4	5.2
JUL									
07...	--	1400	1330	1330	350	130	380	4.5	5.4
AUG									
01...	--	1500	1410	1410	370	140	400	4.6	6.0
30...	--	1600	1450	1450	380	150	430	4.9	6.1

DATE	BICAR- BONATE IT-FLD (MG/L AS HC03) (99440)	CAR- BONATE IT-FLD (MG/L AS C03) (99445)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
OCT								
06...	150	.0	121	1100	570	.70	18	2570
28...	--	--	138	1100	550	.80	17	2520
DEC								
01...	--	--	158	920	480	.70	14	2190
JAN								
13...	--	--	162	820	440	.70	14	2000
FEB								
03...	--	--	172	820	430	.70	13	2000
MAR								
04...	--	--	119	1200	620	.70	18	2760
APR								
07...	190	.0	112	890	490	.20	11	2140
MAY								
12...	180	.0	135	930	490	.70	11	2230
JUN								
01...	--	--	124	1000	550	.70	12	2390
JUL								
07...	100	.0	103	1200	640	.70	16	2770
AUG								
01...	110	.0	108	1300	690	.80	21	2980
30...	140	.0	128	1400	720	.80	27	3180

RIO GRANDE BASIN  
08405000 PECOS RIVER AT CARLSBAD, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT			
06...	1330	240	60
28...	1600	220	60
DEC			
01...	1330	200	30
JAN			
13...	1430	180	40
FEB			
03...	1500	190	20
MAR			
04...	1100	270	30
APR			
07...	1000	210	30
MAY			
12...	1430	200	20
JUN			
01...	1430	220	10
JUL			
07...	1530	270	60
AUG			
01...	1715	300	40
30...	1145	310	30

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2760	3360	3090	2970	3200	3020	3650	3130	3490	3800	3980	4550
2	3120	3380	3110	2830	2880	3410	3660	3130	3450	3840	4020	4470
3	3420	3280	3110	2900	2880	3760	3610	3110	3450	3870	4050	4490
4	3410	3280	3110	2900	2860	3840	---	3110	3520	3880	4070	4530
5	3440	3290	3140	2980	2840	4120	3500	3080	3520	3880	4120	4540
6	3500	3290	3170	2890	2820	4110	3390	3110	3560	3900	4100	4580
7	3510	3280	3160	2870	2780	4160	3270	3110	3520	3850	4120	4570
8	3530	3280	3160	2740	2790	4040	2940	3110	3590	3840	4120	4610
9	3540	3290	3000	2800	2800	3900	3120	3140	3590	3900	4170	4590
10	3560	3260	2760	2840	2790	3900	3150	3150	3630	3930	4180	4570
11	3550	3280	2920	2790	2790	3890	3150	3150	3630	3890	4160	4680
12	3570	3260	2940	2800	2800	3900	3180	3190	3670	3910	4110	4640
13	3560	3260	2950	2820	2790	3870	3180	3190	3660	3910	4130	4550
14	3550	3280	2970	2800	2790	3920	3180	3220	3690	3920	3990	4590
15	3520	3280	2980	2820	2760	3890	3210	3250	3700	3900	4020	4600
16	3550	3310	2990	2780	2760	3930	3210	3250	3690	3940	4070	4610
17	3510	3310	2980	2790	2760	3930	3240	3310	3700	3940	4120	4680
18	3470	3310	2970	2790	2740	3950	3210	3350	3700	3980	4110	4660
19	3480	3310	2970	2800	2740	4000	3250	3380	3720	3980	4180	4670
20	3470	3280	2980	2810	2740	3950	3220	3400	3720	4030	4220	4730
21	3450	3250	2980	2750	2750	3970	3240	3440	3730	4050	4190	4740
22	3460	3250	2980	2770	2750	4010	3210	3450	3760	4110	4150	4700
23	3450	3220	2960	2820	2760	3990	3210	3480	3750	4190	4130	4720
24	3450	3220	2930	2800	2760	4000	3240	3490	3690	4540	4170	4730
25	3450	3190	2950	2840	2760	3980	3180	3500	3700	4430	4200	4740
26	3450	3160	2950	2820	2660	3950	3180	3490	3730	4230	4220	4790
27	3450	3000	2880	2840	2680	3920	3180	3500	3740	4130	4270	4770
28	3420	3000	2900	2860	2760	3910	3150	3490	3770	3760	4300	4530
29	3420	3030	2920	2870	---	3880	3120	3500	3780	3760	4300	4530
30	3420	3050	2940	2870	---	3670	3120	3520	3790	3940	4340	4280
31	3440	---	2940	2870	---	3660	---	3520	---	4010	4360	---
MEAN	3450	3240	2990	2830	2790	3880	3250	3300	3650	3980	4150	4610
WTR YR 1983	MEAN	3520	MAX	4790	MIN	2660						

RIO GRANDE BASIN  
08405000 PECOS RIVER AT CARLSBAD, NM -- Continued  
WATER-QUALITY RECORDS

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TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN.	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	17.0	8.0	4.0	8.0	14.0	16.0	19.0	20.0	25.0	27.0	28.0
2	20.0	15.0	9.0	4.0	10.0	15.0	14.0	20.0	20.0	25.0	27.0	29.0
3	25.0	14.0	8.0	4.0	9.0	16.0	14.0	17.0	21.0	28.0	30.0	27.0
4	23.0	15.0	7.0	5.0	7.0	13.0	12.0	19.0	22.0	25.0	27.0	31.0
5	22.0	14.0	9.0	5.0	9.0	14.0	10.0	20.0	27.0	25.0	25.0	25.0
6	22.0	14.0	8.0	4.0	9.0	10.0	9.0	20.0	22.0	27.0	24.0	27.0
7	22.0	15.0	9.0	5.0	8.0	14.0	9.0	19.0	21.0	26.0	28.0	29.0
8	20.0	15.0	8.0	5.0	10.0	14.0	8.0	20.0	22.0	25.0	26.0	29.0
9	19.0	14.0	6.0	8.0	10.0	15.5	11.0	22.0	21.0	29.0	26.0	29.0
10	20.0	15.0	6.0	6.0	11.0	14.0	12.0	24.0	23.0	29.0	26.0	26.0
11	19.0	15.0	5.0	6.0	9.0	15.0	14.0	20.0	25.0	25.0	26.0	31.0
12	18.0	15.0	7.0	6.0	9.0	15.0	16.0	20.0	25.0	25.0	26.0	26.0
13	18.0	14.0	7.0	8.0	11.5	17.0	13.0	20.0	23.0	25.0	30.0	28.0
14	16.0	12.0	7.0	9.0	11.5	15.0	14.0	18.0	23.0	26.0	30.0	25.0
15	19.0	11.0	8.0	8.0	11.0	15.0	14.0	20.0	24.0	28.0	26.0	29.0
16	18.0	10.0	8.0	8.0	11.0	15.0	15.0	22.0	22.0	27.0	26.0	26.0
17	20.0	11.0	9.0	7.0	10.0	15.0	19.0	22.0	25.0	29.0	25.0	25.0
18	22.0	13.0	8.0	8.0	11.0	12.0	19.0	18.0	26.0	25.0	27.0	29.0
19	18.0	10.0	9.0	8.0	10.0	12.0	24.0	18.0	29.0	24.0	27.0	25.0
20	17.0	13.0	7.0	8.0	11.0	12.0	19.0	22.0	26.0	24.0	25.0	23.0
21	18.0	14.0	9.0	6.0	12.5	10.0	17.0	22.0	25.0	25.0	31.0	20.0
22	17.0	14.0	9.0	5.0	8.5	7.0	16.0	24.0	26.0	24.0	28.0	22.0
23	18.0	12.0	9.0	8.0	11.0	9.0	17.0	24.0	25.0	23.0	26.0	22.0
24	19.0	10.0	8.0	8.0	12.5	12.0	20.0	24.0	25.0	30.0	25.0	20.0
25	16.0	9.0	7.0	9.0	11.0	13.0	18.0	21.0	26.0	25.0	28.0	26.0
26	17.0	8.0	6.0	8.0	12.0	9.0	18.0	22.0	28.0	28.0	26.0	25.0
27	17.0	7.0	5.0	8.0	14.0	15.0	19.0	22.0	25.0	25.0	30.0	24.0
28	16.0	9.0	5.0	8.0	13.0	10.0	20.0	25.0	25.0	28.0	31.0	26.0
29	17.0	10.0	4.0	9.0	---	13.0	19.0	28.0	26.0	27.0	26.0	24.0
30	16.0	8.0	4.0	9.0	---	14.0	19.0	25.0	26.0	26.0	25.0	23.0
31	16.0	---	4.0	10.0	---	17.0	---	21.0	---	26.0	27.0	---
MEAN	19.0	12.5	7.0	7.0	10.5	13.5	15.5	21.0	24.0	26.0	27.0	26.0
WTR YR 1983	MEAN	17.5		MAX	31.0		MIN	4.0				

## 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 upstream from mouth. Mouth at Pecos River mile 459.2.

DRAINAGE AREA.--450 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 3,088.21 ft 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, 1973 determination, and for municipal supply for Carlsbad.

AVERAGE DISCHARGE.--10 years, 7.35 ft<sup>3</sup>/s, 5,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft<sup>3</sup>/s Sept. 26, 1980, gage height, 12.10 ft from rating curve extended above 7,100 ft<sup>3</sup>/s; no flow most of time.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a discharge of 66,000 ft<sup>3</sup>/s as determined by slope-area measurement at site 1.2 mi upstream. Another flood of approximately the same magnitude occurred Sept. 20, 1941.

Other major peaks occurred July 17, 1906, July 24, 1908, July 24, 1911, Apr. 18, 1915, Aug. 8, 1916, Sept. 15, 1919, Aug. 4, 1925, and May 23, 1941.

EXTREMES FOR CURRENT YEAR.--No flow during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CAL YR 1982	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00		
WTR YR 1983	TOTAL	0.00	MEAN	.000	MAX	.00	MIN	.00	AC-FT	.00		

## 08405200 PECOS RIVER BELOW DARK CANYON DRAW, AT CARLSBAD, NM

LOCATION.--Lat 32°24'37", long 104°12'58", in NE¼SW¼NW¼ sec.8, T.22 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on left bank, 700 ft downstream from mouth of Dark Canyon Draw, 0.3 mi downstream from Lower Tansill Dam and Bataan recreational area, 0.8 mi downstream from bridge on U.S. Highway 62-180 in Carlsbad, and at mile 459.1.

DRAINAGE AREA.--18,550 mi<sup>2</sup>, approximately, contributing area.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3,075.19 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Lake Avalon (station 08403800) since 1891, and by several other reservoirs, and up to Nov. 1982 at low stages by power plant. Power Plant discontinued operation Nov. 1982. Gage is bypassed on left bank by Carlsbad main canal east which irrigates several hundred acres adjacent to and below gage site, and on right bank by Carlsbad main canal south, which with supplemental ground-water withdrawals irrigates about 23,000 acres below. Diversions and ground-water withdrawals above station for irrigation of about 198,000 acres, 1959 determination.

AVERAGE DISCHARGE.--13 years, 44.9 ft<sup>3</sup>/s, 32,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft<sup>3</sup>/s Sept. 26, 1980, gage height, 14.60 ft, from floodmarks; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Aug. 23, 1966, reached a stage of about 22 ft, discharge not determined. (For dates of other historical floods see station 08404000.)

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 454 ft<sup>3</sup>/s Oct. 1, stage falling, peak occurred Sept. 30, 1982; maximum peak discharge, 280 ft<sup>3</sup>/s Feb. 28; minimum 0.06 ft<sup>3</sup>/s Mar. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	12	12	14	16	25	5.1	8.8	7.6	9.7	2.7	3.0
2	11	12	12	14	17	68	5.4	11	9.1	9.5	1.6	1.6
3	9.3	12	12	14	16	51	10	8.6	9.9	9.6	1.5	2.1
4	15	12	12	14	19	1.6	11	10	10	8.9	2.3	1.9
5	14	12	12	14	17	26	9.1	10	10	4.7	1.8	2.6
6	12	12	12	14	15	36	16	11	11	.61	1.9	2.0
7	15	12	12	14	16	56	21	10	11	.68	3.6	1.4
8	13	12	12	14	16	49	12	9.9	15	.49	4.3	.78
9	7.5	12	21	14	14	30	11	10	19	.40	8.0	3.9
10	8.5	12	28	14	15	38	12	11	9.2	1.5	6.0	6.0
11	8.5	12	26	14	15	28	13	9.5	6.4	5.0	3.1	4.8
12	8.6	12	24	14	12	.57	11	9.0	5.8	.86	2.5	8.2
13	10	12	22	14	14	.71	9.6	9.0	5.3	2.6	7.7	4.4
14	10	12	21	14	15	7.3	9.3	7.2	5.9	7.1	5.1	3.4
15	10	12	19	14	12	22	8.5	12	5.7	4.3	2.6	7.7
16	15	12	18	15	12	9.2	9.8	14	6.5	3.6	2.7	8.0
17	13	12	18	16	13	.21	10	16	8.1	1.9	2.7	3.8
18	12	12	18	16	10	.16	11	6.3	14	1.3	2.8	3.1
19	11	12	18	16	13	.13	10	7.1	11	.75	3.0	3.1
20	9.6	12	18	19	13	.15	9.0	7.6	8.2	.60	2.4	4.6
21	13	12	17	17	8.3	.11	9.3	4.5	18	.50	3.5	.39
22	17	12	17	17	11	.10	8.9	6.1	4.2	.44	7.5	1.2
23	13	12	17	18	11	.30	11	5.6	8.6	.37	4.4	3.6
24	12	12	15	18	11	.20	11	4.2	8.8	.37	4.1	6.6
25	12	12	15	19	108	.47	11	4.8	9.8	.40	2.4	4.6
26	12	12	15	17	145	1.3	16	2.6	10	3.4	2.4	4.6
27	12	12	15	18	86	5.4	16	6.6	11	3.7	3.1	10
28	12	12	15	21	80	11	14	9.6	9.6	8.3	4.3	17
29	12	12	15	16	---	11	9.3	9.4	8.5	2.1	3.2	13
30	12	12	15	19	---	11	9.5	9.7	8.4	3.3	3.2	7.4
31	12	---	15	21	---	14	---	8.3	---	3.4	3.3	---
TOTAL	396.0	360	518	493	750.3	503.91	329.8	269.4	285.6	100.37	109.7	144.77
MEAN	12.8	12.0	16.7	15.9	26.8	16.3	11.0	8.69	9.52	3.24	3.54	4.83
MAX	44	12	28	21	145	68	21	16	19	9.7	8.0	17
MIN	7.5	12	12	14	8.3	.10	5.1	2.6	4.2	.37	1.5	.39
AC-FT	785	714	1030	978	1490	1000	654	534	566	199	218	287

CAL YR 1982 TOTAL 4570.30 MEAN 12.5 MAX 95 MIN .11 AC-FT 9070  
WTR YR 1983 TOTAL 4260.85 MEAN 11.7 MAX 145 MIN .10 AC-FT 8450

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 1982 TO SEPTEMBER 1983

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)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)
MAR							
04...	1010	1.6	3900	--	7.4	--	--
MAY							
12...	1515	9.0	3160	--	7.6	--	--
JUL							
07...	1530	.73	3910	3970	7.4	30.0	27.0
AUG							
01...	1700	2.1	4890	4080	7.8	--	30.5
30...	1030	3.4	4380	--	7.6	--	26.5

## 08405500 BLACK RIVER ABOVE MALAGA, NM

LOCATION.--Lat 32°13'44", long 104°09'02", in SW¼NW¼SW¼ sec.12, T.24 S., R.27 E., Eddy County, Hydrologic Unit 13060011, on right bank 0.6 mi upstream from Black River diversion dam, 4.6 mi west of Malaga, and 7.1 mi upstream from mouth. Mouth at Pecos River mile 436.3.

DRAINAGE AREA.--343 mi<sup>2</sup>.

PERIOD OF RECORD.--March to December 1940, December 1946 to current year.

REVISED RECORDS.--WSP 1632: 1948, 1949-50(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,070 ft, from topographic map. March to December 1940 water-stage recorder and Cippolletti weir at site 0.3 mi downstream at different datum.

REMARKS.--Records good. Diversions and ground-water withdrawals for irrigation of about 1,000 acres, 1959 determination, above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years (1948-83), 12.9 ft<sup>3</sup>/s, 9,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,600 ft<sup>3</sup>/s Aug. 23, 1966, gage height, 21.7 ft, from floodmarks, from rating curve extended above 5,900 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 12.60 ft and 21.7 ft; minimum, 0.51 ft<sup>3</sup>/s June 1, 1983.

The flood of Aug. 23, 1966, exceeded the previous maximum stage which occurred in 1908 by about 1.0 ft, from information by local resident.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 20 or 21, 1941, reached a stage of 19.0 ft, present site and datum, determined in 1947 from well defined flood marks, discharge, 33,000 ft<sup>3</sup>/s, from rating curve extended above 1,400 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 8.41 ft and 12.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 120 ft<sup>3</sup>/s Sept. 29, gage height, 1.90 ft, no peak above base of 450 ft<sup>3</sup>/s; minimum, 0.51 ft<sup>3</sup>/s, June 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	10	12	15	12	5.1	6.6	10	.80	7.2	6.6	5.1
2	13	10	11	13	12	5.1	8.5	9.7	7.6	7.1	6.6	4.8
3	11	12	12	13	12	5.2	9.5	9.5	8.2	6.6	5.6	4.7
4	11	11	11	13	13	5.3	9.5	9.9	8.2	5.9	6.2	4.8
5	11	11	11	13	13	5.0	10	9.4	8.3	12	6.8	4.8
6	11	10	11	13	13	4.7	11	9.2	8.4	14	7.1	5.0
7	10	11	11	13	13	4.7	12	9.1	8.8	8.3	7.2	5.2
8	11	11	12	13	13	5.0	13	9.2	9.1	7.6	7.1	5.3
9	10	11	13	13	11	5.1	12	8.7	9.4	7.6	6.9	5.3
10	8.5	12	14	13	6.7	5.1	11	8.7	9.7	7.2	6.6	5.1
11	6.1	12	13	13	5.8	5.1	11	8.7	9.0	7.2	7.5	5.1
12	5.6	11	12	13	5.2	5.1	11	8.6	8.5	7.2	10	5.6
13	5.6	11	12	13	5.2	5.1	11	8.0	8.3	7.6	7.5	9.6
14	5.6	11	12	13	5.1	5.1	10	7.9	7.9	7.6	8.5	8.3
15	5.5	11	12	12	5.1	5.1	11	8.1	8.1	7.2	6.8	6.6
16	5.3	11	12	12	5.1	4.9	11	7.9	8.9	6.9	5.3	6.1
17	5.3	11	12	13	5.2	5.3	11	7.0	9.1	7.2	5.6	5.9
18	5.3	12	12	13	5.1	5.6	11	6.7	8.7	6.9	5.5	5.8
19	5.2	10	12	13	5.1	5.7	10	9.2	8.3	6.9	5.4	5.8
20	5.1	10	12	14	5.1	5.9	10	9.3	8.3	6.9	5.3	5.2
21	5.1	11	12	14	4.8	5.8	10	7.7	8.0	6.6	6.5	4.8
22	5.1	11	12	13	4.9	5.6	9.9	7.8	8.0	6.6	6.1	5.3
23	5.1	11	12	13	4.8	5.0	9.9	8.7	8.9	6.6	6.6	5.5
24	5.5	11	12	12	5.1	4.4	10	8.8	9.5	6.9	6.7	5.5
25	8.8	11	12	12	5.1	4.1	9.9	8.4	8.7	6.9	6.8	5.4
26	9.8	12	13	12	5.3	3.7	9.9	8.6	8.2	6.9	5.9	5.3
27	9.9	13	13	12	5.5	3.5	11	8.1	7.5	6.6	4.8	5.4
28	9.9	13	13	12	5.2	3.6	11	5.2	7.1	7.8	4.5	6.6
29	9.9	12	13	12	---	3.8	11	3.0	7.1	7.9	4.3	19
30	9.9	11	13	12	---	3.8	11	1.2	7.2	5.7	4.3	51
31	10	---	14	12	---	3.9	---	.72	---	8.4	5.1	---
TOTAL	257.1	335	378	397	211.4	150.4	313.7	243.02	243.80	232.0	195.7	227.9
MEAN	8.29	11.2	12.2	12.8	7.55	4.85	10.5	7.84	8.13	7.48	6.31	7.60
MAX	17	13	14	15	13	5.9	13	10	9.7	14	10	51
MIN	5.1	10	11	12	4.8	3.5	6.6	.72	.80	5.7	4.3	4.7
AC-FT	510	664	750	787	419	298	622	482	484	460	388	452
CAL YR 1982	TOTAL	3409.80	MEAN	9.34	MAX	127	MIN	1.3	AC-FT	6760		
WTR YR 1983	TOTAL	3185.02	MEAN	8.73	MAX	51	MIN	.72	AC-FT	6320		

## 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 southeast of Malaga, 4.3 mi downstream from Black River, and at mile 432.2.

DRAINAGE AREA.--19,190 mi<sup>2</sup>, approximately (contributing area).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1920 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1632: 1925, 1932-37.

GAGE.--Water-stage recorder. Datum of gage is 2,895.64 ft National Geodetic Vertical Datum of 1929. May 1, 1920, to Mar. 24, 1949, at datum 3 ft higher.

REMARKS.--Records fair. Flow regulated by many reservoirs and diversion dams. Diversions and ground-water withdrawals above station for irrigation of about 202,000 acres, 1959 determination. Harroun canal bypasses gage on left bank and irrigates approximately 1,000 acres adjacent to and below gage. This bypass is not gaged.

AVERAGE DISCHARGE.--16 years (1921-36), 274 ft<sup>3</sup>/s, 198,500 acre-ft/yr, prior to completion of Lake Sumner. 47 years (1938-83) 170 ft<sup>3</sup>/s, 123,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft<sup>3</sup>/s Aug. 23, 1966, gage height, 42.1 ft, from floodmarks, from rating curve extended above 36,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 3.7 ft<sup>3</sup>/s Oct. 20, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in 1904, discharge not determined. Flood of Aug. 7, 1916, reached a discharge of 70,000 ft<sup>3</sup>/s at Carlsbad, 27 mi upstream. Flood in September 1919 reached a stage of 29.4 ft, present datum, discharge, 40,400 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 159 ft<sup>3</sup>/s Feb. 27, gage height, 4.16 ft; minimum, 13 ft<sup>3</sup>/s June 15, 22, 23, and July 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	59	52	64	50	111	20	31	20	17	16	15
2	42	53	50	67	50	93	31	30	19	17	17	15
3	41	51	50	61	50	69	37	26	20	15	16	15
4	52	62	50	56	47	97	31	24	17	14	15	18
5	51	58	50	56	42	77	41	24	16	14	19	21
6	39	49	50	56	42	53	41	26	16	30	16	20
7	38	46	49	56	44	37	32	29	16	46	15	37
8	47	46	49	56	45	48	39	37	23	32	15	24
9	38	46	54	55	51	76	37	38	22	21	16	20
10	41	47	60	55	51	65	27	27	22	19	15	22
11	40	49	65	55	47	46	30	20	17	15	15	17
12	40	49	61	54	42	35	28	20	18	18	26	25
13	39	49	55	54	39	34	28	20	15	23	18	29
14	39	47	52	53	38	31	25	23	14	24	18	20
15	44	46	51	52	39	21	22	20	14	16	17	19
16	35	47	51	52	38	18	23	17	22	18	18	26
17	33	47	50	52	37	17	25	20	17	16	16	25
18	38	47	50	52	36	17	34	29	15	35	15	21
19	40	48	50	51	36	18	28	22	16	31	15	29
20	33	49	50	48	36	18	29	16	19	21	15	24
21	30	48	50	48	36	17	31	24	15	17	17	18
22	29	48	50	48	36	17	52	21	14	15	28	18
23	36	48	50	47	35	17	36	18	17	14	19	19
24	51	48	50	44	34	19	31	16	27	17	21	19
25	48	48	51	43	42	18	57	18	27	20	17	18
26	53	49	54	42	55	17	38	17	22	22	16	18
27	41	55	54	42	155	16	31	16	18	22	16	23
28	44	58	55	41	132	16	31	16	24	22	15	22
29	43	58	55	43	---	32	41	16	19	18	16	21
30	36	54	54	52	---	33	35	16	16	15	16	61
31	45	---	56	50	---	31	---	17	---	15	15	---
TOTAL	1262	1509	1628	1605	1385	1214	991	694	557	639	529	679
MEAN	40.7	50.3	52.5	51.8	49.5	39.2	33.0	22.4	18.6	20.6	17.1	22.6
MAX	53	62	65	67	155	111	57	38	27	46	28	61
MIN	29	46	49	41	34	16	20	16	14	14	15	15
AC-FT	2500	2990	3230	3180	2750	2410	1970	1380	1100	1270	1050	1350

CAL YR 1982 TOTAL 12981 MEAN 35.6 MAX 250 MIN 13 AC-FT 25750  
WTR YR 1983 TOTAL 12692 MEAN 34.8 MAX 155 MIN 14 AC-FT 25170



RIO GRANDE BASIN  
08406500 PECOS RIVER NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

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, 10,000 micromhos Sept. 3; minimum daily, 4,960 micromhos Mar. 4.

WATER TEMPERATURES: Maximum, 31.0°C July 16,30, Aug. 12,15; minimum, 3.5°C Jan. 4.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)
OCT											
06...	1000	38	5400	5420	8.1	7.8	24.0	--	1800	1690	1690
28...	1030	35	6200	6220	8.0	7.7	14.0	--	2000	1850	1850
NOV											
30...	1000	53	5600	6070	--	7.8	16.0	10.0	2000	1870	1870
JAN											
04...	1300	54	5200	5800	8.1	7.7	11.0	4.0	1900	1770	1770
FEB											
03...	1000	52	5800	5830	8.0	7.7	7.0	9.0	1900	1720	1720
MAR											
01...	1500	109	5200	5350	8.3	7.6	26.0	15.5	1700	1520	1520
APR											
08...	1340	36	7600	7500	8.2	7.9	--	7.0	2100	2010	2010
MAY											
09...	1300	E38	7900	8100	8.2	7.5	29.5	21.5	2400	2290	2290
JUN											
01...	0930	20	9400	9220	--	7.4	15.5	20.0	2500	2360	2360
30...	0840	15	8200	8180	7.7	7.3	25.0	25.0	2600	2480	2480
JUL											
29...	1130	19	6900	6200	8.2	7.7	31.0	28.0	1900	1740	1740
AUG											
29...	1200	16	9200	8860	8.1	7.4	34.0	30.0	2500	2360	2360

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT											
06...	480	150	600	6.3	12	160	.0	131	1500	1000	.80
28...	500	180	800	8.1	15	170	.0	124	1600	1400	.80
NOV											
30...	500	180	670	6.8	11	--	--	119	1600	1200	.70
JAN											
04...	500	170	620	6.3	11	--	--	180	1500	1100	.80
FEB											
03...	480	170	660	6.8	12	--	--	178	1500	1200	.80
MAR											
01...	390	170	570	6.2	7.9	--	--	152	1600	730	.80
APR											
08...	530	200	900	8.7	17	170	.0	125	1800	1600	.90
MAY											
09...	630	210	1000	9.1	16	180	.0	123	1800	1800	.90
JUN											
01...	600	240	1200	11	29	--	--	129	2000	2200	1.0
30...	660	230	1100	9.7	21	140	.0	123	2100	1900	.90
JUL											
29...	480	160	830	8.7	17	150	.0	134	1600	1400	.90
AUG											
29...	610	230	1200	11	25	140	.0	131	2000	2100	.90

RIO GRANDE BASIN  
08406500 PECOS RIVER NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SILICA, DIS- SOLVED (MG/L AS SI02) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	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 06...	16	3840	1.2	--	.230	1.3	2.7	.080	--	--
28...	15	4590	1.5	1.5	<.060	--	2.9	.060	<.010	--
NOV 30...	9.2	4240	2.0	1.8	.140	.76	2.9	.050	<.010	--
JAN 04...	13	4020	2.4	2.3	.130	.97	3.5	.100	.020	--
FEB 03...	13	4140	1.8	1.8	.100	2.0	3.9	.140	.050	--
MAR 01...	12	3570	1.1	1.1	.350	1.3	2.7	.150	.080	--
APR 08...	8.9	5140	1.0	.98	.260	1.5	2.8	.070	.040	--
MAY 09...	12	5560	1.0	1.0	<.060	--	2.7	.080	.020	23
JUN 01...	12	6360	.70	.74	.510	1.2	2.4	.080	.030	--
30...	11	6090	.60	.56	.220	1.9	2.7	.090	.060	--
JUL 29...	17	4580	1.0	1.0	.210	1.3	2.5	.080	<.010	--
AUG 29...	24	6260	1.0	1.0	.220	1.5	2.7	.060	.020	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 06...	1000	330	90
28...	1030	400	70
NOV 30...	1000	370	40
JAN 04...	1300	330	50
FEB 03...	1000	340	60
MAR 01...	1500	340	40
APR 08...	1340	460	50
MAY 09...	1300	500	40
JUN 01...	0930	570	70
30...	0840	520	40
JUL 29...	1130	400	20
AUG 29...	1200	600	30

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 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5670	6730	6170	5600	5760	5230	7010	7670	---	8990	7970	9460
2	5080	6450	6060	5500	5740	5220	7060	7760	---	8460	8910	9300
3	5430	6450	6100	5580	5760	5310	6760	7920	---	8580	8910	10000
4	6010	6450	6130	5600	5540	4960	6880	7650	---	8890	8980	9890
5	5180	6130	6020	5640	6010	5030	7540	8200	---	8660	8830	---
6	5080	6050	6100	5580	6190	5210	7030	8240	---	8910	8350	8860
7	6120	6080	5950	5640	6120	5390	7230	8050	---	6060	8170	6710
8	6050	6160	6060	5550	6190	5460	7320	7720	---	6070	8360	6180
9	5910	6160	6020	5680	6030	5060	6910	7530	---	6930	8410	7090
10	5940	6110	5920	5560	5690	5110	7270	7690	---	7330	9140	7020
11	6520	6090	5920	5640	5770	---	7290	8070	---	7930	9300	7230
12	6350	6080	5880	5720	6000	5480	7230	8460	---	8120	9220	7040
13	6050	6290	5750	5600	5960	5700	7250	8870	---	8330	7970	6970
14	6470	6050	5850	5670	6050	5880	6960	9160	---	7240	7480	6440
15	6050	6290	5950	5690	6090	6050	7210	8740	---	7980	8110	8240
16	6520	6130	5810	5510	6140	6550	7550	9400	7830	7880	8700	7960
17	7270	6250	5910	---	6150	6930	7290	9430	8300	7980	8550	6790
18	7210	6200	5870	5590	6190	7260	6820	8480	8800	6070	8620	7580
19	6120	6170	5940	5570	6140	7420	6610	8480	8450	5440	8980	7060
20	7160	6050	5810	6000	6240	7650	6870	8870	8490	---	9060	6490
21	7770	6180	5980	5980	6120	7610	7050	8200	8450	6880	9460	6650
22	7430	6230	5940	6230	6180	7560	6900	8010	9000	7120	7990	7720
23	7480	6160	5940	6220	6160	7580	6960	8500	9070	7680	8430	7840
24	7060	6160	5980	6230	6120	7790	7670	8740	7440	8070	8050	7700
25	6120	6390	5750	6370	6180	8120	7290	9530	7420	7340	8220	8620
26	6080	5940	---	6340	6140	8260	7270	9060	7360	7010	9000	8000
27	6310	6010	5950	6360	5530	8310	7770	8740	7630	5840	8750	8590
28	6730	5940	5910	6380	5210	8340	8010	8440	8260	6500	8980	8800
29	6350	6020	5780	6470	---	8310	7530	8740	7370	5980	9460	8780
30	6920	6000	5880	6170	---	6770	7810	9130	8340	7670	9300	6790
31	7210	---	5700	5720	---	6130	---	9510	---	7750	9550	---
MEAN	6380	6180	5930	5850	5980	6520	7210	8480	8150	7460	11100	7770
WTR YR 1983	MEAN	7230		MAX	10000		MIN	4960				

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.0	15.5	10.0	5.0	10.0	13.0	14.0	18.0	18.5	29.0	26.5	27.0
2	24.0	15.0	10.0	6.0	9.0	13.5	14.0	18.0	26.0	24.0	29.5	27.0
3	21.0	14.5	8.0	5.5	9.5	15.0	15.0	17.0	26.0	29.5	30.5	28.0
4	21.0	13.0	9.0	3.5	9.0	14.0	14.5	17.5	23.0	28.0	30.0	26.0
5	22.5	14.0	9.0	5.0	8.0	13.0	11.0	18.0	23.0	25.0	28.0	29.5
6	22.0	13.0	9.0	5.0	9.5	13.0	9.5	20.0	22.0	26.0	25.0	28.0
7	22.0	14.0	9.0	6.0	9.0	13.0	9.0	19.0	20.0	25.0	27.5	25.0
8	21.5	15.0	8.0	6.0	10.0	16.5	9.0	18.0	27.0	29.0	28.0	28.0
9	21.0	14.0	7.0	6.5	10.5	14.5	12.0	18.0	27.0	26.0	28.0	27.0
10	17.0	15.5	8.0	6.5	10.5	14.0	14.5	20.0	23.5	26.0	29.0	26.0
11	17.5	15.5	7.5	8.0	10.5	15.0	15.0	21.0	24.0	25.0	30.5	25.5
12	17.0	13.0	8.0	8.0	10.5	15.5	15.0	19.0	25.5	30.0	31.0	29.0
13	15.5	12.5	8.0	8.0	10.5	16.0	15.0	24.0	---	25.0	28.0	24.0
14	16.0	12.5	8.0	8.5	11.0	17.0	15.5	17.5	22.0	29.0	25.0	24.5
15	16.0	11.0	8.0	9.0	11.0	15.0	14.0	18.0	25.0	29.0	31.0	23.0
16	17.0	10.5	8.0	7.5	11.0	12.5	15.5	23.0	27.0	31.0	29.5	24.0
17	17.5	11.5	8.0	8.0	12.0	12.0	17.5	23.5	27.0	28.0	29.0	24.0
18	17.0	12.0	9.0	10.0	11.0	13.0	17.0	21.0	27.5	27.0	29.0	27.0
19	16.5	13.0	9.0	11.0	12.0	13.0	18.5	20.0	27.5	27.0	30.0	28.0
20	16.0	13.0	7.0	10.0	12.0	13.0	18.0	22.5	30.0	---	25.0	21.0
21	13.0	14.0	8.5	8.5	10.5	12.0	19.0	20.5	26.5	25.0	30.0	19.0
22	16.5	13.0	9.0	7.0	11.0	12.0	17.5	21.0	25.0	25.0	30.5	22.0
23	18.0	14.0	10.5	7.0	12.0	12.0	20.0	20.5	25.5	25.0	30.5	17.0
24	17.0	10.5	9.5	8.0	12.0	12.0	20.0	20.5	24.0	30.0	29.0	17.0
25	17.0	9.0	8.0	9.5	13.0	15.0	18.5	21.0	25.0	30.5	30.0	23.0
26	16.0	8.5	---	9.0	12.0	13.0	19.0	22.0	29.5	26.0	28.5	25.0
27	18.0	7.0	7.0	9.0	12.0	16.0	19.0	26.0	26.0	28.0	28.0	25.0
28	16.0	10.0	8.0	8.0	12.0	13.0	20.0	22.5	27.0	28.0	27.5	26.0
29	15.0	11.0	6.0	9.0	---	16.0	20.0	24.0	27.0	26.5	30.5	---
30	14.0	12.0	6.0	10.0	---	20.0	19.0	23.0	26.5	31.0	29.0	22.0
31	15.0	---	5.0	10.5	---	19.0	---	21.0	---	30.0	29.0	---
MEAN	18.0	12.5	8.0	7.5	11.0	14.0	16.0	20.5	25.5	27.5	29.0	24.5
WTR YR 1983	MEAN	18.0		MAX	31.0		MIN	3.5				

## 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 upstream from Pierce Canyon Crossing, and 6.0 mi southeast of Malaga, and at mile 425.7.

DRAINAGE AREA.--19,260 mi<sup>2</sup>, approximately (contributing area).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1938 to September 1941, August 1951 to current year.

REVISED RECORDS.--WSP 898: 1938(M). WSP 1712: 1959.

GAGE.--Water-stage recorder. Datum of gage is 2,889.18 ft National Geodetic Vertical Datum of 1929. July 1938 to September 1941 at datum 1.19 ft higher.

REMARKS.--Records good except those above 200 ft<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, 1959 determination.

AVERAGE DISCHARGE.--35 years (1939-41, 1952-83), 131 ft<sup>3</sup>/s, 94,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge determined, 65,000 ft<sup>3</sup>/s Aug. 23, 1966; maximum gage height, 31.6 ft Aug. 23, 1966, from floodmarks; minimum discharge, 0.54 ft<sup>3</sup>/s May 30, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 192 ft<sup>3</sup>/s Feb. 27, gage height, 2.31 ft; minimum 9.9 ft<sup>3</sup>/s Mar. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	55	55	64	55	113	22	31	22	13	17	14
2	45	56	53	68	57	105	20	30	22	14	16	12
3	46	51	52	63	57	64	27	27	20	15	18	11
4	55	59	49	57	56	83	31	26	22	14	19	11
5	55	62	50	56	48	83	26	24	19	14	17	15
6	46	52	48	55	46	54	43	24	16	14	20	18
7	38	45	47	55	46	39	37	27	15	39	19	26
8	43	44	49	56	46	37	36	30	17	43	15	27
9	49	47	55	57	52	60	42	37	22	28	15	21
10	40	48	61	56	54	68	28	38	24	23	16	23
11	39	49	65	56	49	47	27	26	20	19	20	21
12	40	48	64	55	44	34	30	20	18	13	17	22
13	40	48	56	55	41	34	28	20	17	15	23	30
14	38	45	52	55	40	32	28	20	13	25	26	23
15	46	43	50	54	40	21	22	23	12	19	24	18
16	40	46	50	53	39	16	21	21	16	16	21	19
17	36	48	50	54	39	14	23	17	20	16	22	27
18	31	49	49	54	37	13	31	19	18	19	18	19
19	48	49	49	57	37	13	34	29	17	35	17	24
20	37	49	49	54	37	15	28	20	18	25	16	27
21	31	49	49	52	37	15	29	19	16	20	16	23
22	30	49	50	52	37	14	36	23	12	16	33	21
23	30	47	51	52	37	13	54	17	12	13	26	20
24	43	48	52	48	34	13	33	14	20	14	27	20
25	49	49	51	46	35	15	43	14	28	18	21	20
26	50	53	54	45	34	14	64	18	25	20	16	17
27	46	58	56	45	140	12	31	17	18	25	16	19
28	37	61	56	45	162	12	30	16	16	21	15	28
29	47	62	56	45	---	14	41	16	20	23	15	22
30	36	59	56	56	---	26	35	16	15	18	16	39
31	36	---	58	58	---	26	---	17	---	17	15	---
TOTAL	1280	1528	1642	1678	1436	1119	980	696	550	624	592	637
MEAN	41.3	50.9	53.0	54.1	51.3	36.1	32.7	22.5	18.3	20.1	19.1	21.2
MAX	55	62	65	68	162	113	64	38	28	43	33	39
MIN	30	43	47	45	34	12	20	14	12	13	15	11
AC-FT	2540	3030	3260	3330	2850	2220	1940	1380	1090	1240	1170	1260

CAL YR 1982 TOTAL 13429 MEAN 36.8 MAX 283 MIN 12 AC-FT 26640  
WTR YR 1983 TOTAL 12762 MEAN 35.0 MAX 162 MIN 11 AC-FT 25310

RIO GRANDE BASIN  
08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

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, 21,300 micromhos June 17; minimum daily, 5,230 micromhos Mar. 2.  
WATER TEMPERATURES: Maximum, 32.0°C July 25; minimum 3.5°C Jan. 4.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT								
06...	1100	49	8600	8880	8.2	7.8	25.0	22.5
28...	1200	36	10300	10600	8.1	7.8	17.0	15.0
NOV								
30...	1100	57	9000	9230	--	7.7	16.0	10.0
JAN								
04...	1500	58	8200	8720	8.0	8.0	10.0	4.0
FEB								
03...	1200	58	10000	9780	8.3	7.6	10.0	8.0
MAR								
01...	1630	100	8200	7860	8.3	7.6	24.0	15.5
APR								
06...	1600	49	12400	12300	8.7	7.8	6.0	10.0
MAY								
11...	1245	27	13000	12800	8.2	8.0	30.5	24.5
JUN								
01...	1200	23	19400	19400	--	7.4	20.5	20.5
30...	1130	15	17200	16400	7.8	7.0	33.5	25.5
AUG								
01...	1130	18	15200	14300	8.2	7.4	30.0	27.5
29...	1430	14	16700	16100	7.6	7.1	34.0	28.5

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM 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)
OCT									
06...	--	2000	1830	1830	490	180	1400	14	39
28...	--	2300	2120	2120	540	220	1700	16	45
NOV									
30...	--	2000	1930	1930	490	200	1300	13	36
JAN									
04...	--	2000	1810	1810	480	190	1300	13	34
FEB									
03...	--	2200	2030	2030	530	210	1500	14	41
MAR									
01...	--	2100	1960	1960	500	210	1100	11	24
APR									
06...	--	2100	2010	2010	480	230	2000	19	62
MAY									
11...	8.3	2500	2360	2360	600	240	2000	18	61
JUN									
01...	--	2900	2750	2750	670	290	3800	32	110
30...	--	2800	2720	2720	670	280	3000	25	88
AUG									
01...	--	2500	2400	2400	590	250	2600	23	80
29...	--	2800	2670	2670	630	290	2900	25	92

RIO GRANDE BASIN  
08407000 PECOS RIVER AT PIERCE CANYON CROSSING, NEAR MALAGA, NM -- Continued  
WATER-QUALITY RECORDS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	BICAR- BONATE IT-FLD (MG/L AS HC03) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
OCT								
06...	170	.0	127	1500	2500	.80	16	6210
28...	170	.0	145	1900	2900	.90	16	7410
NOV								
30...	--	--	123	1700	2300	.80	10	6110
JAN								
04...	--	--	177	1600	2300	.80	14	6030
FEB								
03...	--	--	156	1600	2600	.80	12	6590
MAR								
01...	--	--	155	1500	1800	.70	12	5240
APR								
06...	110	26	95	1900	3200	.80	5.0	7990
MAY								
11...	160	.0	129	2000	3500	.90	10	8490
JUN								
01...	--	--	119	2500	6400	.90	12	13900
30...	130	.0	107	2400	5000	.90	10	11500
AUG								
01...	130	.0	108	2100	4500	.90	6.1	10200
29...	120	.0	97	2400	5200	.90	21	11600

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT			
06...	1100	520	60
28...	1200	620	80
NOV			
30...	1100	520	40
JAN			
04...	1500	470	50
FEB			
03...	1200	560	40
MAR			
01...	1630	440	40
APR			
06...	1600	690	50
MAY			
11...	1245	780	30
JUN			
01...	1200	1100	70
30...	1130	980	50
AUG			
01...	1130	900	60
29...	1430	1000	60

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), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10200	11200	9520	5600	13000	8340	15200	12200	19700	16500	15200	17800
2	10200	10600	9350	8710	9920	5230	16100	13100	17200	16800	16700	17500
3	10000	10900	9170	8520	9670	7920	15500	14000	16900	17800	16600	17800
4	9610	10500	9430	8610	9530	8180	14400	14600	17000	17700	16900	18600
5	9610	10100	9420	8730	---	8180	12900	14200	17300	17600	16300	19800
6	9000	9810	9420	8950	9720	9220	12500	14400	16900	17700	16100	19100
7	9350	9900	9510	9020	9600	7870	11000	15000	16700	18900	15800	19500
8	10200	10100	9790	9320	10000	8130	10700	15000	17400	14500	15700	18200
9	9800	10200	9620	9250	10600	8610	11400	15400	18500	14300	16000	16200
10	9170	10100	9620	9320	10100	8280	11500	13900	18400	14000	17100	15700
11	9710	10000	9620	8890	9570	8120	11300	12900	16600	14000	18200	15600
12	10500	11500	9090	9040	9670	8440	12400	13000	16700	14000	18400	14000
13	10100	10000	9080	9000	9720	8770	13100	14500	---	13600	17700	13900
14	10200	10000	9170	9110	9550	9440	12900	15400	17300	15400	17100	13700
15	10400	9900	9420	5600	10900	9190	13000	16900	17700	15200	15700	13300
16	10600	9810	9250	9700	10100	9460	12800	16600	19300	14500	15200	13200
17	10100	9710	9350	8980	10100	10600	13300	16400	21300	14900	15200	13800
18	10400	9620	9430	9250	10600	11900	13700	16200	18900	16700	15600	14000
19	11000	10000	9530	9550	10100	12100	12200	18100	18100	---	15500	13300
20	10700	10300	9430	9280	11700	12500	13300	16200	18500	16900	15600	13700
21	11000	9900	9530	6240	11200	13200	13100	16100	18300	13700	16900	13800
22	11600	9810	9710	9280	10400	14000	14000	17000	18200	14200	16600	14000
23	12000	9900	9700	9230	10200	13800	13600	17300	18200	14700	14400	13500
24	11700	10100	10700	9300	10100	13700	12000	17400	18600	---	14900	13800
25	11900	9810	10800	9570	10700	15100	13500	18400	17500	16100	15500	13700
26	12000	9530	---	9760	10200	15400	12200	19100	15300	16100	15400	14000
27	11200	10200	9270	6370	10400	15800	11200	20400	16000	14900	15300	13800
28	10800	9360	9090	6380	9430	16600	11700	20200	16200	14800	15800	14500
29	11700	9270	9270	6450	---	16800	13600	19300	16400	14600	16900	14800
30	10200	9270	9270	6120	---	17100	12200	18900	16700	15900	17200	14300
31	10500	---	9090	5730	---	14500	---	18900	---	15500	17700	---
MEAN	10500	10000	9490	8350	10300	11200	12900	16200	17600	15600	16200	15300
WTR YR 1983	MEAN	12800		MAX	21300		MIN	5230				

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.5	15.5	10.0	4.0	10.0	14.0	15.0	19.5	20.0	27.0	27.5	28.0
2	25.0	15.0	10.0	5.0	8.0	14.0	15.0	19.0	23.5	25.0	29.0	27.0
3	22.0	14.5	7.5	5.0	9.0	15.0	14.0	18.0	26.5	29.0	29.5	28.5
4	22.0	13.0	7.5	3.5	8.0	15.0	15.0	19.0	25.0	28.5	29.5	27.0
5	23.0	14.0	8.0	4.0	7.0	13.5	12.0	18.0	24.0	26.5	28.0	25.0
6	23.0	13.0	8.5	4.0	8.5	13.0	9.5	21.0	23.5	26.5	26.5	28.0
7	22.0	14.0	8.5	5.0	8.5	13.5	8.5	20.5	21.5	26.0	27.5	26.0
8	22.0	14.0	8.0	5.0	10.0	16.5	8.0	19.0	24.5	28.0	---	27.5
9	22.0	14.0	6.5	6.0	11.0	14.5	11.5	19.0	25.5	27.0	27.0	27.0
10	17.5	15.5	6.5	6.0	11.0	14.5	14.0	20.5	24.5	27.0	28.0	26.0
11	18.0	15.5	6.5	7.5	11.0	15.0	15.0	22.0	25.0	26.0	29.5	27.0
12	16.0	13.0	7.0	7.0	11.0	15.5	16.0	21.0	26.0	29.0	30.0	29.0
13	15.0	12.0	7.0	8.0	11.0	16.5	15.0	24.0	---	26.5	30.0	25.5
14	15.0	12.0	8.0	8.0	11.0	18.0	15.0	19.5	24.0	28.0	25.0	24.5
15	16.0	11.0	8.0	9.0	11.0	16.0	14.5	19.0	24.5	28.0	28.0	24.0
16	17.0	10.0	7.5	7.0	10.5	13.5	15.0	23.0	26.0	28.0	29.0	25.0
17	18.0	10.5	7.5	8.0	12.0	12.5	17.5	24.0	26.0	28.0	29.0	25.0
18	18.0	11.0	8.0	10.0	11.0	12.0	18.0	21.0	28.5	26.5	30.0	27.0
19	17.5	12.5	8.0	10.0	12.5	12.0	19.0	21.5	28.0	27.0	28.0	28.0
20	17.0	13.0	6.5	10.0	12.5	13.0	19.0	21.5	29.0	25.5	30.5	23.0
21	14.0	14.0	8.0	8.0	11.0	12.5	20.0	21.5	27.5	26.0	28.0	21.0
22	16.0	13.0	8.5	6.0	11.0	12.0	19.0	21.5	26.5	26.0	28.0	20.5
23	17.0	14.0	10.0	7.0	12.0	12.0	20.0	21.5	27.5	26.0	31.0	20.0
24	17.0	11.0	9.5	7.5	12.5	12.0	19.5	21.0	25.5	27.0	29.0	21.0
25	16.5	8.0	7.5	8.0	13.0	14.5	19.0	22.0	25.0	32.0	29.0	23.5
26	17.0	8.0	---	7.5	11.5	13.0	20.0	23.0	27.0	28.0	29.5	25.0
27	18.0	6.0	5.5	8.0	12.0	15.0	20.0	25.5	28.0	30.0	30.0	25.0
28	16.5	8.5	6.0	8.0	12.5	13.0	21.0	24.0	27.0	29.0	27.5	26.0
29	16.0	10.0	5.0	8.0	---	15.0	21.0	25.0	27.0	28.0	29.5	24.5
30	14.0	11.0	5.0	9.5	---	19.0	20.0	24.0	26.0	30.0	29.0	23.0
31	15.0	---	4.0	10.5	---	19.5	---	22.0	---	31.0	30.0	---
MEAN	18.5	12.0	7.5	7.0	10.5	14.5	16.0	21.5	25.5	27.5	28.5	25.5
WTR YR 1983	MEAN	18.0		MAX	32.0		MIN	3.5				





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.

WATER TEMPERATURES: October 1952 to 1982.

REMARKS.--No appreciable inflow between discharge station and sampling point except during periods of heavy local rains.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L CAC03) (00900)
OCT 27...	1100	48	13200	12100	7.7	7.7	29.0	17.0	.50	9.0	2400
JAN 11...	1230	60	9600	9920	8.1	7.6	18.0	7.0	2.8	--	2000
MAR 01...	1130	122	10200	9850	8.2	7.7	27.0	14.0	13	10.7	2000
MAY 12...	1030	21	16000	16100	8.2	7.2	27.5	22.0	6.7	9.6	2700
JUN 28...	1215	22	21600	19200	8.3	7.6	32.0	26.0	4.7	11.0	3100
AUG 26...	1400	18	16200	14500	8.7	7.0	37.0	29.5	2.3	12.6	2500

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINEITY LAB (MG/L AS CAC03) (90410)
OCT 27...	2220	2220	560	230	2200	20	61	170	.0	141
JAN 11...	1920	1920	490	200	1600	16	40	--	--	127
MAR 01...	1850	1850	450	210	1500	15	37	--	--	136
MAY 12...	2570	2570	610	280	3000	26	78	140	.0	118
JUN 28...	3060	3060	710	330	3600	29	110	95	5.0	92
AUG 26...	2510	2510	570	270	2700	24	83	49	.0	60

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 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)
OCT 27...	1900	3600	.80	14	8590	8660	1.1	.330	.030	<.010
JAN 11...	1600	2700	.70	11	6750	6720	1.5	.140	.070	.050
MAR 01...	1700	2500	.80	12	6830	6490	1.2	.440	.080	.040
MAY 12...	2100	5000	.90	7.9	11300	11200	.16	1.40	.070	.050
JUN 28...	2700	6300	.90	4.3	14000	13800	<.10	.150	.040	.030
AUG 26...	2100	4700	.70	11	10700	10500	<.10	.090	.060	.020

RIO GRANDE BASIN  
08407500 PECOS RIVER AT RED BLUFF, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
OCT 27...	1100	40	1	100	< 10	1	< 1	0	2	60	< 1
MAY 12...	1030	10	2	0	0	< 1	< 1	0	1	20	2
JUN 28...	1215	20	2	100	< 10	1	< 1	0	4	90	5
AUG 26...	1400	20	2	< 100	< 10	1	< 1	0	2	50	1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 27...	100	50	.0	5	< 1	2	< 1	7200	37	30
MAY 12...	220	59	.0	< 10	1	2	< 1	8500	< 6.0	30
JUN 28...	140	40	.0	3	< 1	1	< 1	8900	59	30
AUG 26...	120	30	.0	3	3	1	1	7500	42	20

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT 27...	K10	K56
JAN 11...	K10	K0
MAR 01...	K13	K0
MAY 12...	29	160
JUN 28...	14	240
AUG 26...	2	210

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 27...	1100	48	17.0	21	2.7	98
JAN 11...	1230	60	7.0	25	4.1	56
MAR 01...	1130	122	14.0	47	15	94
JUN 28...	1215	22	26.0	16	.95	89
AUG 26...	1400	18	29.5	28	1.4	92

## 08408500 DELAWARE RIVER NEAR RED BLUFF, NM

LOCATION.--Lat 32°01'23", long 104°03'15", in NE¼SW¼SE¼ sec.23, T.26 S., R.28 E., Eddy County, Hydrologic Unit 13070002, near center of channel on downstream side of pier of bridge on U.S. Highway 285, 2.1 mi north of the New Mexico-Texas state line, 3.6 mi southwest of Red Bluff, 3.7 mi upstream from mouth and 14 mi south of Malaga. Mouth at Pecos River mile 405.6.

DRAINAGE AREA.--689 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1912 to September 1913, May 1914 to June 1915, October 1937 to current year. Published as "near Malaga" 1912-13, and as "near Angeles, Tex." 1914-15.

GAGE.--Water-stage recorder. Datum of gage is 2,900.66 ft National Geodetic Vertical Datum of 1929. Prior to May 1914, at site 3.0 mi upstream at different datum. May 1914 to June 1915 at site 2.5 mi downstream at different datum.

REMARKS.--Records good 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.--46 years (1938-83), 13.0 ft<sup>3</sup>/s, 9,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,400 ft<sup>3</sup>/s Oct. 2, 1955, gage height, 27.0 ft, from floodmarks, from rating curve extended above 6,500 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights, 12.84 ft, 17.55 ft, and 27.0 ft; no flow many days most years.  
Maximum discharge since at least 1911 is that of Oct. 2, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 773 ft<sup>3</sup>/s Sept. 30, gage height, 5.55 ft, no peak above base of 1,700 ft<sup>3</sup>/s; minimum, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.9	3.1	3.7	3.1	3.5	2.3	2.2	1.5	.06	.00	.00
2	2.2	1.9	3.4	3.4	3.1	3.4	2.3	2.1	1.5	.00	.00	.00
3	1.8	2.2	3.3	3.2	3.0	3.3	2.4	2.0	1.3	.00	.00	.00
4	1.7	2.3	3.0	3.2	3.1	3.3	2.4	2.0	1.1	.00	.00	.00
5	1.7	2.3	3.1	3.2	3.1	3.3	2.5	2.0	.88	.00	.00	.00
6	1.6	2.3	3.1	3.4	3.1	3.2	2.6	1.9	.84	.00	.00	.00
7	1.6	2.4	3.1	3.5	3.1	2.9	3.2	1.8	.95	.00	.00	.00
8	1.5	2.4	3.1	3.6	3.1	3.0	3.3	1.8	1.0	.00	.00	.00
9	1.3	2.4	3.8	3.5	3.1	3.0	3.1	1.8	.95	.00	.00	.00
10	1.3	2.5	4.0	3.3	3.2	3.0	2.7	1.9	.81	.00	.00	.00
11	1.4	2.6	4.0	3.2	3.2	2.9	2.6	1.8	.68	.00	.00	.00
12	1.6	2.5	3.7	3.2	3.2	3.0	2.5	1.7	.55	.00	.00	.00
13	1.8	2.3	3.4	3.2	3.2	3.0	2.6	1.7	.45	.00	.00	.00
14	1.9	2.4	3.3	3.2	3.2	3.0	2.5	1.6	.33	.00	.00	.00
15	1.8	2.5	3.2	3.2	3.2	2.8	2.5	1.7	.73	.00	.00	.00
16	1.8	2.5	3.3	3.0	3.2	2.8	2.5	1.7	17	.00	.00	.00
17	1.7	2.7	3.3	3.0	3.2	2.8	2.5	1.6	1.3	.00	.00	.00
18	1.7	2.7	3.4	3.4	3.3	2.9	2.5	1.5	.92	.00	.00	.00
19	1.6	2.6	3.4	3.4	3.2	2.8	2.4	1.4	.66	.00	.00	.00
20	1.6	2.6	3.2	3.5	3.4	2.9	2.4	1.4	.44	.00	.00	.00
21	1.6	2.6	3.3	3.5	3.4	2.9	2.4	1.4	.30	.00	.00	.00
22	1.7	2.7	3.4	3.3	3.4	2.8	2.3	1.4	.24	.00	.00	.00
23	1.9	2.7	3.3	3.2	3.5	2.7	2.4	1.4	5.0	.00	.00	.00
24	1.8	2.8	3.2	3.1	3.6	2.7	2.4	1.3	.77	.00	.00	.00
25	1.8	2.9	3.1	3.0	3.5	2.7	2.4	1.4	1.9	.00	.00	.00
26	1.8	3.1	3.6	3.0	3.7	2.7	2.4	1.4	.86	.00	.00	.00
27	1.8	3.5	3.7	3.0	3.7	2.6	2.3	1.3	.54	.00	.00	.00
28	1.7	3.4	3.7	3.0	3.6	2.5	2.2	1.3	.34	.00	.00	.93
29	1.7	3.1	3.5	3.1	---	2.6	2.2	1.3	.25	.00	.00	141
30	1.8	3.0	3.5	3.1	---	2.6	2.3	1.7	.15	.00	.00	397
31	1.9	---	3.8	3.0	---	2.4	---	1.4	---	.00	.00	---
TOTAL	53.5	77.8	105.3	100.6	91.7	90.0	75.1	50.9	44.24	.06	.00	631.00
MEAN	1.73	2.59	3.40	3.25	3.28	2.90	2.50	1.64	1.47	.002	.000	21.0
MAX	2.4	3.5	4.0	3.7	3.7	3.5	3.3	2.2	17	.06	.00	397
MIN	1.3	1.9	3.0	3.0	3.0	2.4	2.2	1.3	.15	.00	.00	.00
AC-FT	106	154	209	200	182	179	149	101	88	.1	.00	1250

CAL YR 1982 TOTAL 1773.11 MEAN 4.86 MAX 146 MIN .31 AC-FT 3520  
WTR YR 1983 TOTAL 1320.20 MEAN 3.62 MAX 397 MIN .00 AC-FT 2620

## RIO GRANDE BASIN

## 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, 2.8 mi upstream from Salt Creek, and 5.2 mi north of Orla.

DRAINAGE AREA.--20,720 mi<sup>2</sup>, approximately (contributing area).

PERIOD OF RECORD.--February 1937 to current year. Monthly contents only for some periods, published in WSP 1312.

GAGE.--Nonrecording gage. Datum of gage is 0.43 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--The reservoir is formed by a rock-faced earthfill dam 9,200 ft long. The dam was completed and storage began in September 1936. The dam and reservoir are owned and operated by the Red Bluff Water Power Control District. The water is used for power development and for irrigation from Mentone and Grandfalls. The uncontrolled emergency spillway is a cut through natural ground located to the right of right end of dam is 790 ft wide. The controlled service spillway is equipped with 12 tainter gates that are 25 by 15 ft high. Inflow is regulated by many reservoirs and diversion dams. The capacity curve is based on Geological Survey topographic map, survey of 1925. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Gage height (feet)	Capacity (acre-feet)
Top of dam .....	2,856.0	-
Crest of spillway .....	2,845.0	340,000
Top of gates (top of conservation pool) .....	2,842.0	310,000
Crest of spillway .....	2,827.0	166,500
Lowest gated outlet (invert) .....	2,764.0	3,000

COOPERATION.--Gage-height records and capacity curve were furnished by Red Bluff Water Power and Control District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 352,000 acre-ft Sept. 27, 1941, gage height, 2,846.2 ft, observed on nonrecording gage at service spillway (affected by variable drawdown due to flow through tainter gates); minimum observed, 11,080 acre-ft May 13, 1948, gage height, 2,781.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 57,900 acre-ft Mar. 6-24, gage height, 2,806.4 ft; minimum observed, 34,190 acre-ft Sept. 26-29, gage height, 2,797.9 ft.

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

2,797.0	32,300	2,803.0	47,000
2,800.0	39,000	2,807.0	60,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47300	47900	50000	52400	55100	56900	57200	49400	46100	43300	39000	36800
2	47300	47900	50300	52700	55100	57200	57200	48800	45800	43000	39000	36800
3	47300	47900	50300	52700	55100	57200	57200	48500	45500	43000	38800	36600
4	47300	47900	50300	52700	55100	57600	57200	48200	45200	42800	38800	36400
5	47300	48200	50600	53000	55100	57600	57200	48200	45200	42500	38800	36200
6	47300	48200	50600	53000	55500	57900	57200	48200	44900	42300	38500	35900
7	47300	48200	50600	53000	55500	57900	57200	48200	44900	42000	38500	35700
8	47300	48200	50600	53000	55500	57900	57600	48200	44900	42000	38500	35500
9	47300	48500	50600	53400	55500	57900	57600	47900	44900	41800	38500	35300
10	47300	48500	50900	53400	55800	57900	57600	47900	44900	41500	38500	35100
11	47300	48500	50900	53400	55800	57900	57600	47900	44600	41500	38300	35100
12	47300	48500	51200	53700	55800	57900	57600	47900	44600	41300	38300	35100
13	47300	48500	51200	53700	55800	57900	57600	47900	44600	41000	38300	35100
14	47300	48500	51200	53700	55800	57900	57600	47900	44600	41000	38000	35100
15	47300	48800	51500	53700	55800	57900	57600	47900	44300	40800	37800	35100
16	47300	48800	51500	54100	55800	57900	57600	47900	44300	40800	37600	35100
17	47600	48800	51500	54100	56200	57900	57600	47900	44300	40500	37300	35100
18	47600	48800	51800	54100	56200	57900	57600	47600	44300	40500	37100	35100
19	47600	48800	51800	54400	56200	57900	56900	47600	44300	40500	37100	35100
20	47600	48800	51800	54400	56200	57900	56200	47600	44300	40300	36800	35100
21	47600	49100	51800	54400	56200	57900	55100	47600	44000	40300	36800	34800
22	47600	49100	51800	54400	56200	57900	54400	47600	44000	40000	36800	34800
23	47600	49100	52100	54800	56200	57900	53700	47600	44000	40000	36800	34600
24	47600	49100	52100	54800	56200	57900	53000	47300	44000	39800	36800	34400
25	47600	49400	52100	54800	56200	57600	52400	47300	43800	39500	36800	34400
26	47600	49400	52100	54800	56500	57600	52100	47000	43800	39500	36800	34200
27	47600	49400	52100	55100	56500	57600	51500	47000	43800	39500	36800	34200
28	47600	49400	52400	55100	56500	57600	51200	47000	43500	39500	36800	34200
29	47600	49700	52400	55100	---	57200	50600	46700	43500	39300	36800	34200
30	47600	49700	52400	55100	---	57200	50000	46400	43500	39300	36800	34400
31	47600	---	52400	55100	---	57200	---	46400	---	39000	36800	---
MAX	47600	49700	52400	55100	56500	57900	57600	49400	46100	43300	39000	36800
MIN	47300	47900	50000	52400	55100	56900	50000	46400	43500	39000	36800	34200
(t)	+300	+2100	+2700	+2700	+1400	+700	-7200	-3600	-2900	-4500	-2200	-2400

CAL YR 1982 MAX 62500 MIN 41500 (t) -5200  
WTR YR 1983 MAX 57900 MIN 34200 (t) -12900

(t) CHANGE IN CONTENTS IN ACRE-FEET

## 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 downstream from Salt Creek (Screw Bean Arroyo), 5.9 mi northeast of Orla, and 8.5 mi downstream from Red Bluff Reservoir.

DRAINAGE AREA.--21,210 mi<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 National Geodetic Vertical Datum of 1929. Prior to Nov. 16, 1969, at site 6.9 mi downstream at datum 12.81 ft lower.

REMARKS.--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.--46 years (water years 1938-83), 162 ft<sup>3</sup>/s, 117,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft<sup>3</sup>/s Sept. 29, 1941, gage height, 20.74 ft, site and datum then in use; no flow at times in 1946 and 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 407 ft<sup>3</sup>/s Apr. 28, gage height, 6.41 ft; minimum daily, 4.8 ft<sup>3</sup>/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	17	19	24	19	16	17	168	85	20	43	6.3
2	23	17	21	24	19	15	17	125	86	46	42	17
3	20	18	23	25	19	15	17	37	87	77	41	66
4	20	18	23	25	19	16	17	37	87	84	40	70
5	19	19	20	26	18	16	17	34	71	90	38	71
6	18	19	18	24	18	16	17	11	31	94	37	72
7	17	19	18	24	18	15	17	10	30	99	12	72
8	17	19	18	24	18	16	19	10	30	101	4.9	73
9	16	19	20	24	18	17	20	11	28	104	7.2	73
10	18	19	26	22	18	16	20	11	25	88	25	73
11	17	19	30	21	17	16	18	11	24	36	19	21
12	17	19	26	20	17	16	18	11	22	36	24	7.1
13	17	20	26	20	17	16	18	12	21	36	39	6.1
14	17	19	23	20	17	17	17	12	20	36	63	5.9
15	17	19	21	20	17	17	17	12	20	37	79	5.8
16	17	18	20	19	17	16	17	13	20	37	81	6.0
17	17	18	20	19	17	16	17	13	18	37	83	5.5
18	17	17	19	19	17	17	29	13	18	38	80	4.8
19	17	17	19	19	17	17	173	13	17	38	30	5.3
20	17	17	19	20	15	17	172	13	17	39	26	13
21	17	17	18	21	15	17	169	13	17	39	9.8	49
22	17	17	19	22	15	18	169	13	17	40	7.2	50
23	17	16	19	21	15	18	169	13	16	40	6.7	50
24	17	15	18	20	15	17	167	29	17	41	6.7	51
25	17	16	18	19	15	17	167	29	17	41	6.9	52
26	17	18	18	19	15	18	167	31	17	42	6.8	52
27	18	21	19	18	15	17	168	33	16	42	6.3	53
28	17	22	20	20	16	17	178	34	17	43	6.5	55
29	17	22	20	20	---	17	169	45	17	43	6.5	56
30	18	20	20	20	---	17	169	79	17	43	6.4	49
31	18	---	23	20	---	17	---	82	---	43	6.3	---
TOTAL	557	551	641	659	473	513	2366	978	925	1630	890.2	1190.8
MEAN	18.0	18.4	20.7	21.3	16.9	16.5	78.9	31.5	30.8	52.6	28.7	39.7
MAX	29	22	30	26	19	18	178	168	87	104	83	73
MIN	16	15	18	18	15	15	17	10	16	20	4.9	4.8
AC-FT	1100	1090	1270	1310	938	1020	4690	1940	1830	3230	1770	2360
CAL YR 1982	TOTAL	15922.1	MEAN	43.6	MAX	418	MIN	5.3	AC-FT	31580		
WTR YR 1983	TOTAL	11374.0	MEAN	31.2	MAX	178	MIN	4.8	AC-FT	22560		

RIO GRANDE BASIN  
08412500 PECOS RIVER NEAR ORLA, TX -- 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: 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, Jan. 3-4, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 19,000 micromhos Apr. 10; minimum daily, 12,800 micromhos Apr. 28.

WATER TEMPERATURES: Maximum, 29.0°C July 26; minimum 0.0°C Jan. 3-4.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
DEC 15...	1520	22	17500	17500	7.6	8.0	3000	2880	750	270
MAR 09...	1450	18	16500	16400	7.6	6.0	2800	2670	660	270
APR 27...	1555	168	12900	12500	7.7	19.0	2600	2460	610	250
JUN 08...	1510	27	14500	14400	7.5	26.0	2700	2620	660	260
JUL 21...	1520	40	15000	14300	7.6	28.0	2800	2730	700	260
SEP 15...	1330	6.2	16800	15200	7.4	26.0	3300	3220	790	320

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 CAC03) (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)
DEC 15...	3200	26	48	110	2500	5200	1.2	8.6	12000
MAR 09...	2900	25	49	98	2500	4600	1.1	2.2	11000
APR 27...	2100	19	56	100	1900	3500	.80	<1.2	8480
JUN 08...	2500	22	60	100	2400	4100	.90	1.7	10000
JUL 21...	2600	22	76	97	2600	4200	.80	3.5	10500
SEP 15...	2800	22	77	79	2900	4800	1.0	3.7	11700

RIO GRANDE BASIN  
08412500 PECOS RIVER NEAR ORLA, TX -- Continued  
WATER-QUALITY RECORDS

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14200	16400	17400	14300	16600	16700	16500	12900	14000	14500	15100	16600
2	16000	16500	16600	14800	16700	16600	16300	13100	14100	14800	15600	16700
3	17700	16600	17000	18000	16800	16400	16100	13500	14200	14600	15800	16600
4	17400	16900	17200	18600	16600	16300	16400	13600	14100	14500	15700	16800
5	17000	17100	18400	17500	16700	16400	15800	13500	14300	14700	15900	16700
6	16700	17200	16000	17800	16800	16600	16300	13800	14700	14800	15800	16800
7	16600	17400	16500	17300	16900	16500	16200	14500	14500	14800	15900	16900
8	16900	17100	17000	17500	17000	16400	17300	15200	14800	14500	16000	16800
9	16800	17000	14300	17700	17000	16600	18900	15300	14700	14100	16200	16900
10	16400	17100	14700	17800	15800	16400	19000	15300	14800	14800	15900	16900
11	17700	16900	15500	17400	16300	16200	18300	15400	14900	15000	16100	17200
12	17500	17500	16000	17000	16700	16100	18000	15600	14800	15100	16000	17300
13	17000	17900	17800	16900	16600	16200	17600	15500	14700	15100	16100	17400
14	17300	17700	17600	16800	16700	16300	17200	15500	14700	15000	16200	17100
15	17600	17300	17500	16800	16600	16400	17000	15400	14600	15000	16100	16800
16	17700	17200	16700	16700	16500	16300	16800	15500	14500	15100	16000	17000
17	17500	17100	16000	16600	16500	16300	16900	15600	14600	15100	16100	17200
18	17400	17200	16100	16600	16600	16200	16600	15800	14800	15200	16200	17100
19	17200	17300	16300	16700	16500	16300	13200	15700	14900	15100	16300	17300
20	17100	17400	16400	16600	16600	16100	13000	15600	14700	15200	16300	17400
21	17000	17200	17000	17000	16400	16400	13100	15700	14600	15300	16400	17500
22	16900	17000	16800	18000	16300	16600	12900	15600	14700	15500	16500	17400
23	17000	16900	16700	18100	16500	16700	13000	15500	14700	15400	16400	17500
24	17100	16800	16900	17000	16400	16800	13100	14300	14600	15500	16400	17600
25	17000	16700	16800	17300	16500	16700	13000	14100	14900	15300	16500	17700
26	17100	16800	17000	17100	16400	16600	13000	14200	15200	15400	16600	17500
27	16900	16900	16400	17200	16600	16500	12900	14300	14900	15500	16700	17600
28	17100	18000	15500	16800	16800	16600	12800	14200	14800	15500	16600	17300
29	17000	18800	15300	16700	---	16700	13000	14000	14900	15600	16700	17400
30	16900	18300	15400	16600	---	16500	13100	13800	15000	15500	16800	17600
31	17000	---	14600	16700	---	16300	---	13600	---	15300	16800	---
MEAN	17000	17200	16400	17000	16600	16400	15400	14700	14700	15100	16200	17200
WTR YR 1983	MEAN	16200		MAX	19000		MIN	12800				

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	15.0	11.0	---	7.0	13.0	14.0	17.0	20.0	25.0	26.0	26.0
2	23.0	15.0	9.0	1.0	7.0	14.0	13.0	17.0	19.0	24.0	26.0	26.0
3	22.5	13.0	8.0	.0	7.0	15.0	14.0	15.0	19.0	24.0	26.0	23.0
4	22.0	13.0	7.0	.0	6.0	14.0	14.0	15.0	20.0	---	26.0	24.0
5	23.5	12.5	7.0	5.0	6.0	11.0	10.0	15.0	20.0	25.0	25.0	28.5
6	23.0	11.0	7.0	1.0	8.0	12.0	8.0	18.0	21.0	23.0	25.0	28.5
7	22.0	11.0	7.0	4.0	7.0	13.0	7.0	18.0	18.0	24.0	26.0	24.0
8	22.0	12.0	8.0	6.0	8.0	13.0	5.0	19.0	22.0	---	25.0	23.5
9	17.0	15.0	5.0	6.0	10.0	---	10.0	19.0	22.5	24.0	25.0	25.0
10	16.0	13.0	6.0	6.0	10.0	---	16.0	21.0	24.0	24.0	26.0	25.0
11	17.0	16.0	6.0	8.0	10.0	---	15.0	22.0	25.0	25.0	27.0	25.0
12	15.0	16.0	5.5	5.0	9.5	---	---	21.0	25.0	---	---	25.0
13	15.0	12.0	5.5	5.0	10.0	---	14.0	19.5	24.0	25.0	26.0	24.0
14	15.0	10.5	8.0	7.0	10.0	---	12.0	18.0	22.0	25.0	25.0	24.0
15	15.5	11.0	6.0	7.0	9.0	---	13.0	19.0	23.0	25.0	25.0	23.0
16	17.0	10.0	6.5	6.0	9.0	---	14.0	18.0	23.0	26.0	25.0	24.0
17	---	9.0	6.5	8.0	11.0	---	16.0	18.0	25.0	26.0	25.5	26.0
18	17.0	14.0	7.5	8.0	9.0	11.0	18.0	18.0	25.0	26.0	24.0	---
19	17.0	14.0	7.0	9.0	11.0	13.0	14.0	19.0	---	27.0	25.0	24.0
20	16.0	13.0	5.5	8.0	11.0	11.0	14.0	20.0	26.0	27.0	26.0	22.0
21	14.0	13.0	7.0	6.0	9.0	10.0	---	19.0	25.0	25.0	25.5	19.0
22	14.0	13.0	9.0	4.0	10.0	10.0	---	---	25.0	25.0	26.0	18.0
23	14.0	13.0	10.0	5.0	11.0	12.0	16.0	23.0	25.0	25.0	26.0	20.0
24	15.0	9.0	9.0	7.0	13.0	15.0	15.0	23.0	25.0	---	25.5	21.0
25	17.0	---	---	6.0	12.0	16.0	15.5	22.0	23.0	27.0	26.0	20.0
26	15.0	7.0	---	6.0	10.0	11.0	---	22.0	25.0	29.0	26.0	21.0
27	16.0	5.0	6.0	6.0	10.5	12.0	17.5	22.0	24.0	26.0	26.0	21.0
28	15.0	7.0	4.0	7.5	12.0	15.0	16.0	22.5	23.0	26.0	26.0	21.0
29	13.0	11.0	4.0	7.0	---	---	18.0	22.0	25.0	27.0	26.0	22.0
30	13.0	13.0	4.0	8.0	---	---	18.0	20.0	28.0	26.0	25.0	21.0
31	14.5	---	---	11.0	---	17.0	---	19.0	---	26.0	26.0	---
MEAN	17.5	12.0	7.0	6.0	9.5	13.0	13.5	19.5	23.0	25.5	25.5	23.5
WTR YR 1983	MEAN	16.5		MAX	29.0		MIN	.0				

## MIMBRES RIVER BASIN

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 downstream from Willow Springs Canyon, 0.3 mi east of Mimbres, 1.1 mi downstream from Shepard Canyon, 2.5 mi downstream from Bear Canyon and at mile 73.1.

DRAINAGE AREA.--184 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,920 ft, from topographic map.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--5 years, 16.8 ft<sup>3</sup>/s, 12,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft<sup>3</sup>/s Dec. 18, 1978, gage height, 9.00 ft from floodmarks, from rating curve extended above 450 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 0.22 ft<sup>3</sup>/s Aug. 22, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 143 ft<sup>3</sup>/s at 1015 hours Apr. 1, gage height, 4.00 ft, no peak above base of 200 ft<sup>3</sup>/s; minimum, 0.94 ft<sup>3</sup>/s Oct. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	4.3	7.0	5.8	5.8	41	133	64	18	5.4	11	3.0
2	1.6	4.3	6.3	5.6	5.6	48	117	56	14	5.3	9.1	2.9
3	1.1	4.3	6.2	5.6	6.3	64	103	47	14	5.8	7.0	3.0
4	1.2	4.4	6.1	5.6	7.4	110	94	41	15	5.7	6.5	2.9
5	2.6	5.2	5.9	5.6	8.2	96	80	39	14	5.0	5.7	2.7
6	3.6	6.6	6.1	5.3	9.1	85	66	38	15	4.9	4.0	2.6
7	3.7	6.2	5.9	5.2	11	88	57	40	13	4.5	4.1	2.6
8	3.8	6.1	5.9	5.2	16	91	46	44	12	4.7	4.0	2.8
9	3.8	6.6	7.4	5.1	29	89	39	39	11	4.7	3.9	2.6
10	3.7	6.4	10	4.8	42	95	37	40	11	4.9	3.8	2.6
11	3.8	7.1	9.0	4.8	32	100	33	43	11	5.0	12	2.5
12	3.8	7.6	7.5	4.8	37	113	30	41	12	5.1	9.7	5.5
13	3.8	7.0	7.1	4.8	34	115	30	37	11	5.6	7.2	3.6
14	3.5	6.5	6.9	4.8	38	109	28	33	11	5.9	7.2	4.5
15	3.1	6.4	6.6	4.9	33	112	29	32	10	5.9	6.5	4.5
16	2.7	6.6	6.3	5.4	33	95	32	31	10	6.0	4.8	5.0
17	2.5	6.8	6.3	5.6	39	77	32	30	9.1	5.9	4.0	5.1
18	2.3	6.5	6.3	5.6	45	65	35	27	8.4	5.8	3.8	5.7
19	2.3	6.0	6.2	5.2	58	70	40	25	8.4	4.7	3.1	6.3
20	2.4	5.4	5.9	5.5	51	56	46	26	7.9	4.9	2.7	6.0
21	2.5	5.4	5.8	5.5	53	51	52	26	7.7	5.1	2.9	5.7
22	2.8	6.2	5.7	5.2	50	51	53	26	7.9	4.2	2.9	5.5
23	3.2	6.1	6.2	5.2	50	50	54	22	7.8	3.8	2.6	5.5
24	3.4	5.9	6.3	5.2	50	48	59	21	7.6	7.3	2.6	6.1
25	3.5	5.9	6.3	5.2	50	54	69	21	7.1	12	2.7	5.7
26	3.5	5.9	6.3	5.4	51	51	77	21	6.5	11	3.0	5.3
27	3.5	5.9	6.2	5.6	46	57	76	23	6.1	12	3.0	5.7
28	3.5	5.9	5.9	5.6	42	64	75	22	5.4	10	3.0	6.3
29	3.5	5.9	5.9	5.6	---	71	71	23	5.3	9.4	3.2	6.5
30	3.5	5.9	5.9	5.8	---	82	67	22	5.1	11	3.2	29
31	4.1	---	5.9	5.6	---	113	---	20	---	11	3.1	---
TOTAL	94.5	179.3	201.3	165.1	932.4	2411	1760	1020	302.3	202.5	152.3	157.7
MEAN	3.05	5.98	6.49	5.33	33.3	77.8	58.7	32.9	10.1	6.53	4.91	5.26
MAX	4.1	7.6	10	5.8	58	115	133	64	18	12	12	29
MIN	1.1	4.3	5.7	4.8	5.6	41	28	20	5.1	3.8	2.6	2.5
AC-FT	187	356	399	327	1850	4780	3490	2020	600	402	302	313
CAL YR 1982	TOTAL	2044.13	MEAN	5.60	MAX	30	MIN	.67	AC-FT	4050		
WTR YR 1983	TOTAL	7578.40	MEAN	20.8	MAX	133	MIN	1.1	AC-FT	15030		



RIO GRANDE BASIN  
08477110 MIMBRES RIVER AT MIMBRES, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 AS CAC03 (00900)
NOV											
16...	1600	6.6	260	273	8.5	8.5	11.5	12.0	.70	7.6	120
FEB											
02...	0900	5.7	240	259	8.1	8.2	-4.0	2.5	.70	12.1	110
MAR											
24...	1145	48	190	184	8.0	8.2	14.0	10.5	2.0	9.4	77
MAY											
19...	0900	26	170	204	8.3	8.3	13.0	10.0	2.0	12.0	80
JUL											
15...	1000	5.8	230	263	8.5	8.7	25.0	18.0	.90	9.3	110
SEP											
22...	1245	5.6	250	258	8.8	8.9	30.0	22.0	--	9.1	120

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)
NOV											
16...	0	0	35	7.2	12	.5	2.9	--	--	--	132
FEB											
02...	0	0	32	7.1	11	.5	2.5	--	--	--	122
MAR											
24...	11	11	22	5.3	7.3	.4	2.1	--	--	--	66
MAY											
19...	4	4	23	5.4	8.3	.4	2.1	92	.0	75	77
JUL											
15...	0	0	33	7.1	11	.5	2.9	--	--	--	124
SEP											
22...	0	0	35	7.4	12	.5	3.0	100	23	120	128

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 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										
16...	10	1.8	.20	52	274	201	<.10	.080	.060	.060
FEB										
02...	11	3.5	.30	49	186	190	<.10	<.060	.060	.030
MAR										
24...	21	2.5	.20	38	142	139	.28	.300	.100	.120
MAY										
19...	18	2.5	.20	44	152	149	.10	.060	.080	.070
JUL										
15...	15	3.2	.30	49	194	196	<.10	.090	.080	.060
SEP										
22...	12	1.9	.30	53	193	221	<.10	.090	.060	.040

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV											
16...	1600	<10	1	0	0	<1	<1	0	2	0	<1
MAY											
19...	0900	30	1	0	0	<1	<1	0	<1	20	<1
JUL											
15...	1000	<10	1	0	0	<1	<1	0	4	0	<1
SEP											
22...	1245	20	1	0	0	<1	<1	0	2	10	3

RIO GRANDE BASIN  
08477110 MIMBRES RIVER AT MIMBRES, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 16...	0	3	.0	<10	2	<1	<1	160	10	20
MAY 19...	0	7	.0	<10	3	<1	<1	120	6.0	0
JUL 15...	10	3	.0	<10	<1	<1	<1	160	7.0	0
SEP 22...	0	4	.0	<10	1	<1	<1	160	9.0	0

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 16...	K37	120
FEB 02...	27	54
MAR 24...	K8	K240
MAY 19...	33	98
SEP 22...	K110	100

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 16...	1600	6.6	12.0	2	.04	94
FEB 02...	0900	5.7	2.5	6	.09	74
MAR 24...	1145	48	10.5	11	1.4	84
MAY 19...	0900	26	10.0	6	.42	69
JUL 15...	1000	5.8	18.0	11	.17	74
SEP 22...	1245	5.6	22.0	15	.23	76

## TULAROSA VALLEY BASIN

365

08481500 TULAROSA CREEK NEAR BENT, NM  
(National stream-quality accounting network station)

LOCATION.--Lat 33°08'41", long 105°53'50", in SE¼NW¼ sec.32, T.13 S., R.11 E., Otero County, Hydrologic Unit 13050003, on right bank 50 ft downstream from old U.S. Highway 70 bridge, 2.6 mi west of Bent, and 8.5 mi northeast of Tularosa, and at mile 19.4.

DRAINAGE AREA.--120 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1947 to current year. Prior to October 1982 published as "Rio Tularosa near Bent".

REVISED RECORDS.--WSP 1312: 1949(M).

GAGE.--Water-stage recorder. Altitude of gage is 5,450 ft, from topographic map.

REMARKS.--Water-discharge records fair. Diversion for irrigation of about 1,000 acres 1959 determination, above station.

AVERAGE DISCHARGE.--35 years, (1949-83), 10.2 ft<sup>3</sup>/s, 7,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 4,280 ft<sup>3</sup>/s June 18, 1965, gage height, 5.02 ft, from rating curve extended above 160 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow May 14, 1955, result of unusual regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood probably occurred Sept. 3, 1938, when a peak of 9,640 ft<sup>3</sup>/s was computed for station approximately 6 mi downstream near Tularosa. Another flood may have occurred July 2, 1914.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base 125 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 7	1430	173	3.08	Sept. 30	1545	*463	3.36

Minimum discharge, 3.8 ft<sup>3</sup>/s July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	11	14	12	15	15	12	15	10	7.1	18
2	10	13	11	13	13	15	15	15	15	10	8.4	17
3	11	14	11	13	13	15	15	15	15	8.2	8.8	14
4	13	13	12	12	14	16	16	14	14	8.6	9.2	11
5	13	12	12	12	14	16	15	14	11	9.9	9.0	7.1
6	12	12	12	13	13	15	15	13	12	10	9.5	7.5
7	13	12	12	13	13	15	15	13	13	10	9.7	21
8	12	12	11	13	13	14	16	11	17	9.9	10	11
9	12	13	13	13	13	15	16	12	17	9.7	10	11
10	12	15	14	13	13	15	13	14	16	9.8	10	12
11	12	15	13	12	12	15	14	15	15	9.6	11	12
12	12	16	13	13	12	15	16	13	15	9.4	11	14
13	13	15	13	13	12	15	16	13	14	9.6	11	14
14	13	15	13	15	13	14	16	12	16	9.6	9.3	14
15	13	15	13	15	15	17	16	12	17	9.3	11	14
16	14	15	13	14	15	17	16	12	18	8.7	11	14
17	15	16	15	14	16	18	16	14	18	6.0	13	14
18	14	15	15	15	15	18	15	14	14	6.3	14	13
19	14	15	16	15	15	20	14	14	10	7.1	13	13
20	13	15	14	15	15	16	15	14	10	7.1	13	13
21	13	15	15	13	15	17	15	15	11	7.8	13	11
22	12	14	15	13	16	20	15	11	13	8.3	12	11
23	12	11	20	14	15	20	14	10	13	8.0	12	11
24	12	13	19	13	14	18	11	12	12	7.2	14	11
25	12	11	19	13	13	19	11	14	12	7.0	14	9.2
26	12	11	18	13	17	18	11	14	11	7.4	13	11
27	12	12	16	13	15	14	14	14	9.9	7.0	16	12
28	13	12	16	13	15	14	15	15	10	7.1	14	13
29	13	12	15	13	---	16	14	15	10	7.0	15	12
30	13	11	14	13	---	15	13	16	10	6.8	16	26
31	14	---	15	13	---	15	---	16	---	5.8	17	---
TOTAL	393	404	439	414	391	502	438	418	403.9	258.2	365.0	391.8
MEAN	12.7	13.5	14.2	13.4	14.0	16.2	14.6	13.5	13.5	8.33	11.8	13.1
MAX	15	16	20	15	17	20	16	16	18	10	17	26
MIN	10	11	11	12	12	14	11	10	9.9	5.8	7.1	7.1
AC-FT	780	801	871	821	776	996	869	829	801	512	724	777

CAL YR 1982 TOTAL 4646.7 MEAN 12.7 MAX 20 MIN 5.4 AC-FT 9220  
WTR YR 1983 TOTAL 4817.9 MEAN 13.2 MAX 26 MIN 5.8 AC-FT 9560

TULAROSA VALLEY BASIN  
08481500 RIO TULAROSA NEAR BENT, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)
NOV 09...	1530	13	1200	1250	8.9	7.9	15.0	11.5	.50	--
DEC 14...	1300	14	1400	1440	8.4	7.8	8.0	7.0	1.9	10.7
FEB 23...	1400	15	1400	1270	7.9	7.9	16.5	11.0	14	10.4
MAY 25...	1500	14	1230	1270	8.1	7.8	27.0	19.5	20	7.8
JUL 18...	1300	4.6	1300	1380	--	7.9	36.0	21.5	5.4	7.1
SEP 20...	1300	14	1150	1190	7.8	7.9	19.0	16.0	50	8.0

DATE	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM 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)
NOV 09...	670	479	479	180	54	42	.7	1.4	196	470
DEC 14...	760	562	562	210	58	51	.8	1.4	202	510
FEB 23...	710	521	521	190	57	44	.7	1.3	189	500
MAY 25...	680	478	478	180	55	42	.7	1.1	201	450
JUL 18...	720	538	538	190	59	50	.8	1.5	183	530
SEP 20...	670	448	448	180	52	41	.7	1.6	219	440

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 09...	58	.50	14	967	940	.39	<.060	.030	<.010
DEC 14...	61	.40	14	995	1030	--	--	--	--
FEB 23...	61	.40	13	975	980	.41	.070	.030	.040
MAY 25...	57	.50	14	996	923	.33	.060	.040	.030
JUL 18...	66	.50	15	1080	1020	.31	.060	.030	.020
SEP 20...	54	.50	15	936	918	.44	.140	.050	.010

TULAROSA VALLEY BASIN  
08481500 RIO TULAROSA NEAR BENT, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 09...	1530	20	1	0	0	1	<1	0	1	10	2
MAY 25...	1500	10	<1	0	0	<1	<1	0	1	20	2
JUL 18...	1300	<10	<1	0	0	<1	<1	0	2	10	1
SEP 20...	1300	30	1	0	0	<1	<1	0	2	40	2

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 09...	30	29	.0	<10	<1	1	<1	2300	<6.0	30
MAY 25...	30	15	.0	<10	1	1	<1	2300	<6.0	0
JUL 18...	30	16	.0	<10	1	1	<1	2500	<6.0	30
SEP 20...	30	48	1.0	<10	2	1	<1	2200	<6.0	370

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
DEC 14...	K12	K32
FEB 23...	K2	38
MAY 25...	90	580
JUL 18...	310	490
SEP 20...	470	1700

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
DEC 14...	1300	14	7.0	77	2.9	73
FEB 23...	1400	15	11.0	123	5.0	73
MAY 05...	1525	13	17.0	51	1.8	83
MAY 25...	1500	14	19.5	70	2.6	90
JUL 18...	1300	4.6	21.5	30	.37	44
SEP 20...	1300	14	16.0	1160	44	47

## 08484500 LA LUZ CREEK AT LA LUZ, NM

LOCATION.--Lat 32°58'56", long 105°55'30", in SW¼NE¼ sec.25, T.15 S., R.10 E., Otero County, Hydrologic Unit 13050003, on right bank retaining wall of old diversion dam, 200 ft downstream of low-water crossing of county road, and 1.0 mi east of La Luz.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Current year. Records for November 1931 to September 1932 published in WSP 733, are unreliable and should not be used.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water stage recorder. Altitude of gage 4870 ft, from topographic map.

REMARKS.--Records fair. Diversions above station for municipal supply of Alamogordo. Several observations of water temperature were made during the year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 437 ft<sup>3</sup>/s at 1530 hours Sept. 29, gage height, 4.19 ft, no other peaks above base of 250 ft<sup>3</sup>/s; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	.95	5.5	7.7	1.4	6.6	1.1	2.0	.59	.07	.33	3.5
2	9.1	1.1	5.2	2.6	1.5	6.7	1.0	2.2	.48	.05	.81	2.5
3	8.8	1.1	5.2	3.2	1.6	6.9	.89	2.2	.50	.00	.91	1.1
4	8.6	1.2	5.2	3.2	2.8	7.1	1.7	2.2	.50	.00	.86	2.0
5	8.3	1.9	4.9	2.2	2.1	4.8	1.6	2.2	.46	.00	.90	1.6
6	8.6	2.7	4.9	2.1	2.1	4.3	1.6	2.9	.49	.00	1.0	1.4
7	8.3	2.8	5.2	2.2	2.0	4.4	2.0	1.4	.51	.00	1.1	8.3
8	7.7	2.0	4.9	2.2	2.1	4.6	2.2	.79	.41	.00	1.1	.88
9	7.3	2.1	8.5	2.1	2.1	4.7	3.0	1.6	.28	.00	1.2	1.0
10	7.3	3.3	4.6	3.5	2.3	4.5	6.2	.61	.12	.00	1.4	1.0
11	7.2	3.4	2.9	5.2	4.7	3.0	6.1	.54	.06	.00	1.2	1.0
12	7.9	3.5	3.7	5.2	6.7	3.0	6.2	.47	.03	.00	1.7	1.0
13	8.2	3.6	3.7	5.2	6.8	3.0	5.7	.47	.02	.00	2.0	1.0
14	7.1	3.7	4.6	3.5	7.1	2.9	4.0	.41	.00	.00	1.9	4.0
15	3.2	3.9	5.8	1.9	6.9	2.9	1.3	.41	.32	.00	1.7	4.0
16	3.8	4.3	5.9	1.8	6.9	2.8	1.3	.35	.36	.00	1.6	4.0
17	3.9	4.8	6.1	1.7	7.0	3.0	1.2	.70	.26	.00	1.9	4.0
18	3.9	5.3	6.0	1.7	7.0	3.0	1.3	.79	.27	.00	.39	4.0
19	3.8	4.4	6.0	1.6	5.9	3.5	1.7	.79	.17	.00	.09	5.0
20	4.1	4.4	6.0	2.2	2.5	3.3	5.0	.79	.12	.22	.06	.15
21	3.2	4.5	5.9	1.9	2.4	3.4	6.6	.79	.17	.17	.07	.13
22	1.4	3.5	5.9	2.0	2.5	3.4	1.9	.70	.34	.62	.04	.20
23	1.4	1.7	6.3	1.8	2.4	5.4	1.7	.54	.43	.56	.09	.27
24	1.4	1.7	6.2	4.3	2.3	6.6	1.3	.55	.59	.29	.11	.31
25	1.2	1.7	5.7	6.2	2.7	6.8	1.6	.52	.42	.22	.12	.31
26	.93	1.8	6.0	6.2	5.7	6.9	2.3	.67	.35	.14	.13	.35
27	.92	1.8	4.8	3.9	6.9	5.6	2.3	.63	.33	.10	.15	.47
28	.97	1.8	2.6	2.2	6.9	3.1	2.0	.70	.35	.13	3.1	8.3
29	1.0	1.7	3.1	2.1	---	2.7	2.4	.72	.19	.13	2.8	23
30	1.0	3.5	4.3	2.1	---	4.0	2.2	.74	.07	.12	3.4	5.4
31	1.0	---	9.0	1.9	---	3.2	---	.77	---	.31	3.0	---
TOTAL	151.52	84.15	164.6	95.6	113.3	136.1	79.39	31.15	9.19	3.13	35.16	90.17
MEAN	4.89	2.81	5.31	3.08	4.05	4.39	2.65	1.00	.31	.10	1.13	3.01
MAX	10	5.3	9.0	7.7	7.1	7.1	6.6	2.9	.59	.62	3.4	23
MIN	.92	.95	2.6	1.6	1.4	2.7	.89	.35	.00	.00	.04	.13
AC-FT	301	167	326	190	225	270	157	62	18	6.2	70	179

WTR YR 1983 TOTAL 993.46 MEAN 2.72 MAX 23 MIN .00 AC-FT 1970

## SAN JUAN RIVER BASIN

09346400 SAN JUAN RIVER NEAR CARRACAS, CO

LOCATION.--Lat 37°00'49", long 107°18'42", in SE¼SW¼ sec.17, T.32 N., R.4 W., Archuleta County, Hydrologic Unit 14080101, on right bank just upstream from flow line of Navajo Reservoir, 3 mi northwest of Carracas, 7.2 mi upstream from Piedra River, and at mile 332.8.

DRAINAGE AREA.--1,230 mi<sup>2</sup>, approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,090 ft, from river-profile map.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 11,000 acres 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, 457,900 acre-ft/yr prior to completion of Azotea tunnel.

13 years (water years 1971-83), 581 ft<sup>3</sup>/s, 420,900 acre-ft/yr since completion of Azotea tunnel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft<sup>3</sup>/s Sept. 6, 1970, gage height, 8.34 ft from rating curve extended above 6,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, about 5 ft<sup>3</sup>/s Dec. 10, 1961, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911; June 29, 1927.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
May 29	0800	*5310	6.54	June 20	0830	4490	6.16

Minimum daily discharge, 153 ft<sup>3</sup>/s Sept. 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1550	296	300	220	180	500	985	1300	3980	1960	427	300
2	1000	316	245	220	180	600	788	1140	3950	1840	480	279
3	838	304	253	210	170	496	809	913	3410	1780	657	271
4	747	283	238	210	180	570	650	913	3240	1780	644	260
5	669	287	240	220	190	496	496	1040	3190	1820	657	256
6	564	283	240	220	180	427	524	1180	2760	1700	760	235
7	512	283	240	230	180	469	496	1000	2400	1650	882	214
8	480	287	260	230	190	535	485	1130	2490	1500	747	245
9	438	351	280	220	190	524	463	1420	2310	1370	582	300
10	412	448	300	200	180	600	576	1960	2090	1240	518	245
11	402	485	320	190	180	740	676	2020	2220	1120	480	218
12	407	351	290	200	170	845	637	1580	2760	945	463	204
13	393	347	270	200	180	921	637	1460	2150	868	402	192
14	365	329	240	190	190	1040	625	1290	1510	781	402	182
15	351	300	230	190	200	1060	501	1190	1430	650	480	207
16	342	308	230	190	210	714	518	1030	1590	607	427	198
17	334	308	240	190	210	676	625	913	2060	594	384	185
18	316	320	250	190	220	689	945	795	2540	564	365	170
19	304	329	230	190	220	650	1420	795	3260	553	365	167
20	291	398	230	190	220	594	1650	802	3530	512	402	170
21	283	347	230	190	220	535	1870	823	3360	507	360	167
22	275	320	230	190	240	547	1690	905	3220	490	325	165
23	271	312	270	180	260	524	1410	1210	2820	490	304	165
24	268	304	250	160	300	507	1590	1760	2850	524	291	159
25	260	291	230	170	370	553	1930	2440	2880	453	402	156
26	264	283	220	170	420	558	1950	2980	2620	474	453	156
27	393	287	240	170	420	496	1630	3530	2660	427	432	156
28	393	283	250	180	440	529	1300	4060	2310	458	398	153
29	316	275	230	180	---	529	1520	4670	2080	417	351	153
30	300	287	230	180	---	644	1330	4020	2080	402	374	153
31	300	---	230	180	---	953	---	4210	---	402	329	---
TOTAL	14038	9602	7736	6050	6490	19521	30726	54479	79750	28878	14543	6081
MEAN	453	320	250	195	232	630	1024	1757	2658	932	469	203
MAX	1550	485	320	230	440	1060	1950	4670	3980	1960	882	300
MIN	260	275	220	160	170	427	463	795	1430	402	291	153
AC-FT	27840	19050	15340	12000	12870	38720	60950	108100	158200	57280	28850	12060

CAL YR 1982	TOTAL	270587	MEAN 741	MAX 3260	MIN 120	AC-FT 536700
WTR YR 1983	TOTAL	277894	MEAN 761	MAX 4670	MIN 153	AC-FT 551200

## 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 downstream from Ignacio Creek, 5.2 mi northeast of Arboles Post Office, and 8 mi upstream from mouth.

DRAINAGE AREA.--629 mi<sup>2</sup>.

PERIOD OF RECORD.-- August 1962 to current year. Gage operated 1895-1899, 1910-1927 at a site 7.5 mi downstream at altitude 6,000 ft. Low flow records probably not equivalent.

GAGE.--Water-stage recorder. Datum of gage is 6,147.52 ft National Geodetic Vertical Datum of 1929, from Colorado State Highway Department bench mark.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 2,800 acres above station. Several observations of specific conductance and water temperature were obtained and are published in Water Resources Data for Colorado.

AVERAGE DISCHARGE.--21 years, 380 ft<sup>3</sup>/s, 275,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,370 ft<sup>3</sup>/s Sept. 6, 1970, gage height, 6.38 ft recorded, 7.55 ft from floodmarks, from rating curve extended above 4,400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 11 ft<sup>3</sup>/s Dec. 9, 1963, Oct. 1, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Apr. 26	0130	2740	4.15	May 28	0430	*2880	4.24
May 11	0330	2400	3.93	June 20	0330	2140	3.74

Minimum daily discharge, 92 ft<sup>3</sup>/s Sept. 24-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	158	146	135	110	312	656	1500	2530	1140	229	174
2	800	155	132	130	110	360	607	1280	2500	1050	326	164
3	650	135	138	128	104	335	670	1110	2140	1000	345	164
4	500	130	140	130	113	435	582	1190	1890	980	345	155
5	470	132	149	130	118	385	492	1390	1860	940	455	152
6	425	128	146	132	110	326	470	1520	1710	884	450	138
7	385	125	140	140	106	308	405	1310	1650	828	642	130
8	360	122	152	138	115	330	370	1460	1720	764	475	152
9	321	146	160	132	115	350	355	1820	1650	691	370	152
10	290	221	180	120	113	420	395	2190	1500	621	303	132
11	277	253	190	115	106	522	445	2210	1590	558	285	132
12	265	198	180	120	104	614	455	1790	1780	498	261	128
13	261	177	160	120	110	740	470	1650	1550	445	221	118
14	237	167	150	115	120	820	455	1470	1270	415	241	115
15	229	152	146	115	120	876	395	1310	1250	395	326	115
16	225	152	143	118	125	607	425	1190	1350	340	261	113
17	217	155	149	115	130	552	480	1080	1420	316	221	106
18	205	164	152	115	130	522	712	924	1660	308	202	104
19	194	164	140	115	138	440	1100	900	1970	281	191	110
20	180	237	140	113	135	380	1410	892	2010	253	205	108
21	170	194	143	113	135	380	1430	844	1940	229	188	99
22	161	184	140	113	149	395	1420	990	1880	253	170	97
23	158	170	161	106	174	395	1490	1310	1820	257	155	94
24	155	161	152	104	194	380	1800	1760	1960	269	149	92
25	152	152	135	104	245	385	2220	2080	1970	273	170	92
26	149	146	138	106	265	370	2230	2300	1660	355	198	92
27	217	155	146	104	253	360	2010	2530	1720	277	170	94
28	198	146	146	108	277	395	1840	2690	1440	261	213	110
29	161	140	140	108	---	370	1940	2690	1270	225	202	108
30	155	146	135	110	---	430	1770	2640	1210	209	205	466
31	158	---	138	110	---	621	---	2690	---	205	191	---
TOTAL	9325	4865	4607	3662	4024	14115	29499	50710	51870	15520	8365	4006
MEAN	301	162	149	118	144	455	983	1636	1729	501	270	134
MAX	1000	253	190	140	277	876	2230	2690	2530	1140	642	466
MIN	149	122	132	104	104	308	355	844	1210	205	149	92
AC-FT	18500	9650	9140	7260	7980	28000	58510	100600	102900	30780	16590	7950

CAL YR 1982	TOTAL	177587	MEAN 487	MAX 2710	MIN 60	AC-FT 352200
WTR YR 1983	TOTAL	200568	MEAN 550	MAX 2690	MIN 92	AC-FT 397800



## 09354500 LOS PINOS RIVER AT LA BOCA, CO

LOCATION.--Lat 37°00'34", long 107°35'56", in NE¼NW¼ sec.22, T.32 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on downstream end of right abutment of the Denver & Rio Grande Western Railroad Co. bridge, at southeast edge of La Boca, 0.1 mi upstream from Spring Creek, and 13 mi upstream from mouth.

DRAINAGE AREA.--510 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--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 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 upstream since April 1941. Diversions for irrigation of about 33,000 acres above station. Several observations of specific conductance and water temperature were obtained and are published in Water Resources Data for Colorado.

AVERAGE DISCHARGE.--33 years, 219 ft<sup>3</sup>/s, 158,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft<sup>3</sup>/s July 27, 1957, gage height, 8.95 ft, from rating curve extended above 5,100 ft<sup>3</sup>/s; minimum determined, 5.6 ft<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, 1,400 ft<sup>3</sup>/s at 1700 hours June 25, gage height, 5.88 ft; minimum daily, 130 ft<sup>3</sup>/s May 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234	380	454	170	160	375	355	544	1010	490	380	290
2	218	338	424	160	157	342	314	472	876	586	406	298
3	218	412	400	150	154	310	314	430	996	574	400	290
4	226	418	395	145	163	442	294	430	988	562	412	290
5	278	418	395	157	160	365	274	460	1000	478	406	286
6	286	424	390	157	157	278	294	466	1080	282	412	270
7	290	424	395	148	154	270	322	350	1310	266	412	282
8	298	400	406	145	157	270	314	350	1340	286	380	365
9	360	442	472	142	157	258	314	375	1280	598	350	234
10	430	442	550	140	154	270	322	418	1270	604	322	206
11	472	460	520	150	154	290	334	365	1280	395	326	206
12	550	436	508	157	151	302	338	298	1280	380	342	190
13	550	412	436	154	151	338	350	250	1200	390	326	178
14	562	406	418	154	157	355	350	202	980	360	330	190
15	538	400	390	154	157	390	342	154	892	298	326	202
16	400	395	390	151	166	310	342	130	640	286	290	187
17	350	395	390	154	175	286	342	154	448	278	266	181
18	365	406	385	163	181	298	385	136	430	282	270	172
19	262	424	380	163	187	302	472	139	424	274	330	172
20	246	442	375	160	190	282	550	287	430	286	290	190
21	238	430	375	160	206	266	532	580	418	274	294	178
22	246	424	370	157	234	270	508	788	424	290	290	190
23	294	418	385	157	274	290	502	924	442	338	278	206
24	360	406	375	157	290	278	592	916	592	322	274	234
25	370	406	365	157	318	290	676	900	1030	418	278	230
26	390	400	365	157	314	330	700	892	836	640	290	222
27	442	400	360	160	270	310	646	884	688	490	294	250
28	395	406	346	163	326	290	580	868	628	400	294	234
29	390	412	342	166	---	282	616	884	484	385	290	258
30	187	430	342	169	---	314	592	916	466	406	298	623
31	148	---	178	166	---	375	---	1060	---	385	286	---
TOTAL	10593	12406	12276	4843	5474	9628	12866	16022	25162	12303	10142	7304
MEAN	342	414	396	156	196	311	429	517	839	397	327	243
MAX	562	460	550	170	326	442	700	1060	1340	640	412	623
MIN	148	338	178	140	151	258	274	130	418	266	266	172
AC-FT	21010	24610	24350	9610	10860	19100	25520	31780	49910	24400	20120	14490

CAL YR 1982 TOTAL 106514 MEAN 292 MAX 1240 MIN 60 AC-FT 211300  
WTR YR 1983 TOTAL 139019 MEAN 381 MAX 1340 MIN 130 AC-FT 275700

## 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 upstream from mouth, and 0.2 mi east of La Boca.

DRAINAGE AREA.--58 mi<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, from topographic map.

REMARKS.--Records good except those for winter period, 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.--33 years, 30.9 ft<sup>3</sup>/s, 22,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft<sup>3</sup>/s Sept. 6, 1970, gage height, 4.62 ft, from rating curve extended above 160 ft<sup>3</sup>/s on basis of field estimate of peak flow; maximum gage height, 5.98 ft Mar. 9, 1960 (backwater from ice); minimum discharge, 0.6 ft<sup>3</sup>/s Nov. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Mar. 25	2000	180	1.38	July 26	0100	454	2.18
June 25	1600	434	2.15	Sept. 30	1800	*590	2.50

Minimum daily discharge, 4.4 ft<sup>3</sup>/s Nov. 15, 25-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	5.6	26	7.5	7.0	72	25	15	25	88	82	82
2	34	5.6	8.5	7.5	7.0	57	11	11	59	90	98	82
3	34	4.8	6.9	7.5	6.5	48	11	8.5	67	90	100	76
4	34	4.8	7.5	7.5	7.0	50	8.5	11	66	82	80	82
5	37	4.8	8.0	7.5	7.5	50	7.8	12	66	82	82	82
6	36	4.8	7.5	8.0	7.0	33	10	13	66	80	80	78
7	34	4.8	7.5	8.0	7.0	19	7.8	68	59	80	76	84
8	34	5.2	8.0	8.0	7.8	14	7.4	62	57	80	82	104
9	37	10	9.0	7.5	7.4	8.5	6.5	25	55	82	72	80
10	36	8.5	10	7.0	7.5	7.8	7.4	25	59	82	71	80
11	36	8.5	10	7.0	7.0	9.2	9.2	26	62	78	71	80
12	36	6.5	10	7.0	7.0	10	9.2	26	66	78	71	82
13	39	5.2	9.5	7.0	7.5	11	13	32	66	78	72	80
14	37	5.2	8.5	7.0	7.8	16	15	30	60	78	74	80
15	32	4.4	8.5	7.0	8.0	37	11	37	60	80	76	78
16	33	4.8	8.5	7.0	9.5	15	14	30	57	76	72	78
17	32	5.2	8.5	7.0	11	12	11	37	60	76	74	78
18	30	6.5	8.5	7.0	11	20	15	54	60	76	76	80
19	30	6.9	8.0	7.0	13	34	22	57	57	74	102	82
20	34	6.5	8.0	7.0	14	22	26	64	57	76	80	88
21	30	5.6	8.0	7.0	18	13	26	64	55	76	80	86
22	27	5.2	8.5	7.0	30	14	18	59	55	78	76	90
23	32	4.8	9.0	7.0	45	20	23	59	57	82	72	92
24	19	4.8	8.5	6.5	48	23	29	59	67	78	76	96
25	6.9	4.4	8.0	6.5	59	67	32	69	190	126	84	94
26	6.5	4.4	8.0	6.5	54	55	30	64	108	197	96	94
27	11	4.4	8.5	6.5	40	17	22	66	92	100	82	104
28	6.9	4.4	8.5	6.5	64	14	18	67	100	88	84	96
29	6.1	4.8	8.0	7.0	---	11	22	71	92	84	90	94
30	6.1	8.8	8.0	7.0	---	12	19	76	90	84	86	279
31	6.1	---	8.0	7.0	---	29	---	76	---	82	82	---
TOTAL	851.6	170.2	277.9	220.5	525.5	820.5	486.8	1373.5	2090	2681	2499	2761
MEAN	27.5	5.67	8.96	7.11	18.8	26.5	16.2	44.3	69.7	86.5	80.6	92.0
MAX	39	10	26	8.0	64	72	32	76	190	197	102	279
MIN	6.1	4.4	6.9	6.5	6.5	7.8	6.5	8.5	25	74	71	76
AC-FT	1690	338	551	437	1040	1630	966	2720	4150	5320	4960	5480

CAL YR 1982	TOTAL	12921.1	MEAN 35.4	MAX 181	MIN 3.0	AC-FT 25630
WTR YR 1983	TOTAL	14757.5	MEAN 40.4	MAX 279	MIN 4.4	AC-FT 29270

## 09355100 NAVAJO RESERVOIR NEAR ARCHULETA, NM

LOCATION.--Lat 36°48'28", long 107°36'31", in SW¼SE¼ sec.18, T.30 N., R.7 W., San Juan County, Hydrologic Unit 14080101, in gate shaft of outlet works structure near right abutment of Navajo Dam on San Juan River, 5.5 mi east of Archuleta, 33 mi east of Farmington, and at mile 298.6.

DRAINAGE AREA.--3,230 mi<sup>2</sup>, approximately.

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

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1968 dead storage included.

REMARKS.-- Reservoir is formed by earth-rock-fill dam, completed in June 1963; storage began June 27, 1962. Capacity, 1,708,600 acre-ft between elevation 5,720 ft upstream toe of dam and 6,085 ft crest of spillway. Usable capacity 1,696,000 acre-ft above elevation 5,774.9 ft minimum operating level. Dead storage below elevation 5,774.9 ft is 12,600 acre-ft. Figures given herein are usable contents. Reservoir is used for irrigation storage, river regulation, desilting, flood control, and recreation.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 1,731,000 acre-ft July 2-4, 1973, elevation, 6,087.25 ft; minimum daily contents after June 1964 (initial filling period), 234,300 acre-ft Mar. 10, 11, 1965, elevation, 5,906.36 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 1,680,000 acre-ft July 7, Aug. 9, 10, elevation, 6,083.95 ft; minimum daily contents, 1,286,000 acre-ft Apr. 18, 19, elevation, 6,055.25 ft.

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

6,015	864.5	6,035	1,056.7	6,055	1,281.3	6,075	1,546.2
6,020	910.1	6,040	1,109.4	6,060	1,343.5	6,080	1,619.5
6,025	957.2	6,045	1,164.3	6,065	1,408.3	6,085	1,696.0
6,030	1,006.0	6,050	1,221.6	6,070	1,475.8	6,090	1,775.7

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1508000	1510000	1510000	1473000	1399000	1344000	1323000	1319000	1458000	1670000	1673000	1659000
2	1510000	1510000	1510000	1470000	1396000	1344000	1322000	1321000	1471000	1674000	1673000	1658000
3	1513000	1509000	1511000	1468000	1394000	1344000	1321000	1321000	1483000	1676000	1674000	1656000
4	1515000	1508000	1511000	1466000	1390000	1344000	1320000	1321000	1493000	1677000	1674000	1654000
5	1515000	1508000	1511000	1463000	1388000	1343000	1318000	1322000	1502000	1678000	1675000	1653000
6	1515000	1507000	1511000	1461000	1386000	1342000	1315000	1322000	1511000	1679000	1676000	1652000
7	1516000	1506000	1510000	1459000	1384000	1342000	1312000	1322000	1521000	1680000	1678000	1650000
8	1515000	1506000	1509000	1457000	1382000	1341000	1310000	1324000	1528000	1679000	1679000	1649000
9	1515000	1505000	1508000	1454000	1380000	1340000	1308000	1324000	1537000	1678000	1680000	1648000
10	1514000	1505000	1508000	1452000	1377000	1339000	1305000	1327000	1544000	1676000	1680000	1647000
11	1514000	1506000	1507000	1449000	1375000	1339000	1302000	1331000	1552000	1676000	1679000	1646000
12	1514000	1506000	1507000	1446000	1374000	1340000	1300000	1336000	1560000	1675000	1679000	1644000
13	1515000	1505000	1506000	1443000	1372000	1341000	1298000	1339000	1568000	1674000	1678000	1642000
14	1516000	1504000	1505000	1441000	1371000	1342000	1295000	1342000	1574000	1673000	1677000	1641000
15	1516000	1504000	1504000	1439000	1368000	1344000	1293000	1345000	1579000	1672000	1675000	1639000
16	1517000	1504000	1502000	1436000	1365000	1345000	1291000	1348000	1584000	1672000	1674000	1637000
17	1517000	1504000	1501000	1433000	1362000	1346000	1288000	1350000	1588000	1671000	1673000	1636000
18	1518000	1504000	1500000	1431000	1361000	1346000	1286000	1351000	1594000	1670000	1671000	1634000
19	1518000	1505000	1498000	1429000	1358000	1345000	1286000	1352000	1601000	1669000	1671000	1633000
20	1517000	1505000	1496000	1427000	1356000	1344000	1287000	1353000	1607000	1669000	1670000	1631000
21	1517000	1506000	1495000	1424000	1355000	1344000	1290000	1355000	1612000	1668000	1669000	1629000
22	1516000	1507000	1493000	1422000	1352000	1342000	1292000	1357000	1618000	1667000	1668000	1627000
23	1515000	1507000	1492000	1419000	1350000	1340000	1294000	1360000	1625000	1668000	1666000	1625000
24	1515000	1507000	1490000	1417000	1348000	1338000	1297000	1366000	1632000	1668000	1666000	1624000
25	1514000	1508000	1488000	1415000	1346000	1337000	1300000	1372000	1639000	1669000	1664000	1623000
26	1514000	1508000	1486000	1412000	1346000	1334000	1304000	1381000	1647000	1669000	1664000	1622000
27	1513000	1508000	1485000	1410000	1345000	1332000	1308000	1392000	1654000	1670000	1663000	1621000
28	1513000	1508000	1482000	1407000	1344000	1330000	1312000	1405000	1660000	1670000	1662000	1620000
29	1513000	1508000	1480000	1405000	---	1328000	1314000	1418000	1664000	1671000	1662000	1618000
30	1512000	1509000	1478000	1403000	---	1325000	1317000	1431000	1667000	1672000	1661000	1618000
31	1511000	---	1475000	1401000	---	1324000	---	1444000	---	1672000	1660000	---
MAX	1518000	1510000	1511000	1473000	1399000	1346000	1323000	1444000	1667000	1680000	1680000	1659000
MIN	1508000	1504000	1475000	1401000	1344000	1324000	1286000	1319000	1458000	1667000	1660000	1618000
(†)	6072.51	6072.36	6069.94	6064.42	6060.05	6058.40	6057.85	6067.67	6083.12	6083.45	6082.62	6079.86
(††)	+5000	+2000	-34000	-74000	-57000	-20000	-7000	+127000	+223000	+5000	-12000	-42000

CAL YR 1982 MAX 1518000 MIN 1201000 (††) +240000  
WTR YR 1983 MAX 1680000 MIN 1286000 (††) +112000

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

## SAN JUAN RIVER BASIN

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 upstream from Gobernador Canyon, 0.8 mi northeast of Archuleta, 7.2 mi downstream from Navajo Dam, and at mile 291.4.

DRAINAGE AREA.--3,260 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1954 to current year.

REVISED RECORDS.--The annual runoff for the 1958 water year as published in table 2, WSP 1733, is 455,000 acre-ft. The correct value is 1,455,000 acre-ft.

GAGE.--Water-stage recorder. Altitude of gage is 5,653 ft, from river-profile survey. Prior to Dec. 29, 1959, at site 5.0 mi upstream at altitude 55 ft higher. Dec. 29, 1959 to Nov. 15, 1964, at site 0.4 mi upstream at altitude 5 ft higher. Prior to Nov. 28, 1966, at altitude 2.0 ft higher.

REMARKS.--Water-discharge records good. Flow completely regulated by Navajo Reservoir (station 09355100) 7 mi upstream except for minor inflow from 30 mi<sup>2</sup> intervening drainage area. Highwater diversions through Azotea tunnel (station 08284160) into Rio Grande Basin began in March 1971. Diversions for irrigation of about 47,000 acres 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, 944,700 acre-ft/yr prior to closure of Navajo Dam. 21 years (water years 1963-83), 1,110 ft<sup>3</sup>/s, 804,200 acre-ft/yr since closure of Navajo Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft<sup>3</sup>/s July 27, 1957, gage height, 11.00 ft, site and datum then in use; minimum determined, 8 ft<sup>3</sup>/s Feb. 28, 1963. Maximum discharge since construction of Navajo Dam in 1962, 6,500 ft<sup>3</sup>/s June 20, 1965; gage height, 4.57 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,860 ft<sup>3</sup>/s July 9, 10; minimum daily, 646 ft<sup>3</sup>/s June 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	1120	676	1840	1810	1750	2660	2720	848	2360	837	1090
2	1110	1130	676	1840	1810	1750	2660	2720	677	2360	875	1090
3	1120	1130	680	1850	1790	1750	2660	2720	646	2360	850	1090
4	1110	1130	684	1850	1720	1750	2660	2720	681	2370	891	1090
5	1100	1140	684	1850	1720	1730	2640	2720	751	2370	869	1090
6	1100	1140	1010	1840	1720	1730	2640	2710	766	2380	874	1090
7	1110	1150	1460	1840	1720	1730	2640	2700	781	2610	903	1100
8	1110	1150	1470	1850	1720	1730	2640	2720	790	2850	953	1100
9	1110	1150	1470	1850	1730	1730	2640	2720	800	2860	1050	1090
10	1120	1160	1530	1840	1730	1730	2640	2600	892	2860	1100	1090
11	1120	1170	1590	1840	1730	1730	2640	2220	993	2710	1140	1090
12	1000	1170	1590	1840	1730	1730	2640	1670	1010	2210	1130	1090
13	800	1170	1590	1830	1730	1740	2640	1450	1030	1710	1130	1090
14	800	1170	1590	1820	1730	1830	2640	1450	1040	1660	1150	1100
15	800	1010	1600	1820	1730	1950	2640	1460	1120	1460	1150	1100
16	801	765	1600	1820	1730	1940	2640	1460	1300	1230	1170	1100
17	804	648	1600	1820	1730	1940	2640	1460	1560	1240	1200	1100
18	804	648	1600	1840	1730	2010	2660	1430	1570	1080	1170	1100
19	928	648	1610	1840	1720	2110	2660	1460	1580	922	1050	1110
20	1060	648	1610	1830	1730	2120	2670	1360	1590	934	1020	1100
21	1080	649	1610	1820	1730	2310	2700	1120	1600	847	1030	1100
22	1090	654	1620	1820	1730	2400	2700	1120	1610	771	1040	1100
23	1100	654	1740	1820	1740	2390	2700	1130	1620	769	1040	1110
24	1110	654	1810	1810	1740	2400	2700	1130	1630	769	1050	1110
25	1110	656	1810	1810	1740	2460	2700	1150	1640	797	1090	1110
26	1100	660	1810	1810	1750	2540	2700	986	1640	796	1090	1110
27	1110	660	1810	1810	1750	2540	2700	845	1740	798	1090	1120
28	1110	660	1820	1820	1750	2650	2710	853	2190	807	1090	1130
29	1110	666	1820	1820	---	2700	2720	860	2350	813	1090	1140
30	1120	676	1830	1820	---	2700	2720	862	2350	814	1090	1140
31	1120	---	1840	1810	---	2690	---	870	---	828	1090	---
TOTAL	32177	27036	45840	56720	48690	64260	80000	53396	38795	49345	32302	33070
MEAN	1038	901	1479	1830	1739	2073	2667	1722	1293	1592	1042	1102
MAX	1120	1170	1840	1850	1810	2700	2720	2720	2350	2860	1200	1140
MIN	800	648	676	1810	1720	1730	2640	845	646	769	837	1090
AC-FT	63820	53630	90920	112500	96580	127500	158700	105900	76950	97880	64070	65590
(†)	2750	0	0	0	0	0	6160	16400	22550	32880	29750	19050

CAL YR 1982 TOTAL 416539 MEAN 1141 MAX 1940 MIN 468 AC-FT 826200  
WTR YR 1983 TOTAL 561631 MEAN 1539 MAX 2860 MIN 646 AC-FT 1114000

(†) DISCHARGE, IN ACRE-FEET, THROUGH NAVAJO INDIAN IRRIGATION PROJECT TUNNEL.

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 1982 TO SEPTEMBER 1983

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)
NOV 04...	1345	1140	255	265	9.0	8.8	11.5	9.0	3.5	13.0	94
JAN 04...	1330	1850	230	241	8.6	8.4	6.0	7.5	7.0	--	93
MAR 04...	1045	1770	230	244	8.2	8.0	9.5	6.0	3.8	14.1	89
MAY 02...	1130	2720	233	266	8.2	8.2	10.5	7.0	5.0	12.4	100
JUL 06...	1215	2350	260	280	8.4	8.3	31.0	10.0	--	12.8	100
SEP 06...	1000	1090	220	265	7.6	7.7	21.0	8.0	2.0	10.4	100

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	ALKA- LITY LAB (MG/L AS CACO3) (90410)
NOV 04...	16	16	28	5.8	13	.6	1.8	77	9.0	--	82
JAN 04...	11	11	28	5.5	12	.6	1.8	85	7.0	--	76
MAR 04...	10	10	27	5.2	12	.6	1.7	--	--	--	79
MAY 02...	21	21	30	6.4	13	.6	1.8	98	.0	97	81
JUL 06...	21	21	30	6.3	13	.6	1.7	87	5.0	79	--
SEP 06...	24	24	31	6.5	14	.6	1.8	98	.0	--	82

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 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)
NOV 04...	52	2.5	.20	10	162	169	--	--	--	--	--
JAN 04...	38	1.9	.20	11	157	154	--	--	--	--	--
MAR 04...	38	2.0	.20	11	140	145	<.10	<.060	.020	3.7	.3
MAY 02...	48	2.2	.20	11	155	161	--	--	--	--	--
JUL 06...	43	2.0	.20	11	154	160	--	--	--	--	--
SEP 06...	50	1.4	.10	10	163	163	<.10	<.010	.030	3.0	.3

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC 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)
MAR 04...	1045	1	1	100	0	--	<1	<1	<10	<10
JUL 06...	1215	--	--	--	--	0	--	--	--	--
SEP 06...	1000	1	1	<100	0	--	1	<1	20	<10

SAN JUAN RIVER BASIN  
09355500 SAN JUAN RIVER NEAR ARCHULETA, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
MAR 04...	0	0	0	3	220	10	0	<1	10	4
JUL 06...	--	--	--	--	160	10	--	--	10	2
SEP 06...	30	10	20	3	160	20	0	<1	10	5

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)
MAR 04...	.5	.0	10	2	1	1	0	<1	20	0
JUL 06...	--	--	--	--	--	--	--	--	--	--
SEP 06...	.0	.5	0	13	1	1	0	<1	30	0

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SAN JUAN RIVER BASIN  
09355500 SAN JUAN RIVER NEAR ARCHULETA, NM -- Continued  
WATER-QUALITY RECORDS

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
IDENTIFICATION OF PHYTOPLANKTON

DATE TIME	MAR 4,83 1045	SEP 6,83 1000		
TOTAL CELLS/ML	770	460		
DIVERSITY: DIVISION	0.0	1.1		
.CLASS	0.0	1.1		
..ORDER	1.6	2.5		
...FAMILY	1.7	2.6		
....GENUS	2.7	2.6		
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)				
.BACILLARIOPHYCEAE				
..ACHNANTHALES				
...ACHNANTHACEAE				
....COCCONEIS	14	2	28	6
....RHOICOSPHENIA	87	11	--	-
..BACILLARIALES				
...NITZSCHIAEAE				
....NITZSCHIA	--	-	42	9
...EUPODISCALES				
...COSCINODISCACEAE				
....CYCLOTELLA	43	6	--	-
....MELOSIRA	29	4	--	-
..FRAGILARIALES				
...FRAGILARIAEAE				
....DIATOMA	330#	43	180#	39
....FRAGILARIA	100	13	--	-
....SYNEDRA	58	8	--	-
...NAVICULALES				
...CYMBELLACEAE				
....AMPHORA	--	-	14	3
....CYMBELLA	43	6	--	-
...NAVICULACEAE				
....NAVICULA	--	-	70#	15
....PINNULARIA	29	4	--	-
...SURIRELLALES				
...SURIRELLACEAE				
....SURIRELLA	29	4	--	-
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
....ANKISTRODESMUS	--	-	42	9
...VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	--	-	28	6
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....ANACYSTIS	--	-	56	12

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 1982 TO SEPTEMBER 1983

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)
NCV						
04...	1345	1140	9.0	10	31	75
JAN						
04...	1330	1850	7.5	55	275	31
MAR						
04...	1045	1770	6.0	14	67	63
MAY						
02...	1130	2720	7.0	19	140	64
JUL						
06...	1215	2350	10.0	14	89	59
SEP						
06...	1000	1090	8.0	12	35	64

## SAN JUAN RIVER BASIN

09363500 ANIMAS RIVER NEAR CEDAR HILL, NM

LOCATION.--Lat 37°02'17", long 107°52'25", in sec.7, T.32 N., R.9 W., La Plata County, Colorado, Hydrologic Unit 14080104, on right bank 0.8 mi downstream from Florida River, 2.5 mi upstream from Colorado-New Mexico State line, 8.5 mi north of Cedar Hill, and at mile 32.9.

DRAINAGE AREA.--1,090 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for October and November 1933, published in WSP 1313.

REVISED RECORDS.--WSP 1563: 1940 and 1946 (monthly figures only).

GAGE.--Water-stage recorder. Altitude of gage is 5,960 ft, from topographic map. Prior to Sept. 14, 1937, at datum between 1.52 ft and 1.36 ft higher. Sept. 15, 1937, to Sept. 30, 1946, at datum 1.36 ft higher.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 20,000 acres above station. During water years 1944-49, Twin Rocks Canal diverted above station for irrigation below. Slight regulation by Lemon Dam about 30 mi upstream on Florida River since November 1963 (capacity, 40,100 acre-ft). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years, 901 ft<sup>3</sup>/s, 652,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft<sup>3</sup>/s June 19, 1949, gage height, 11.45 ft; minimum, 63 ft<sup>3</sup>/s Jan. 21, 1935.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred in October 1911 at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
May 31	1615	*6530	8.72	June 24	1830	6430	8.65

Minimum daily discharge, 242 ft<sup>3</sup>/s Jan. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	393	333	295	245	524	626	1750	5860	3780	1370	598
2	1120	385	307	305	245	474	614	1480	5730	3630	1370	579
3	1020	372	288	325	265	436	583	1320	4480	3620	1370	598
4	963	354	302	330	295	578	611	1350	3920	3840	1320	552
5	918	356	281	330	280	515	558	1670	3900	3640	1330	543
6	830	353	287	330	270	423	541	2040	4000	3460	1380	504
7	788	342	286	325	250	417	544	2000	3870	3340	1440	501
8	753	333	293	310	262	420	512	2010	4310	3430	1470	492
9	739	392	350	304	273	449	499	2400	4070	3020	1370	574
10	690	413	393	295	258	472	526	3120	3600	3090	1270	507
11	690	405	376	280	270	528	506	3400	3680	2680	1240	468
12	684	377	348	270	286	571	539	2960	4550	2390	1210	438
13	648	343	300	265	298	591	566	2700	3910	2150	1090	430
14	582	341	290	265	307	648	568	2460	3800	2030	998	409
15	570	346	280	260	277	702	517	2240	3980	1910	1020	399
16	588	318	276	260	295	599	497	2080	3380	1730	918	414
17	582	344	285	260	298	546	510	1860	3660	1710	831	371
18	546	346	292	255	296	540	603	1840	4490	1680	757	362
19	540	345	280	255	299	531	714	1830	5600	1760	795	362
20	528	361	263	252	296	500	818	1830	5980	1770	764	396
21	486	339	266	252	294	446	868	1740	5820	1680	692	393
22	462	322	274	252	314	492	875	1920	5760	1750	656	382
23	445	308	291	250	374	516	939	2580	5490	1830	632	373
24	456	314	288	250	378	490	1250	3310	5940	1850	648	364
25	435	309	285	250	411	509	1680	4050	5730	1680	652	364
26	430	306	285	250	412	524	2010	4500	5060	1950	694	360
27	440	297	280	248	393	497	2020	4730	4820	1980	706	378
28	435	294	275	245	469	490	1920	5230	4250	1600	683	379
29	405	295	270	243	---	496	1900	5540	3930	1440	642	365
30	398	310	275	242	---	541	1970	5640	3870	1440	660	522
31	402	---	285	245	---	641	---	6470	---	1370	629	---
TOTAL	19723	10313	9184	8498	8610	16106	26884	88050	137440	73230	30607	13377
MEAN	636	344	296	274	308	520	896	2840	4581	2362	987	446
MAX	1150	413	393	330	469	702	2020	6470	5980	3840	1470	598
MIN	398	294	263	242	245	417	497	1320	3380	1370	629	360
AC-FT	39120	20460	18220	16860	17080	31950	53320	174600	272600	145300	60710	26530

CAL YR 1982	TOTAL	383260	MEAN	1050	MAX	3880	MIN	201	AC-FT	760200
WTR YR 1983	TOTAL	442022	MEAN	1211	MAX	6470	MIN	242	AC-FT	876800



09364500 ANIMAS RIVER AT FARMINGTON, NM  
(National stream-quality accounting network station)

LOCATION.--Lat 36°43'17", long 108°12'05", in SW¼SW¼ sec.15, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080104, in Boyd City Park, on right bank 900 ft upstream from bridge on Miller Ave., 0.4 mi downstream from bridge on U.S. Highway 64 in Farmington, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--1,360 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1904 to October 1905 (published as "near Farmington"), September 1912 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1243: 1931. WSP 1313: 1913.

GAGE.--Water-stage recorder. Altitude of gage is 5,280 ft, from topographic map. Prior to Nov. 1, 1905, non-recording gage at old bridge 0.1 mi upstream at different datum. Sept. 17, 1912, to Oct. 4, 1938, water-stage recorder at site 0.8 mi downstream at lower datums (datum lowered 2.0 ft Aug. 15, 1927, and raised 0.2 ft Dec. 16, 1929). Oct. 5, 1938 to Nov. 1, 1973 at site 900 ft downstream at datum 1.74 ft lower.

REMARKS.--Water-discharge records good except those for winter period, which are fair. Diversions for irrigation of about 30,000 acres above station.

AVERAGE DISCHARGE.--72 years, 916 ft<sup>3</sup>/s, 663,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 25,000 ft<sup>3</sup>/s June 29, 1927, gage height, 8.5 ft, site and datum then in use, from rating curve extended above 10,000 ft<sup>3</sup>/s; minimum, 1.0 ft<sup>3</sup>/s Aug. 11, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911, when a stage of about 16.5 ft was reached (datum in use Oct. 1938 to Nov. 1973). Flood of Sept. 6, 1909, reached a stage of 11.1 ft, 1904-5 site and datum (discharge, about 19,000 ft<sup>3</sup>/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
May 31	2330	*6320	8.59	Aug. 6	0100	5320	8.31
June 25	0330	5920	8.61				

Minimum daily discharge, 268 ft<sup>3</sup>/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	858	411	432	345	353	564	692	1780	5810	3610	1260	421
2	890	409	415	341	336	510	652	1540	5250	3470	1270	406
3	790	411	395	346	332	508	636	1400	4370	3430	1390	442
4	746	389	385	385	353	593	652	1330	3630	3560	1320	400
5	710	396	405	391	365	633	660	1300	3640	3480	1230	379
6	656	390	380	390	330	498	572	1480	3650	3310	1810	349
7	592	390	388	355	298	468	588	1760	3570	3150	1330	343
8	554	380	384	369	296	465	561	1870	3740	3180	1430	345
9	535	395	411	376	308	481	527	1730	3810	2930	1280	387
10	511	462	553	358	311	503	559	2030	3510	2840	1150	385
11	499	450	544	365	302	548	555	2610	3340	2670	1090	353
12	491	444	481	376	317	611	573	2980	3920	2290	1080	335
13	448	395	432	365	328	647	630	2770	3930	2070	972	308
14	430	390	404	367	335	678	672	2340	3120	1860	859	297
15	429	390	396	370	336	830	645	2160	2730	1740	801	303
16	436	370	374	373	319	703	591	1900	2920	1590	757	293
17	455	370	382	376	341	606	602	1720	3190	1500	648	304
18	471	405	400	380	336	604	646	1620	3730	1470	547	278
19	464	405	391	366	341	597	783	1490	4610	1480	536	270
20	442	434	366	352	341	553	923	1450	5410	1570	607	268
21	430	428	363	350	345	490	1030	1470	5310	1530	504	275
22	398	405	373	351	345	500	1020	1360	5330	1520	471	295
23	387	387	423	335	390	580	1060	1430	5160	1610	435	312
24	389	390	416	328	444	540	1220	1950	5140	1690	414	326
25	387	374	367	332	468	540	1600	2660	5540	1660	415	302
26	384	377	339	330	504	548	1970	3900	4930	1810	466	304
27	425	371	348	318	480	556	1950	4210	4520	2110	473	298
28	437	371	325	321	492	528	1810	4940	4270	1690	579	309
29	407	385	306	341	---	522	1720	5510	3760	1430	480	322
30	403	385	288	334	---	556	1770	5460	3680	1360	466	392
31	404	---	336	321	---	660	---	5800	---	1340	433	---
TOTAL	15858	11959	12202	11007	10046	17620	27869	75950	125520	68950	26503	10001
MEAN	512	399	394	355	359	568	929	2450	4184	2224	855	333
MAX	890	462	553	391	504	830	1970	5800	5810	3610	1810	442
MIN	384	370	288	318	296	465	527	1300	2730	1340	414	268
AC-FT	31450	23720	24200	21830	19930	34950	55280	150600	249000	136800	52570	19840

CAL YR 1982	TOTAL	364553	MEAN	999	MAX	3660	MIN	209	AC-FT	723100
WTR YR 1983	TOTAL	413485	MEAN	1133	MAX	5810	MIN	268	AC-FT	820100

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, 854 micromhos Dec. 30; minimum daily, 157 micromhos June 24.  
WATER TEMPERATURES: Maximum, 26.5°C Aug. 1, 3; minimum, 0.0°C, Dec. 26-31, Jan. 1-6.  
SEDIMENT CONCENTRATIONS: Maximum daily, 3,210 mg/l Aug. 6; minimum daily, 3 mg/l Sept. 18.  
SEDIMENT LOADS: Maximum daily, 20,300 tons (18,400 tonnes) Aug. 6; minimum daily, 2.3 tons (2.1 tonnes) Sept. 18.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L) AS CAC03 (00900)
NOV 18...	1030	405	650	654	8.6	8.2	13.0	6.0	3.2	13.0	270
FEB 01...	1030	320	670	714	8.5	8.1	3.0	3.0	13	11.6	290
MAY 18...	1015	1640	352	382	8.2	8.1	14.0	7.5	17	10.5	170
AUG 03...	1400	1590	410	415	7.4	7.8	29.0	24.0	1100	7.5	150

DATE	HARD- NESS, NONCAR- BONATE (MG/L) AS CAC03 (00902)	HARD- NESS NONCAR- BONATE (MG/L) AS CAC03 (95902)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)	BICAR- BONATE IT-FLD (MG/L) AS HCO3 (99440)	CAR- BONATE IT-FLD (MG/L) AS CO3 (99445)	ALKA- LINITY FIELD (MG/L) AS CAC03 (00410)	ALKA- LINITY LAB (MG/L) AS CAC03 (90410)
NOV 18...	135	135	88	13	30	.8	2.7	160	5.0	--	152
FEB 01...	124	124	90	15	38	1.0	2.7	180	10	--	158
MAY 18...	52	52	52	8.8	10	.4	1.4	140	.0	120	116
AUG 03...	54	54	50	6.5	20	.7	2.2	120	.0	--	97

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)
NOV 18...	170	18	.40	4.5	421	417	<.10	<.060	.020	<.010
FEB 01...	190	21	.40	6.3	457	474	.10	.060	.070	<.010
MAY 18...	71	5.6	.20	6.4	221	225	<.10	<.060	.070	.010
AUG 03...	93	8.6	.30	6.6	254	247	.11	.060	.490	.010

SAN JUAN RIVER BASIN  
09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 18...	1030	20	<1	0	0	<1	<1	0	3	20	<1
FEB 01...	1030	10	<1	0	0	<1	<1	0	3	0	<1
MAY 18...	1015	30	<1	0	0	1	<1	0	5	10	2
AUG 03...	1400	30	1	110	0	<1	<1	0	4	20	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 18...	50	99	.0	<10	3	1	<1	1100	<6.0	20
FEB 01...	50	130	.0	<10	1	1	<1	1100	<6.0	30
MAY 18...	20	22	.0	<10	2	1	<1	530	<6.0	20
AUG 03...	40	10	.5	<10	1	1	<1	740	<6.0	10

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 18...	K570	220
FEB 01...	K5	55
MAY 18...	41	160
AUG 03...	1400	5700

SAN JUAN RIVER BASIN  
09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	TEMPER- ATURE (DEG C) (000010)	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									
01...	0930	852	11.0	196	451	--	--	--	44
NOV									
18...	1030	405	6.0	39	43	--	--	--	--
DEC									
10...	1630	572	4.5	1340	2070	61	73	83	--
JAN									
04...	1500	385	1.0	213	221	--	--	--	34
FEB									
01...	1030	320	3.0	60	52	--	--	--	--
MAR									
01...	1130	564	6.5	1270	1930	39	52	86	92
01...	1830	604	8.0	2860	4660	--	--	--	--
04...	1620	516	7.5	2540	3540	--	--	--	--
15...	1805	788	6.0	3330	7080	--	--	--	--
31...	1715	660	10.5	1760	3140	--	--	--	--
MAY									
03...	1245	1360	11.0	481	1770	--	--	--	--
18...	1015	1640	7.5	311	1380	--	--	--	--
28...	1300	4980	14.0	1660	22300	--	--	--	55
JUL									
25...	1800	1600	21.0	2530	10900	37	51	83	--
AUG									
03...	1400	1590	24.0	2180	9360	--	--	--	--
12...	2230	1030	23.0	2550	7090	43	58	89	--
28...	2030	510	23.0	1520	2090	49	69	93	--
SEP									
01...	0825	400	19.0	82	89	--	--	--	--

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)	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM (70336)
OCT									
01...	57	76	100	--	--	--	--	--	--
NOV									
18...	--	--	--	43	48	59	75	83	100
DEC									
10...	--	--	--	98	99	100	--	--	--
JAN									
04...	42	88	100	--	--	--	--	--	--
FEB									
01...	--	--	--	63	72	82	94	100	--
MAR									
01...	94	98	100	--	--	--	--	--	--
01...	--	--	--	96	--	--	--	--	--
04...	--	--	--	88	--	--	--	--	--
15...	--	--	--	96	--	--	--	--	--
31...	--	--	--	96	--	--	--	--	--
MAY									
03...	--	--	--	41	--	--	--	--	--
18...	--	--	--	26	--	--	--	--	--
28...	76	95	100	--	--	--	--	--	--
JUL									
25...	--	--	--	98	99	100	--	--	--
AUG									
03...	--	--	--	98	--	--	--	--	--
12...	--	--	--	98	99	100	--	--	--
28...	--	--	--	100	--	--	--	--	--
SEP									
01...	--	--	--	98	--	--	--	--	--

SAN JUAN RIVER BASIN  
09364500 ANIMAS RIVER AT FARMINGTON, NM -- Continued  
WATER-QUALITY RECORDS

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	449	651	736	728	732	666	616	436	228	234	390	581
2	431	663	728	742	729	702	600	456	221	237	387	588
3	449	670	736	766	726	712	626	471	257	196	437	549
4	469	670	776	748	686	786	597	487	259	213	412	---
5	482	702	760	760	649	689	578	464	262	215	395	574
6	496	718	755	720	654	691	575	432	253	241	401	592
7	538	673	756	711	671	749	586	411	258	240	388	602
8	556	687	723	699	720	749	589	422	260	---	352	581
9	542	698	732	715	773	760	581	409	247	241	387	561
10	555	697	667	728	744	760	600	361	260	241	389	626
11	579	700	755	744	740	708	598	343	235	251	466	598
12	578	692	764	746	745	687	602	346	231	269	470	658
13	576	672	772	732	760	654	624	385	279	281	437	647
14	598	563	763	727	741	678	618	387	301	296	460	623
15	599	623	776	724	708	631	613	416	300	301	477	717
16	595	624	782	723	708	638	608	439	223	334	482	639
17	610	625	761	700	714	630	620	438	254	339	483	660
18	613	651	746	718	724	641	640	469	215	342	527	692
19	624	621	734	751	736	663	631	472	214	341	558	660
20	616	658	772	759	731	672	552	482	187	345	---	660
21	633	668	760	770	731	683	549	412	184	349	543	684
22	574	652	766	770	703	718	521	465	184	338	549	638
23	634	653	776	767	739	701	478	328	185	324	579	648
24	652	668	744	776	762	683	447	---	157	353	592	683
25	685	670	---	785	721	714	464	271	262	353	598	659
26	603	645	802	772	732	597	420	258	244	345	601	668
27	---	660	793	783	735	652	360	262	217	310	593	682
28	639	650	804	786	765	637	420	250	224	311	579	---
29	641	664	802	756	---	646	421	238	233	380	591	667
30	645	655	854	665	---	652	419	226	219	382	495	693
31	655	---	674	694	---	648	---	224	---	374	528	---
MEAN	577	661	759	741	724	684	552	382	235	299	485	637
WTR YR 1983	MEAN	561		MAX	854		MIN	157				

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.5	9.0	4.0	.0	3.5	8.0	10.5	10.5	14.5	13.0	26.5	24.0
2	15.0	8.0	4.0	.0	2.5	6.5	13.5	13.0	13.0	15.0	26.0	26.0
3	15.0	7.5	3.0	.0	2.5	9.0	7.5	14.0	13.5	16.0	26.5	25.0
4	15.5	7.5	3.0	.0	2.5	7.5	5.5	16.0	9.5	17.0	24.0	---
5	15.0	7.0	3.5	.0	3.0	5.0	4.0	15.0	14.5	14.0	19.5	23.0
6	15.0	7.0	4.0	.0	3.5	3.5	5.0	13.5	14.5	18.0	23.0	26.0
7	15.0	9.5	4.5	2.0	3.0	9.0	6.5	12.0	15.0	19.5	21.0	23.0
8	11.5	7.5	4.5	1.0	3.5	8.0	10.5	15.0	15.0	---	22.0	23.0
9	10.0	8.5	4.5	1.0	3.5	9.0	10.0	16.0	15.0	20.0	21.0	23.5
10	11.5	10.0	4.5	1.0	4.0	10.0	11.5	13.0	16.0	20.0	22.0	24.0
11	11.5	7.0	5.0	1.5	5.0	12.0	8.0	12.5	14.0	18.0	21.0	23.0
12	12.0	7.5	6.5	2.0	5.0	11.0	5.0	13.0	13.0	17.0	23.0	25.0
13	13.0	7.0	5.0	2.0	2.0	11.5	5.5	15.0	13.0	20.0	23.0	23.0
14	9.0	5.0	3.0	2.5	4.0	10.0	10.0	17.0	13.0	16.0	23.0	18.0
15	14.0	4.0	3.0	2.5	7.0	6.0	10.5	13.0	15.0	17.5	23.0	23.0
16	15.0	6.0	2.5	2.0	7.0	6.0	11.0	11.5	15.0	16.0	22.5	24.0
17	14.0	4.5	4.5	2.5	3.5	7.0	14.5	10.0	16.0	21.0	21.5	20.0
18	10.0	8.0	3.0	2.5	7.0	5.0	---	11.5	16.0	19.0	23.0	19.5
19	8.5	9.5	3.0	2.0	5.0	5.0	17.0	13.5	18.0	16.5	26.0	20.0
20	12.5	7.0	4.0	2.5	7.0	6.5	15.0	13.0	15.0	18.0	---	19.0
21	13.0	8.0	3.0	2.0	8.0	5.0	14.0	13.0	15.0	16.5	25.0	19.0
22	12.0	7.0	2.5	1.0	7.0	5.5	14.5	13.5	15.0	15.5	26.0	11.0
23	12.0	6.0	2.5	1.0	7.5	5.0	14.5	---	15.0	20.0	25.0	14.0
24	12.5	5.5	2.0	2.0	7.5	4.0	14.0	---	13.0	19.0	25.0	16.0
25	13.0	6.5	---	3.0	8.0	5.5	15.5	---	12.0	21.0	23.0	20.0
26	12.0	7.0	.0	3.5	7.0	6.0	11.0	---	13.0	19.0	24.0	17.5
27	---	8.0	.0	4.0	6.5	6.0	15.0	---	13.0	18.5	23.0	20.5
28	10.0	5.5	.0	4.0	5.5	8.0	14.0	14.0	13.0	15.5	23.0	---
29	9.5	5.5	.0	5.0	---	7.0	15.0	11.0	17.5	17.0	19.5	17.5
30	10.0	4.0	.0	4.0	---	6.0	9.5	12.0	16.0	20.0	25.0	15.0
31	9.0	---	.0	3.5	---	10.5	---	15.0	---	24.5	23.5	---
MEAN	12.5	7.0	3.0	2.0	5.0	7.0	11.0	13.5	14.5	18.0	23.5	21.0
WTR YR 1983	MEAN	11.5		MAX	26.5		MIN	.0				

09364500 SAN JUAN RIVER BASIN  
ANIMAS RIVER AT FARMINGTON, NM -- Continued  
WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	182	422	42	47	108	126	90	84	45	43	1700	2590
2	261	627	78	86	69	77	155	143	102	93	1150	1580
3	235	501	48	53	121	129	192	179	81	73	750	1030
4	154	310	24	25	69	72	236	245	67	64	2300	3680
5	189	362	27	29	53	58	327	345	62	61	2480	4240
6	206	365	24	25	51	52	426	449	60	53	960	1290
7	260	416	16	17	52	54	104	100	48	39	480	607
8	183	274	30	31	41	43	245	244	41	33	900	1130
9	90	130	33	35	99	110	85	86	43	36	650	844
10	185	255	48	60	1240	1850	103	100	59	50	545	740
11	112	151	52	63	919	1350	105	103	63	51	655	969
12	46	61	90	108	560	727	182	185	51	44	700	1150
13	82	99	43	46	282	329	111	109	77	68	980	1710
14	113	131	33	35	110	120	75	74	90	81	815	1490
15	97	112	30	32	82	88	93	93	111	101	2830	6340
16	67	79	26	26	83	84	127	128	85	73	520	987
17	44	54	27	27	66	68	254	258	105	97	290	474
18	41	52	36	39	57	62	113	116	66	60	315	514
19	29	36	29	32	52	55	93	92	71	65	520	838
20	33	39	57	67	35	35	91	86	62	57	523	781
21	31	36	108	125	54	53	98	93	72	67	295	390
22	44	47	48	52	53	53	88	83	109	102	190	256
23	44	46	31	32	56	64	73	66	228	240	450	705
24	30	32	30	32	66	74	51	45	365	438	605	882
25	29	30	24	24	64	63	26	23	314	397	380	554
26	30	31	21	21	102	93	62	55	484	659	700	1040
27	35	40	28	28	85	80	44	38	411	533	1380	2070
28	32	38	23	23	104	91	33	29	490	651	748	1070
29	37	41	34	35	112	93	53	49	---	---	372	524
30	35	38	55	57	112	87	50	45	---	---	658	988
31	21	23	---	---	135	122	41	36	---	---	1660	2960
TOTAL	---	4878	---	1312	---	6362	---	3781	---	4329	---	44423

[illegible]

## SAN JUAN RIVER BASIN

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## 09365000 SAN JUAN RIVER AT FARMINGTON, NM

LOCATION.--Lat 36°43'22", long 108°13'30", in NW¼SE¼ sec.17, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080105, on left bank 360 ft downstream from highway bridge on State Highway 371 in Farmington, 4,000 ft downstream from Animas River, 2.3 mi upstream from La Plata River, and at mile 251.4.

DRAINAGE AREA.--7,240 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to December 1904, January 1905 to September 1906 (gage heights and discharge measurements only), September 1912 to current year. Monthly discharge only for some periods, published in WSP 1313. Discharge records for January to December 1905, published in WSP 175, are unreliable and should not be used.

REVISED RECORDS.--WSP 1119: Drainage area. WSP 1243: 1938. WSP 1313: 1905, 1914. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 5,230.37 ft 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 upstream. Diversions above station for irrigation of about 86,000 acres, 4,000 of which is irrigated by Farmers Mutual ditch which diverts from Animas River and bypasses this station; ditch flow not included in record. At times this ditch may be supplied partly or entirely by diversion from San Juan River below this station. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--71 years (water years 1913-83), 2,354 ft<sup>3</sup>/s, 1,705,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 68,000 ft<sup>3</sup>/s June 29, 1927, gage height, 10.2 ft, site and datum then in use, from rating curve extended above 37,000 ft<sup>3</sup>/s; minimum, 14 ft<sup>3</sup>/s Aug. 22, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911. Flood of Sept. 6, 1909, reached a stage of about 12.3 ft, site and datum in use May to September 1906.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,030 ft<sup>3</sup>/s June 25, gage height, 6.00 ft; minimum daily, 961 ft<sup>3</sup>/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1990	1640	1050	2010	2170	2330	3280	4310	6340	5590	2080	1250
2	2040	1630	1020	2020	2120	2310	3230	3970	5940	5380	2040	1260
3	1920	1660	1010	2000	2130	2280	3220	3740	4870	5320	2410	1240
4	1850	1600	1000	2050	2140	2360	3250	3610	3900	5510	3110	1180
5	1770	1600	1030	2070	2170	2410	3240	3720	3980	5440	2490	1170
6	1740	1610	1030	2090	2110	2220	3180	4000	4060	5240	2910	1110
7	1670	1590	1650	2130	2070	2150	3160	4140	3870	5120	2260	1080
8	1650	1570	1680	2120	2070	2160	3160	3970	4110	5570	2380	1190
9	1630	1610	1770	2140	2110	2180	3080	4250	4300	5270	2310	1130
10	1610	1700	1950	2110	2080	2200	3070	4930	3860	5140	2200	1120
11	1600	1700	2090	2120	2040	2260	3060	5020	3770	4940	2160	1090
12	1590	1680	2040	2130	2060	2290	3080	4230	4570	4260	2700	1090
13	1250	1630	1960	2130	2080	2350	3230	3340	4730	3470	1950	1030
14	1200	1600	1910	2150	2130	2410	3200	3180	3690	3160	1850	1020
15	1190	1590	1890	2140	2150	2720	3160	2950	3250	2920	1770	1010
16	1220	1210	1860	2130	2110	2620	3080	2760	3600	2540	1790	999
17	1230	1010	1870	2150	2150	2530	3160	2720	4280	2400	1680	1010
18	1230	1050	1900	2240	2140	2520	3120	2580	5140	2390	1580	994
19	1300	1040	1910	2210	2120	2650	3220	2510	6390	2180	1490	987
20	1530	1050	1870	2170	2100	2590	3370	2540	7140	2280	1410	961
21	1500	1040	1880	2170	2100	2610	3550	2190	7060	2270	1390	964
22	1490	1030	1900	2150	2090	2850	3570	2170	6970	2120	1370	1000
23	1490	995	2100	2130	2130	2930	3550	2600	6770	2360	1350	1040
24	1490	995	2130	2110	2220	2920	3690	3190	6880	2440	1330	1090
25	1480	962	2070	2120	2310	3010	4090	3870	7860	2440	1310	1060
26	1480	962	2020	2120	2440	3070	4530	4490	6740	2830	1300	1050
27	1600	962	2010	2110	2360	3040	4530	4680	6060	3170	1300	1050
28	1640	984	1990	2120	2250	3050	4320	5450	6100	2490	1290	1220
29	1640	984	1950	2180	---	3140	4210	6060	5750	2230	1290	1090
30	1610	995	1970	2210	---	3130	4270	5970	5680	2150	1280	1750
31	1610	---	2010	2180	---	3220	---	6290	---	2120	1260	---
TOTAL	48240	39679	54520	65910	60150	80510	103860	119430	157660	110740	57040	33235
MEAN	1556	1323	1759	2126	2148	2597	3462	3853	5255	3572	1840	1108
MAX	2040	1700	2130	2240	2440	3220	4530	6290	7860	5590	3110	1750
MIN	1190	962	1000	2000	2040	2150	3060	2170	3250	2120	1260	961
AC-FT	95680	78700	108100	130700	119300	159700	206000	236900	312700	219700	113100	65920

CAL YR 1982 TOTAL 762242 MEAN 2088 MAX 5540 MIN 691 AC-FT 1512000  
WTR YR 1983 TOTAL 930974 MEAN 2551 MAX 7860 MIN 961 AC-FT 1847000

## SAN JUAN RIVER BASIN

## 09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 36°59'51", long 108°11'17", in NW¼SE¼ sec.10, T.32 N., R.13 W., La Plata County, Colorado, Hydrologic Unit 14080105, on right bank at Colorado-New Mexico State line, 0.2 mi downstream from Ponds Arroyo, and 4.8 mi north of La Plata, NM.

DRAINAGE AREA.--331 mi<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 National Geodetic Vertical Datum of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 17, 1934.

REMARKS.--Records good except those for December and January and April 21-26, which are fair. Diversions above station for irrigation of about 15,000 acres, most of which are above station.

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

AVERAGE DISCHARGE.--63 years, 35.2 ft<sup>3</sup>/s, 25,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft<sup>3</sup>/s Aug. 24, 1927, gage height, 11.36 ft, present datum, from rating curve extended above 750 ft<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, 632 ft<sup>3</sup>/s at 0900 hours Apr. 26, gage height, 3.40 ft; minimum daily, 2.9 ft<sup>3</sup>/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	8.5	19	11	20	41	129	375	382	88	35	7.0
2	14	7.0	17	12	18	39	110	295	325	78	24	7.0
3	14	7.0	15	11	20	44	107	265	220	72	21	7.0
4	14	8.0	15	12	21	60	92	292	180	73	22	8.0
5	14	8.0	15	12	21	52	78	350	160	66	19	7.0
6	13	5.8	16	13	18	44	79	375	147	61	21	6.2
7	13	5.4	16	13	20	44	73	308	128	90	18	6.2
8	14	8.5	15	14	20	45	69	328	143	88	15	6.6
9	15	12	18	14	20	50	69	365	129	91	15	6.6
10	15	10	21	12	20	55	75	416	107	92	15	6.2
11	15	11	23	13	20	66	88	452	120	73	18	6.6
12	16	10	21	14	19	82	86	315	132	69	19	6.6
13	13	9.0	18	14	21	95	87	256	101	64	15	6.6
14	14	9.0	17	15	27	116	79	214	68	55	14	6.6
15	14	9.5	17	16	26	132	80	175	60	49	12	4.8
16	13	8.5	18	17	30	100	79	155	73	46	10	5.1
17	14	8.5	18	19	30	82	87	137	79	40	12	5.1
18	15	10	17	19	30	83	123	118	117	33	23	5.8
19	13	10	17	18	30	78	198	103	192	30	40	5.7
20	11	11	18	18	29	69	268	103	200	37	18	2.9
21	10	11	17	18	34	63	260	90	162	62	16	4.4
22	9.0	12	18	17	40	70	236	91	148	68	15	5.1
23	8.5	15	20	18	41	69	292	122	137	79	13	6.2
24	7.0	15	19	18	40	67	332	178	176	55	9.5	8.0
25	8.5	15	17	19	42	63	428	234	212	55	14	8.0
26	8.0	15	15	20	37	62	482	246	204	84	10	6.6
27	12	14	14	20	37	59	416	292	159	52	9.5	5.8
28	11	14	12	20	42	61	390	362	129	36	9.5	5.8
29	10	14	10	20	---	60	446	358	114	30	10	6.2
30	9.0	16	11	20	---	67	446	315	101	30	9.5	7.0
31	8.5	---	11	20	---	101	---	380	---	41	7.0	---
TOTAL	378.5	317.7	515	497	773	2119	5784	8065	4605	1887	509.0	186.7
MEAN	12.2	10.6	16.6	16.0	27.6	68.4	193	260	154	60.9	16.4	6.22
MAX	16	16	23	20	42	132	482	452	382	92	40	8.0
MIN	7.0	5.4	10	11	18	39	69	90	60	30	7.0	2.9
AC-FT	751	630	1020	986	1530	4200	11470	16000	9130	3740	1010	370

CAL YR 1982 TOTAL 12333.8 MEAN 33.8 MAX 232 MIN 5.4 AC-FT 24460  
WTR YR 1983 TOTAL 25636.9 MEAN 70.2 MAX 482 MIN 2.9 AC-FT 50850



## SAN JUAN RIVER BASIN

387

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 upstream from culvert on State Highway 17, 3.6 mi north of U.S. Highway 550, 4.1 mi northwest of Farmington, and 10.0 mi south of La Plata.

DRAINAGE AREA.--1.03 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1970-78 (annual maximum only), May 1979 to September 1983 (discontinued).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,376 ft from topographic map.

REMARKS.--Water-discharge records poor. Recording rain gage at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 245 ft<sup>3</sup>/s Mar. 1973, gage-height, 4.25 ft from rating curve extended above 35 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 4.02 ft; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Jan. 18	1530	23	2.12	July 26	1805	*187	3.95
Mar. 22	1530	17	1.98	Aug. 3	1900	86	3.17

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.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	1.3	.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	.04	.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	.03	.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	.35	.00	.00	.00	.00	.00	.42	.00	.00
19	.00	.00	.00	.01	.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	.35	.00	.00
22	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00
23	.00	.00	.63	.00	.00	.55	.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	.01	.00	.00	.00	.00	1.9	.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	.34
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.63	.36	.08	2.45	.00	.00	.00	2.67	1.30	.34
MEAN	.000	.000	.020	.012	.003	.079	.000	.000	.000	.086	.042	.011
MAX	.00	.00	.63	.35	.04	1.9	.00	.00	.00	1.9	1.3	.34
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	1.2	.7	.2	4.9	.00	.00	.00	5.3	2.6	.7
(††)	0.20	0.88	----	----	----	0.47	0.52	0.20	0.63	1.90	0.51	0.63

CAL YR 1982 TOTAL 10.60 MEAN .029 MAX 3.1 MIN .00 AC-FT 21  
WTR YR 1983 TOTAL 7.83 MEAN .021 MAX 1.9 MIN .00 AC-FT 16

(††) 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.

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	
JAN 19...	1430	E.07	7.0	8170	--	--	--	--	--	--	
JUL 26...	1850	44	--	192000	22800	17	21	28	51	74	
SEP 30...	1000	0.5	13.5	25100	34	81	84	88	--	--	
DATE		SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM (70336)	SAMPLE SOURCE (72005)
JAN 19...	--	--	--	90	--	--	--	--	--	--	--
JUL 26...	94	99	100	--	--	--	--	--	--	--	40
SEP 30...	--	--	--	90	90	91	95	99	100	29	

## SAN JUAN RIVER BASIN

389

09367500 LA PLATA RIVER NEAR FARMINGTON, NM

LOCATION.--Lat 36°44'23", long 108°14'51", in NE¼SW¼ sec.7, T.29 N., R.13 W., San Juan County, Hydrologic Unit 14080105, on right bank 1,300 ft upstream from bridge on U.S. Highway 550 in Farmington, and 1,800 ft upstream from mouth.

DRAINAGE AREA.--583 mi<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, from river-profile map. Prior to July 28, 1978 at altitude 1.0 ft higher.

REMARKS.--Water-discharge records good except those below 10 ft<sup>3</sup>/s, which are poor. Diversions for irrigation of about 24,000 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 27.1 ft<sup>3</sup>/s, 19,630 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, that of Sept. 10, 1939, "discharge not determined", gage height, 6.03 ft, site and datum then in use; no flow for long periods in some years.  
Major floods occurred Sept. 5 or 6, 1909, and Oct. 5 or 6, 1911.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 702 ft<sup>3</sup>/s Apr. 26, gage height, 4.56 ft; minimum daily, 0.42 ft<sup>3</sup>/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	7.6	25	18	25	76	131	512	304	30	13	.70
2	8.3	7.1	26	15	24	64	109	350	257	17	9.4	.56
3	10	7.2	22	13	22	62	96	269	153	12	20	.55
4	11	7.3	22	11	27	104	88	270	96	12	13	.60
5	11	7.6	24	9.8	30	77	78	299	88	12	10	.62
6	10	6.8	26	7.0	26	51	72	347	86	5.7	11	.72
7	11	6.1	29	6.2	26	42	66	293	64	4.8	9.7	.87
8	8.6	6.5	30	5.2	29	42	64	295	52	8.0	8.8	.76
9	9.4	8.8	33	4.4	29	44	62	336	65	8.8	7.6	.67
10	13	11	57	3.7	30	47	66	407	39	8.7	6.9	.65
11	14	8.0	54	5.0	32	53	84	475	25	9.4	6.0	.72
12	14	8.5	38	6.9	30	69	92	345	27	4.4	5.4	.75
13	13	7.6	31	9.6	32	91	90	211	54	3.8	4.6	.85
14	11	7.2	28	19	58	108	88	137	24	3.4	4.1	.66
15	11	7.6	25	22	191	145	80	102	13	3.1	3.8	.57
16	11	10	27	22	48	109	74	88	10	2.4	3.5	.48
17	10	10	28	31	62	82	76	80	8.8	2.0	3.4	.43
18	11	13	26	37	47	76	109	70	15	1.9	3.1	.42
19	11	11	23	24	50	91	178	64	77	1.7	40	.50
20	10	11	24	25	40	92	297	56	124	1.1	10	.57
21	11	12	24	30	43	86	300	50	93	25	6.9	.67
22	11	12	25	23	52	100	269	47	75	37	5.4	.70
23	10	13	49	22	57	93	333	44	53	19	2.3	.99
24	9.9	13	32	22	57	89	386	71	70	21	1.0	1.2
25	9.5	16	25	22	57	77	473	100	106	16	4.1	1.0
26	9.0	18	22	23	58	77	574	101	147	32	3.1	1.0
27	8.3	16	22	23	57	70	533	131	94	59	2.1	.87
28	8.8	16	24	25	58	68	471	216	72	19	2.1	1.1
29	8.0	16	16	25	---	65	508	282	49	11	1.2	1.1
30	7.8	18	34	28	---	64	551	226	38	8.2	1.0	4.2
31	7.8	---	22	27	---	86	---	263	---	15	.95	---
TOTAL	314.8	319.9	893	564.8	1297	2400	6398	6537	2378.8	414.4	223.45	25.48
MEAN	10.2	10.7	28.8	18.2	46.3	77.4	213	211	79.3	13.4	7.21	.85
MAX	14	18	57	37	191	145	574	512	304	59	40	4.2
MIN	5.4	6.1	16	3.7	22	42	62	44	8.8	1.1	.95	.42
AC-FT	624	635	1770	1120	2570	4760	12690	12970	4720	822	443	51

CAL YR 1982 TOTAL 7323.76 MEAN 20.1 MAX 241 MIN .24 AC-FT 14530  
WTR YR 1983 TOTAL 21766.63 MEAN 59.6 MAX 574 MIN .42 AC-FT 43170

SAN JUAN RIVER BASIN  
09367540 SAN JUAN RIVER NEAR FRUITLAND, NM -- Continued  
WATER-QUALITY RECORDS

LOCATION.--Lat 36°44'25", long 108°24'09", in NW¼Sec. 10, T.29 N., R.15W., San Juan County, Hydrologic Unit 14080105, on right bank 300 ft (91.4 m) downstream from Four Corners Power Plant highway bridge, 0.4 mi (0.64 km) west of Fruitland, 10 mi (16.1 km) downstream from La Plata River, 14.0 mi (22.5 km) upstream from Chaco River, and at mile 239 (385 km).

DRAINAGE AREA.--8,010 mi<sup>2</sup> (20,750 km<sup>2</sup>), approximately.

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
NOV 02...	0930	1650	450	471	8.4	8.2	7.5	6.5	25	12.8	160	60
JAN 11...	1115	2300	370	390	8.2	7.7	4.5	3.5	18	--	140	55
MAR 08...	1030	2850	430	442	8.0	8.1	10.0	7.0	90	12.6	160	58
MAY 19...	1045	2580	400	409	8.1	8.0	13.0	9.5	19	10.2	160	50
JUL 11...	1115	4850	257	281	8.0	8.1	30.0	15.0	23	9.0	100	34
SEP 14...	1015	1020	420	435	8.2	8.1	25.0	16.0	35	8.6	160	51

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINEITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINEITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 02...	60	49	8.8	28	1.0	2.2	110	5.0	--	111	110
JAN 11...	55	45	7.9	22	.8	2.0	110	.0	--	96	84
MAR 08...	58	49	10	26	.9	1.9	--	--	--	106	110
MAY 19...	50	47	9.4	21	.8	1.8	130	.0	110	107	92
JUL 11...	34	32	5.7	13	.6	1.4	85	.0	72	74	57
SEP 14...	51	49	8.6	28	1.0	2.2	130	.0	110	107	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 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- PENDED TOTAL (MG/L AS C) (00689)
NOV 02...	8.6	.30	8.5	298	280	--	--	--	--	--	--
JAN 11...	6.2	.20	10	253	231	--	--	--	--	--	--
MAR 08...	6.9	.20	10	273	278	.10	.090	.51	.150	4.3	1.4
MAY 19...	5.7	.20	8.8	245	250	--	--	--	--	--	--
JUL 11...	3.5	.20	7.5	159	162	--	--	--	--	--	--
SEP 14...	7.5	.20	9.3	280	269	<.10	.090	.61	.120	5.0	1.0

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
MAR 08...	1030	1	1	100	0	<1	<1	10	<10	0
SEP 14...	1015	1	<1	100	0	<1	<1	<10	10	0

SAN JUAN RIVER BASIN  
09367540 SAN JUAN RIVER NEAR FRUITLAND, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
MAR 08...	0	30	3	5500	10	10	1	250	5	.0
SEP 14...	0	20	2	4000	0	10	1	150	7	.5

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)
MAR 08...	.0	20	1	1	1	0	< 1	70	30
SEP 14...	1.0	20	3	1	1	0	< 1	30	0

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
IDENTIFICATION OF PHYTOPLANKTON

DATE	MAR 8,83
TIME	1030
TOTAL CELLS/ML	2000
DIVERSITY: DIVISION	0.0
..CLASS	0.0
...ORDER	1.5
...FAMILY	1.7
....GENUS	2.4

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...ACHNANTHALES		
....ACHNANTHACEAE		
.....COCCONEIS	54	3
.....RHOICOSPHENIA	54	3
..BACILLARIALES		
...NITZSCHIA		
....NITZSCHIA	90	5
..EUPODISCALES		
...COSCINODISCACEAE		
....CYCLOTELLA	54	3
..FRAGILARIALES		
...FRAGILARIACEAE		
....DIATOMA	1100#	56
....FRAGILARIA	130	6
....SYNEDRA	140	7
..NAVICULALES		
...CYMBELLACEAE		
....CYMBELLA	18	1
...GOMPHONEMACEAE		
....GOMPHONEMA	130	6
...NAVICULACEAE		
....NAVICULA	72	4
..SURIRELLALES		
...SURIRELLACEAE		
....SURIRELLA	130	6

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%  
\* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SAN JUAN RIVER BASIN  
09367540 SAN JUAN RIVER NEAR FRUITLAND, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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						
02...	0930	1650	6.5	859	3830	13
JAN						
11...	1115	2300	3.5	785	4870	12
MAR						
08...	1030	2850	7.0	983	7560	26
MAY						
19...	1045	2580	9.5	319	2220	26
JUL						
11...	1115	4850	15.0	212	2780	45
SEP						
14...	1015	936	16.0	1020	1110	44

## SAN JUAN RIVER BASIN

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09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM

LOCATION.--Lat 36°46'24", long 108°26'26", in SE¼NW¼ sec.32, T.30 N., R.15 W., San Juan County, Hydrologic Unit 14080105, on right bank 0.6 mi downstream from Westwater Arroyo, 0.7 mi upstream from highway to San Juan Power Plant, 14 mi west of Farmington, and at mile 4.5.

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

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,130 ft, from topographic map. Prior to May 20, 1978, at datum, 10.0 ft higher.

REMARKS.--Water-discharge records fair except those above 10 ft<sup>3</sup>/s and those for winter months, which are poor.

AVERAGE DISCHARGE.--9 years, 2.37 ft<sup>3</sup>/s, 1,720 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,420 ft<sup>3</sup>/s May 20, 1978, gage height, 18.94 ft, from floodmark, from rating curve extended above 4.0 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15 ft<sup>3</sup>/s Mar. 23, gage height, 5.83 ft, no peak above base of 80 ft<sup>3</sup>/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.4	2.9	2.2	2.4	2.8	2.8	2.4	.36	.01	.00	.01
2	2.1	2.5	2.7	2.4	2.2	2.8	2.4	2.3	.25	.01	.00	.01
3	2.0	2.7	2.6	2.4	2.2	2.8	2.7	2.5	.39	.00	.04	.01
4	2.0	2.5	2.6	2.5	2.2	3.2	2.7	2.6	.41	.00	.00	.01
5	2.0	2.5	2.7	2.6	2.1	3.0	2.5	2.4	.40	.00	.00	.01
6	2.3	2.6	2.9	2.7	1.8	2.6	2.5	2.6	.40	.00	.00	.01
7	1.8	2.5	2.9	2.7	1.9	2.5	2.4	2.6	.46	.00	.00	.01
8	1.2	2.6	2.6	2.6	2.4	2.7	2.3	2.6	.46	.00	.02	.01
9	1.2	3.0	3.0	2.5	2.2	2.6	2.1	2.5	.40	.00	.02	.00
10	1.8	2.2	3.1	2.4	2.4	2.5	2.2	2.6	.35	.00	.00	.00
11	2.1	1.8	2.9	2.6	2.5	2.6	2.4	2.7	.05	.00	.00	.00
12	2.1	2.9	2.6	2.5	2.4	2.8	2.6	2.4	.00	.00	.00	.00
13	1.9	2.8	2.8	2.4	2.4	2.8	2.3	2.5	.17	.00	.00	.00
14	1.8	2.4	2.7	2.7	2.4	2.8	2.4	.70	.23	.00	.00	.00
15	1.7	2.4	2.5	2.6	2.4	2.7	2.6	.60	.02	.00	.00	.00
16	2.3	2.6	2.7	2.7	2.4	2.7	2.6	.58	.06	.42	.00	.00
17	2.6	2.5	2.8	2.9	2.4	2.9	2.8	.55	.17	.50	.00	.00
18	2.4	3.0	2.9	3.0	2.6	2.9	2.6	.54	.02	.30	.03	.00
19	2.3	3.1	3.0	2.4	2.5	2.7	2.6	.52	.15	.03	.00	.00
20	2.2	3.2	3.0	2.5	2.5	2.6	2.6	.51	.22	.03	.00	.00
21	2.0	2.9	3.1	2.5	2.3	2.7	2.5	.45	.12	.00	.10	.02
22	1.9	2.6	3.4	2.6	2.3	3.7	2.6	.44	.00	.05	.04	.07
23	1.9	2.5	3.5	2.4	2.2	7.0	2.3	.40	.03	.20	.14	.14
24	2.0	2.5	3.2	2.4	2.5	6.2	2.4	.40	.01	.05	.13	.10
25	2.3	2.6	2.8	2.2	2.8	4.0	2.8	.43	.00	.05	.05	.05
26	2.8	2.9	2.5	2.4	3.0	3.0	2.9	.43	.02	.03	.00	.05
27	3.0	2.7	2.4	2.6	3.0	3.0	2.9	.45	.12	.03	.00	.06
28	3.3	2.7	2.3	2.4	2.9	2.9	3.0	.39	.01	.00	.00	.08
29	2.7	2.9	2.2	2.4	---	2.9	2.3	.40	.00	.00	.01	.05
30	2.9	2.8	2.1	2.4	---	2.9	2.5	.44	.02	.00	.01	.08
31	2.4	---	2.0	2.4	---	2.8	---	.44	---	.00	.01	---
TOTAL	67.5	79.3	85.4	78.0	67.3	96.1	76.3	41.37	5.30	1.71	.60	.78
MEAN	2.18	2.64	2.75	2.52	2.40	3.10	2.54	1.33	.18	.055	.019	.026
MAX	3.3	3.2	3.5	3.0	3.0	7.0	3.0	2.7	.46	.50	.14	.14
MIN	1.2	1.8	2.0	2.2	1.8	2.5	2.1	.39	.00	.00	.00	.00
AC-FT	134	157	169	155	133	191	151	82	11	3.4	1.2	1.5

CAL YR 1982 TOTAL 1287.90 MEAN 3.53 MAX 61 MIN 1.1 AC-FT 2550  
WTR YR 1983 TOTAL 599.66 MEAN 1.64 MAX 7.0 MIN .00 AC-FT 1190

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 1982 TO SEPTEMBER 1983

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)
JAN 10...	1400	2.4	8500	9220	6.6	4.2	9.0	8.5	--
SEP 15...	1315	.01	17000	17500	8.2	8.2	29.5	29.0	10.2

DATE	TIME	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)
JAN 10...	1100	--	--	--	280	100	2000	27	10	--
SEP 15...	2700	2370	2370	2370	560	320	4400	38	23	430

DATE	TIME	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
JAN 10...	--	--	--	4900	250	60	34	8090	--
SEP 15...	.0	350	8800	1600	7.7	10	16800	16000	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
JAN 10...	1400	19000	2100	1100	450	450
SEP 15...	1315	14000	1400	100	9700	9800



SAN JUAN RIVER BASIN  
09367561 SHUMWAY ARROYO NEAR WATERFLOW, NM -- Continued  
WATER-QUALITY RECORDS

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INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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							
22...	1300	1.8	11.0	35	.17	94	29
DEC							
08...	1230	3.3	9.5	82	.73	89	--
JAN							
10...	1400	2.4	8.5	161	1.0	96	--
FEB							
09...	1230	2.0	11.0	137	.74	95	--
APR							
01...	1125	2.8	13.0	438	3.3	--	--
MAY							
04...	1215	3.0	25.0	30	.24	87	--
JUN							
07...	1330	.33	29.0	67	.06	82	--
AUG							
08...	1300	.03	35.0	60	.00	73	29
SEP							
15...	1245	.01	29.0	116	.00	75	29

## 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 downstream from south boundary of Chaco Canyon National Monument, 0.5 mi west of Fajada Butte, 0.7 mi upstream from mouth and 1.0 mi southwest of Chaco Canyon National Monument Visitors Center.

DRAINAGE AREA.--199 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1980 to September 1983 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,155 ft, from topographic map.

REMARKS.--Water-discharge records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 491 ft<sup>3</sup>/s June 30, 1981, gage height, 5.68 ft, from rating curve extended above 25 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18 ft<sup>3</sup>/s at 2300 hours Feb. 8, gage height, 1.13 ft; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	3.5	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	1.4	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.32	.00	.00	.00	.00	.00	4.2	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.8	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	1.4	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	5.4	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	7.1	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.69	.00	3.4	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.18	.00	1.0	.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	.16	.00	.70	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.79	.00	.00	.00	.00	.00	.00
23	.00	.00	1.6	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	1.8	.90	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	1.7	.00	1.9	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	2.1	.00	2.2	.00	.00	.00	.00	.00	.00
27	.00	.19	.00	2.0	.00	.28	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	1.8	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	4.4	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	3.7	---	.00	.00	.00	.00	.00	.00	3.2
31	.00	---	.00	3.1	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.19	4.27	19.70	23.68	5.35	.00	.70	.00	.00	6.00	3.20
MEAN	.0000	.0006	.14	.64	.85	.17	.0000	.023	.0000	.0000	.19	.11
MAX	.00	.19	1.8	4.4	7.1	2.2	.00	.70	.00	.00	4.2	3.2
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.4	8.5	39	47	11	.00	1.4	.00	.00	12	6.3

CAL YR 1982 TOTAL 312.04 MEAN .85 MAX 67 MIN .00 AC-FT 619  
WTR YR 1983 TOTAL 63.09 MEAN .17 MAX 7.1 MIN .00 AC-FT 125

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 1982 TO SEPTEMBER 1983

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)
JAN 24...	1115	.14	650	660	6.7	8.2	5.0	.5

DATE	TIME	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L) AS CACO3 (00900)	HARD- NESS, NONCAR- BONATE (MG/L) AS CACO3 (00902)	HARD- NESS NONCAR- BONATE (MG/L) AS CACO3 (95902)	CALCIUM 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)
JAN 24...	11.6	43	0	0	14	1.9	130	9.0	2.8	

DATE	TIME	BICAR- BONATE IT-FLD (MG/L) AS HCO3 (99440)	CAR- BONATE IT-FLD (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)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
JAN 24...	170	.0	160	11	.50	7.1	472	411	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
JAN 24...	1115	0	33000	540	340	18

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
JAN 24...	1115	.14	.5	1880	.71	100

## SAN JUAN RIVER BASIN

09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM

LOCATION.--Lat 36°01'43", long 107°55'04", in NW¼NE¼ sec.29, T.21 N., R.10 W., San Juan County, Hydrologic Unit 14080106, on downstream side of center bridge pier, 800 ft downstream from Fajada Wash, and 0.5 mi southwest of Chaco Canyon National Monument Visitors Center.

DRAINAGE AREA.--578 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR NM-80-1: 1979.

GAGE.--Water-stage recorder. Altitude of gage is 6,140 ft, from topographic map.

REMARKS.--Water-discharge records fair.

AVERAGE DISCHARGE.--7 years, 4.39 ft<sup>3</sup>/s, 3,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,260 ft<sup>3</sup>/s Jan. 18, 1979, gage height, 6.62 ft, from rating curve extended above 350 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights, 3.44 ft, 3.68 ft and 5.32 ft; no flow most of time.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Aug. 3	1045	*445	3.71	Aug. 29	0415	186	2.61
Aug. 28	0815	315	3.16				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.20	.00	2.0	.00	.00	.00	.00	.00	.00	2.0
2	.00	.00	.29	.00	1.3	.00	.00	.00	.00	.00	.00	1.8
3	.00	.00	.06	.00	.80	4.6	.00	.00	.00	.00	182	.19
4	.00	.00	.00	.00	.40	.00	.58	.00	.00	.00	16	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.17	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	2.7	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.69	.00	.62	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.95	.00	2.3	.00	.00	.00	.00	.00	.21	.00
12	.00	.00	.36	.00	12	.00	.00	.00	.00	.00	2.9	.00
13	.00	.00	.00	.00	22	.00	.00	.00	.00	.19	.95	.00
14	.00	.00	.00	.00	17	.00	5.9	.00	.00	.00	.23	.00
15	.00	.00	.00	.00	19	.00	6.4	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	19	.00	2.9	.00	.00	.00	.00	.00
17	.00	.00	.00	.37	26	.00	.50	.00	.00	.00	.00	.00
18	.00	.00	.00	2.3	31	.14	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	3.8	23	.07	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	2.3	45	.00	.00	.53	.00	.00	.00	.00
21	.00	.00	.00	2.1	15	.68	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	1.0	.06	1.2	.00	.00	.00	.00	.00	.00
23	.00	.00	2.5	.80	.00	2.8	.00	.00	.00	.00	.00	.00
24	.00	.00	.19	.76	.00	6.7	.00	.00	.00	1.7	.00	.00
25	.00	.00	.00	.51	5.7	5.2	.00	.00	.00	.18	.00	.00
26	.00	.00	.00	.01	12	16	.00	.00	.00	1.3	1.1	.00
27	.00	.31	.00	.01	.00	12	.00	.00	.00	.19	42	.00
28	.00	.59	.00	.23	.00	4.4	.00	.00	.00	.00	108	.00
29	.00	.07	.00	.24	---	2.8	.00	.00	.00	.00	46	.05
30	.00	.02	.00	2.0	---	.42	.00	.00	.00	.00	6.0	.04
31	.00	---	.00	3.0	---	.00	---	.00	---	.00	2.4	---
TOTAL	.00	.99	5.24	19.43	258.77	57.01	16.28	.53	.00	3.56	407.79	4.08
MEAN	.000	.033	.17	.63	9.24	1.84	.54	.017	.000	.11	13.2	.14
MAX	.00	.59	2.5	3.8	45	16	6.4	.53	.00	1.7	182	2.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	2.0	10	39	513	113	32	1.1	.00	7.1	809	8.1

CAL YR 1982 TOTAL 1022.44 MEAN 2.80 MAX 187 MIN .00 AC-FT 2030  
WTR YR 1983 TOTAL 773.68 MEAN 2.12 MAX 182 MIN .00 AC-FT 1530

SAN JUAN RIVER BASIN  
09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM--- Continued  
WATER-QUALITY RECORDS

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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 1982 TO SEPTEMBER 1983

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)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)
JAN 24...	1315	.79	345	356	7.3	7.8	6.0	.5	11.9	20	0	0
APR 15...	1000	3.9	490	480	6.9	7.2	10.0	4.0	--	11	0	0
AUG 03-03	--	--	--	436	--	8.2	--	--	--	79	0	0
29...	1515	20	320	322	6.8	7.5	24.5	20.5	--	27	0	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY 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)
JAN 24...	6.8	.7	74	7.6	2.1	180	.0	--	51	4.5	.50	6.8
APR 15...	3.8	.3	110	15	1.5	260	.0	--	74	12	.70	8.5
AUG 03-03	28	2.3	65	3.3	2.3	--	--	154	70	4.0	.70	15
29...	9.5	.9	61	5.3	2.5	130	.0	109	47	5.8	.80	120

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	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, GEN, 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- PENDED TOTAL (MG/L AS C) (00689)
JAN 24...	249	235	--	--	--	--	--	--	--	--	--
APR 15...	338	339	--	--	--	--	--	--	--	--	--
AUG 03-03	281	280	--	--	--	--	--	--	--	--	--
29...	200	312	.40	.38	.050	1.2	1.6	4.10	.060	5.5	46

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
JAN 24...	1315	--	--	--	--	--	0	--	--	--
APR 15...	1000	--	--	--	--	--	0	--	--	--
AUG 03-03	--	--	--	--	--	--	0	--	--	--
29...	1515	33	16	3600	0	0	0	<1	<1	130

SAN JUAN RIVER BASIN  
09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
JAN 24...	--	--	--	92000	100	--	--	--	--	1100
APR 15...	--	--	--	250000	50	--	--	--	--	6400
AUG 03-03	--	--	--	--	70	--	--	--	--	--
29...	< 10	320	18	220000	20	110	< 1	160	10	4300

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, TOTAL 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)
JAN 24...	15	--	--	--	--	--	--	--	--	--
APR 15...	4	--	--	--	--	--	--	--	--	--
AUG 03-03	< 10	--	--	--	--	--	--	--	--	--
29...	3	.5	1.5	3	< 1	1	1600	120	670	20

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CO) (01029)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)
AUG 29...	1515	< 2.0	2.8	180	1	0	0	< 10

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS MN) (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)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C) (00693)
AUG 29...	0	1400	< 10	150	.00	0	3.4

SAN JUAN RIVER BASIN  
09367680 CHACO WASH AT CHACO CANYON NATIONAL MONUMENT, NM -- Continued  
WATER-QUALITY RECORDS

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RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	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 228, METHOD (PCI/L) (09511)	RADIUM 228, TOTAL (PCI/L) (11501)	URANIUM NATURAL TOTAL (UG/L AS U) (28011)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
AUG 29...	1515	<6.2	600	410	4.4	310	4.2	270	.08	<3.0	43	2.0

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
JAN 24...	1315	.79	.5	6560	14	--	--	--	--	--	--	100
FEB 14...	1245	4.8	1.0	20900	271	--	--	--	--	--	--	100
APR 15...	1000	3.9	4.0	30300	319	--	--	--	--	--	--	96
AUG 03...	0340	55	--	79300	11800	--	--	--	--	--	--	--
03...	0410	273	--	55100	40600	--	--	--	--	--	--	--
03...	0440	298	--	36300	29200	--	--	--	--	--	--	--
03...	0510	333	--	29300	26300	52	58	76	84	96	100	--
03...	0540	317	--	26900	23000	--	--	--	--	--	--	--
03...	0610	342	--	23800	22000	--	--	--	--	--	--	--
03...	0640	346	--	21700	20300	--	--	--	--	--	--	--
03...	0710	377	--	20600	21000	--	--	--	--	--	--	--
03...	0740	406	--	18600	20400	--	--	--	--	--	--	--
03...	0810	398	--	18700	20100	--	--	--	--	--	--	--
03...	0840	421	--	20400	23200	--	--	--	--	--	--	--
03...	0910	411	--	22300	24700	--	--	--	--	--	--	--
03...	0940	429	--	22500	26100	--	--	--	--	--	--	--
03...	1010	434	--	20800	24400	66	77	88	94	97	100	--
03...	1040	432	--	20900	24400	--	--	--	--	--	--	--
03...	1110	406	--	20300	22300	--	--	--	--	--	--	--
03...	1140	361	--	21300	20800	--	--	--	--	--	--	--
03...	1210	313	--	28600	24200	--	--	--	--	--	--	--
03...	1240	302	--	24900	20300	--	--	--	--	--	--	--
03...	1310	270	--	23900	17400	64	71	83	95	98	100	--
03...	1340	244	--	25200	16600	--	--	--	--	--	--	--
03...	1410	230	--	43200	26800	--	--	--	--	--	--	--
03...	1440	213	--	44500	25600	--	--	--	--	--	--	--
29...	1515	20	20.5	13100	707	--	--	--	--	--	--	98

09367683 CHACO WASH AT PUEBLO BONITO BRIDGE AT CHACO CANYON NATIONAL MONUMENT, NM

LOCATION.--Lat 36°03'15", long 107°57'52", in NE&NW¼ sec.13, T.21 N., R.11 W., San Juan County, Hydrologic Unit 14080106, in Chaco Canyon National Monument, on downstream side of center bridge pier, 800 ft south of Pueblo Bonito Ruins, 2.3 mi downstream from Gallo Wash, and 3.6 mi northwest of Chaco Canyon National Monument Visitors Center.

DRAINAGE AREA.--619 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1980 to September 1983 (discontinued).

REVISED RECORDS.--WDR NM-82-1: 1981.

GAGE.--Water-stage recorder. Altitude of gage is 6,090 ft from topographic map.

REMARKS.--Water-discharge records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 428 ft<sup>3</sup>/s Aug. 24, 1982, gage height, 5.84 ft, from rating curve extended above 175 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 405 ft<sup>3</sup>/s at 1115 hours Aug. 3, gage height, 5.68 ft; no flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.46	.00	.00	.00	.09	.00	.00	1.1
2	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00	3.3
3	.00	.00	.00	.00	.80	4.0	.00	.00	.00	.00	170	.13
4	.00	.00	.00	.00	.41	.00	.00	.00	.00	.00	15	.00
5	.00	.00	.00	.00	.07	.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	.80	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	2.7	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.29	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.20	.00	.50	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	2.8	.00	.00	.00	.00	.00	1.7	.00
13	.00	.00	.00	.00	11	.00	.00	.00	.00	.00	.67	.00
14	.00	.00	.00	.00	13	.00	5.0	.00	.00	.00	.11	.00
15	.00	.00	.00	.00	17	.00	7.4	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	18	.00	4.3	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	23	.00	1.8	.00	.00	.00	.00	.00
18	.00	.00	.00	.92	25	.00	.66	.00	.00	.00	.00	.00
19	.00	.00	.00	4.3	33	.00	.25	.00	.00	.00	.00	.00
20	.00	.00	.00	4.6	24	.00	.03	.00	.00	.00	.00	.00
21	.00	.00	.00	2.8	16	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	1.0	.50	2.2	.00	.00	.00	.00	.00	.00
23	.00	.00	.30	.90	.00	3.9	.00	.00	.00	.00	.00	.00
24	.00	.00	.55	1.3	.00	9.9	.00	.00	.00	.42	.00	.00
25	.00	.00	.00	.41	5.0	7.2	.00	.00	.00	.65	.00	.00
26	.00	.00	.00	.20	11	18	.00	.00	.00	.68	.00	.00
27	.00	.00	.00	.13	.00	13	.00	.00	.06	.49	16	.00
28	.00	.00	.00	.11	.00	3.0	.00	.00	.00	.03	92	.00
29	.00	.00	.00	.16	---	.00	.00	.00	.00	.00	46	3.7
30	.00	.00	.00	.85	---	.00	.00	.00	.00	.00	6.7	4.9
31	.00	---	.00	.98	---	.00	---	.07	---	.00	1.6	---
TOTAL	.00	.00	1.05	18.66	207.33	61.20	19.44	.07	.15	2.27	349.78	13.13
MEAN	.000	.000	.034	.60	7.40	1.97	.65	.002	.005	.073	11.3	.44
MAX	.00	.00	.55	4.6	33	18	7.4	.07	.09	.68	170	4.9
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	2.1	37	411	121	39	.1	.3	4.5	694	26

CAL YR 1982 TOTAL 1021.17 MEAN 2.80 MAX 167 MIN .00 AC-FT 2030  
WTR YR 1983 TOTAL 673.08 MEAN 1.84 MAX 170 MIN .00 AC-FT 1340



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 1982 TO SEPTEMBER 1983

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)
JAN 24...	1515	1.3	340	356	7.2	8.3	6.5	.5	12.0
AUG 03-03	0530	--	--	435	--	8.2	--	--	--
27-27	--	--	--	442	--	8.1	--	--	--
29...	1630	20	320	328	6.8	7.4	27.5	22.0	--

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)
JAN 24...	22	0	0	7.3	.9	68	6.6	2.0	180
AUG 03-03	82	0	0	29	2.3	65	3.3	2.8	--
27-27	45	0	0	16	1.3	84	5.7	3.4	--
29...	28	0	0	10	.8	64	5.5	2.4	130

DATE	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINEITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	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)
JAN 24...	.0	--	51	3.5	.50	9.5	143	232
AUG 03-03	--	150	70	3.7	.70	14	--	278
27-27	--	176	50	4.3	.70	15	286	280
29...	.0	109	43	6.2	.70	8.3	215	199

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
JAN 24...	1515	0	110000	420	1500	6
AUG 03-03	0530	0	--	50	--	--
27-27	--	0	--	100	--	<10
29...	1630	0	230000	30	4700	5

SAN JUAN RIVER BASIN  
09367683 CHACO WASH NEAR PUEBLO BONITO AT CHACO NATIONAL MONUMENT, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
JAN							
24...	1515	1.3	.5	8100	28	--	--
FEB							
14...	1115	15	1.0	27300	1110	--	--
AUG							
03...	0530	27	--	44100	3210	--	--
03...	0600	214	--	33500	19400	48	58
03...	0630	299	--	32500	26200	--	--
03...	0700	330	--	27500	24500	--	--
03...	0730	323	--	25600	22300	--	--
03...	0800	328	--	86700	76800	--	--
03...	0830	337	--	22100	20100	--	--
03...	0900	346	--	22800	21300	--	--
03...	0930	355	--	24200	23200	--	--
03...	1000	367	--	25000	24800	--	--
03...	1030	383	--	24000	24800	--	--
03...	1100	402	--	23000	25000	--	--
03...	1130	405	--	20900	22900	65	72
03...	1200	393	--	22600	24000	--	--
03...	1230	359	--	24500	23700	--	--
03...	1300	318	--	26300	22600	--	--
03...	1330	298	--	27200	21900	--	--
03...	1400	255	--	25500	17600	63	70
03...	1430	237	--	27400	17500	--	--
03...	1500	215	--	26700	15500	--	--
03...	1530	201	--	26400	14300	--	--
03...	1600	187	--	25800	13000	--	--
03...	1630	174	--	25300	11900	--	--
03...	1700	162	--	24700	10800	--	--
27...	1130	22	--	29500	1750	--	--
27...	1200	22	--	26500	1570	--	--
27...	1230	23	--	25600	1590	--	--
27...	1300	24	--	28100	1820	--	--
27...	1330	24	--	26300	1700	--	--
27...	1400	24	--	25700	1670	--	--
27...	1430	25	--	23400	1580	77	81
27...	1500	25	--	24300	1640	--	--
27...	1530	25	--	24200	1630	--	--
27...	1600	25	--	23700	1600	--	--
27...	1630	25	--	24100	1630	--	--
27...	1700	25	--	26600	1800	--	--

SAN JUAN RIVER BASIN  
09367683 CHACO WASH NEAR PUEBLO BONITO AT CHACO NATIONAL MONUMENT, NM -- Continued  
WATER-QUALITY RECORDS

405

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
JAN						
24...	--	--	--	--	--	100
FEB						
14...	--	--	--	--	--	96
AUG						
03...	--	--	--	--	--	--
03...	73	84	96	100	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	82	89	95	99	100	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	79	93	98	100	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
03...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	85	93	97	100	--	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--

SAN JUAN RIVER BASIN  
09367683 CHACO WASH NEAR PUEBLO BONITO AT CHACO NATIONAL MONUMENT, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
AUG							
27...	1730	25	--	31700	2140	--	--
27...	1830	25	--	38700	2610	--	--
27...	1900	29	--	42900	3360	53	59
27...	1930	28	--	38700	2930	--	--
27...	2000	27	--	38800	2830	--	--
27...	2030	27	--	44400	3240	--	--
27...	2100	27	--	46500	3390	57	66
27...	2130	27	--	47300	3450	--	--
27...	2200	27	--	47500	3460	--	--
29...	1630	20	22.0	14900	805	--	--

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)
AUG						
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	75	88	95	99	100	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
27...	86	95	98	100	--	--
27...	--	--	--	--	--	--
27...	--	--	--	--	--	--
29...	--	--	--	--	--	94

## SAN JUAN RIVER BASIN

407

09367685 AH-SHI-SLE-PAH WASH NEAR KIMBETO, NM

LOCATION.--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 west of Kimbeto, and 6.0 mi upstream from mouth.

DRAINAGE AREA.--8.2 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,180 ft from topographic map.

REMARKS.--Water-discharge records fair. Recording rain gage at station.

AVERAGE DISCHARGE.--6 years, 1.53 ft<sup>3</sup>/s, 1,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,310 ft<sup>3</sup>/s Aug. 3, 1983, gage height, 7.38 ft, from rating curve extended above 60 ft<sup>3</sup>/s on basis of step-back water analysis and slope-area measurements at gage heights 2.82 ft and 7.38 ft; no flow most of time.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
July 25	1855	403	2.82	Aug. 11	2020	1590	6.02
Aug. 3	2130	*2310	7.38				

No flow most of time.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	2.7	.00	1.1	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	1.1	.00	.50	.00	.00	.00	.00	.00	18	.00
3	.00	.00	.37	.00	.00	.34	.00	.00	.00	.00	244	.00
4	.00	.00	.14	.00	.00	11	2.5	.00	.00	.00	.00	.00
5	.00	.00	.03	.00	4.4	.28	4.3	.00	.00	.00	7.4	.00
6	.00	.00	.01	.00	11	.15	2.2	.00	.00	.33	9.0	.00
7	.00	.00	.00	.00	18	.13	1.5	.00	.00	.00	.00	.00
8	.00	.00	.25	.00	27	.10	.85	.00	.00	.00	.00	.00
9	.00	.00	3.0	.00	29	.00	.32	.00	.00	.00	.00	.00
10	.00	.00	34	.00	4.6	.00	.48	.00	.00	.00	.00	.00
11	.00	.00	8.0	.00	.42	.00	.06	.00	.00	.00	.00	.00
12	.00	.00	.00	6.0	.11	.00	.12	.00	.00	.00	70	.00
13	.00	.00	.00	11	1.7	.00	.08	.00	.00	.00	.00	.00
14	.00	.00	.00	24	6.9	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	7.7	.40	1.3	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	3.5	3.3	.00	.00	.00	.00	.00	.00	.00
17	.00	.01	.00	7.7	1.4	.00	.00	.00	.00	.00	.00	.00
18	.00	1.7	.00	56	2.3	9.7	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	14	.44	.53	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	11	.55	1.0	.00	7.5	.00	.00	.00	.00
21	.00	.00	.00	15	.82	1.3	.00	.10	.00	.00	.00	.00
22	.00	.00	10	5.0	.55	14	.00	.00	.00	.00	.00	.00
23	.00	2.2	26	2.0	.51	9.5	.00	.00	3.1	8.9	.00	.00
24	.00	.00	.77	2.9	.69	9.9	.00	.00	1.3	2.0	.00	.00
25	.00	1.9	.00	1.7	.85	3.9	.00	.00	.04	36	.00	.00
26	.00	2.9	.00	2.3	.24	.00	.00	.00	.00	.00	1.4	.37
27	.00	2.6	.00	3.5	.12	.00	.00	.00	14	.00	.70	.00
28	.00	.50	.00	20	.00	.00	.00	.00	.89	.00	.00	1.0
29	.00	.88	.00	25	---	.00	.00	.00	.00	.00	.00	7.0
30	.00	.64	.00	21	---	.00	.00	.00	.00	20	.00	12
31	.00	---	.00	1.3	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	13.33	86.37	240.60	116.90	63.13	12.41	7.60	19.33	67.23	350.50	20.37
MEAN	.000	.44	2.79	7.76	4.18	2.04	.41	.25	.64	2.17	11.3	.68
MAX	.00	2.9	34	56	29	14	4.3	7.5	14	36	244	12
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	26	171	477	232	125	25	15	38	133	695	40
(††)	0.01	0.57	0.85	1.07	0.17	0.85	0.25	0.41	0.50	1.43	2.87	0.75

CAL YR 1982 TOTAL 719.78 MEAN 1.97 MAX 62 MIN .00 AC-FT 1430  
WTR YR 1983 TOTAL 997.77 MEAN 2.73 MAX 244 MIN .00 AC-FT 1980

(††) 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 by automatic pump and 40 indicates single-stage sample.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

		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)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
MAR 17...	1030	.01	746	767	7.3	7.3	6.0	5.0	19	0	0	6.5	
DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINEITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS STO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
MAR 17...	.7	160	17	2.0	160	.0	125	200	28	.70	12	490	

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
MAR 17...	1030	0	1200

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
MAR 17...	1030	.01	5.0	2650	.07	--	--
JUL 25...	1800	290	--	67800	53100	--	--
25...	1805	290	--	58700	46000	--	--
25...	1820	290	--	98300	77000	--	--
30...	1800	204	--	152000	83700	--	--
AUG 02...	2300	314	--	373000	316000	9	11
02...	2315	237	--	47900	30700	41	52
03...	0045	166	--	37400	16800	65	71
03...	0130	80	--	38800	8380	65	71
03...	1940	1950	--	134000	706000	--	--
03...	2000	1700	--	73300	336000	--	--
03...	2400	69	--	37400	6970	53	57
11...	1820	1150	--	324000	101000	--	--
11...	1845	1160	--	290000	908000	--	--
11...	1900	451	--	100000	122000	--	--
11...	1930	450	--	76700	93200	49	55

SAN JUAN RIVER BASIN  
09367685 AH-SHI-SLE-PAH WASH NEAR KIMBETO, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	SAMPLE SOURCE (72005)
MAR							
17...	--	--	--	--	--	--	--
JUL							
25...	--	--	--	--	--	73	40
25...	--	--	--	--	--	91	40
25...	--	--	--	--	--	79	40
30...	--	--	--	--	--	83	40
AUG							
02...	14	53	86	98	100	--	40
02...	63	84	96	100	--	--	26
03...	79	92	99	100	--	--	26
03...	80	93	99	100	--	--	26
03...	--	--	--	--	--	65	40
03...	--	--	--	--	--	68	40
03...	72	88	97	100	--	--	26
11...	--	--	--	--	--	63	40
11...	--	--	--	--	--	64	40
11...	--	--	--	--	--	79	40
11...	66	87	96	99	100	--	40

## SAN JUAN RIVER BASIN

09367687 KIM-ME-NI-OLI WASH NEAR CROWNPOINT, NM

LOCATION.--Lat 35°50'55", long 108°03'36", in SE¼NW¼ sec.25, T.19 N., R.12 W., McKinley County, Hydrologic Unit 14080106, on left bank 1.0 mi north of proposed Phillips Petroleum Nose Rock Uranium Mine, 4.5 mi north of State Road 57 and 13.2 mi northeast of Crownpoint.

DRAINAGE AREA.--228 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.-- October 1981 to September 1983 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage 6,300 ft, from topographic map.

REMARKS.--Water-discharge records fair except those for winter months, which are poor. Base discharge is result of discharge from proposed Phillips Petroleum Nose Rock Uranium Mine which is upstream 1.0 mi. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft<sup>3</sup>/s, gage height, 4.49 ft Sept. 21, 1982 from rating curve extended above 10 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 259 ft<sup>3</sup>/s at 0015 hours Aug. 4, gage height, 3.34 ft; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	5.1	1.0	.96	1.2	1.0	.96	.61	.51	.00	1.5	2.4
2	2.3	5.2	1.0	.98	1.1	.77	.96	.61	.44	.00	1.6	2.0
3	4.7	5.2	.99	1.0	1.1	.36	.92	.55	.45	.00	18	1.9
4	5.1	5.2	.98	1.0	1.1	.77	.99	.56	.47	.00	182	1.9
5	5.1	5.1	.98	1.1	1.1	.91	1.0	.51	.47	.00	58	1.5
6	5.1	4.6	.97	1.1	1.1	.93	1.0	.48	.50	.00	13	.12
7	5.1	4.5	.97	1.2	1.1	.94	.99	.54	.18	.00	4.3	.00
8	5.0	4.1	.95	1.2	1.6	.95	.96	.50	.00	.00	8.0	.00
9	4.9	2.2	.94	1.4	1.5	.97	.92	.49	.00	.02	13	.00
10	5.0	1.7	1.0	2.5	1.1	.99	.84	.24	.00	.00	23	.00
11	5.0	1.4	1.1	1.2	1.1	1.0	.81	.00	.00	.00	40	.00
12	5.0	1.4	1.0	1.2	1.0	.94	.90	.00	.00	.00	62	.00
13	5.0	1.2	1.0	1.1	.97	.90	.88	.00	.00	.00	13	.00
14	5.0	1.1	1.0	1.1	.98	.92	.90	.00	.00	.34	18	.00
15	4.8	1.1	1.0	1.1	.97	.99	.84	.07	.00	.72	13	.00
16	4.8	1.0	1.0	1.1	1.0	.97	.84	.24	.00	.75	4.8	.00
17	4.8	1.0	1.0	1.2	1.0	.94	.84	.27	.00	.81	2.2	.00
18	4.8	1.0	.97	1.3	1.0	.98	.80	.32	.00	1.3	2.4	.00
19	4.8	1.0	1.0	1.5	1.0	1.0	.77	.34	.00	1.8	2.1	.00
20	4.8	1.0	1.0	1.3	1.0	1.0	.76	.45	.00	1.9	1.9	.00
21	4.8	1.0	1.0	1.3	1.1	.98	.75	.50	.00	1.6	1.9	.00
22	5.0	1.0	.99	1.1	.99	1.0	.77	.52	.00	1.2	2.0	.00
23	5.0	1.0	1.0	1.1	1.3	.99	.77	1.1	.00	1.0	2.1	30
24	4.8	1.1	.99	1.1	1.3	.95	.70	.87	.00	.98	2.2	.86
25	4.8	1.0	.96	1.1	1.2	.97	.63	.59	.00	2.1	2.0	.64
26	4.8	1.0	.95	1.1	1.1	1.3	.70	.81	.00	1.1	2.0	.79
27	4.9	1.0	.94	1.1	1.2	.92	.65	.70	.00	1.0	2.0	3.2
28	4.9	.99	.94	1.1	1.2	.92	.66	.57	.00	1.1	2.0	1.2
29	12	1.0	.94	1.3	---	.97	.57	.48	.00	1.1	2.0	12
30	6.7	1.0	.94	1.8	---	.97	.53	.45	.00	4.5	2.0	30
31	5.2	---	.95	1.4	---	.86	---	.91	---	1.6	2.0	---
TOTAL	157.2	64.19	30.45	38.04	31.41	29.06	24.61	14.28	3.02	24.92	504.0	88.51
MEAN	5.07	2.14	.98	1.23	1.12	.94	.82	.46	.10	.80	16.3	2.95
MAX	12	5.2	1.1	2.5	1.6	1.3	1.0	1.1	.51	4.5	182	30
MIN	2.3	.99	.94	.96	.97	.36	.53	.00	.00	.00	1.5	.00
AC-FT	312	127	60	75	62	58	49	28	6.0	49	1000	176

CAL YR 1982 TOTAL 1773.54 MEAN 4.86 MAX 168 MIN .94 AC-FT 3520  
WTR YR 1983 TOTAL 1009.69 MEAN 2.77 MAX 182 MIN .00 AC-FT 2000



SAN JUAN RIVER BASIN  
09367687 KIM-ME-NI-OLI WASH NEAR CROWNPOINT, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (000095)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (900095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L) AS (CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L) (CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L) AS (CAC03) (95902)
NOV 15...	1100	.90	2000	2310	9.2	9.0	12.0	3.5	13.8	36	--	--
APR 07...	1345	.99	3300	3760	9.3	9.1	6.5	9.5	8.6	26	0	0
AUG 16...	1400	2.8	4180	4500	9.1	8.9	32.0	28.0	8.0	30	0	0

DATE	CALCIUM DIS- SOLVED (MG/L) AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K) (00935)	BICAR- BONATE IT-FLD (MG/L) AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L) AS CO3) (99445)	ALKA- LINITY FIELD (MG/L) AS CAC03) (00410)	ALKA- LINITY LAB (MG/L) AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)
NOV 15...	12	1.2	500	39	2.2	--	--	--	--	670	110
APR 07...	7.5	1.8	820	72	2.8	520	69	--	--	960	270
AUG 16...	8.4	2.2	1100	91	4.5	560	83	590	588	1300	340

DATE	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 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)	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)
NOV 15...	2.0	18	1470	--	<.10	<.10	<.060	.020	<.010	3.0	1.2
APR 07...	4.3	8.8	2380	2470	--	--	--	--	--	--	--
AUG 16...	5.0	28	3020	3230	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 15...	1100	1	1	<100	<100	<10	210	1	<1	<10
APR 07...	1345	--	--	--	--	--	430	--	--	--
AUG 16...	1400	--	--	--	--	--	510	--	--	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU) (01042)	COPPER, DIS- SOLVED (UG/L) AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L) AS FE) (01045)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L) AS PB) (01051)	LEAD, DIS- SOLVED (UG/L) AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L) AS LI) (01132)	LITHIUM DIS- SOLVED (UG/L) AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L) AS MN) (01055)
NOV 15...	<10	0	1	680	40	0	2	80	80	20
APR 07...	--	--	--	4100	140	--	--	--	--	70
AUG 16...	--	--	--	16000	290	--	--	--	--	230

SAN JUAN RIVER BASIN  
09367687 KIM-ME-NI-OLI WASH NEAR CROWNPOINT, NM -- Continued  
WATER-QUALITY RECORDS

## TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 15...	10	.5	.5	1	<1	<1	840	1000	20	10
APR 07...	<10	--	--	--	--	--	--	--	--	--
AUG 16...	10	--	--	--	--	--	--	--	--	--

## RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS-SOLVED (PCI/L AS YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90) (80060)	RADIUM 226, DIS-SOLVED (PCI/L METHOD) (09511)	RADIUM 228, TOTAL (PCI/L) (11501)	URANIUM DIS-SOLVED, EXTRACTION (UG/L) (80020)
NOV 15...	1100	<36	3.8	2.6	<21	1.5	<20	1.5	1.4	<2.0	.90

## INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	TEMPERATURE (DEG C) (00010)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 15...	1100	.90	3.5	22	.05	81
DEC 29...	1300	.94	.0	149	.38	98
APR 07...	1345	.99	9.5	125	.33	100
MAY 10...	1300	.14	20.0	105	.04	100
AUG 16...	1400	2.8	28.0	679	5.1	84

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 below primitive road crossing, 4.1 mi east of State Highway 371, 8.5 mi upstream from Lake Valley, and 9.0 mi upstream from mouth.

DRAINAGE AREA.--400 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to September 1983 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage 6,060 ft from topographic map.

REMARKS.--Water-discharge records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 320 ft<sup>3</sup>/s Sept. 21, 1982, gage height, 2.50 ft, from rating curve extended above 10 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 52 ft<sup>3</sup>/s Aug. 5, gage height, 1.60 ft, from floodmarks; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.1	.14	1.05	1.7	1.3	.26	.26	.00	.00	1.6	.33
2	2.7	4.0	.14	.07	1.1	1.0	.25	.28	.02	.00	1.5	.50
3	2.2	3.8	.15	.11	1.0	.75	.49	.41	.00	.00	2.2	.53
4	3.0	3.9	.15	.15	1.0	.08	.46	.46	.00	.00	6.8	.36
5	3.6	4.1	.16	.24	.98	.07	.72	.49	.00	.00	120	.24
6	3.8	4.1	.16	.31	.94	.34	1.1	.40	.00	.00	20	.20
7	3.8	3.7	.17	.46	.90	.51	.84	.21	.00	.00	4.0	.15
8	3.7	3.5	.18	.80	.86	.54	.88	.31	.00	.00	6.2	.01
9	3.6	3.4	.19	2.1	.82	.53	.63	.40	.00	.00	9.6	.00
10	3.9	1.7	.20	2.0	.78	.57	.53	.39	.00	.00	15	.00
11	4.1	.60	.21	1.4	.74	.62	.49	.31	.00	.00	22	.00
12	4.1	.40	.22	1.1	.70	.74	.45	.06	.00	.00	35	.00
13	4.2	.24	.23	1.3	.65	.53	.56	.00	.00	.00	50	.00
14	4.2	.17	.24	1.7	.60	.56	.72	.00	.00	.00	15	.00
15	4.2	.11	.25	1.9	.54	.65	.67	.00	.00	.00	12	.00
16	4.1	.10	.24	1.1	.51	.82	.67	.00	.00	.00	1.5	.00
17	4.1	.10	.23	1.1	.48	.69	.59	.00	.00	.00	2.2	.00
18	4.0	.10	.23	1.1	.45	.82	.56	.00	.00	.00	1.2	.00
19	4.0	.10	.22	1.2	.43	1.1	.47	.00	.00	.00	.90	.00
20	4.0	.10	.22	1.3	.40	1.1	.47	.00	.00	.00	.58	.00
21	4.1	.11	.22	1.3	.38	.92	.59	.00	.00	.00	.34	.00
22	4.2	.11	.22	1.3	.42	.99	.68	.06	.00	.42	.24	.00
23	4.4	.11	.21	1.4	.52	.93	.56	.20	.00	.48	.25	.00
24	4.6	.12	.21	1.4	.60	.84	.53	.60	.00	.16	.37	3.0
25	4.6	.12	.20	1.5	1.5	.94	.49	2.0	.00	.08	.74	20
26	4.0	.12	.20	1.6	1.4	.82	.38	1.4	.00	1.1	.54	2.1
27	3.7	.13	.20	1.7	1.2	.66	.45	.83	.00	.69	2.9	.62
28	3.6	.13	.19	1.6	1.2	.75	.41	1.4	.00	.44	.38	.08
29	3.7	.13	.19	1.6	---	.65	.41	1.1	.00	.38	.28	1.1
30	9.0	.14	.11	1.5	---	.67	.37	.61	.00	.48	.42	1.9
31	4.9	---	.07	1.6	---	.54	---	.23	---	3.0	.38	---
TOTAL	125.8	39.54	5.95	35.99	22.80	22.03	16.68	12.41	.02	7.23	334.12	31.12
MEAN	4.06	1.32	.19	1.16	.81	.71	.56	.40	.001	.23	10.8	1.04
MAX	9.0	4.1	.25	2.1	1.7	1.3	1.1	2.0	.02	3.0	120	20
MIN	2.2	.10	.07	.05	.38	.07	.25	.00	.00	.00	.24	.00
AC-FT	250	78	12	71	45	44	33	25	.04	14	663	62

CAL YR 1982 TOTAL 1528.39 MEAN 4.19 MAX 55 MIN .07 AC-FT 3030  
WTR YR 1983 TOTAL 653.69 MEAN 1.79 MAX 120 MIN .00 AC-FT 1300

SAN JUAN RIVER BASIN  
09367689 KIM-ME-NI-OLI WASH NEAR LAKE VALLEY, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS- CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)
NOV 16...	1230	.10	2500	2410	8.8	8.6	14.0	2.0	13.2	57	--	--
APR 07...	1100	1.1	4200	4310	9.1	9.0	3.0	5.5	11.0	46	0	0
AUG 16...	1050	1.6	3080	3340	8.7	8.5	28.5	20.0	7.6	88	0	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 16...	18	2.7	570	35	3.3	--	--	--	700	110	1.9
APR 07...	13	3.3	950	63	3.3	590	59	--	1100	310	4.9
AUG 16...	27	4.9	750	36	7.1	500	26	452	920	250	3.8

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, ORTHOC, 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)
NOV 16...	12	1550	--	<.10	<.10	.240	1.3	.080	<.010	4.7	1.7
APR 07...	4.9	2690	2800	--	--	--	--	--	--	--	--
AUG 16...	15	2210	2280	--	--	--	--	--	--	--	--

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 16...	1230	2	1	<100	<100	<10	200	<1	<1	<10
APR 07...	1100	--	--	--	--	--	450	--	--	--
AUG 16...	1050	--	--	--	--	--	380	--	--	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
NOV 16...	<10	0	2	7100	120	0	2	80	80	90
APR 07...	--	--	--	9900	260	--	--	--	--	120
AUG 16...	--	--	--	16000	80	--	--	--	--	200

SAN JUAN RIVER BASIN  
09367689 KIM-ME-NI-OLI WASH NEAR LAKE VALLEY, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 16...	10	.5	.0	2	<1	<1	760	830	40	10
APR 07...	10	--	--	--	--	--	--	--	--	--
AUG 16...	10	--	--	--	--	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	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)	RADIUM 228, TOTAL (PCI/L) (11501)	URANIUM NATURAL, DIS-SOLVED (UG/L AS U) (22703)
NOV 16...	1230	<34	13	8.8	<21	6.5	<20	6.2	.11	<2.0	1.3

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS) (00061)	TEMPERATURE (DEG C) (00010)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SEDIMENT, SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 16...	1230	.10	2.0	149	.04	98
DEC 29...	1115	.19	.0	135	.07	98
APR 07...	1100	1.1	5.5	310	.92	100
MAY 10...	1045	.34	14.0	140	.13	100
AUG 16...	1050	1.6	20.0	468	2.0	99

## SAN JUAN RIVER BASIN

09367950 CHACO RIVER NEAR WATERFLOW, NM

LOCATION.--Lat 36°43'28", long 108°35'27", in SW¼SW¼ sec.13, T.29 N., R.17 W., San Juan County, Hydrologic Unit 14080106, on downstream end of right bridge pier, 4.2 mi upstream from Dead Mans Wash, 5.3 mi downstream from the Hogback, 6.6 mi southwest of Waterflow, 7.2 mi southeast of Shiprock and at mile 4.5.

DRAINAGE AREA.--4,350 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1959-69 (annual maximum only), November 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,980 ft, from topographic map. Prior to 1975 at site 1.8 mi 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.--7 years (water years 1977-83), 42.3 ft<sup>3</sup>/s, 30,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft<sup>3</sup>/s, Sept. 20, 1969, gage height, 7.88 ft site and datum then in use; no flow at times.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
July 28	0345	1250	5.50	Aug. 6	1000	3360	7.96
Aug. 5	0115	*3530	8.13				

No flow July 17-21, Aug. 2, 3, 29-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	18	20	18	79	35	27	112	20	21	.25	15
2	29	18	19	18	56	32	26	50	20	21	.00	9.7
3	28	19	19	18	42	30	17	34	20	21	.00	19
4	27	19	19	18	34	31	16	15	20	21	1150	19
5	26	18	19	18	28	34	18	59	20	21	1160	18
6	25	18	19	18	32	29	17	114	20	21	2210	19
7	24	18	19	18	22	44	20	108	18	21	203	17
8	24	18	19	18	26	38	20	114	18	21	30	17
9	22	18	19	18	25	30	21	150	18	49	8.9	18
10	22	18	19	18	29	24	19	119	18	17	6.2	18
11	21	19	19	19	44	18	18	85	19	16	5.6	18
12	21	18	59	19	53	15	16	74	19	16	2.7	19
13	26	18	35	19	43	14	15	50	19	16	37	19
14	22	18	24	20	47	15	15	42	20	16	49	20
15	21	18	23	20	39	15	15	33	20	1.5	14	20
16	20	18	20	20	55	16	15	27	19	.09	7.3	20
17	20	18	21	22	55	21	15	23	19	.00	8.0	20
18	20	18	20	64	51	20	16	21	19	.00	3.4	21
19	20	17	18	97	48	19	16	20	18	.00	21	22
20	19	18	17	128	43	20	17	19	19	.00	23	22
21	18	17	18	74	41	20	19	19	18	.00	7.5	23
22	18	18	19	94	43	21	19	60	18	2.4	2.3	23
23	18	17	21	69	35	20	20	45	19	238	1.2	22
24	18	18	20	55	32	23	25	30	19	31	.51	22
25	17	18	21	40	38	31	20	20	19	24	40	22
26	18	18	20	35	41	83	68	20	19	21	6.4	22
27	18	18	18	40	51	65	103	20	19	215	1.2	22
28	18	19	18	36	60	58	109	20	19	381	.00	22
29	18	19	21	91	---	44	105	20	20	34	.00	22
30	18	20	18	84	---	37	126	20	20	6.0	.00	23
31	18	---	18	85	---	32	---	20	---	1.3	26	---
TOTAL	664	544	659	1311	1192	934	973	1563	573	1253.29	5024.46	593.7
MEAN	21.4	18.1	21.3	42.3	42.6	30.1	32.4	50.4	19.1	40.4	162	19.8
MAX	30	20	59	128	79	83	126	150	20	381	2210	23
MIN	17	17	17	18	22	14	15	15	18	.00	.00	9.7
AC-FT	1320	1080	1310	2600	2360	1850	1930	3100	1140	2490	9970	1180

CAL YR 1982	TOTAL	16562.70	MEAN 45.4	MAX 1850	MIN .00	AC-FT 32850
WTR YR 1983	TOTAL	15284.45	MEAN 41.9	MAX 2210	MIN .00	AC-FT 30320

SAN JUAN RIVER BASIN  
09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued  
WATER-QUALITY RECORDS

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PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1976 to September 1982. (discontinued)

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 tonnes) on many days in 1981 and 1982.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, DIS- SOLVED (MG/L) (00300)
JAN 06...	1230	19	1280	1360	8.3	8.3	6.0	9.0	--
JUL 07...	1100	22	1170	1140	8.0	8.1	29.5	24.5	7.4
SEP 15...	1015	17	1200	1200	8.3	8.3	24.5	20.5	7.7

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD AS HCO3) (99440)
JAN 06...	370	258	258	93	34	150	3.5	5.3	140
JUL 07...	310	216	216	78	27	130	3.3	--	110
SEP 15...	320	215	215	81	29	140	3.5	5.5	130

DATE	CAR- BONATE IT-FLD (MG/L AS C03) (99445)	ALKA- LINITY FIELD (MG/L AS CAC03) (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 SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
JAN 06...	.0	--	500	62	.90	3.0	970	918
JUL 07...	.0	92	420	56	.80	3.2	772	--
SEP 15...	.0	100	440	58	1.1	5.0	853	824

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
JAN 06...	1230	--	--	680	--	--	--	11000
JUL 07...	1100	1	0	600	<1	<10	6	13000
SEP 15...	1015	--	--	610	--	--	--	16000

SAN JUAN RIVER BASIN  
09367950 CHACO RIVER NEAR WATERFLOW, NM --- Continued  
WATER-QUALITY RECORDS

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	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)
JAN 06...	0	--	160	3	--	--	--	--
JUL 07...	0	9	220	8	.5	<1	2	10
SEP 15...	0	--	250	1	--	--	--	--

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 U) (01148)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
JUL 07...	1100	2	<10	0	<100	0	500	<10	170	.00	<1	0

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	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)
JUL 07...	1100	<22	28	19	<9.1	18	<8.8	15	.09	3.8



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 1982 TO SEPTEMBER 1983

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)	SAMPLE SOURCE (72005)
OCT							
25...	1015	18	13.0	604	29	97	--
DEC							
09...	1120	18	8.5	479	23	96	--
JAN							
06...	1230	19	9.0	521	27	91	--
FEB							
08...	1130	29	7.0	4380	343	97	--
16...	1415	54	8.5	27100	3950	98	--
APR							
01...	0945	28	6.0	10900	824	--	--
MAY							
04...	1000	13	10.0	4340	152	100	--
05...	0950	94	--	13600	3450	--	26
05...	1050	90	--	13300	3230	--	26
06...	0020	191	--	20600	10600	87	26
06...	0100	182	--	20400	10000	--	26
06...	0145	165	--	21100	9400	--	26
06...	0230	154	--	20700	8610	--	26
06...	0315	148	--	19800	7910	--	26
06...	0400	136	--	19700	7230	--	26
06...	2000	215	--	18600	10800	--	26
06...	2045	215	--	18100	10500	--	26
06...	2130	230	--	19900	12400	--	26
06...	2215	224	--	19600	11900	--	26
06...	2300	218	--	22000	12900	--	26
06...	2345	200	--	20700	11200	--	26
07...	0030	180	--	19600	9530	--	26
07...	0115	173	--	20800	9720	--	26
07...	0200	160	--	20800	8990	--	26
07...	0245	154	--	20500	8520	--	26
07...	0330	144	--	20700	8050	--	26
07...	0415	134	--	20100	7270	--	26
07...	2100	185	--	16300	8140	--	26
07...	2145	203	--	15900	8710	--	26
07...	2230	200	--	15800	8530	90	26
07...	2315	191	--	17600	9080	--	26
08...	0001	188	--	18900	9590	--	26
08...	0046	182	--	19300	9480	--	26
08...	0131	168	--	20500	9300	--	26
08...	0216	158	--	17200	7340	--	26

SAN JUAN RIVER BASIN  
09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
MAY							
08...	0301	150	--	16500	6680	--	--
08...	0346	140	--	15100	5710	--	--
08...	0431	134	--	14900	5390	--	--
08...	2000	233	--	16600	10400	--	--
08...	2045	260	--	23200	16300	--	--
08...	2130	269	--	20500	14900	--	--
08...	2215	263	--	18300	13000	--	--
08...	2300	251	--	19600	13300	--	--
08...	2345	236	--	19100	12200	--	--
09...	0030	215	--	20400	11800	--	--
09...	0115	200	--	20700	11200	--	--
09...	0200	185	--	20500	10200	--	--
09...	0245	172	--	19900	9240	--	--
09...	0330	158	--	17600	7510	--	--
09...	0415	152	--	16700	6850	--	--
09...	0500	146	--	16300	6430	--	--
09...	0545	140	--	15300	5780	--	--
09...	1800	200	--	15200	8210	--	--
09...	1845	245	--	17800	11800	--	--
09...	1930	272	--	18500	13600	--	--
09...	2015	275	--	17700	13100	46	53
09...	2100	272	--	19100	14000	--	--
09...	2145	266	--	20200	14500	--	--
09...	2230	248	--	19200	12900	--	--
09...	2315	233	--	19900	12500	--	--
10...	0001	215	--	19500	11300	--	--
10...	0046	194	--	19300	10100	--	--
10...	0131	172	--	18600	8640	--	--
10...	0216	156	--	18500	7790	--	--
10...	0301	146	--	17800	7020	--	--
10...	0346	142	--	17300	6630	--	--
10...	0431	136	--	17700	6500	--	--
10...	0516	134	--	16000	5790	--	--
10...	2000	230	--	20900	13000	--	--
10...	2045	239	--	20700	13400	--	--
11...	0015	185	--	21700	10800	--	--
11...	0100	170	--	17600	8080	--	--
JUN							
07...	1040	20	24.0	392	21	--	--
JUL							
07...	1100	22	24.5	659	39	--	--

SAN JUAN RIVER BASIN  
09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	SAMPLE SOURCE (72005)
MAY							
08...	--	--	--	--	--	--	26
08...	--	--	--	--	--	--	26
08...	--	--	--	--	--	--	26
08...	--	--	--	--	--	76	26
08...	--	--	--	--	--	--	26
08...	--	--	--	--	--	--	26
08...	--	--	--	--	--	--	26
08...	--	--	--	--	--	--	26
08...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	65	90	97	99	100	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
09...	--	--	--	--	--	--	26
10...	--	--	--	--	--	--	26
10...	--	--	--	--	--	--	26
10...	--	--	--	--	--	--	26
10...	--	--	--	--	--	--	26
10...	--	--	--	--	--	--	26
10...	--	--	--	--	--	--	26
10...	--	--	--	--	--	--	26
10...	--	--	--	--	--	--	26
10...	--	--	--	--	--	93	26
10...	--	--	--	--	--	--	26
10...	--	--	--	--	--	--	26
11...	--	--	--	--	--	--	26
11...	--	--	--	--	--	85	26
JUN							
07...	--	--	--	--	--	90	--
JUL							
07...	--	--	--	--	--	88	--

SAN JUAN RIVER BASIN  
09367950 CHACO RIVER NEAR WATERFLOW, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
JUL							
23...	0315	710	--	682	1310	--	--
23...	0445	690	--	22700	42300	48	58
23...	0615	489	--	28000	37000	--	--
28...	1450	392	22.0	53600	56700	51	59
29...	1020	25	21.0	29800	2010	--	--
AUG							
04...	1000	88	22.0	192000	45600	64	75
04...	1010	88	22.0	83600	19900	62	82
08...	1110	30	24.0	15500	1260	--	--
SEP							
15...	1045	17	20.5	753	35	--	--

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)	SAMPLE SOURCE (72005)
JUL							
23...	--	--	--	--	--	53	26
23...	78	94	99	100	--	--	26
23...	--	--	--	--	--	86	26
28...	73	90	97	99	100	--	--
29...	--	--	--	--	--	99	--
AUG							
04...	93	97	98	100	--	--	--
04...	92	97	99	100	--	--	26
08...	--	--	--	--	--	99	--
SEP							
15...	--	--	--	--	--	96	--

09368000 SAN JUAN RIVER AT SHIPROCK, NM  
(National stream-quality accounting network, surveillance network, and radiochemical network station)

LOCATION.--Lat 36°47'32", long 108°43'54", in NW¼ sec. 27, T. 30 N., R. 18 W., San Juan County, Hydrologic Unit 14080105, on left bank 3 mi west of Shiprock, 6 mi downstream from Chaco River, and at mile 215.0.

DRAINAGE AREA.--12,900 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January to October 1911, February 1927 to current year. Monthly or yearly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1243: 1931, 1934-38, 1951. WSP 1313: 1911, 1933. WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 4,848.68 ft National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Apr. 6, 1922, nonrecording gage and Apr. 7, 1922, to Oct. 25, 1933, water-stage recorder, at site 3 mi upstream at different datum. Oct. 26, 1933, to Sept. 30, 1936, water-stage recorder at present site at datum 3.31 ft higher and Oct. 1, 1936, to Sept. 30, 1952, at datum 1.77 ft higher. Supplementary water-stage recorders at nearby sites, same datum, used at times.

REMARKS.--Water-discharge records good. Since 1962 flow partly regulated by Navajo Reservoir (station 09355100). Diversions for irrigation of about 118,000 acres 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.--57 years (water years 1927-83), 2,181 ft<sup>3</sup>/s, 1,580,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD (SINCE 1927).--Maximum discharge, about 80,000 ft<sup>3</sup>/s Aug. 11, 1929, gage height, 5.7 ft, site and datum then in use; minimum daily, 8 ft<sup>3</sup>/s Aug. 25, 26, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood occurred Oct. 6, 1911, and reached a stage of 22 ft, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
June 1	0515	7150	6.75	June 25	0945	*9090	7.34

Minimum daily discharge, 820 ft<sup>3</sup>/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1880	1510	1240	2220	2340	2380	3170	4760	6810	5600	1960	1050
2	2030	1510	1230	2210	2260	2400	3200	4260	6260	5510	1890	1010
3	2020	1510	1130	2210	2190	2380	3130	4100	5580	5290	2070	1050
4	1860	1520	1040	2240	2210	2430	3130	3890	4290	5630	4040	1100
5	1740	1500	1050	2270	2240	2630	3130	3950	4040	5740	3400	1050
6	1700	1510	1040	2240	2180	2300	3050	4370	4160	5470	3870	1020
7	1600	1500	1430	2270	2120	2170	3040	4700	4080	5180	2710	941
8	1570	1510	1800	2340	2150	2340	2990	4570	4150	5320	2440	1040
9	1590	1610	1890	2330	2210	2340	2940	4630	4480	5610	2080	1060
10	1630	1750	2060	2300	2180	2300	2980	5130	4250	5420	1940	1070
11	1600	1780	2310	2290	2140	2410	3090	5360	4030	5360	1850	1040
12	1600	1770	2250	2310	2190	2480	3110	4990	4350	4680	2570	993
13	1410	1660	2200	2310	2160	2510	3180	3670	4840	4010	2010	1010
14	1150	1640	2100	2340	2220	2570	3260	3330	4350	3360	1900	909
15	1140	1650	2080	2350	2280	2800	3300	2920	3780	3050	1760	901
16	1100	1450	2050	2380	2180	2600	3250	2780	3800	2580	1700	862
17	1060	1170	2000	2390	2220	2440	3200	2760	4500	2410	1590	880
18	1030	1150	1950	2490	2230	2480	3200	2780	5400	2510	1400	905
19	1140	1070	1940	2460	2200	2460	3360	2820	6500	2260	1340	886
20	1270	1050	1930	2500	2170	2410	3490	3020	7300	2270	1310	820
21	1340	1010	1920	2440	2170	2410	3720	2850	7200	2310	1160	852
22	1340	997	1950	2440	2150	2650	3870	2630	7100	2330	1180	917
23	1350	983	2160	2320	2160	2770	3940	3020	7000	2910	1130	1050
24	1320	1050	2300	2330	2250	2780	3970	3680	7000	2840	983	1220
25	1320	1050	2230	2300	2300	2890	4390	4300	8020	2840	1010	1160
26	1300	1050	2150	2320	2430	2890	4920	4740	7320	3160	1200	1160
27	1430	1070	2170	2280	2420	2830	4880	5110	6500	4010	1220	1200
28	1560	1100	2200	2300	2340	2800	4850	5830	6300	3480	1330	1220
29	1500	1110	2090	2370	---	2980	4670	6250	5830	2550	1240	1520
30	1500	1170	2120	2430	---	3020	4600	6290	5680	2010	1150	1770
31	1520	---	2190	2330	---	3070	---	6260	---	1980	1110	---
TOTAL	45600	40410	58200	72310	62290	79920	107010	129750	164900	117680	56543	31666
MEAN	1471	1347	1877	2333	2225	2578	3567	4185	5497	3796	1824	1056
MAX	2030	1780	2310	2500	2430	3070	4920	6290	8020	5740	4040	1770
MIN	1030	983	1040	2210	2120	2170	2940	2630	3780	1980	983	820
AC-FT	90450	80150	115400	143400	123600	158500	212300	257400	327100	233400	112200	62810

CAL YR 1982 TOTAL 749589 MEAN 2054 MAX 6560 MIN 648 AC-FT 1487000  
WTR YR 1983 TOTAL 966279 MEAN 2647 MAX 8020 MIN 820 AC-FT 1917000

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 1957-83): 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, 781 micromhos Sept. 29; minimum daily, 240 micromhos June 20, 23.

WATER TEMPERATURES: Maximum, 25.0°C Aug. 2-5, 9; minimum, 0.0°C Dec. 29, Jan. 4-5.

SEDIMENT CONCENTRATIONS: Maximum daily, 24,900 mg/l Aug. 4; minimum daily, 46 mg/l July 20.

SEDIMENT LOADS: Maximum daily, 398,000 tons (361,000 tonnes) June 25; minimum daily, 177 tons (161 tonnes) Sept. 21.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CACO3) (00900)
NOV 03...	1400	1510	580	545	8.5	8.3	10.5	8.0	20	11.3	190
JAN 05...	1400	2180	430	--	8.2	--	4.5	2.0	--	--	--
FEB 02...	1400	2220	460	492	7.9	8.2	1.5	3.0	450	--	170
MAY 03...	1015	4100	373	391	8.1	8.2	16.0	9.0	40	11.3	150
JUN 01...	1315	7000	249	277	7.5	7.9	31.0	13.5	--	9.3	110
AUG 03...	0945	2080	450	443	7.9	8.0	25.0	22.0	220	7.4	160

DATE	HARD- NESS NONCAR- BONATE (MG/L CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS) CACO3 (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
NOV 03...	85	85	57	11	36	1.2	2.3	110	8.0	--	114
JAN 05...	--	--	--	--	--	--	--	120	.0	--	--
FEB 02...	68	68	50	9.8	39	1.4	2.2	120	.0	--	104
MAY 03...	56	56	45	10	21	.8	1.9	120	--	120	101
JUN 01...	29	29	34	6.0	9.9	.4	1.6	99	--	--	78
AUG 03...	63	63	50	8.6	26	.9	2.2	120	.0	--	99

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)
NOV 03...	140	11	.30	8.6	352	338	.12	.080	.070	.030
JAN 05...	--	--	--	--	--	--	--	--	--	--
FEB 02...	130	8.5	.30	11	329	311	.28	.140	.330	.020
MAY 03...	88	4.9	.20	9.5	236	240	.13	.060	.270	.030
JUN 01...	55	3.3	.20	6.0	--	165	--	--	--	--
AUG 03...	110	8.3	.30	7.9	277	273	.16	.060	.200	.030

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 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 03...	1400	20	1	0	0	0	<1	<1	0	5	20
JAN 05...	1400	--	<1	--	0	--	<1	<10	--	4	--
FEB 02...	1400	20	1	0	0	--	<1	<1	0	3	20
MAY 03...	1015	30	1	0	0	--	1	<1	0	3	10
JUN 01...	1315	--	--	--	--	0	--	--	--	--	50
AUG 03...	0945	20	1	0	0	0	<1	<1	0	3	0

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	<1	40	4	.0	<10	5	2	<1	670	<6.0	0
JAN 05...	1	--	--	.0	--	3	3	--	--	--	0
FEB 02...	<1	20	4	.0	<10	2	3	<1	600	<6.0	0
MAY 03...	<1	20	3	.0	<10	1	2	<1	440	<6.0	20
JUN 01...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	<1	30	3	.5	<10	<1	1	<1	620	<6.0	10

CHEMICAL ANALYSES OF BOTTOM MATERIAL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

		NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO- GEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS) (01003)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD) (01028)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) (01029)	
NOV 03...	1400	<2.0	3.6	190	2	0	0	
		COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO) (01038)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) (01043)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) (01052)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (01053)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) (71921)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
NOV 03...	<10	0	800	<10	170	.00	20	

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	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 03...	1400	<8.9	2.0	1.4	<5.3	2.1	<5.1	2.0	.07	1.8
MAY 03...	1015	<7.9	23	16	<3.0	23	<2.9	20	.08	1.7

SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS:

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)
JUN 01...	1315	--	--	--	--	--	--	--	--	--
AUG 03...	0945	<.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)	MIREX, TOTAL (UG/L) (39755)
JUN 01...	--	--	--	--	--	--	--	--	--	--
AUG 03...	<.01	<.01	<.01	<.01	<.01	.02	<.01	<.01	<.01	<.01

DATE	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE TOTAL (UG/L) (39034)	TOX- APHENE, TOTAL (UG/L) (39400)	TRI- THION TOTAL (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)
JUN 01...	--	--	--	--	--	.03	<.01	<.01	<.01
AUG 03...	<.10	<.01	<.10	<1	<.01	--	--	--	--

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 03...	K23	34
FEB 02...	K15	1200
MAY 03...	77	110
JUN 01...	110	1200
AUG 03...	450	1400



SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 (70337)	SED. SUSP. FALL DIAM. % FINER THAN (70338)	SED. SUSP. FALL DIAM. % FINER THAN (70340)	SED. SUSP. FALL DIAM. % FINER THAN (70342)
OCT									
05...	1000	1720	13.0	363	1690	--	--	--	--
NOV									
03...	1400	1510	8.0	623	2540	--	--	--	14
JAN									
05...	1400	2180	2.0	971	5730	--	--	--	14
20...	0810	2510	3.0	2200	14900	63	71	80	--
FEB									
02...	1400	2220	3.0	1730	10400	29	33	39	42
16...	1110	2170	4.0	2590	15200	59	70	90	--
26...	0930	2440	5.0	4950	32600	--	--	--	--
MAR									
14...	0810	2580	8.0	769	5360	--	--	--	--
24...	1100	2760	3.0	2700	20100	36	52	67	86
APR									
14...	0805	3380	6.0	1050	9580	51	60	77	--
27...	0820	4760	10.0	1780	22900	--	--	--	--
MAY									
03...	1015	4100	9.0	1100	12200	--	--	--	40
JUN									
01...	1315	7000	13.5	1070	20200	15	15	23	47
25...	1700	8000	13.0	27700	598000	11	14	22	33
JUL									
22...	0840	2440	17.0	3970	26200	52	67	93	--
28...	1000	3570	18.0	6340	61100	49	61	81	--
AUG									
03...	0945	2080	22.0	820	4610	--	--	--	--
03...	1545	2380	25.0	22300	143000	60	65	83	96
04...	1500	3790	25.0	21500	220000	56	67	85	99
19...	0745	1280	19.0	2990	10300	49	64	90	--
SEP									
02...	1215	1000	22.0	810	2190	--	--	--	--
29...	1110	1460	14.0	8810	34700	46	67	90	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN (70343)	SED. SUSP. FALL DIAM. % FINER THAN (70344)	SED. SUSP. FALL DIAM. % FINER THAN (70345)	SED. SUSP. FALL DIAM. % FINER THAN (70346)	SED. SUSP. FALL DIAM. % FINER THAN (70331)	SED. SUSP. FALL DIAM. % FINER THAN (70332)	SED. SUSP. FALL DIAM. % FINER THAN (70333)	SED. SUSP. FALL DIAM. % FINER THAN (70334)	SED. SUSP. FALL DIAM. % FINER THAN (70335)
OCT									
05...	--	--	--	--	42	64	88	95	100
NOV									
03...	29	49	92	100	--	--	--	--	--
JAN									
05...	34	82	97	100	--	--	--	--	--
20...	--	--	--	--	90	97	99	100	--
FEB									
02...	49	77	93	100	--	--	--	--	--
16...	--	--	--	--	97	99	100	--	--
26...	--	--	--	--	98	--	--	--	--
MAR									
14...	--	--	--	--	82	--	--	--	--
24...	96	100	--	--	--	--	--	--	--
APR									
14...	--	--	--	--	95	99	100	--	--
27...	--	--	--	--	95	--	--	--	--
MAY									
03...	60	82	98	100	--	--	--	--	--
JUN									
01...	66	82	98	100	--	--	--	--	--
25...	47	82	99	100	--	--	--	--	--
JUL									
22...	--	--	--	--	100	--	--	--	--
28...	--	--	--	--	97	100	--	--	--
AUG									
03...	--	--	--	--	77	--	--	--	--
03...	99	100	--	--	--	--	--	--	--
04...	100	--	--	--	--	--	--	--	--
19...	--	--	--	--	99	100	--	--	--
SEP									
02...	--	--	--	--	89	--	--	--	--
29...	--	--	--	--	100	--	--	--	--

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 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	350	540	650	500	500	---	---	---	---	---	---	526
2	380	540	680	430	---	---	---	---	---	---	---	---
3	370	530	640	440	---	---	---	---	---	---	---	---
4	400	560	670	450	---	---	---	---	---	---	---	---
5	420	540	660	450	---	---	---	---	---	---	---	---
6	460	550	660	450	---	---	---	---	---	---	---	---
7	480	530	660	440	---	---	---	---	---	---	---	---
8	480	530	520	470	---	---	---	---	---	---	---	---
9	470	550	500	440	---	---	---	---	---	---	---	---
10	440	550	520	450	---	---	---	---	---	---	---	---
11	480	550	550	450	---	---	---	---	---	---	---	---
12	490	540	560	450	---	---	---	---	---	---	---	---
13	500	530	520	440	---	---	---	---	---	---	---	---
14	570	530	500	450	---	---	---	---	---	---	---	---
15	570	520	500	440	---	---	---	---	---	---	---	---
16	630	540	500	460	---	---	---	---	---	---	---	---
17	600	600	490	450	---	---	---	---	---	---	---	---
18	600	650	490	470	---	---	---	---	---	---	421	---
19	590	690	480	500	---	---	---	---	---	---	720	---
20	590	670	480	510	---	---	---	---	---	---	648	---
21	541	670	480	480	---	---	---	---	---	---	491	---
22	550	660	480	490	---	---	---	---	---	---	480	---
23	540	650	500	470	---	---	---	---	---	---	497	---
24	560	660	550	460	---	---	---	---	---	---	485	---
25	550	660	460	470	---	---	---	---	---	---	493	---
26	550	650	460	470	---	---	---	---	---	---	538	---
27	550	640	460	480	---	---	---	---	---	---	636	---
28	580	640	470	470	---	---	---	---	---	---	483	---
29	550	640	470	500	---	---	---	---	---	---	502	---
30	560	650	450	490	---	---	---	---	---	---	476	---
31	540	---	450	500	---	---	---	---	---	---	506	---
MEAN	514	592	531	465	---	---	---	---	---	---	527	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. ° C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	530	490	505	450	420	435	375	360	367
2	465	455	462	505	475	492	435	405	422	375	365	369
3	460	450	454	570	500	520	435	410	419	380	365	374
4	470	450	458	545	510	519	430	410	418	385	370	377
5	490	475	480	570	530	551	430	410	422	400	375	386
6	490	470	478	545	495	517	440	420	428	390	360	374
7	470	445	457	505	485	489	430	415	423	375	355	366
8	465	455	461	485	475	482	430	415	422	370	355	362
9	505	460	483	505	470	491	415	410	412	375	355	365
10	495	475	483	505	485	493	410	405	406	365	340	349
11	480	460	474	495	470	481	415	410	411	355	320	327
12	495	455	468	490	480	486	425	405	416	335	320	326
13	475	450	463	490	470	480	430	415	423	375	335	355
14	490	455	471	485	475	479	550	430	470	375	370	374
15	535	445	476	515	490	501	430	415	425	385	375	382
16	500	465	484	515	450	479	425	410	418	400	390	395
17	495	465	478	490	455	461	420	405	413	405	400	403
18	490	460	477	460	435	444	425	405	416	410	405	408
19	480	455	469	490	460	474	440	400	424	425	415	418
20	475	465	470	500	460	478	435	405	422	450	420	429
21	470	455	461	500	460	477	425	400	411	450	425	434
22	470	455	459	475	450	463	440	410	425	485	455	470
23	470	455	462	520	480	498	420	395	409	465	420	444
24	485	465	471	520	475	500	415	385	400	420	365	394
25	495	475	485	550	465	506	410	380	391	370	325	345
26	545	490	520	545	465	501	395	375	383	325	300	308
27	540	505	528	470	450	459	380	355	369	310	285	295
28	530	480	504	460	445	450	365	355	360	295	280	286
29	---	---	---	455	435	439	370	355	362	290	255	264
30	---	---	---	465	420	435	365	360	361	265	250	258
31	---	---	---	460	430	443	---	---	---	275	260	263
MONTH	545	445	475	570	420	484	550	355	411	485	250	363

SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN,  
WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	265	250	255	265	255	257	455	415	428	---	---	---
2	260	250	257	260	250	253	470	425	443	515	---	510
3	280	250	260	255	250	253	755	410	472	590	505	533
4	315	280	298	255	245	250	1310	220	777	530	525	526
5	315	305	310	250	240	243	1010	555	732	530	510	521
6	305	290	298	250	240	244	680	500	609	560	520	531
7	300	295	299	260	245	253	685	425	514	535	520	527
8	305	295	300	280	255	263	420	390	405	550	510	534
9	295	275	283	325	260	278	420	380	390	685	510	583
10	300	285	292	350	270	295	480	380	404	535	520	526
11	315	300	308	290	260	272	420	400	409	530	510	519
12	310	280	296	290	275	284	955	145	549	525	510	517
13	280	255	262	395	290	308	600	425	482	660	515	552
14	305	265	287	390	330	347	455	430	442	540	520	529
15	330	305	322	335	325	329	475	435	448	530	520	526
16	340	315	332	350	330	338	445	420	431	540	520	530
17	315	285	299	365	350	360	430	425	429	540	525	533
18	285	260	274	365	360	363	---	---	---	565	530	544
19	260	235	245	380	365	370	---	---	---	550	530	537
20	245	215	226	390	370	377	---	---	---	545	530	538
21	225	215	219	395	365	371	---	---	---	555	535	543
22	225	210	217	530	365	428	---	---	---	550	530	539
23	225	210	218	855	420	489	---	---	---	570	540	547
24	240	215	225	570	450	483	---	---	---	580	505	533
25	520	220	331	530	395	452	---	---	---	560	535	546
26	335	275	286	780	450	586	---	---	---	555	530	543
27	285	260	268	745	475	593	---	---	---	555	530	540
28	265	245	249	615	430	504	---	---	---	545	530	539
29	270	245	260	430	405	417	---	---	---	960	525	681
30	275	255	262	440	415	423	---	---	---	840	550	581
31	---	---	---	445	420	430	---	---	---	---	---	---
MONTH	520	210	275	855	240	358	1310	145	492	960	505	542

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

TEMPERATURE WATER (DEG.° C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7.0	4.0	2.0	2.0	5.0						
2	---	7.0	3.0	3.0	2.0							
3	---	7.0	4.0	2.0	2.0					17.0		
4	---	6.0	2.0	.0	2.0					17.0		
5	---	6.0	3.0	.0	4.0							
6	14.0	5.0	2.0	3.0	4.0							
7	13.0	8.0	2.0	3.0	3.0							
8	12.0	6.0	3.0	5.0	3.0							
9	11.0	7.0	3.0	4.0	3.0							
10	7.0	7.0	4.0	2.0	3.0							
11	11.0	5.0	6.0	1.0	4.0							
12	10.0	4.0	6.0	2.0	6.0							
13	9.0	6.0	5.0	2.0	4.0							
14	10.0	5.0	4.0	2.0	3.0							
15	9.0	4.0	3.0	4.0	4.0							
16	12.0	5.0	3.0	2.0	4.0							
17	12.0	5.0	4.0	4.0	4.0							
18	10.0	5.0	4.0	4.0	4.0							
19	10.0	5.0	4.0	3.0	5.0							
20	9.0	8.0	3.0	3.0	3.0							
21	9.0	8.0	3.0	3.0	3.0							
22	10.0	8.0	4.0	4.0	3.0							
23	9.0	9.0	5.0	4.0	4.0							
24	10.0	6.0	3.0	2.0	4.0							
25	10.0	6.0	2.0	3.0	6.0							
26	10.0	6.0	2.0	2.0	5.0							
27	9.0	6.0	2.0	2.0	5.0							
28	7.0	5.0	2.0	3.0	5.0							
29	6.0	6.0	.0	3.0	---							
30	9.0	5.0	2.0	4.0	---							
31	9.0	---	2.0	3.0	---							
MEAN	10.5	6.0	3.0	2.5	3.5					17.0		

SAN JUAN RIVER BASIN  
09368000 SAN JUAN RIVER AT SHIPROCK, NM -- Continued  
WATER-QUALITY RECORDS

TEMPERATURE WATER (DEG.° C), RECORDER MAXIMUM, MINIMUM, AND MEAN, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1				---	---	---	9.0	6.5	7.5	10.0	7.5	8.5
2				8.5	7.5	8.0	9.5	6.5	8.0	11.0	8.5	9.5
3				8.0	6.5	7.5	9.0	7.0	8.0	12.0	8.5	10.5
4				8.5	7.0	7.5	7.0	4.5	6.0	13.5	10.0	11.5
5				7.5	6.0	7.0	6.5	3.5	5.5	13.5	11.0	12.0
6				8.0	5.0	6.5	7.5	6.0	6.5	12.5	10.0	11.0
7				9.0	5.5	7.0	9.0	5.5	7.0	12.0	9.0	10.5
8				9.5	6.0	8.0	9.0	6.0	7.5	13.5	10.5	12.0
9				9.5	6.5	8.0	10.0	6.0	8.0	14.5	11.0	12.5
10				10.0	7.0	8.5	10.5	7.5	9.0	14.0	11.5	13.0
11				11.0	8.0	9.5	8.5	7.0	8.0	12.5	10.5	12.0
12				11.5	8.5	10.0	7.5	6.0	7.0	12.0	9.0	10.5
13				10.5	8.5	9.5	7.0	6.0	6.5	12.5	10.0	11.5
14				10.5	9.0	9.5	8.5	5.5	7.0	13.0	10.5	11.5
15				9.0	6.5	8.0	10.0	6.5	8.0	13.5	10.0	11.5
16				9.0	6.0	7.5	11.0	7.0	9.0	13.0	10.5	12.0
17				7.5	6.5	7.0	11.5	7.5	9.5	10.5	9.0	9.5
18				7.5	6.0	7.0	12.0	9.0	10.5	12.0	7.5	9.5
19				6.5	5.5	6.0	12.5	9.0	10.5	13.0	10.0	11.0
20				7.0	4.5	5.5	11.5	9.5	10.5	14.0	10.5	12.0
21				6.0	5.0	5.5	10.5	9.0	9.5	15.5	11.0	13.0
22				6.0	4.5	5.0	11.5	9.0	10.0	17.0	13.0	15.0
23				7.5	5.0	6.0	13.0	9.5	11.0	18.0	14.0	16.0
24				5.5	4.5	5.0	13.5	10.5	12.0	18.0	14.5	16.0
25				6.0	4.5	5.0	13.0	10.5	12.0	17.0	14.5	15.5
26				7.0	4.5	5.5	12.5	10.0	11.5	16.0	14.0	15.0
27				8.0	5.0	6.5	11.5	10.0	11.0	15.5	13.5	14.5
28				9.0	7.0	7.5	13.0	10.0	11.5	16.0	14.0	15.0
29				10.0	7.0	8.5	12.5	10.5	11.5	15.0	12.5	14.0
30				10.5	7.5	9.0	11.0	8.5	10.0	14.5	12.5	13.5
31				11.0	8.0	9.0	---	---	---	14.0	12.5	13.5
MONTH				11.5	4.5	7.5	13.5	3.5	9.0	18.0	7.5	12.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	14.5	12.0	13.5	17.5	15.5	16.5	24.0	21.0	22.0	25.0	20.0	22.5
2	14.0	12.0	13.5	15.5	15.5	15.5	24.5	21.5	22.5	25.0	21.0	23.0
3	14.0	11.5	13.0	---	---	---	24.5	22.0	23.0	22.5	20.0	21.5
4	15.5	12.5	14.0	---	---	---	24.0	21.5	22.5	23.0	19.0	21.0
5	15.5	12.5	14.0	17.5	15.5	16.5	23.5	22.0	23.0	22.0	18.0	20.0
6	16.0	13.5	14.5	18.0	16.0	17.0	22.5	21.0	21.5	22.0	17.0	19.5
7	16.5	13.5	15.0	19.0	16.5	17.5	23.5	21.0	22.0	20.0	17.0	18.5
8	17.0	14.0	15.5	18.5	17.0	17.5	24.0	21.0	22.5	22.0	16.5	19.5
9	15.5	14.0	15.0	18.0	17.0	17.0	25.0	21.5	23.0	22.5	18.0	20.0
10	16.5	13.5	15.0	19.5	17.0	18.0	24.5	21.5	22.5	23.0	18.5	20.5
11	16.0	14.0	15.0	19.0	16.5	17.5	23.0	20.5	21.5	23.0	18.5	20.5
12	16.0	14.0	14.5	19.5	16.0	17.5	22.0	20.0	20.5	22.0	17.5	20.0
13	14.5	12.5	13.5	20.0	16.5	18.0	23.5	20.0	21.5	21.5	17.0	19.0
14	15.0	12.0	13.5	20.0	17.0	18.5	24.5	20.5	22.0	21.5	17.0	19.5
15	16.5	13.0	14.5	20.5	17.5	19.0	24.0	20.5	22.0	22.0	17.5	19.5
16	17.5	14.0	15.5	21.5	17.5	19.0	24.0	20.0	22.0	21.0	16.0	18.5
17	17.0	15.0	16.0	22.0	18.5	20.0	24.5	20.0	22.0	20.0	16.0	18.0
18	17.0	14.5	15.5	22.5	19.0	20.5	24.5	20.5	22.0	20.5	16.0	18.0
19	16.0	15.0	15.5	24.0	19.5	21.5	24.0	19.5	21.5	19.5	16.0	18.0
20	16.0	13.5	15.0	24.0	20.5	22.0	23.5	19.5	21.5	17.5	13.5	15.5
21	15.5	13.5	14.5	24.5	21.0	22.5	24.5	19.5	22.0	16.5	11.5	14.0
22	16.0	14.0	15.5	23.0	20.5	22.0	24.5	19.0	21.5	16.5	11.0	14.0
23	16.0	15.0	15.5	23.0	20.5	21.5	24.5	19.5	22.0	15.5	13.5	14.5
24	15.0	12.5	14.0	23.5	20.0	21.5	24.0	20.5	22.0	17.5	14.0	15.5
25	15.0	12.5	14.0	22.5	20.5	21.5	23.5	19.5	21.5	19.5	14.5	16.5
26	16.5	14.0	15.5	22.0	20.0	21.0	24.0	19.0	21.5	19.0	15.0	17.0
27	16.0	14.5	15.0	20.5	19.0	19.5	24.0	19.0	21.0	19.5	15.5	17.5
28	16.0	14.5	15.5	21.0	18.0	19.5	23.0	19.5	21.0	17.0	15.5	16.5
29	16.5	14.5	15.5	23.0	19.0	20.5	21.5	20.0	20.5	15.5	14.0	15.0
30	17.0	14.5	16.0	23.0	20.0	21.5	24.0	19.0	21.0	15.0	14.0	14.5
31	---	---	---	23.5	21.0	22.0	24.5	19.0	21.5	---	---	---
MONTH	17.5	11.5	15.0	24.5	15.5	19.5	25.0	19.0	22.0	25.0	11.0	18.5

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR



## SAN JUAN RIVER BASIN

09371010. SAN JUAN RIVER AT FOUR CORNERS, CO

LOCATION.--Lat 37°00'20", long 109°02'00", SE¼NE¼ sec.21, T.32 N., R.20 W., Montezuma County, Hydrologic Unit 14080201, on left bank 1,300 ft upstream from bridge on U.S. Highway 160, 0.1 mi north of New Mexico-Colorado State line, 1.0 mi east of Four Corners Monument, 3.0 mi downstream from Mancos River, and at mile 187.2.

DRAINAGE AREA.--14,600 mi<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, from topographic map.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--6 years, 2,361, 1,711,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft<sup>3</sup>/s May 29, 1979, gage height, 6.25 ft; maximum gage height, 14.43 ft Dec. 12, 1978 (backwater from ice); minimum 110 ft<sup>3</sup>/s Aug. 19, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
May 11	0615	6590	4.41	June 26	0900	*8430	4.87
June 1	0745	7430	4.62	July 28	0030	6300	4.33

Minimum daily discharge, 937 ft<sup>3</sup>/s Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1680	1540	1320	1930	2460	2730	3420	5640	7030	6190	1830	1060
2	1740	1500	1370	1940	2390	2730	3700	5140	6800	6010	1760	1030
3	1750	1500	1280	1970	2260	2760	3730	4650	6570	5730	1760	1010
4	1660	1490	1180	1930	2280	2830	3700	4490	5270	5650	2460	1080
5	1620	1430	1170	2030	2280	3040	3550	4520	4930	5810	3440	1080
6	1540	1480	1200	1980	2270	2750	3480	4950	5100	5630	3440	1080
7	1520	1500	1280	2090	2260	2560	3400	5220	4850	5350	2610	1030
8	1470	1480	1810	2090	2260	2430	3150	4970	4520	5390	2240	986
9	1490	1510	1810	2090	2290	2470	3220	5130	4800	5620	2000	1130
10	1480	1660	1940	2030	2250	2500	3300	5730	4480	5330	1810	1090
11	1550	1700	2240	2070	2240	2560	3280	6360	4090	5280	1710	1110
12	1540	1670	2040	2100	2240	2740	3480	6070	4200	4680	2100	1080
13	1530	1620	1940	2160	2270	2730	3200	4830	5030	4000	1720	1060
14	1320	1560	1830	2140	2300	2790	3450	4330	4500	3350	1720	1000
15	1330	1560	1800	2180	2360	2980	3600	3890	3780	3120	1580	975
16	1300	1500	1800	2230	2360	2960	3620	3440	3750	2680	1440	960
17	1290	1270	1740	2210	2410	2670	3550	3080	4350	2280	1440	939
18	1290	1170	1700	2340	2390	2620	3600	2930	4870	2140	1320	987
19	1330	1200	1700	2450	2420	2740	3910	2800	5810	2120	1300	998
20	1430	1180	1690	2510	2350	2770	4030	2890	6710	1880	1300	971
21	1540	1180	1580	2500	2320	2680	4120	2720	6760	1900	1200	937
22	1560	1140	1620	2440	2360	2880	4300	2350	6780	1860	1130	1010
23	1560	1090	1760	2340	2400	3020	4330	2640	6750	2260	1100	1080
24	1550	1090	1930	2360	2480	3100	4390	3110	6800	2060	1000	1260
25	1570	1130	1860	2300	2500	3280	4830	4070	7520	2100	1080	1240
26	1540	1110	1820	2290	2570	3200	5500	5070	7850	2460	1050	1180
27	1600	1130	1800	2280	2690	3400	5670	5420	7440	3070	1200	1210
28	1690	1140	1820	2370	2680	3580	5580	5670	7250	3590	1190	1200
29	1640	1160	1950	2380	---	3650	5530	6250	6800	2500	1260	1390
30	1660	1230	1900	2480	---	3550	5470	6420	6330	1940	1160	1440
31	1660	---	1880	2420	---	3450	---	6440	---	1940	1120	---
TOTAL	47430	40920	52760	68630	66340	90150	120090	141220	171720	113920	51470	32603
MEAN	1530	1364	1702	2214	2369	2908	4003	4555	5724	3675	1660	1087
MAX	1750	1700	2240	2510	2690	3650	5670	6440	7850	6190	3440	1440
MIN	1290	1090	1170	1930	2240	2430	3150	2350	3750	1860	1000	937
AC-FT	94080	81160	104600	136100	131600	178800	238200	280100	340600	226000	102100	64670

CAL YR 1982	TOTAL	774173	MEAN	2121	MAX	6270	MIN	848	AC-FT	1536000
WTR YR 1983	TOTAL	997253	MEAN	2732	MAX	7850	MIN	937	AC-FT	1978000

## SAN JUAN RIVER BASIN

433

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 downstream from Gypsum Creek, 1,800 ft upstream from highway bridge, 20 mi southwest of Bluff, and at mile 113.5.

DRAINAGE AREA.--23,000 mi<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 from levels of Topographic Division, USGS. Prior to Mar. 16, 1927, chain gages at sites about 1,700 ft downstream at different datums.

REMARKS.--Records fair. Diversions for irrigation of approximately 200,000 acres 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.--69 years, 2,542 ft<sup>3</sup>/s, 1,842,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD (1914-17 AND SINCE 1927).--Maximum discharge, 70,000 ft<sup>3</sup>/s Sept. 10, 1927, gage height, 32.0 ft from rating curve extended above 31,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 26.62 ft; 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 and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
May 31	0215	8100	9.21	June 26	0830	*8770	9.60

Minimum discharge, 624 ft<sup>3</sup>/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1960	1680	1790	2110	2510	3430	5790	6740	7680	6600	3000	1230
2	1870	1680	1520	2110	2440	3400	5840	6420	7560	6310	2770	1160
3	1980	1660	1580	2090	2330	3530	5200	5560	7090	5860	2630	1120
4	1940	1650	1400	2070	2280	4920	4860	5170	6130	5830	2790	1100
5	1810	1660	1250	2150	2410	4820	4660	5130	5080	5750	4590	1180
6	1730	1590	1250	2120	2390	3990	4400	5620	4990	5730	3930	1140
7	1730	1610	1240	2100	2450	3210	4190	6140	4970	5510	4420	1130
8	1660	1560	1340	2150	2450	3010	4080	6120	4710	5230	3020	1100
9	1650	2060	1820	2190	2900	2980	3960	5940	4870	5630	3010	1040
10	1670	2460	1950	2200	2630	3230	3880	6480	5100	5870	2600	1210
11	1690	2060	2280	2160	2400	3380	4080	7560	4870	5500	2390	1160
12	1680	1940	2530	2150	2260	3580	4130	7530	4560	5280	2900	1190
13	1720	1900	2400	2160	2230	4020	4160	6370	5100	4610	4030	1140
14	1600	1760	2280	2190	2290	4180	4360	5060	5410	3990	2580	1110
15	1300	1690	2150	2190	2360	4700	4260	4660	4600	3590	2220	1050
16	1330	1690	2090	2210	2370	4640	4190	4230	4000	3270	2070	1020
17	1330	1590	2030	2270	2340	3920	4020	3910	4130	2910	2000	994
18	1360	1400	2040	2400	2390	3510	4260	3780	4620	2620	2010	963
19	1310	1310	2000	2640	2340	3500	4790	3630	5270	2610	1870	969
20	1390	1370	1980	2610	2340	3610	5100	3480	6360	2430	1990	934
21	1480	1380	1980	2700	2300	3480	5290	3500	7170	2420	1860	906
22	1620	1350	1980	2500	2280	3670	5380	3200	7130	2500	1590	883
23	1620	1310	2370	2420	2310	4540	5290	3030	7090	3030	1440	1050
24	1580	1260	2700	2310	2400	4450	5430	3460	6980	3280	1380	1070
25	1520	1220	2720	2340	2530	4450	5780	4280	7170	2970	1240	1210
26	1540	1250	2260	2410	2790	3980	6310	5190	8410	3530	1310	1190
27	1980	1210	2130	2540	3030	3920	6630	5840	7760	3530	1280	1180
28	1740	1210	2130	2600	3100	3860	6530	6120	7030	5150	1430	1230
29	1850	1230	2080	2930	---	4040	6300	6830	6800	4830	1400	1720
30	1700	1300	2000	2870	---	4390	6400	7460	6540	2970	1440	2870
31	1720	---	2090	2660	---	4720	---	7430	---	2540	1320	---
TOTAL	51060	47040	61360	72550	68850	121060	149550	165870	179180	131880	72510	35249
MEAN	1647	1568	1979	2340	2459	3905	4985	5351	5973	4254	2339	1175
MAX	1980	2460	2720	2930	3100	4920	6630	7560	8410	6600	4590	2870
MIN	1300	1210	1240	2070	2230	2980	3880	3030	4000	2420	1240	883
AC-FT	101300	93300	121700	143900	136600	240100	296600	329000	355400	261600	143800	69920

CAL YR 1982	TOTAL	826406	MEAN	2264	MAX	11700	MIN	800	AC-FT	1639000
WTR YR 1983	TOTAL	1156159	MEAN	3168	MAX	8410	MIN	883	AC-FT	2293000

## LITTLE COLORADO RIVER BASIN

09386900 RIO NUTRIA NEAR RAMAH, NM

LOCATION.--Lat 35°16'57", long 108°33'10", in NW¼SW¼ sec.8, T.12 N., R.16 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank at mouth of Nutria Canyon, 0.9 mi upstream from Nutria Diversion Dam, 1.3 mi northeast of Upper Nutria, and 10.4 mi northwest of Ramah.

DRAINAGE AREA.--71.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1969 to current year.

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

GAGE.--Water-stage recorder and concrete control. Concrete control raised 1.0 ft June 6, 1975. Altitude of gage is 6,860 ft, from topographic map.

REMARKS.--Records poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 7.34 ft<sup>3</sup>/s, 5,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 782 ft<sup>3</sup>/s Apr. 14, 1973, gage height, 5.58 ft, from rating curve extended above 470 ft<sup>3</sup>/s; maximum gage height, 6.92 ft 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, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Mar. 12	1900	382	5.38	July 27	2115	364	5.45
Mar. 31	1715	702	6.26	Aug. 1	1945	*777	6.65
Apr. 18	1900	487	5.84	Aug. 18	1615	176	4.88

Minimum daily discharge, 0.01 ft<sup>3</sup>/s at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.12	1.2	.55	.63	43	400	24	4.9	.42	35	.11
2	.10	.12	1.3	.48	.54	39	298	18	3.6	.37	4.3	.03
3	.10	.12	1.1	.44	.48	43	276	15	2.6	.29	2.3	.02
4	.10	.12	1.0	.40	.40	49	196	13	2.2	.23	.72	.01
5	.10	.12	.74	.37	.35	37	145	12	2.0	.26	.33	.01
6	.10	.12	.58	.35	.41	27	101	9.0	1.6	.78	.32	.01
7	.10	.13	.64	.36	.45	27	74	8.0	1.3	.35	.23	.01
8	.10	.15	.87	.40	.50	49	58	8.4	1.1	.13	.13	.01
9	.10	.25	.63	.42	.60	71	56	8.4	.94	.19	.05	.02
10	.10	.24	4.8	.43	1.0	84	112	7.4	.96	.19	.03	.01
11	.12	.27	12	.45	3.1	148	149	6.5	.97	.13	.03	.01
12	.12	.20	6.3	.47	3.0	193	102	5.2	.87	.12	.02	.01
13	.12	.18	2.7	.52	3.9	234	69	5.7	.71	.14	.02	.01
14	.12	.18	1.6	.66	5.6	228	71	5.3	.63	.21	.53	.01
15	.12	.18	.58	.82	6.5	199	.67	5.8	.52	.29	.06	.01
16	.12	.18	.32	1.0	6.3	122	124	6.2	.53	.25	.01	.01
17	.12	.19	.29	1.5	7.6	86	234	5.1	.49	.34	.01	.01
18	.12	.45	.24	.90	8.9	34	303	5.2	.44	.34	19	.01
19	.12	1.6	.19	.80	11	34	284	6.1	.43	.72	4.4	.01
20	.12	.91	.19	.70	7.8	62	187	17	.54	1.1	.30	.01
21	.12	1.5	.18	.65	8.8	63	149	18	.60	3.0	.10	.01
22	.12	.76	.26	.60	13	27	159	10	.44	.19	.06	.01
23	.12	.53	1.2	.57	20	29	124	7.2	.64	.14	.04	.01
24	.10	.44	1.2	.55	27	31	110	6.4	.98	.25	.04	.02
25	.10	.45	1.0	.54	29	21	90	5.6	.98	3.8	.04	.03
26	.12	.69	.90	.56	20	22	60	5.6	1.0	3.8	.04	.02
27	.29	.59	.80	.60	19	29	40	5.9	.57	14	.04	.03
28	.16	.34	.77	.70	27	58	32	5.2	.43	8.0	.13	.02
29	.12	.33	.69	.80	---	144	25	5.5	.29	.72	.32	.03
30	.12	.43	.64	.90	---	280	20	6.7	.28	.25	.23	.46
31	.12	---	.59	.75	---	452	---	6.4	---	.14	.52	---
TOTAL	3.69	11.89	45.50	19.24	232.86	2965	4115	273.8	33.54	41.14	69.35	.98
MEAN	.12	.40	1.47	.62	8.32	95.6	137	8.83	1.12	1.33	2.24	.033
MAX	.29	1.6	1.2	1.5	29	452	400	24	4.9	14	35	.46
MIN	.10	.12	.18	.35	.35	21	20	5.1	.28	.12	.01	.01
AC-FT	7.3	24	90	38	462	5880	8160	543	67	82	138	1.9

CAL YR 1982 TOTAL 2430.54 MEAN 6.66 MAX 156 MIN .09 AC-FT 4820  
WTR YR 1983 TOTAL 7811.99 MEAN 21.4 MAX 452 MIN .01 AC-FT 15500



## 09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM

LOCATION.--Lat 35°06'03", long 108°45'03", in NE¼ sec.17, T.10 N., R.18 W., McKinley County, Hydrologic Unit 15020004, on Zuni Indian Reservation, on left bank downstream from highway bridge on State Highway 36, 0.8 mi upstream from flow line of Black Rock Reservoir, 2.3 mi northeast of Black Rock, and 5.9 mi northeast of Zuni Pueblo.

DRAINAGE AREA.--810 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year. Prior to October 1974 published as "above Zuni Reservoir".

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,480 ft, 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.--14 years, 14.1 ft<sup>3</sup>/s, 10,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft<sup>3</sup>/s Aug. 4, 1974, gage height, 6.61 ft, from rating curve extended above 670 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 4.05 ft, 3.94 ft, 5.16 ft, and 6.61 ft; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Mar. 15	1300	378	4.26	Aug. 3	2045	180	3.78
Apr. 1	1630	1220	4.95	Aug. 13	1500	432	4.19
Apr. 20	1500	486	4.38	Aug. 18	1730	*2560	5.66
Aug. 2	2100	170	3.73				

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.96	3.3	.60	4.1	4.0	840	52	.49	.00	3.0	5.9
2	.00	.90	3.0	.60	2.5	3.6	1000	47	.22	.00	7.0	5.4
3	.00	.90	3.0	.60	2.9	9.0	739	42	.14	.00	67	3.9
4	.00	.90	3.0	.65	3.2	27	605	22	.10	.00	24	2.3
5	.00	1.6	3.0	.70	3.1	67	410	18	.08	.00	7.2	1.2
6	.00	2.2	3.2	.70	3.1	80	277	11	.07	.00	5.0	.72
7	.00	1.3	3.5	.80	3.4	83	207	9.6	.05	.00	1.2	.70
8	.00	1.2	2.2	.85	6.6	84	156	9.0	.06	.00	5.1	.72
9	.00	1.7	2.0	.90	8.6	71	122	6.0	.04	.00	6.0	.27
10	.00	1.9	3.2	1.0	28	78	95	5.4	.02	.00	5.7	.05
11	.00	2.2	4.6	1.2	30	87	84	4.6	.01	.00	5.1	.00
12	.00	3.0	5.0	1.4	17	100	117	4.0	.00	.00	5.0	.00
13	.01	2.8	5.0	1.7	16	155	137	3.4	.00	.00	16	.00
14	.16	2.8	4.5	2.0	7.2	269	126	2.8	.00	.00	13	.00
15	.17	2.2	4.5	2.4	12	334	114	2.6	.00	.00	3.6	.00
16	.10	2.6	3.2	2.9	8.5	299	99	2.2	.00	.00	1.4	.00
17	.06	1.8	5.6	7.1	7.1	234	97	1.9	.00	.00	.86	.00
18	.03	2.8	4.4	17	5.4	203	168	1.8	.00	.00	91	.00
19	.09	3.0	4.1	12	4.3	189	343	1.8	.00	.00	21	.00
20	.42	2.6	3.0	5.8	11	157	458	1.8	.00	.00	6.0	.00
21	.63	2.2	3.5	3.0	6.0	143	375	2.0	.00	.00	2.3	.00
22	.67	2.0	2.2	2.0	3.2	137	288	2.6	.00	.00	1.6	.00
23	.71	1.8	2.9	2.5	3.2	147	240	2.2	.00	.00	1.3	.00
24	.87	1.8	2.4	2.5	3.5	141	207	1.8	.00	.00	1.1	.00
25	.77	2.6	2.0	2.5	3.6	142	171	1.4	.00	4.1	1.1	.00
26	.97	2.8	1.6	2.7	4.0	141	147	1.3	.00	5.0	.83	.00
27	1.1	2.2	1.3	3.2	4.3	127	124	1.1	.00	23	.74	.00
28	1.1	2.0	1.0	3.5	4.0	115	92	1.4	.00	11	.68	.00
29	1.1	2.0	.80	3.8	---	110	72	3.2	.00	6.7	.72	.00
30	1.0	2.1	.50	6.1	---	145	56	2.2	.00	1.7	.46	1.3
31	.96	---	.50	4.9	---	279	---	1.6	---	2.3	5.0	---
TOTAL	10.92	60.86	92.00	97.60	215.8	4160.6	7966	269.7	1.28	53.80	309.99	22.46
MEAN	.35	2.03	2.97	3.15	7.71	134	266	8.70	.043	1.74	10.0	.75
MAX	1.1	3.0	5.6	17	30	334	1000	52	.49	23	91	5.9
MIN	.00	.90	.50	.60	2.5	3.6	56	1.1	.00	.00	.46	.00
AC-FT	22	121	182	194	428	8250	15800	535	2.5	107	615	45

CAL YR 1982 TOTAL 2337.98 MEAN 6.41 MAX 371 MIN .00 AC-FT 4640  
WTR YR 1983 TOTAL 13261.01 MEAN 36.3 MAX 1000 MIN .00 AC-FT 26300

LITTLE COLORADO BASIN  
09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM -- Continued  
WATER-QUALITY RECORDS

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

REMARKS.--Data collected and analyzed by USGS except chemical data analyzed by BIA Laboratory in Gallup, New Mexico.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
DEC 07...	1548	668	8.4	250	0	0	62	23	64
JAN 05...	1437	773	8.1	330	0	0	86	28	85
MAR 17...	0829	397	8.3	130	11	11	34	11	21
29...	1349	299	8.3	110	0	0	34	4.9	12
APR 21...	0812	359	8.4	140	4	4	40	11	9.2
MAY 11...	1525	462	8.4	130	0	0	27	16	25
AUG 03...	1633	281	8.7	110	35	35	36	4.9	12

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE FET-FLD (MG/L AS HCO3) (00440)	CAR- BONATE FET-FLD (MG/L AS CO3) (00445)	ALKA- LINITY FIELD (MG/L AS CAC03) (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)
DEC 07...	1.8	4.3	280	18	263	100	18	.80	4490
JAN 05...	2.1	5.5	410	13	355	120	19	.30	577
MAR 17...	.8	3.5	140	3	--	48	3.6	.01	230
29...	.5	2.7	130	2	--	35	6.9	.20	241
APR 21...	.3	2.0	150	9	--	22	4.8	.20	199
MAY 11...	1.0	3.1	170	8	--	35	4.6	.20	275
AUG 03...	.5	4.3	87	2	--	47	.4	.46	172

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)
DEC 07...	1548	0
JAN 05...	1437	120
MAR 17...	0829	0
29...	1349	2100
APR 21...	0812	1300
MAY 11...	1525	1500
AUG 03...	1633	1100

LITTLE COLORADO BASIN  
09386950 ZUNI RIVER ABOVE BLACK ROCK RESERVOIR, NM -- Continued  
WATER-QUALITY RECORDS

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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						
07...	1500	4.2	--	164	1.9	53
JAN						
05...	1315	.68	.0	392	.72	24
FEB						
15...	1300	4.3	7.5	860	10	25
MAR						
16...	1400	262	10.5	206	146	90
29...	1245	106	8.5	227	65	95
APR						
20...	1500	471	15.0	165	210	87
MAY						
11...	1400	4.6	16.0	26	.32	94
AUG						
03...	1500	86	27.0	14900	3460	95

LITTLE COLORADO RIVER BASIN  
09395500 PUERCO RIVER AT GALLUP, NM  
WATER-QUALITY RECORDS

PERIOD OF RECORD--Water years 1975-77, 1978 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
DEC 07...	1700	22	840	876	8.4	8.4	9.0	1.0	160	150	0
MAR 29...	1630	61	395	459	8.3	8.1	15.0	12.0	--	87	0
MAY 12...	0930	.27	1300	1410	8.8	8.6	17.0	15.0	--	190	0
AUG 03...	1700	116	--	468	7.8	7.7	31.5	29.0	<10	160	92

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM 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)
DEC 07...	0	44	8.9	140	5.2	2.9	185	230	20	.50
MAR 29...	0	26	5.4	59	2.9	2.3	147	65	11	.40
MAY 12...	0	51	14	230	7.6	4.5	260	410	29	.80
AUG 03...	92	50	8.7	34	1.2	5.3	69	150	6.3	.70

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)
DEC 07...	8.6	566	1.6	1.7	.060	18	20	2.30	.060	57
MAR 29...	7.7	265	--	--	--	--	--	--	--	--
MAY 12...	11	906	--	--	--	--	--	--	--	--
AUG 03...	7.6	304	1.4	1.5	.050	36	37	7.80	.020	290

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 07...	1700	8	3	100	<1	<1	80	<10	100	3
MAR 29...	1630	--	--	0	--	--	--	--	--	--
MAY 12...	0930	--	--	170	--	--	--	--	--	--
AUG 03...	1700	--	--	100	--	--	--	--	--	--

LITTLE COLORADO RIVER BASIN  
09395500 PUERCO RIVER AT GALLUP, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
DEC 07...	0	120	1	.5	.0	39	33	390	0
MAR 29...	50	--	--	--	--	--	--	--	--
MAY 12...	10	--	--	--	--	--	--	--	--
AUG 03...	40	--	--	--	--	--	--	--	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	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)
DEC 07...	1700	910	620	770	520	230	600	220	560	.13	1200
AUG 03...	1700	71	48	2700	1800	22	1700	21	1400	.22	26

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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...	0800	22	.0	3910	232	95

## GILA RIVER BASIN

09430500 GILA RIVER NEAR GILA, NM

LOCATION.--Lat 33°03'40", long 108°32'12", in NE¼NW¼ sec.30, T.14 S., R.16 W., Grant County, Hydrologic Unit 15040001, on left bank at Hooker damsite, 1.6 mi upstream from Mogollon Creek, 7 mi northeast of Gila, and at mile 572.5.

DRAINAGE AREA.--1,864 mi<sup>2</sup>.

PERIOD OF RECORD.--April to December 1914, December 1927 to current year. Monthly discharge only December 1927 to September 1930, published in WSP 1313.

REVISED RECORDS.--WSP 1283: Drainage area. WSP 1313: 1944 (M), 1949 (M). WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 4,655.8 ft National Geodetic Vertical Datum of 1929, (river-profile survey). Prior to Dec. 31, 1928, at site 5 mi upstream at different datum. Dec. 31, 1928, to Jan. 7, 1942, at site 200 ft upstream at same datum.

REMARKS.--Records good. Diversions for irrigation of about 500 acres above station. Several observations of water temperature were made during the year. National Weather Service satellite telemeter at station.

AVERAGE DISCHARGE.--56 years (water years 1928-83), 141 ft<sup>3</sup>/s, 102,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft<sup>3</sup>/s Dec. 18, 1978, gage height, 12.5 ft from floodmark, from rating curve extended above 7,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; maximum gage height, 17.2 ft from floodmark, Sept. 29, 1941; minimum, 14 ft<sup>3</sup>/s July 15, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Other major floods occurred in November 1905, December 1906, and January 1916.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Dec. 10	2200	992	2.90	Apr. 1	2230	1800	3.70
Feb. 5	0015	775	2.63	July 23	2215	632	2.32
Mar. 4	1330	*1830	3.72				

Minimum discharge, 34 ft<sup>3</sup>/s July 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	51	144	138	416	512	1710	463	323	65	78	119
2	51	52	217	130	359	563	1580	444	313	59	185	103
3	51	55	177	120	337	728	1210	396	298	56	121	89
4	51	54	151	115	623	1620	1010	353	266	53	151	91
5	50	55	142	112	666	1460	874	323	234	50	131	91
6	49	45	133	112	586	1140	735	317	213	53	104	90
7	50	48	127	112	557	1060	611	331	201	54	86	91
8	50	55	123	113	508	971	542	330	185	54	74	93
9	49	63	138	114	661	872	478	335	172	50	64	95
10	49	65	492	115	655	873	448	360	173	50	61	98
11	49	70	692	116	550	943	496	383	170	51	60	100
12	50	75	402	119	494	1080	534	376	162	51	74	131
13	49	80	315	117	493	1170	517	351	153	53	67	100
14	50	76	250	117	571	1160	469	332	146	52	68	99
15	49	70	221	117	558	1100	423	308	139	53	63	97
16	49	70	192	117	504	976	387	279	132	51	59	96
17	50	99	171	119	520	751	371	257	125	43	55	94
18	50	127	156	129	566	632	412	258	119	39	54	90
19	47	133	148	149	626	629	520	254	113	38	51	90
20	49	151	145	174	646	587	630	241	108	44	47	89
21	49	131	146	179	560	541	683	238	103	51	46	99
22	49	131	142	172	500	564	622	235	99	61	41	101
23	49	121	148	159	482	586	552	234	96	84	39	99
24	49	113	210	149	496	570	531	256	97	133	39	106
25	51	113	241	149	532	804	575	297	98	81	40	111
26	52	108	210	142	593	890	664	336	94	63	68	125
27	54	101	189	138	585	1000	660	348	88	76	135	138
28	54	101	174	140	535	1070	601	351	80	78	123	252
29	54	96	155	138	---	1230	560	347	77	76	121	424
30	54	91	142	192	---	1470	505	327	70	86	121	375
31	54	---	142	429	---	1540	---	315	---	79	140	---
TOTAL	1565	2600	6435	4442	15179	29092	19910	9975	4647	1887	2566	3776
MEAN	50.5	86.7	208	143	542	938	664	322	155	60.9	82.8	126
MAX	54	151	692	429	666	1620	1710	463	323	133	185	424
MIN	47	45	123	112	337	512	371	234	70	38	39	89
AC-FT	3100	5160	12760	8810	30110	57700	39490	19790	9220	3740	5090	7490

CAL YR 1982 TOTAL 52898 MEAN 145 MAX 882 MIN 22 AC-FT 104900  
WTR YR 1983 TOTAL 102074 MEAN 280 MAX 1710 MIN 38 AC-FT 202500

## GILA RIVER BASIN

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09430600 MOGOLLON CREEK NEAR CLIFF, NM  
(Hydrologic bench-mark station)

LOCATION.--Lat 33°10'01", long 108°38'58", in SE¼SE¼ sec.13, T.13 S., R.18 W., Grant County, Hydrologic Unit 15040001, on right bank 0.3 mi downstream from Rain Creek, 0.8 mi downstream from Gila Wilderness Boundary, 12 mi upstream from mouth, and 14 mi north of Cliff.

DRAINAGE AREA.--69 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,440 ft, from topographic map.

REMARKS.--Water-discharge records good except those for July and August, which are fair.

AVERAGE DISCHARGE.--16 years, 30.0 ft<sup>3</sup>/s, 21,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft<sup>3</sup>/s Aug. 12, 1967, gage height, 13.7 ft, from floodmarks, from rating curve extended above 220 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Dec. 10	1045	235	2.84	Apr. 26	0500	242	2.78
Mar. 12	0100	245	2.82	Aug. 1	unknown	*358	3.20
Apr. 1	0300	338	3.13				

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	3.3	15	21	72	93	265	136	56	.97	50	7.6
2	.45	3.9	12	21	59	103	194	120	49	.72	35	5.9
3	.41	4.3	13	22	58	154	167	95	37	.53	25	4.9
4	.32	4.7	14	21	69	202	146	93	30	.38	23	4.4
5	.23	4.8	20	22	62	158	121	115	28	.33	20	3.5
6	.10	5.0	23	28	59	146	99	117	24	1.3	15	2.9
7	.06	5.0	23	36	57	170	86	111	21	1.0	12	2.8
8	.03	5.3	21	40	59	167	81	118	21	1.1	9.0	2.7
9	.00	16	115	41	72	172	81	129	21	1.4	6.4	2.5
10	.06	14	174	38	79	182	89	128	19	4.8	5.0	2.0
11	.18	22	111	34	76	199	100	115	17	3.6	6.0	4.2
12	.27	12	85	34	92	221	97	103	16	1.9	5.0	2.8
13	.30	7.8	71	33	113	211	90	93	14	1.7	4.0	9.2
14	.31	6.4	58	34	135	189	81	81	13	1.5	3.5	8.3
15	.30	5.4	47	32	121	163	74	63	11	.96	3.0	9.4
16	.31	4.8	39	29	121	129	75	62	9.4	.70	2.8	8.7
17	.41	33	36	30	128	103	98	68	8.1	.58	2.7	20
18	.28	92	43	44	138	93	149	60	6.9	.63	2.6	15
19	.18	51	40	45	145	90	183	56	5.8	.94	2.5	8.6
20	.15	32	37	43	120	81	197	57	4.8	1.2	2.3	8.0
21	.20	23	34	38	106	81	159	56	3.9	3.5	2.2	7.7
22	.26	17	32	34	103	79	132	63	3.4	10	2.0	5.1
23	.24	13	67	31	108	79	137	80	3.2	30	2.4	4.0
24	.20	11	74	29	109	78	173	89	3.4	13	13	35
25	.18	8.3	52	27	107	125	213	89	2.7	6.0	9.3	32
26	.15	7.1	43	25	103	114	207	80	2.5	3.0	65	20
27	.98	6.3	36	24	95	131	182	72	2.0	3.2	33	47
28	2.2	5.6	34	25	89	147	174	68	1.7	3.4	19	91
29	2.5	4.9	33	25	---	165	152	63	1.4	3.6	14	77
30	2.9	4.2	27	86	---	191	143	61	1.2	3.7	11	233
31	3.1	---	24	92	---	250	---	62	---	3.9	9.2	---
TOTAL	17.84	433.1	1453	1084	2655	4466	4145	2703	437.4	109.54	414.9	685.2
MEAN	.58	14.4	46.9	35.0	94.8	144	138	87.2	14.6	3.53	13.4	22.8
MAX	3.1	92	174	92	145	250	265	136	56	30	65	233
MIN	.00	3.3	12	21	57	78	74	56	1.2	.33	2.0	2.0
AC-FT	.35	859	2880	2150	5270	8860	8220	5360	868	217	823	1360

CAL YR 1982 TOTAL 9199.15 MEAN 25.2 MAX 174 MIN .00 AC-FT 18250  
WTR YR 1983 TOTAL 18603.98 MEAN 51.0 MAX 265 MIN .00 AC-FT 36900

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 1982 TO SEPTEMBER 1983

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)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)
NOV 16...	1300	4.8	68	102	7.7	8.0	14.0	8.0	.50	9.2	37
MAR 22...	1300	78	95	91	7.4	7.6	7.5	6.0	1.7	9.6	34
MAY 17...	1100	73	60	63	7.4	7.6	19.0	9.5	2.1	11.6	21
SEP 20...	0930	7.9	110	111	8.2	7.7	19.0	17.0	.80	8.0	40

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LITY FIELD (MG/L AS CACO3) (00410)	ALKA- LITY LAB (MG/L AS CACO3) (90410)
NOV 16...	0	0	11	2.3	6.2	.5	.8	--	--	--	39
MAR 22...	7	7	10	2.2	4.5	.3	.9	--	--	--	27
MAY 17...	0	0	6.5	1.2	3.6	.4	.6	51	.0	42	18
SEP 20...	0	0	12	2.5	5.8	.4	1.0	52	.0	42	43

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)
NOV 16...	10	.1	.40	20	98	74	<.10	.090	<.010	<.010
MAR 22...	16	1.3	.20	19	72	71	<.10	.280	.030	.050
MAY 17...	12	<.1	.20	18	51	--	<.10	.150	.010	.020
SEP 20...	12	1.1	.30	17	82	77	<.10	.090	<.010	.010

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INIUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 16...	1300	10	<1	0	0	<1	<1	0	1	20	<1
MAY 17...	1100	80	<1	0	0	<1	<1	0	1	30	4

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 16...	0	3	.0	<10	<1	<1	1	50	<6.0	20
MAY 17...	0	2	.0	<10	3	<1	<1	30	<6.0	20



GILA RIVER BASIN  
09430600 MOGOLLON CREEK NEAR CLIFF, NM -- Continued  
WATER-QUALITY RECORDS

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RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 16...	1300	1.9	1.3	<.4	.9	<.4	.9	<.4	.04	1.1

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 16...	9	50
16...	K67	K80
MAR 22...	K2	K2
MAY 17...	K1	K18
SEP 20...	K30	--

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 16...	1300	4.8	8.0	2	.03	91
MAR 22...	1300	78	6.0	3	.63	79
MAY 17...	1100	73	9.5	4	.79	97
SEP 20...	0930	7.9	17.0	0	.00	--

GILA RIVER BASIN  
09431100 MANGAS CREEK BELOW MANGAS SPRINGS, NM  
WATER-QUALITY RECORDS

LOCATION.--Lat 32°50'48", long 108°30'57", in NW¼NE¼ sec.8, T.17S., R.16W., Grant County, Hydrologic Unit 15040002, 0.4 mi northwest of Mangas Springs, 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 SE&SW¼ 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 1982 TO SEPTEMBER 1983

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)
OCT 13...	1700	4.1	602	--	7.6	--	--	--
NOV 18...	0930	3.6	590	661	8.1	8.1	16.5	15.5
JAN 13...	1330	5.0	630	607	8.1	8.0	--	16.5
MAR 22...	1600	4.3	680	665	8.2	8.2	10.0	15.5
MAY 18...	1445	1.8	700	702	7.9	8.1	28.0	20.0
JUL 13...	1615	2.1	650	688	7.5	7.9	25.0	23.0

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)
OCT 13...	--	--	--	--	--	--	--	--	--
NOV 18...	280	84	84	86	16	30	.8	2.3	--
JAN 13...	--	--	--	--	--	--	--	--	--
MAR 22...	290	102	102	91	16	30	.8	2.0	--
MAY 18...	310	146	146	96	17	28	.7	.9	200
JUL 13...	310	124	124	95	17	29	.7	2.4	--

DATE	CAR- BONATE IT-FLD (MG/L AS C03) (99445)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
OCT 13...	--	--	--	--	--	--	--	--
NOV 18...	--	--	197	110	15	.40	32	410
JAN 13...	--	--	--	--	--	--	--	--
MAR 22...	--	--	192	120	17	.50	30	422
MAY 18...	.0	160	181	140	18	.40	32	431
JUL 13...	--	--	184	140	20	.40	33	447

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 18...	0930	0	20
MAR 22...	1600	0	20
MAY 18...	1445	0	0
JUL 13...	1615	0	0

09431500 GILA RIVER NEAR REDROCK, NM  
(National stream-quality accounting network and radiochemical network station)

LOCATION.--Lat 32°43'37", long 108°40'30", in W $\frac{1}{2}$  sec. 23, T.18 S., R.18 W., Grant County, Hydrologic Unit 15040002, on left bank 0.2 mi downstream from Copper Canyon, 0.2 mi upstream from lower end of box canyon, 4.7 mi northeast of Redrock, 14 mi downstream from Mangas Creek, and at mile 539.2.

DRAINAGE AREA.--2,829 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1904 to February 1905 (gage heights only). May 1905 to December 1906, January to December 1907 and July to October 1908 (gage heights only). November 1908 to December 1910, January 1911 to January 1912 and May to June 1912 (gage heights only). August 1912 to September 1955, October 1962 to current year. Monthly or annual discharge only for some periods, published in WSP 1313. Published as "near Cliff" 1904-7.

REVISED RECORDS.--WSP 1213: 1906, 1911-15, 1931, 1936-37, 1939, 1941, 1944, 1945(P), 1946(M), 1947. WSP 1283: Drainage area. WSP 1926: 1955. WDR NM-78-1: 1977.

GAGE.--Water-stage recorder. Altitude of gage is 4,090 ft, from plane table survey. Prior to Dec. 31, 1907, nonrecording gage at site 13.5 mi upstream at different datum. May 14, 1908, to July 16, 1909, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.--Water-discharge records good except those for October, which are poor. Diversions for irrigation of about 5,000 acres above station.

AVERAGE DISCHARGE.--67 years (water years 1906, 1909-10, 1913-55, 1963-83), 202 ft<sup>3</sup>/s, 146,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,800 ft<sup>3</sup>/s Dec. 19, 1978, gage height, 29.8 ft in gage well, 34.1 ft from floodmarks, from rating curve extended above 9,500 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 2.2 ft<sup>3</sup>/s Aug. 5, 1947.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 4	unknown	*10800	12.6	Sept. 17	0145	3770	9.24

Minimum discharge, 18 ft<sup>3</sup>/s July 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	52	110	184	872	676	2160	616	343	39	47	205
2	63	54	157	199	573	764	1990	573	351	37	159	198
3	64	53	148	160	520	958	1510	516	339	33	207	133
4	64	52	133	141	4890	1850	1310	472	311	22	347	78
5	63	52	120	132	2360	2310	1150	444	272	19	192	70
6	58	53	118	117	1850	1630	990	434	239	26	152	56
7	53	54	115	103	1650	1440	830	453	222	34	114	54
8	48	56	115	108	1340	1330	723	453	200	38	103	51
9	42	62	108	165	1680	1230	637	472	168	37	94	47
10	40	60	497	175	1440	1250	562	487	144	41	64	42
11	40	59	1380	184	1180	1320	616	511	123	32	70	67
12	39	52	624	208	1040	1480	723	492	123	28	62	73
13	39	50	430	189	1040	1580	690	472	126	26	84	124
14	39	67	365	175	1150	1540	605	429	130	41	83	118
15	38	87	292	175	1160	1450	520	386	123	39	74	89
16	39	89	264	180	1020	1320	492	357	105	40	63	120
17	39	95	224	184	1000	1020	468	324	73	34	61	699
18	39	105	199	208	1040	839	501	314	64	29	54	242
19	40	148	193	247	1080	794	712	309	60	27	46	143
20	42	142	184	300	1110	767	937	295	64	27	35	147
21	43	139	181	338	979	707	947	285	67	33	36	113
22	43	118	178	338	819	735	787	290	62	51	37	86
23	43	112	184	314	776	812	680	290	50	95	38	74
24	42	101	252	290	725	777	658	304	53	425	62	79
25	42	89	320	285	768	1060	787	333	43	238	64	94
26	41	85	304	276	827	1450	904	372	45	153	142	105
27	42	85	280	266	831	1570	883	386	42	97	363	128
28	43	83	244	256	743	1570	819	367	40	88	250	273
29	44	71	224	252	---	1650	776	362	41	83	236	591
30	48	73	211	300	---	1900	680	352	41	81	219	706
31	50	---	202	616	---	2000	---	335	---	55	235	---
TOTAL	1430	2398	8356	7065	34463	39779	26047	12485	4064	2048	3793	5005
MEAN	46.1	79.9	270	228	1231	1283	868	403	135	66.1	122	167
MAX	64	148	1380	616	4890	2310	2160	616	351	425	363	706
MIN	38	50	108	103	520	676	468	285	40	19	35	42
AC-FT	2840	4760	16570	14010	68360	78900	51660	24760	8060	4060	7520	9930

CAL YR 1982 TOTAL 61967 MEAN 170 MAX 1380 MIN 21 AC-FT 122900  
WTR YR 1983 TOTAL 146933 MEAN 403 MAX 4890 MIN 19 AC-FT 291400

GILA RIVER BASIN  
09431500 GILA RIVER NEAR REDROCK, NM -- Continued  
WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 17...	1200	95	360	388	8.0	8.3	11.0	12.0	30	9.6	130
FEB 02...	1300	576	210	234	8.1	8.0	9.0	5.5	50	12.1	76
MAR 23...	1130	796	200	209	8.0	7.9	10.0	10.0	45	10.6	70
MAY 18...	1030	317	190	224	8.3	8.1	24.5	14.0	10	13.2	74
JUL 14...	1000	46	325	374	8.3	8.5	27.0	21.0	33	8.7	130
SEP 21...	1100	111	350	353	8.5	8.1	27.0	20.0	--	7.8	120

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
NOV 17...	0	0	39	7.6	32	1.3	2.2	--	--	--	146
FEB 02...	0	0	22	5.1	16	.8	1.6	--	--	--	78
MAR 23...	3	3	20	4.8	13	.7	1.4	--	--	--	67
MAY 18...	0	0	22	4.5	17	.9	1.5	94	.0	77	77
JUL 14...	0	0	39	7.8	30	1.2	2.5	--	--	--	149
SEP 21...	0	0	37	6.8	30	1.2	2.7	150	9.0	140	136

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)
NOV 17...	28	14	2.1	35	349	248	.29	.080	.100	.040
FEB 02...	25	6.4	1.1	31	167	155	.10	.110	.260	.060
MAR 23...	23	4.9	.90	28	146	137	.16	.310	.220	.070
MAY 18...	21	6.1	1.3	31	149	151	.10	.080	.090	.050
JUL 14...	34	11	1.9	35	243	252	.16	.090	.100	.050
SEP 21...	29	12	2.0	37	229	249	.37	.110	.240	.070

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 17...	1200	10	2	0	0	<1	<1	0	2	0	<1
MAY 18...	1030	60	1	0	0	1	<1	0	1	30	<1
JUL 14...	1000	500	2	0	0	<1	<1	0	3	260	1
SEP 21...	1100	20	1	0	0	2	<1	0	4	10	3

GILA RIVER BASIN  
09431500 GILA RIVER NEAR REDROCK, NM -- Continued  
WATER-QUALITY RECORDS

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TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 17...	30	4	.0	<10	<1	<1	1	160	<6.0	10
MAY 18...	10	3	.0	<10	3	<1	<1	90	<6.0	30
JUL 14...	30	17	.0	10	2	<1	<1	170	7.0	0
SEP 21...	30	5	.0	<10	2	<1	<1	170	6.0	10

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 17...	1200	<5.0	4.4	3.0	<2.7	3.2	<2.6	3.0	.04	1.8
MAY 18...	1030	<4.4	1.7	1.2	<2.2	2.3	<2.1	1.9	.09	1.4

MICROBIOLOGICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31623)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 17...	150	280
FEB 02...	40	110
MAR 23...	K30	54
MAY 18...	K33	K60

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 17...	1200	95	12.0	85	22	98
FEB 02...	1300	576	5.5	251	390	87
MAR 23...	1130	796	10.0	505	1090	36
MAY 18...	1030	317	14.0	74	63	55
JUL 14...	1000	46	21.0	74	9.2	96
SEP 21...	1100	111	20.0	195	58	97

## 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 downstream from Blue Creek, 10 mi east of Virden, 16 mi upstream from New Mexico-Arizona State line, and at mile 523.6.

DRAINAGE AREA.--3,203 mi<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 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, from river-profile map. May 11, 1914, to Sept. 30, 1915, at site 6 mi downstream, 1,000 ft 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 downstream at same datum. Since June 1980, crest-stage gage at supplementary gage site.

REMARKS.--Records good except those above 1,500 ft<sup>3</sup>/s which are fair. Station is above all Duncan Valley diversions. Diversions for irrigation of about 6,200 acres above station.

AVERAGE DISCHARGE.--56 years (water years 1928-83), 187 ft<sup>3</sup>/s, 135,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,700 ft<sup>3</sup>/s Dec. 19, 1978, gage height, 29.00 ft, from rating curve extended above 38,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 1 ft<sup>3</sup>/s July 14, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,900 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 4	0330	*5870	11.89	Mar. 5	1700	2300	6.15

Minimum daily, 26 ft<sup>3</sup>/s July 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	58	158	211	884	709	1760	716	352	62	94	123
2	68	58	176	201	786	730	1850	688	349	60	108	120
3	68	64	191	196	735	849	1560	606	346	58	159	105
4	66	66	184	186	4690	1210	1490	534	329	51	233	83
5	64	69	179	174	2800	2070	1340	458	298	59	180	71
6	58	70	169	172	1510	1800	1190	422	264	60	149	64
7	54	73	165	160	1320	1620	1040	434	242	45	117	58
8	42	77	162	153	1250	1560	941	438	228	47	103	59
9	38	82	187	160	1320	1470	821	446	203	46	90	56
10	37	84	508	172	1250	1440	723	474	188	44	124	78
11	36	84	880	172	1150	1480	702	510	172	45	86	66
12	33	81	737	174	994	1520	737	510	166	40	73	68
13	32	77	552	176	948	1630	751	486	162	40	72	76
14	33	77	430	177	986	1630	688	450	162	35	84	80
15	34	108	332	179	1030	1560	606	390	157	30	79	89
16	37	113	284	181	948	1450	522	346	144	30	73	83
17	42	118	248	182	898	1290	478	314	132	30	65	321
18	40	121	220	184	905	1130	458	302	118	28	62	172
19	46	158	228	194	912	1050	552	296	111	26	54	128
20	46	172	203	210	970	994	758	278	102	28	47	106
21	46	174	201	230	891	891	905	272	102	32	43	109
22	47	165	199	240	779	849	849	270	99	58	39	97
23	48	158	199	238	723	891	793	268	90	110	36	90
24	47	150	211	226	702	898	765	281	85	154	37	86
25	45	147	258	218	730	1090	814	302	79	190	48	89
26	46	140	272	216	765	1440	912	338	74	137	72	97
27	46	136	260	211	779	1480	956	402	71	123	137	108
28	47	130	250	208	758	1430	912	398	66	160	144	144
29	57	124	236	206	---	1470	877	386	64	157	135	274
30	57	116	222	289	---	1530	800	378	65	275	127	358
31	57	---	220	618	---	1600	---	350	---	112	128	---
TOTAL	1482	3250	8721	6514	32413	40761	27550	12743	5020	2372	2998	3458
MEAN	47.8	108	281	210	1158	1315	918	411	167	76.5	96.7	115
MAX	68	174	880	618	4690	2070	1850	716	352	275	233	358
MIN	32	58	158	153	702	709	458	268	64	26	36	56
AC-FT	2940	6450	17300	12920	64290	80850	54650	25280	9960	4700	5950	6860

CAL YR 1982	TOTAL	66257	MEAN 182	MAX 920	MIN 25	AC-FT 131400
WTR YR 1983	TOTAL	147282	MEAN 404	MAX 4690	MIN 26	AC-FT 292100

## GILA RIVER BASIN

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09442680 SAN FRANCISCO RIVER NEAR RESERVE, NM

LOCATION.--Lat 33°44'12", long 108°46'14", in NE¼NW¼SE¼ sec.35, T.6 S., R.19 W., Catron County, Hydrologic Unit 15040004, on left bank 1,300 ft downstream from Rainbow Bridge Canyon, 1.7 mi northwest of Reserve, and at mile 563.1.

DRAINAGE AREA.--350 mi<sup>2</sup>, approximately.

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

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

GAGE.--Water-stage recorder. Altitude of gage is 5,820 ft, from topographic map. Prior to Dec. 15, 1972 at site 1,800 ft upstream at different datum.

REMARKS.--Records good. Possible minor regulation by Luna Lake, 27 mi upstream. Diversions for irrigation of about 280 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 25.5 ft<sup>3</sup>/s, 18,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft<sup>3</sup>/s Oct. 20, 1972, gage height, 7.47 ft in gage well, 8.05 ft, from outside floodmarks, site and datum then in use, from rating curve extended above 9,000 ft<sup>3</sup>/s on basis of velocity-area study; maximum gage height, 9.40 ft Nov. 25, 1978; minimum, 1.0 ft<sup>3</sup>/s Mar. 16, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 15 ft, as determined in 1962 from old floodmarks. Major floods of Nov. 26, 1905 and Dec. 3, 1906, exceeded 20,000 ft<sup>3</sup>/s at Alma (downstream). See WSP 1313.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base 450 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Dec. 1	0015	525	3.80	Sept. 21	1700	*998	3.92
Apr. 1	0215	921	3.88				

Minimum discharge, 1.8 ft<sup>3</sup>/s Oct. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.7	4.3	6.4	14	53	478	57	9.9	4.3	20	13
2	3.4	3.7	13	5.6	12	71	295	53	8.2	4.8	17	13
3	3.0	3.6	8.9	5.9	13	136	248	49	8.5	4.5	58	10
4	3.2	3.6	8.4	6.2	18	162	200	42	8.1	4.8	33	11
5	3.2	3.6	8.5	6.7	17	120	161	34	7.7	4.5	16	11
6	3.2	3.7	8.0	6.7	18	91	142	33	8.1	4.9	11	11
7	3.3	3.8	7.7	6.9	17	91	139	30	8.0	5.0	10	11
8	3.3	3.9	7.9	7.1	26	97	114	29	7.5	4.1	9.5	12
9	3.3	6.0	8.8	6.4	27	118	96	28	5.3	4.4	9.1	11
10	3.2	26	26	6.1	23	153	94	28	7.4	4.9	9.7	15
11	3.0	12	16	6.4	21	204	93	27	7.4	5.4	11	33
12	3.4	7.7	12	6.3	20	305	86	26	7.4	6.3	10	13
13	3.5	6.5	10	6.1	22	280	86	24	7.5	7.8	9.3	13
14	3.5	6.0	9.3	6.1	24	300	85	23	7.1	9.1	9.3	10
15	3.5	5.7	7.7	6.3	22	285	78	22	6.7	7.0	9.2	9.1
16	3.5	5.5	7.5	6.4	26	186	71	22	6.5	5.1	9.2	9.6
17	3.7	6.4	7.5	14	28	154	71	20	6.7	5.5	8.7	9.7
18	3.6	24	7.2	13	29	154	78	19	6.9	5.5	8.2	10
19	3.5	9.1	6.9	11	33	159	87	18	5.7	6.2	7.2	9.5
20	3.5	7.6	6.9	12	29	145	103	17	5.4	5.5	5.5	10
21	3.6	6.9	6.9	9.2	27	143	115	15	5.6	8.6	6.4	46
22	3.6	6.7	7.4	7.6	28	146	103	14	5.4	7.7	6.7	37
23	3.6	6.5	35	8.5	31	145	83	13	5.6	7.6	6.8	62
24	3.3	7.5	18	8.5	33	152	79	13	7.5	9.9	18	129
25	3.1	7.4	11	8.6	40	185	81	13	7.7	8.1	11	76
26	2.1	7.4	8.8	7.5	45	162	81	13	6.6	12	14	31
27	1.9	7.6	8.4	7.8	43	160	77	12	6.2	20	11	28
28	2.5	7.3	6.3	8.0	46	185	71	12	5.6	22	9.9	30
29	3.3	7.2	5.8	7.8	---	238	68	13	5.1	21	9.9	172
30	3.5	8.6	7.2	21	---	311	62	12	3.8	25	14	4300
31	3.6	---	7.1	18	---	399	---	11	---	37	16	---
TOTAL	101.5	225.2	353.1	264.1	732	5490	3625	742	205.1	288.5	404.6	5155.9
MEAN	3.27	7.51	11.4	8.52	26.1	177	121	23.9	6.84	9.31	13.1	172
MAX	3.7	26	43	21	46	399	478	57	9.9	37	58	4300
MIN	1.9	3.6	5.8	5.6	12	53	62	11	3.8	4.1	5.5	9.1
AC-FT	201	447	700	524	1450	10890	7190	1470	407	572	803	10230

CAL YR 1982	TOTAL	2420.8	MEAN	6.63	MAX	54	MIN	1.4	AC-FT	4800
WTR YR 1983	TOTAL	17587.0	MEAN	48.2	MAX	4300	MIN	1.9	AC-FT	34880

## GILA RIVER BASIN

09442692 TULAROSA RIVER ABOVE ARAGON, NM.

LOCATION.--Lat 33°53'29", long 108°30'54", in NE¼NW¼ sec.9, T.5 S., R.16 W., Catron County, Hydrologic Unit 15040004, on right bank 0.4 mi upstream from first diversion, 1.4 mi northeast of Aragon; and 8 mi upstream from Apache Creek.

DRAINAGE AREA.--94 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1966 to current year. 1955 to 1965 at site 0.6 mi upstream (drainage area, 89 mi<sup>2</sup>), annual maximum only.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,750 ft, from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 3.40 ft<sup>3</sup>/s, 2,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 392 ft<sup>3</sup>/s Sept. 1, 1971, gage height, 3.13 ft, from rating curve extended above 80 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 1.1 ft<sup>3</sup>/s July 22, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Jan. 30	1000	30	2.03	Apr. 28	0015	56	2.27
Mar. 28	1915	*185	2.92	Aug. 25	2100	30	1.98

Minimum discharge, 2.4 ft<sup>3</sup>/s Oct. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.5	2.9	2.8	3.1	11	56	3.4	2.9	3.1	3.4	3.3
2	2.7	2.6	2.7	2.8	3.0	10	31	3.4	2.8	3.2	3.3	4.1
3	2.7	2.6	2.7	2.8	2.9	12	30	3.3	2.9	3.1	3.3	3.4
4	2.7	2.6	2.7	2.8	2.8	14	22	3.2	2.8	3.0	3.3	3.3
5	2.7	2.6	2.7	2.8	2.8	11	13	3.1	2.8	3.0	3.2	3.3
6	2.7	2.6	2.7	2.8	3.4	7.7	10	3.1	2.9	3.1	3.2	3.3
7	2.7	2.6	2.7	2.7	3.0	7.4	7.5	3.1	2.9	3.1	3.2	3.3
8	2.6	2.6	2.7	2.8	3.1	8.4	5.6	3.1	2.9	3.3	3.1	3.4
9	2.5	2.8	2.8	2.8	3.7	8.4	4.3	3.1	2.9	3.4	3.0	3.3
10	2.5	2.8	2.8	2.8	3.1	7.7	3.7	3.1	2.9	3.3	3.1	3.2
11	2.6	2.7	2.9	2.8	2.8	7.7	5.1	3.1	2.9	3.2	3.1	3.4
12	2.6	2.6	2.8	2.8	2.7	7.5	5.9	3.0	2.9	3.2	3.2	3.3
13	2.6	2.6	2.8	2.8	2.7	6.3	4.8	2.9	2.9	3.2	3.1	3.3
14	2.6	2.6	2.7	2.8	2.8	5.6	4.7	2.9	3.0	3.2	3.2	3.2
15	2.6	2.6	2.7	2.8	2.7	5.0	4.2	2.9	3.1	3.2	3.1	3.2
16	2.6	2.6	2.7	2.8	2.7	3.7	3.4	2.9	3.1	3.1	3.2	3.2
17	2.6	2.7	2.6	3.1	3.1	3.2	15	2.9	3.1	3.3	3.2	3.2
18	2.6	2.7	2.7	3.1	3.0	3.5	28	2.9	3.1	3.3	3.2	3.2
19	2.6	2.7	2.7	3.0	5.3	5.2	29	2.9	3.0	3.3	3.2	3.3
20	2.6	2.7	2.7	3.0	3.1	4.7	24	2.9	3.0	3.3	3.2	3.3
21	2.6	2.6	2.6	2.8	3.0	7.4	19	2.9	3.0	3.2	3.2	3.3
22	2.6	2.6	2.7	2.8	4.0	10	14	2.8	3.0	3.4	3.2	3.3
23	2.5	2.6	5.6	2.9	5.0	8.1	10	2.8	3.2	3.4	3.5	3.3
24	2.5	2.6	3.1	2.8	5.5	7.5	9.0	2.8	3.3	3.3	3.4	3.3
25	2.5	2.7	2.9	2.8	6.1	11	7.9	2.7	3.2	3.3	4.3	3.3
26	2.5	2.7	2.9	2.8	6.3	11	6.1	2.8	3.2	3.3	3.3	3.3
27	2.5	2.7	2.9	2.8	6.2	20	4.4	2.8	3.1	3.4	3.3	3.5
28	2.5	2.7	2.9	2.8	8.2	38	4.1	2.9	3.1	3.4	3.3	3.4
29	2.5	2.7	2.9	2.8	---	29	3.8	2.9	3.1	3.4	3.4	3.7
30	2.5	2.7	2.9	16	---	28	3.6	2.9	3.1	3.4	3.3	4.2
31	2.5	---	2.9	5.7	---	34	---	2.9	---	3.4	3.3	---
TOTAL	80.2	79.4	89.0	103.9	106.1	354.0	389.1	92.4	90.1	100.8	101.3	101.1
MEAN	2.59	2.65	2.87	3.35	3.79	11.4	13.0	2.98	3.00	3.25	3.27	3.37
MAX	2.7	2.8	5.6	16	8.2	38	56	3.4	3.3	3.4	4.3	4.2
MIN	2.5	2.5	2.6	2.7	2.7	3.2	3.4	2.7	2.8	3.0	3.0	3.2
AC-FT	159	157	177	206	210	702	772	183	179	200	201	201

CAL YR 1982 TOTAL 1045.3 MEAN 2.86 MAX 5.6 MIN 2.5 AC-FT 2070  
WTR YR 1983 TOTAL 1687.4 MEAN 4.62 MAX 56 MIN 2.5 AC-FT 3350



## 09443000 SAN FRANCISCO RIVER NEAR ALMA, NM

LOCATION.--Lat 33°22'05", long 108°54'35", in SW¼SE¼ sec.4, T.11 S., R.20 W., Catron County, Hydrologic Unit 15040004, on right bank 1.2 mi downstream from Alma, 4 mi northwest of Glenwood, 6 mi upstream from Whitewater Creek, and at mile 523.5.

DRAINAGE AREA.--1,546 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1904 to January 1914, fragmentary (see WSP 1313), January 1964 to current year. Prior to October 1911, published as "at Alma".

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

GAGE.--Water-stage recorder. Altitude of gage is 4,842 ft, from topographic map. Prior to Aug. 11, 1912, nonrecording gages at various sites, within 500 ft of each other, 0.8 mi upstream, at different datums. Aug. 11, 1912, to Feb. 2, 1914, nonrecording gage at approximately present site and datum. Jan. 10, 1964 to Nov. 1, 1972, at datum 3.00 ft higher.

REMARKS.--Records good except those for June thru September, which are poor. Diversions for irrigation of about 1,600 acres above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years (water years 1965-83), 75.1 ft<sup>3</sup>/s, 54,410 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,600 ft<sup>3</sup>/s Oct. 20, 1972, gage height, 18.16 ft, present datum, from floodmarks in well, from rating curve extended above 9,000 ft<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 were computed at Clifton, Az.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Dec. 10	1445	1130	5.21	Mar. 25	0130	2300	6.12
Feb. 4	1800	1070	5.00	Aug. 12	1915	*4380	6.30

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	.00	281	21	351	265	1440	263	72	5.0	33	45
2	3.6	.00	84	19	195	325	1070	232	68	4.0	40	40
3	3.2	.00	39	16	184	439	907	197	54	3.8	100	35
4	3.6	.00	25	15	657	845	789	170	46	3.4	130	30
5	3.6	.00	21	15	401	695	657	161	35	3.0	150	25
6	3.6	.00	19	15	327	516	522	159	31	2.8	117	25
7	3.6	.00	18	15	317	438	436	162	20	2.6	82	25
8	3.2	.00	17	15	401	432	400	165	18	2.4	72	25
9	3.2	.00	135	15	436	461	337	179	14	2.2	75	24
10	3.9	43	655	14	323	529	323	190	12	2.0	70	30
11	3.9	59	367	14	226	635	345	192	11	3.0	141	35
12	3.6	26	159	14	206	760	339	184	10	3.0	200	40
13	2.4	18	95	13	198	732	335	165	10	4.0	300	45
14	.60	16	48	13	224	652	316	156	10	5.0	100	40
15	.40	15	32	13	215	668	305	129	9.0	4.0	60	35
16	.40	14	22	13	198	564	303	107	9.0	5.0	300	30
17	.40	15	18	16	198	454	312	96	8.0	4.0	100	25
18	.40	53	16	38	200	431	349	93	8.0	4.0	50	20
19	.00	24	14	40	216	468	439	95	8.0	6.0	40	15
20	.00	17	13	40	219	503	507	85	7.0	10	30	18
21	.00	15	13	42	197	502	502	82	7.0	20	22	16
22	.00	14	12	36	189	547	475	77	6.0	20	12	34
23	.00	14	81	32	189	544	380	77	7.0	22	20	144
24	.00	14	182	32	202	502	363	87	7.0	21	25	168
25	.00	14	82	31	228	1260	394	94	6.0	20	30	261
26	.00	14	62	29	263	860	418	93	5.0	20	40	196
27	.00	14	50	28	258	759	376	87	5.0	20	40	215
28	.00	15	39	28	240	810	344	85	6.0	21	40	143
29	.00	15	26	28	---	1040	318	89	7.0	20	42	156
30	.00	18	24	223	---	1210	294	84	6.0	24	40	2100
31	.00	---	23	487	---	1510	---	76	---	28	44	---
TOTAL	47.80	447.00	2672	1370	7458	20356	14295	4111	522.0	315.2	2545	4040
MEAN	1.54	14.9	86.2	44.2	266	657	477	133	17.4	10.2	82.1	135
MAX	4.2	59	655	487	657	1510	1440	263	72	28	300	2100
MIN	.00	.00	12	13	184	265	294	76	5.0	2.0	12	15
AC-FT	95	887	5300	2720	14790	40380	28350	8150	1040	625	5050	8010

CAL YR 1982 TOTAL 8945.87 MEAN 24.5 MAX 655 MIN .00 AC-FT 17740  
WTR YR 1983 TOTAL 58179.00 MEAN 159 MAX 2100 MIN .00 AC-FT 115400

NOTE: No gage-height record June 7 to July 21.

## GILA RIVER BASIN

09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM

LOCATION.--Lat 33°14'48", long 108°52'47", in NE¼NW¼ sec.23, T.12 S., R.20 W., Catron County, Hydrologic Unit 15040004, on left bank 0.2 mi upstream from hot springs, 5 mi south of Glenwood, 6 mi downstream from Whitewater Creek, and at mile 511.5.

DRAINAGE AREA.--1,653 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1213: 1931, 1934, 1936-37, 1940-42, 1943-44(M), 1945-47. WSP 1283: Drainage area. WDR NM-78-1: 1977. WDR NM-79-1: 1973, 1975-77 (P).

GAGE.--Water-stage recorder. Altitude of gage is 4,560 ft, from topographic map; prior to Feb. 15, 1934, at site 4.5 mi upstream at datum 98.82 ft higher.

REMARKS.--Water-discharge records good. Diversions for irrigation of about 2,000 acres above station. Gage height satellite telemeter at station.

AVERAGE DISCHARGE.--56 years, 76.6 ft<sup>3</sup>/s, 55,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft<sup>3</sup>/s, Oct. 20, 1972, gage height, 16.61 ft, from rating curve extended above 6,500 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 10.74 ft and 15.6 ft; minimum, 1.5 ft<sup>3</sup>/s Aug. 6, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods probably occurred Jan. 19 and Oct. 14, 1916 when discharges of 60,000 ft<sup>3</sup>/s or greater were computed for station at Clifton, AZ. On Nov. 26, 1905, a peak of 25,000 ft<sup>3</sup>/s was measured (by float-area method) at station at Alma (about 12 mi upstream, drainage area, 1,560 mi<sup>2</sup>); a similar measurement of 21,000 ft<sup>3</sup>/s was made at the Alma station for peak of Dec. 3, 1906.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Dec. 10	1600	1370	4.49	Mar. 25	0415	2540	5.77
Feb. 4	2245	1160	4.00	Aug. 17	2000	*2900	6.09
Mar. 12	1745	894	3.91				

Minimum discharge, 14 ft<sup>3</sup>/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	19	328	48	400	415	1460	432	199	29	67	59
2	15	19	150	44	264	455	1080	400	191	28	70	53
3	16	20	77	42	215	650	843	355	172	27	93	47
4	17	20	53	40	714	850	767	309	147	28	96	41
5	18	20	46	39	544	600	651	299	133	28	103	33
6	20	19	40	38	406	500	535	300	123	29	81	32
7	21	18	37	38	406	440	445	299	111	26	62	31
8	22	19	34	38	495	410	400	297	109	25	61	30
9	22	23	137	38	613	460	345	319	102	24	54	31
10	21	41	702	37	480	488	329	337	87	24	54	28
11	22	116	491	37	378	574	353	332	80	28	52	26
12	21	63	211	37	347	728	359	317	71	29	89	38
13	21	43	127	36	341	766	353	293	64	29	157	58
14	19	39	87	36	383	711	332	276	56	28	79	46
15	17	40	60	35	375	694	316	242	51	25	62	44
16	17	38	44	35	341	616	310	212	49	25	54	41
17	20	37	36	37	344	453	315	196	51	24	409	37
18	19	104	32	52	356	400	369	192	48	27	127	35
19	18	76	29	60	381	464	465	184	44	28	48	34
20	18	52	27	64	399	502	573	177	43	27	42	34
21	17	43	25	67	358	519	593	172	41	24	39	35
22	17	39	25	64	342	559	545	171	41	36	36	35
23	17	36	50	57	351	603	498	182	41	42	33	59
24	19	38	240	56	373	584	507	206	38	43	35	66
25	20	38	150	55	395	1290	579	239	40	43	37	99
26	19	38	105	52	430	817	627	253	39	43	41	71
27	19	36	85	51	427	687	589	245	36	55	46	101
28	20	34	71	51	401	696	540	233	33	48	45	94
29	20	35	58	50	---	892	498	219	28	49	47	114
30	20	37	52	127	---	1110	462	215	30	55	46	4670
31	20	---	51	490	---	1350	---	209	---	58	46	---
TOTAL	589	1200	3660	1951	11259	20283	16038	8112	2298	1034	2311	6122
MEAN	19.0	40.0	118	62.9	402	654	535	262	76.6	33.4	74.5	204
MAX	22	116	702	490	714	1350	1460	432	199	58	409	4670
MIN	15	18	25	35	215	400	310	171	28	24	33	26
AC-FT	1170	2380	7260	3870	22330	40230	31810	16090	4560	2050	4580	12140

CAL YR 1982	TOTAL	17773	MEAN	48.7	MAX	702	MIN	13	AC-FT	35250
WTR YR 1983	TOTAL	74857	MEAN	205	MAX	4670	MIN	15	AC-FT	148500

GILA RIVER BASIN  
09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, NM -- Continued  
WATER-QUALITY RECORDS

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

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 13...	0930	21	323	--	8.2	--	--	12.0	--	--	--	--
NOV 15...	1430	40	395	422	8.4	8.0	22.0	16.0	140	0	0	39
JAN 12...	1130	34	310	323	8.0	8.2	10.5	10.0	--	--	--	--
MAR 22...	0930	558	240	238	7.8	8.0	7.0	7.5	90	0	0	25
MAY 17...	0840	193	190	223	8.0	8.1	15.0	11.0	84	0	0	24
JUL 12...	1500	29	260	294	8.5	8.4	26.5	24.0	110	0	0	32

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 IT-FLD (MG/L AS HCO3) (99440)	ALKA- LINEITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINEITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
OCT 13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	10	32	1.2	3.1	--	--	178	10	19	.40	39	259
JAN 12...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 22...	6.8	13	.6	1.6	--	--	98	18	3.5	.30	30	157
MAY 17...	5.9	13	.6	1.5	110	88	89	17	3.4	.30	31	150
JUL 12...	7.9	19	.8	2.5	--	--	137	12	6.7	.40	34	197

TRACE ELEMENT ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 15...	1430	0	0
MAR 22...	0930	0	50
MAY 17...	0840	0	20
JUL 12...	1500	0	20

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 (mi2)	Period of record	Gage Station		
				Date	height (feet)	Discharge (ft3/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-	05-20-83	0.54 (+)
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-	02-20-83	0.76 91
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-	- -83	-- k
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-	- -83	-- k
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*	07-12-83	2.40 43
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-	- -83	-- k
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-	08-28-83	3.32 (+)
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-	- -83	-- m
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-	06-09-83	6.72 274
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-	08-28-83	5.19 1,490

## 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)
Arkansas River Basin - Concluded							
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-	09-08-83	3.83	40
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-	03-19-83	3.44	(+)
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-	05-20-83	3.68	324
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-	06-09-83	5.32	52
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-	08-08-83	1.59	164
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-	- -83	--	k
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-	- -83	--	k
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	--	k
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-	- -83	--	(+)
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-	- -83	--	k
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-	09-20-83	3.24	17
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-	09-12-83	2.44	(+)

## 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							
08275500	Rio Grande del Rancho near Talpa, N. Mex.	Lat 36°17'52", long 105°34'55", Taos County, in Rancho del Rio Grande Grant, 104 miles downstream from Rito de la Olla, 3.2 miles south of Talpa, 4.3 miles upstream from Rio Chiquito.	83	1952-82* 1983-	08-08-83	3.08	328
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-	05-28-83	2.24	159
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-	07-23-83	4.83	528
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-	08-02-83	7.58	207
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-	08-08-83	1.86	20
08313350	Rito de los Frijoles in Bandelier National Monument, N. Mex.	Lat 35°46'35", long 106°16'06", Sandoval County, in Bandelier National Monument, downstream from Monument headquarters, 6.5 miles south of Los Alamos, 18.5 miles northwest of Santa Fe.	18.1	1963-69* 1977-82* 1983	05-04-83	2.56	23
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-	08-02-83	1.92	28
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-	07-17-83	4.12	2,090
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-	- -83	--	k
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-	- -83	--	k
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-	- -83	--	k
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-	- -83	--	k
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-	06-25-83	4.45	400

## 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							
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-	07-12-83	0.76	(+)
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-	- -83	--	k
08331100	Belen Highline Canal tributary near Los Lunas, N. Mex.	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-	- -83	--	k
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-	- -83	--	k
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 southeast of junction of U.S. Highway 60, and State Highway 6, southwest of Scholle.	.23	1954-	- -83	--	k
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-	12-23-82	2.20	j42
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	07-31-83	7.87	(+)
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-	12-10-82	3.97	260
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-	08-22-83	2.33	960
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	- -83	--	k
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	- -83	--	k
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-	- -83	--	k
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-	n09-18-82 09-12-83	n9.52 7.54	n5,510 3,380
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-	09-14-83	3.41	370



## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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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							
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-	10-7-83	2.84	400
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-	08-18-83	5.45	142
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-	- -83	--	k
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-	- -83	--	k
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-	09-09-83	6.80	1,180
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-	- -83	--	k
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-	06-06-83	1.51	74
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-	- -83	--	k
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-	- -83	--	k
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-	h08-17-82 07-10-83	h6.43 3.14	(+) (+)
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-	- -79 07-10-83	n6.82 8.77	84 211
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-	- -82	--	k
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	09-08-83	0.31	246

## 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							
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-	- -83	--	k
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-	- -83	--	k
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-	09-20-83	2.53	31
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-	- -52	1.83	35
					- -53	3.30	63
					- -54	1.94	37
					- -55	1.62	32
					- -56	.33	a7
					- -57	.36	a8
					- -58	1.28	26
					07-08-59	1.60	39
					07- -60	1.09	22
					- -61	.42	a8
					- -62	.58	a12
					- -63	2.07	39
					09-21-64	2.19	41
					07-29-65	2.02	38
					08-23-66	.81	a15
					08-10-67	h1.41	21
					08-22-68	h1.39	20
					09-08-69	h1.61	26
					10-20-69	X1.12	X13
					09-31-71	h1.62	26
					07-20-72	h2.22	41
					- -73	X1.12	X13
					08-11-74	h1.30	18
					07-22-75	h1.26	16
					- -76	X1.12	X13
					08-11-77	a3.75	73
06-27-78	ha3.08	66					
- -79	X1.12	X13					
- -80	X1.12	X13					
- -81	X1.12	X13					
- -83	1.70	28					
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-	04-28-83	2.84	j101
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-	- -83	--	k
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-	- -83	(e)	--
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-	- -83	(e)	--

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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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 - Concluded							
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-	- -83	--	k
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-	- -83	X2.21	(+)
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-	- -83	--	k
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-	- -83	--	k
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-	- -83	X0.50	X20
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-	- -83	1.2	(+)
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-	- -83	X6.19	X140
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-	09-29-83	a7.00	a600
08405100	Mosley Canyon White City, N. Mex.	Lat 32°15'27", long 104°22'43", Eddy County, 600 ft below dip on Dark Canyon Road, and 5.5 miles north of White City.	14.6	1959-	05-19-61 - -62 03-31-63 05-15-64 08-30-68 07-31-71 - -73 - -74 10-23-74 09-29-83	4.82 5.98 6.11 4.43 4.19 2.87 X2.35 (e) 3.37 2.91	1790 2450 2510 1560 1440 725 X450 X980 980 730
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-	- -83	--	k
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	--	--	--

## 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)
Mimbres River basin							
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-	- -83	(e)	(+)
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-	- -83	(e)	(+)
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-	- -83	(e)	(+)
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-	- -83	(e)	(+)
08478500	Mimbres River at Deming, N. Mex.	Lat 32°17'00", long 107°45'35", Luna County, at bridge on U.S. Highway 260, at north end of Deming.	1,370	1983-	- -83	(e)	(+)
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-	- -83	--	k
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-	12-01-82	2.88	47
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-	07-21-83	1.40	180
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-	- -83	2.35	(+)
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-	- -83	1.28	550
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 north-west of Capitan and 2 miles north of Nogal.	1.94	1968-	- -78 08-15-79 06-10-80 - -82 - -83	h2.65 h2.46 2.36 207 (e)	125 103 93 60 --
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-	- -83	--	k

## 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)
Tularosa Valley - Concluded							
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-	- -83	--	k
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 - -83	1.44 2.02	(+) (+)
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-	- -83	(e)	--
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-	- -83	X4.19	X330
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-	- -83	(e)	(+)
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-	- -82 10-01-82	-- 4.47	k (+)
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-	07-11-83	7.48	82
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-	- -83	--	k
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-	- -83	--	k
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-	- -83	--	k
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-	- -83	(e)	(+)
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-	- -83	(e)	(+)

## 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)
Estancia Valley - Concluded							
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-	- -83	--	k
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-	09-19-83	4.26	680
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-	08-18-83	4.11	6.4
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-	09-30-83	6.70	1,230
09350700	Ruben Canyon near Gobernador, N. Mex.	Lat 36°44'26", long 107°14'33", Rio Arriba County, in Carson National Forest, upstream from culvert on State Highway 17, and 6.5 miles east of Gobernador.	5.06	1970-	09-30-83	3.70	(+)
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-	03-18-83	2.27	82
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-	- -83	--	k
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-	08-01-83	2.59	500
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-	- -83	(e)	(+)
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-	08-04-83	2.90	180
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-	07-09-83	2.84	(+)

## 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)	
San Juan River basin - Concluded								
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-	08-19-83	1.56	90	
09367550	Stevens Arroyo near Kirtland, N. Mex.	Lat 36°45'56", long 108°21'59", San Juan County, on 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-	01-17-83	11.43	(+)	
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-	- -83	(e)	(+)	
09367900	Black Springs Wash near Mexican Springs, N. Mex.	Lat 35°45'40", long 108°49'00", McKinley County, 2.5 miles south of Mexican Springs and 17 miles north of Gallup.	7.05	1954-78 1979-82* 1983-	- -83	(e)	(+)	
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-	07-27-83	6.14	(+)	
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-	08-03-83	7.61	(+)	
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-	09-30-83	2.45	(+)	
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-	- -83	--	k	
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-	- -83	(e)	(+)	
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-	- -83	(e)	k	
09386200	Carrizozo 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-	- -83	(e)	(+)	

## 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)
Little Colorado River basin - Concluded							
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-	04-05-83	3.69	245
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-	- -83	(e)	(+)
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-	- -83	(e)	(+)
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	03-19-83	1.02	42
09395500	Puerco River at Gallup, N. Mex.	Lat 35°31'49", long 108°44'23", McKinley County, on right bank north of the Santa Fe RR freight depot, 1,500 ft above Second Street Bridge at Gallup	558	1940-46* 1957-77 1977-82* 1983-	- -83	(e)	(+)
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-	- -83	(b)	X10
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-	- -83	(e)	(+)
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-	09-26-83	5.69	1,250
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-	- -83	(e)	(+)
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-	- -83	(e)	(+)
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-	- -83	(e)	(+)
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-	- -83	(e)	(+)



## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Annual maximum discharge at crest-stage partial-record stations - Concluded

Station no.	Station name	Location	Drainage area (ft2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft3/s)
Gila River basin - Concluded							
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-	- -83	(e)	(+)
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-	- -83	(e)	(+)

Less than  
 + Discharge not yet determined.  
 \* Operated as continuous-record gaging station.  
 a Approximately.  
 b Peak too low to register on gage.  
 c Estimated.  
 d From floodmark.  
 e Gage height not determined.

f Contributing area.  
 g Discontinued at end of year.  
 h Revised.  
 j May not have been peak for year.  
 k No evidence of any flow during winter year.  
 m No record.  
 n Correction.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations are given in the following table.

Discharge measurements made at miscellaneous sites during water year 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	11-23-82	7.19
				1958-71	02-28-83	7.63
				1972-81	05-13-83	6.59
				08-31-83	6.44	
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.	-	1976-82	01-31-83	3.3
					04-15-83	3.5
					07-13-83	2.2
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	01-10-83	10
				1919-20	03-30-83	13
				1923	06-24-83	12
				1935	09-28-83	11
				1952-70		
				1974-82		
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.	-	1975-82	01-10-83	0.47
					03-30-83	0.56
					06-24-83	0.34
					09-28-83	0.21
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	1972-82	10-13-82	4.12
					11-18-82	3.62
					01-13-83	5.00
					03-22-83	4.33
					07-13-83	2.14
					09-20-83	0.19
Arkansas River basin						
Canadian River b07227140	Arkansas River	Lat 35°23'35", long 103°02'30", in SW¼ sec.32, T.14 N., R.37 E., Quay County at New Mexico-Texas State Line 14.7 miles north of Glenrio, NM		1969-82	10-05-83	326
					12-08-83	206
					04-12-83	40
					06-14-83	275
					08-09-83	38
Little Colorado River basin						
Puerco River 09395500	Colorado River	Lat 35°31'45", long 108°44'41", in NE¼SE¼ sec.16, T.15 W., R.18 W., McKinley County, near center of span on downstream side of Third Street bridge in Gallup.	558	1940-1946	10-19-82	4.59
				1957-1982	12-07-82	21.7
					01-05-83	3.83
					03-29-83	60.5
					05-12-83	0.27
					08-03-83	116

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 hydrological analyses. The data are collected less than quarterly, usually one to three times a year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

RIO GRANDE BASIN  
08405450 BLUE SPRINGS ABOVE DIVERSIONS, NM (LAT 32°11'07" LONG 104°16'50")

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS) (90095)	PH LAB (STAND- ARD UNITS) (00403)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)
AUG 04...	1015	11	1480	7.9	950	766	310	43	15	.2

DATE	TIME	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, 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)
AUG 04...	1.4	750	13	.40	14	1260	1.0	7	3	

SAN JUAN RIVER BASIN  
WESTWATER ARROYO AT SAN JUAN POWER PLANT, NM (LAT 36°47'37" LONG 108°25'47")  
(LOCAL IDENTIFIER - 30N.15W.21.333)

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 CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS (00902)
JAN 10...	1115	1.8	9500	10300	6.8	6.6	8.0	12.0	790	462

DATE	TIME	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
JAN 10...	260	34	2500	40	13	400	.0	5000	270	42	

DATE	TIME	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L (70301)	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)
JAN 10...	42	9240	8390	28000	2200	1300	210	210	39	85	

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SAN JUAN RIVER BASIN -- Continued  
 POWERPLANT ARROYO BELOW SAN JUAN POWERPLANT RESERVOIR, NM (LAT 36°47'06" LONG 108°26'26")  
 (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 (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)
JAN 10...	1300	.81	3800	3950	8.4	8.4	10.0	6.5	--	1700	1530
JUL 12...	1000	.04	6700	7360	8.1	8.0	27.5	23.0	11.7	3500	3190

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	ALKA- LINITY FIELD (MG/L AS CACO3) (00410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
JAN 10...	300	230	430	4.6	6.8	200	3.0	--	2200	88	.30
JUL 12...	480	560	960	7.2	9.0	390	.0	320	4600	210	.40

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)	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)
JAN 10...	8.0	3710	3370	230	90	30	70	80	34	26
JUL 12...	2.3	7990	7010	430	160	60	50	40	51	52

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 1982 TO SEPTEMBER 1983

RIO GRANDE BASIN  
BLAND CREEK AT BLAND, NM (LAT 35°45'26" LONG 106°27'49")  
(LOCAL IDENTIFIER - 18N.04E.25.443)

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, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L) CAC03 (00900)	HARD- NESS, NONCAR- BONATE (MG/L) CAC03 (00902)
SEP 09...	1015	.02	162	175	7.9	7.9	20.5	15.0	8.1	72	4

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (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)
SEP 09...	19	6.0	5.9	.3	2.8	83	.0	15	1.3	.10	35

DATE	SOLIDS, SUM OF CONSTITUENTS, 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)	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...	126	< .10	.090	< 1	< 10	22	< 4	7	< .1	1.5

SAN ANTONIO CREEK NEAR LA CUEVA, NM (LAT 35°56'57" LONG 106°38'22")  
(LOCAL IDENTIFIER - 20N.03E.20.311)

DATE	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, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L) CAC03 (00900)	HARD- NESS, NONCAR- BONATE (MG/L) CAC03 (00902)
SEP 06...	1545	5.3	113	116	8.2	8.3	25.0	24.0	7.2	30

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	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)
SEP 06...	9.7	1.3	11	.9	2.4	53	.0	10	1.0	< 1.4	58

DATE	SOLIDS, SUM OF CONSTITUENTS, 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)	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 06...	120	< .10	.030	< 2	10	220	30	9	< .1	2.9

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

RIO GRANDE BASIN -- Continued  
SULPHUR CREEK AT SULPHUR SPRINGS, NM (LAT 35°54'08" LONG 106°37'11")

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)
SEP 02...	1530	.29	920	767	2.6	3.1	26.0	19.0	7.2	160

DATE	TIME	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)	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)
SEP 02...	3.4	50	7.4	9.6	.3	11	330	2.8	.40	.07	

DATE	TIME	SILICA, DIS- SOLVED (MG/L) AS SiO2) (00955)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	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 02...	59	< .10	.010	1	40	9300	33	760	.3	21	

## EAST FORK JEMEZ RIVER-TRIBUTARY NEAR VALLECITOS DE LOS INDIOS, NM (LAT 35°48'55" LONG 106°31'24")

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) CACO3 (00900)	HARD- NESS, NONCAR- BONATE (MG/L) CACO3 (00902)
SEP 02...	1221	.27	212	223	7.9	7.6	24.0	15.5	7.8	95	5

DATE	TIME	CALCIUM DIS- SOLVED (MG/L) AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K) (00935)	BICAR- BONATE IT-FLD (MG/L) AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L) AS CO3) (99445)	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)
SEP 02...	30	4.8	7.7	.4	1.9	110	.0	15	8.1	< .10	27	

DATE	TIME	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)	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 02...	149	< .10	.030	1	< 10	150	7	37	.2	< 1.0	

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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## WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

RIO GRANDE BASIN -- Continued  
 RIO DE LAS VACAS NEAR SEVEN SPRINGS, NM (LAT 35°57'14" LONG 106°47'21")  
 (LOCAL IDENTIFIER - 20N.01E.24.121)

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 CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
SEP 06...	1330	4.3	220	230	8.2	8.3	24.0	22.0	7.2	110	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (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)
SEP 06...	40	3.5	4.9	.2	1.1	140	.0	5.3	1.3	<.10	11

DATE	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)	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 06...	136	<.10	.010	<1	10	34	9	7	<.1	1.2

## VALLECITO CREEK ABOVE PONDEROSA, NM (LAT 35°47'06" LONG 106°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 (STAND- ARD UNITS) (00400)	TEMPER- ATURE, AIR (DEG C) (00020)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CACO3) (00902)
SEP 01...	1300	.04	88	91	6.9	16.0	13.0	8.0	32	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)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
SEP 01...	9.3	2.2	3.8	.3	50	.0	14	<.01	39

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	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 01...	<.10	.020	<1	<10	140	6	9	.1	2.3

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

PECOS RIVER BASIN  
RIO BONITO NEAR FORT STANTON, NM (LAT 33°30'12" LONG 105°29'56")  
(LOCAL IDENTIFIER - 09S.15E.20.341)

DATE	TIME	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)	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)
MAY 13...	1000	410	441	8.3	7.9	9.5	180	94	54	11	16
DATE		SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS 70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	ARSENIC DIS- SOLVED (MG/L AS AS) (01000)	BARIUM, DIS- SOLVED (MG/L AS BA) (01005)
MAY 13...	.5	1.0	110	16	.60	13	273	.23	<1	35	
DATE		CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SR) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
MAY 13...	<1	<10	<1	5	2	5	<.1	<1	<1	29	

SAN JUAN RIVER BASIN  
NAVAJO MINE 1973 RECLAMATION PLOT NEAR FRUITLAND, NM (LAT 36°40'42" LONG 108°27'14")  
(LOCAL IDENTIFIER - 29N.15W.31.441)

DATE	TIME	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)	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)
AUG 03...	1930	600	658	7.1	7.3	180	0	57	8.9	40	1.4
03...	2000	2350	2490	7.7	7.7	860	709	270	46	260	4.0
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	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 AS 70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS 70301)	ARSENIC TOTAL (UG/L AS AS) (01002)
AUG 03...	25	230	.0	100	27	1.0	12	393	387	46	
03...	31	190	.0	1100	49	1.2	8.8	2060	1860	8	
DATE		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)
AUG 03...	10	320	<1	150	440	220000	1800	310	7600	970	
03...	<10	610	<1	50	140	55000	100	63	1400	50	
DATE		MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	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. FALL DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70332)
AUG 03...	1.3	210	12	1200	11700	56	70	92	100	--	
03...	1.3	76	7	280	2860	50	68	90	99	100	



## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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## WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SAN JUAN RIVER BASIN -- Continued  
 SAN JUAN MINE 1977 GRADED PILE NEAR FRUITLAND, NM (LAT 36°46'31" LONG 108°25'08")  
 (LOCAL IDENTIFIER - 30N.15W.33.214)

DATE	TIME	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 (STAND- ARD UNITS) (00403)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CA) (00902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
NOV											
17...	2005	.00	685	588	8.2	7.9	60	0	21	1.9	100
17...	2010	--	825	827	7.9	7.6	120	14	41	4.3	120
DEC											
10...	1830	--	550	740	6.6	7.9	85	--	28	3.6	120
10...	1835	--	3500	4060	7.8	7.6	1100	1040	340	64	750
JAN											
18...	1230	--	460	473	7.9	7.7	45	0	15	1.8	78
18...	1240	--	--	--	--	--	--	--	--	--	--
18...	1245	--	950	932	7.9	7.8	150	76	49	6.3	140

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	CAR- BONATE IT-FLD (MG/L AS CO3) (99445)	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)	ARSENIC TOTAL (UG/L AS AS) (01002)
NOV											
17...	5.9	5.8	122	.0	140	7.6	1.1	7.3	383	345	13
17...	5.0	6.7	130	.0	240	9.0	.70	5.9	617	492	--
DEC											
10...	5.9	4.0	--	--	220	13	.70	3.8	478	--	10
10...	10	9.6	91	--	2400	55	.50	7.2	4030	3670	5
JAN											
18...	5.3	3.6	98	.0	130	2.9	.70	7.8	296	288	84
18...	--	--	--	--	--	--	--	--	--	--	--
18...	5.2	4.4	88	.0	350	11	.80	4.9	640	610	18

DATE	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)	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)
NOV											
17...	3	10	1	200	<1	<1	80	<10	250	17	140000
17...	3	--	<10	240	--	1	--	<10	--	17	66000
DEC											
10...	4	<10	1	140	<1	<1	50	<10	130	12	66000
10...	2	<10	<10	320	1	1	20	10	20	17	870
JAN											
18...	--	40	--	120	<1	--	180	--	920	--	370000
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	<10	--	150	<1	--	50	--	210	--	90000

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, TOTAL RECOV- ERABLE (UG/L AS MN) (01053)	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, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)
NOV										
17...	260	110	12	2100	15	.5	.2	120	3	9
17...	110	--	6	1100	10	--	<.1	--	4	--
DEC										
10...	22	69	<1	930	6	.9	.4	53	3	4
10...	40	1	8	50	20	.1	.1	6	7	7
JAN										
18...	330	560	--	6900	8	2.2	--	400	--	16
18...	--	--	--	--	--	--	--	--	--	--
18...	60	89	--	1400	5	1.0	--	89	--	8

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SAN JUAN RIVER BASIN -- Continued  
 SAN JUAN MINE 1977 GRADED PILE NEAR FRUITLAND, NM (LAT 36°46'31" LONG 108°25'08")  
 (LOCAL IDENTIFIER - 30N.15W.33.214)

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	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)
NOV										
17...	2	720	96	10000	82	96	99	100	--	40
17...	2	--	10	5610	86	92	98	100	--	40
DEC										
10...	2	340	15	5030	--	--	--	--	100	40
10...	7	30	20	55	--	--	--	--	89	40
JAN										
18...	--	2200	--	--	--	--	--	--	--	--
18...	--	--	--	29200	--	--	--	--	100	40
18...	--	540	--	7760	--	--	--	--	100	40

SAN JUAN MINE 1974 RECLAMATION PLOT NEAR FRUITLAND, NM (LAT 36°46'37" LONG 108°25'10")  
 (LOCAL IDENTIFIER - 30N.15W.33.212)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	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)	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)
DEC										
10...	1830	630	8.4	10	30	30	1	1	<1	180
10...	1835	640	8.2	10	8	20	1	1	<1	140
16...	1830	--	--	--	--	--	--	--	--	--
16...	1835	--	--	--	--	--	--	--	--	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	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)	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)
DEC										
10...	<10	550	12	260	2	2.0	.2	250	4	13
10...	<10	420	14	160	4	1.0	.5	200	4	10
16...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	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 .062 MM (70331)	SAMPLE SOURCE (72005)
DEC											
10...	3	1300	25	--	--	--	--	--	--	--	--
10...	3	910	21	--	--	--	--	--	--	--	--
16...	--	--	--	30800	78	85	91	97	100	--	40
16...	--	--	--	17900	87	91	97	--	--	100	40

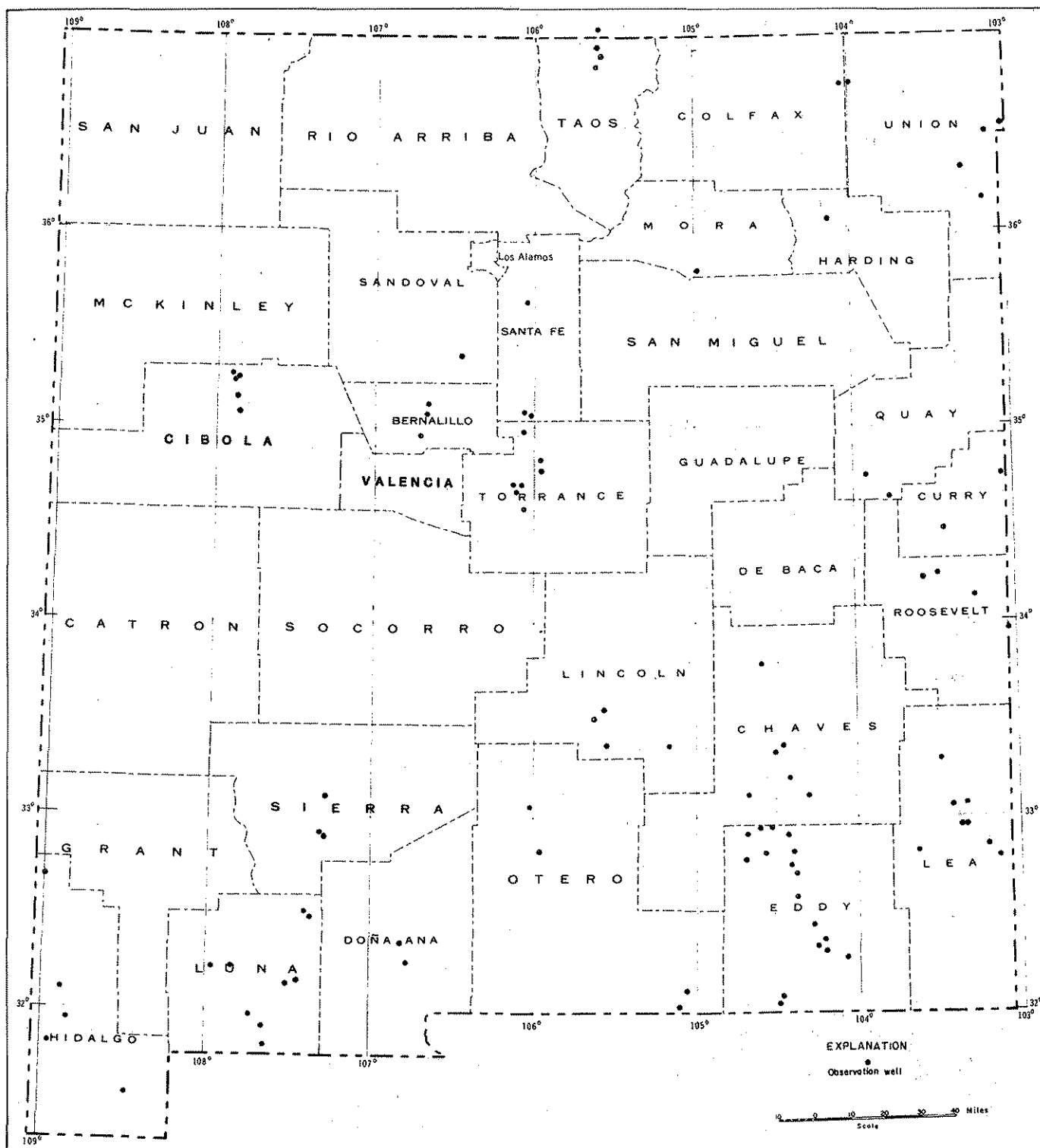


Figure 8.-- Map of New Mexico showing location of observation wells.

## GROUND-WATER LEVELS

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 22	13.17
Aug. 10	12.42

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 22	30.56
Aug. 10	29.12

350415106403001. Local number, 10N.2E.24.413.

LOCATION.--Lat 35°04'15", long 106°0'30", 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, 10.19 ft (3.11 m) below land-surface datum, Aug. 10, 1983; 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 22	12.75
Aug. 10	10.19

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 2	282.74
Sept. 27	285.50

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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	63.63	60.70	58.33	56.43	--	54.06	57.66	61.48	62.10	64.33	67.38	66.33
10	63.02	60.23	57.94	56.16	54.68	54.70	57.42	61.40	63.19	65.40	67.51	66.79
15	62.53	59.76	57.68	55.90	54.55	55.24	58.88	60.82	63.92	65.68	66.19	66.48
20	62.05	59.46	57.31	55.57	54.45	55.85	59.78	61.78	63.37	65.62	67.22	66.94
25	61.60	59.04	57.13	--	54.30	56.75	59.80	61.45	63.75	65.75	66.81	65.74
eom	61.11	58.54	56.76	--	54.16	57.90	61.25	61.85	64.25	66.59	66.98	65.70

WTR YEAR 1983 MAX 54.05 Mar. 4, 1983 MIN 67.51 Aug. 10, 1983

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 2	18.55
Sept. 27	pumping

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 2	77.37
Sept. 27	78.50

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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	78.84	43.84	34.65	30.15	--	36.17	94.76	117.17	112.94	118.27	128.01	112.96
10	67.71	41.66	33.50	28.97	26.37	--	--	112.94	131.03	126.21	135.80	130.09
15	60.51	39.72	33.10	28.68	26.04	66.16	103.57	88.97	137.35	141.59	131.33	121.93
20	56.48	38.50	32.13	27.55	26.53	77.18	105.13	96.19	131.61	142.58	139.79	124.33
25	52.03	36.91	31.30	27.20	29.16	93.77	96.57	108.02	96.19	124.54	141.73	112.99
eom	46.48	35.88	31.12	--	28.55	109.59	115.89	119.14	108.55	121.79	130.38	113.97

WTR YEAR 1983 MAX 25.35 Feb. 14, 1983 MIN 150.77 July 20, 1983

## GROUND-WATER LEVELS

CHAVES COUNTY  
Roswell Basin

331524104245101. Local number, 12S.25E.23.344A.

LOCATION.--Lat 33°15'24", long 104°24'51", Hydrologic Unit 13060007.

Owner: U.S. Geological Survey.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled observation well, diameter 7 in (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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	110.09	110.06	109.93	109.75	109.48	109.16	108.93	108.95	109.35	109.65	109.88	110.05
10	110.14	110.00	109.83	109.68	109.41	109.12	108.86	109.06	109.36	109.64	109.90	110.09
15	110.18	109.96	109.90	109.60	109.40	109.03	108.89	109.14	109.37	109.66	109.94	110.10
20	110.13	110.05	109.75	109.59	109.44	109.08	108.79	109.19	109.45	109.70	109.97	110.25
25	110.08	109.96	109.86	109.52	109.28	108.93	108.79	109.26	109.46	109.76	109.99	110.18
eam	110.08	109.90	109.82	109.53	109.19	108.77	108.88	109.37	109.54	109.83	110.03	110.16

WTR YEAR 1983 MAX 108.74 Apr. 18, 1983 MIN 110.25 Sept. 20, 1983

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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	80.59	39.10	27.68	22.73	17.95	27.74	96.83	132.13	--	124.97	139.34	133.76
10	68.04	36.80	26.78	21.60	18.67	50.62	72.39	--	144.40	140.82	143.82	139.10
15	58.60	33.73	25.57	20.74	17.90	71.21	105.67	--	158.98	162.47	140.82	133.59
20	54.57	--	24.48	19.42	18.87	98.49	116.80	--	141.75	160.72	150.75	136.81
25	47.59	30.15	23.66	19.26	22.60	106.99	106.79	--	95.80	141.42	157.00	126.53
eam	41.42	30.15	23.54	18.50	21.85	121.96	122.45	--	116.84	136.96	148.80	127.70

WTR YEAR 1983 MAX 17.57 Feb. 14, 1983 MIN 168.00 July 13, 1983

330640104174501. Local number, 14S.26E.12.433b.

LOCATION.--Lat 33°06'40", long 104°17'45", Hydrologic Unit 13060007.

Owner: C. B. Donaghay.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 13 in (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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 2	20.91
Sept. 27	20.77

## GROUND-WATER LEVELS

481

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, 0.19 ft (0.06 m) below land-surface datum, Feb. 7, 1983  
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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	15.02	14.64	5.03	1.04	0.58	12.66	---	58.99	---	---	69.50	59.23
10	12.16	13.12	3.06	.68	4.53	32.50	---	---	53.95	---	75.82	47.90
15	9.54	12.53	2.75	.30	5.03	---	---	---	---	65.74	65.37	44.92
20	10.89	10.54	4.00	1.25	5.21	39.24	59.48	44.80	43.10	59.94	66.15	52.54
25	11.92	5.28	2.08	.86	11.14	---	56.79	---	---	64.97	64.63	56.73
com	13.47	5.51	1.29	1.98	10.77	55.05	66.65	---	---	56.83	63.04	---

WTR YEAR 1983 MAX .19 Feb. 7, 1983 MIN 77.44 Aug. 10, 1983

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 17	29.39
Aug.	not measured

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 17	25.74
Aug. 12	24.98

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 17	83.96
Aug. 12	80.95

## GROUND-WATER LEVELS

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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST WATER LEVEL, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	106.51	106.48	106.49	106.77	106.58	106.45	105.68	102.42	101.04	101.12	101.22	--
10	106.58	106.34	106.47	106.72	106.72	106.67	105.48	101.84	101.03	101.09	101.19	--
15	106.70	106.48	106.67	106.74	106.82	106.35	104.93	101.60	101.23	101.07	--	--
20	106.60	106.42	106.65	106.41	106.73	106.26	104.39	101.37	99.69	101.16	--	--
25	106.58	106.48	106.47	106.62	106.65	106.00	103.83	101.26	100.14	101.11	--	--
eam	106.40	106.20	106.59	106.52	106.71	105.89	103.07	101.00	99.63	101.25	--	--

WTR YEAR 1983 MAX 99.63 June 30, 1983 MIN 106.88 Jan. 14, 1983

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, 83.87 ft (25.56 m) below land-surface datum, Jan. 17, 1983; 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 17	83.87
Aug. 12	83.89

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 18	9.05
Aug. 24	8.30



## GROUND-WATER LEVELS

483

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 25	136.91
Sept. 29	136.98

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 10	282.45
Aug. 23	286.59

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 9	353.66
Aug. 22	354.01

## GROUND-WATER LEVEL

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 8	444.76
Aug. 23	444.22

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, 441.52 ft (134.58 m) Aug. 23, 1983.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 8	439.66
Aug. 23	441.52A

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 7	289.60
Aug. 25	289.54

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 16	13.43
Aug. 16	10.86

A well being pumped

## GROUND WATER LEVELS

485

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 16	23.89
Aug. 16	23.20

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 2	85.11
Sept. 27	91.15

325638104274801. Local number, 16S.25E.11.111.

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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	58.98	58.34	57.62	56.68	56.42	55.82	56.60	57.48	58.01	58.69	59.24	59.56
10	58.96	58.17	57.52	56.77	56.38	55.81	56.70	57.61	58.12	58.78	59.30	59.59
15	58.92	58.04	57.43	56.71	56.32	55.78	56.86	57.69	58.23	58.87	59.36	59.65
20	58.84	57.92	57.31	56.61	56.24	55.93	56.98	57.72	58.35	58.98	59.41	59.70
25	58.70	57.79	57.19	56.53	56.06	56.12	57.16	57.80	58.45	59.07	59.47	59.74
eam	58.50	57.66	57.01	56.47	55.96	56.35	57.33	57.91	58.57	59.17	59.53	59.77

WTR YEAR 1983 MAX 55.77 Mar. 14, 1983 MIN 59.77 Sept. 30, 1983

## GROUND-WATER LEVELS

EDDY COUNTY  
Roswell Basin

325445104253501. Local number, 16S.26E.19.211.

LOCATION.--Lat 32°54'45", long 104°25'35", Hydrologic Unit 13060007.

Owner: H. V. Parker.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 12 in (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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 3	103.43
Sept. 27	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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 3	93.05
Sept. 28	pumping

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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST WATER LEVEL, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	129.90	112.72	101.77	93.93	87.53	87.70	120.67	139.24	143.95	148.67	167.27	168.75
10	126.35	110.44	100.20	92.75	86.59	92.93	110.20	130.51	144.89	156.51	166.60	168.79
15	122.35	108.34	98.97	91.65	85.87	99.43	123.01	127.59	144.31	159.10	167.04	158.82
20	119.60	106.68	97.30	90.44	86.01	108.51	130.45	136.44	142.39	162.60	--	155.29
25	117.08	104.86	96.34	89.79	86.67	113.78	134.84	143.18	146.21	166.20	174.96	153.05
com	114.39	103.01	95.03	88.26	86.14	127.31	139.72	149.06	146.36	166.69	174.09	153.22

WTR YEAR 1983 MAX 85.62 Feb. 16, 1983 MIN 175.35 Aug. 27, 1983

## GROUND-WATER LEVELS

487

EDDY COUNTY  
Roswell Basin

324620104255101. Local number, 18S.26E.06.442b.

LOCATION.--Lat 32°46'20", long 104°25'51", Hydrologic Unit 13060007.

Owner: U.S. Geological Survey-

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled observation well, diameter 7 in (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, 140.59 ft (42.85 m) below land-surface datum, Sept. 13, 1983.

WATER LEVEL IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	137.76	132.45	128.20	124.73	121.67	119.42	124.52	128.11	131.37	134.39	138.11	139.99
10	137.13	131.60	127.39	124.10	121.25	119.56	--	128.79	131.82	134.78	138.44	140.41
15	136.18	130.79	127.05	123.65	120.94	119.57	--	129.20	132.31	135.14	138.89	140.33
20	135.29	130.24	126.26	122.97	120.44	120.62	--	129.50	132.79	135.83	139.19	140.03
25	134.30	129.49	125.98	122.57	120.13	121.30	126.45	129.93	133.26	136.50	139.62	139.48
eom	133.27	128.57	125.30	122.07	119.83	122.93	127.39	130.84	133.60	137.43	139.79	139.19

WTR YEAR 1983 MAX 119.41 Mar. 4, 1983 MIN 140.59 Sept. 13, 1983

324325104233001. Local number, 18S.26E.28.122.

LOCATION.--Lat 32°43'25", long 104°23'30", Hydrologic Unit 13060011.

Owner: Town of Dayton.

AQUIFER.--Valley Fill.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	120.91	120.88	120.90	120.98	--	120.96	121.12	121.02	121.06	121.19	121.19	121.16
10	120.83	120.89	120.82	120.96	--	120.99	121.04	121.03	121.07	121.08	121.16	121.21
15	120.85	120.82	120.98	120.90	--	120.93	121.07	121.07	121.08	121.07	121.19	121.19
20	--	120.97	120.86	120.91	120.98	121.09	121.03	121.08	121.10	121.13	121.18	121.24
25	120.86	120.83	121.07	--	121.01	120.94	120.95	121.07	121.06	121.15	121.21	121.25
eom	120.92	120.85	120.99	--	120.98	120.87	121.01	121.12	121.09	121.19	121.20	121.27

WTR YEAR 1983 MAX 120.78 Dec. 1, 1982 MIN 121.27 Sept. 26, 1983

## 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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	23.27	--	22.79	22.72	22.35	22.59	--	23.27	--	--	--	24.15
10	23.42	--	22.78	22.63	22.28	--	--	23.35	--	--	24.25	24.36
15	23.39	--	22.85	22.62	22.29	--	22.79	23.65	--	--	24.00	24.17
20	23.25	--	22.76	22.41	22.23	--	23.00	23.79	--	--	24.19	24.21
25	--	22.87	22.80	22.42	22.31	22.74	23.12	--	--	24.10	24.02	24.04
eom	--	22.74	22.77	22.34	22.56	22.82	23.18	--	--	--	24.11	23.86

WTR YEAR 1983 MAX 22.15 Feb. 19, 1983 MIN 24.36 Sept. 10, 1983

## 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 15	12.93
Sept. 14	14.39

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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	--	95.22	95.18	95.03	94.63	94.61	95.04	95.47	95.76	96.42	96.44	--
10	--	95.19	95.08	94.91	94.52	95.11	94.76	95.48	95.89	96.45	96.49	--
15	--	95.12	95.21	94.88	94.55	95.07	94.96	95.78	96.21	96.38	96.23	--
20	--	95.19	95.06	94.66	94.49	95.38	95.18	95.98	96.19	96.75	96.47	--
25	95.38	95.21	95.13	94.65	94.45	94.92	95.30	96.17	95.77	96.77	--	96.18
eom	95.22	95.02	95.06	94.55	94.60	94.98	95.36	95.87	96.19	96.56	--	96.03

WTR YEAR 1983 MAX 94.38 Feb. 19, 1983 MIN 96.77 July 19, 1983

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 (0.30 m), 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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	182.49	176.99	172.26	168.70	165.94	163.97	168.18	173.51	177.70	179.32	180.91	180.31
10	181.66	176.02	171.62	168.13	165.60	164.20	168.89	174.42	178.32	179.57	180.61	180.96
15	180.74	175.27	171.03	167.76	165.35	164.14	169.54	175.35	178.82	179.75	179.93	181.41
20	179.78	174.46	170.31	167.09	164.95	164.75	170.31	175.77	178.55	180.07	179.57	180.87
25	178.94	173.95	169.82	166.76	164.70	165.45	171.43	176.21	178.60	180.47	179.71	180.57
eom	177.81	--	169.22	166.21	164.47	166.85	172.39	177.14	178.82	180.82	180.05	180.23

WTR YEAR 1983 MAX 163.97 Mar. 5, 1983 MIN 183.11 Oct. 1, 1982

## GROUND-WATER LEVELS

489

EDDY COUNTY  
Carlsbad Area

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 15	48.34
Sept. 14	50.33

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 16	41.52
Sept. 15	43.97

GRANT COUNTY  
Silver City Area

324600108222501. Local number, 18S.15W.11.323

LOCATION.--Lat 32°46'00", long 108°22'25", Hydrologic Unit 15040002.

Owner: Town of Silver City.

AQUIFER.--Gila Conglomerate.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter 12 in (0.30 m) depth 580 ft (176.78 m).

DATUM.--Altitude of land-surface datum is 5,845 ft (1,782 m). Measuring point: Top of 12 in (0.30 m) casing 1.50 ft (0.46 m) above land surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 262.34 ft (79.96 m) below land-surface datum Mar. 3, 1962; lowest measured, 291.19 ft (88.75 m) below land-surface datum, Sept. 11, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	287.54	287.62	287.97	287.91	--	288.33	289.38	289.42	289.54	289.93	290.56	290.89
10	287.58	287.65	287.56	288.39	--	288.87	289.75	289.33	289.53	289.83	290.65	291.13
15	287.70	287.65	288.11	--	--	288.68	289.66	289.50	289.54	289.91	290.79	291.10
20	287.51	287.75	287.94	--	--	289.01	289.45	289.43	289.57	290.29	290.87	291.06
25	287.47	287.86	287.68	--	288.21	289.07	289.37	289.55	289.68	290.33	290.79	--
eom	287.35	287.45	287.74	--	288.45	289.30	289.43	289.27	289.71	290.54	290.87	--

WTR YEAR 1983 MAX 287.32 Oct. 27, 1982 MIN 291.19 Sept. 11, 1983

HARDING COUNTY  
Roy Area

355352104054201. Local number, 19N.27E.5.334.

LOCATION.--Lat 35°53'52", long 104°05'42", Hydrologic Unit 11080007.

Owner: Town of Roy.

AQUIFER.--Ogallala Formation.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 in (0.25 m), depth 75 ft (22.9 m), cased to 75 ft (22.9 m).

DATUM.--Altitude of land-surface datum is 5,658 ft (1,725 m). Measuring point Bottom edge of slot in steel casing, 3.50 ft (1.07 m) above land surface datum.

PERIOD OF RECORD.--Jan. 1967 to present.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 48.34 ft (14.73 m) below land surface-datum, Jan. 18, 1983; lowest measured, 50.64 ft (15.44 m) below land-surface datum, July 3, 1968.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 to 1983

DATE	WATER LEVEL
Jan. 18	48.34
Aug. 23	49.18

## GROUND-WATER LEVELS

HARDING COUNTY  
Roy Area

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 18	83.50
Aug. 23	83.30

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 3	11.83
Aug. 1	11.19

## 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 5	177.58
Aug. 2	190.74

## 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 25	47.53
Aug.	not measured



## GROUND-WATER LEVELS

491

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, 34.14 ft (10.41 m) below land-surface datum, Aug. 17, 1983.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 4	32.37
Aug. 17	34.14

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 5	66.90
Aug. 17	66.94

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, 64.22 (19.57 m) below land-surface datum, April 22, 1983; 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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH,

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	64.75	64.63	64.56	64.40	64.32	64.29	64.28	64.26	64.40	64.54	64.73	--
10	64.76	64.61	64.55	64.40	64.32	64.30	64.26	64.27	64.43	64.54	64.76	--
15	64.75	64.60	64.55	64.39	64.32	64.28	64.26	64.30	64.43	64.59	64.81	--
20	64.73	64.60	64.50	64.33	64.31	64.30	64.24	64.30	64.46	64.65	64.80	--
25	64.70	64.57	64.52	64.35	64.31	64.26	64.22	64.32	64.47	64.66	64.82	--
com	64.64	64.56	64.49	64.33	64.31	64.24	64.23	64.39	64.48	64.74	64.81	--

WTR YEAR 1983 MAX 64.22 Apr. 22, 1983 MIN 64.82 Aug. 22, 1983

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 5	71.69
Aug. 17	71.98

## GROUND-WATER LEVELS

LEA COUNTY  
Tatum-Lovington-Hobbs Area

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 4	70.79
Aug. 17	68.23

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, 57.92 ft (17.65 m) below land-surface datum, Aug. 17, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 4	57.38
Aug. 17	57.92

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 24	29.26
Sept. 21	26.42

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 24	38.53
Sept. 21	38.91

## GROUND-WATER LEVELS

493

LINCOLN COUNTY  
Hondo Valley

332157105094101. Local number, 11S.18E.15.333.

LOCATION.--Lat 33°21'57", long 105°09'41", Hydrologic Unit 1306008, 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 24	51.80
Sept. 21	53.03

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, 176.23 ft (51.71 m) below land-surface datum, Aug. 16, 1983.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 2	171.32
Aug. 16	176.23

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 1982 TO SEPTEMBER 1983  
DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	--	93.48	--	95.16	--	99.35	100.50	101.47	102.48	103.29	--	--
10	--	93.53	--	--	--	99.55	100.54	101.67	102.61	103.36	--	--
15	--	93.62	--	--	--	99.62	100.79	101.99	102.64	--	--	--
20	--	93.72	94.45	--	--	100.05	100.81	102.13	102.76	--	--	--
25	--	93.82	94.51	--	99.11	99.98	100.95	102.22	102.86	--	--	--
eam	--	93.88	94.81	--	99.25	100.13	101.25	102.23	103.03	--	--	--

WTR YEAR 1983 MAX 93.41 Nov. 1, 1982 MIN 103.43 July 11, 1983

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb.	not measured
Aug. 2	192.46

## GROUND-WATER LEVELS

LUNA COUNTY  
Mimbres Valley

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan.	not measured
Aug. 1	37.57

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan.	not measured
Aug. 1	87.93

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan.	not measured
Aug. 2	92.18

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb.	not measured
Aug. 1	39.37

## GROUND-WATER LEVELS

495

LUNA COUNTY  
Mimbres Valley

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, 8.18 ft (2.49 m) below land-surface datum, Aug. 2, 1983; 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan.	not measured
Aug. 2	8.18

MORA COUNTY  
Watrous Area

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, 2.24 ft (0.68 m) below land-surface datum, Aug. 24, 1983; 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 3	6.51
Aug. 24	2.24

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 17	112.59
Aug. 15	112.19

324853105582501. Local number, 17S.9E.24.343.

LOCATION.--Lat 32°48'53", long 105°58'25", Hydrologic Unit 13050003.

Owner: U.S. Air Force.

AQUIFER.--Bolson deposits.

WELL CHARACTERISTICS.--Drilled public supply water-table well, diameter 10 in (0.25 m), depth 236 ft (71.9 m), cased to 236 ft (71.9 m).

DATUM.--Altitude of land-surface datum is 4,144 ft (1,263 m). Measuring point: Top of 1½ in (3.8 cm) pipe, 2.10 ft (0.64 m) above land surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.42 ft (18.72 m) below land surface datum, Apr. 6, 1960; lowest measured, 82.18 ft (25.05 m) below land-surface datum, Sept. 22, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 17	78.69
Aug. 15	79.54

## GROUND-WATER LEVELS

OTERO COUNTY  
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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 14	60.26
Sept. 15	71.34

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 7	99.28
Aug. 22	108.12

## GROUND-WATER LEVELS

497

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, 197.95 ft (60.34 m) below land-surface datum, Aug. 22, 1983.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 10	194.53
Aug. 22	197.95

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 9	44.30
Aug. 22	45.90

## 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 6	97.73
Aug. 22	101.38

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 1	not measured
Aug. 11	145.87

## GROUND-WATER LEVELS

SANTA FE COUNTY  
Estancia Valley

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb.	not measured
Aug. 11	115.00

## 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 26	250.00
Aug. 4	250.74

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 17	62.44
Aug. 16	62.29

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 1982 TO SEPTEMBER 1983

## DAILY HIGHEST VALUES, FROM RECORDER GRAPH

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
5	35.23	35.88	38.66	40.06	40.43	40.41	40.53	40.60	40.62	--	--	--
10	35.00	36.23	39.01	40.21	40.45	40.39	40.54	40.60	--	--	--	--
15	34.86	36.71	39.37	40.30	--	40.39	40.57	40.60	--	--	--	--
20	34.99	37.21	39.65	40.35	40.44	40.41	40.58	40.60	--	--	--	--
25	35.16	37.78	39.81	40.39	40.42	40.44	40.59	40.60	--	--	--	--
eom	35.42	38.27	39.96	40.43	40.42	40.49	40.59	40.61	--	--	--	--

WTR YEAR 1983 MAX 34.85 Oct. 17, 1982 MIN 40.62 June 5, 1983



## GROUND-WATER LEVELS

499

SIERRA COUNTY  
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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 17	23.60
Aug. 16	22.25

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 25	74.80
Sept. 29	74.10

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 DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 25	79.60
Sept. 29	78.60

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, 121.088 ft (36.91 m) below land-surface datum, Aug. 8, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 10	118.53
Aug. 11	121.088

B Well pumped recently

## GROUND-WATER LEVELS

TORRANCE COUNTY  
Estancia Valley

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 10	123.17
Aug.	not measured

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 10	75.83
Aug.	not measured

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 10	15.02
Aug. 11	25.89

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Feb. 10	110.29
Aug. 11	110.30

## GROUND-WATER LEVELS

501

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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan.	not measured
Aug. 23	146.82

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, 90.19 ft (27.48 m) below land-surface datum, Aug. 24 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 19	89.63
Aug. 24	90.19

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, 252.90 ft (77.08 m) below land-surface datum, Aug. 24, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 19	156.48
Aug. 24	252.90

## 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL
Jan. 18	34.47
Aug. 24	34.98

## QUALITY OF GROUND WATER

EXPLANATION OF GEOLOGIC UNIT (AQUIFER) CODES (LISTED FROM YOUNGEST TO OLDEST AGE) U-UPPER, M-MIDDLE, L-LOWER:  
 000 EXRV-UNKNOWN, Extrusive Rocks; 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, Pediment, Terrace, and other Deposits of Gravel, Sand and Caliche; 112 SNTF-Cenozoic, Quaternary, Pleistocene, Santa Fe Group; 112 SNTFU-Cenozoic, Quaternary, Pleistocene, Santa Fe Group, Upper Part; 120 DTILW-Cenozoic, Tertiary, Datil Formation (Welded and Crystal Rhyolite, Tuffs, Flows and Breccias); 122 SNTFL-Cenozoic, Tertiary, Miocene, Santa Fe Group, Lower Part; 211 LVNN-Mesozoic, Upper Cretaceous, La Ventana Tongue of Cliff House Sandstone; 211 OJAM-Mesozoic, Upper Cretaceous, Ojo Alamo Sandstone; 211 PNLK-Mesozoic, Upper Cretaceous, Point Lookout Sandstone; 318 ABO U-Paleozoic, Lower Permian, Leonardian, Abo Sandstone (Upper Tongue).

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 TO BOT- TOM OF WATER- BEARING ZONE (FT) (72003)	DEPTH TO TOP OF WATER- BEARING ZONE (FT) (72002)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)
ATRISCO GR WEST MESA 1-A	350449106493101		001	GW	83-01-17	1200	112SNTF	1180	1140	5790.00
			001	GW	83-01-25	--	112SNTF	1120	980	5790.00

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	DEPTH OF HOLE, TOTAL (FEET) (72001)	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 CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
ATRISCO GR WEST MESA 1-A	83-01-17	--	1200	1250	1270	7.8	7.9	32.0	76	22
	83-01-25	--	1200	1130	1180	7.7	8.1	30.5	71	21

LOCAL IDENT- I- FIER	DATE OF SAMPLE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE IT-FLD (MG/L AS HCO3) (99440)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
ATRISCO GR WEST MESA 1-A	83-01-17	5.2	240	12	7.4	250	207	220	100	.80
	83-01-25	4.5	230	12	6.2	240	201	240	91	.80

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	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)
ATRISCO GR WEST MESA 1-A	83-01-17	49	891	.18	31	19	<1	<10	4	500
	83-01-25	25	737	<.10	--	--	--	--	--	83

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)
ATRISCO GR WEST MESA 1-A	83-01-17	9	88	.2	1	<1	21
	83-01-25	--	120	--	--	--	--

## 503

CATRON COUNTY

[illegible]

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

CATRON COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	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.17W.12.333 ROSS EAGE	83-07-26	170	1	8	< .1	2	< 1	270
01N.19W.27.42 EGAR WELL	83-07-13	19	2	3	< .1	< 1	< 1	110
01S.20W.21.233 BROCKMAN	83-03-16	7	< 1	4	< .1	1	< 1	680
03N.17W.10.223 TEJANA WI	83-07-25	--	1	--	< .1	< 1	< 1	--
03S.09W.28.243 NEW WELL	83-02-24	650	< 1	7	.1	1	< 1	140
04N.16W.31.111 UNNAMED B	83-07-26	90	1	260	< .1	< 1	< 1	27
04N.17W.23.22 TAYLOR WEL	83-07-27	40	< 1	1500	< .1	< 1	< 1	70
04S.13W.12.123 SANCHEZ S	83-03-01	< 3	4	1	< .1	1	< 1	17
04S.14W.27.344 PATTERSON	82-11-24	--	--	--	--	--	--	--

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)
01N.17W.12.333 ROSS EAGE	341904108344201		003	GW	83-07-26	0840	< 15	--	< 6.8	--
01N.19W.27.42 EGAR WELL	341642108484401		003	GW	83-07-13	1405	< 6.8	--	< 3.5	--
03N.17W.10.223 TEJANA WI	343012108355601		003	GW	83-07-25	1720	< 11	--	< 5.4	--
03S.09W.28.243 NEW WELL	340103107461501		003	GW	83-02-24	1200	4.7	< .4	1.9	.5
04N.16W.31.111 UNNAMED B	343206108333401		003	GW	83-07-26	1610	< 11	--	< 5.7	--
04N.17W.23.22 TAYLOR WEL	343345108345801		003	GW	83-07-27	1530	< 30	--	< 15	--
04S.13W.12.123 SANCHEZ S	335838108091201		003	SP	83-03-01	1245	4.2	< .4	< 1.7	.4

LOCAL IDENT- I- FIER	DATE OF SAMPLE	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM DIS- SOLVED EXTRAC- TION (UG/L) (80020)
01N.17W.12.333 ROSS EAGE	83-07-26	< 6.6	--	.06	4.1	--
01N.19W.27.42 EGAR WELL	83-07-13	< 3.4	--	.29	--	.39
03N.17W.10.223 TEJANA WI	83-07-25	< 5.2	--	.05	--	--
03S.09W.28.243 NEW WELL	83-02-24	1.8	.6	--	--	--
04N.16W.31.111 UNNAMED B	83-07-26	< 5.5	--	.06	--	.04
04N.17W.23.22 TAYLOR WEL	83-07-27	< 14	--	.56	--	.11
04S.13W.12.123 SANCHEZ S	83-03-01	< 1.6	.4	--	--	--

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)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	DEPTH OF HOLE, TOTAL (FEET) (72001)
05S.24E.22.433 HIGH POIN	335106104243301	005	GW	82-12-22	1330	--	--	4050.00	10	410
08S.26E.32.222 MCREA NO	333458104184301	005	GW	83-07-12	1100	--	--	3740.00	--	--
09S.25E.24.431	333048104211301	005	SP	83-07-13	1230	--	--	3670.00	--	--
09S.27E.11.121	333315104095901	005	GW	83-07-12	1300	--	--	3866.00	--	--
10S.25E.13.421	332644104205701	005	SP	83-07-13	1100	--	--	3720.00	--	--
18S.20E.28.121 UNNAMED W	324329104541501	005	GW	83-08-03	1500	--	--	4518.00	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	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 CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
05S.24E.22.433 HIGH POIN	82-12-22	3.0	2850	3060	7.8	8.1	20.0	2000	540	170
08S.26E.32.222 MCREA NO	83-07-12	.3	5500	5470	7.4	7.5	23.5	2700	630	280
09S.25E.24.431	83-07-13	E.1	17500	16500	8.8	8.6	27.0	8800	900	1600
09S.27E.11.121	83-07-12	E.8	3780	3820	7.4	7.7	20.0	1600	320	190
10S.25E.13.421	83-07-13	E.1	6400	6310	7.8	7.7	22.0	3700	560	550
18S.20E.28.121 UNNAMED W	83-08-03	6.0	880	873	7.6	7.8	17.5	510	140	38

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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CHAVES COUNTY -- Continued

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- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SI02) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
05S.24E.22.433 HIGH POIN	82-12-22	56	.6	6.2	100	1900	36	.70	19	2790
08S.26E.32.222 MCREA NO	83-07-12	430	3.7	4.3	126	2300	810	2.0	26	4560
09S.25E.24.431	83-07-13	1500	7.0	36	120	5400	4600	2.2	34	14100
09S.27E.11.121	83-07-12	440	4.9	5.5	209	2000	130	2.4	12	3230
10S.25E.13.421	83-07-13	480	3.5	17	156	3400	660	.40	28	5790
18S.20E.28.121 UNNAMED W	83-08-03	15	.3	.8	219	280	16	.60	12	635

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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 (AS CU) (01040)	IRON, DIS- SOLVED (AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
05S.24E.22.433 HIGH POIN	82-12-22	< .10	10	100	< 1	20	1	20	< 1	< 10
08S.26E.32.222 MCREA NO	83-07-12	< .10	1	< 100	1	10	95	670	< 1	230
09S.25E.24.431	83-07-13	< .10	--	--	--	--	--	80	--	100
09S.27E.11.121	83-07-12	.38	1	< 100	1	10	9	810	< 1	320
10S.25E.13.421	83-07-13	6.2	--	--	--	--	--	40	--	30
18S.20E.28.121 UNNAMED W	83-08-03	1.0	< 1	34	< 1	< 10	1	16	1	12

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)
05S.24E.22.433 HIGH POIN	82-12-22	< .1	< 1	< 1	20
08S.26E.32.222 MCREA NO	83-07-12	< .1	24	< 1	1200
09S.25E.24.431	83-07-13	--	--	--	--
09S.27E.11.121	83-07-12	< .1	33	< 1	1700
10S.25E.13.421	83-07-13	--	--	--	--
18S.20E.28.121 UNNAMED W	83-08-03	< .1	1	< 1	960

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)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)
19S.05E.17.331 MAR-1	323906106274301	013	GW	83-03-02	1130	110BLSN	--	--	--	--
19S.05E.17.334 MAR-2	323857106273201	013	GW	83-03-02	1145	110BLSN	--	--	--	--
21S.04E.14.122	322913106301801	013	GW	83-02-22	1430	--	27.50	--	--	5270.00
21S.04E.23.233 HTA-1	322801106300801	013	GW	83-03-02	1345	000IRSV	--	--	--	--
21S.05E.16.132 SMR-1	322856106262701	013	GW	83-03-02	1230	110BLSN	--	--	--	--
21S.05E.32.222 T-13	322635106264401	013	GW	83-09-01	1230	110BLSN	--	320	--	--
22S.04E.01.431 T-9	322503106290801	013	GW	83-09-01	1000	110BLSN	--	550	--	--
22S.04E.11.224 T-8	322434106295001	013	GW	83-09-01	1045	110BLSN	--	915	--	--
22S.04E.12.214 SW-20	322446106290801	013	GW	83-02-23	1440	110BLSN	--	--	--	--
		013	GW	83-05-02	1425	110BLSN	--	--	--	--
		013	GW	83-06-14	0930	110BLSN	--	--	--	--
		013	GW	83-08-08	1240	110BLSN	--	--	--	--
		013	GW	83-09-07	--	110BLSN	--	--	--	--
22S.04E.12.414 SW-19	322424106290301	013	GW	83-02-23	1450	110BLSN	--	--	--	--
		013	GW	83-06-14	0925	110BLSN	--	--	--	--

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983  
DONA ANA COUNTY -- Continued

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SAM- PLING DEPTH (FEET) (00003)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)
			013	GW	83-08-08	1300	110BLSN	--	--	--
			013	GW	83-09-07	--	110BLSN	--	--	--
22S.04E.12.434 SW-18	322405106290101		013	GW	83-02-23	1500	110BLSN	--	--	--
			013	GW	83-05-02	1445	110BLSN	--	--	--
			013	GW	83-06-14	0915	110BLSN	--	--	--
			013	GW	83-08-08	1330	110BLSN	--	--	--
			013	GW	83-09-07	--	110BLSN	--	--	--
22S.04E.13.241 SW-17	322347106285801		013	GW	83-02-23	1510	110BLSN	--	--	--
			013	GW	83-05-02	1510	110BLSN	--	--	--
			013	GW	83-06-14	0910	110BLSN	--	--	--
			013	GW	83-08-08	1120	110BLSN	--	--	--
			013	GW	83-09-07	--	110BLSN	--	--	--
22S.04E.13.311 SW-13	322331106293801		013	GW	83-09-07	1200	110BLSN	--	--	--
			013	GW	83-02-17	1245	110BLSN	--	--	--
			013	GW	83-05-02	1500	110BLSN	--	--	--
			013	GW	83-08-08	1100	110BLSN	--	--	--
22S.04E.13.432 SW-16	322325106290401		013	GW	83-09-07	0940	110BLSN	--	--	--
			013	GW	83-02-23	1525	110BLSN	--	--	--
			013	GW	83-05-02	1410	110BLSN	--	--	--
			013	GW	83-06-14	0900	110BLSN	--	--	--
			013	GW	83-08-08	1105	110BLSN	--	--	--
			013	GW	83-09-07	--	110BLSN	--	--	--
22S.04E.14.133 T-6	322339106304001		013	GW	83-09-01	0900	110BLSN	--	350	--
22S.04E.23.214 OS-12	322250106302501		013	GW	83-09-01	1130	110BLSN	--	350	--
22S.04E.24.112 SW-11	322310106293401		013	GW	83-02-17	0915	110BLSN	--	--	--

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 (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CAC03) (00900)
19S.05E.17.331 MAR-1	83-03-02	--	--	--	914	--	7.4	--	--	--
19S.05E.17.334 MAR-2	83-03-02	--	--	--	813	--	7.1	--	--	--
21S.04E.14.122	83-02-22	0	74	.0	838	848	7.1	7.5	--	310
21S.04E.23.233 HTA-1	83-03-02	--	--	--	726	--	7.2	--	--	--
21S.05E.16.132 SMR-1	83-03-02	--	--	--	794	--	7.4	--	--	--
21S.05E.32.222 T-13	83-09-01	--	--	--	519	--	7.9	--	--	--
22S.04E.01.431 T-9	83-09-01	--	--	--	844	--	7.9	--	26.0	--
22S.04E.11.224 T-8	83-09-01	--	--	--	596	--	8.0	--	--	--
22S.04E.12.214 SW-20	83-02-23	--	--	--	592	--	7.4	--	25.5	--
	83-05-02	--	--	--	--	568	--	7.6	--	--
	83-06-14	--	--	--	--	568	--	7.4	--	--
	83-08-08	--	--	--	--	573	--	7.6	--	--
	83-09-07	--	--	--	--	564	--	7.5	--	--
22S.04E.12.414 SW-19	83-02-23	--	--	--	426	--	7.6	--	25.0	--
	83-06-14	--	--	--	--	397	--	7.5	--	--
	83-08-08	--	--	--	--	386	7.6	--	--	--
	83-09-07	--	--	--	--	395	--	7.5	--	--
22S.04E.12.434 SW-18	83-02-23	--	--	--	382	--	7.6	--	25.0	--
	83-05-02	--	--	--	--	366	--	7.4	--	--
	83-06-14	--	--	--	--	389	--	7.4	--	--
	83-08-08	--	--	--	--	371	--	7.7	--	--
	83-09-07	--	--	--	--	386	--	7.5	--	--
22S.04E.13.241 SW-17	83-02-23	--	--	--	389	--	7.5	--	26.5	--
	83-05-02	--	--	--	--	363	--	7.4	--	--
	83-06-14	--	--	--	--	382	--	7.6	--	--
	83-08-08	--	--	--	--	363	--	7.6	--	--
	83-09-07	--	--	--	386	395	7.6	7.5	--	98
	83-09-07	--	--	--	--	395	--	7.5	--	--
22S.04E.13.311 SW-13	83-02-17	--	--	--	617	--	7.4	--	24.0	--
	83-05-02	--	--	--	--	611	--	7.2	--	--
	83-08-08	--	--	--	--	604	--	7.1	--	--
	83-09-07	--	--	--	--	607	--	7.2	--	--
22S.04E.13.432 SW-16	83-02-23	--	--	--	426	--	7.3	--	25.0	--
	83-05-02	--	--	--	--	406	--	7.4	--	--
	83-06-14	--	--	--	--	397	--	7.2	--	--
	83-08-08	--	--	--	--	384	--	7.2	--	--
	83-09-07	--	--	--	--	372	--	7.4	--	--
22S.04E.14.133 T-6	83-09-01	--	--	--	337	--	7.9	--	24.5	--
22S.04E.23.214 OS-12	83-09-01	--	--	--	461	--	7.9	--	23.5	--
22S.04E.24.112 SW-11	83-02-17	--	--	--	754	--	7.4	--	21.0	--



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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)
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[illegible]

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DONA ANA COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SILICA, DIS- SOLVED (MG/L AS SI02) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
22S.04E.13.241 SW-17	83-08-08	--	--	--	--	--	--	--	--	--
	83-09-07	--	--	--	--	--	--	--	--	--
	83-02-23	--	--	--	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--	--	--	--
22S.04E.13.311 SW-13	83-08-08	--	--	--	--	--	--	--	--	--
	83-09-07	31	252	248	1.2	--	--	30	--	--
	83-09-07	--	--	--	--	--	--	--	--	--
	83-02-17	--	--	--	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--	--	--	--
22S.04E.13.432 SW-16	83-08-08	--	--	--	--	--	--	--	--	--
	83-09-07	--	--	--	--	--	--	--	--	--
	83-02-23	--	--	--	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--	--	--	--
22S.04E.14.133 T-6 22S.04E.23.214 OS-12 22S.04E.24.112 SW-11	83-08-08	--	--	--	--	--	--	--	--	--
	83-09-07	--	--	--	--	--	--	--	--	--
	83-09-01	--	--	--	--	--	--	--	--	--
	83-09-01	--	--	--	--	--	--	--	--	--
	83-02-17	--	--	--	--	--	--	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
19S.05E.17.331 MAR-1	83-03-02	--	--	--	--	--	--
19S.05E.17.334 MAR-2	83-03-02	--	--	--	--	--	--
21S.04E.14.122	83-02-22	18	< 3	< 1	28	41	.2
21S.04E.23.233 HTA-1	83-03-02	--	--	--	--	--	--
21S.05E.16.132 SMR-1	83-03-02	--	--	--	--	--	--
21S.05E.32.222 T-13	83-09-01	--	--	--	--	--	--
22S.04E.01.431 T-9	83-09-01	--	--	--	--	--	--
22S.04E.11.224 T-8	83-09-01	--	--	--	--	--	--
22S.04E.12.214 SW-20	83-02-23	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--
22S.04E.12.414 SW-19	83-09-07	--	--	--	--	--	--
	83-02-23	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--
22S.04E.12.434 SW-18	83-09-07	--	--	--	--	--	--
	83-02-23	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--
22S.04E.13.241 SW-17	83-09-07	--	--	--	--	--	--
	83-02-23	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--
22S.04E.13.311 SW-13	83-09-07	--	--	--	--	--	--
	83-09-07	--	--	--	--	--	--
	83-02-17	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--
22S.04E.13.432 SW-16	83-09-07	--	--	--	--	--	--
	83-02-23	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--
22S.04E.14.133 T-6	83-09-07	--	--	--	--	--	--
22S.04E.23.214 OS-12	83-09-01	--	--	--	--	--	--
22S.04E.24.112 SW-11	83-02-17	--	--	--	--	--	--

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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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 ZN) (01090)
19S.05E.17.331 MAR-1	83-03-02	--	--	--	--
19S.05E.17.334 MAR-2	83-03-02	--	--	--	--
21S.04E.14.122	83-02-22	2	< 1	280	470
21S.04E.23.233 HTA-1	83-03-02	--	--	--	--
21S.05E.16.132 SMR-1	83-03-02	--	--	--	--
21S.05E.32.222 T-13	83-09-01	--	--	--	--
22S.04E.01.431 T-9	83-09-01	--	--	--	--
22S.04E.11.224 T-8	83-09-01	--	--	--	--
22S.04E.12.214 SW-20	83-02-23	--	--	--	--
	83-05-02	--	--	--	--
	83-06-14	--	--	--	--
	83-08-08	--	--	--	--
	83-09-07	--	--	--	--
22S.04E.12.414 SW-19	83-02-23	--	--	--	--
	83-06-14	--	--	--	--
	83-08-08	--	--	--	--
	83-09-07	--	--	--	--
22S.04E.12.434 SW-18	83-02-23	--	--	--	--
	83-05-02	--	--	--	--
	83-06-14	--	--	--	--
	83-08-08	--	--	--	--
	83-09-07	--	--	--	--
22S.04E.13.241 SW-17	83-02-23	--	--	--	--
	83-05-02	--	--	--	--
	83-06-14	--	--	--	--
	83-08-08	--	--	--	--
	83-09-07	--	--	--	--
22S.04E.13.311 SW-13	83-02-17	--	--	--	--
	83-05-02	--	--	--	--
	83-08-08	--	--	--	--
	83-09-07	--	--	--	--
22S.04E.13.432 SW-16	83-02-23	--	--	--	--
	83-05-02	--	--	--	--
	83-06-14	--	--	--	--
	83-08-08	--	--	--	--
	83-09-07	--	--	--	--
22S.04E.14.133 T-6	83-09-01	--	--	--	--
22S.04E.23.214 OS-12	83-09-01	--	--	--	--
22S.04E.24.112 SW-11	83-02-17	--	--	--	--

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)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)
22S.04E.24.112 SW-11	322310106293401	013	GW	83-05-02	1525	110BLSN	--	--	--
		013	GW	83-06-14	0845	110BLSN	--	--	--
		013	GW	83-08-08	1040	110BLSN	--	--	--
		013	GW	83-09-07	--	110BLSN	--	--	--
22S.04E.24.212A SW-10A	322309106290201	013	GW	83-02-17	0855	110BLSN	--	--	--
		013	GW	83-05-02	1540	110BLSN	--	--	--
		013	GW	83-06-14	0830	110BLSN	--	--	--
		013	GW	83-08-08	0845	110BLSN	--	--	--
		013	GW	83-09-07	--	110BLSN	--	--	--
22S.05E.05.313 T-10	322510106274101	013	GW	83-09-01	1210	110BLSN	--	513	--
22S.05E.07.342 T-7	322415106281801	013	GW	83-08-30	1530	110BLSN	--	444	--
22S.05E.15.221 T-14	321401106245201	013	GW	83-08-30	1340	110BLSN	--	200	--
		013	GW	83-08-30	1400	110BLSN	--	--	--
22S.05E.16.111 T-4	322403106263901	013	GW	83-08-30	1500	110BLSN	--	325	--
22S.05E.19.141 SW-22	322256106282601	013	GW	83-02-23	1315	110BLSN	--	--	--
		013	GW	83-05-02	1530	110BLSN	--	--	--
		013	GW	83-06-14	1000	110BLSN	--	--	--
		013	GW	83-08-08	0945	110BLSN	--	--	--
		013	GW	83-09-07	--	110BLSN	--	--	--
22S.05E.19.323 SW-21	322237106282801	013	GW	83-02-23	1300	110BLSN	--	--	--



QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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DONA ANA COUNTY -- Continued

LOCAL IDENT- I- PIER	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 CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
22S.05E.07.342 T-7	83-08-30	--	--	--	--	--	--	--	--	--
22S.05E.15.221 T-14	83-08-30	--	--	--	--	--	--	--	--	--
	83-08-30	3.8	.2	320	46	5.0	162	23	350	.60
22S.05E.16.111 T-4	83-08-30	--	--	--	--	--	--	--	--	--
22S.05E.19.141 SW-22	83-02-23	--	--	--	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--	--	--	--
	83-09-07	32	4.3	35	1.6	1.7	108	59	9.0	.40
22S.05E.19.323 SW-21	83-02-23	--	--	--	--	--	--	--	--	--
	83-05-03	--	--	--	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--	--	--	--
	83-09-07	--	--	--	--	--	--	--	--	--
22S.05E.20.111 T-5	83-08-30	--	--	--	--	--	--	--	--	--
22S.05E.29.412 T-11	83-08-30	--	--	--	--	--	--	--	--	--
22S.05E.33.244 T-15	83-08-30	--	--	--	--	--	--	--	--	--
23S.05E.05.321 T-18	83-08-30	--	--	--	--	--	--	--	--	--
23S.05E.10.413 WSMR T-16	83-08-30	--	--	--	--	--	--	--	--	--

LOCAL IDENT- I- PIER	DATE OF SAMPLE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM, DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
22S.04E.24.112 SW-11	83-05-02	--	--	--	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--	--	--	--
	83-09-07	44	437	419	8.0	--	--	10	--	--
22S.04E.24.212A SW-10A	83-02-17	--	--	--	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--	--	--	--
	83-09-07	--	--	--	--	--	--	--	--	--
22S.05E.05.313 T-10	83-09-01	--	--	--	--	--	--	--	--	--
22S.05E.07.342 T-7	83-08-30	--	--	--	--	--	--	--	--	--
22S.05E.15.221 T-14	83-08-30	--	--	--	--	--	--	--	--	--
	83-08-30	2.3	716	802	.43	--	--	60	--	--
22S.05E.16.111 T-4	83-08-30	--	--	--	--	--	--	--	--	--
22S.05E.19.141 SW-22	83-02-23	--	--	--	--	--	--	--	--	--
	83-05-02	--	--	--	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--	--	--	--
	83-09-07	30	229	236	.83	--	--	20	--	--
22S.05E.19.323 SW-21	83-02-23	--	--	--	--	--	--	--	--	--
	83-05-03	--	--	--	--	--	--	--	--	--
	83-06-14	--	--	--	--	--	--	--	--	--
	83-08-08	--	--	--	--	--	--	--	--	--
	83-09-07	--	--	--	--	--	--	--	--	--
22S.05E.20.111 T-5	83-08-30	--	--	--	--	--	--	--	--	--
22S.05E.29.412 T-11	83-08-30	--	--	--	--	--	--	--	--	--
22S.05E.33.244 T-15	83-08-30	--	--	--	--	--	--	--	--	--
23S.05E.05.321 T-18	83-08-30	--	--	--	--	--	--	--	--	--
23S.05E.10.413 WSMR T-16	83-08-30	--	--	--	--	--	--	--	--	--

EDDY COUNTY

LOCAL IDENT- I- PIER	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)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)
20S.23E.26.323 SOUTH WEL	323232104395101		015	GW	82-10-15	1400	--	--	--	4052.00
26S.26E.18.113 BEN SLAUG	320252104202001		015	SP	83-08-05	1000	--	--	--	3500.00
26S.26E.34.131 OWL DRAW	320002104171101		015	SP	83-09-02	1245	--	--	--	3375.00

QUALITY OF GROUND WATER  
 WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

## EDDY COUNTY -- Continued

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 (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CAC03) (00900)
20S.23E. 26.323 SOUTH WEL	82-10-15	--	--	2.0	2700	2750	6.8	7.3	29.5	2100
22S.24E. 09.241 W.P. MURR	83-08-05	--	--	.3	850	841	7.9	7.8	22.0	470
25S.24E. 14.4332	83-08-03	--	--	--	--	2400	--	7.9	--	1800
25S.25E. 35.222 COTTONWOOD	83-08-05	--	--	.3	3050	3060	7.8	7.7	23.5	2100
25S.29E. 15.323 BRANTLEY	83-08-04	15	--	12	570	583	8.0	7.9	22.0	270
26S.24E. 02.121142	83-08-03	1440	270	15	2070	2430	--	7.9	20.5	1700
26S.26E. 18.113 BEN SLAUG	83-08-05	--	--	E.3	2550	2540	7.5	7.2	24.0	1700
26S.26E. 34.131 OWL DRAW	83-09-02	--	--	E1.5	3240	3320	--	7.2	28.5	2300

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 CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
20S.23E. 26.323 SOUTH WEL	82-10-15	610	130	19	.2	1.5	282	1700	22	1.6
22S.24E. 09.241 W.P. MURR	83-08-05	120	42	12	.2	1.0	137	350	8.4	.60
25S.24E. 14.4332	83-08-03	630	44	14	.2	1.8	174	1500	22	1.1
25S.25E. 35.222 COTTONWOOD	83-08-05	660	120	64	.6	4.8	93	2100	55	1.1
25S.29E. 15.323 BRANTLEY	83-08-04	76	20	19	.5	1.3	148	130	21	1.5
26S.24E. 02.121142	83-08-03	560	65	74	.8	2.8	160	1600	9.1	1.2
26S.26E. 18.113 BEN SLAUG	83-08-05	630	29	28	.3	6.2	113	1600	34	.40
26S.26E. 34.131 OWL DRAW	83-09-02	830	56	55	.5	20	107	2300	61	.90

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L (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)
20S.23E. 26.323 SOUTH WEL	82-10-15	15	2670	< .10	1	< 100	< 1	10	< 1	350
22S.24E. 09.241 W.P. MURR	83-08-05	19	636	2.0	< 1	26	< 1	< 10	26	4
25S.24E. 14.4332	83-08-03	19	2340	< .10	--	--	--	--	--	30
25S.25E. 35.222 COTTONWOOD	83-08-05	30	3090	3.3	--	--	--	--	--	40
25S.29E. 15.323 BRANTLEY	83-08-04	52	410	2.9	2	37	< 1	< 10	7	< 3
26S.24E. 02.121142	83-08-03	22	2430	< .10	--	--	--	--	--	50
26S.26E. 18.113 BEN SLAUG	83-08-05	26	2420	1.9	< 1	< 100	< 1	10	6	60
26S.26E. 34.131 OWL DRAW	83-09-02	36	3420	< .10	--	--	--	--	--	90

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)
20S.23E. 26.323 SOUTH WEL	82-10-15	1	110	.1	< 1	< 1	20
22S.24E. 09.241 W.P. MURR	83-08-05	< 1	17	< .1	1	< 1	300
25S.24E. 14.4332	83-08-03	--	100	--	--	--	--
25S.25E. 35.222 COTTONWOOD	83-08-05	--	40	--	--	--	--
25S.29E. 15.323 BRANTLEY	83-08-04	1	2	< .1	3	< 1	13
26S.24E. 02.121142	83-08-03	--	60	--	--	--	--
26S.26E. 18.113 BEN SLAUG	83-08-05	< 1	40	< .1	1	< 1	10
26S.26E. 34.131 OWL DRAW	83-09-02	--	90	--	--	--	--

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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LINCOLN 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)	DEPTH OF HOLE, TOTAL (FEET) (72001)
09S.14E.28.224	333008105342401		027	SP	83-06-23	1130	--	--	6630.00	--
09S.14E.29.241 WEST PAST	333002105353101		027	GW	83-06-08	1400	--	325	6645.00	--
09S.14E.29.321	332948105360301		027	SP	83-05-04	1045	--	0	6700.00	--
09S.15E.08.422 EAST PAST	333217105292001		027	GW	83-06-08	1230	--	0	6090.00	--
09S.15E.15.331 GOVERNMENT	333120105280401		027	SP	83-05-13	1430	--	0	5970.00	--
09S.15E.20.314 RIO BONIT	333032105295901		027	GW	83-05-18	1445	--	0	6101.00	--
09S.15E.33.221 FT STANTO	332916105281601		027	GW	83-05-18	1300	--	0	6393.00	--
09S.15E.35.244 FT STANTO	332902105261101		027	GW	83-05-13	1200	--	0	6450.00	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	FLOW RATE, INSTAN- TANEOUS (GPM) (00059)	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 CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
09S.14E.28.224	83-06-23	.3	3800	4410	7.9	7.8	16.0	2300	620	180
09S.14E.29.241 WEST PAST	83-06-08	1.5	3900	4110	7.9	7.7	15.5	890	190	100
09S.14E.29.321	83-05-04	.5	3180	3300	7.8	7.8	10.5	1400	380	120
09S.15E.08.422 EAST PAST	83-06-08	1.5	1400	1520	7.8	7.8	17.0	720	180	65
09S.15E.15.331 GOVERNMENT	83-05-13 E2000		720	756	8.1	7.8	12.5	330	99	20
09S.15E.20.314 RIO BONIT	83-05-18	2.0	750	816	7.6	7.9	14.5	400	120	24
09S.15E.33.221 FT STANTO	83-05-18	2.0	1050	1100	7.8	8.0	15.5	550	130	55
09S.15E.35.244 FT STANTO	83-05-13	--	1250	1250	7.3	7.8	10.5	590	130	64

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- LINEITY LAB (MG/L AS CAC03) (90410)	SULFATE LAB 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)
09S.14E.28.224	83-06-23	290	2.7	4.5	219	2000	540	.70	20	3790
09S.14E.29.241 WEST PAST	83-06-08	630	9.5	4.2	221	1300	480	.40	17	2860
09S.14E.29.321	83-05-04	300	3.6	2.9	211	1400	300	.40	15	2650
09S.15E.08.422 EAST PAST	83-06-08	56	.9	2.1	172	550	86	1.1	18	1060
09S.15E.15.331 GOVERNMENT	83-05-13	30	.7	1.0	138	190	46	.40	14	483
09S.15E.20.314 RIO BONIT	83-05-18	32	.7	1.5	163	230	37	.50	16	559
09S.15E.33.221 FT STANTO	83-05-18	48	.9	1.2	187	350	60	.50	14	771
09S.15E.35.244 FT STANTO	83-05-13	58	1.1	1.5	195	420	75	.60	16	882

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
09S.14E.28.224	83-06-23	< .10	--	--	--	--	--	50	--	70
09S.14E.29.241 WEST PAST	83-06-08	< .10	< 1	< 100	< 1	< 10	< 1	1900	1	90
09S.14E.29.321	83-05-04	< .10	--	--	--	--	--	40	--	340
09S.15E.08.422 EAST PAST	83-06-08	< .10	< 1	24	< 1	< 10	1	93	< 1	3
09S.15E.15.331 GOVERNMENT	83-05-13	.42	< 1	49	< 1	< 10	< 1	36	< 1	7
09S.15E.20.314 RIO BONIT	83-05-18	.49	< 1	41	< 1	< 10	14	7	2	24
09S.15E.33.221 FT STANTO	83-05-18	1.1	< 1	27	< 1	< 10	1	5	< 1	3
09S.15E.35.244 FT STANTO	83-05-13	1.0	--	--	--	--	--	10	--	3

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)
09S.14E.28.224	83-06-23	--	--	--	--
09S.14E.29.241 WEST PAST	83-06-08	< .1	< 1	< 1	40
09S.14E.29.321	83-05-04	--	--	--	--
09S.15E.08.422 EAST PAST	83-06-08	< .1	3	< 1	51
09S.15E.15.331 GOVERNMENT	83-05-13	< .1	1	< 1	64
09S.15E.20.314 RIO BONIT	83-05-18	< .1	1	< 1	310
09S.15E.33.221 FT STANTO	83-05-18	< .1	2	< 1	510
09S.15E.35.244 FT STANTO	83-05-13	--	--	--	--

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	DEPTH OF WELL, TOTAL (FEET) (72008)
21S.08W.23.313 FT CUMMIN	322746107385301		029	SP	83-04-12	1305	--	--	--	0
25S.07W.31.432 BLUE WATE	320523107354401		029	GW	83-08-22	1523	--	--	--	300
25S.08N.12.143 LOVERS LE	320828107373801		029	SP	83-07-07	1130	--	--	--	0
28S.12W.19.114 NE WDMILL	315124108061701		029	GW	83-03-10	1220	110BSLN	500.00	--	550
28S.12W.24.143 UPPER WL	315111108012701		029	GW	83-03-23	1200	110PTOD	--	--	0
28S.13W.26.344 WAMEL UPP	315014108080201		029	GW	83-03-10	1130	110BSLN	350.00	--	377

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 (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS AS CAC03 (00900)
21S.08W.23.313 FT CUMMIN	83-04-12	4820.00	--	--	485	490	7.6	8.4	20.0	220
25S.07W.31.432 BLUE WATE	83-08-22	4890.00	300	1.5	485	470	7.4	7.7	25.0	210
25S.08N.12.143 LOVERS LE	83-07-07	5575.00	--	1.0	610	610	8.2	7.9	19.0	310
28S.12W.19.114 NE WDMILL	83-03-10	4658.00	--	2.0	450	447	7.3	8.0	22.5	120
28S.12W.24.143 UPPER WL	83-03-23	4662.00	--	4.0	525	532	7.3	7.8	20.0	200
28S.13W.26.344 WAMEL UPP	83-03-10	4519.00	--	2.0	500	460	7.4	8.0	20.0	100

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 CAC03) (90410)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)
21S.08W.23.313 FT CUMMIN	83-04-12	59	17	20	.6	2.1	226	17	13	.60
25S.07W.31.432 BLUE WATE	83-08-22	61	13	18	.6	1.2	221	22	7.0	.70
25S.08N.12.143 LOVERS LE	83-07-07	94	19	18	.5	.9	221	97	13	.40
28S.12W.19.114 NE WDMILL	83-03-10	23	16	48	1.9	4.0	183	22	14	1.1
28S.12W.24.143 UPPER WL	83-03-23	50	18	35	1.1	2.3	192	24	18	.90
28S.13W.26.344 WAMEL UPP	83-03-10	35	3.5	58	2.6	4.5	175	17	8.6	1.4

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)
21S.08W.23.313 FT CUMMIN	83-04-12	62	326	3.0	3	12	<1	<10	17	4
25S.07W.31.432 BLUE WATE	83-08-22	31	287	1.2	<1	63	<1	<10	3	9
25S.08N.12.143 LOVERS LE	83-07-07	22	397	.83	<1	97	<1	<10	6	7
28S.12W.19.114 NE WDMILL	83-03-10	47	285	3.0	5	10	<1	<10	22	140
28S.12W.24.143 UPPER WL	83-03-23	70	333	2.1	6	10	<1	<10	12	36
28S.13W.26.344 WAMEL UPP	83-03-10	27	261	8.4	6	130	<1	<10	4	240

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)
21S.08W.23.313 FT CUMMIN	83-04-12	1	2	<.1	1	<1	46
25S.07W.31.432 BLUE WATE	83-08-22	<1	56	.2	1	<1	640
25S.08N.12.143 LOVERS LE	83-07-07	<1	9	.1	1	<1	26
28S.12W.19.114 NE WDMILL	83-03-10	2	7	<.1	2	<1	250
28S.12W.24.143 UPPER WL	83-03-23	1	3	<.1	2	<1	70
28S.13W.26.344 WAMEL UPP	83-03-10	5	11	<.1	1	<1	710



QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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MCKINLEY 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)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)
19N.02W.26.1224 JONES CA	355115107532501		031	SP	83-07-02	1030	211LVNN	--	0	6935.00
19N.03W.06.4144 BLM/RW J	355412107112201		031	GW	83-07-03	1130	110AVMB	--	29	6636.00
20N.02W.32.3344 OAK SPRI	355417107041901		031	SP	83-07-02	1245	2110JAM	--	0	7075.00

LOCAL IDENT- I- FIER	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 (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
19N.02W.26.1224 JONES CA	83-07-02	--	<.1	415	397	7.6	8.1	14.0	190	50
19N.03W.06.4144 BLM/RW J	83-07-03	29	1.5	--	711	7.7	8.0	13.0	52	16
20N.02W.32.3344 OAK SPRI	83-07-02	--	<.1	160	174	6.9	7.4	13.0	35	11

LOCAL IDENT- I- FIER	DATE OF SAMPLE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
19N.02W.26.1224 JONES CA	83-07-02	17	4.2	.1	1.3	164	52	2.3	.30	15
19N.03W.06.4144 BLM/RW J	83-07-03	2.8	150	9.5	1.1	283	80	2.5	.70	6.8
20N.02W.32.3344 OAK SPRI	83-07-02	1.9	22	1.7	1.2	57	20	5.1	<.10	16

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
19N.02W.26.1224 JONES CA	83-07-02	240	<.10	1	17	<1	<10	<1	5	1
19N.03W.06.4144 BLM/RW J	83-07-03	430	2.1	1	100	<1	<10	10	40	<1
20N.02W.32.3344 OAK SPRI	83-07-02	111	.59	1	12	<1	<10	<1	63	<1

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)
19N.02W.26.1224 JONES CA	83-07-02	3	<.1	<1	<1	21
19N.03W.06.4144 BLM/RW J	83-07-03	<10	<.1	8	<1	30
20N.02W.32.3344 OAK SPRI	83-07-02	10	<.1	1	<1	32

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)
NR032.0505X0180 CHACO R	364325108353001		045	GW	83-02-22	1130	110AVMB	0	4980.00	2350
NR049.0380X0891 BURNHAM	362213108340501		045	GW	83-02-23	1315	110AVMB	0	5317.00	960

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

SAN JUAN COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)
		(00400)	(00020)	(00010)	(00615)	(00630)	(00610)	(01000)	(01020)	(01025)
NRO32.0505X0180 CHACO R	83-02-22	7.8	12.5	10.0	<.020	<.10	1.40	1	2600	2
NRO49.0380X0891 BURNHAM	83-02-23	7.1	13.0	8.0	<.020	<.10	.450	3	110	3

LOCAL IDENT- I- FIER	DATE OF SAMPLE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
		(01030)	(01040)	(01046)	(01049)	(01130)	(01056)
NRO32.0505X0180 CHACO R	83-02-22	10	2	3600	1	230	220
NRO49.0380X0891 BURNHAM	83-02-23	<10	1	1900	<1	25	840

LOCAL IDENT- I- FIER	DATE OF SAMPLE	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)
		(71890)	(01145)	(01080)	(01090)
NRO32.0505X0180 CHACO R	83-02-22	.2	<1	1500	3100
NRO49.0380X0891 BURNHAM	83-02-23	<.1	<1	460	1500

LOCAL IDENT- I- FIER	STATION NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	ALPHA, DIS- SOLVED (UG/L AS U-NAT)	BETA, DIS- SOLVED (PCI/L AS CS-137)	BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	226, DIS- SOLVED (PCI/L METHOD PCI/L)
						(80030)	(03515)	(80050)	(09511)
NRO32.0505X0180 CHACO R	364325108353001	045	GW	83-02-22	1130	<33	<20	<19	.06
NRO49.0380X0891 BURNHAM	362213108340501	045	GW	83-02-23	1315	<14	<8.0	<7.6	.06

LOCAL IDENT- I- FIER	DATE OF SAMPLE	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L 80020)
NRO32.0505X0180 CHACO R	83-02-22	.34
NRO49.0380X0891 BURNHAM	83-02-23	.54

SANTA FE COUNTY

LOCAL IDENT- I- FIER	STATION NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET)	DEPTH OF SAMPLE INTER- VAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)
							(72008)	(72015)	(72000)
14N.07E.36.131 MADRID TO	352405106092402	049	GW	83-07-25	1600	211PNLK	694	--	6120.00

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
		(00095)	(90095)	(00400)	(00403)	(00010)	(00900)	(00915)	(00925)	(00930)
14N.07E.36.131 MADRID TO	83-07-25	1290	1220	7.6	7.8	20.0	270	67	24	190

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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SANTA FE COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY FIELD (MG/L AS CAC03) (00410)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	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)
14N.07E.36.131 MADRID TO	83-07-25	5.2	2.3	410	325	250	52	1.4	24

LOCAL IDENT- I- FIER	DATE OF SAMPLE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
14N.07E.36.131 MADRID TO	83-07-25	857	<.10	340	390

SIERRA 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 (FEET) (72002)	DEPTH OF WELL, TOTAL (FEET) (72008)
13S.04E.11.334 RC-4	331135106345701		051	GW	83-06-01	1130	110BLSN	E420.00	--	E710
16S.05W.05.222 GREENHORN	325707107220401		051	GW	83-08-11	1350	112SNTFU	60.00	--	150

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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 (UMHOS) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)
13S.04E.11.334 RC-4	83-06-01	4595.00	45	--	E50	1000	985	--	8.2	27.0
16S.05W.05.222 GREENHORN	83-08-11	4525.00	--	150	10	395	413	7.6	7.8	21.0

LOCAL IDENT- I- FIER	DATE OF SAMPLE	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
13S.04E.11.334 RC-4	83-06-01	450	94	51	38	.8	2.7	182	270	52
16S.05W.05.222 GREENHORN	83-08-11	180	58	8.3	18	2.6	2.6	198	18	3.5

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
13S.04E.11.334 RC-4	83-06-01	.80	25	746	645	5.6	<1	22	80	<1
16S.05W.05.222 GREENHORN	83-08-11	.30	41	--	269	2.4	<1	46	--	<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)
13S.04E.11.334 RC-4	83-06-01	<10	2	7	<1	30	12	.2
16S.05W.05.222 GREENHORN	83-08-11	<10	2	77	<1	--	27	.1

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

## SIERRA 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 ZN) (01090)
13S.04E.11.334 RC-4	83-06-01	3	<1	1600	290
16S.05W.05.222 GREENHORN	83-08-11	<1	<1	--	41

## SOCORRO 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)
02S.02E.11.311 GALLINA W	340904106424401	053	GW	83-02-09	1034	318ABO U	--	--	--
02S.04W.26.342 PRICKETT	340611107135801	053	GW	83-04-08	0725	110AVMB	147.00	240	147
03N.01W.21.331	342802106572401	053	GW	82-10-22	1430	112SNTF	261.00	527	261
04S.02E.29.33 ONINE WELL	345539106454701	053	GW	83-01-13	1310	110PTOD	364.00	500	445
06S.03E.05.232 SRC-1	334908106390801	053	GW	82-10-12	1430	--	--	--	--
		053	GW	83-02-14	1150	--	--	--	--
		053	GW	83-08-15	0830	--	--	--	--
06S.03E.05.233 SRC PROD	334908106391201	053	GW	82-10-12	1400	--	--	--	--
		053	GW	83-02-14	1135	--	--	--	--
		053	GW	83-02-14	1140	--	--	--	--
06S.03E.05.234 SRC-2	334907106391201	053	GW	83-02-14	1145	--	--	--	--
		053	GW	83-08-15	0815	--	--	--	--
08S.04E.12.444 DIRECT CO	333722106282101	053	GW	83-08-15	1337	--	--	--	--
09S.07W.6.423 ALUM SPRIN	333322107353501	053	SP	82-10-28	1100	000EXRV	--	--	--
09S.08W.03.142 SAM COX W	333344107390801	053	GW	82-10-28	1230	--	82.00	120	82

LOCAL IDENT- I- FIER	DATE OF SAMPLE	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	PUMP OR FLOW 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 (STAND- ARD UNITS) (00400)
02S.02E.11.311 GALLINA W	83-02-09	0	--	5482.00	--	--	1.0	2220	2250	7.2
02S.04W.26.342 PRICKETT	83-04-08	240	--	6740.00	--	240	--	580	--	7.8
03N.01W.21.331	82-10-22	527	--	5125.00	--	530	12	1810	1830	7.6
04S.02E.29.33 ONINE WELL	83-01-13	500	--	4925.00	--	500	--	4100	--	7.5
06S.03E.05.232 SRC-1	82-10-12	--	--	--	--	--	--	3430	--	7.4
	83-02-14	--	--	--	--	--	--	3460	--	7.6
	83-08-15	--	--	--	120	--	--	3440	--	7.8
06S.03E.05.233 SRC PROD	82-10-12	--	--	--	--	--	--	456	--	5.1
	83-02-14	--	--	--	--	--	--	684	--	6.7
	83-02-14	--	--	--	--	--	--	3360	--	7.8
06S.03E.05.234 SRC-2	83-02-14	--	--	--	--	--	--	3450	--	7.6
	83-08-15	--	--	--	--	--	--	--	3380	--
08S.04E.12.444 DIRECT CO	83-08-15	--	--	4930.00	--	--	--	4090	3990	8.2
09S.07W.6.423 ALUM SPRIN	82-10-28	--	--	6420.00	--	--	1.0	1100	1080	7.1
09S.08W.03.142 SAM COX W	82-10-28	120	--	6466.00	--	120	2.0	730	758	7.5

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	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 CAC03) (90410)
02S.02E.11.311 GALLINA W	83-02-09	7.0	9.0	1300	320	120	72	.9	9.0	101
02S.04W.26.342 PRICKETT	83-04-08	--	13.0	--	--	--	--	--	--	--
03N.01W.21.331	82-10-22	7.8	22.0	400	93	41	220	4.9	9.3	202
04S.02E.29.33 ONINE WELL	83-01-13	--	23.0	--	--	--	--	--	--	--
06S.03E.05.232 SRC-1	82-10-12	--	--	--	--	--	--	--	--	--
	83-02-14	--	--	--	--	--	--	--	--	--
	83-08-15	--	--	--	--	--	--	--	--	--
06S.03E.05.233 SRC PROD	82-10-12	--	--	--	--	--	--	--	--	--
	83-02-14	--	--	--	--	--	--	--	--	--
	83-02-14	--	--	--	--	--	--	--	--	--
06S.03E.05.234 SRC-2	83-02-14	--	--	--	--	--	--	--	--	--
	83-08-15	7.8	--	1700	390	180	240	2.6	8.6	42
08S.04E.12.444 DIRECT CO	83-08-15	7.8	--	2000	490	180	340	3.4	5.3	35
09S.07W.6.423 ALUM SPRIN	82-10-28	7.3	15.0	540	140	46	40	.8	1.3	298
09S.08W.03.142 SAM COX W	82-10-28	7.9	14.0	180	59	7.7	77	2.6	1.6	95

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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SOCORRO COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
02S.02E.11.311 GALLINA W	83-02-09	1300	21	.70	10	--	1910	< .10	< 1	< 100
02S.04W.26.342 PRICKETT	83-04-08	--	--	--	--	--	--	--	--	--
03N.01W.21.331	82-10-22	290	300	.80	23	--	1100	< .10	< 1	40
04S.02E.29.33 ONINE WELL	83-01-13	--	--	--	--	--	--	--	--	--
06S.03E.05.232 SRC-1	82-10-12	--	--	--	--	--	--	--	--	--
	83-02-14	--	--	--	--	--	--	--	--	--
	83-08-15	--	--	--	--	--	--	--	--	--
06S.03E.05.233 SRC PROD	82-10-12	--	--	--	--	--	--	--	--	--
	83-02-14	--	--	--	--	--	--	--	--	--
	83-02-14	--	--	--	--	--	--	--	--	--
06S.03E.05.234 SRC-2	83-02-14	--	--	--	--	--	--	--	--	--
	83-08-15	2100	21	.70	32	3390	3000	2.5	--	--
08S.04E.12.444 DIRECT CO	83-08-15	2500	120	1.3	12	2930	3680	11	< 1	< 100
09S.07W.6.423 ALUM SPRIN	82-10-28	320	10	1.2	31	--	769	< .10	< 1	30
09S.08W.03.142 SAM COX W	82-10-28	40	140	.20	26	--	409	8.6	1	70

LOCAL IDENT- I- FIER	DATE OF SAMPLE	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	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)
02S.02E.11.311 GALLINA W	83-02-09	--	2	10	5	30	3	--	300	< .1
02S.04W.26.342 PRICKETT	83-04-08	--	--	--	--	--	5	--	--	--
03N.01W.21.331	82-10-22	--	< 1	< 10	3	16	2	--	64	.1
04S.02E.29.33 ONINE WELL	83-01-13	--	--	--	--	--	--	--	--	--
06S.03E.05.232 SRC-1	82-10-12	--	--	--	--	--	--	--	--	--
	83-02-14	--	--	--	--	--	--	--	--	--
	83-08-15	--	--	--	--	--	--	--	--	--
06S.03E.05.233 SRC PROD	82-10-12	--	--	--	--	--	--	--	--	--
	83-02-14	--	--	--	--	--	--	--	--	--
	83-02-14	--	--	--	--	--	--	--	--	--
06S.03E.05.234 SRC-2	83-02-14	--	--	--	--	--	--	--	--	--
	83-08-15	440	--	--	--	--	--	--	--	--
08S.04E.12.444 DIRECT CO	83-08-15	780	2	20	5	70	< 1	120	90	.1
09S.07W.6.423 ALUM SPRIN	82-10-28	--	< 1	< 10	3	130	< 1	--	34	< .1
09S.08W.03.142 SAM COX W	82-10-28	--	< 1	< 10	3	110	3	--	45	< .1

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)
02S.02E.11.311 GALLINA W	83-02-09	< 1	< 1	--	530
02S.04W.26.342 PRICKETT	83-04-08	--	--	--	550
03N.01W.21.331	82-10-22	1	< 1	--	74
04S.02E.29.33 ONINE WELL	83-01-13	7	--	--	--
06S.03E.05.232 SRC-1	82-10-12	--	--	--	--
	83-02-14	--	--	--	--
	83-08-15	--	--	--	--
06S.03E.05.233 SRC PROD	82-10-12	--	--	--	--
	83-02-14	--	--	--	--
	83-02-14	--	--	--	--
06S.03E.05.234 SRC-2	83-02-14	--	--	--	--
	83-08-15	--	--	--	--
08S.04E.12.444 DIRECT CO	83-08-15	10	< 1	9500	1400
09S.07W.6.423 ALUM SPRIN	82-10-28	1	< 1	--	140
09S.08W.03.142 SAM COX W	82-10-28	2	< 1	--	64

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

## SOCORRO COUNTY -- Continued

LOCAL IDENT- I- FIER	STATION	NUMBER	COUNTY	SITE	DATE OF SAMPLE	TIME	ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	BETA, DIS- SOLVED (PCI/L AS CS-137) (Q3515)	BETA, SUSP. TOTAL (PCI/L AS CS-137) (Q3516)
02S.02E.11.311 GALLINA W	340904106424401		053	GW	83-02-09	1034	< 39	.9	21	1.0
03N.01W.21.331	342802106572401		053	GW	82-10-22	1430	38	--	< 17	--
09S.07W.6.423 ALUM SPRIN	333322107353501		053	SP	82-10-28	1100	< 19	< .4	8.8	.7
09S.08W.03.142 SAM COX W	333344107390801		053	GW	82-10-28	1230	< 13	< .4	7.0	< .4

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 NATURAL DIS- SOLVED (UG/L AS U) (22703)
02S.02E.11.311 GALLINA W	83-02-09	20	1.0	--	--
03N.01W.21.331	82-10-22	< 16	--	1.3	22
09S.07W.6.423 ALUM SPRIN	82-10-28	< 8.4	.7	--	--
09S.08W.03.142 SAM COX W	82-10-28	< 6.7	< .4	--	--

## 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)
23N.10E.35.WITLOCK SPRIN	361054105504701		055	SP	83-03-08	1000	112SNTFU	6280.00	410	455
24N.08E.21.CERRO NEGRO S	361733106054701		055	SP	83-03-08	1400	112SNTFU	6600.00	580	680
28N.12E.08 BIG ARSENIC S	364058105412201		055	SP	83-09-08	1445	000EXRV	6880.00	230	235
28N.12E.08 N. BIG ARSENI	364058105411701		055	SP	83-09-08	1400	000EXRV	6880.00	228	237
28N.12E.09.BLM VISITOR C	364057105401701		055	GW	83-09-08	1530	122SNTFL	--	225	234
28N.12E.09.MOTTLE SPRING	364042105393901		055	SP	83-09-07	1400	122SNTFL	--	222	233

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)
23N.10E.35.WITLOCK SPRIN	83-03-08	7.7	8.2	8.0	--	39	14	.9	88	6.5
24N.08E.21.CERRO NEGRO S	83-03-08	7.4	8.0	5.0	--	240	69	17	50	1.5
28N.12E.08 BIG ARSENIC S	83-09-08	7.8	8.1	17.0	.40	--	--	--	--	--
28N.12E.08 N. BIG ARSENI	83-09-08	7.9	8.2	17.0	.40	--	--	--	--	--
28N.12E.09.BLM VISITOR C	83-09-08	7.4	8.1	18.0	.50	--	--	--	--	--
28N.12E.09.MOTTLE SPRING	83-09-07	7.5	8.1	17.0	.40	--	--	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY FIELD (MG/L AS CAC03) (00410)	ALKA- LITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
23N.10E.35.WITLOCK SPRIN	83-03-08	1.8	180	186	29	4.2	1.8	24	272	--
24N.08E.21.CERRO NEGRO S	83-03-08	4.2	270	280	35	32	.60	24	396	--
28N.12E.08 BIG ARSENIC S	83-09-08	--	79	--	--	--	--	--	--	.70
28N.12E.08 N. BIG ARSENI	83-09-08	--	78	--	--	--	--	--	--	.70
28N.12E.09.BLM VISITOR C	83-09-08	--	77	--	--	--	--	--	--	.60
28N.12E.09.MOTTLE SPRING	83-09-07	--	77	--	--	--	--	--	--	--

QUALITY OF GROUND WATER  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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TAOS COUNTY -- Continued

LOCAL IDENT- I- FIER	DATE OF SAMPLE	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 TOTAL (MG/L AS C) (00680)	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)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
23N.10E.35.WITLOCK SPRIN	83-03-08	.69	--	--	--	18	110	<1	--	--
24N.08E.21.CERRO NEGRO S	83-03-08	.73	--	--	--	6	40	<1	<1	3
28N.12E.08 BIG ARSENIC S	83-09-08	--	.010	<.010	.4	--	--	--	--	--
28N.12E.08 N. BIG ARSENI	83-09-08	--	.020	.010	.3	--	--	--	--	--
28N.12E.09.BLM VISITOR C	83-09-08	--	.020	.010	.3	--	--	--	--	--
28N.12E.09.MOTTI SPRING	83-09-07	--	.050	.030	.2	--	--	--	--	--

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)	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)
23N.10E.35.WITLOCK SPRIN	83-03-08	--	40	5	13	<.1	--	1	--	--
24N.08E.21.CERRO NEGRO S	83-03-08	12	980	11	800	<.1	--	<1	<1	--
28N.12E.08 BIG ARSENIC S	83-09-08	--	<3	--	2	--	4	--	--	4
28N.12E.08 N. BIG ARSENI	83-09-08	--	<3	--	1	--	4	--	--	4
28N.12E.09.BLM VISITOR C	83-09-08	--	<3	--	1	--	4	--	--	49
28N.12E.09.MOTTI SPRING	83-09-07	--	--	--	--	--	4	--	--	--

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## FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	$2.54 \times 10^1$	millimeters (mm)
	$2.54 \times 10^{-2}$	meters (m)
feet (ft)	$3.048 \times 10^{-1}$	meters (m)
miles (mi)	$1.609 \times 10^0$	kilometers (km)
<i>Area</i>		
acres	$4.047 \times 10^3$	square meters (m <sup>2</sup> )
	$4.047 \times 10^{-1}$	square hectometers (hm <sup>2</sup> )
	$4.047 \times 10^{-3}$	square kilometers (km <sup>2</sup> )
square miles (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometers (km <sup>2</sup> )
<i>Volume</i>		
gallons (gal)	$3.785 \times 10^0$	liters (L)
	$3.785 \times 10^0$	cubic decimeters (dm <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic meters (m <sup>3</sup> )
million gallons	$3.785 \times 10^3$	cubic meters (m <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
cubic feet (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeters (dm <sup>3</sup> )
	$2.832 \times 10^{-2}$	cubic meters (m <sup>3</sup> )
cfs-days	$2.447 \times 10^3$	cubic meters (m <sup>3</sup> )
	$2.447 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
acre-feet (acre-ft)	$1.233 \times 10^3$	cubic meters (m <sup>3</sup> )
	$1.233 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
	$1.233 \times 10^{-6}$	cubic kilometers (km <sup>3</sup> )
<i>Flow</i>		
cubic feet per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liters per second (L/s)
	$2.832 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$2.832 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
gallons per minute (gal/min)	$6.309 \times 10^{-2}$	liters per second (L/s)
	$6.309 \times 10^{-2}$	cubic decimeters per second (dm <sup>3</sup> /s)
	$6.309 \times 10^{-5}$	cubic meters per second (m <sup>3</sup> /s)
million gallons per day	$4.381 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$4.381 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
<i>Mass</i>		
tons (short)	$9.072 \times 10^{-1}$	megagrams (Mg) or metric tons

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